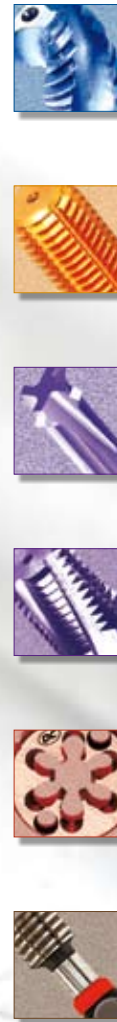


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**DC SWISS SA**  
FR-IT-ID-2014



**Catalogue général**  
**Catalogo generale**  
FR-IT-ID-2014







**THREADING  
TECHNOLOGY**



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- ID**      *Numéro d'identification, articles disponibles du stock*
- \* ID**    *Numéro d'identification, articles disponibles jusqu'à épuisement du stock*

### **Disponibilità degli articoli**

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This certificate is valid from 7 September 2013 until 6 September 2016  
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Issue 4. Certified since September 2007

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# K



K613VS-3

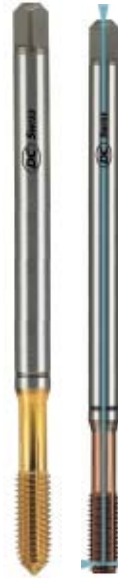
**M**



K313TC-3  
K413TC-3

**MF**

# FPS-FAS



FPS581VS-3  
FPS681VS-3

**M**



FPS584VS-3  
FPS684VS-3

**M**



FAS581VS-3  
FAS681VS-3

**M**



FAS584VS-3  
FAS684VS-3

**M**

# W



W320DL-4  
W420DL-4

**M**



W360DL-3  
W460DL-3  
W460DL-5

**M**  
**G**

# FS



FS380DL-5

**M**



FS380DL-3

**M**

# GW



GW3016  
GW3016VS

$\leq$  **M12**

**MF**



GW3019  
GW3019VS

$\leq$   $\frac{1}{2}$  **UNC**  
 $\leq$   $\frac{3}{8}$  **UNF**

# AERO



SA320-4 **UNJF 3B**



# N

Schaublin



N1110-3  
N1210-3  
N5120

**SV**

# NEW



# CODIFICATION - CODIFICA

**Tarauds DC Maschi DC**

Exemple - Esempio



Matières normales	Materiali normali	N							
Matières tendres	Materiali teneri	W							
Matières tenaces	Materiali tenaci	Z							
Matières à haute résistance	Materiali ad alta resistenza	H							
Alliages spéciaux	Leghe speciali	S							
Alliages spéciaux (Aero)	Leghe speciali (Aero)	SA							
Alliages de titane (Aero)	Leghe al titanio (Aero)	TL							
Fonte grise et fonte alu	Ghisa grigia e ghisa alluminio	GG							
Taraudage synchrone	Maschiatura sincrona	RTS							
Brise-copeaux	Rompi trucioli	K							
MEGA dimensions	Dimensioni MEGA	MA							
Exécution spéciale	Esecuzione speciale		3						
DIN courte - queue renforcée	DIN corto - gambo rinforzato			1					
DIN courte - queue passante	DIN corto - gambo passante			2					
DIN longue - queue renforcée	DIN lungo - gambo rinforzato			3					
DIN longue - queue passante	DIN lungo - gambo passante			4					
DIN extra-longue - queue renforcée	DIN extra-lungo - gambo rinforzato			5					
DIN extra-longue - queue passante	DIN extra-lungo - gambo passante			6					
Selon norme d'usine	Sec. norme standard DC			9					
ISO courte - queue renforcée	ISO corto - gambo rinforzato			11					
ISO courte - queue passante	ISO corto - gambo passante			12					
Goujures droites	Scanalature diritte			1					
Goujures droites, entrée à hélice	Scanalature diritte, imbocco corretto			2					
Entrée à hélice	Imbocco corretto			3					
Goujures hélicoïdales < 27° à gauche	Scanalature elicoidali < 27° a sinistra			4					
Goujures hélicoïdales < 27° à droite	Scanalature elicoidali < 27° a destra			5					
Goujures hélicoïdales > 27° à droite	Scanalature elicoidali > 27° a destra			6					
Goujures hélicoïdales > 40° à droite	Scanalature elicoidali > 40° a destra			7					
Goujures hélicoïdales 10°, entrée à hélice	Scanalature elicoidali 10°, imbocco corretto			9					
Exécution standard	Esecuzione standard					0			
Filets alternés	Filetti alternati					1			
Filets tronqués	Filetti rastremati					2			
Canal de lubrification	Canale di lubrificazione					3			
Filets alternés, canal de lubrification	Filetti alternati, canale di lubrificazione					4			
Filets tronqués, canal de lubrification	Filetti rastremati, canale di lubrificazione					5			
Traitement de surface "Vapeur"	Trattamento di superficie "Vapore"						V		
Protection contre l'usure	Protezione antiusura						VS		
Revêtu au nitrure de titane (TiN)	Rivestimento al nitruro di titanio (TiN)						TN		
Revêtu au carbonitrure de titane (TiCN)	Rivestimento al carbonitruro di titanio (TiCN)						TC		
Nitruration Plasma + traitement de surface "V"	Nitrurazione Plasma+trattamento superficiale "V"						NV		
Revêtement DLC	Rivestimento DLC						DL		
Revêtement Hardlube	Rivestimento Hardlube						HL		
Ebaucheur	Sgrossatore							1	
Intermédiaire	Intermedio							2	
Finisseur / 2 - 3 filets d'entrée	Finitore / 2 - 3 filetti d'imbocco							3	
3.5 - 5 filets d'entrée, entrée à hélice	3.5 - 5 filetti d'imbocco, imbocco corretto							4	
1.5 - 2 filets d'entrée	1.5 - 2 filetti d'imbocco							5	
6 - 8 filets d'entrée	6 - 8 filetti d'imbocco							8	
Jeu de tarauds	Serie di maschi							S	

# CODIFICATION - CODIFICA

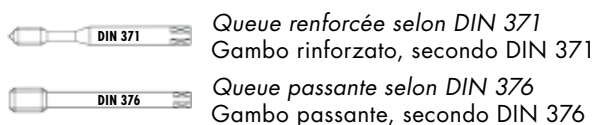
## Tarauds à refouler Maschi a rullare

Exemple - Esempio



Polygone standard < Ø 3 mm	Poligono standard < Ø 3 mm	FS							
Polygone passif ≥ Ø 3 mm	Poligono passivo ≥ Ø 3 mm	FPS							
Polygone actif ≥ Ø 3 mm	Poligono attivo ≥ Ø 3 mm	FAS							
Exécution spéciale	Esecuzione speciale		3						
DIN longue - queue renforcée	DIN lungo - gambo rinforzato		3						
DIN longue - queue passante	DIN lungo - gambo passante		4						
DIN extra-longue - queue renforcée	DIN extra-lungo - gambo rinforzato		5						
DIN extra-longue - queue passante	DIN extra-lungo - gambo passante		6						
Taraud à refouler	Maschi a rullare			8					
Sans rainures de lubrification	Senza scanalature di lubrificazione				0				
Avec rainures de lubrification	Con scanalature di lubrificazione				1				
Canal de lubrification, sorties radiales	Canale di lubrificazione, uscite radiali				4				
Protection contre l'usure	Protezione antiusura							VS	
Revêtu au nitride de chrome (CrN)	Rivestimento al cromo (CrN)							CN	
Revêtement DLC	Rivestimento DLC							DL	
2 - 3 filets d'entrée	2 - 3 filetti d'imbocco								-3
1.5 - 2 filets d'entrée	1.5 - 2 filetti d'imbocco								-5

## PICTOGRAMMES - SIMBOLI



HSSE  
HSSE



HSSE-PM  
HSSE-PM



Nombre de lèvres (Z)  
Numero delle scanalature (Z)



Goujures droites  
Scanalature diritte



Goujures droites avec entrée à hélice  
Scanalature diritte con imbocco corretto



Entrée à hélice uniquement  
Solo imbocco corretto



Goujures hélicoïdales, hélice à 40° à droite  
Scanalature elicoidali con elica 40° a destra



Filets tronqués  
Filetti rastremati



Filets alternés  
Filetti alternati



Tarauds à refouler  
Maschi a rullare



Tarauds à refouler avec rainures de lubrification  
Maschi a rullare con scanalature di lubrificazione



Ebaucheur  
Sgrossatore



Intermédiaire  
Intermedio



Finition  
Finitore



Jeu de deux tarauds à main  
Serie di due maschi a mano



Jeu de trois tarauds à main  
Serie di tre maschi a mano



Guide lisse  
Guida liscia



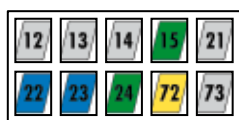
Lubrification intérieure avec sortie frontale  
Lubrificazione interna con uscita frontale



Lubrification intérieure avec sorties radiales  
Lubrificazione interna con uscite radiali



# PICTOGRAMMES - SIMBOLI



Pour groupes matières selon  
tablette d'utilisation

Per gruppi di materiali secondo  
tabella d'impiego

12	
1.0037	Si37-2 (S235JR)
1.0050	Si50-2 (E295)
1.0060	Si60-2 (E335)
1.5919	15CrNi6
1.7131	16MnCr5

22	
1.4301	X5CrNi18-10
1.4406	X2CrNiMoN17-12-2
1.4435	X2CrNiMo18-14-3
1.4541	X6CrNiTi18-10
1.4571	X6CrNiMoTi17-12-2



Extra-longue  
Extra-lungo



Trou traversant, copeaux longs  
Foro passante, trucioli lunghi



Trou traversant < 1.5 x D, copeaux courts  
Foro passante < 1.5 x D, trucioli corti



Trou borgne < 1.5 x D, copeaux longs  
Foro cieco < 1.5 x D, trucioli lunghi



Trou borgne < 2.5 x D, copeaux courts  
Foro cieco < 2.5 x D, trucioli corti



Trou traversant / borgne < 2.5 x D  
Foro passante / cieco < 2.5 x D



Trou borgne < 3 x D  
Foro cieco < 3 x D



Tête à tarauder MEGA  
Testa maschio MEGA



Tarauds couronne  
Maschi a corona



Forets-taraudeurs  
Punte maschiatrici



Diamètre d'avant-trou  
Prefori



Rayon sur le diamètre extérieur  
Raggio sul diametro esterno



Filetage conique 1:16 (NPT - NPTF - Rc)  
Filettatura conica 1:16 (NPT - NPTF - Rc)



Filetage EG  
Filettatura EG



Filetage à gauche  
Filettatura sinistra



3.5 - 5 filets d'entrée, forme B  
3.5 - 5 filetti d'imbocco, forma B



2 - 3 filets d'entrée, forme C  
2 - 3 filetti d'imbocco, forma C



1.5 - 2 filets d'entrée, forme E  
1.5 - 2 filetti d'imbocco, forma E



Classe de tolérance ISO 2 6H  
Classe di tolleranza ISO 2 6H



Classe de tolérance ISO 2 6H + 0.1 mm  
Classe di tolleranza ISO 2 6H + 0.1 mm



Classe de tolérance ISO 3 6G  
Classe di tolleranza ISO 3 6G



Traitement de surface "Vapeur"  
Trattamento di superficie "V"



Protection contre l'usure   
Protezione antiusura



Revêtu au nitrure de titane  
Rivestimento al nitrato di titanio



Revêtu au carbonitrure de titane  
Rivestimento al carbonitrato di titanio



Nitruration Plasma + traitement de surface "V"  
Nitrurazione Plasma+trattamento superficiale "V"



Revêtu au nitrure de chrome  
Rivestimento al cromo



Revêtement DLC  
Rivestimento DLC



Revêtement Hardlube  
Rivestimento Hardlube



Copeaux fragmentés / Copeaux consistants  
Frammenti di trucioli / Trucioli consistenti



Pour taraudage classique  
Per maschiatura classica



Pour taraudage synchrone  
Per maschiatura sincrona

CLASSIFICATION DES MATIÈRES

Exemples pratiques de classification des matières

<div>11</div> <div>Aciers de décolletage</div> <div>1.0711 9S20 1.0715 9SMn28 1.0718 9SMnPb28 1.0726 35S20 1.0737 9SMnPb36</div>	<div>12</div> <div>Aciers de construction ou de cémentation</div> <div>1.0037 Si37-2 (S235JR) 1.0050 Si50-2 (E295) 1.0060 Si60-2 (E335) 1.5919 15CrNi6 1.7131 16MnCr5</div>	<div>13</div> <div>Aciers au carbone</div> <div>1.0503 C45 1.0535 C55 1.0601 C60 1.1545 C10SW1 1.2067 102Cr6 (100Cr6)</div>	<div>14</div> <div>Aciers alliés &lt; 850 N/mm²</div> <div>1.2363 X100CrMoV5-1 1.3551 80MoCrV42-16 1.7218 25CrMo4 1.7220 34CrMo4 1.7225 42CrMo4</div>
<div>15</div> <div>Aciers alliés / traités &gt; 850 - &lt; 1150 N/mm²</div> <div>1.3553 X82WCrMoV6-5-4 1.6580 30CrNiMo8 1.7220 34CrMo4 1.7225 42CrMo4 1.8507 34CrAlMo5</div>	<div>16</div> <div>Aciers haute résistance</div> <div>EN-GJS-1200-2 1.6582 34CrNiMo6v 1.7225 42CrMo4v 1.7228 50CrMo4v 1.8515 31CrMo12v</div>	<div>21</div> <div>Aciers inoxydables, soudés</div> <div>1.4005 X12CrS13 1.4104 X14CrMoS17 1.4305 X10CrNiS18-9</div>	<div>22</div> <div>Austénitiques</div> <div>1.4301 X5CrNi18-10 1.4406 X2CrNiMoN17-12-2 1.4435 X2CrNiMo18-14-3 1.4541 X6CrNiTi18-10 1.4571 X6CrNiMoTi17-12-2</div>
<div>23</div> <div>Ferritiques et martens. &lt; 850 N/mm²</div> <div>1.4112 X90CrMoV18 1.4540 X4CrNiCuNb16-4 1.4582 X4CrNiMoNb25-7 1.4762 X10CrAl24 1.4922 X20CrMo11-1</div>	<div>24</div> <div>Ferritiques et martens. &gt; 850 - &lt; 1150 N/mm²</div> <div>1.4057 X17CrNi17-2 1.4125 X105CrMo17 1.4542 X5CrNiCuNb16-4 1.4548 X5CrNiCuNb17-4-4 1.4748 X85CrMoV18-2</div>	<div>31</div> <div>Fonte grise</div> <div>0.6015 GG15 0.6020 GG20 0.6025 GG25 0.6030 GG30</div>	<div>32</div> <div>Fonte à graphite sphéroïdale</div> <div>0.7040 GGG40 0.7043 GGG40.3 0.7050 GGG50 0.7060 GGG60 0.7080 GGG80</div>
<div>41</div> <div>Titane pur</div> <div>3.7024 Grad1 3.7034 Grad2 3.7055 Grad3 3.7065 Grad4</div>	<div>42</div> <div>Alliage au titane</div> <div>3.7124 TiCu2.5 Ti6Al7Nb 3.7164 TiAl6V4 (Grad5) 3.7174 TiAl6V6Sn2</div>	<div>51</div> <div>Alliage au Nickel 1 &lt; 850 N/mm²</div> <div>1.3912 Ni36 (Invar) 2.4360 NiCu30Fe (Monel 400) 2.4816 NiCr15Fe (Inconel 600) 1.4876 X10NiCrAlTi32-20</div>	<div>52</div> <div>Alliage au Nickel 2 &gt; 850 - &lt; 1150 N/mm²</div> <div>2.4375 NiCu30Al (MonelK500) 2.4631 NiCr20TiAl (Nimonic 80) 2.4668 NiCr19NbMo (Inconel718)</div>
<div>53</div> <div>Alliage au Nickel 3 &gt; 1150 - ≤ 1600 N/mm²</div> <div>2.4631 NiCr20TiAl (Nimonic80) 2.4668 NiCr19NbMo (Inconel718)</div>	<div>61</div> <div>Cuivre pur (électrolytique)</div> <div>2.0060 E-Cu57 (E-Cu)</div>	<div>62</div> <div>Laiton, bronze, copeaux courts</div> <div>2.0401 CuZn39Pb3 (Ms58) 2.0402 CuZn40Pb2 (Ms58) 2.1030 CuSn8 (Bz) 2.1096 G-CuSn5ZnPh</div>	<div>63</div> <div>Laiton copeaux longs</div> <div>2.0240 CuZn15 (Ms85) 2.0265 CuZn30 (Ms70) 2.0321 CuZn37 (Ms63)</div>
<div>71</div> <div>Al non allié</div> <div>3.0205 Al99 3.0255 Al99.5</div>	<div>72</div> <div>Al allié Si &lt; 1.5%</div> <div>3.1255 AlCuSiMn 3.1355 AlCuMg2 3.2315 AlMgSi1 3.3206 AlMgSi0.5 3.4345 AlZnMgCu0.5</div>	<div>73</div> <div>Al allié Si &gt; 1.5% - &lt; 10%</div> <div>3.2161 G-AlSi8Cu3 3.2162 GD-AlSi8Cu3 3.2341 G-AlSi5Mg 3.2371 G-AlSi7Mg</div>	<div>74</div> <div>Al allié Si &gt; 10% Alliages Magnésium</div> <div>3.2381 G-AlSi10Mg 3.2382 GD-AlSi10Mg 3.2581 G-AlSi12 3.2583 G-AlSi12 (Cu)</div>
<div>81</div> <div>Matières thermoplastiques</div> <div>Delrin (POM) Teflon Nylon</div>	<div>82</div> <div>Matières duroplastiques</div> <div>Bakelit Novopan</div>	<div>83</div> <div>Matières plastiques renforcées par fibres</div> <div>Thermo et duroplastique, renforcées par fibre de verre</div>	

Référence: DIN

CLASSIFICAZIONE DEI MATERIALI

Esempi pratici della classificazione dei materiali

<div>11</div> <div>Acciai da tornitura</div> <div>1.0711 1212 1.0715 1213 1.0718 12L13 1.0726 1140 1.0737 12L14</div>	<div>12</div> <div>Acciai da costruzione da cementazione</div> <div>1.0037 1015 1.0050 A570 Gr.50 1.0060 A572 Gr.65 1.5919 3115 1.7131 5115</div>	<div>13</div> <div>Acciai al carbonio</div> <div>1.0503 1045 1.0535 1055 1.0601 1060 1.1545 W110 1.2067 L3</div>	<div>14</div> <div>Acciai legati &lt; 850 N/mm²</div> <div>1.2363 A2 1.3551 M50 1.7218 4130 1.7220 4135 1.7225 4140</div>
<div>15</div> <div>Acciai legati / trattati &gt; 850 - &lt; 1150 N/mm²</div> <div>1.3553 - 1.6580 4340 1.7220 4135 1.7225 4140 1.8507 A355CLD (K23510)</div>	<div>16</div> <div>Acciai ad alta resistenza</div> <div>EN-GJS-1200-2 1.6582 4340 1.7225 4140 1.7228 4150 1.8515 -</div>	<div>21</div> <div>Acciai inox, allo zolfo</div> <div>1.4005 416 1.4104 430F 1.4305 303</div>	<div>22</div> <div>Acciai inox austenitici</div> <div>1.4301 304 1.4406 316LN 1.4435 316L 1.4541 321 1.4571 316Ti</div>
<div>23</div> <div>Ferritici e martensitici &lt; 850 N/mm²</div> <div>1.4112 440B 1.4540 XM12 (15-5PH) 1.4582 - 1.4762 446 1.4821 4922</div>	<div>24</div> <div>Ferritici e martensitici &gt; 850 - &lt; 1150 N/mm²</div> <div>1.4057 431 1.4125 440C 1.4542 630 (17-4PH) 1.4748 -</div>	<div>31</div> <div>Ghisa grigia</div> <div>0.6015 A48-25B 0.6020 A48-30B 0.6025 A48-40B 0.6030 A48-45B</div>	<div>32</div> <div>Ghisa grafitica sferoidale e malleabile</div> <div>0.7040 60-40-18 0.7043 - 0.7050 65-45-12 0.7060 80-55-06 0.7080 120-90-02</div>
<div>41</div> <div>Titanio puro</div> <div>3.7024 Gr.1 3.7034 Gr.2 3.7055 Gr.3 3.7065 Gr.4</div>	<div>42</div> <div>Leghe al titanio</div> <div>3.7124 Alloy 230 F-1295 3.7164 Gr.5 3.7174 -</div>	<div>51</div> <div>Leghe al Nickel 1 &lt; 850 N/mm²</div> <div>1.3912 K93600 2.4360 N04400 1.4816 N08800</div>	<div>52</div> <div>Leghe al Nickel 2 &gt; 850 - &lt; 1150 N/mm²</div> <div>2.4375 N05500 (B865) 2.4631 N07080 (B637) 2.4668 N07718 (B637)</div>
<div>53</div> <div>Leghe al Nickel 3 &gt; 1150 - ≤ 1600 N/mm²</div> <div>2.4631 N07080 (B637) 2.4668 N07718 (B637)</div>	<div>61</div> <div>Rame puro (elettrolitico)</div> <div>2.0060 C11000</div>	<div>62</div> <div>Ottone, bronzo (trucioli corti)</div> <div>2.0401 C38500 2.0402 C37800 2.1030 C52100 2.1096 -</div>	<div>63</div> <div>Ottone (trucioli lunghi)</div> <div>2.0240 C23000 2.0265 C26000 2.0321 C27200</div>
<div>71</div> <div>Alluminio non legato</div> <div>3.0205 1200 3.0255 1050A</div>	<div>72</div> <div>Leghe di alluminio Si &lt; 1.5%</div> <div>3.1255 2014 3.1355 2024 3.2315 6082 3.3206 6060 3.4345 7020</div>	<div>73</div> <div>Leghe di alluminio Si &gt; 1.5% - &lt; 10%</div> <div>3.2161 380.1 3.2162 - 3.2341 - 3.2371 A 356.2</div>	<div>74</div> <div>Leghe di al. Si &gt; 10% Leghe al magnesio</div> <div>3.2381 A360 3.2382 - 3.2581 A413 3.2583 413.1</div>
<div>81</div> <div>Materie termoplastiche</div> <div>Delrin (POM) Teflon Nylon</div>	<div>82</div> <div>Materie termoidurenti</div> <div>Bakelit Novopan</div>	<div>83</div> <div>Materie plastiche rinforzate con fibre</div> <div>Rinforzata con fibre di vetro, termoplastiche e termoidurenti</div>	

Referenze: AISI/ASTM/UNS

## TARAUDAGE CLASSIQUE - MASCHIATURA CLASSICA

**E** Ottimale con emulsione  
**E** Funzionale con emulsione

## TARAUDAGE CLASSIQUE - MASCHIATURA CLASSICA

[illegible]



## TARAUDAGE SYNCHRONE - MASCHIATURA SINCRONA









































**Dès page :**  
**Dalla pagina :**

<b>M</b>
<b>MF</b>
<b>UNC</b>
<b>UNF</b>
<b>UNEF/UN/UNS</b>
<b>G/Rp/Rc</b>
<b>NPT/NPTF</b>
<b>W</b>
<b>PG/TR/SV</b>
<b>EG M/EG UNC/EG UNF</b>

K

[illegible]

Vc (m/min)			
Ø M6-M10	Ø M12-M16	Ø M20-M30	Ø M33-M42
32	28	22	18
30	25	20	15
24	20	16	12
24	20	16	12
15	12	8	6
30	25	20	15
30	25	20	15
35	30	25	20
32	28	22	18
30	25	20	15

κ. 137C		κ. 137S		
				
				11
				12
				13
				14
				15
				16
				21
				22
				23
				24
				31
				32
				41
				42
				51
				52
				53
				61
				62
				63
				71
				72
				73
				74
				81
				82
				83

**Vc (m/min)**  
**< Ø 20 mm**  
**(Guide line)**  
**Revêtu VS**  
**Rivestito VS**

## Rivestito VS







20 – 40
20 – 40
16 – 24
16 – 24
6 – 12
20 – 40
6 – 12
6 – 12
4 – 8
20 – 40
20 – 40
6 – 12
10 – 20
20 – 40
30 – 50
20 – 40
20 – 40

RTS

Z

62	62	63	63	50	50
102		102		94	
126		126		120	
146		146		139	
		161		161	
				181	



RTS, 20VS	RTS, 23VS	RTS, 62VS	RTS, 65VS	Z, 70VS	Z, 73VS	
						11
E	E	E	E			12
E	E	E	E			13
E	E	E	E			14
E	E	E	E	E	E	15
E	E	E	E	E	E	16
E	E	E	E			21
E	E	E	E	E	E	22
				E	E	23
				E	E	24
E	E	E	E			31
E	E	E	E			32
						41
						42
				E	E	51
						52
						53
E	E	E	E	E	E	61
						62
E	E	E	E			63
E	E	E	E			71
E	E	E	E			72
E	E	E	E			73
E	E	E	E			74
						81
						82
						83

**S Optimale avec huile de coupe**  
**S Fonctionnelle avec huile de coupe**

**S Ottimale con olio da taglio**  
**S Funzionale con olio da taglio**

**E** Optimale avec émulsion  
**E** Fonctionnelle avec émulsion





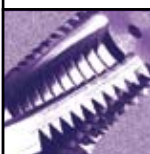





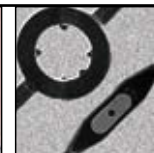



**E** Ottimale con emulsione  
**E** Funzionale con emulsione



## TARAUDAGE PAR DÉFORMATION - PER DEFORMAZIONE

[illegible]

	<b>Taraudage classique</b> <b>Maschiatura classica</b> 		<b>Taraudage synchrone</b> <b>Maschiatura sincrona</b> 
<p><b>M</b></p> <p>N 22-45/76-78/285 W 46-47 Z 48-51 H 52-55</p> <p>S 56-57 SA 57-59 TL 58-59 GG 60-61</p> <p>K 66-67</p> <p><b>MF</b></p> <p>N 84-93/106-108 Z 94-95 H 96-97 S 98</p> <p>SA 99-101 TL 100-101 K 103</p> <p><b>UNC, UNC(J)</b></p> <p>N 114-117/128-129 Z 118-120 H 121 S 122-123</p> <p>SA 124-125 TL 124</p> <p><b>UNF, UNF(J), UNJF, UNEF, UN, UNS</b></p> <p>N 134-137/148-151 Z 138-139 H 140-141 S 142</p> <p>SA 143-145 TL 143-144</p> <p><b>G (BSP), Rp, Rc, W, SV Schaublin</b></p> <p>N 156-158/163-167 W 159 Z 160-161 H 159</p> <p>GG 159</p> <p><b>NPT, NPTF, PG, TR</b></p> <p>N 170-173</p> <p><b>EG M, EG UNC, EG UNF</b></p> <p>N 176-177/180/183 Z 181/184 S 184 SA 178-179/182/184-185</p> <p>TL 178/182/185</p>		<p><b>M</b></p> <p>RTS 62-65 Z.70/Z.73 50-51 K 66-67</p> <p><b>MF</b></p> <p>RTS 102 Z.70 94-95 K 103</p> <p><b>UNC</b></p> <p>RTS 126 Z.70 120</p> <p><b>UNF</b></p> <p>RTS 146 Z.70 139</p> <p><b>G (BSP)</b></p> <p>RTS 161 Z.70 161</p> <p><b>EG UNC, EG UNF</b></p> <p>Z.70 181/184</p>	
			<b>Taraudage par déformation</b> <b>Maschiatura per deformazione</b> 
		<p><b>M</b></p> <p>FS 68-69 FPS 70-72 FAS 73-75</p> <p><b>MF</b></p> <p>FPS 104 FAS 105</p> <p><b>UNC</b></p> <p>FS 127 FPS 127 FAS 127</p> <p><b>UNF</b></p> <p>FS 147 FPS 147 FAS 147</p> <p><b>G (BSP)</b></p> <p>FPS 162 FAS 162</p>	
	<b>Tarauds couronne</b> <b>Maschi a corona</b> 		<b>Forets-taraudeurs</b> <b>Punte maschiatrici</b> 
<p><b>M, MF</b></p> <p>N 187-188</p> <p><b>UN, G (BSP)</b></p> <p>N 189</p>		<p><b>M, MF</b></p> <p>N 192</p> <p><b>UNC, G (BSP), PG</b></p> <p>N 193</p>	

	<b>Tourbillonnage</b> <b>Microfresatura di filetti</b> 		<b>Jauges de filetage</b> <b>Calibri</b> 
<b>S, M, MF, UNC, UNF</b> <b>GW 206-213</b>		<b>M</b> <b>D 266-267</b> <b>MF</b> <b>D 268-271</b> <b>UNC, UNF, UNEF</b> <b>D 272-273</b> <b>G (BSP), PG</b> <b>D 274</b> <b>NPT, NPTF</b> <b>D 275</b> <b>EG M, EG UNC, EG UNF</b> <b>D 276</b>	
	<b>Fraisage de filets</b> <b>Fresatura di filetti</b> 		
<b>M</b> <b>GF 214-216    GFH 214    GFS 225-227    GFM 236</b> <b>BGF 240-242</b> <b>MF</b> <b>GF 217-218    GFS 228-229    GFM 236    BGF 243</b> <b>UNC, UNF, UNEF, UN, UNS</b> <b>GF 219-222    GFS 230-233    GFM 237</b> <b>G (BSP), PG</b> <b>GF 223    GFS 234    GFM 238</b> <b>NPT, NPTF</b> <b>GF 224    GFS 235    GFM 239</b>		 <b>Mandrins de taraudage SRT</b> <b>Maschiatore SRT</b>  <b>HSK 278    BT40 278    SK40/SK50 279</b> <b>DIN1835 B 280-281</b>  <b>D 282/283</b> <b>F 284</b>  <b>D 285</b>  <b>D 286-287</b>	
	<b>Filières</b> <b>Filiere</b> 		
<b>M</b> <b>N 246/260/262/263    Z 247/260</b> <b>MF</b> <b>N 248-250/261/262    Z 248-249</b> <b>UNC, UNF, UNEF, UN, UNS</b> <b>N 251-253</b> <b>G (BSP), R</b> <b>N 254/256/263    Z 255    MS 255</b> <b>NPT, NPTF, PG, TR, W / W Schaublin</b> <b>N 257-259/263    N 167</b>		 <b>Tabelles de vitesses de coupe,</b> <b>de conversion, d'avant-trous,</b> <b>de tournage</b> <b>Questionnaires technique</b> <b>Conditions générales</b>  <b>Tabelle di velocità, di comparazione,</b> <b>prefori per filettare, diametri di tor-</b> <b>nitura per viti</b> <b>Questionario tecnico</b> <b>Condizioni generali di vendita</b>	

M

MF

UNC, UNC(U)

UNF, UNF(U), UNJF  
UNEF, UN, UNS





















G, Rp, Rc, W, SV

NPT, NPTF,  
PG, TR




































EG M, EG UN

Tarauds couronne  
Maschi a corona







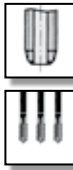
















Forets-taraudeurs  
Punte maschiatrici

		N						
Caractéristiques Caratteristiche				 V	 TiN TiCN		 V	
								
Genre de trou Tipo di foro								
		N310-3	N320-3 N320-4	N320V-3 N320V-4	N320TN-3/4 N320TC-3/4	N321-3 N321-4	N330-3 N330-4	N330V-3 N330V-4
DIN longue DIN lungo	DIN 371	22	22/24	24	24	30	30	30
Extra-longue Extra-lungo	DC							
ISO courte ISO corto	ISO 529							
DIN courte DIN corto	DIN 352							
DIN longue DIN lungo	~DIN 2174							
Tolérance Tolleranza	ISO 2 6H	22	22/24	24	24	30	30	30
Surcote Maggiorazione	ISO 3 6G		28	28				
Surcote Maggiorazione	7G		28					
Surcote Maggiorazione	+ 0.10 mm + 0.20 mm		28					
Tolérance fine Tolleranza fine	ISO 1 4H		26					
LH Filetage à gauche LH Filettatura sinistra	ISO 2 6H	22	26	26				
		N410-3	N420-4	N420V-4	N420TN-4 N420TC-4	N421-4	N430-4	N430V-4
DIN longue DIN lungo	DIN 371	23	25	25	25	31	31	31
Extra-longue Extra-lungo	DC							
ISO courte ISO corto	ISO 529							
DIN courte DIN corto	DIN 352							
DIN longue DIN lungo	~DIN 2174							
Tolérance Tolleranza	ISO 2 6H	23	25	25	25	31	31	31
Surcote Maggiorazione	ISO 3 6G		29	29				
Surcote Maggiorazione	7G		29					
Surcote Maggiorazione	+ 0.10 mm + 0.20 mm		29/31					
Tolérance fine Tolleranza fine	ISO 1 4H		27					
LH Filetage à gauche LH Filettatura sinistra	ISO 2 6H	23	27	27				


























N




















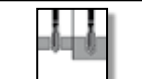




 		 	 	 	 	 	 	 
								
								
<b>N350-3 N350V-3</b>	<b>N360-3</b>	<b>N360V-3</b>	<b>N360TN-3 N360TC-3</b>	<b>N360-5 N360V-5</b>	<b>N361-3</b>	<b>N362V-3</b>	<b>N520-4</b>	<b>N520V-4</b>
32	34	34	34	40	40	40	42	42
32	34	34	34	40	40	40	42	42
	36	36						
	38	38						
	38							
	36	36						
<b>N450-3 N450V-3</b>	<b>N460-3</b>	<b>N460V-3</b>	<b>N460TN-3 N460TC-3</b>	<b>N460-5 N460V-5</b>	<b>N461-3</b>	<b>N462V-3</b>	<b>N620-4</b>	<b>N620V-4</b>
33	35	35	35	41	41	41	43	43
33	35	35	35	41	41	41	43	43
	37	37						
	39	39						
	39							
	37	37						























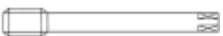


	N						
Caractéristiques Caratteristiche	 <b>TiN</b>	 <b>R40</b>	 <b>V</b>	 <b>R40</b>	 <b>TiN</b>	 <b>R40</b>	
							
Genre de trou Tipo di foro							
	<b>N520TN-4</b>	<b>N560-3</b>	<b>N560V-3</b>	<b>N560TN-3</b>	<b>N1120-4</b>	<b>N1160-3</b>	<b>N1110 -1-2-3-S</b>
<i>DIN longue</i> DIN lungo	DIN 371						
<i>Extra-longue</i> Extra-lungo	DC	42	44	44			
<i>ISO courte</i> ISO corto	ISO 529				78	78	76
<i>DIN courte</i> DIN corto	DIN 352						
<i>DIN longue</i> DIN lungo	~DIN 2174						
<i>Tolérance</i> Tolleranza	ISO 2 6H	42	44	44	78	78	76
<i>Surcote</i> Maggiorazione	ISO 3 6G						
<i>Surcote</i> Maggiorazione	7G						
<i>Surcote</i> Maggiorazione	+ 0.10 mm + 0.20 mm						
<i>Tolérance fine</i> Tolleranza fine	ISO 1 4H						
<i>LH Filetage à gauche</i> LH Filettatura sinistra	ISO 2 6H						
	<b>N620TN-4</b>	<b>N660-3</b>	<b>N660V-3</b>	<b>N660TN-3</b>	<b>N1220-4</b>	<b>N1260-3</b>	<b>N1210 -1-2-3-S</b>
<i>DIN longue</i> DIN lungo	DIN 371						
<i>Extra-longue</i> Extra-lungo	DC	43	45	45			
<i>ISO courte</i> ISO corto	ISO 529				78	78	77
<i>DIN courte</i> DIN corto	DIN 352						
<i>DIN longue</i> DIN lungo	~DIN 2174						
<i>Tolérance</i> Tolleranza	ISO 2 6H	43	45	45	78	78	77
<i>Surcote</i> Maggiorazione	ISO 3 6G						
<i>Surcote</i> Maggiorazione	7G						
<i>Surcote</i> Maggiorazione	+ 0.10 mm + 0.20 mm						
<i>Tolérance fine</i> Tolleranza fine	ISO 1 4H						
<i>LH Filetage à gauche</i> LH Filettatura sinistra	ISO 2 6H						

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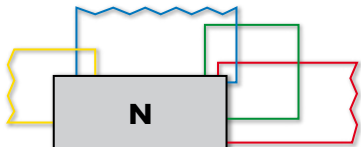

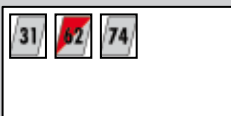




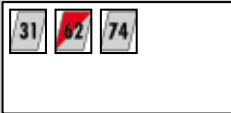

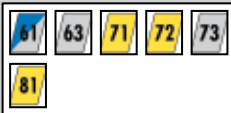



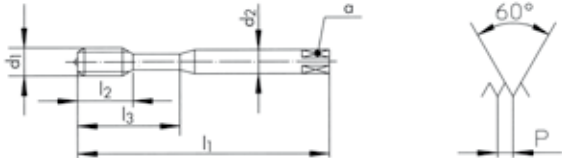







		Z		H		S		SA
<b>Caractéristiques</b> <b>Caratteristiche</b>		 <b>VS</b>	 <b>VS</b>	 <b>TiCN</b>	 <b>TiCN</b>	 <b>VS</b>	 <b>VS</b>	
				 	 			
<b>Genre de trou</b> <b>Tipo di foro</b>								
		<b>Z370VS-3</b>	<b>Z373VS-3</b>	<b>H320-4</b> <b>H320TC-4</b>	<b>H350-3</b> <b>H350TC-3</b>	<b>S320VS-4</b>	<b>S360VS-3</b>	<b>SA320-4</b>
<b>DIN longue</b> <b>DIN lungo</b>	<b>DIN 371</b>	50	50	52	54	56	57	58
<b>Extra-longue</b> <b>Extra-lungo</b>	<b>DC</b>							
<b>ISO courte</b> <b>ISO corto</b>	<b>ISO 529</b>							
<b>DIN courte</b> <b>DIN corto</b>	<b>DIN 352</b>							
<b>DIN longue</b> <b>DIN lungo</b>	<b>~DIN 2174</b>							
<b>Tolérance</b> <b>Tolleranza</b>	<b>ISO 2 6H</b>	50	50	52	54	56	57	58
<b>Surcote</b> <b>Maggiorazione</b>	<b>ISO 3 6G</b>				54			
<b>Surcote</b> <b>Maggiorazione</b>	<b>7G</b>							
<b>Surcote</b> <b>Maggiorazione</b>	<b>+ 0.10 mm</b> <b>+ 0.20 mm</b>							
<b>Tolérance fine</b> <b>Tolleranza fine</b>	<b>ISO 1 4H</b>	50				56		58
<b>LH Filetage à gauche</b> <b>LH Filettatura sinistra</b>	<b>ISO 2 6H</b>							
		<b>Z470VS-3</b>	<b>Z473VS-3</b>	<b>H420-4</b> <b>H420TC-4</b>	<b>H450-3</b> <b>H450TC-3</b>	<b>S420VS-4</b>	<b>S460VS-3</b>	<b>SA420-4</b>
<b>DIN longue</b> <b>DIN lungo</b>	<b>DIN 371</b>	51	51	53	55	56	57	59
<b>Extra-longue</b> <b>Extra-lungo</b>	<b>DC</b>							
<b>ISO courte</b> <b>ISO corto</b>	<b>ISO 529</b>							
<b>DIN courte</b> <b>DIN corto</b>	<b>DIN 352</b>							
<b>DIN longue</b> <b>DIN lungo</b>	<b>~DIN 2174</b>							
<b>Tolérance</b> <b>Tolleranza</b>	<b>ISO 2 6H</b>	51	51	53	55	56	57	59
<b>Surcote</b> <b>Maggiorazione</b>	<b>ISO 3 6G</b>				55			
<b>Surcote</b> <b>Maggiorazione</b>	<b>7G</b>							
<b>Surcote</b> <b>Maggiorazione</b>	<b>+ 0.10 mm</b> <b>+ 0.20 mm</b>							
<b>Tolérance fine</b> <b>Tolleranza fine</b>	<b>ISO 1 4H</b>							59
<b>LH Filetage à gauche</b> <b>LH Filettatura sinistra</b>	<b>ISO 2 6H</b>							

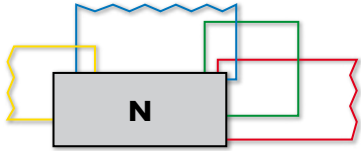








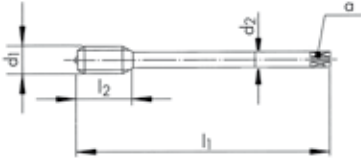





SA		TL		GG			K	
								
								
								
SA350-3	SA390-3	TL320VS-4	TL351VS-3	GG350NV-3 GG550NV-3	GG350TC-3	GG353TC-3	K313TC-3	
58	57	58	58	60 60	60	60	66	
58	57	58	58	60	60	60	66	
58	57	58	58					
SA450-3		TL420VS-4	TL451VS-3	GG450NV-3 GG650NV-3	GG450TC-3	GG453TC-3	K413TC-3 K613TC-3	K613VS-3
59		59	59	61 61	61	61	66 67	67
59		59	59	61	61	61	66/67	67
59		59	59					

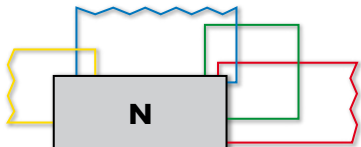

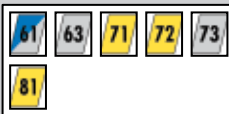





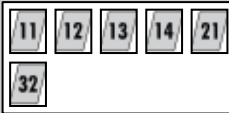












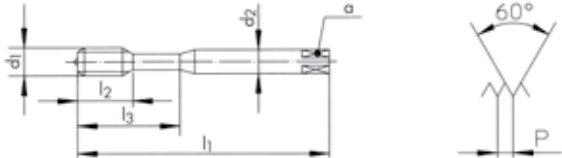











		RTS						
Caractéristiques Caratteristiche		 <b>VS</b>	 <b>VS</b>	 <b>VS</b>	 <b>VS</b>	 <b>E</b> 1.5 x P <b>VS</b>	 <b>VS</b>	 <b>VS</b>
								
Genre de trou Tipo di foro								
		RTS320VS-4	RTS323VS-4	RTS360VS-3 RTS362VS-3	RTS365VS-3	RTS362VS-5 RTS365VS-5	RTS523VS-4	RTS565VS-3
DIN longue DIN lungo	DIN 371	62	62	63	63	64		
Extra-longue Extra-lungo	DC						65	65
ISO courte ISO corto	ISO 529							
DIN courte DIN corto	DIN 352							
DIN longue DIN lungo	~DIN 2174							
Tolérance Tolleranza	ISO 2 6H	62	62	63	63	64	65	65
Surcote Maggiorazione	ISO 3 6G			64				
Surcote Maggiorazione	7G							
Surcote Maggiorazione	+ 0.10 mm + 0.20 mm							
Tolérance fine Tolleranza fine	ISO 1 4H							
LH Filetage à gauche LH Filettatura sinistra	ISO 2 6H							
		RTS420VS-4	RTS423VS-4	RTS462VS-3	RTS465VS-3		RTS623VS-4	RTS665VS-3
DIN longue DIN lungo	DIN 371	62	62	63	63			
Extra-longue Extra-lungo	DC						65	65
ISO courte ISO corto	ISO 529							
DIN courte DIN corto	DIN 352							
DIN longue DIN lungo	~DIN 2174							
Tolérance Tolleranza	ISO 2 6H	62	62	63	63		65	65
Surcote Maggiorazione	ISO 3 6G							
Surcote Maggiorazione	7G							
Surcote Maggiorazione	+ 0.10 mm + 0.20 mm							
Tolérance fine Tolleranza fine	ISO 1 4H							
LH Filetage à gauche LH Filettatura sinistra	ISO 2 6H							

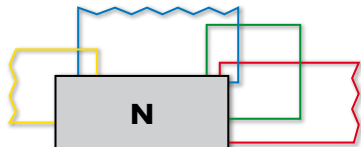

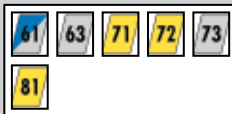





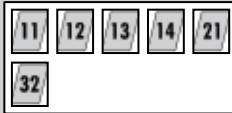
















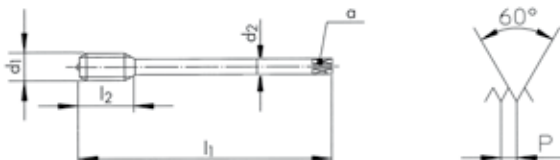








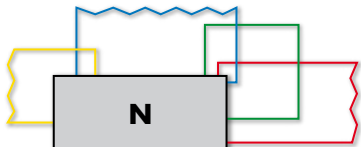


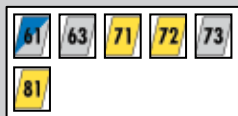

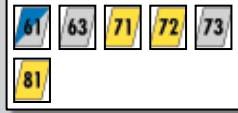

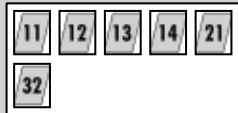
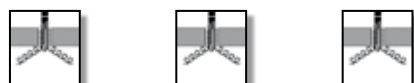
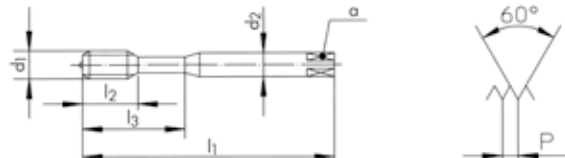
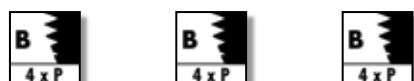





[illegible]

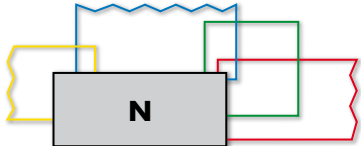






























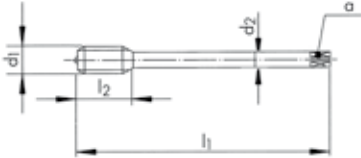










									N310-3	N310-3 LH	N320-3	
N310-3												
N310-3 LH	 LH											
N320-3												
												
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm			ID	ID	ID	
1	0.25	40	5.5		2.5	2.1	3	0.75	150167			
1.1	0.25	40	5.5		2.5	2.1	3	0.85	174745			
1.2	0.25	40	5.5		2.5	2.1	3	0.95	150168			
1.4	0.30	40	7.0		2.5	2.1	3	1.10	150169			
1.5	0.30	40	7.0		2.5	2.1	3	1.20	174752			
1.6	0.35	40	8.0		2.5	2.1	3	1.25	174753			
1.7	0.35	40	8.0		2.5	2.1	3	1.35	174754			
1.8	0.35	40	8.0		2.5	2.1	3	1.45	174755			
2	0.40	45	8.0		2.8	2.1	3	1.60	101439	111460		
2.2	0.45	45	9.0		2.8	2.1	3	1.75	174756			
2.3	0.40	45	9.0		2.8	2.1	3	1.90	174757			
2.5	0.45	50	10.0		2.8	2.1	*3	2.05	101440	111461	* 101461	
2.6	0.45	50	10.0		2.8	2.1	3	2.15	101441			
3	0.50	56	12.0	18	3.5	2.7	*3	2.50	101442	111462	* 101462	
3.5	0.60	56	13.0	20	4.0	3.0	*3	2.90	101443		* 101463	
4	0.70	63	14.0	21	4.5	3.4	*3	3.30	101444	111464	* 101464	
5	0.80	70	15.0	25	6.0	4.9	*3	4.20	101445	111465	* 101465	
6	1.00	80	17.0	30	6.0	4.9	*3	5.00	101446	111466	* 101466	
8	1.25	90	20.0	35	8.0	6.2	3	6.80	101447			
10	1.50	100	22.0	39	10.0	8.0	3	8.50	101438			
* N320-3 =  2									≤ M1.5 			

								N410-3	N410-3 LH		
<b>N410-3</b>  											
<b>N410-3 LH</b>  <b>LH</b> 											
								 			
 								 			
								 			
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID		
3	0.50	56	12.0	2.2	1.8	3	2.50	101897			
4	0.70	63	14.0	2.8	2.1	3	3.30	101924			
5	0.80	70	15.0	3.5	2.7	3	4.20	101942			
6	1.00	80	17.0	4.5	3.4	3	5.00	101953			
7	1.00	80	17.0	5.5	4.3	3	6.00	142645	111491		
8	1.25	90	20.0	6.0	4.9	3	6.80	101958	111492		
10	1.50	100	22.0	7.0	5.5	3	8.50	101866	111478		
12	1.75	110	24.0	9.0	7.0	3	10.20	101870	111479		
14	2.00	110	28.0	11.0	9.0	3	12.00	101874	111480		
16	2.00	110	30.0	12.0	9.0	3	14.00	101880	111481		
18	2.50	125	33.0	14.0	11.0	3	15.50	101883	111482		
20	2.50	140	36.0	16.0	12.0	3	17.50	101885	125530		
22	2.50	140	36.0	18.0	14.5	3	19.50	101888			
24	3.00	160	39.0	18.0	14.5	4	21.00	101891	111485		
27	3.00	160	42.0	20.0	16.0	4	24.00	101895	111486		
30	3.50	180	45.0	22.0	18.0	4	26.50	101901	111487		
33	3.50	180	48.0	25.0	20.0	4	29.50	101907			
36	4.00	200	51.0	28.0	22.0	4	32.00	101915	111488		
39	4.00	200	55.0	32.0	24.0	4	35.00	101922			
42	4.50	200	55.0	32.0	24.0	4	37.50	101932			
48	5.00	250	63.0	36.0	29.0	4	43.00	111489			
56	5.50	280	71.0	45.0	35.0	5	50.50	111447			

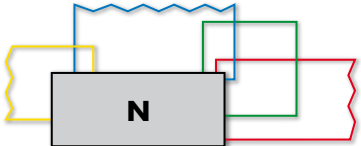




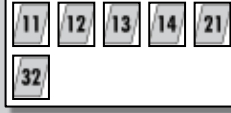

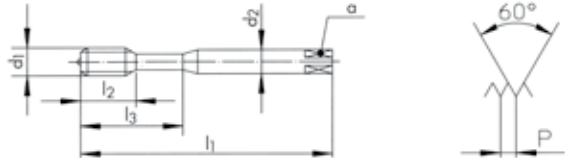
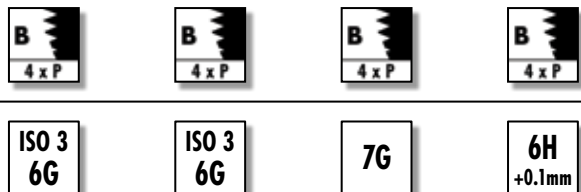

									N320-4	N320V-4	N320TN-4	N320TC-4
N320-4												
N320V-4	 V											
N320TN-4	 TiN											
N320TC-4	 TiCN											
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
*1	0.25	40	5.5		2.5	2.1	2	0.75	111467			
*1.1	0.25	40	5.5		2.5	2.1	2	0.85	111468			
*1.2	0.25	40	5.5		2.5	2.1	2	0.95	111469			
*1.4	0.30	40	7.0		2.5	2.1	2	1.10	111470			
*1.5	0.30	40	7.0		2.5	2.1	2	1.20	111471			
*1.6	0.35	40	8.0		2.5	2.1	2	1.25	101454			
*1.7	0.35	40	8.0		2.5	2.1	2	1.35	101455			
*1.8	0.35	40	8.0		2.5	2.1	2	1.45	101456			
*2	0.40	45	8.0		2.8	2.1	2	1.60	101458	101536	101528	152900
*2.2	0.45	45	9.0		2.8	2.1	2	1.75	101459			
*2.3	0.40	45	9.0		2.8	2.1	2	1.90	101460			
2.5	0.45	50	10.0		2.8	2.1	3	2.05	101483	101545	101530	101522
2.6	0.45	50	10.0		2.8	2.1	3	2.15	101484			
3	0.50	56	12.0	18	3.5	2.7	3	2.50	101485	101546	101531	101523
3.5	0.60	56	13.0	20	4.0	3.0	3	2.90	101491	101547		
4	0.70	63	14.0	21	4.5	3.4	3	3.30	101495	101548	101532	101524
5	0.80	70	15.0	25	6.0	4.9	3	4.20	101499	101549	101533	101525
6	1.00	80	17.0	30	6.0	4.9	3	5.00	101503	101550	101534	101526
8	1.25	90	20.0	35	8.0	6.2	3	6.80	101506	101551	101535	101527
10	1.50	100	22.0	39	10.0	8.0	3	8.50	101481	101544	101529	101521
* N320-3 / N320V-3 N320TN-3 / N320TC-3												
									≤ M1.5	ISO 1 4H		

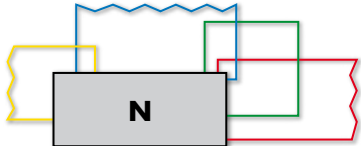




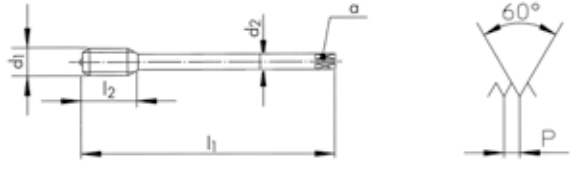


								N420-4	N420V-4	N420TN-4	N420TC-4
N420-4											
N420V-4	 V										
N420TN-4	 TiN										
N420TC-4	 TiCN										
											
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID	ID
3	0.50	56	12.0	2.2	1.8	3	2.50	102119	143418		
4	0.70	63	14.0	2.8	2.1	3	3.30	102146	102279		
5	0.80	70	15.0	3.5	2.7	3	4.20	102171	102280	146297	
6	1.00	80	17.0	4.5	3.4	3	5.00	102182	102282	147439	
7	1.00	80	17.0	5.5	4.3	3	6.00	102189	144713		
8	1.25	90	20.0	6.0	4.9	3	6.80	102195	102285	102251	102233
9	1.25	90	20.0	7.0	5.5	3	7.80	102202			
10	1.50	100	22.0	7.0	5.5	3	8.50	102061	102263	102240	102228
11	1.50	100	19.0	8.0	6.2	3	9.50	162770			
12	1.75	110	24.0	9.0	7.0	3	10.20	102072	102265	102243	102229
14	2.00	110	28.0	11.0	9.0	3	12.00	102081	102267	102245	
16	2.00	110	30.0	12.0	9.0	3	14.00	102090	102269	102247	102231
18	2.50	125	33.0	14.0	11.0	3	15.50	102097	102271		
20	2.50	140	36.0	16.0	12.0	3	17.50	102101	102273	102248	102232
22	2.50	140	36.0	18.0	14.5	3	19.50	102106	102275		
24	3.00	160	39.0	18.0	14.5	4	21.00	102110	102278	144220	163736
27	3.00	160	42.0	20.0	16.0	4	24.00	102117	143856		
30	3.50	180	45.0	22.0	18.0	4	26.50	102124	105124		
33	3.50	180	48.0	25.0	20.0	4	29.50	102130	146968		
36	4.00	200	51.0	28.0	22.0	4	32.00	102137	143430		
39	4.00	200	55.0	32.0	24.0	4	35.00	102144	158724		
42	4.50	200	55.0	32.0	24.0	4	37.50	102158	143107		
45	4.50	220	59.0	36.0	29.0	4	40.50	* 110225			
48	5.00	250	63.0	36.0	29.0	4	43.00	110226	157517		
56	5.50	280	71.0	45.0	35.0	5	50.50	110229	158178		

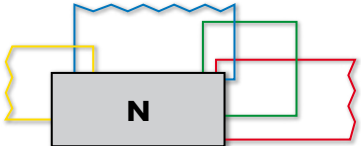




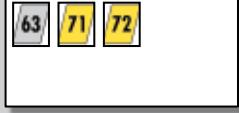


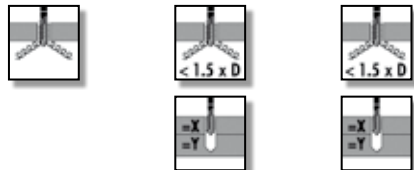
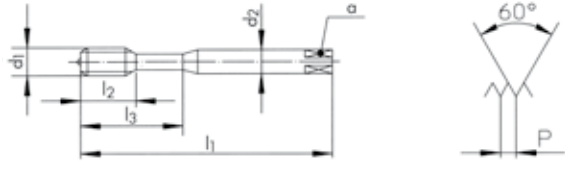

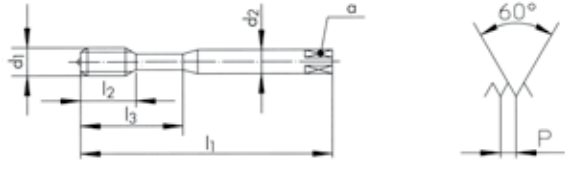

									N320-4	N320-4 LH	N320V-4 LH								
																			
N320-4																			
N320-4 LH	 LH																		
N320V-4 LH	 V LH																		
																			
																			
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID								
*2	0.40	45	8.0		2.8	2.1	2	1.60	162503	111472	162771								
2.5	0.45	50	10.0		2.8	2.1	3	2.05	159345										
3	0.50	56	12.0	18	3.5	2.7	3	2.50	101487	111473	162772								
4	0.70	63	14.0	21	4.5	3.4	3	3.30	101493	111474	162773								
5	0.80	70	15.0	25	6.0	4.9	3	4.20	101497	111475	162774								
6	1.00	80	17.0	30	6.0	4.9	3	5.00	101501	111476	162775								
8	1.25	90	20.0	35	8.0	6.2	3	6.80	* 146482										
10	1.50	100	22.0	39	10.0	8.0	3	8.50	* 146484										
<p>* N320-3 </p> <p> = 6.70</p>																			

									N420-4	N420-4 LH	N420V-4 LH	
<b>N420-4</b>       												
<b>N420-4 LH</b>  <b>LH</b>      												
<b>N420V-4 LH</b>  <b>V</b> <b>LH</b>      												
												
												
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm				ID	ID	ID	
8	1.25	90	20.0	6.0	4.9	3	$\Delta$	6.80	102193	102198	142621	
10	1.50	100	22.0	7.0	5.5	3		8.50	102059	102064	143287	
12	1.75	110	24.0	9.0	7.0	3		10.20	102070	102040	146583	
14	2.00	110	28.0	11.0	9.0	3		12.00		102084	146563	
16	2.00	110	30.0	12.0	9.0	3		14.00		102093	143108	
20	2.50	140	36.0	16.0	12.0	3		17.50		102103	145579	
24	3.00	160	39.0	18.0	14.5	4		21.00		111493	145578	
30	3.50	180	45.0	22.0	18.0	4		26.50		* 111494		
$\Delta$  = 6.70 												



									N320-4	N320V-4	N320-4	N320-4
												
<p><b>N320-4</b></p>   <p><b>N320V-4</b></p>  												
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		6H → ←	ID 6H + mm	ID 6H + mm	ID 6H + mm	ID
*2	0.40	45	8.0		2.8	2.1	2	1.60	101457 0.019	143584 0.019		
2.5	0.45	50	10.0		2.8	2.1	3	2.05	101482 0.020	150522 0.020		
3	0.50	56	12.0	18	3.5	2.7	3	2.50	101486 0.020	143116 0.020	101489 0.036	101488
3.5	0.60	56	13.0	20	4.0	3.0	3	2.95	101490 0.021			
4	0.70	63	14.0	21	4.5	3.4	3	3.35	101494 0.022	143087 0.022	101496 0.041	111522
5	0.80	70	15.0	25	6.0	4.9	3	4.25	101498 0.024	143088 0.024	101500 0.044	111523
6	1.00	80	17.0	30	6.0	4.9	3	5.00	101502 0.026	143089 0.026	101504 0.050	111524
8	1.25	90	20.0	35	8.0	6.2	3	6.80	101505 0.028	143604 0.028		
<p>* N320-3 / N320V-3</p> 												

								N420-4	N420V-4	N420-4	N420-4
											
<p><b>N420-4</b></p>  <p><b>N420V-4</b></p> 											
											
											
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		6H → ←	ID 6H + mm	ID 6H + mm	ID 6H + mm	ID
8	1.25	90	20.0	6.0	4.9	3	6.80	102194 0.028	145246 0.028	102199 0.052	102196
10	1.50	100	22.0	7.0	5.5	3	8.50	102060 0.032	143726 0.032	102065 0.060	102062
12	1.75	110	24.0	9.0	7.0	3	10.30	102071 0.034	145655 0.034	102076 0.066	102073
16	2.00	110	30.0	12.0	9.0	3	14.00	135531 0.038	162795 0.038	102094 0.072	102091

									N321-4	N330-4	N330V-4	
												
<p><b>N321-4</b></p>  												
<p><b>N330-4</b></p>  												
<p><b>N330V-4</b></p>  												
												
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		6H	ID	ID	ID	
*1	0.25	40	5.5		2.5	2.1	2	0.75		101558		
*1.1	0.25	40	5.5		2.5	2.1	2	0.85		* 101559		
*1.2	0.25	40	5.5		2.5	2.1	2	0.95		101560		
*1.4	0.30	40	7.0		2.5	2.1	2	1.10		101561		
*1.6	0.35	40	8.0		2.5	2.1	2	1.25		101562	151246	
*1.7	0.35	40	8.0		2.5	2.1	2	1.35		* 101563		
*2	0.40	45	8.0		2.8	2.1	2	1.60	101552	105125	101572	
*2.2	0.45	45	9.0		2.8	2.1	2	1.75		* 105126		
*2.3	0.40	45	9.0		2.8	2.1	2	1.90		* 105127		
2.5	0.45	50	10.0		2.8	2.1	*3	2.05	101553	101565	101573	
2.6	0.45	50	10.0		2.8	2.1	2	2.15		* 101566		
3	0.50	56	12.0	18	3.5	2.7	*3	2.50	101555	101567	101574	
3.5	0.60	56	13.0	20	4.0	3.0	2	2.90		101568		
4	0.70	63	14.0	21	4.5	3.4	3	3.30	101557	101569	101576	
5	0.80	70	15.0	25	6.0	4.9	3	4.20		101570	101577	
6	1.00	80	17.0	30	6.0	4.9	3	5.00		101571	101578	

\* N321-3 / N330-3 / N330V-3



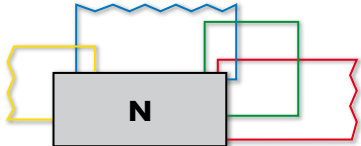







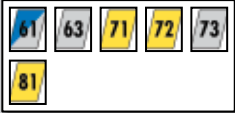











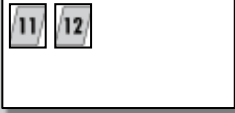




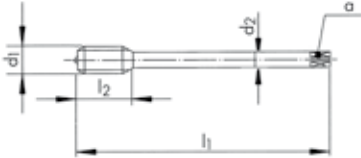















\* N330-4 = 2

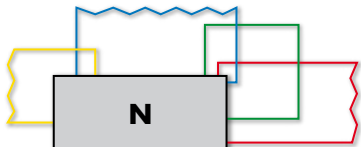




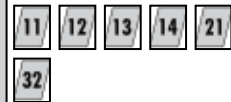


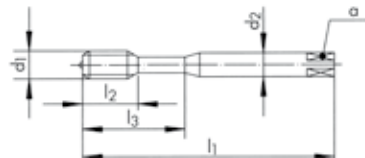










\* N330V-4 = 2

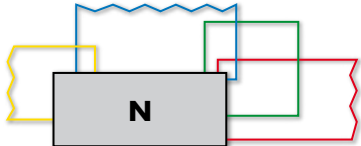

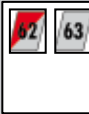





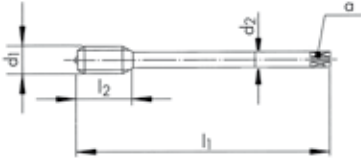




≤ M1.5

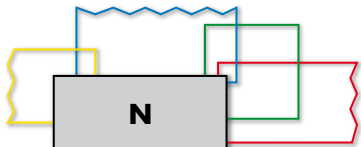























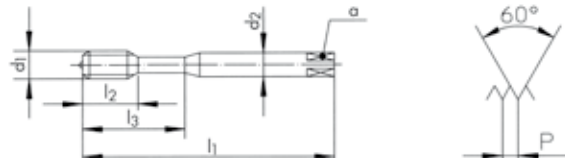




ISO 1  
4H

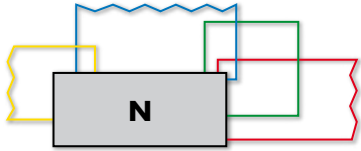








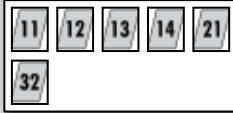






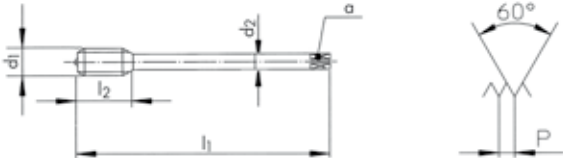










								N420-4	N421-4	N430-4	N430V-4
<b>N420-4</b>  											
<b>N421-4</b>  											
<b>N430-4</b>  											
<b>N430V-4</b>  											
 											
   											
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		 6H	ID	ID	ID	ID
4	0.70	63	14.0	2.8	2.1	3	3.30		102293		
5	0.80	70	15.0	3.5	2.7	3	4.20		102294		
6	1.00	80	17.0	4.5	3.4	3	5.00		102295		
8	1.25	90	20.0	6.0	4.9	3	6.80	102197	102296	102301	102306
10	1.50	100	22.0	7.0	5.5	3	8.50	102063	102286	102297	102302
12	1.75	110	24.0	9.0	7.0	3	10.20	102074	102287	102298	102303
14	2.00	110	28.0	11.0	9.0	3	12.00		* 102288		
16	2.00	110	30.0	12.0	9.0	3	14.00	102092	102289		

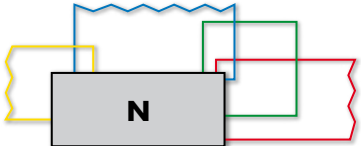







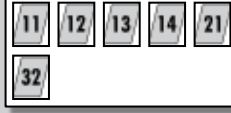











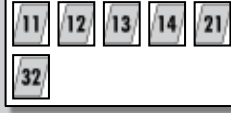




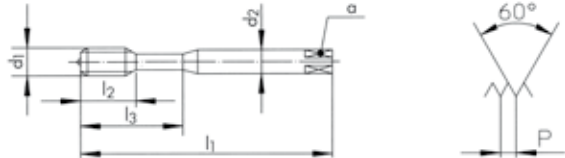










									N350-3	N350V-3		
<div>N350-3</div> <div></div> <div></div> <div>N350V-3</div> <div></div> <div></div> <div></div>									 			
 									 			
												
												
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm			ID	ID		
2	0.40	45	8.0		2.8	2.1	2	1.60	101580	101593		
2.3	0.40	45	9.0		2.8	2.1	2	1.90	101581			
2.5	0.45	50	10.0		2.8	2.1	2	2.05	101582	101594		
2.6	0.45	50	10.0		2.8	2.1	2	2.15	101583			
3	0.50	56	12.0	18	3.5	2.7	2	2.50	101584	101595		
3.5	0.60	56	13.0	20	4.0	3.0	2	2.90	101585			
4	0.70	63	14.0	21	4.5	3.4	2	3.30	101587	101596		
5	0.80	70	15.0	25	6.0	4.9	3	4.20	101589	101597		
6	1.00	80	17.0	30	6.0	4.9	3	5.00	101591	101598		
8	1.25	90	20.0	35	8.0	6.2	3	6.80	101592	146810		
10	1.50	100	22.0	39	10.0	8.0	3	8.50	101579	147217		

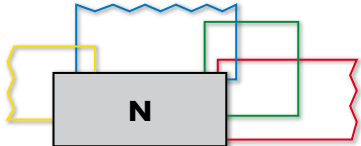













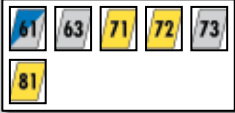





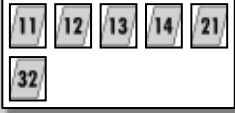




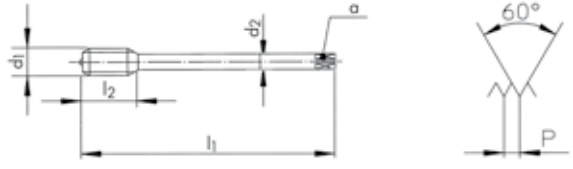






								N450-3	N450V-3		
<p><b>N450-3</b></p>  											
<p><b>N450V-3</b></p>   											
 											
								 			
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID		
8	1.25	90	20.0	6.0	4.9	3	6.80	102327	102334		
10	1.50	100	22.0	7.0	5.5	3	8.50	102314	102329		
12	1.75	110	24.0	9.0	7.0	3	10.20	102317	102330		
14	2.00	110	28.0	11.0	9.0	3	12.00	102319	145487		
16	2.00	110	30.0	12.0	9.0	3	14.00	102321	102331		
20	2.50	140	36.0	16.0	12.0	4	17.50	102324	102332		
24	3.00	160	39.0	18.0	14.5	4	21.00	102325	102333		

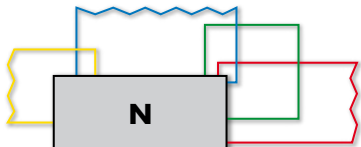







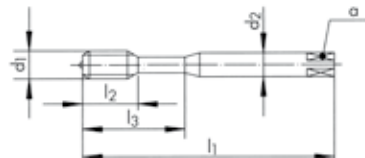











									N360-3	N360V-3	N360TN-3	N360TC-3
<div><div>N360-3</div><div></div><div><div>6163717273</div><div>81</div></div></div>												
<div><div>N360V-3</div><div></div><div><div>1112131421</div><div>32</div></div></div>									<div></div>			
<div><div>N360TN-3</div><div></div><div><div>1112131421</div><div>31327374</div></div></div>									<div></div>			
<div><div>N360TC-3</div><div></div><div><div>111213142131</div><div>3273748283</div></div></div>									<div></div>			
<div></div>												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
2	0.40	45	7.0		2.8	2.1	2	1.60	101618	101708	101697	146842
2.2	0.45	45	8.0		2.8	2.1	2	1.75	101619			
2.3	0.40	45	8.0		2.8	2.1	2	1.90	101620			
2.5	0.45	50	9.0		2.8	2.1	2	2.05	101622	101709	101698	101689
2.6	0.45	50	9.0		2.8	2.1	2	2.15	101623	101710		
3	0.50	56	5.5	18	3.5	2.7	3	2.50	101626	101711	101699	101690
3.5	0.60	56	6.5	20	4.0	3.0	3	2.90	101630	142625		
4	0.70	63	7.5	21	4.5	3.4	3	3.30	101635	101713	101700	101691
4.5	0.75	70	9.0	25	6.0	4.9	3	3.75	101639			
5	0.80	70	9.0	25	6.0	4.9	3	4.20	101644	101715	101701	101692
6	1.00	80	11.0	30	6.0	4.9	3	5.00	101652	101717	101703	101693
7	1.00	80	11.0	30	7.0	5.5	3	6.00	101656	101718		
8	1.25	90	12.5	35	8.0	6.2	3	6.80	101663	101721	101705	101694
9	1.25	90	12.5	35	9.0	7.0	3	7.80	101668			
10	1.50	100	14.0	39	10.0	8.0	3	8.50	101612	101707	101696	101688

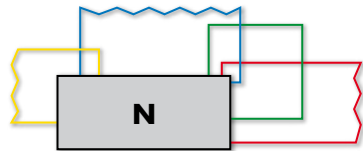










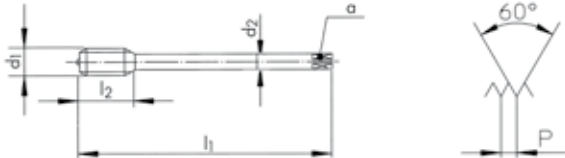












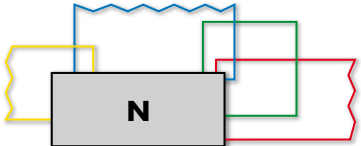





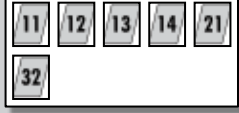





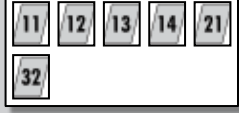
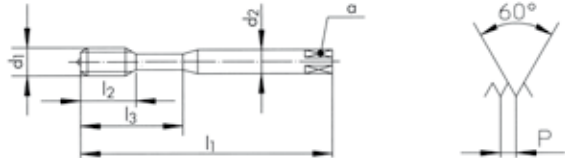


								N460-3	N460V-3	N460TN-3	N460TC-3
<b>N460-3</b>  											
<b>N460V-3</b>   											
<b>N460TN-3</b>   											
<b>N460TC-3</b>   											
											
											
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID	ID
5	0.80	70	9.0	3.5	2.7	3	4.20	102410	102489	160682	
6	1.00	80	11.0	4.5	3.4	3	5.00	102411	102491	152850	
8	1.25	90	12.5	6.0	4.9	3	6.80	102412	102492	152849	
10	1.50	100	14.0	7.0	5.5	3	8.50	102351	102461	150242	158687
12	1.75	110	14.0	9.0	7.0	3	10.20	102359	102465	102449	102438
14	2.00	110	14.0	11.0	9.0	3	12.00	102369	102468	102451	111615
16	2.00	110	18.0	12.0	9.0	3	14.00	102376	102471	102453	102440
18	2.50	125	21.0	14.0	11.0	3	15.50	102383	102473		
20	2.50	140	24.0	16.0	12.0	4	17.50	102389	102475	102454	143280
22	2.50	140	24.0	18.0	14.5	4	19.50	102394	102477		
24	3.00	160	27.0	18.0	14.5	4	21.00	102398	102480	143119	150018
27	3.00	160	27.0	20.0	16.0	4	24.00	175423	102481		
30	3.50	180	30.0	22.0	18.0	4	26.50	150246	102482		
33	3.50	180	33.0	25.0	20.0	4	29.50	167621	102483		
36	4.00	200	36.0	28.0	22.0	5	32.00	143914	102484		
39	4.00	200	40.0	32.0	24.0	5	35.00	175424	102485		
42	4.50	200	40.0	32.0	24.0	5	37.50	169122	102486		
45	4.50	220	44.0	36.0	29.0	5	40.50		102487		
48	5.00	250	48.0	36.0	29.0	5	43.00		102488		
52	5.00	250	52.0	40.0	32.0	5	47.00		110228		
56	5.50	280	56.0	45.0	35.0	6	50.50		102490		
64	6.00	315	64.0	50.0	39.0	6	58.00		143805		

									N360-3 LH	N360V-3 LH	N360-3	N360V-3
<b>N360-3 LH</b>  <b>LH</b> 												
<b>N360V-3 LH</b>  <b>V LH</b> 												
<b>N360-3</b>  												
<b>N360V-3</b>  <b>V</b> 												
												
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID + mm	ID + mm
2	0.40	45	7.0		2.8	2.1	2	1.60			101617 0.019	146000 0.019
2.5	0.45	50	9.0		2.8	2.1	2	2.05			101621 0.020	143294 0.020
3	0.50	56	5.5	18	3.5	2.7	3	2.50	101627	146811	101625 0.020	104816 0.020
3.5	0.60	56	6.5	20	4.0	3.0	3	2.95			101629 0.021	125829 0.021
4	0.70	63	7.5	21	4.5	3.4	3	3.30	101637	162540	101634 0.022	104817 0.022
5	0.80	70	9.0	25	6.0	4.9	3	4.20	101646	144003	101643 0.024	104818 0.024
6	1.00	80	11.0	30	6.0	4.9	3	5.00	101654	144004	101669 0.026	104819 0.026
8	1.25	90	12.5	35	8.0	6.2	3	6.80	101666	143925	101662 0.028	104820 0.028
10	1.50	100	14.0	39	10.0	8.0	3	8.50	101615	143587	101611 0.032	104821 0.032

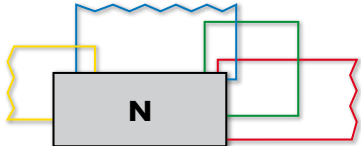











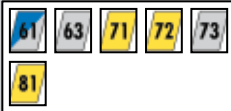








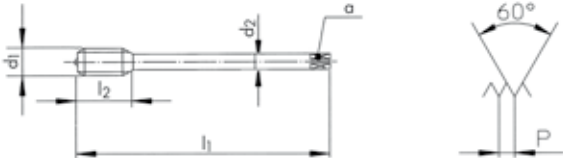










								N460-3 LH	N460V-3 LH	N460-3	N460V-3
<b>N460-3 LH</b>  <b>LH</b> 											
<b>N460V-3 LH</b>  <b>V LH</b> 											
<b>N460-3</b>  											
<b>N460V-3</b>  <b>V</b> 											
											
								<b>ISO 2 6H</b>	<b>ISO 2 6H</b>	<b>ISO 3 6G</b>	<b>ISO 3 6G</b>
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID $6H$ + mm	ID $6H$ + mm
12	1.75	110	14.0	9.0	7.0	3	10.20	102362	146354	102358 0.034	143602 0.034
14	2.00	110	14.0	11.0	9.0	3	12.00			102368 0.038	144712 0.038
16	2.00	110	18.0	12.0	9.0	3	14.00	102378	143439	102375 0.038	150197 0.038
20	2.50	140	24.0	16.0	12.0	4	17.50	102390	146564	102388 0.042	145420 0.042

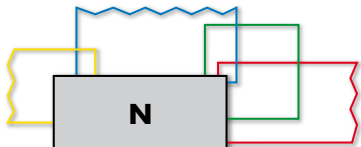








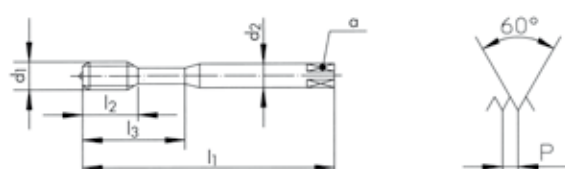








									N360-3	N360-3	N360V-3	N360-3		
<div><div>N360-3</div><div></div><div><div>61</div><div>63</div><div>71</div><div>72</div><div>73</div><div>81</div></div></div> <div><div>N360V-3</div><div></div><div><div>V</div></div><div><div>11</div><div>12</div><div>13</div><div>14</div><div>21</div><div>32</div></div></div>														
														
 														
														
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$a$ mm			ID	ID	$6H$ + mm	ID	$6H$ + mm	ID
3	0.50	56	5.5	18	3.5	2.7	3	2.50	101624	101628	0.036	144311	0.036	160847
4	0.70	63	7.5	21	4.5	3.4	3	3.30	101633	101638	0.041	144192	0.041	101636
5	0.80	70	9.0	25	6.0	4.9	3	4.20	101642	101647	0.044	143208	0.044	101645
6	1.00	80	11.0	30	6.0	4.9	3	5.00	101651	101655	0.050	146709	0.050	101653
8	1.25	90	12.5	35	8.0	6.2	3	$\Delta$ 6.80	101661	101667	0.052	146267	0.052	101664
10	1.50	100	14.0	39	10.0	8.0	3	8.50	101610	101616	0.060	142547	0.060	101613

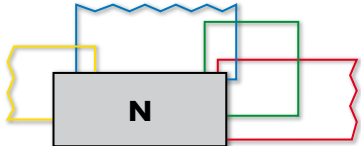






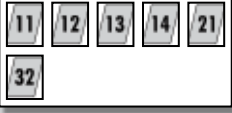


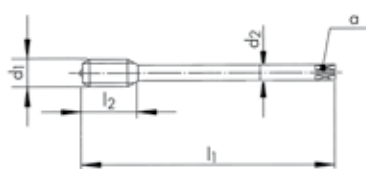









								N460-3	N460-3	N460V-3	N460-3		
<div><div>N460-3</div><div></div><div><div>6163717273</div><div>81</div></div></div> <div><div>N460V-3</div><div><div>V</div></div><div><div>1112131421</div><div>32</div></div></div>													
													
													
													
$\varnothing d_1$	P	$l_1$	$l_2$	$d_2$	$\alpha$			ID	ID	6H + mm	ID	6H + mm	ID
M	mm	mm	mm	mm	mm								
12	1.75	110	14.0	9.0	7.0	3	10.20	* 124987	102363	0.066	142532	0.066	102360
16	2.00	110	18.0	12.0	9.0	3	14.00		102379	0.072	144956	0.072	102377

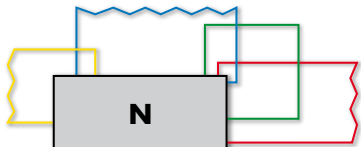

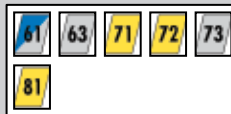



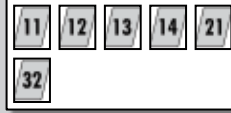








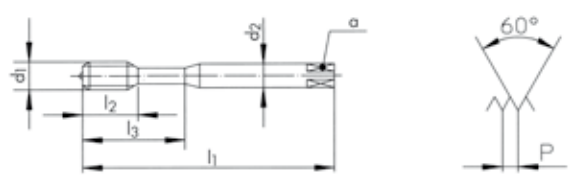








									N360-5	N360V-5	N361-3	N362V-3
												
<p><b>N360-5</b></p>  												
<p><b>N360V-5</b></p>   												
<p><b>N361-3</b></p>  												
<p><b>N362V-3</b></p>   												
												
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
2	0.40	45	7.0		2.8	2.1	2	1.60	158079	150058		
3	0.50	56	5.5	18	3.5	2.7	3	2.50	104809	142646	101735	
4	0.70	63	7.5	21	4.5	3.4	3	3.30	104810	142647	101736	101741
5	0.80	70	9.0	25	6.0	4.9	3	4.20	104811	142648	101737	101742
6	1.00	80	11.0	30	6.0	4.9	3	5.00	104812	142649	101738	101743
8	1.25	90	12.5	35	8.0	6.2	3	6.80	104813	142650	101739	101744
10	1.50	100	14.0	39	10.0	8.0	3	8.50	104814	124899	101734	101740

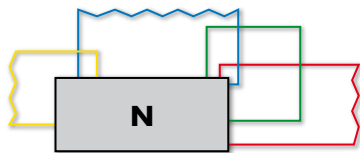


								N460-5	N460V-5	N461-3	N462V-3
<b>N460-5</b>  											
<b>N460V-5</b>   											
<b>N461-3</b>   											
<b>N462V-3</b>    											
											
											
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm			ID	ID	ID	ID
12	1.75	110	14.0	9.0	7.0	3	10.20	104815	142651	102506	102512
14	2.00	110	14.0	11.0	9.0	3	12.00			* 102507	102513
16	2.00	110	18.0	12.0	9.0	3	14.00			* 102508	102514
18	2.50	125	21.0	14.0	11.0	3	15.50			* 111614	102515
20	2.50	140	24.0	16.0	12.0	4	17.50				102516
24	3.00	160	27.0	18.0	14.5	4	21.00				102517
27	3.00	160	27.0	20.0	16.0	4	24.00				159244
30	3.50	180	30.0	22.0	18.0	4	26.50				143090

									N520-4	N520V-4	N520TN-4		
													
N520-4		<div><div>61</div><div>63</div><div>71</div><div>72</div><div>73</div><div>81</div></div>											
N520V-4			<div><div>11</div><div>12</div><div>13</div><div>14</div><div>21</div><div>32</div></div>										
N520TN-4			<div><div>11</div><div>12</div><div>13</div><div>14</div><div>21</div><div>31</div><div>32</div><div>73</div><div>74</div></div>										
													
													
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID		
2.5	0.45	100	10.0		2.8	2.1	3	2.05	102594	142623			
3	0.50	112	12.0	18	3.5	2.7	3	2.50	102595	143399	162790		
4	0.70	112	14.0	21	4.5	3.4	3	3.30	102596	143400	146837		
5	0.80	125	15.0	25	6.0	4.9	3	4.20	102597	142654	150113		
6	1.00	125	17.0	30	6.0	4.9	3	5.00	102598	143137	148821		

								N620-4	N620V-4	N620TN-4	
<b>N620-4</b>  											
<b>N620V-4</b>  <b>V</b> 											
<b>N620TN-4</b>  <b>TiN</b> 											
 											
											
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm			ID	ID	ID	
4	0.70	112	14.0	2.8	2.1	3	3.30	102619	142582	146442	
5	0.80	125	15.0	3.5	2.7	3	4.20	102620	142657	146443	
6	1.00	125	17.0	4.5	3.4	3	5.00	102621	142658	144591	
8	1.25	140	20.0	6.0	4.9	3	6.80	102622	143401	146262	
10	1.50	160	22.0	7.0	5.5	3	8.50	102614	142660	146849	
12	1.75	180	24.0	9.0	7.0	3	10.20	102615	143127	146295	
14	2.00	180	28.0	11.0	9.0	3	12.00	102616	151905		
16	2.00	200	30.0	12.0	9.0	3	14.00	102617	143106	143574	
20	2.50	224	36.0	16.0	12.0	3	17.50	102618	143596		

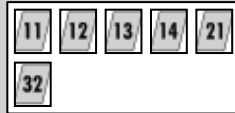
									N560-3	N560V-3	N560TN-3								
																			
N560-3																			
N560V-3	 																		
N560TN-3	 																		
																			
																			
																			
																			
																			
																			
																			
																			
																			
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID								
2.5	0.45	100	9.0		2.8	2.1	2	2.05	102600	102607									
3	0.50	112	5.5	18	3.5	2.7	3	2.50	102601	102608	142663								
4	0.70	112	7.5	21	4.5	3.4	3	3.30	102602	102609	142664								
5	0.80	125	9.0	25	6.0	4.9	3	4.20	102603	102610	142665								
6	1.00	125	11.0	30	6.0	4.9	3	5.00	102604	102611	142666								
8	1.25	140	12.5	35	8.0	6.2	3	6.80	102605	102612	142667								
10	1.50	160	14.0	39	10.0	8.0	3	8.50	102599	102606	142668								



N660-3



N660V-3



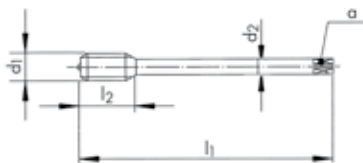
N660TN-3



N660-3

N660V-3

N660TN-3



$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
6	1.00	125	11.0	4.5	3.4	3	5.00
8	1.25	140	12.5	6.0	4.9	3	6.80
10	1.50	160	14.0	7.0	5.5	3	8.50
12	1.75	180	14.0	9.0	7.0	3	10.20
14	2.00	180	14.0	11.0	9.0	3	12.00
16	2.00	200	18.0	12.0	9.0	3	14.00
20	2.50	224	24.0	16.0	12.0	4	17.50

ID

ID

ID

162792

115657

162793

115544

162794

135539

173484

102623

102626

142669

162253

147500

102624

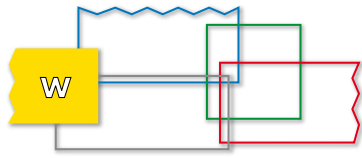
















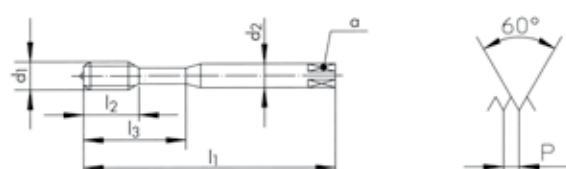







102627

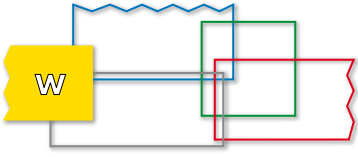












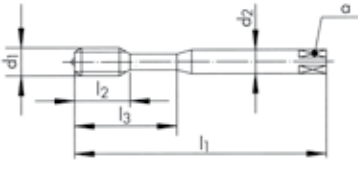













142670

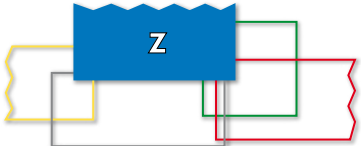




























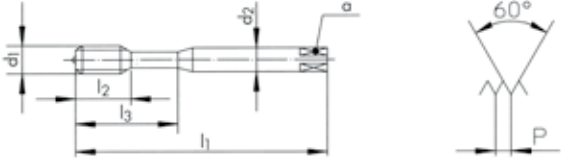






102625

102628



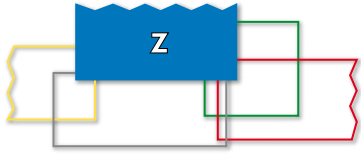









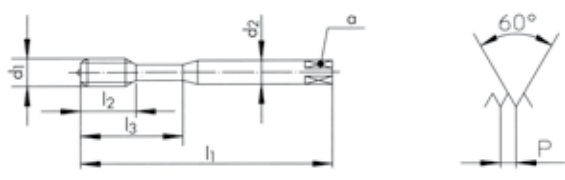






									W320-4	W420-4	W320DL-4	W420DL-4
W320-4												
W420-4											<b>NEW</b>	<b>NEW</b>
W320DL-4		<b>DL</b>										
W420DL-4		<b>DL</b>										
												
									<b>ISO 2 6H</b>	<b>ISO 2 6H</b>	<b>ISO 2 6H</b>	<b>ISO 2 6H</b>
$\varnothing d_1$ <b>M</b>	<b>P</b> mm	<b>l<sub>1</sub></b> mm	<b>l<sub>2</sub></b> mm	<b>l<sub>3</sub></b> mm	<b>d<sub>2</sub></b> mm	<b>a</b> mm			<b>ID</b>	<b>ID</b>	<b>ID</b>	<b>ID</b>
*2	0.40	45	8.0		2.8	2.1	2	1.60	104612		176688	
2.5	0.45	50	10.0		2.8	2.1	2	2.05	104613		176689	
2.6	0.45	50	10.0		2.8	2.1	2	2.15	* 104614			
3	0.50	56	12.0	18	3.5	2.7	2	2.50	104615		176690	
3.5	0.60	56	13.0	20	4.0	3.0	2	2.90	* 104616			
4	0.70	63	14.0	21	4.5	3.4	2	3.30	104617		176691	
5	0.80	70	15.0	25	6.0	4.9	2	4.20	104618		176354	
6	1.00	80	17.0	30	6.0	4.9	2	5.00	104619		175590	
8	1.25	90	20.0		6.0	4.9	2	6.80		104636		176692
10	1.50	100	22.0		7.0	5.5	2	8.50		104632		176693
12	1.75	110	24.0		9.0	7.0	3	10.20		104633		176694
16	2.00	110	30.0		12.0	9.0	3	14.00		104634		176695
* W320-3 												
* W320DL-3												

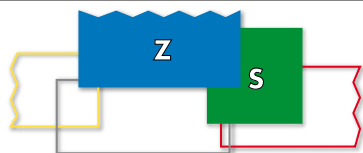
									W360-3	W460-3	W360DL-3	W460DL-3
<b>W360-3</b>  												
<b>W460-3</b>  												
<b>W360DL-3</b>  <b>DL</b> 												
<b>W460DL-3</b>  <b>DL</b> 												
 									   			
   									   			
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm			ID	ID	ID	ID
2	0.40	45	7.0		2.8	2.1	2	1.60	104625		176719	
2.5	0.45	50	9.0		2.8	2.1	2	2.05	104626		176720	
3	0.50	56	5.5	18	3.5	2.7	2	2.50	104627		176721	
4	0.70	63	7.5	21	4.5	3.4	2	3.30	104628		176722	
5	0.80	70	9.0	25	6.0	4.9	2	4.20	104629		176723	
6	1.00	80	11.0	30	6.0	4.9	2	5.00	104630		176355	
8	1.25	90	12.5	35	8.0	6.2	2	6.80	104631		176724	
10	1.50	100	14.0	39	10.0	8.0	2	8.50	104624		176725	
12	1.75	110	14.0		9.0	7.0	3	10.20		104640		176726
16	2.00	110	18.0		12.0	9.0	3	14.00		104641		176727

									Z320V-4	Z420V-4	Z320VS-4	Z420VS-4
<b>Z320V-4</b>   												
<b>Z420V-4</b>   												
<b>Z320VS-4</b>   												
<b>Z420VS-4</b>   												
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
*1.6	0.35	40	8.0		2.5	2.1	2	1.25	142671			
*2	0.40	45	8.0		2.8	2.1	2	1.60	111613			
2.5	0.45	50	10.0		2.8	2.1	3	2.05	111455		143683	
2.6	0.45	50	10.0		2.8	2.1	3	2.15	142672			
3	0.50	56	12.0	18	3.5	2.7	3	2.50	104669		104830	
4	0.70	63	14.0	21	4.5	3.4	3	3.30	104670		104831	
5	0.80	70	15.0	25	6.0	4.9	3	4.20	104671		104832	
6	1.00	80	17.0	30	6.0	4.9	3	5.00	104672		104833	
8	1.25	90	20.0	35	8.0	6.2	3	6.80	104673		104834	
10	1.50	100	22.0	39	10.0	8.0	3	8.50	104668		104835	
12	1.75	110	24.0		9.0	7.0	3	10.20		104723		104836
14	2.00	110	28.0		11.0	9.0	3	12.00		142673		143684
16	2.00	110	30.0		12.0	9.0	3	14.00		105068		111569
18	2.50	125	33.0		14.0	11.0	4	15.50		142674		
20	2.50	140	36.0		16.0	12.0	4	17.50		105069		111570
22	2.50	140	36.0		18.0	14.5	4	19.50		146003		
24	3.00	160	39.0		18.0	14.5	4	21.00		142675		
30	3.50	180	45.0		22.0	18.0	4	26.50		142676		

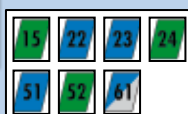
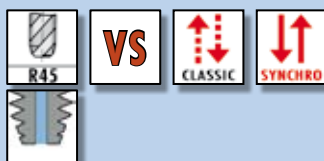
\* Z320V-3



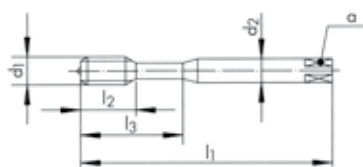
									Z360V-3	Z362V-3	Z462V-3	
<p><b>Z360V-3</b></p>  <p><b>Z362V-3</b></p>  <p><b>Z462V-3</b></p> 												
												
												
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	
2	0.40	45	7.0		2.8	2.1	2	1.60	104684			
2.5	0.45	50	9.0		2.8	2.1	2	2.05	104685			
2.6	0.45	50	9.0		2.8	2.1	2	2.15	104686			
3	0.50	56	5.5	18	3.5	2.7	3	2.50	104687			
3.5	0.60	56	6.5	20	4.0	3.0	3	2.90		104688		
4	0.70	63	7.5	21	4.5	3.4	3	3.30		104689		
5	0.80	70	9.0	25	6.0	4.9	3	4.20		104690		
6	1.00	80	11.0	30	6.0	4.9	3	5.00		104691		
8	1.25	90	12.5	35	8.0	6.2	3	6.80		104692		
10	1.50	100	14.0	39	10.0	8.0	3	8.50		104683		
12	1.75	110	14.0		9.0	7.0	3	10.20			104742	
14	2.00	110	14.0		11.0	9.0	3	12.00			104743	
16	2.00	110	18.0		12.0	9.0	3	14.00			104744	
18	2.50	125	21.0		14.0	11.0	3	15.50			104745	
20	2.50	140	24.0		16.0	12.0	3	17.50			104746	
22	2.50	140	24.0		18.0	14.5	3	19.50			104752	
24	3.00	160	27.0		18.0	14.5	4	21.00			104747	
27	3.00	160	27.0		20.0	16.0	4	24.00			104748	
30	3.50	180	30.0		22.0	18.0	4	26.50			104749	
36	4.00	200	36.0		28.0	22.0	4	32.00			104750	
42	4.50	200	40.0		32.0	24.0	4	37.50			104751	


**Z362VS-3**

**Z370VS-3**

**Z373VS-3**

**Z362VS-3**
**Z370VS-3**
**Z370VS-3**
**Z373VS-3**

**PM**
**PM**
**PM**

**6HX**
**6HX**
**4HX**
**6HX**


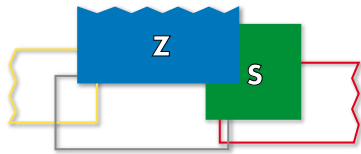
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm		
*3	0.50	56	5.5	18	3.5	2.7	3	2.50
4	0.70	63	7.5	21	4.5	3.4	3	3.30
5	0.80	70	9.0	25	6.0	4.9	3	4.20
6	1.00	80	11.0	30	6.0	4.9	3	5.00
8	1.25	90	12.5	35	8.0	6.2	3	6.80
10	1.50	100	14.0	39	10.0	8.0	3	8.50

**\* Z360VS-3**

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ h6 mm	a mm		
3	0.50	56	5.5	18	3.5(h9)	2.7	3	2.50
4	0.70	63	7.5	21	4.5(h9)	3.4	3	3.30
5	0.80	70	9.0	25	6.0	4.9	3	4.20
6	1.00	80	11.0	30	6.0	4.9	3	5.00
8	1.25	90	12.5	35	8.0	6.2	3	$\Delta$ 6.80
10	1.50	100	14.0	39	10.0	8.0	3	8.50

$\Delta$  **4HX** = 6.70

**ID**
**111504**
**111505**
**111506**
**111507**
**111508**
**111509**
**ID**
**162776**
**162777**
**162778**
**162779**
**162780**
**162781**
**ID**
**165324**
**165325**
**165326**
**165327**
**165328**
**165438**
**ID**
**165236**
**165237**
**165238**
**165239**
**165240**
**165241**



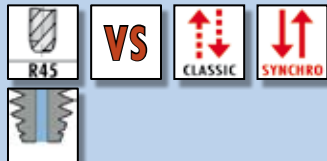
Z462VS-3



Z470VS-3



Z473VS-3



Z462VS-3

Z470VS-3

Z473VS-3



PM

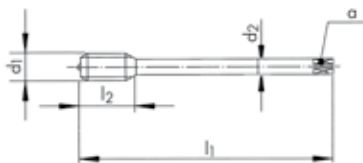
PM



6HX

6HX

6HX



Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm		
12	1.75	110	14.0	9.0	7.0	4	10.20
14	2.00	110	14.0	11.0	9.0	4	12.00
16	2.00	110	18.0	12.0	9.0	4	14.00
20	2.50	140	24.0	16.0	12.0	4	17.50
24	3.00	160	27.0	18.0	14.5	4	21.00

ID

111510

\* 148169

111511

111512

\* 111620

Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> h6 mm	α mm		
12	1.75	110	14.0	* 10.0	* 8.0	4	10.20
14	2.00	110	14.0	* 12.0	* 9.0	4	12.00
16	2.00	110	18.0	12.0	9.0	4	14.00
18	2.50	125	21.0	14.0	11.0	4	15.50
20	2.50	140	24.0	16.0	12.0	4	17.50
22	2.50	140	24.0	16.0	12.0	4	19.50
24	3.00	160	27.0	16.0	12.0	4	21.00

ID

ID

162782

165242

162783

\* 165243

162784

165244

170643

162785

165234

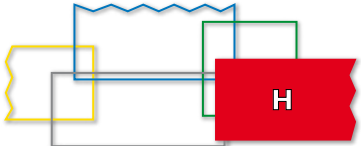






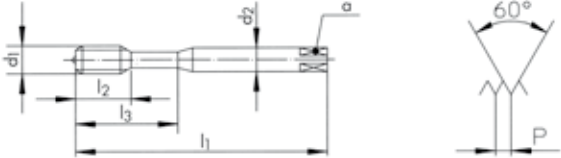




175190

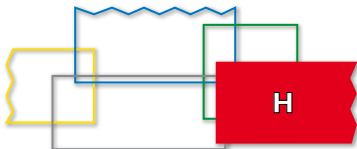









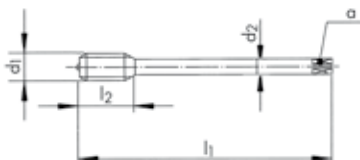







162786

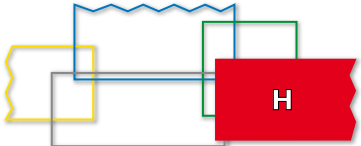







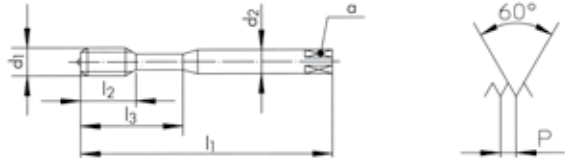




165235

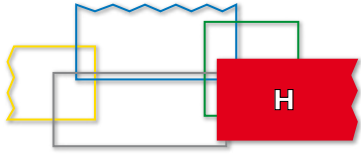







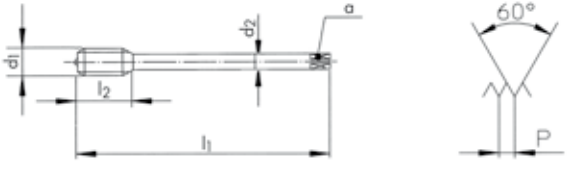


\* Norme DC / \* DC Norm / \* Norma DC

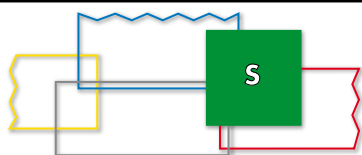


									H320-4	H320TC-4		
<div> <div>H320-4</div>  <div> <div>15</div> <div>16</div> <div>82</div> <div>82</div> </div> </div> <div> <div>H320TC-4</div>  <div>TiCN</div> <div> <div>15</div> <div>16</div> <div>31</div> <div>82</div> <div>83</div> </div> </div>												
												
												
												
$\varnothing d_1$	P	$l_1$	$l_2$	$l_3$	$d_2$	a			ID	ID		
M	mm	mm	mm	mm	mm	mm						
2	0.40	45	8.0		2.8	2.1	2	1.60	101206	151836		
2.2	0.45	45	9.0		2.8	2.1	2	1.75	111801			
2.5	0.45	50	10.0		2.8	2.1	3	2.05	101207	148603		
3	0.50	56	12.0	18	3.5	2.7	3	2.50	101209	111836		
3.5	0.60	56	13.0	20	4.0	3.0	3	2.90	101210			
4	0.70	63	14.0	21	4.5	3.4	3	3.30	101211	111502		
4.5	0.75	70	15.0	25	6.0	4.9	3	3.75	101212			
5	0.80	70	15.0	25	6.0	4.9	3	4.20	101213	111458		
6	1.00	80	17.0	30	6.0	4.9	3	5.00	101215	111456		
8	1.25	90	20.0	35	8.0	6.2	3	6.80	101218	111453		
10	1.50	100	22.0	39	10.0	8.0	3	8.50	101205	110911		

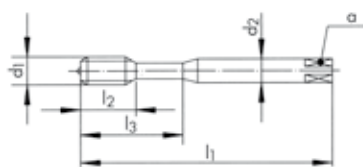
								H420-4	H420TC-4		
<div>H420-4</div> <div></div> <div></div> <div>H420TC-4</div> <div> </div> <div></div>								 			
											
 											
											
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID		
12	1.75	110	24.0	9.0	7.0	4	10.20	101275	110912		
14	2.00	110	28.0	11.0	9.0	4	12.00	101277			
16	2.00	110	30.0	12.0	9.0	4	14.00	101279	111612		
18	2.50	125	33.0	14.0	11.0	4	15.50	101281			
20	2.50	140	36.0	16.0	12.0	4	17.50	101284			
24	3.00	160	39.0	18.0	14.5	4	21.00	101286			
27	3.00	160	42.0	20.0	16.0	4	24.00	101287			
30	3.50	180	45.0	22.0	18.0	4	26.50	101288			
36	4.00	200	51.0	28.0	22.0	4	32.00	101289			

									H350-3	H350-3	H350TC-3	
												
<b>H350-3</b>  												
<b>H350TC-3</b>   												
												
												
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm			ID	ID	<sup>6H</sup> + mm	ID
2	0.40	45	7.0		2.8	2.1	2	1.60	101238			146451
2.5	0.45	50	9.0		2.8	2.1	3	2.05	101239			144957
3	0.50	56	5.5	18	3.5	2.7	3	2.50	101242	101241	0.020	111835
3.5	0.60	56	6.5	20	4.0	3.0	3	2.90	101243			
4	0.70	63	7.5	21	4.5	3.4	3	3.30	101245	101244	0.022	111607
4.5	0.75	70	9.0	25	6.0	4.9	3	3.75	101246			
5	0.80	70	9.0	25	6.0	4.9	3	4.20	101248	101247	0.024	111610
6	1.00	80	11.0	30	6.0	4.9	3	5.00	101251	101250	0.026	111500
8	1.25	90	12.5	35	8.0	6.2	3	6.80	101255	101254	0.028	110963
10	1.50	100	14.0	39	10.0	8.0	3	8.50	101237	101236	0.032	111454

								H450-3	H450-3	H450TC-3	
											
<p><b>H450-3</b></p>   <p><b>H450TC-3</b></p>   											
											
											
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm		6H	ID	ID	6H + mm	ID
12	1.75	110	14.0	9.0	7.0	4	10.20	101305	101304	0.034	111501
14	2.00	110	14.0	11.0	9.0	4	12.00	101307			
16	2.00	110	18.0	12.0	9.0	4	14.00	101309			111605
18	2.50	125	21.0	14.0	11.0	4	15.50	101311			
20	2.50	140	24.0	16.0	12.0	4	17.50	101313			
22	2.50	140	24.0	18.0	14.5	4	19.50	101315			
24	3.00	160	27.0	18.0	14.5	4	21.00	101318			
27	3.00	160	27.0	20.0	16.0	4	24.00	101320			
30	3.50	180	30.0	22.0	18.0	4	26.50	101323			
36	4.00	200	36.0	28.0	22.0	4	32.00	101324			
42	4.50	200	40.0	32.0	24.0	4	37.50	101325			

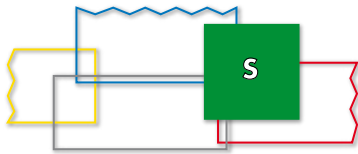

**S320VS-4**

**S420VS-4**

**S320VS-4**
**S320VS-4**
**S420VS-4**

**6HX**
**4HX**
**6HX**

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm		
3	0.50	56	12.0	18	3.5	2.7	3	2.50
4	0.70	63	14.0	21	4.5	3.4	3	3.30
5	0.80	70	15.0	25	6.0	4.9	3	4.20
6	1.00	80	17.0	30	6.0	4.9	3	5.00
8	1.25	90	20.0	35	8.0	6.2	3	$\Delta$ 6.80
10	1.50	100	22.0	39	10.0	8.0	3	8.50
12	1.75	110	24.0		9.0	7.0	4	10.20
14	2.00	110	30.0		11.0	9.0	4	12.50
16	2.00	110	30.0		12.0	9.0	4	14.00
20	2.50	140	36.0		16.0	12.0	4	17.50

**ID**
**ID**
**ID**
**111596**
**\* 165318**
**111597**
**165319**
**111598**
**165320**
**111599**
**165321**
**111600**
**165322**
**111601**
**165323**
**111602**
**\* 162537**
**111603**
**111604**
 $\Delta$  **4HX** = 6.70



S360VS-3



VS

13 15 24 52

S460VS-3



VS

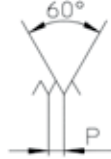
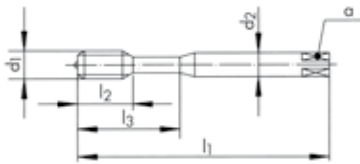
13 15 24 52

aero

SA390-3



53



S360VS-3

S460VS-3

SA390-3

SA390-3



6HX

6HX

4HX

6HX

ID

ID

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm		
3	0.50	56	5.5	18	3.5	2.7	3	2.50
4	0.70	63	7.5	21	4.5	3.4	3	3.30
5	0.80	70	9.0	25	6.0	4.9	3	4.20
6	1.00	80	11.0	30	6.0	4.9	3	5.00
8	1.25	90	12.5	35	8.0	6.2	3	6.80
10	1.50	100	14.0	39	10.0	8.0	3	8.50
12	1.75	110	14.0		9.0	7.0	4	10.20
14	2.00	110	14.0		11.0	9.0	4	12.00
16	2.00	110	18.0		12.0	9.0	4	14.00
20	2.50	140	24.0		16.0	12.0	4	17.50
24	3.00	160	27.0		18.0	14.5	4	21.00

111513  
111514  
111515  
111516  
111517  
111518

111519  
148171  
111520  
111521  
111606

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
4	0.70	63	14.0	4.5	3.4	3	3.30
5	0.80	70	15.0	6.0	4.9	3	4.20
6	1.00	80	20.0	6.0	4.9	3	5.00
8	1.25	90	25.0	8.0	6.2	3	6.80
10	1.50	100	30.0	10.0	8.0	3	8.50
12	1.75	110	35.0	12.0	9.0	4	10.20
14	2.00	110	40.0	16.0	12.0	4	12.00
16	2.00	110	40.0	16.0	12.0	4	14.00

$\Delta$  4HX = 6.70

ID

ID

149673 149674  
149693 149694  
149707 149708  
149736 149737  
149754 149755  
149775  
\* 149792  
\* 149816

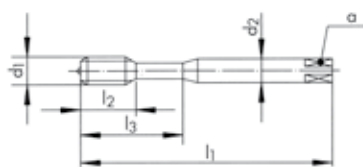
# aero

**SA320-4**

**S2 S3**
**SA350-3**

**S2 S3**
**TL320VS-4**

**VS**
**41 42**
**TL351VS-3**

**VS**
**41 42**

**SA320-4**
**SA350-3**
**TL320VS-4**
**TL351VS-3**

**4HX**
**4HX**
**4HX**
**4HX**

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm		
3	0.50	56	12.0		3.5	2.7	3	2.50
4	0.70	63	14.0		4.5	3.4	3	3.30
5	0.80	70	15.0		6.0	4.9	3	4.20
6	1.00	80	15.0	23	6.0	4.9	3	5.00
8	1.25	90	18.0	29	8.0	6.2	3	6.70
10	1.50	100	20.0	33	10.0	8.0	3	8.50

**ID**
**ID**
**ID**
**ID**

147975	147987	152006	152012
147976	147988	152007	152013
147977	147989	152008	152014
147978	147990	152009	152015
147979	147991	152010	152016
147980	147992	152011	152017

**6HX**
**6HX**
**6HX**
**6HX**

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm		
3	0.50	56	12.0		3.5	2.7	3	2.50
4	0.70	63	14.0		4.5	3.4	3	3.30
5	0.80	70	15.0		6.0	4.9	3	4.20
6	1.00	80	15.0	23	6.0	4.9	3	5.00
8	1.25	90	18.0	29	8.0	6.2	3	6.80
10	1.50	100	20.0	33	10.0	8.0	3	8.50

**ID**
**ID**
**ID**
**ID**

147981	147993	148001	148000
147982	147994	148003	148002
147983	147995	148007	148006
147984	147996	148011	148010
147985	147997	148020	148018
147986	147998	148027	148025



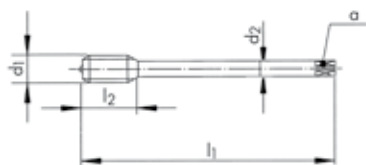
# aero

**SA420-4**

**S2 S3**
**SA450-3**

**S2 S3**
**TL420VS-4**

**VS**
**41 42**
**TL451VS-3**

**VS**
**41 42**

**SA420-4**
**SA450-3**
**TL420VS-4**
**TL451VS-3**

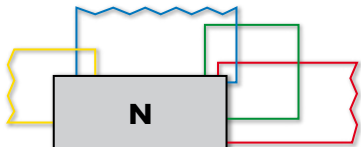
























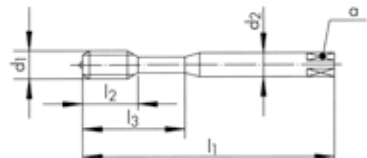















**4HX**
**4HX**
**4HX**
**4HX**

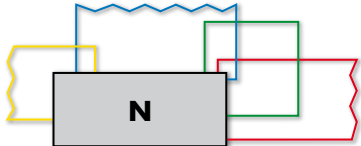

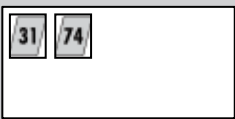


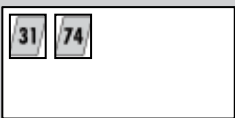
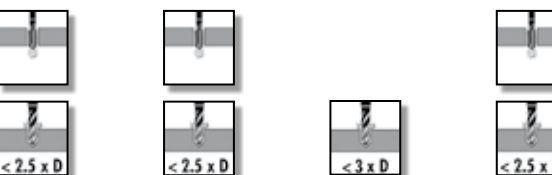


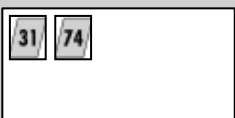


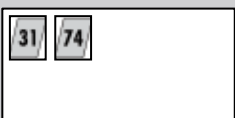

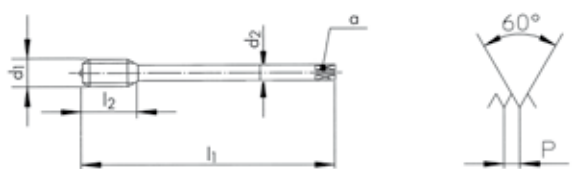
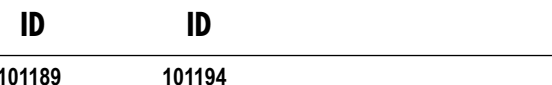
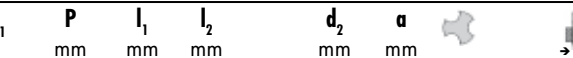
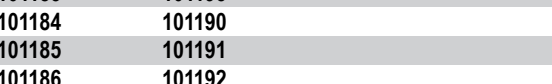

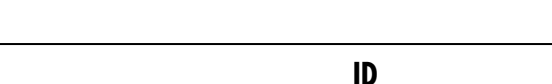


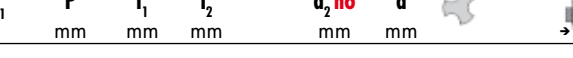



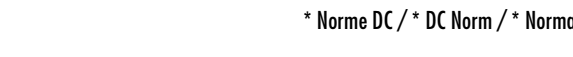
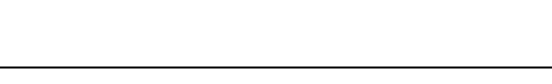


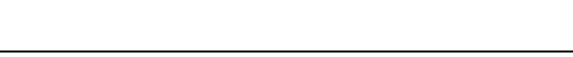






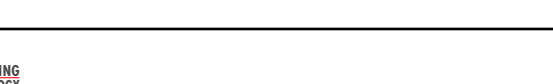




$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
12	1.75	110	24.0	9.0	7.0	4	10.20
14	2.00	110	28.0	11.0	9.0	4	12.00
16	2.00	110	30.0	12.0	9.0	4	14.00

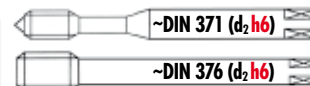
**ID**
**ID**
**ID**
**ID**
**148096**
**152189**
**152192**
**152195**
**\* 152187**
**\* 152188**
**\* 152191**
**152197**
**6HX**
**6HX**
**6HX**
**6HX**

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
12	1.75	110	24.0	9.0	7.0	4	10.20
14	2.00	110	28.0	11.0	9.0	4	12.00
16	2.00	110	30.0	12.0	9.0	4	14.00

**ID**
**ID**
**ID**
**ID**
**152198**
**152201**
**152204**
**148028**
**\* 152199**
**\* 152202**
**\* 152205**
**152207**
**\* 152200**
**152203**
**\* 152206**
**148029**

									GG350NV-3		GG350TC-3		GG353TC-3		GG550NV-3	
GG350NV-3  																
GG350TC-3  																
GG353TC-3  																
GG550NV-3  																
 																
																
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm			ID	ID						
3	0.50	56	12.0	18	3.5	2.7	3	2.50	101172	101178						
4	0.70	63	14.0	21	4.5	3.4	3	3.30	101173	101179						
5	0.80	70	15.0	25	6.0	4.9	3	4.20	101174	101180						
6	1.00	80	17.0	30	6.0	4.9	3	5.00	101175	101181						
8	1.25	90	20.0	35	8.0	6.2	4	6.80	101076	101182						
10	1.50	100	22.0	39	10.0	8.0	4	8.50	101171	101177						
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ h6 mm	$\alpha$ mm			ID							
5	0.80	70	15.0	25	6.0	4.9	3	4.20	144947							
6	1.00	80	17.0	30	6.0	4.9	3	5.00	147710							
8	1.25	90	20.0	35	8.0	6.2	4	6.80	147711							
10	1.50	100	22.0	39	10.0	8.0	4	8.50	146708							
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm			ID							
4	0.70	112	14.0	21	4.5	3.4	3	3.30	101196							
5	0.80	125	15.0	25	6.0	4.9	3	4.20	101197							
6	1.00	125	17.0	30	6.0	4.9	3	5.00	101198							

								GG450NV-3	GG450TC-3	GG453TC-3	GG650NV-3
<b>GG450NV-3</b>  <b>NV</b> 											
<b>GG450TC-3</b>  <b>TiCN</b> 											
<b>GG453TC-3</b>   <b>TiCN</b> 											
<b>GG650NV-3</b>  <b>NV</b> 											
											
											
											
											
											
											
											
											
											
											
											
											
											
											



## RTS Rigid Tapping Synchro

RTS320VS-4



VS



RTS420VS-4

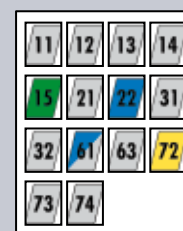


VS

RTS323VS-4



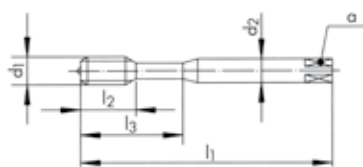
VS



RTS423VS-4



VS



RTS320VS-4

RTS420VS-4

RTS323VS-4

RTS423VS-4



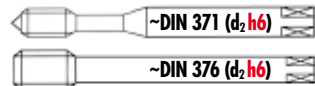
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2, h_6$ mm	$a$ mm		
*2	0.40	45	8.0		2.8(h9)	2.1	2	1.60
2.5	0.45	50	10.0		2.8(h9)	2.1	3	2.05
3	0.50	56	5.5	18	3.5(h9)	2.7	3	2.50
4	0.70	63	7.5	21	4.5(h9)	3.4	3	3.30
5	0.80	70	9.0	25	6.0	4.9	3	4.20
6	1.00	80	11.0	30	6.0	4.9	3	5.00
8	1.25	90	12.5	35	8.0	6.2	3	6.80
10	1.50	100	14.0	39	10.0	8.0	3	8.50
12	1.75	110	14.0		*10.0	*8.0	3	10.20
14	2.00	110	14.0		*12.0	*9.0	3	12.00
16	2.00	110	18.0		12.0	9.0	3	14.00
20	2.50	140	24.0		16.0	12.0	4	17.50
24	3.00	160	27.0		16.0	12.0	4	21.00

\* Norme DC / \* DC Norm / \* Norma DC

\* RTS320VS-3



sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido



## RTS Rigid Tapping Synchro

RTS362VS-3



VS



RTS462VS-3

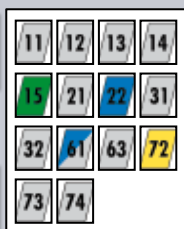


VS

RTS365VS-3



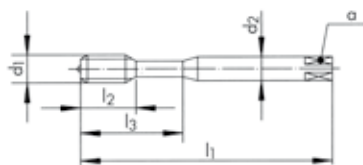
VS



RTS465VS-3



VS



RTS362VS-3



RTS462VS-3



RTS365VS-3



RTS465VS-3



Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	α mm		
*2	0.40	45	7.0		2.8 (h9)	2.1	3	1.60
*2.5	0.45	50	9.0		2.8 (h9)	2.1	3	2.05
3	0.50	56	5.5	18	3.5 (h9)	2.7	3	2.50
4	0.70	63	7.5	21	4.5 (h9)	3.4	3	3.30
5	0.80	70	9.0	25	6.0	4.9	3	4.20
6	1.00	80	11.0	30	6.0	4.9	3	5.00
8	1.25	90	12.5	35	8.0	6.2	3	6.80
10	1.50	100	14.0	39	10.0	8.0	3	8.50
12	1.75	110	14.0		*10.0	*8.0	3	10.20
14	2.00	110	14.0		*12.0	*9.0	3	12.00
16	2.00	110	18.0		12.0	9.0	3	14.00
20	2.50	140	24.0		16.0	12.0	4	17.50
24	3.00	160	27.0		16.0	12.0	4	21.00

\* Norme DC / \* DC Norm / \* Norma DC

\* RTS360VS-3



sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido



# RTS

## Rigid Tapping Synchro

RTS362VS-5



VS



RTS365VS-5



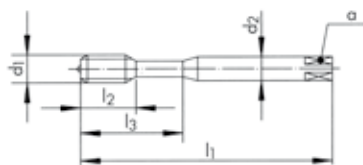
VS



RTS362VS-3



VS



RTS362VS-5

RTS365VS-5

RTS362VS-3



6HX

6HX

6GX

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2 h_6$ mm	$a$ mm		
3	0.50	56	5.5	18	3.5(h9)	2.7	3	2.50
4	0.70	63	7.5	21	4.5(h9)	3.4	3	3.30
5	0.80	70	9.0	25	6.0	4.9	3	4.20
6	1.00	80	11.0	30	6.0	4.9	3	5.00
8	1.25	90	12.5	35	8.0	6.2	3	6.80
10	1.50	100	14.0	39	10.0	8.0	3	8.50

ID

ID

157648

157650

157652

162791

158074

151803

158076

157821

153286

157823

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2 h_6$ mm	$a$ mm		6H
3	0.50	56	5.5	18	3.5(h9)	2.7	3	2.50
4	0.70	63	7.5	21	4.5(h9)	3.4	3	3.35
5	0.80	70	9.0	25	6.0	4.9	3	4.25
6	1.00	80	11.0	30	6.0	4.9	3	5.00
8	1.25	90	12.5	35	8.0	6.2	3	6.80
10	1.50	100	14.0	39	10.0	8.0	3	8.50

ID

6H  
+ mm

162797 0.020

162798 0.022

162799 0.024

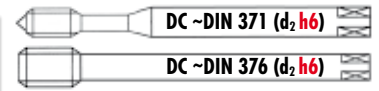
162800 0.026

162801 0.028

162802 0.032



sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido



## RTS Rigid Tapping Synchro

RTS523VS-4



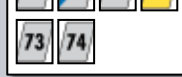
VS



RTS623VS-4



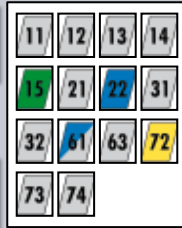
VS



RTS565VS-3



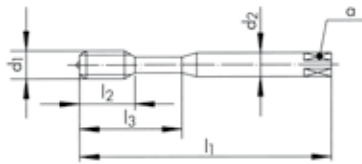
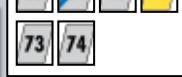
VS



RTS665VS-3



VS



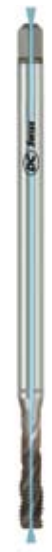
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ h6 mm	$\alpha$ mm		
5	0.80	125	9.0	25	6.0	4.9	3	4.20
6	1.00	125	11.0	30	6.0	4.9	3	5.00
8	1.25	140	12.5	35	8.0	6.2	3	6.80
10	1.50	160	14.0	39	10.0	8.0	3	8.50
12	1.75	180	14.0		*10.0	*8.0	3	10.20
16	2.00	200	18.0		12.0	9.0	3	14.00

\* Norme DC / \* DC Norm / \* Norma DC

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ h6 mm	$\alpha$ mm		
6	1.00	125	11.0	30	6.0	4.9	3	5.00
8	1.25	140	12.5	35	8.0	6.2	3	6.80
10	1.50	160	14.0	39	10.0	8.0	3	8.50
12	1.75	180	14.0		*10.0	*8.0	3	10.20
16	2.00	200	18.0		12.0	9.0	3	14.00

\* Norme DC / \* DC Norm / \* Norma DC

RTS523VS-4 RTS623VS-4 RTS565VS-3 RTS665VS-3



ID

ID

161038  
161041  
161044  
161047

161050  
161053

161050  
161053

161050  
161053

ID

ID

150614  
150624  
150639

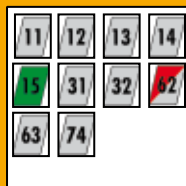
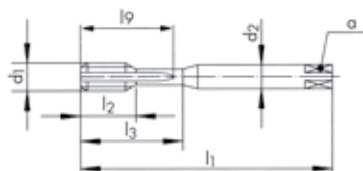
151867  
150674



sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido

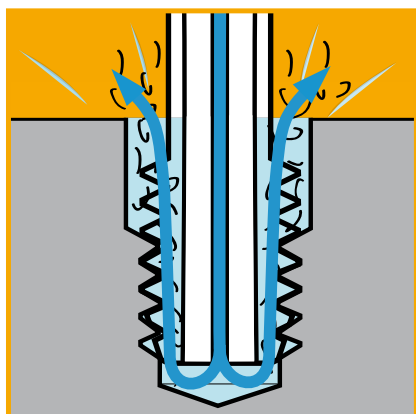





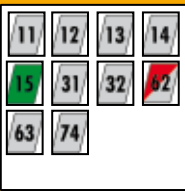






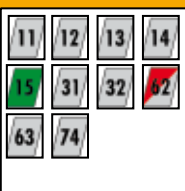

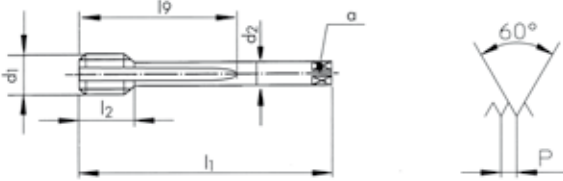


# K






**K313TC-3**

**K413TC-3**

**K313TC-3**
**K413TC-3**

**6HX**
**6HX**

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$l_9$ mm	$d_2$ mm	$\alpha$ mm		
6	1.00	80	17.0	30	28.0	6.0	4.9	3	5.00
8	1.25	90	20.0	35	33.0	8.0	6.2	3	6.80
10	1.50	100	22.0	39	37.0	10.0	8.0	3	8.50
12	1.75	110	24.0		42.0	9.0	7.0	3	10.20
14	2.00	110	28.0		49.0	11.0	9.0	3	12.00
16	2.00	110	30.0		56.0	12.0	9.0	4	14.00
20	2.50	140	36.0		70.0	16.0	12.0	5	17.50
24	3.00	160	39.0		84.0	18.0	14.5	5	21.00

**ID**
**ID**
**170766**
**170769**
**170772**
**165838**
**170778**
**170783**
**170786**
**170775**


K									K613TC-3	K613VS-3		
<p><b>K613TC-3</b></p>     <p><b>&gt;20 bar</b></p> 												
<p><b>K613VS-3</b></p>     <p><b>&gt;20 bar</b></p> 										<b>NEW</b>		
												
									<b>6HX</b>	<b>6HX</b>		
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm			ID	ID		
6	1.00	110	17.0	30	4.5	3.4	3	5.00	170646	172699		
8	1.25	110	20.0	40	6.0	4.9	3	6.80	170649	172700		
10	1.50	125	22.0	50	7.0	5.5	3	8.50	170652	172701		
12	1.75	140	24.0	60	9.0	7.0	3	10.20	167982	172702		
14	2.00	140	28.0	70	11.0	9.0	3	12.00	167983			
16	2.00	160	30.0	80	12.0	9.0	4	14.00	167984	170573		
20	2.50	180	36.0	100	16.0	12.0	5	17.50	167985	170576		
24	3.00	200	39.0	120	18.0	14.5	5	21.00	167986	172704		
27	3.00	225	42.0	135	20.0	16.0	5	24.00	167987			
30	3.50	250	45.0	150	22.0	18.0	5	26.50	165542			
33	3.50	280	48.0	165	25.0	20.0	5	29.50	167988			
36	4.00	300	51.0	180	28.0	22.0	6	32.00	167989			
39	4.00	300	55.0	195	32.0	24.0	6	35.00	167990			
42	4.50	355	55.0	210	32.0	24.0	6	37.50	167999			

Vc (m/min)				
M6 - M10		M12 - M16	M20 - M30	M33 - M42
	32	28	22	18
	30	25	20	15
	24	20	16	12
	15	12	8	6
	35	30	25	20

## FS FORMING

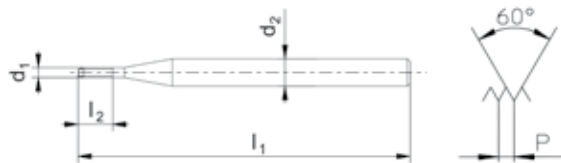
**FS380VS-5**

**VS**

**FS380VS-3**

**VS**

**FS380VS-5**
**FS380VS-3**
**FS380VS-3**
**FS380VS-3**

**6HX**
**6HX**
**6HX**
**6GX**


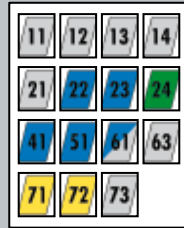
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm	4HX Tol. 6HX	ID	ID	ID	ID 6H + mm
1	0.25	40	3.0	2.5		0.88 + 0.02	157171	173452		
1.2	0.25	40	3.6	2.5		1.08 + 0.02	157172	173455		
1.4	0.30	40	4.2	2.5		1.25 + 0.02	157173	173458		
1.6	0.35	40	4.8	2.5		1.45 + 0.02	157174	169779		
1.7	0.35	40	5.1	2.5		1.55 + 0.02		169782		
1.8	0.35	40	5.4	2.5		1.65 + 0.02	157175	169785		
2	0.40	45	8.0	2.8	2.1	1.80 + 0.02			157176	157180 0.019
2.5	0.45	50	10.0	2.8	2.1	2.30 + 0.02			157178	157181 0.020
2.6	0.45	50	10.0	2.8	2.1	2.40 + 0.02			157179	

≤ M1.5

**4HX**

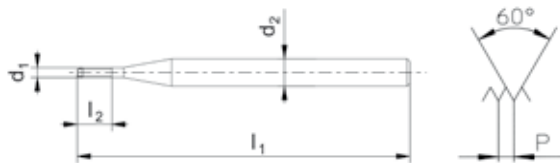
## FS FORMING

**FS380DL-5**

**DL**

**FS380DL-3**

**DL**

**FS380DL-5**
**FS380DL-3**
**FS380DL-3**
**FS380DL-3**

**NEW**
**NEW**
**NEW**
**NEW**

**6HX**
**6HX**
**6HX**
**6GX**

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm	4HX Tol. 6HX
1	0.25	40	3.0	2.5		0.88 + 0.02
1.2	0.25	40	3.6	2.5		1.08 + 0.02
1.4	0.30	40	4.2	2.5		1.25 + 0.02
1.6	0.35	40	4.8	2.5		1.45 + 0.02
1.7	0.35	40	5.1	2.5		1.55 + 0.02
1.8	0.35	40	5.4	2.5		1.65 + 0.02
2	0.40	45	8.0	2.8	2.1	1.80 + 0.02
2.5	0.45	50	10.0	2.8	2.1	2.30 + 0.02
2.6	0.45	50	10.0	2.8	2.1	2.40 + 0.02

**ID**
**ID**
**ID**
**ID**
**6H**  
+ mm

**172839**
**173461**
**172840**
**173464**
**172841**
**173467**
**170585**
**170916**
**172843**
**172842**
**172844**
**158814**
**172849** 0.019

**172845**
**173246** 0.020

**172846**
**≤ M1.5**
**4HX**

## FPS FORMING

FPS380CN-3



CrN



FPS381CN-3



CrN



FPS380VS-3



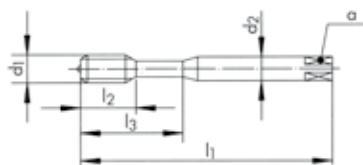
VS



FPS381VS-3



VS



FPS380CN-3

FPS381CN-3

FPS380VS-3

FPS381VS-3



6HX

6HX

6HX

6HX

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
3	0.50	56	12.0	18	3.5	2.7	2.80 + 0.03
3.5	0.60	56	13.0	20	4.0	3.0	3.25 + 0.03
4	0.70	63	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	70	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	80	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	90	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	100	22.0	39	10.0	8.0	9.30 + 0.05

ID

ID

ID

ID

166613

166615

166614

166616

166619

166621

166620

166622

166626

166628

166627

166629

166634

166636

166635

166637

166643

166645

166644

166646

166653

166655

166654

166656

166663

166665

166664

166666

6GX

6GX

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
3	0.50	56	12.0	18	3.5	2.7	2.80 + 0.03
3.5	0.60	56	13.0	20	4.0	3.0	3.25 + 0.03
4	0.70	63	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	70	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	80	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	90	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	100	22.0	39	10.0	8.0	9.30 + 0.05

ID 6H  
+ mm

ID 6H  
+ mm

166697 0.020

166617 0.020

166687 0.021

166623 0.021

166688 0.022

166630 0.022

166689 0.024

166638 0.024

166686 0.026

166647 0.026

166740 0.028

166657 0.028

166739 0.032

166667 0.032

## FPS FORMING

FPS481VS-3



VS



FPS581VS-3



EL

VS

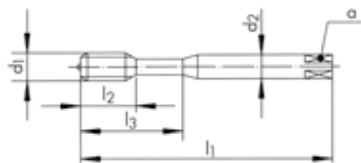


FPS681VS-3



EL

VS



FPS481VS-3



FPS581VS-3



NEW

FPS681VS-3



NEW



6HX

6HX

6HX

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
12	1.75	110	24.0	9.0	7.0	11.20 + 0.05
14	2.00	110	28.0	11.0	9.0	13.10 + 0.05
16	2.00	110	30.0	12.0	9.0	15.10 + 0.05
20	2.50	140	36.0	16.0	12.0	18.85 + 0.05

ID

166673  
166678  
166683  
168713

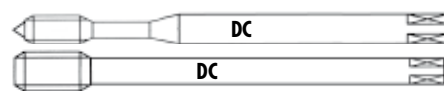
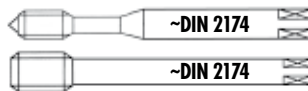
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
3	0.50	100	12.0	18	3.5	2.7	2.80 + 0.03
4	0.70	125	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	140	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	160	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	180	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	200	22.0	39	10.0	8.0	9.30 + 0.05
12	1.75	224	24.0		9.0	7.0	11.20 + 0.05

ID

ID

172824  
172826  
172828  
172830  
172832  
172834

172836



# FPS FORMING

FPS384VS-3



VS



FPS484VS-3



VS



FPS584VS-3



EL

VS

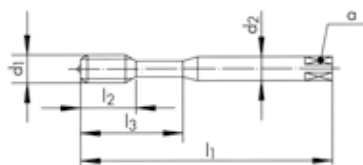


FPS684VS-3



EL

VS



FPS384VS-3

FPS484VS-3

FPS584VS-3

FPS684VS-3



NEW



NEW



6HX

6HX

6HX

6HX

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol. → ←
3	0.50	56	12.0	18	3.5	2.7	2.80 + 0.03
4	0.70	63	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	70	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	80	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	90	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	100	22.0	39	10.0	8.0	9.30 + 0.05
12	1.75	110	24.0		9.0	7.0	11.20 + 0.05
14	2.00	110	28.0		11.0	9.0	13.10 + 0.05
16	2.00	110	30.0		12.0	9.0	15.10 + 0.05

ID

ID

166737

166738

166640

166650

166660

166670

166675

166680

166685

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol. → ←
3	0.50	100	12.0	18	3.5	2.7	2.80 + 0.03
4	0.70	125	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	140	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	160	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	180	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	200	22.0	39	10.0	8.0	9.30 + 0.05
12	1.75	224	24.0		9.0	7.0	11.20 + 0.05

ID

ID

172763

172766

172769

172772

172775

172778

172781

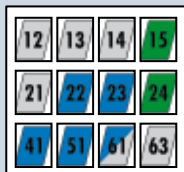


## FAS FORMING

FAS380VS-3



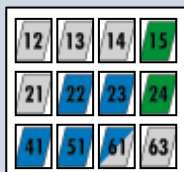
VS



FAS381VS-3



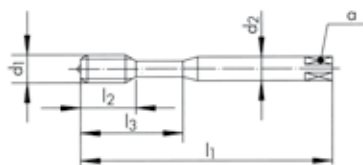
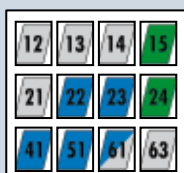
VS



FAS481VS-3



VS



FAS380VS-3



FAS381VS-3



FAS481VS-3



$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
3	0.50	56	12.0	18	3.5	2.7	2.80 + 0.03
3.5	0.60	56	13.0	20	4.0	3.0	3.25 + 0.03
4	0.70	63	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	70	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	80	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	90	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	100	22.0	39	10.0	8.0	9.30 + 0.05
12	1.75	110	24.0		9.0	7.0	11.20 + 0.05
14	2.00	110	28.0		11.0	9.0	13.10 + 0.05
16	2.00	110	30.0		12.0	9.0	15.10 + 0.05
20	2.50	140	36.0		16.0	12.0	18.85 + 0.05

ID	ID	ID
170603	166612	
170605	166618	
170607	166624	
170609	166632	
170611	166641	
170616	166651	
170618	166661	
		166671
		166676
		166681
		168711

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
3	0.50	56	12.0	18	3.5	2.7	2.80 + 0.03
3.5	0.60	56	13.0	20	4.0	3.0	3.25 + 0.03
4	0.70	63	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	70	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	80	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	90	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	100	22.0	39	10.0	8.0	9.30 + 0.05
12	1.75	110	24.0		9.0	7.0	11.20 + 0.05
14	2.00	110	28.0		11.0	9.0	13.10 + 0.05
16	2.00	110	30.0		12.0	9.0	15.10 + 0.05

6GX

6GX

ID 6H + mm	ID 6H + mm
166703 0.020	
* 166704 0.021	
166705 0.022	
166706 0.024	
166707 0.026	
166708 0.028	
166709 0.032	
	166710 0.034
	166711 0.038
	166712 0.038

## FAS FORMING

FAS384VS-3



VS

12	13	14	15
21	22	23	24
41	51	61	63

FAS484VS-3

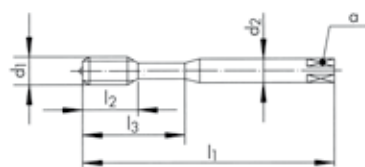


VS

12	13	14	15
21	22	23	24
41	51	61	63

FAS384VS-3

FAS484VS-3



6HX

6HX

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$a$ mm	6HX → ←	Tol.
3	0.50	56	12.0	18	3.5	2.7	2.80	+ 0.03
4	0.70	63	14.0	21	4.5	3.4	3.70	+ 0.03
5	0.80	70	15.0	25	6.0	4.9	4.65	+ 0.03
6	1.00	80	17.0	30	6.0	4.9	5.55	+ 0.05
8	1.25	90	20.0	35	8.0	6.2	7.40	+ 0.05
10	1.50	100	22.0	39	10.0	8.0	9.30	+ 0.05
12	1.75	110	24.0		9.0	7.0	11.20	+ 0.05
14	2.00	110	28.0		11.0	9.0	13.10	+ 0.05
16	2.00	110	30.0		12.0	9.0	15.10	+ 0.05

ID

ID

166741

166742

166690

166691

166692

166693

166694

\* 166695

166696

## FAS FORMING

FAS581VS-3



EL

VS

12	13	14	15
21	22	23	24
41	51	61	63

FAS681VS-3



EL

VS

12	13	14	15
21	22	23	24
41	51	61	63

FAS584VS-3



EL

VS

12	13	14	15
21	22	23	24
41	51	61	63

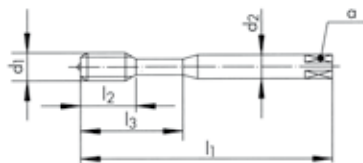
FAS684VS-3



EL

VS

12	13	14	15
21	22	23	24
41	51	61	63



FAS581VS-3

FAS681VS-3

FAS584VS-3

FAS684VS-3



NEW



NEW



NEW



NEW



< 2.5 x D



< 2.5 x D



< 3 x D



< 3 x D



2.5 x P



2.5 x P



2.5 x P



2.5 x P

6HX

6HX

6HX

6HX

$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
3	0.50	100	12.0	18	3.5	2.7	2.80 + 0.03
4	0.70	125	14.0	21	4.5	3.4	3.70 + 0.03
5	0.80	140	15.0	25	6.0	4.9	4.65 + 0.03
6	1.00	160	17.0	30	6.0	4.9	5.55 + 0.05
8	1.25	180	20.0	35	8.0	6.2	7.40 + 0.05
10	1.50	200	22.0	39	10.0	8.0	9.30 + 0.05
12	1.75	224	24.0		9.0	7.0	11.20 + 0.05

ID

ID

ID

ID

172784

172805

172787

172808

172790

172811

172793

172814

172796

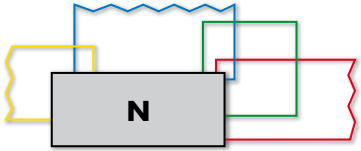
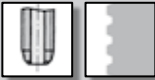












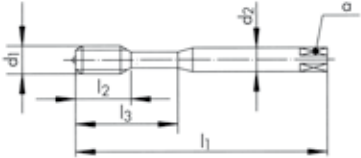







172817

172799

172820

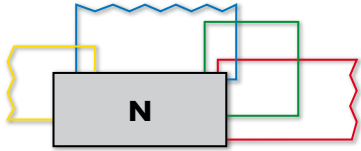
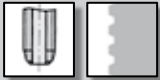





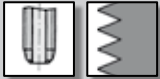
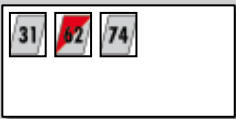





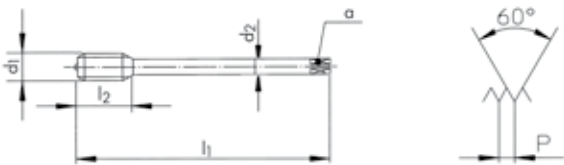







172802

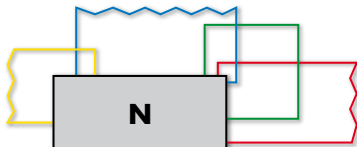

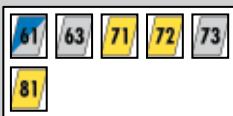














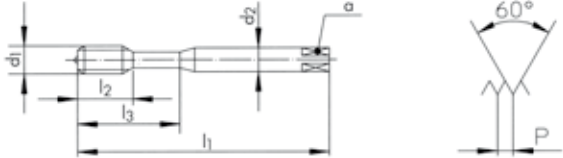








172822

									N1110-1	N1110-2	N1110-3	N1110-S
<b>N1110-1</b> 												
<b>N1110-2</b> 												
<b>N1110-3</b>  												
<b>N1110-S</b> 												
 												
												
Ø d <sub>1</sub> M	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
1	0.25	40	5.5		2.50	2.10	3	0.75	102744	102844	102917	111015
1.2	0.25	40	5.5		2.50	2.10	3	0.95	102746	102846	102919	111017
1.4	0.30	40	7.0		2.50	2.10	3	1.10	102747	102847	102920	111018
1.6	0.35	40	8.0		2.50	2.10	3	1.25	102749	102849	102922	111020
1.7	0.35	40	8.0		2.50	2.10	3	1.35	102750	102850	102923	111021
1.8	0.35	40	8.0		2.50	2.10	3	1.45	102751	102851	102924	111022
2	0.40	45	8.0		2.80	2.10	3	1.60	102759	102854	102934	111028
2.2	0.45	45	9.5		2.80	2.10	3	1.75	102761	102856	102937	111030
2.5	0.45	45	9.5		2.80	2.10	3	2.05	102763	102858	102941	111032
2.6	0.45	45	9.5		2.80	2.10	3	2.15	102765	102860	102944	111034
3	0.50	48	11.0	18	3.15	2.50	3	2.50	102766	102861	102947	111036
3.5	0.60	50	13.0	20	3.55	2.80	3	2.90	102769	102864	102950	111038
4	0.70	53	13.0	21	4.00	3.15	3	3.30	102771	102866	102956	111042
4.5	0.75	53	13.0	21	4.50	3.55	3	3.75	102775	102869	102959	111044
5	0.80	58	16.0	25	5.00	4.00	3	4.20	102776	102870	102965	111047
6	1.00	66	19.0	30	6.30	5.00	3	5.00	102781	102874	102973	111053
7	1.00	66	19.0	30	7.10	5.60	3	6.00	102786	102876	102978	111055
8	1.25	72	22.0	35	8.00	6.30	3	6.80	102788	102878	102986	111059
9	1.25	72	22.0	36	9.00	7.10	3	7.80	102792	102880	102991	111061
10	1.50	80	24.0	39	10.00	8.00	3	8.50	102752	102852	102931	111026
												

≤ M1.5

ISO 1  
4H

								N1210-1	N1210-2	N1210-3	N1210-S
<b>N1210-1</b> 											
<b>N1210-2</b> 											
<b>N1210-3</b>  											
<b>N1210-S</b> 											
											
											
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID	ID
11	1.50	85	22.0	8.0	6.3	3	9.50	103302	103427	103489	111168
12	1.75	89	24.0	9.0	7.1	3	10.20	103303	103428	103499	111173
14	2.00	95	24.0	11.2	9.0	3	12.00	103310	103430	103510	111179
16	2.00	102	32.0	12.5	10.0	3	14.00	103319	103432	103522	111185
18	2.50	112	30.0	14.0	11.2	3	15.50	103324	103434	103534	111191
20	2.50	112	37.0	14.0	11.2	3	17.50	103330	103436	103543	111196
22	2.50	115	32.0	16.0	12.5	3	19.50	103337	103438	103550	125567
24	3.00	130	45.0	18.0	14.0	4	21.00	103341	103440	103557	111204
27	3.00	135	45.0	20.0	16.0	4	24.00	103347	103442	103568	111211
30	3.50	138	48.0	20.0	16.0	4	26.50	103353	103444	103579	111216
33	3.50	151	51.0	22.4	18.0	4	29.50	103357	103446	103581	111218
36	4.00	162	57.0	25.0	20.0	4	32.00	103359	103448	103583	111220

									N1120-4	N1220-4	N1160-3	N1260-3
N1120-4												
N1220-4											<b>NEW</b>	<b>NEW</b>
N1160-3												
N1260-3												
												
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm			ID	ID		
3	0.50	48	11.0	18	3.15	2.50	3	2.50	103068			
4	0.70	53	13.0	21	4.00	3.15	3	3.30	103075			
4.5	0.75	53	13.0	21	4.50	3.55	3	3.75	* 103078			
5	0.80	58	16.0	25	5.00	4.00	3	4.20	103082			
6	1.00	66	19.0	30	6.30	5.00	3	5.00	103090			
8	1.25	72	22.0	35	8.00	6.30	3	6.80	103102			
10	1.50	80	24.0	39	10.00	8.00	3	8.50	103060			
11	1.50	85	22.0		8.00	6.30	3	9.50		* 103661		
12	1.75	89	24.0		9.00	7.10	3	10.20		103670		
14	2.00	95	24.0		11.20	9.00	3	12.00		103680		
16	2.00	102	32.0		12.50	10.00	3	14.00		103690		
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm					ID	ID
3	0.50	48	5.5	18	3.15	2.50	3	2.50			103177	
4	0.70	53	7.5	21	4.00	3.15	3	3.30			103178	
5	0.80	58	9.0	25	5.00	4.00	3	4.20			103179	
6	1.00	66	11.0	30	6.30	5.00	3	5.00			103180	
8	1.25	72	12.5	35	8.00	6.30	3	6.80			103181	
10	1.50	80	14.0	39	10.00	8.00	3	8.50			103174	
12	1.75	89	14.0		9.00	7.10	3	10.20				103781
16	2.00	102	18.0		12.50	10.00	3	14.00				103782





**285**



































# MF

























## Répertoire - Tarauds à machine DIN 13

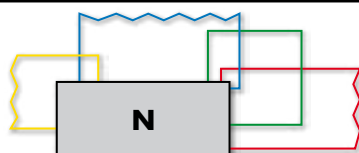
### Rubrica - Maschi a macchina DIN 13

	N							
Caractéristiques Caratteristiche				 V	 TiN	 R15	 R40	
								
Genre de trou Tipo di foro								
		N320-3	N320-4			N350-3	N360-3	
DIN longue DIN lungo	DIN 371	84	84			84	91	
ISO courte ISO corto	ISO 529							
DIN longue DIN lungo	~DIN 2174							
Tolérance Tolleranza	ISO 2 6H		84			84	91	
Tolérance fine Tolleranza fine	ISO 1 4H	84						
Surcote Maggiorazione	ISO 3 6G						91	
	N410-3	N420-3	N420-4	N420V-4	N420TN-4	N450-3	N460-3	
DIN longue DIN lungo	DIN 374	85/90	88/89	85/90	85/88	85/86	84	92/93
ISO courte ISO corto	ISO 529							
DIN longue DIN lungo	~DIN 2174							
Tolérance Tolleranza	ISO 2 6H	85/90		85/90	85/88	85/86	84	92/93
Tolérance fine Tolleranza fine	ISO 1 4H							
Surcote Maggiorazione	ISO 3 6G							92
Tolérance Tolleranza	7H (EN 60423)		88/89					
LH Filetage à gauche LH Filettatura sinistra	ISO 2 6H	90		90				

N					Z			
 R40 <b>V</b>	 R40 <b>TiN</b>	 	 	 	 <b>V</b>	 <b>VS</b>	 R40 <b>V</b>	 R45 <b>VS</b>
						 <b>NEW</b>		
								
N360V-3	N360TN-3	N1110-1	N1110-3	N1110-S	Z320V-3 Z320V-4	Z320VS-4	Z360V-3	Z370VS-3
91	91				94	94	94	94
		106	106	106				
91	91		106	106	94	94	94	94
					94			
N460V-3	N460TN-3	N1210-1	N1210-3	N1210-S	Z420V-4	Z420VS-4	Z460V-3	Z470VS-3
92/93	92				95	95	95	95
		107/108	107/108	107/108				
92/93	92		107/108	107/108	95	95	95	95

	H		S		SA		
Caractéristiques Caratteristiche							
			VS	VS			
							
Genre de trou Tipo di foro							
	H320-4	H350-3	S320VS-4	S360VS-3	SA320-4	SA350-3	SA390-3
DIN longue DIN lungo	DIN 371						
ISO courte ISO corto	ISO 529						
DIN longue DIN lungo	~DIN 2174						
Tolérance Tolleranza	ISO 2 6H						
Tolérance fine Tolleranza fine	ISO 1 4H						
Surcote Maggiorazione	ISO 3 6G						
	H420-4	H450-3	S420VS-4	S460VS-3	SA420-4	SA450-3	
DIN longue DIN lungo	DIN 374						
ISO courte ISO corto	ISO 529						
DIN longue DIN lungo	~DIN 2174						
Tolérance Tolleranza	ISO 2 6H						
Tolérance fine Tolleranza fine	ISO 1 4H						

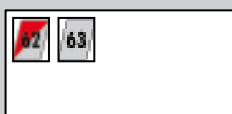
TL		K	RTS		FPS		FAS	
		 <b>TiCN</b>						
<b>VS</b>	<b>VS</b>		<b>VS</b>	<b>VS</b>	<b>CrN</b>	<b>VS</b>	<b>VS</b>	
		 <b>NEW</b>						
								
<b>TL320VS-4</b>	<b>TL351VS-3</b>	<b>K313TC-3</b>	<b>RTS320VS-4</b>	<b>RTS362VS-3</b>	<b>FPS381CN-3</b>	<b>FPS381VS-3</b>	<b>FAS381VS-3</b>	
100	100	103	102	102				
					104	104	105	
100	100	103	102	102	104	104	105	
100	100							
<b>TL420VS-4</b>	<b>TL451VS-3</b>	<b>K413TC-3</b>	<b>RTS420VS-4</b>	<b>RTS462VS-3</b>	<b>FPS481CN-3</b>	<b>FPS481VS-3</b>	<b>FAS481VS-3</b>	
101	101	103	102	102				
						104	105	
101	101	103	102	102		104	105	
101	101							



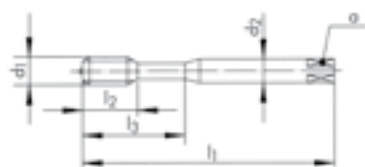
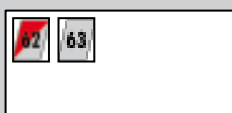
N320-4



N350-3



N450-3



N320-4



N350-3



N450-3



ISO 2  
6H

ISO 2  
6H

ISO 2  
6H

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
*2	0.25	45	8.0		2.8	2.1	2	1.75
2.5	0.35	50	10.0		2.8	2.1	3	2.15
2.6	0.35	50	10.0		2.8	2.1	3	2.25
3	0.35	56	12.0	18	3.5	2.7	3	2.65
3.5	0.35	56	13.0	20	4.0	3.0	3	3.15

ID

142689  
142691  
142692  
142693  
142694

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
4	0.50	63	14.0	21	4.5	3.4	2	3.50
5	0.50	70	15.0	25	6.0	4.9	3	4.50
6	0.75	80	17.0	30	6.0	4.9	3	5.25
8	1.00	90	20.0		6.0	4.9	3	7.00
9	0.75	90	20.0		7.0	5.5	3	8.25
10	1.00	100	22.0		7.0	5.5	3	9.00
12	1.00	100	24.0		9.0	7.0	3	11.00
12	1.50	100	24.0		9.0	7.0	3	10.50
14	1.50	100	24.0		11.0	9.0	3	12.50
16	1.50	100	26.0		12.0	9.0	3	14.50
18	1.50	110	26.0		14.0	11.0	4	16.50
20	1.50	125	28.0		16.0	12.0	4	18.50

ID

ID

101586  
101588  
101590

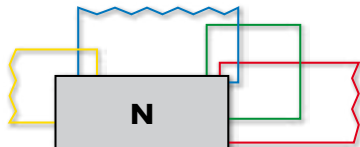










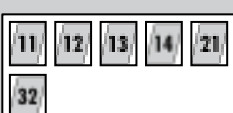







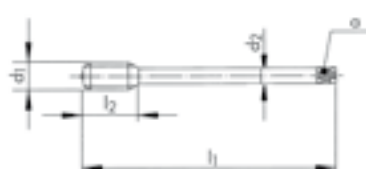











102326  
102328  
102313  
\* 102315  
\* 102316  
\* 102318  
\* 102320  
\* 102322  
\* 102323

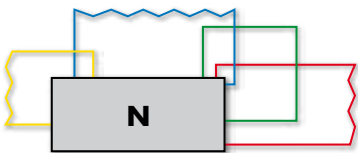
























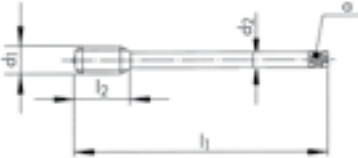











\* N320-3




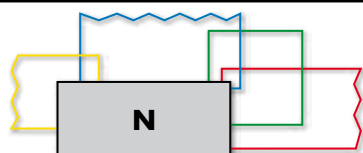
P 0.25



								N410-3	N420-4	N420V-4	N420TN-4
N410-3											
N420-4											
N420V-4	 										
N420TN-4	 										
 											
											
Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
4	0.35	63	14.0	2.8	2.1	3	3.65		142695		
4	0.50	63	14.0	2.8	2.1	3	3.50	101923	102145	142715	
4.5	0.50	70	15.0	3.5	2.7	3	4.00		102150		
5	0.50	70	15.0	3.5	2.7	3	4.50	101941	102167	142716	
5	0.75	70	15.0	3.5	2.7	3	4.25		102168		
5.5	0.50	80	17.0	4.0	3.0	3	5.00		142696		
6	0.50	80	17.0	4.5	3.4	3	5.50	101951	102178	142717	
6	0.75	80	17.0	4.5	3.4	3	5.25	101952	102179	102281	102249
7	0.50	80	17.0	5.5	4.3	3	6.50		102187		
7	0.75	80	17.0	5.5	4.3	3	6.25	101954	102188		
8	0.50	90	20.0	6.0	4.9	3	7.50	101955	102190	142718	
8	0.75	90	20.0	6.0	4.9	3	7.25	101956	102191	102283	
8	1.00	90	20.0	6.0	4.9	3	7.00	101957	102192	102284	102250
9	0.50	90	20.0	7.0	5.5	3	8.50		142697		
9	0.75	90	20.0	7.0	5.5	3	8.25		102200		
9	1.00	90	20.0	7.0	5.5	3	8.00		102201	143935	
10	0.50	100	22.0	7.0	5.5	3	9.50		142698		
10	0.75	100	22.0	7.0	5.5	3	9.25	101863	102056		
10	1.00	100	22.0	7.0	5.5	3	9.00	101864	102057	102262	102239
10	1.25	100	22.0	7.0	5.5	3	8.80	101865	102058	142719	

								N410-3	N420-4	N420V-4	N420TN-4
<b>N410-3</b>  											
<b>N420-4</b>  											
<b>N420V-4</b>  <b>V</b> 											
<b>N420TN-4</b>  <b>TiN</b> 											
 											
											
Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
11	0.50	100	19.0	8.0	6.2	3	10.50		142699		
11	0.75	100	19.0	8.0	6.2	3	10.25		142700		
11	1.00	100	19.0	8.0	6.2	3	10.00		142701		
11	1.25	100	19.0	8.0	6.2	3	9.80		142702		
12	0.50	100	14.0	9.0	7.0	3	11.50		102066		
12	0.75	100	24.0	9.0	7.0	3	11.25		142703		
12	1.00	100	24.0	9.0	7.0	3	11.00	101867	102067	142345	102241
12	1.25	100	24.0	9.0	7.0	3	10.80	101868	102068	142721	
12	1.50	100	24.0	9.0	7.0	3	10.50	101869	102069	102264	102242
13	1.00	100	21.0	11.0	9.0	3	12.00	158401	142704		
14	0.50	100	14.0	11.0	9.0	3	13.50		142705		
14	0.75	100	24.0	11.0	9.0	3	13.25		142706		
14	1.00	100	24.0	11.0	9.0	3	13.00	101871	102077		
14	1.25	100	24.0	11.0	9.0	3	12.80	101872	102078		
14	1.50	100	24.0	11.0	9.0	3	12.50	101873	102079	102266	102244
15	1.00	100	26.0	12.0	9.0	3	14.00	101875	102085		
15	1.50	100	26.0	12.0	9.0	3	13.50	101876	102086		
16	0.75	100	26.0	12.0	9.0	3	15.25		142708		
16	1.00	100	26.0	12.0	9.0	*3	15.00	101877	102087		
16	1.25	100	26.0	12.0	9.0	*3	14.80	101878	102088		
16	1.50	100	26.0	12.0	9.0	*3	14.50	101879	102089	102268	102246
17	1.00	100	26.0	12.0	9.0	3	16.00		142709		
17	1.50	100	26.0	12.0	9.0	3	15.50		142710		
18	0.75	110	26.0	14.0	11.0	4	17.25		142711		
18	1.00	110	26.0	14.0	11.0	4	17.00	101881	102095		
18	1.50	110	26.0	14.0	11.0	4	16.50	101882	102096	102270	
18	2.00	125	33.0	14.0	11.0	3	16.00		142712		
19	1.00	110	26.0	14.0	11.0	4	18.00		* 142713		

\* N410-3 =  4



N410-3

N420-4

N420V-4

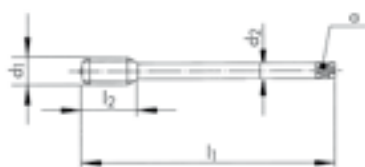
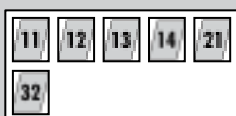
N410-3



N420-4



N420V-4



Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm		
20	1.00	125	28.0	16.0	12.0	4	19.00
20	1.50	125	28.0	16.0	12.0	4	18.50
20	2.00	140	36.0	16.0	12.0	3	18.00
22	1.00	125	28.0	18.0	14.5	4	21.00
22	1.50	125	28.0	18.0	14.5	4	20.50
22	2.00	140	36.0	18.0	14.5	3	20.00
24	1.00	140	30.0	18.0	14.5	4	23.00
24	1.50	140	30.0	18.0	14.5	4	22.50
24	2.00	140	34.0	18.0	14.5	4	22.00
25	1.00	140	30.0	18.0	14.5	4	24.00
25	1.50	140	30.0	18.0	14.5	4	23.50
25	2.00	140	34.0	18.0	14.5	4	23.00
26	1.00	140	30.0	18.0	14.5	4	25.00
26	1.50	140	30.0	18.0	14.5	4	24.50
27	1.50	140	34.0	20.0	16.0	4	25.50
27	2.00	140	34.0	20.0	16.0	4	25.00
28	1.00	140	30.0	20.0	16.0	4	27.00
28	1.50	140	30.0	20.0	16.0	4	26.50
28	2.00	140	30.0	20.0	16.0	4	26.00

ID

ID

ID

102098

101884

102099

102272

105130

102100

102104

101886

102105

102274

101887

142714

101889

102107

102276

101890

102108

102277

101892

102109

142722

101893

102110

142723

101894

102111

142724

101895

102112

142725

101896

102113

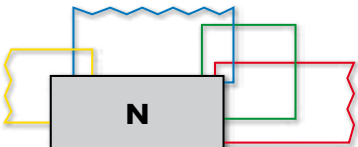













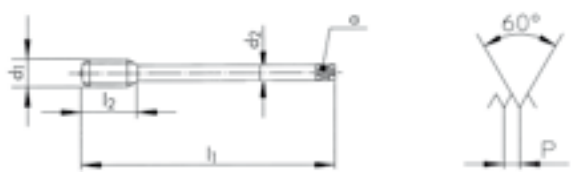










142726

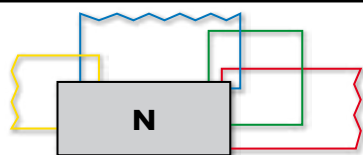
122023

102114

145896



								N410-3	N420-4	N420V-4	N420-3
N410-3											
N420-4											
N420V-4											
N420-3											
											
											
Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
30	1.00	150	32.0	22.0	18.0	4	29.00	101898	102121		
30	1.50	150	32.0	22.0	18.0	4	28.50	101899	102122	143978	
30	2.00	150	32.0	22.0	18.0	4	28.00	101900	102123	143766	
32	1.00	150	32.0	22.0	18.0	4	31.00	101902			
32	1.50	150	32.0	22.0	18.0	4	30.50	101903	102126		143812
32	2.00	150	32.0	22.0	18.0	4	30.00	101904	102127		
33	1.50	160	32.0	25.0	20.0	4	31.50	101905	102128		
33	2.00	160	32.0	25.0	20.0	4	31.00	101906	102129		
34	1.00	170	32.0	28.0	22.0	4	33.00	* 101908			
34	1.50	170	32.0	28.0	22.0	4	32.50	101909	* 102131		
35	1.50	170	32.0	28.0	22.0	4	33.50	101910	102132		
35	2.00	170	32.0	28.0	22.0	4	33.00	101911			
36	1.00	170	34.0	28.0	22.0	4	35.00		* 102133		
36	1.50	170	34.0	28.0	22.0	4	34.50	101912	102134		
36	2.00	170	34.0	28.0	22.0	4	34.00	101913	102135		
36	3.00	200	45.0	28.0	22.0	4	33.00	101914	102136		
38	1.00	170	34.0	28.0	22.0	4	37.00	* 101916	* 102138		
38	1.50	170	34.0	28.0	22.0	4	36.50	101917	102139		
38	2.00	170	34.0	28.0	22.0	4	36.00	101918			
39	2.00	170	34.0	32.0	24.0	4	37.00	101920			
39	3.00	200	45.0	32.0	24.0	4	36.00	101921			



N410-3

N420-4

N420-3

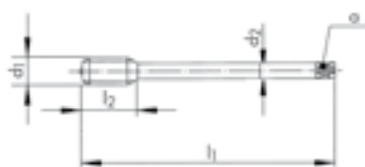
N410-3



N420-4

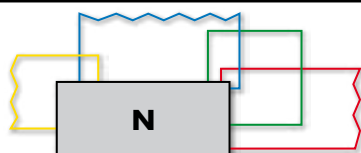


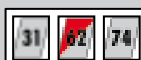
N420-3



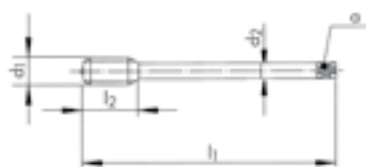
Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm	6H
40	1.00	170	34.0	32.0	24.0	5
40	1.50	170	34.0	32.0	24.0	5
40	2.00	170	34.0	32.0	24.0	5
40	3.00	200	45.0	32.0	24.0	4
42	1.50	170	34.0	32.0	24.0	5
42	2.00	170	34.0	32.0	24.0	5
42	3.00	200	45.0	32.0	24.0	4
45	1.50	180	34.0	36.0	29.0	5
45	2.00	180	34.0	36.0	29.0	5
45	3.00	200	45.0	36.0	29.0	4
48	1.50	190	36.0	36.0	29.0	5
48	2.00	190	36.0	36.0	29.0	5
48	3.00	220	48.0	36.0	29.0	5
50	1.50	190	36.0	36.0	29.0	5
50	2.00	190	36.0	36.0	29.0	5
52	1.50	190	36.0	40.0	32.0	5
52	2.00	190	36.0	40.0	32.0	5
52	3.00	220	48.0	40.0	32.0	5
55	2.00	190	40.0	40.0	32.0	5
60	2.00	220	42.0	45.0	35.0	5
63	1.50	220	38.0	45.0	35.0	5




ID	ID	ID
101925		
101926	102152	143813
101927	102153	
* 101928	* 102154	
101929	102155	
101930	102156	
101931	102157	
101933	102159	
101934		
101935	* 102161	
101937	102163	
101938	102164	
101939	102165	
101943	102176	143814
* 101944	* 102177	
* 101946		
101947		
* 101948		
* 105131		
105132		
		143815

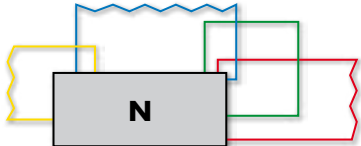







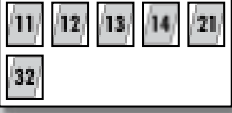










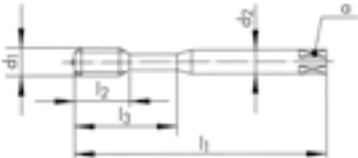








**N**
**N410-3 LH**

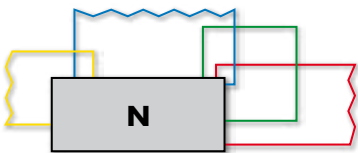


















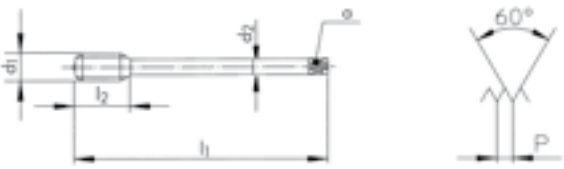






**LH**

**N420-4 LH**

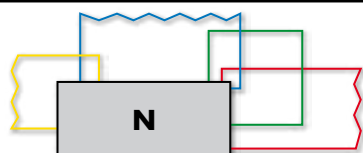
**LH**

**N410-3 LH**
**N420-4 LH**

**ISO 2  
6H**
**ISO 2  
6H**

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID
4	0.50	63	14.0	2.8	2.1	3	3.50	104844	
5	0.50	70	15.0	3.5	2.7	3	4.50	104845	
6	0.50	80	17.0	4.5	3.4	3	5.50	104846	104870
6	0.75	80	17.0	4.5	3.4	3	5.25	104847	105133
7	0.75	80	17.0	5.5	4.3	3	6.25	104848	
8	0.50	90	20.0	6.0	4.9	3	7.50	104849	
8	0.75	90	20.0	6.0	4.9	3	7.25	104850	104871
8	1.00	90	20.0	6.0	4.9	3	7.00	104851	104872
10	0.75	100	22.0	7.0	5.5	3	9.25	104852	
10	1.00	100	22.0	7.0	5.5	3	9.00	104853	104873
10	1.25	100	22.0	7.0	5.5	3	8.80		104874
12	1.00	100	24.0	9.0	7.0	3	11.00	104854	104875
12	1.25	100	24.0	9.0	7.0	3	10.80	104855	104876
12	1.50	100	24.0	9.0	7.0	3	10.50	104856	104877
14	1.00	100	24.0	11.0	9.0	3	13.00	104857	104878
14	1.25	100	24.0	11.0	9.0	3	12.80	104858	
14	1.50	100	24.0	11.0	9.0	3	12.50	104859	104879
16	1.00	100	26.0	12.0	9.0	*3	15.00	104860	104880
16	1.50	100	26.0	12.0	9.0	*3	14.50	104861	104881
18	1.00	110	26.0	14.0	11.0	4	17.00	104862	
18	1.50	110	26.0	14.0	11.0	4	16.50	104863	104882
20	1.00	125	28.0	16.0	12.0	4	19.00	104864	
20	1.50	125	28.0	16.0	12.0	4	18.50	104865	104883
22	1.50	125	28.0	18.0	14.5	4	20.50	104866	104884
24	1.50	140	30.0	18.0	14.5	4	22.50	104867	104885
24	2.00	140	34.0	18.0	14.5	4	22.00	104868	104886
28	1.50	140	30.0	20.0	16.0	4	26.50	105166	
30	1.50	150	32.0	22.0	18.0	4	28.50	105167	105165
30	2.00	150	32.0	22.0	18.0	4	28.00	105168	
* N410-3 LH =  4									

									N360-3	N360V-3	N360TN-3	N360-3
<b>N360-3</b>  												
<b>N360V-3</b>  												
<b>N360TN-3</b>  												
 												
Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm			ID	ID	ID	ID <sup>6H</sup> + mm
4	0.50	63	7.5	21	4.5	3.4	3	3.50	101632	101712	111618	101631 0.020
5	0.50	70	9.0	25	6.0	4.9	3	4.50	101641	101714	111617	101640 0.020
6	0.50	80	11.0	30	6.0	4.9	3	5.50	101648	143990		
6	0.75	80	11.0	30	6.0	4.9	3	5.25	101650	101716	101702	101649 0.022
8	0.75	90	12.5	35	8.0	6.2	3	7.25	101658	101719		101657 0.022
8	1.00	90	12.5	35	8.0	6.2	3	7.00	101660	101720	101704	101659 0.026
10	0.75	100	14.0	39	10.0	8.0	3	9.25	101606	144401		
10	1.00	100	14.0	39	10.0	8.0	3	9.00	101608	101706	101695	101607 0.026
10	1.25	100	14.0	39	10.0	8.0	3	8.80	101609	105134	110965	

								N460-3	N460V-3	N460TN-3	N460-3
<b>N460-3</b>  											
<b>N460V-3</b>  											
<b>N460TN-3</b>  											
											
$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		$6H$ 	ID	ID	ID	ID $6H$ + mm
12	1.00	100	14.0	9.0	7.0	3	11.00	102353	102462	102447	102352 0.026
12	1.25	100	14.0	9.0	7.0	3	10.80	102354	102463	144202	
12	1.50	100	14.0	9.0	7.0	3	10.50	102356	102464	102448	102355 0.032
13	1.00	100	14.0	11.0	9.0	3	12.00	102364			
14	1.00	100	14.0	11.0	9.0	3	13.00	102365	102466		
14	1.50	100	14.0	11.0	9.0	3	12.50	102367	102467	102450	102366 0.032
15	1.00	100	14.0	12.0	9.0	3	14.00	102370			
15	1.50	100	18.0	12.0	9.0	3	13.50	102371			
16	1.00	100	14.0	12.0	9.0	4	15.00	102372	102469		
16	1.50	100	14.0	12.0	9.0	4	14.50	102374	102470	102452	102373 0.032
18	1.00	110	18.0	14.0	11.0	4	17.00	102380	143926		
18	1.50	110	18.0	14.0	11.0	4	16.50	102382	102472		102381 0.032
20	1.00	125	20.0	16.0	12.0	4	19.00	102384	146377		
20	1.50	125	20.0	16.0	12.0	4	18.50	102386	102474		
20	2.00	140	24.0	16.0	12.0	4	18.00	102387	143566		
22	1.00	125	20.0	18.0	14.5	4	21.00	102392	147702		
22	1.50	125	20.0	18.0	14.5	4	20.50	102393	102476		
24	1.50	140	22.0	18.0	14.5	4	22.50	102396	102478		
24	2.00	140	22.0	18.0	14.5	4	22.00	102397	102479		
25	1.50	140	22.0	18.0	14.5	4	23.50	102399	143810		
26	1.50	140	22.0	18.0	14.5	4	24.50	102400	143952		
27	1.50	140	22.0	20.0	16.0	4	25.50	102401	143965		
27	2.00	140	22.0	20.0	16.0	4	25.00	102402	144201		
28	1.50	140	22.0	20.0	16.0	4	26.50	102403	144997		



**N460-3**

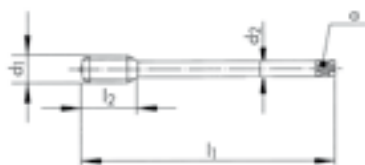


**N460V-3**



**N460-3**

**N460V-3**

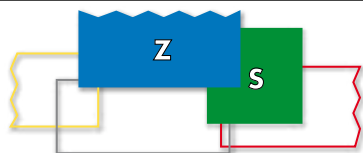


MF	Ø d <sub>1</sub>	P	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	a		6H
	mm	mm	mm	mm	mm	mm		mm
30	1.50	150	24.0	22.0	18.0	4		28.50
30	2.00	150	24.0	22.0	18.0	4		28.00
32	1.50	150	24.0	22.0	18.0	4		30.50
33	2.00	160	26.0	25.0	20.0	4		31.00
33	3.00	180	33.0	25.0	20.0	4		30.00
35	1.50	170	24.0	28.0	22.0	5		33.50
36	1.50	170	24.0	28.0	22.0	5		34.50
36	2.00	170	28.0	28.0	22.0	5		34.00
36	3.00	200	36.0	28.0	22.0	4		33.00
39	3.00	200	40.0	32.0	24.0	5		36.00
42	3.00	200	40.0	32.0	24.0	5		39.00

**ID**

**ID**

102404	142524
102405	142581
102406	143605
102407	147604
175437	150448
102408	146846
102409	143824
175436	164870
115072	150453
174995	122669
174996	150436



Z320V-4



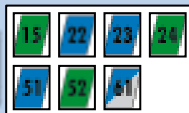
Z320VS-4



Z360V-3



Z370VS-3



Z320V-4

Z320VS-4

Z360V-3

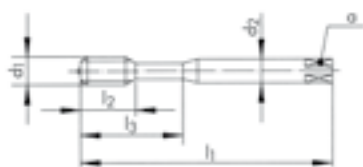
Z370VS-3



NEW





PM


ISO 2  
6H

ISO 2  
6H

ISO 2  
6H

6HX



$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm		
*2	0.20	45	8.0		2.8	2.1	2	1.80
*2	0.25	45	8.0		2.8	2.1	2	1.75
*2.2	0.25	45	9.0		2.8	2.1	2	1.95
2.5	0.20	50	10.0		2.8	2.1	3	2.30
2.5	0.25	50	10.0		2.8	2.1	3	2.25
3	0.35	56	12.0	18	3.5	2.7	3	2.65
6	0.75	80	17.0	30	6.0	4.9	3	5.25
8	1.00	90	20.0	35	8.0	6.2	3	7.00
10	1.00	100	22.0	39	10.0	8.0	3	9.00

ID

ID



146487  
114715  
115462  
115578  
115887  
115468  
142726  
142727  
142728

124289  
120060

$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	a mm		
4	0.50	63	7.5	21	4.5	3.4	3	3.50
5	0.50	70	9.0	25	6.0	4.9	3	4.50
6	0.75	80	11.0	30	6.0	4.9	3	5.25
8	1.00	90	12.5	35	8.0	6.2	3	7.00
10	1.00	100	14.0	39	10.0	8.0	3	9.00

ID

104675  
104676  
104677  
104678  
104674

$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ h6 mm	a mm		
6	0.75	80	11.0	30	6.0	4.9	3	5.25
8	1.00	90	12.5	35	8.0	6.2	3	7.00
10	1.00	100	14.0	39	10.0	8.0	3	9.00

ID

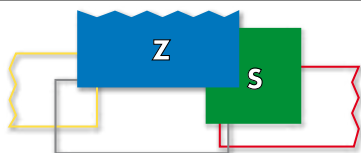
166117  
166118  
166119

\* Z320V-3



P ≤ 0.25

ISO 1  
4H



Z420V-4

Z420VS-4

Z460V-3

Z470VS-3

Z420V-4



Z420VS-4



Z460V-3



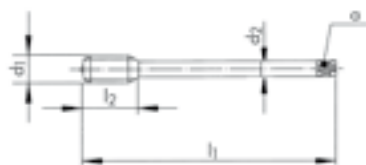
Z470VS-3



NEW



PM



Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm		
12	1.00	100	24.0	9.0	7.0	3	11.00
12	1.50	100	24.0	9.0	7.0	3	10.50
14	1.50	100	24.0	11.0	9.0	3	12.50
16	1.50	100	26.0	12.0	9.0	3	14.50

ID	ID
142729	
142730	120421
142731	120688
142732	120878

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm		
12	1.00	100	14.0	9.0	7.0	3	11.00
12	1.50	100	14.0	9.0	7.0	3	10.50
14	1.50	100	14.0	11.0	9.0	3	12.50
16	1.50	100	14.0	12.0	9.0	4	14.50
18	1.50	110	18.0	14.0	11.0	4	16.50
20	1.50	125	20.0	16.0	12.0	4	18.50
22	1.50	125	20.0	18.0	14.5	4	20.50
24	1.50	140	22.0	18.0	14.5	4	22.50
24	2.00	140	22.0	18.0	14.5	4	22.00

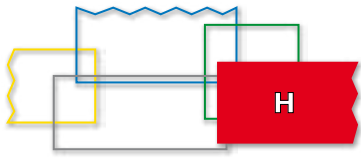






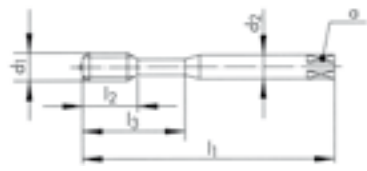







ID
104729
104730
104731
104732
104733
104734
104735
104736
104737

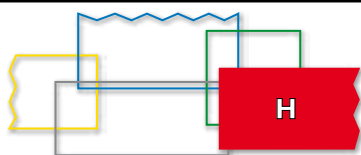
Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> h <sub>6</sub> mm	a mm		
12	1.50	110	14.0	*10.0	*8.0	4	10.50
14	1.50	110	14.0	*12.0	*9.0	4	12.50
16	1.50	110	18.0	12.0	9.0	4	14.50

ID
166120
166121
166122

\* Norme DC / \* DC Norm / \* Norma DC



									H320-4	H420-4		
<div><div>H320-4</div><div></div><div><div>15166282</div></div></div> <div><div>H420-4</div><div></div><div><div>15166282</div></div></div>									 			
												
 												
												
Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID		
6	0.75	80	17.0	30	6.0	4.9	3	5.25	101214			
8	0.75	90	20.0	35	8.0	6.2	3	7.25	101216			
8	1.00	90	20.0	35	8.0	6.2	3	7.00	101217			
10	1.00	100	22.0	39	10.0	8.0	3	9.00	101204			
12	1.25	100	24.0		9.0	7.0	4	10.80		101273		
12	1.50	100	24.0		9.0	7.0	4	10.50		101274		
14	1.50	100	24.0		11.0	9.0	4	12.50		101276		
16	1.50	100	26.0		12.0	9.0	4	14.50		101278		
20	1.50	125	28.0		16.0	12.0	4	18.50		101282		
24	2.00	140	34.0		18.0	14.5	4	22.00		101285		



H350-3

H450-3

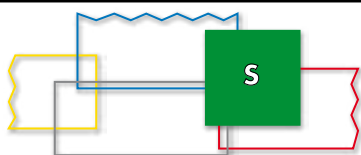
H350-3










H450-3

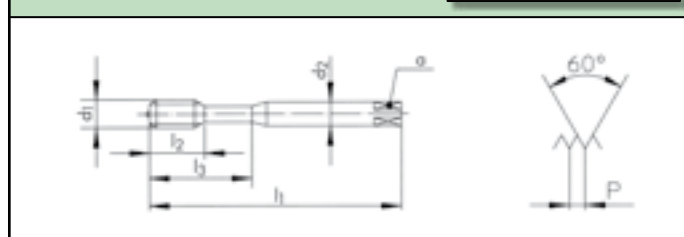






Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID
6	0.75	80	11.0	30	6.0	4.9	3	5.25	101249	
8	0.75	90	12.5	35	8.0	6.2	3	7.25	101252	
8	1.00	90	12.5	35	8.0	6.2	3	7.00	101253	
10	1.00	100	14.0	39	10.0	8.0	3	9.00	101235	
12	1.00	100	14.0		9.0	7.0	4	11.00		101302
12	1.50	100	14.0		9.0	7.0	4	10.50		101303
14	1.50	100	14.0		11.0	9.0	4	12.50		101306
16	1.50	100	14.0		12.0	9.0	4	14.50		101308
18	1.50	110	18.0		14.0	11.0	4	16.50		101310
20	1.50	125	20.0		16.0	12.0	4	18.50		101312
22	1.50	125	20.0		18.0	14.5	4	20.50		101314
24	1.50	140	22.0		18.0	14.5	4	22.50		101316
24	2.00	140	22.0		18.0	14.5	4	22.00		101317
27	2.00	140	22.0		20.0	16.0	4	25.00		101319
30	1.50	150	24.0		22.0	18.0	4	28.50		101321
30	2.00	150	24.0		22.0	18.0	4	28.00		101322





S320VS-4		<b>VS</b>	
S420VS-4		<b>VS</b>	
S360VS-3		<b>VS</b>	
S460VS-3		<b>VS</b>	



S320VS-4	S420VS-4	S360VS-3	S460VS-3
			
			



			
<b>6HX</b>	<b>6HX</b>	<b>6HX</b>	<b>6HX</b>

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
6	0.75	80	17.0	30	6.0	4.9	3	5.25
8	1.00	90	20.0	35	8.0	6.2	3	7.00
10	1.00	100	22.0	39	10.0	8.0	3	9.00
12	1.50	100	24.0		9.0	7.0	4	10.50
14	1.50	100	24.0		11.0	9.0	4	12.50
16	1.50	100	26.0		12.0	9.0	4	14.50

ID	ID
* 123690	
124288	
120059	
	120420
	120687
	120877

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
8	1.00	90	12.5	35	8.0	6.2	3	7.00
10	1.00	100	14.0	39	10.0	8.0	3	9.00
12	1.50	100	14.0		9.0	7.0	4	10.50
14	1.50	100	14.0		11.0	9.0	4	12.50
16	1.50	100	14.0		12.0	9.0	4	14.50

ID	ID
	111528
	111529
	111540
	111541
	111542

# dero

SA390-3



53

SA390-3



6HX



$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
8	1.00	90	25.0	8.0	6.2	3	7.00
10	1.00	100	30.0	10.0	8.0	3	9.00
10	1.25	100	30.0	10.0	8.0	3	8.80
12	1.00	110	35.0	12.0	9.0	4	11.00
12	1.50	110	35.0	12.0	9.0	4	10.50
14	1.50	110	40.0	16.0	12.0	4	12.50

ID

\* 149735

\* 149751

\* 149753

\* 149769

\* 149773

\* 149790

# aero

**SA320-4**

**SA350-3**

**TL320VS-4**

**VS**

**TL351VS-3**

**VS**

**SA320-4**
**SA350-3**
**TL320VS-4**
**TL351VS-3**

**4HX**
**4HX**
**4HX**
**4HX**
**ID**
**ID**
**ID**
**ID**

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
4	0.50	63	14.0		4.5	3.4	3	3.50
5	0.50	70	15.0		6.0	4.9	3	4.50
6	0.50	80	15.0	23	6.0	4.9	3	5.50
8	1.00	90	18.0	29	8.0	6.2	3	7.00
10	1.00	100	20.0	33	10.0	8.0	3	9.00

	* 149079	* 152032	152033
* 149142	149144	* 152048	152049
* 149193		* 152058	152059
149304	149306	* 152079	152080
149362	149364	* 152092	152093

**6HX**
**6HX**
**6HX**
**6HX**

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
4	0.50	63	14.0		4.5	3.4	3	3.50
5	0.50	70	15.0		6.0	4.9	3	4.50
6	0.50	80	15.0	23	6.0	4.9	3	5.50
8	1.00	90	18.0	29	8.0	6.2	3	7.00
10	1.00	100	20.0	33	10.0	8.0	3	9.00

<b>ID</b>	<b>ID</b>	<b>ID</b>	<b>ID</b>
149081	149083	* 152034	152035
149146	149148	* 152050	152051
	* 149199	* 152060	152061
149308	149310		148019
149366	149368	* 152094	148026

aero

SA420-4



52 53

SA450-3



52 53

TL420VS-4



VS

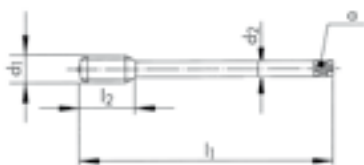
41 42

TL451VS-3



VS

41 42



SA420-4

SA450-3

TL420VS-4

TL451VS-3



4HX

4HX

4HX

4HX

$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
12	1.00	100	19.0	9.0	7.0	4	11.00
12	1.50	100	24.0	9.0	7.0	4	10.50
14	1.50	100	24.0	11.0	9.0	4	12.50
16	1.50	100	26.0	12.0	9.0	4	14.50

ID

ID

ID

ID

\* 152209

\* 152218

\* 152208

\* 152213

\* 152210

\* 152214

\* 152224

\* 152212

\* 152216

\* 152226

6HX

6HX

6HX

6HX

$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
12	1.00	100	19.0	9.0	7.0	4	11.00
12	1.50	100	24.0	9.0	7.0	4	10.50
14	1.50	100	24.0	11.0	9.0	4	12.50
16	1.00	100	23.0	12.0	9.0	4	15.00
16	1.50	100	26.0	12.0	9.0	4	14.50

ID

ID

ID

ID

\* 152228

\* 148967

\* 152237

\* 152242

\* 152227

\* 152232

\* 152241

\* 152229

\* 152233

\* 152238

\* 152243

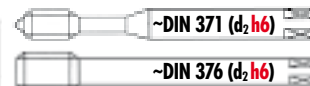
\* 152239

\* 152244

\* 152235

\* 152240

\* 152245



# RTS

## Rigid Tapping Synchro

RTS320VS-4



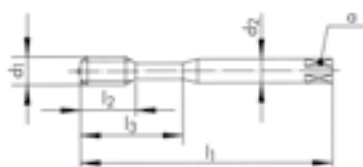
RTS420VS-4



RTS362VS-3



RTS462VS-3



RTS320VS-4

RTS420VS-4

RTS362VS-3

RTS462VS-3



6HX

6HX

6HX

6HX

$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ h6 mm	$\alpha$ mm		
8	1.00	90	12.5	35	8.0	6.2	3	7.00
10	1.00	100	14.0	39	10.0	8.0	3	9.00
12	1.50	110	14.0		*10.0	*8.0	3	10.50
14	1.50	110	14.0		*12.0	*9.0	3	12.50
16	1.50	110	18.0		12.0	9.0	3	14.50

\* Norme DC / \* DC Norm / \* Norma DC

$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ h6 mm	$\alpha$ mm		
8	1.00	90	12.5	35	8.0	6.2	3	7.00
10	1.00	100	14.0	39	10.0	8.0	3	9.00
12	1.50	110	14.0		*10.0	*8.0	3	10.50
14	1.50	110	14.0		*12.0	*9.0	3	12.50
16	1.50	110	18.0		12.0	9.0	3	14.50

\* Norme DC / \* DC Norm / \* Norma DC

ID	ID	ID	ID
150615			
150630			
	150640		
	150655		
	150665		

ID	ID
150617	
150632	
	151862
	151869
	151871



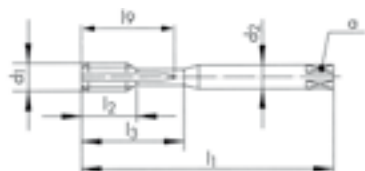
sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido

# K

K313TC-3



K413TC-3



K313TC-3

K413TC-3



NEW

NEW



6HX

6HX

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	l <sub>4</sub> mm	d <sub>2</sub> mm	a mm	→	←
10	1.00	100	22.0	39	37	10.0	8.0	3	9.00
12	1.00	110	24.0		42	9.0	7.0	3	11.00
12	1.25	110	24.0		42	9.0	7.0	3	10.80
12	1.50	110	24.0		42	9.0	7.0	3	10.50
14	1.50	110	28.0		49	11.0	9.0	3	12.50
16	1.50	110	30.0		56	12.0	9.0	3	14.50
20	1.50	140	36.0		70	16.0	12.0	5	18.50

ID

ID

175729

175731

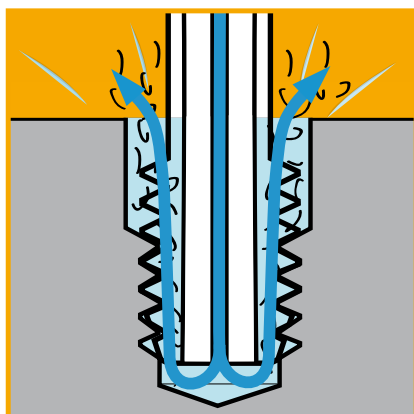
175733

175735

175737

175739

171205





## FPS FORMING

FPS381CN-3



FPS381VS-3



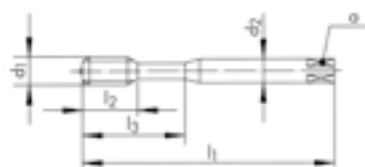
FPS481VS-3



FPS381CN-3

FPS381VS-3

FPS481VS-3



6HX

6HX

6HX

$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	6HX Tol.
4	0.50	63	14.0	21	4.5	3.4	3.80 + 0.03
5	0.50	70	15.0	25	6.0	4.9	4.80 + 0.03
6	0.50	80	17.0	30	6.0	4.9	5.80 + 0.03
6	0.75	80	17.0	30	6.0	4.9	5.65 + 0.03
8	0.75	90	20.0	35	8.0	6.2	7.65 + 0.03
8	1.00	90	20.0	35	8.0	6.2	7.55 + 0.05
10	1.00	100	22.0	39	10.0	8.0	9.55 + 0.05
12	1.00	100	19.0		9.0	7.0	11.55 + 0.05
14	1.50	100	24.0		11.0	9.0	13.30 + 0.05
16	1.50	100	26.0		12.0	9.0	15.30 + 0.05

ID

ID

ID

166631

166639

166699

166648

166649

166701

166702

166658

166659

166668

166669

166674

166679

166684

## FAS FORMING

FAS381VS-3



VS

12	13	14	15
21	22	23	24
41	51	61	63

FAS481VS-3



VS

12	13	14	15
21	22	23	24
41	51	61	63

FAS381VS-3

FAS481VS-3



6HX

6HX

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm	6HX Tol.	
4	0.50	63	14.0	21	4.5	3.4	3.80	+ 0.03
5	0.50	70	15.0	25	6.0	4.9	4.80	+ 0.03
6	0.50	80	17.0	30	6.0	4.9	5.80	+ 0.03
6	0.75	80	17.0	30	6.0	4.9	5.65	+ 0.03
8	0.75	90	20.0	35	8.0	6.2	7.65	+ 0.03
8	1.00	90	20.0	35	8.0	6.2	7.55	+ 0.05
10	1.00	100	22.0	39	10.0	8.0	9.55	+ 0.05
12	1.00	100	19.0		9.0	7.0	11.55	+ 0.05
14	1.50	100	24.0		11.0	9.0	13.30	+ 0.05
16	1.50	100	26.0		12.0	9.0	15.30	+ 0.05

ID

ID

166625

166633

166698

166642

166700

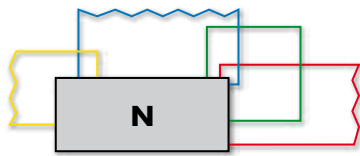
166652

166662

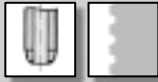
166672

166677

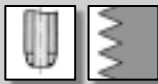
166682



N1110-1



N1110-3



N1110-S



N1110-1

N1110-3

N1110-S



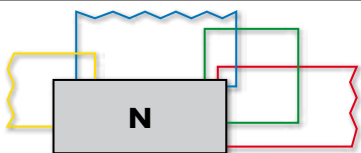













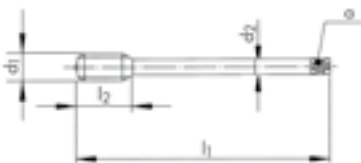







ISO 2  
6H

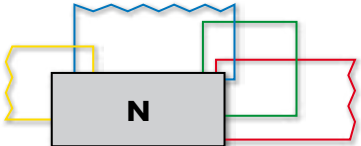
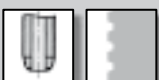






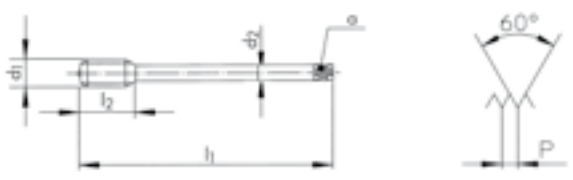



ISO 2  
6H

Ø d <sub>1</sub> MF	P mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID
2	0.25	45	8.0		2.80	2.10	3	1.75		102933	
2.2	0.25	45	9.5		2.80	2.10	3	1.95		102936	
2.3	0.25	45	9.5		2.80	2.10	3	2.05		* 102938	
2.5	0.35	45	9.5		2.80	2.10	3	2.15		102940	
3	0.35	48	11.0	18	3.15	2.50	3	2.65		102945	
3.5	0.35	50	13.0	20	3.55	2.80	3	3.15		102949	
4	0.35	53	13.0	21	4.00	3.15	3	3.65		102952	
4	0.50	53	13.0	21	4.00	3.15	3	3.50	102773	102953	111040
4.5	0.50	53	13.0	21	4.50	3.55	3	4.00		102958	
5	0.35	58	16.0	25	5.00	4.00	3	4.65		102960	
5	0.50	58	16.0	25	5.00	4.00	3	4.50	102778	102961	111045
5	0.75	58	16.0	25	5.00	4.00	3	4.25		102963	
5.5	0.50	62	17.0	26	5.60	4.50	3	5.00		102967	
6	0.50	66	19.0	30	6.30	5.00	3	5.50	102783	102969	111050
6	0.75	66	19.0	30	6.30	5.00	3	5.25	102784	102971	111051
7	0.50	66	19.0	30	7.10	5.60	3	6.50		102975	
8	0.75	72	22.0	35	8.00	6.30	3	7.25	102790	102982	111057
8	1.00	72	22.0	35	8.00	6.30	3	7.00	102791	102984	111058
9	0.50	72	22.0	36	9.00	7.10	3	8.50		102988	
9	0.75	72	22.0	36	9.00	7.10	3	8.25		102989	
9	1.00	72	22.0	36	9.00	7.10	3	8.00		102990	
10	0.50	80	24.0	39	10.00	8.00	3	9.50		102925	
10	1.00	80	24.0	39	10.00	8.00	3	9.00	102756	102928	111024
10	1.25	80	24.0	39	10.00	8.00	3	8.80	102758	102930	111025

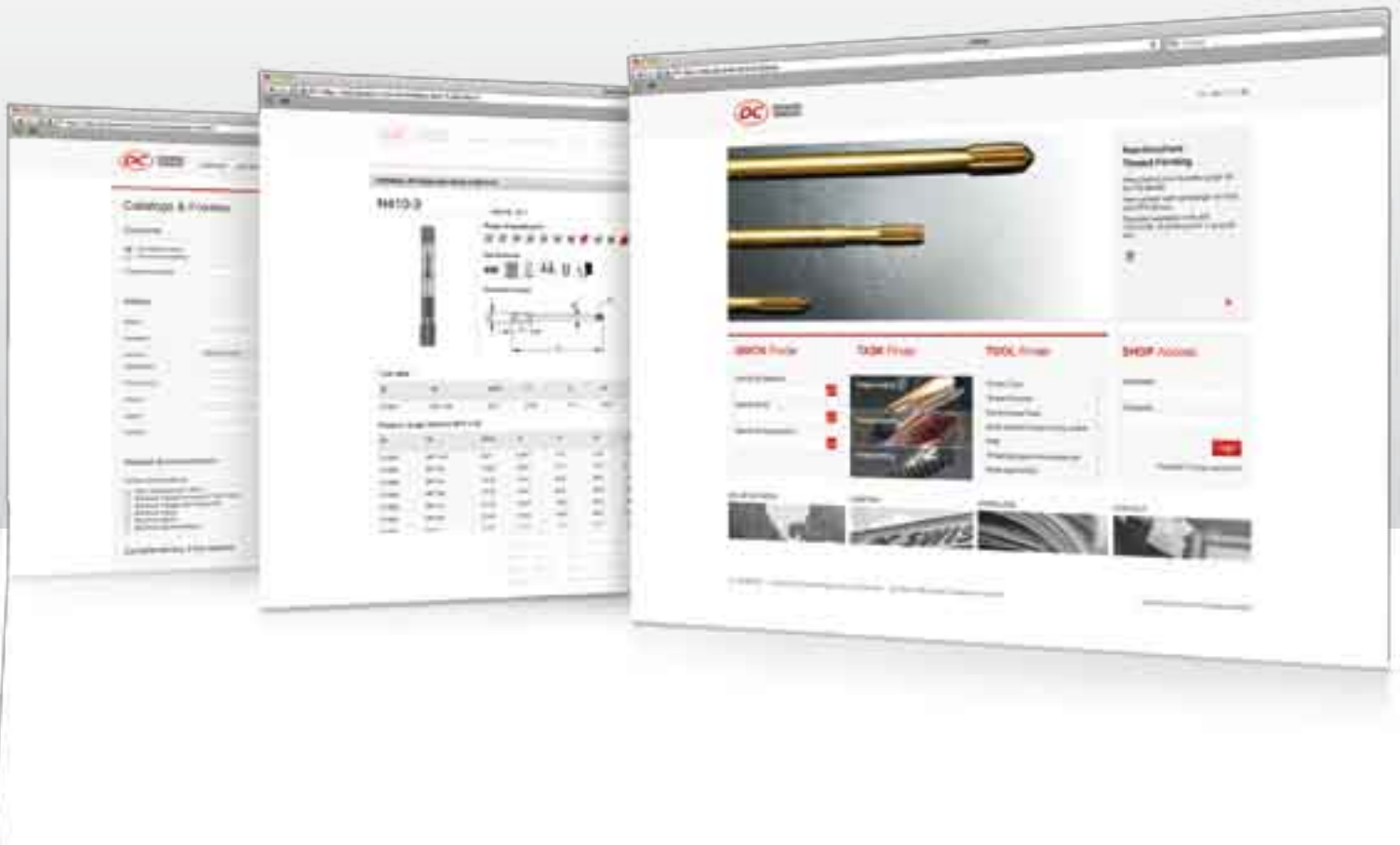
P 0.25

ISO 1  
4H












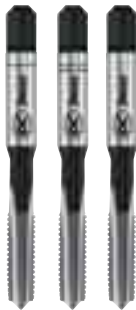











								N1210-1	N1210-3	N1210-S	
<b>N1210-1</b>  											
<b>N1210-3</b>   											
<b>N1210-S</b>  											
								  			
 								 			
								 			
$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID	
11	0.50	85	22.0	8.0	6.3	3	10.50		103485		
11	0.75	85	22.0	8.0	6.3	3	10.25		103486		
11	1.00	85	22.0	8.0	6.3	3	10.00		103487		
11	1.25	85	22.0	8.0	6.3	3	9.80		103488		
12	0.50	89	24.0	9.0	7.1	3	11.50		103490		
12	0.75	89	24.0	9.0	7.1	3	11.25		103491		
12	1.00	89	24.0	9.0	7.1	3	11.00	103305	103493	111169	
12	1.25	89	24.0	9.0	7.1	3	10.80	103307	103495	111171	
12	1.50	89	24.0	9.0	7.1	3	10.50	103308	103497	111172	
14	0.50	95	24.0	11.2	9.0	3	13.50		103502		
14	0.75	95	24.0	11.2	9.0	3	13.25		103503		
14	1.00	95	24.0	11.2	9.0	3	13.00	103312	103504	111175	
14	1.25	95	24.0	11.2	9.0	3	12.80	103314	103506	111177	
14	1.50	95	24.0	11.2	9.0	3	12.50	103315	103508	111178	
15	0.75	90	23.0	11.2	9.0	3	14.25		103512		
15	1.00	90	23.0	11.2	9.0	3	14.00		103513		
16	0.50	102	32.0	12.5	10.0	4	15.50		103515		
16	0.75	102	32.0	12.5	10.0	4	15.25		103516		
16	1.00	102	32.0	12.5	10.0	4	15.00	103321	103517	111183	
16	1.50	102	32.0	12.5	10.0	4	14.50	103322	103520	111184	
17	1.00	95	23.0	12.5	10.0	4	16.00		103525		
18	0.75	112	30.0	14.0	11.2	4	17.25		103527		
18	1.00	112	30.0	14.0	11.2	4	17.00	103326	103528	111187	
18	1.50	112	30.0	14.0	11.2	4	16.50	103327	103531	111188	
18	2.00	112	30.0	14.0	11.2	3	16.00		103533		
19	1.00	112	33.0	14.0	11.2	4	18.00		103536		

								N1210-1	N1210-3	N1210-S	
<b>N1210-1</b> 											
<b>N1210-3</b>  											
<b>N1210-S</b> 											
											
$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID	
20	1.00	112	37.0	14.0	11.2	4	19.00	103332	103537	111198	
20	1.25	112	37.0	14.0	11.2	4	18.80		103539		
20	1.50	112	37.0	14.0	11.2	4	18.50	103334	103540	111195	
22	1.00	115	32.0	16.0	12.5	4	21.00		103545		
22	1.50	115	32.0	16.0	12.5	4	20.50	103340	103546	121669	
22	2.00	115	32.0	16.0	12.5	3	20.00		103548		
24	1.00	120	30.0	18.0	14.0	4	23.00		103552		
24	1.50	120	30.0	18.0	14.0	4	22.50	103343	103553	111202	
24	2.00	130	45.0	18.0	14.0	4	22.00	103344	103555	111203	
25	1.00	120	30.0	18.0	14.0	4	24.00		103559		
25	1.50	120	30.0	18.0	14.0	4	23.50		103560		
25	2.00	120	30.0	18.0	14.0	4	23.00		103561		
26	1.00	120	30.0	18.0	14.0	4	25.00		103562		
26	1.50	120	30.0	18.0	14.0	4	24.50	103346	103563	111207	
26	2.00	120	30.0	18.0	14.0	4	24.00		103564		
27	1.00	127	30.0	20.0	16.0	4	26.00		103565		
27	1.50	127	30.0	20.0	16.0	4	25.50		103566		
27	2.00	135	45.0	20.0	16.0	4	25.00	* 103351	* 103567	* 111210	
28	1.00	127	30.0	20.0	16.0	4	27.00		103570		
28	1.50	127	30.0	20.0	16.0	4	26.50		103571		
30	1.50	127	32.0	20.0	16.0	4	28.50	103355	103575	111214	
30	2.00	127	32.0	20.0	16.0	4	28.00	103356	103577	111215	





























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MORE COMPLETE.  
MORE **YOU.**


























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	N					Z	
Caractéristiques Caratteristiche			 V	 R40 V		 V	 VS
							
Genre de trou Tipo di foro							
	N310-3	N320-3 N320-4	N320V-4	N360-3 N360V-3	N1110 -1-2-3-S	Z320V-3 Z320V-4	Z320VS-4
DIN longue DIN lungo	DIN 371	114	114	114	116	118	118
ISO courte ISO corto	ISO 529					128	
Tolérance Tolleranza	UNC 2B	114	114	114	116	128	118
Tolérance Tolleranza	UNC 3B						
Tolérance Tolleranza	UNC(J) 3B		114		116		
	N410-3	N420-4	N420V-4	N460-3 N460V-3	N1210 -1-2-3-S	Z420V-4	Z420VS-4
DIN longue DIN lungo	DIN 376	115	115	115	117	118	118
ISO courte ISO corto	ISO 529					129	
Tolérance Tolleranza	UNC 2B	115	115	115	117	129	118
Tolérance Tolleranza	UNC 3B						
Tolérance Tolleranza	UNC(J) 3B						



Z		H		S		SA		
								
								
								
								
<b>Z360V-3</b> <b>Z362V-3</b>	<b>Z370VS-3</b>	<b>H320-4</b>	<b>H350-3</b>	<b>S320VS-4</b>	<b>S360VS-3</b>	<b>SA320-4</b>	<b>SA350-3</b>	<b>SA390-3</b>
119	120	121	121	122	123	124	124	125
119	120	121	121	122	123	124	124	
	120			122		124	124	125
<b>Z462V-3</b>	<b>Z470VS-3</b>	<b>H420-4</b>	<b>H450-3</b>	<b>S420VS-4</b>	<b>S460VS-3</b>	<b>SA420-4</b>	<b>SA450-3</b>	
119	120	121	121	122	123	125	125	
119	120	121	121	122	123	125	125	

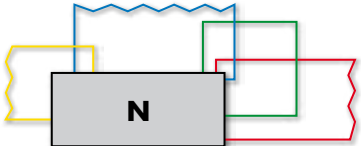






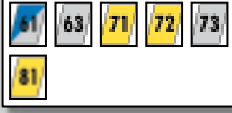


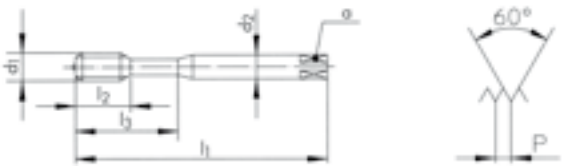








	TL		RTS		FS	FPS	FAS
<b>Caractéristiques</b> <b>Caratteristiche</b>	 <b>VS</b>	 <b>VS</b>	 <b>VS</b>	 <b>VS</b>	 <b>VS</b>	 <b>VS</b>	 <b>VS</b>
							
<b>Genre de trou</b> <b>Tipo di foro</b>							
	<b>TL320VS-4</b>	<b>TL351VS-3</b>	<b>RTS320VS-4</b>	<b>RTS362VS-3</b>	<b>FS380VS-3</b>	<b>FPS381VS-3</b>	<b>FAS381VS-3</b>
<b>DIN longue</b> <b>DIN lungo</b> <b>DIN 371</b>	124	124	126	126			
<b>DIN longue</b> <b>DIN lungo</b> <b>~ DIN 2184-1</b>					127	127	127
<b>Tolérance</b> <b>Tolleranza</b> <b>UNC 2B</b>	124	124	126	126	127	127	127
<b>Tolérance</b> <b>Tolleranza</b> <b>UNC 3B</b>							
<b>Tolérance</b> <b>Tolleranza</b> <b>UNC(J) 3B</b>	124	124					
			<b>RTS420VS-4</b>	<b>RTS462VS-3</b>			
<b>DIN longue</b> <b>DIN lungo</b> <b>DIN 376</b>			126	126			
<b>DIN longue</b> <b>DIN lungo</b> <b>~ DIN 2184-1</b>							
<b>Tolérance</b> <b>Tolleranza</b> <b>UNC 2B</b>			126	126			
<b>Tolérance</b> <b>Tolleranza</b> <b>UNC 3B</b>							
<b>Tolérance</b> <b>Tolleranza</b> <b>UNC(J) 3B</b>							

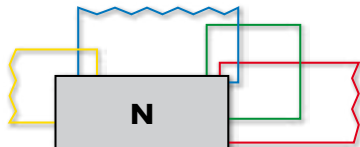










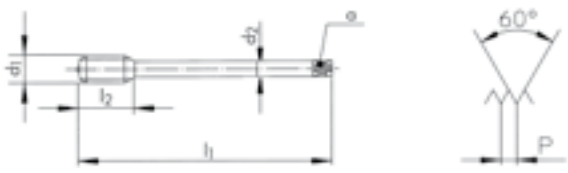








# aero

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THREADING TOOLS FOR AEROSPACE MATERIALS

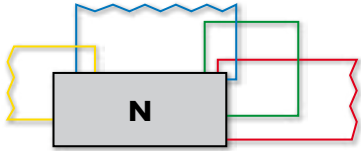









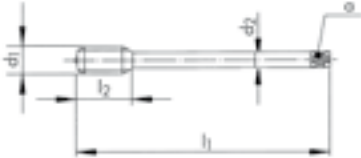







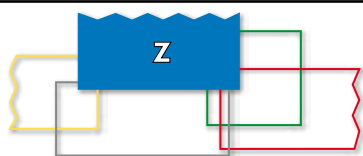
										N310-3	N320-4	N320V-4	
													
<b>N310-3</b>  													
<b>N320-4</b>  													
<b>N320V-4</b>  													
													
													
Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a			ID	ID	ID	
UNC	TPI	mm	mm	mm	mm	mm	mm						
*2	56	2.18	45	9.0		2.8	2.1	2	1.75		101469	143690	
*3	48	2.51	50	10.0		2.8	2.1	2	2.00		101470		
4	40	2.84	56	12.0	18	3.5	2.7	3	2.25	101450	101511	142738	
5	40	3.17	56	12.0	18	3.5	2.7	3	2.55		101512		
6	32	3.50	56	13.0	20	4.0	3.0	3	2.75	101451	101514	144402	
8	32	4.16	63	14.0	21	4.5	3.4	3	3.40	101452	101515	142739	
10	24	4.82	70	15.0	25	6.0	4.9	3	3.80	101449	101508	142740	
12	24	5.48	80	17.0	30	6.0	4.9	3	4.40		101509		
1/4	20	6.35	80	17.0	30	7.0	5.5	3	5.10	101448	101507	142741	
													
Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a			ID			
UNC	TPI	mm	mm	mm	mm	mm	mm						
4	40	2.84	56	12.0	18	3.5	2.7	3	2.30	145656			
6	32	3.50	56	13.0	20	4.0	3.0	3	2.80	155317			
8	32	4.16	63	14.0	21	4.5	3.4	3	3.45	155319			
<b>* N320-3</b> 													

									N410-3	N420-4	N420V-4							
																		
N410-3																		
N420-4																		
N420V-4																		
																		
																		
Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID							
5/16	18	7.93	90	20.0	6.0	4.9	3	6.50	101997	102213	142742							
3/8	16	9.52	100	22.0	7.0	5.5	3	8.00	101996	102212	142743							
7/16	14	11.11	100	19.0	8.0	6.2	3	9.30		102215	142744							
1/2	13	12.70	110	24.0	9.0	7.0	3	10.80	101993	102208	142745							
9/16	12	14.28	110	28.0	11.0	9.0	3	12.20		102217								
5/8	11	15.87	110	30.0	12.0	9.0	3	13.60	101998	102214	142746							
3/4	10	19.05	125	33.0	14.0	11.0	3	16.60	101995	102211	142747							
7/8	9	22.22	140	36.0	18.0	14.5	3	19.50		102216	142748							
1	8	25.40	160	39.0	18.0	14.5	4	22.30	101994	102209	142749							
1 1/8	7	28.57	180	45.0	22.0	18.0	4	25.00		102205								
1 1/4	7	31.75	180	45.0	22.0	18.0	4	28.20	* 101991	102204								
1 1/2	6	38.10	200	55.0	32.0	24.0	4	34.00	* 101990	102203								
1 3/4	5	44.45	220	59.0	36.0	29.0	4	39.50	* 101992	102206								
2	4.5	50.80	250	67.0	40.0	32.0	4	45.30		102210								

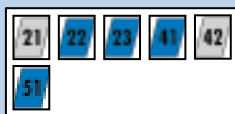
										N360-3	N360V-3	N360-3																																																																																																																									
<div>N360-3<div></div><div></div></div> <div>N360V-3<div></div><div></div></div> <div>N360-3<div></div><div></div></div>																																																																																																																																					
<table><thead><tr><th><math>\varnothing'' d_1</math> UNC</th><th>P TPI</th><th><math>d_1</math> mm</th><th><math>l_1</math> mm</th><th><math>l_2</math> mm</th><th><math>l_3</math> mm</th><th><math>d_2</math> mm</th><th><math>\alpha</math> mm</th><th></th><th></th></tr></thead><tbody><tr><td>2</td><td>56</td><td>2.18</td><td>45</td><td>8.0</td><td></td><td>2.8</td><td>2.1</td><td>2</td><td>1.75</td></tr><tr><td>3</td><td>48</td><td>2.51</td><td>50</td><td>9.0</td><td></td><td>2.8</td><td>2.1</td><td>2</td><td>2.00</td></tr><tr><td>4</td><td>40</td><td>2.84</td><td>56</td><td>5.5</td><td>18</td><td>3.5</td><td>2.7</td><td>3</td><td><sup>1</sup>2.25</td></tr><tr><td>5</td><td>40</td><td>3.17</td><td>56</td><td>5.5</td><td>18</td><td>3.5</td><td>2.7</td><td>3</td><td>2.55</td></tr><tr><td>6</td><td>32</td><td>3.50</td><td>56</td><td>6.5</td><td>20</td><td>4.0</td><td>3.0</td><td>3</td><td><sup>2</sup>2.75</td></tr><tr><td>8</td><td>32</td><td>4.16</td><td>63</td><td>7.5</td><td>21</td><td>4.5</td><td>3.4</td><td>3</td><td><sup>3</sup>3.40</td></tr><tr><td>10</td><td>24</td><td>4.82</td><td>70</td><td>9.0</td><td>25</td><td>6.0</td><td>4.9</td><td>3</td><td>3.80</td></tr><tr><td>12</td><td>24</td><td>5.48</td><td>80</td><td>11.0</td><td>30</td><td>6.0</td><td>4.9</td><td>3</td><td>4.40</td></tr><tr><td>1/4</td><td>20</td><td>6.35</td><td>80</td><td>11.0</td><td>30</td><td>7.0</td><td>5.5</td><td>3</td><td>5.10</td></tr><tr><td>5/16</td><td>18</td><td>7.93</td><td>90</td><td>12.5</td><td>35</td><td>8.0</td><td>6.2</td><td>3</td><td>6.50</td></tr><tr><td>3/8</td><td>16</td><td>9.52</td><td>100</td><td>14.0</td><td>39</td><td>10.0</td><td>8.0</td><td>3</td><td>8.00</td></tr></tbody></table>										$\varnothing'' d_1$ UNC	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm			2	56	2.18	45	8.0		2.8	2.1	2	1.75	3	48	2.51	50	9.0		2.8	2.1	2	2.00	4	40	2.84	56	5.5	18	3.5	2.7	3	<sup>1</sup> 2.25	5	40	3.17	56	5.5	18	3.5	2.7	3	2.55	6	32	3.50	56	6.5	20	4.0	3.0	3	<sup>2</sup> 2.75	8	32	4.16	63	7.5	21	4.5	3.4	3	<sup>3</sup> 3.40	10	24	4.82	70	9.0	25	6.0	4.9	3	3.80	12	24	5.48	80	11.0	30	6.0	4.9	3	4.40	1/4	20	6.35	80	11.0	30	7.0	5.5	3	5.10	5/16	18	7.93	90	12.5	35	8.0	6.2	3	6.50	3/8	16	9.52	100	14.0	39	10.0	8.0	3	8.00	ID	ID	ID	
$\varnothing'' d_1$ UNC	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm																																																																																																																														
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10	24	4.82	70	9.0	25	6.0	4.9	3	3.80																																																																																																																												
12	24	5.48	80	11.0	30	6.0	4.9	3	4.40																																																																																																																												
1/4	20	6.35	80	11.0	30	7.0	5.5	3	5.10																																																																																																																												
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										101672																																																																																																																											
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										101678	101726																																																																																																																										
										101675	101724																																																																																																																										
UNJC <sup>1</sup> 2.30 <sup>2</sup> 2.80 <sup>3</sup> 3.45																																																																																																																																					

UNJC  
<sup>1</sup>2.30  
<sup>2</sup>2.80  
<sup>3</sup>3.45

									N460-3	N460V-3		
<p><b>N460-3</b></p>   <p><b>N460V-3</b></p>   									 			
									 			
 									 			
									 			
Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm			ID	ID		
7/16	14	11.11	100	14.0	8.0	6.2	3	9.30	102424	105135		
1/2	13	12.70	110	14.0	9.0	7.0	3	10.80	102420	102497		
9/16	12	14.28	110	14.0	11.0	9.0	3	12.20	102426	102502		
5/8	11	15.87	110	18.0	12.0	9.0	3	13.60	102423	102500		
3/4	10	19.05	125	21.0	14.0	11.0	3	16.60	102422	102499		
7/8	9	22.22	140	24.0	18.0	14.5	4	19.50	102425	102501		
1	8	25.40	160	27.0	18.0	14.5	4	22.30	102421	102498		
1 1/8	7	28.57	180	30.0	22.0	18.0	4	25.00	102418	102495		
1 1/4	7	31.75	180	30.0	22.0	18.0	4	28.20	102417	102494		
1 1/2	6	38.10	200	40.0	32.0	24.0	5	34.00	102416	102493		
1 3/4	5	44.45	220	44.0	36.0	29.0	5	39.50		128062		
2	4.5	50.80	250	52.0	40.0	32.0	5	45.30		128084		



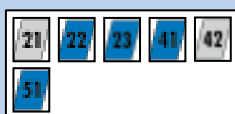
Z320V-4



Z320VS-4



Z420V-4



Z420VS-4



Z320V-4



Z320VS-4



Z420V-4



Z420VS-4



2B

2B

2B

2B

Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
*2	56	2.18	45	9.0		2.8	2.1	2	1.75
4	40	2.84	56	12.0	18	3.5	2.7	3	2.25
6	32	3.50	56	13.0	20	4.0	3.0	3	2.75
8	32	4.16	63	14.0	21	4.5	3.4	3	3.40
10	24	4.82	70	15.0	25	6.0	4.9	3	3.80
1/4	20	6.35	80	17.0	30	7.0	5.5	3	5.10
5/16	18	7.93	90	20.0	35	8.0	6.2	3	6.50
3/8	16	9.52	100	22.0	39	10.0	8.0	3	8.00
1/2	13	12.70	110	24.0		9.0	7.0	3	10.80
5/8	11	15.87	110	30.0		12.0	9.0	3	13.60
3/4	10	19.05	125	33.0		14.0	11.0	4	16.60
7/8	9	22.22	140	36.0		18.0	14.5	4	19.50
1	8	25.40	160	39.0		18.0	14.5	4	22.30

ID

ID

ID

ID

142750

142751

142752

111560

142753

111561

142754

111562

142755

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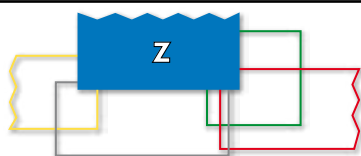
142761

142762

\* Z320V-3







Z362V-3

Z362VS-3

Z462V-3



2B

2BX

2B

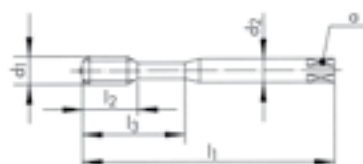
Z362V-3



Z362VS-3

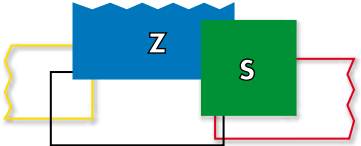
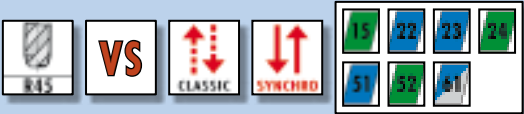
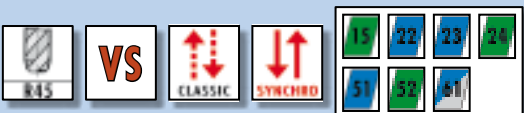




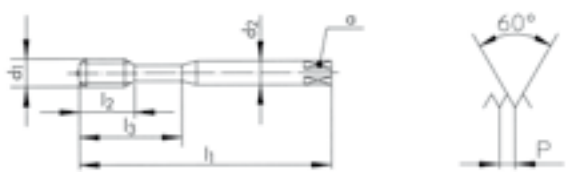











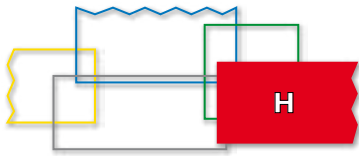
Z462V-3



Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
*2	56	2.18	45	8.0		2.8	2.1	2	1.75
*4	40	2.84	56	5.5	18	3.5	2.7	3	2.25
6	32	3.50	56	6.5	20	4.0	3.0	3	2.75
8	32	4.16	63	7.5	21	4.5	3.4	3	3.40
10	24	4.82	70	9.0	25	6.0	4.9	3	3.80
1/4	20	6.35	80	11.0	30	7.0	5.5	3	5.10
5/16	18	7.93	90	12.5	35	8.0	6.2	3	6.50
3/8	16	9.52	100	14.0	39	10.0	8.0	3	8.00
7/16	14	11.11	100	14.0		8.0	6.2	3	9.30
1/2	13	12.70	110	14.0		9.0	7.0	3	10.80
5/8	11	15.87	110	18.0		12.0	9.0	3	13.60
3/4	10	19.05	125	21.0		14.0	11.0	3	16.60
7/8	9	22.22	140	24.0		18.0	14.5	3	19.50
1	8	25.40	160	27.0		18.0	14.5	4	22.30

\* Z360V-3

										Z370VS-3	Z470VS-3		
<p><b>Z370VS-3</b></p>  <p><b>Z470VS-3</b></p> 													
													
													
													
Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	a mm			ID	ID		
6	32	3.50	56	6.5	20	4.0(h9)	3.0	3	2.75	166123			
8	32	4.16	63	7.5	21	4.5(h9)	3.4	3	3.40	166124			
10	24	4.82	70	9.0	25	6.0	4.9	3	3.80	166125			
1/4	20	6.35	80	11.0	30	*6.0	*4.9	3	5.10	166126			
5/16	18	7.93	90	12.5	35	8.0	6.2	3	6.50	166127			
3/8	16	9.52	100	14.0	39	10.0	8.0	3	8.00	166128			
7/16	14	11.11	100	14.0		8.0	6.2	3	9.30		166129		
1/2	13	12.70	110	14.0		*10.0	*8.0	4	10.80		166130		
5/8	11	15.87	110	18.0		12.0	9.0	4	13.60		166131		
3/4	10	19.05	125	21.0		14.0	11.0	4	16.60		166132		
1	8	25.40	160	27.0		16.0	12.0	4	22.30		175703		
* Norme DC / * DC Norm / * Norma DC													
Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	a mm			ID			
4	40	2.84	56	5.5	18	3.5(h9)	2.7	3	2.30	165114			
6	32	3.50	56	6.5	20	4.0(h9)	3.0	3	2.80	165115			
8	32	4.16	63	7.5	21	4.5(h9)	3.4	3	3.45	165116			
1/4	20	6.35	80	11.0	30	*6.0	*4.9	3	5.20	165117			
5/16	18	7.93	90	12.5	35	8.0	6.2	3	6.70	165118			
* Norme DC / * DC Norm / * Norma DC													



H320-4

H420-4

H350-3

H450-3

H320-4



H420-4



H350-3



H450-3

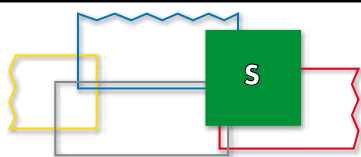


Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm		
2	56	2.18	45	8.0		2.8	2.1	2	1.75
4	40	2.84	56	10.0	18	3.5	2.7	3	2.25
6	32	3.50	56	13.0	20	4.0	3.0	3	2.75
8	32	4.16	63	14.0	21	4.5	3.4	3	3.40
10	24	4.82	70	15.0	25	6.0	4.9	3	3.80
1/4	20	6.35	80	17.0	30	7.0	5.5	3	5.10
5/16	18	7.93	90	20.0	35	8.0	6.2	3	6.50
3/8	16	9.52	100	22.0	39	10.0	8.0	3	8.00
1/2	13	12.70	110	24.0		9.0	7.0	4	10.80

ID	ID
101221	
101223	
101225	
101226	
101220	
101219	
101224	
101222	
	101290

Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm		
2	56	2.18	45	8.0		2.8	2.1	2	1.75
4	40	2.84	56	5.5	18	3.5	2.7	3	2.25
6	32	3.50	56	6.5	20	4.0	3.0	3	2.75
8	32	4.16	63	7.5	21	4.5	3.4	3	3.40
10	24	4.82	70	9.0	25	6.0	4.9	3	3.80
1/4	20	6.35	80	11.0	30	7.0	5.5	3	5.10
5/16	18	7.93	90	12.5	35	8.0	6.2	3	6.50
3/8	16	9.52	100	14.0	39	10.0	8.0	3	8.00
7/16	14	11.11	100	14.0		8.0	6.2	3	9.30
1/2	13	12.70	110	14.0		9.0	7.0	4	10.80
5/8	11	15.87	110	18.0		12.0	9.0	4	13.60
3/4	10	19.05	125	21.0		14.0	11.0	4	16.60
1	8	25.40	160	27.0		18.0	14.5	4	22.30

ID	ID
	101258
	101260
	101262
	101263
	101257
	101256
	101261
	101259
	101330
	101326
	101329
	101328
	101327



S320VS-4



S420VS-4



S320VS-4

S420VS-4



2B

2B

Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
6	32	3.50	56	13.0	20	4.0	3.0	3	2.75
8	32	4.16	63	14.0	21	4.5	3.4	3	3.40
10	24	4.82	70	15.0	25	6.0	4.9	3	3.80
1/4	20	6.35	80	17.0	30	7.0	5.5	3	5.10
5/16	18	7.93	90	20.0	35	8.0	6.2	3	6.50
3/8	16	9.52	100	22.0	39	10.0	8.0	3	8.00
1/2	13	12.70	110	24.0		9.0	7.0	4	10.80
5/8	11	15.87	110	30.0		12.0	9.0	4	13.60
3/4	10	19.05	125	33.0		14.0	11.0	4	16.60

ID

ID

111587

111588

\* 111589

111590

111591

111592

111593

111594

111595

3B  
UNC(J)

Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		UNC
4	40	2.84	56	12.0	18	3.5	2.7	3	2.30
6	32	3.50	56	13.0	20	4.0	3.0	3	2.80
8	32	4.16	63	14.0	21	4.5	3.4	3	3.45
1/4	20	6.35	80	17.0	30	7.0	5.5	3	5.20
5/16	18	7.93	90	20.0	35	8.0	6.2	3	6.70

ID

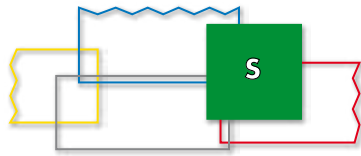
165314

165315

165316

165317

\* 143761



S360VS-3



S460VS-3



S360VS-3

S460VS-3



2B

2B

Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm		
6	32	3.50	56	6.5	20	4.0	3.0	3	2.75
8	32	4.16	63	7.5	21	4.5	3.4	3	3.40
10	24	4.82	70	9.0	25	6.0	4.9	3	3.80
1/4	20	6.35	80	11.0	30	7.0	5.5	3	5.10
5/16	18	7.93	90	12.5	35	8.0	6.2	3	6.50
3/8	16	9.52	100	14.0	39	10.0	8.0	3	8.00
1/2	13	12.70	110	14.0		9.0	7.0	4	10.80
3/4	10	19.05	125	21.0		14.0	11.0	4	16.60

ID

ID

111530

111531

\* 111532

111533

111534

111535

111537

\* 111539

## aero

SA320-4



SA350-3



TL320VS-4



VS



TL351VS-3



VS



Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
4	40	2.84	56	12.0		3.5	2.7	3	2.25
5	40	3.17	56	12.0		3.5	2.7	3	2.55
6	32	3.50	56	13.0		4.0	3.0	3	2.75
8	32	4.16	63	14.0		4.5	3.4	3	3.40
10	24	4.82	70	15.0		6.0	4.9	3	3.80
1/4	20	6.35	80	15.0	23	7.0	5.5	3	5.10
5/16	18	7.93	90	18.0	29	8.0	6.2	3	6.50
3/8	16	9.52	100	20.0	33	10.0	8.0	3	8.00

Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		UNC
4	40	2.84	56	12.0		3.5	2.7	3	2.30
6	32	3.50	56	13.0		4.0	3.0	3	2.80
8	32	4.16	63	14.0		4.5	3.4	3	3.45
10	24	4.82	70	15.0		6.0	4.9	3	3.90
1/4	20	6.35	80	15.0	23	7.0	5.5	3	5.20
5/16	18	7.93	90	18.0	29	8.0	6.2	3	6.70
3/8	16	9.52	100	20.0	33	10.0	8.0	3	8.10

SA320-4

SA350-3

TL320VS-4

TL351VS-3



2B

2B

2B

2B

ID

ID

ID

ID

147271

149003

152018

* 149031	* 149033	* 152023	* 152024
149055	149057	* 152027	152028
149093	149095	* 152036	152037
149125	* 149127	* 152042	* 152043
149222	149224	* 152062	127972
149269	149271		152068
149346	149348	* 152084	152085

3B  
UNC(J)

3B  
UNC(J)

3B  
UNC(J)

3B  
UNC(J)

ID

ID

ID

ID

149005

149007

\* 148804

149059	149061	* 152029	150210
149097	149099	* 152038	152039
* 149129	* 149131		* 152045
149226	149228	* 152063	152064
149273	149275	* 152069	152070
149350	149352	* 152086	152087

## aero

SA420-4



52 53

SA450-3



52 53

SA390-3

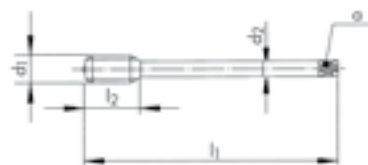


53

SA420-4

SA450-3

SA390-3



$\varnothing'' d_1$ UNC	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
7/16	14	11.11	100	22.0	8.0	6.2	3	9.30
1/2	13	12.70	110	24.0	9.0	7.0	4	10.80
5/8	11	15.87	110	30.0	12.0	9.0	4	13.60
3/4	10	19.05	125	33.0	14.0	11.0	4	16.60

ID

ID

\* 152246

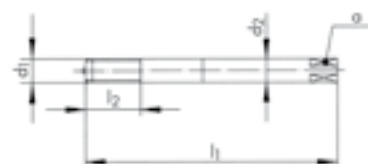
152247

152252

152249

152254

\* 152250



$\varnothing'' d_1$ UNC	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
4	40	2.84	56	12.0	3.5	2.7	3	2.30
6	32	3.50	56	13.0	4.0	3.0	3	2.80
8	32	4.16	63	14.0	4.5	3.4	3	3.45
10	24	4.82	70	15.0	6.0	4.9	3	3.90
1/4	20	6.35	80	20.0	7.0	5.5	3	5.20
5/16	18	7.93	90	25.0	8.0	6.2	3	6.70
3/8	16	9.52	100	30.0	10.0	8.0	3	8.10

3B  
UNC(J)

ID

149652

149666

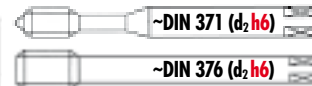
149677

149685

149713

149726

149747



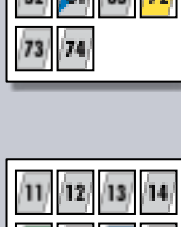
## RTS

Rigid Tapping Synchro

RTS320VS-4



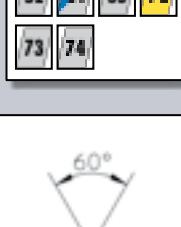
RTS420VS-4



RTS362VS-3



RTS462VS-3



RTS320VS-4

RTS420VS-4

RTS362VS-3

RTS462VS-3



Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	a mm		
6	32	3.50	56	6.5	20	4.0(h9)	3.0	3	2.75
8	32	4.16	63	7.5	21	4.5(h9)	3.4	3	3.40
10	24	4.82	70	9.0	25	6.0	4.9	3	3.80
1/4	20	6.35	80	11.0	30	*6.0	*4.9	3	5.10
5/16	18	7.93	90	12.5	35	8.0	6.2	3	6.50
3/8	16	9.52	100	14.0	39	10.0	8.0	3	8.00
1/2	13	12.70	110	14.0		*10.0	*8.0	3	10.80

\* Norme DC / \* DC Norm / \* Norma DC

ID	ID	ID	ID
157395		157402	
157396		157403	
157397		157404	
157398		157405	
157399		157406	
157400		157407	
	157401		157408



sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido

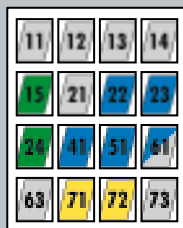


## FS FPS FAS FORMING

FS380VS-3



VS



FPS381VS-3



VS



FAS381VS-3



VS



FS380VS-3



FPS381VS-3



FAS381VS-3



2BX

2BX

2BX

$\varnothing'' d_1$ UNC	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	2BX Tol. → ←
2	56	2.18	45	9.0		2.8	2.1	1.95 + 0.02
4	40	2.84	56	12.0	18	3.5	2.7	2.55 + 0.03
6	32	3.50	56	13.0	20	4.0	3.0	3.15 + 0.03
8	32	4.16	63	14.0	21	4.5	3.4	3.80 + 0.03
10	24	4.82	70	15.0	25	6.0	4.9	4.35 + 0.05
1/4	20	6.35	80	17.0	30	7.0	5.5	5.75 + 0.05
5/16	18	7.93	90	20.0	35	8.0	6.2	7.30 + 0.05

ID

157285

ID

170063

166713

166714

166715

166716

\* 166717

ID

170065

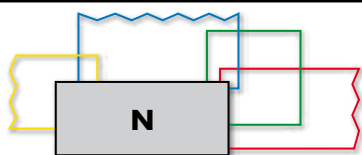
166725

166726

166727

166728

\* 166729



N1110-1

N1110-2

N1110-3

N1110-S

N1110-1



N1110-2



N1110-3



N1110-S



2B

2B

Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
2	56	2.18	45	9.5		2.80	2.10	3	1.75
3	48	2.51	45	9.5		2.80	2.10	3	2.00
4	40	2.84	48	11.0	18	3.15	2.50	3	2.25
5	40	3.17	48	11.0	18	3.15	2.50	3	2.55
6	32	3.50	50	13.0	20	3.55	2.80	3	2.75
8	32	4.16	53	13.0	21	4.50	3.55	3	3.40
10	24	4.82	58	16.0	25	5.00	4.00	3	3.80
1/4	20	6.35	66	19.0	30	6.30	5.00	3	5.10
5/16	18	7.93	72	22.0	35	8.00	6.30	3	6.50
3/8	16	9.52	80	24.0	39	10.00	8.00	3	8.00

ID

ID

ID

ID

102799

102885

102998

111067

\* 102800

\* 102886

\* 102999

\* 111068

102802

102888

103001

111070

103002

102805

102891

103004

111073

102806

102892

103005

111074

102797

102883

102996

111065

102796

102882

102995

111064

102804

102890

103003

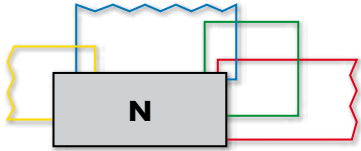
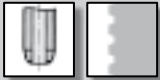









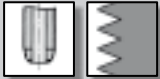










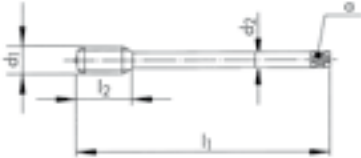








111072

102801

102887

103000

111069

									N1210-1	N1210-2	N1210-3	N1210-S
<b>N1210-1</b> 												
<b>N1210-2</b> 												
<b>N1210-3</b>  												
<b>N1210-S</b> 												
 												
												
Ø" d <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm			ID	ID	ID	ID
7/16	14	11.11	85	22.0	8.0	6.3	3	9.30	103392	103466	103606	111236
1/2	13	12.70	89	24.0	9.0	7.1	3	10.80	103387	103461	103601	111229
5/8	11	15.87	102	32.0	12.5	10.0	3	13.60	103391	103465	103605	111235
3/4	10	19.05	112	33.0	14.0	11.2	3	16.60	103390	103464	103604	111234
1	8	25.40	130	45.0	18.0	14.0	4	22.30	103388	103462	103602	111230

# UNF, UNEF, Répertoire - Tarauds à machine et à main ANSI B1.1

## UNS, UN Rubrica - Maschi a macchina e a mano ANSI B1.1

		N						
Caractéristiques Caratteristiche				 V	 E40	 E40	 	
								
Genre de trou Tipo di foro								
		N310-3	N320-3 N320-4	N320V-4	N360-3	N360V-3	N1110 -1-3-S	N1120-4
DIN longue DIN lungo	DIN 371	134	134	134	136	136		
ISO courte ISO corto	ISO 529						148	150
Tolérance Tolleranza	UNF 2B	134	134	134	136	136	148	
Tolérance Tolleranza	UNJF 3B							
Tolérance Tolleranza	UNF(J) 3B		134		136			
Tolérance Tolleranza	UNEF 2B						150	150
Tolérance Tolleranza	UNS 2B							
Tolérance Tolleranza	UN 2B							
		N410-3	N420-4	N420V-4	N460-3	N460V-3	N1210 -1-3-S	N1220-4
DIN longue DIN lungo	DIN 374	135/151	135	135	137	137		
ISO courte ISO corto	ISO 529						149	150
Tolérance Tolleranza	UNF 2B	135	135	135	137	137	149	
Tolérance Tolleranza	UNJF 3B							
Tolérance Tolleranza	UNF(J) 3B		135		137			
Tolérance Tolleranza	UNEF 2B						150	150
Tolérance Tolleranza	UNS 2B	151			151	151		
Tolérance Tolleranza	UN 2B				151	151		






















# UNF, UNJF

Répertoire - Tarauds à machine ANSI B.1 / ASME B1.15

Rubrica - Maschi a macchina ANSI B1.1 / ASME B1.15

Z			H		S		SA	
								
								
								
								
<b>Z320V-4</b>	<b>Z360V-3</b>	<b>Z370VS-3</b>	<b>H320-4</b>	<b>H350-3</b>	<b>S320VS-4</b>	<b>S360VS-3</b>	<b>SA320-4</b>	<b>SA320-4</b>
138	138	139	140	141	142	142	143	145
138	138	139	140	141		142	143	
								145
		139			142	142	143	
<b>Z420V-4</b>	<b>Z460V-3</b>	<b>Z470VS-3</b>	<b>H420-4</b>	<b>H450-3</b>	<b>S420VS-4</b>	<b>S460VS-3</b>	<b>SA420-4</b>	
138	138	139	140	141	142	142	144	
138	138	139	140	141		142	144	
					142	142	144	

UNF,  
UNJF, UNS, UN

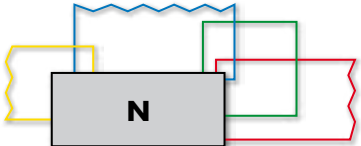



















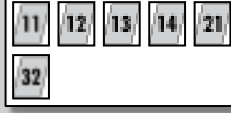




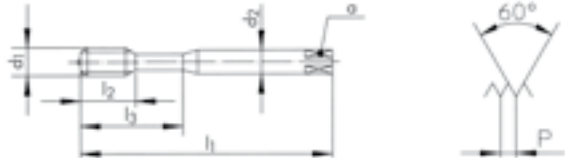













	SA		TL		RTS		
<b>Caractéristiques</b> <b>Caratteristiche</b>			 <b>VS</b>	  <b>VS</b>	 <b>VS</b>	 <b>VS</b>	
							
<b>Genre de trou</b> <b>Tipo di foro</b>							
	<b>SA350-3</b>	<b>SA390-3</b>	<b>TL320VS-4</b>	<b>TL351VS-3</b>	<b>RTS320VS-4</b>	<b>RTS362VS-3</b>	
<b>DIN longue</b> <b>DIN lungo</b> <b>DIN 371</b>	143	145	143	143	146	146	
<b>DIN longue</b> <b>DIN lungo</b> ~ DIN 2184-1							
<b>Tolérance</b> <b>Tolleranza</b> <b>UNF 2B</b>	143		143	143	146	146	
<b>Tolérance</b> <b>Tolleranza</b> <b>UNF(J) 3B</b>	143	145	143	143			
<b>Tolérance</b> <b>Tolleranza</b> <b>UNEF 2B</b>							
<b>Tolérance</b> <b>Tolleranza</b> <b>UNS 2B</b>							
<b>Tolérance</b> <b>Tolleranza</b> <b>UN 2B</b>							
	<b>SA450-3</b>		<b>TL420VS-4</b>	<b>TL451VS-3</b>	<b>RTS420VS-4</b>	<b>RTS462VS-3</b>	
<b>DIN longue</b> <b>DIN lungo</b> <b>DIN 374</b>	144		144	144	146	146	
<b>DIN longue</b> <b>DIN lungo</b> ~ DIN 2184-1							
<b>Tolérance</b> <b>Tolleranza</b> <b>UNF 2B</b>	144			144	146	146	
<b>Tolérance</b> <b>Tolleranza</b> <b>UNF(J) 3B</b>	144		144	144			
<b>Tolérance</b> <b>Tolleranza</b> <b>UNEF 2B</b>							
<b>Tolérance</b> <b>Tolleranza</b> <b>UNS 2B</b>							
<b>Tolérance</b> <b>Tolleranza</b> <b>UN 2B</b>							

**Répertoire - Tarauds à refouler ANSI B.1**  
**Rubrica - Maschi a rullare ANSI B1.1**

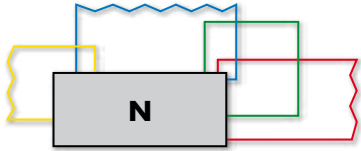








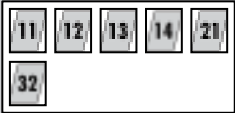

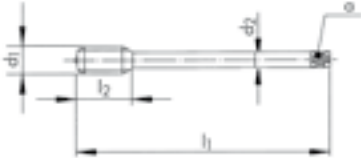












[illegible]

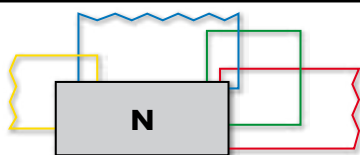
**UNF,  
UNJF, UNS, UN**

**www.dcswiss.com**

										N310-3	N320-3	N320-4	N320V-4
<b>N310-3</b>  													
<b>N320-3</b>  													
<b>N320-4</b>  													
<b>N320V-4</b>  													
													
													
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
0	80	1.52	40	7.0		2.5	2.1	2	1.20		101475		
1	72	1.85	40	8.0		2.5	2.1	2	1.50		* 101476		
2	64	2.18	45	9.0		2.8	2.1	2	1.80		101477		
4	48	2.84	56	12.0	18	3.5	2.7	3	2.35			128847	
5	44	3.17	56	12.0	18	3.5	2.7	3	2.60			142764	
6	40	3.50	56	13.0	20	4.0	3.0	3	2.90			101519	142765
8	36	4.16	63	14.0	21	4.5	3.4	3	3.50			101520	
10	32	4.82	70	15.0	25	6.0	4.9	3	4.05			101517	142766
12	28	5.48	80	17.0	30	6.0	4.9	3	4.60			101518	
1/4	28	6.35	80	17.0	30	7.0	5.5	3	5.50	101453		101516	142767
													
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID			
10	32	4.82	70	15.0	25	6.0	4.9	3	4.15			135506	
1/4	28	6.35	80	17.0	30	7.0	5.5	3	5.55			155323	



									N410-3	N420-4	N420V-4	
<p><b>N410-3</b></p>  												
<p><b>N420-4</b></p>  												
<p><b>N420V-4</b></p>   												
 									  			
									  			
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	
5/16	24	7.93	90	20.0	6.0	4.9	3	6.90	102004	102223	142774	
3/8	24	9.52	100	22.0	7.0	5.5	3	8.50	102003	102222	142775	
7/16	20	11.11	100	19.0	8.0	6.2	3	9.80	102006	102225	142776	
1/2	20	12.70	100	24.0	9.0	7.0	3	11.40	102000	102219	142777	
9/16	18	14.28	100	24.0	11.0	9.0	3	12.90		102227		
5/8	18	15.87	100	26.0	12.0	9.0	3	14.50	102005	102224	142778	
3/4	16	19.05	125	33.0	14.0	11.0	4	17.50	102002	102221	142779	
7/8	14	22.22	140	36.0	18.0	14.5	4	20.40	* 102007	102226		
1	12	25.40	160	39.0	18.0	14.5	4	23.30		102220	142780	
1 1/8	12	28.57	180	39.0	22.0	18.0	4	26.50		142773		
1 1/4	12	31.75	180	39.0	22.0	18.0	4	29.70		102218		
1 3/8	12	34.92	200	36.0	28.0	22.0	4	32.80		105137		
1 1/2	12	38.10	200	41.0	32.0	24.0	4	36.00	* 110986	105138		
												
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	
5/16	24	7.93	90	20.0	6.0	4.9	3	7.00		155328		
3/8	24	9.52	100	22.0	7.0	5.5	3	8.60		155326		
7/16	20	11.11	100	19.0	8.0	6.2	3	10.00		155330		
1/2	20	12.70	100	24.0	9.0	7.0	3	11.55		155321		



N360-3

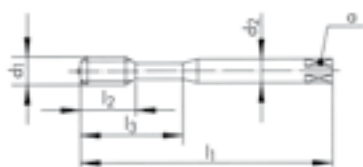


N360V-3





N360-3

N360V-3



2B

2B

$\varnothing'' d_1$ UNF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$a$ mm		
6	40	3.50	56	6.5	20	4.0	3.0	3	2.90
8	36	4.16	63	7.5	21	4.5	3.4	3	3.50
10	32	4.82	70	9.0	25	6.0	4.9	3	4.05
12	28	5.48	80	11.0	30	6.0	4.9	3	4.60
1/4	28	6.35	80	11.0	30	7.0	5.5	3	5.50
5/16	24	7.93	90	12.5	35	8.0	6.2	3	6.90
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.50

ID

ID

101686

\* 101687 \* 101733

101682 101730

101683



101681 101729

101685 101732

101684 101731

3B

UNF(J)

$\varnothing'' d_1$ UNF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$a$ mm		
10	32	4.82	70	9.0	25	6.0	4.9	3	4.15
1/4	28	6.35	80	11.0	30	7.0	5.5	3	5.55
5/16	24	7.93	90	12.5	35	8.0	6.2	3	7.00
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.60

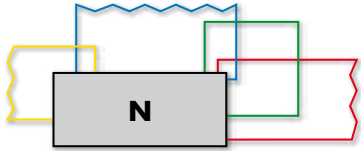









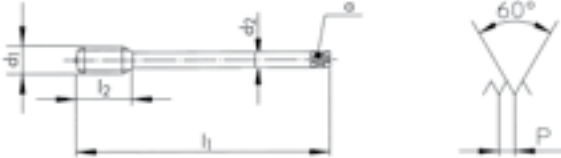









ID

155325

155324

155329

155327

									N460-3	N460V-3		
<p><b>N460-3</b></p>   <p><b>N460V-3</b></p>   									 			
									 			
									 			
									 			
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID		
7/16	20	11.11	100	14.0	8.0	6.2	3	9.80	102434	142781		
1/2	20	12.70	100	14.0	9.0	7.0	3	11.40	102430	102503		
9/16	18	14.28	100	14.0	11.0	9.0	3	12.90	102436	143422		
5/8	18	15.87	100	14.0	12.0	9.0	3	14.50	102433	143097		
3/4	16	19.05	125	18.0	14.0	11.0	4	17.50	102432	102505		
7/8	14	22.22	140	20.0	18.0	14.5	4	20.40	102435	144714		
1	12	25.40	160	27.0	18.0	14.5	4	23.30	102431	102504		
1 1/8	12	28.57	180	24.0	22.0	18.0	4	26.50	102429	144414		
1 1/4	12	31.75	180	24.0	22.0	18.0	4	29.70	102428	151709		
1 1/2	12	38.10	200	30.0	32.0	24.0	5	36.00	102427	148793		
												
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID			
7/16	20	11.11	100	14.0	8.0	6.2	3	10.00	155331			
1/2	20	12.70	100	14.0	9.0	7.0	3	11.55	155322			

# UNF

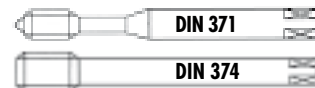
## ANSI B1.1

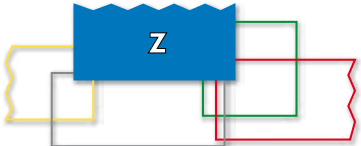
























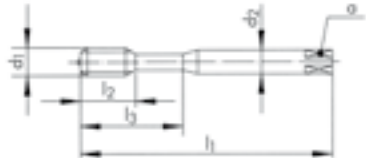









Z .20

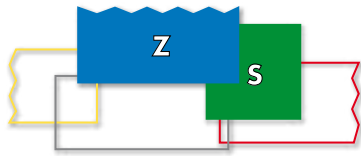
Z .60

PM

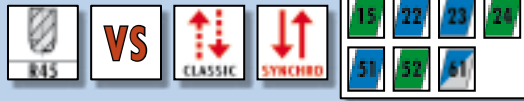
HSSE



										Z320V-4	Z420V-4	Z360V-3	Z460V-3
<b>Z320V-4</b>  													
<b>Z420V-4</b>  													
<b>Z360V-3</b>  													
<b>Z460V-3</b>  													
 													
													
Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a			ID	ID		
UNF	TPI	mm	mm	mm	mm	mm	mm						
10	32	4.82	70	15.0	25	6.0	4.9	3	4.05	142783			
1/4	28	6.35	80	17.0	30	7.0	5.5	3	5.50	142784			
5/16	24	7.93	90	20.0	35	8.0	6.2	3	6.90	142785			
3/8	24	9.52	100	22.0	39	10.0	8.0	3	8.50	142786			
7/16	20	11.11	100	19.0		8.0	6.2	3	9.80		142787		
1/2	20	12.70	100	24.0		9.0	7.0	3	11.40		142788		
Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a			ID	ID		
UNF	TPI	mm	mm	mm	mm	mm	mm						
10	32	4.82	70	9.0	25	6.0	4.9	3	4.05		104680		
1/4	28	6.35	80	11.0	30	7.0	5.5	3	5.50		104679		
5/16	24	7.93	90	12.5	35	8.0	6.2	3	6.90		104682		
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.50		104681		
7/16	20	11.11	100	14.0		8.0	6.2	3	9.80			104741	
1/2	20	12.70	100	14.0		9.0	7.0	3	11.40			104738	
5/8	18	15.87	100	14.0		12.0	9.0	3	14.50			104740	
3/4	16	19.05	125	18.0		14.0	11.0	4	17.50			104739	



Z370VS-3



Z470VS-3



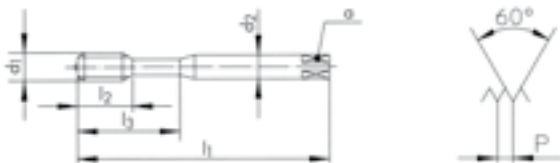
Z370VS-3

Z470VS-3



2BX

2BX



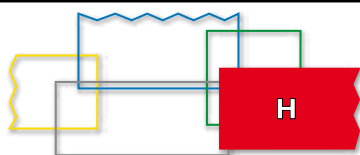
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	a mm		
10	32	4.82	70	9.0	25	6.0	4.9	3	4.05
1/4	28	6.35	80	11.0	30	*6.0	*4.9	3	5.50
5/16	24	7.93	90	12.5	35	8.0	6.2	3	6.90
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.50
7/16	20	11.11	100	14.0		8.0	6.2	3	9.80
1/2	20	12.70	110	14.0		*10.0	*8.0	4	11.40

\* Norme DC / \* DC Norm / \* Norma DC

3B  
UNF(J)

Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	a mm		UNF → ←
10	32	4.82	70	9.0	25	6.0	4.9	3	4.15
1/4	28	6.35	80	11.0	30	*6.0	*4.9	3	5.55
5/16	24	7.93	90	12.5	35	8.0	6.2	3	7.00
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.60

\* Norme DC / \* DC Norm / \* Norma DC



H320-4



H420-4



H320-4

H420-4



2B

2B

Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm	→	↔
10	32	4.82	70	15.0	25	6.0	4.9	3	4.05
1/4	28	6.35	80	17.0	30	7.0	5.5	3	5.50
5/16	24	7.93	90	20.0	35	8.0	6.2	3	6.90
3/8	24	9.52	100	22.0	39	10.0	8.0	3	8.50
1/2	20	12.70	100	24.0		9.0	7.0	4	11.40

ID

ID

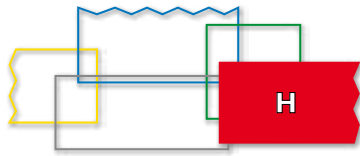
101228

101227

105139

101229

101291



H350-3



H450-3



H350-3

H450-3



2B

2B

$\varnothing'' d_1$ UNF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm		
10	32	4.82	70	9.0	25	6.0	4.9	3	4.05
1/4	28	6.35	80	11.0	30	7.0	5.5	3	5.50
5/16	24	7.93	90	12.5	35	8.0	6.2	3	6.90
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.50
7/16	20	11.11	100	14.0		8.0	6.2	3	9.80
1/2	20	12.70	100	14.0		9.0	7.0	4	11.40
5/8	18	15.87	100	14.0		12.0	9.0	4	14.50
3/4	16	19.05	125	18.0		14.0	11.0	4	17.50

ID

ID

101265

101264

101267

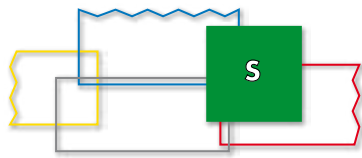
101266

101334

101331

101333

101332



S320VS-4



VS

13 15 24 52

S420VS-4



VS

13 15 24 52

S360VS-3



VS

13 15 24 52

S460VS-3



VS

13 15 24 52

S320VS-4

S420VS-4

S360VS-3

S460VS-3



Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm	UNF	UNF
10	32	4.82	70	15.0	25	6.0	4.9	3	4.15
1/4	28	6.35	80	17.0	30	7.0	5.5	3	5.55
5/16	24	7.93	90	20.0	35	8.0	6.2	3	7.00
3/8	24	9.52	100	22.0	39	10.0	8.0	3	8.60
7/16	20	11.11	100	22.0		8.0	6.2	3	10.00

ID	ID
111814	
111813	
111816	
111818	
	111837

Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm	UNF	UNF
10	32	4.82	70	9.0	25	6.0	4.9	3	4.05
1/4	28	6.35	80	11.0	30	7.0	5.5	3	5.50
5/16	24	7.93	90	12.5	35	8.0	6.2	3	6.90
7/16	20	11.11	100	14.0		8.0	6.2	3	9.80
1/2	20	12.70	100	14.0		9.0	7.0	4	11.40

ID	ID
	* 111581
	* 111582
	* 111583
	* 111585
	* 111586

Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm	UNF	UNF
10	32	4.82	70	9.0	25	6.0	4.9	3	4.15
1/4	28	6.35	80	11.0	30	7.0	5.5	3	5.55
5/16	24	7.93	90	12.5	35	8.0	6.2	3	7.00
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.60
7/16	20	11.11	100	14.0		8.0	6.2	3	10.00

ID	ID
	111815
	111820
	111817
	111819
	111833



## aero

SA320-4



52 53

SA350-3



52 53

TL320VS-4



VS

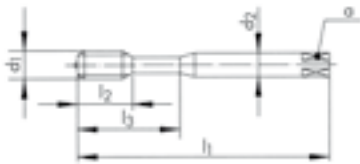
41 42

TL351VS-3



VS

41 42



$\varnothing'' d_1$ UNF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm		
10	32	4.82	70	15.0		6.0	4.9	3	4.05
1/4	28	6.35	80	15.0	23	7.0	5.5	3	5.50
5/16	24	7.93	90	18.0	29	8.0	6.2	3	6.90
3/8	24	9.52	100	20.0	33	10.0	8.0	3	8.50

SA320-4

SA350-3

TL320VS-4

TL351VS-3



2B

2B

2B

2B

ID

ID

ID

ID

149133

149135

\* 152046

152047

149230

149232

\* 152065

152066

149277

149279

\* 152071

152072

149339

149341

\* 152082

152083

3B  
UNF(J)

3B  
UNF(J)

3B  
UNF(J)

3B  
UNF(J)

ID

ID

ID

ID

146098

149015

\* 148005

148004

146404

149235

\* 148013

148012

146393

149282

\* 148017

148016

147165

149344

\* 148024

148023

## aero

SA420-4



SA450-3



TL420VS-4



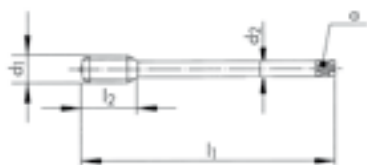
VS



TL451VS-3



VS



SA420-4

SA450-3

TL420VS-4

TL451VS-3



2B

2B

2B

Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	α		
UNF	TPI	mm	mm	mm	mm	mm		
7/16	20	11.11	100	22.0	8.0	6.2	* 4	9.80
1/2	20	12.70	100	24.0	9.0	7.0	4	11.40
9/16	18	14.28	100	24.0	11.0	9.0	4	12.90
5/8	18	15.87	100	26.0	12.0	9.0	4	14.50

ID

ID

ID

152286

152290

\* 152298

152287

152291

\* 152299

\* 152288

\* 152289

3B  
UNF(J)

3B  
UNF(J)

3B  
UNF(J)

3B  
UNF(J)

Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	α		UNF
UNF	TPI	mm	mm	mm	mm	mm		
7/16	20	11.11	100	22.0	8.0	6.2	* 4	10.00
1/2	20	12.70	100	24.0	9.0	7.0	4	11.55
9/16	18	14.28	100	24.0	11.0	9.0	4	13.05
5/8	18	15.87	100	26.0	12.0	9.0	4	14.60

ID

ID

ID

ID

147187

152302

\* 152306

148031

147189

152303

\* 152307

152310

146395

147169

\* SA420-4 = 3

\* TL420VS-4 = 3

## aero

SA320-4



52 53

SA390-3



53

SA320-4

SA390-3



NEW



$\varnothing'' d_1$ UNJF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm		
10	32	4.82	70	15.0		6.0	4.9	3	4.15
1/4	28	6.35	80	15.0	23	7.0	5.5	3	5.55
5/16	24	7.93	90	18.0	29	8.0	6.2	3	7.00
3/8	24	9.52	100	20.0	33	10.0	8.0	3	8.60

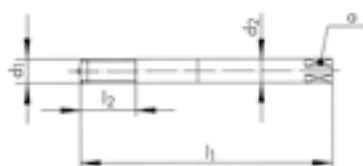
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174976

175993

175995

175997



$\varnothing'' d_1$ UNF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
10	32	4.82	70	15.0	6.0	4.9	3	4.15
1/4	28	6.35	80	20.0	7.0	5.5	3	5.55
5/16	24	7.93	90	25.0	8.0	6.2	3	7.00
3/8	24	9.52	100	30.0	10.0	8.0	3	8.60

ID

149687

149715

149728

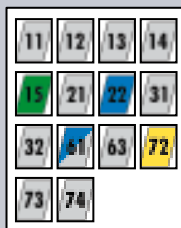
149745

UNF

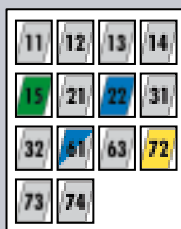
# RTS

Rigid Tapping Synchro

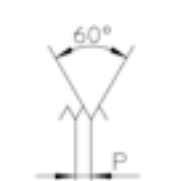
RTS320VS-4



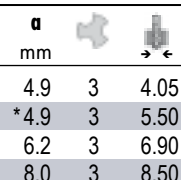
RTS420VS-4



RTS362VS-3



RTS462VS-3



RTS320VS-4

RTS420VS-4

RTS362VS-3

RTS462VS-3



2BX

2BX

2BX

2BX

Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub> h6	α		
UNF	TPI	mm	mm	mm	mm	mm	mm		
10	32	4.82	70	9.0	25	6.0	4.9	3	4.05
1/4	28	6.35	80	11.0	30	*6.0	*4.9	3	5.50
5/16	24	7.93	90	12.5	35	8.0	6.2	3	6.90
3/8	24	9.52	100	14.0	39	10.0	8.0	3	8.50
1/2	20	12.70	110	14.0		*10.0	*8.0	3	11.40

\* Norme DC / \* DC Norm / \* Norma DC



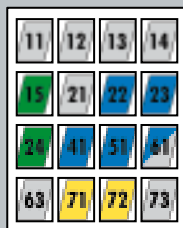
sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido

## FS FPS FAS FORMING

FS380VS-5



VS



FPS381VS-3



VS



FAS381VS-3



VS



$\varnothing'' d_1$ UNF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm	$\rightarrow \leftarrow$	Tol.
0	80	1.52	40	4.6		2.5	1.37	+ 0.02	
10	32	4.82	70	15.0	25	6.0	4.9	+ 0.03	
1/4	28	6.35	80	17.0	30	7.0	5.5	+ 0.05	
5/16	24	7.93	90	20.0	35	8.0	6.2	+ 0.05	

FS380VS-5



FPS381VS-3



FAS381VS-3



ID

161498

ID

166718

166719

166720

ID

166730

166731

166732

# UNF

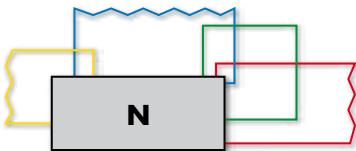
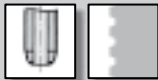
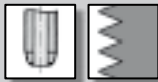





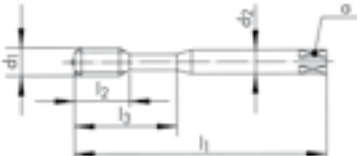





## ANSI B1.1

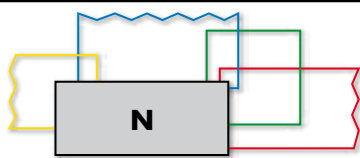

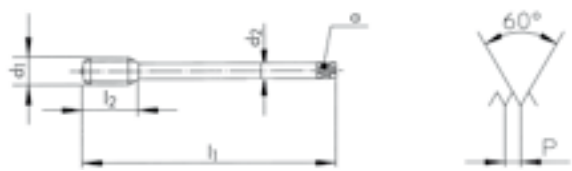



≤ Ø 2.8 > Ø 2.8

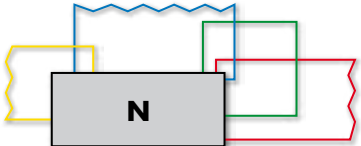















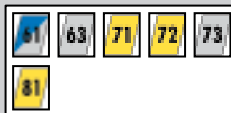
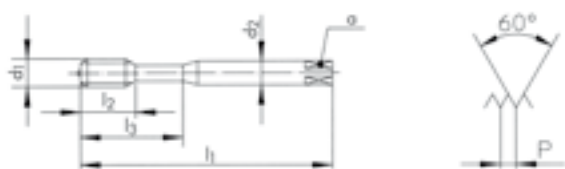










PM

HSS



										N1110-1	N1110-3	N1110-S	
<div>N1110-1</div> <div>N1110-3<div><div>31</div><div>62</div><div>74</div></div></div> <div>N1110-S</div>													
													
 													
											<div>2B</div>	<div>2B</div>	
$\varnothing'' d_1$ UNF	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$a$ mm			ID	ID	ID	
0	80	1.52	40	7.0		2.50	2.10	3	1.20	102811	103010	111079	
1	72	1.85	40	8.0		2.50	2.10	3	1.50	102812	103011	111080	
4	48	2.84	48	11.0	18	3.15	2.50	3	2.35		* 103018		
8	36	4.16	53	13.0	21	4.50	3.55	3	3.50		* 103022		
10	32	4.82	58	16.0	25	5.00	4.00	3	4.05	102814	103013	111082	
12	28	5.48	62	17.0	26	5.60	4.50	3	4.60	* 102815	* 103014	* 111083	
1/4	28	6.35	66	19.0	30	6.30	5.00	3	5.50	102813	103012	111081	
5/16	24	7.93	72	22.0	35	8.00	6.30	3	6.90	102821	103020	111089	
3/8	24	9.52	80	24.0	39	10.00	8.00	3	8.50	102818	103017	111086	

									N1210-1	N1210-3	N1210-S	
<div>N1210-1</div> <div>N1210-3</div> <div>N1210-S</div>												
												
									2B		2B	
Ø" d <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	
7/16	20	11.11	85	22.0	8.0	6.3	3	9.80	103411	103626	111255	
1/2	20	12.70	89	24.0	9.0	7.1	3	11.40	103407	103622	111251	
5/8	18	15.87	102	32.0	12.5	10.0	3	14.50	103410	103625	111254	
3/4	16	19.05	112	33.0	14.0	11.2	4	17.50	103409	103624	111253	
7/8	14	22.22	115	32.0	16.0	12.5	4	20.40	103412	103627	111256	
1	12	25.40	130	45.0	18.0	14.0	4	23.30	103408	103623	111252	

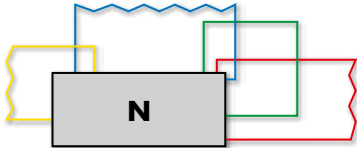










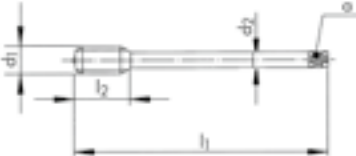















										N1110-3	N1120-4	N1210-3	N1220-4
<b>N1110-3</b>  													
<b>N1120-4</b>  													
<b>N1210-3</b>  													
<b>N1220-4</b>  													
													
													
Ø" d <sub>1</sub> UNEF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
12	32	5.48	62	17.0	26	5.6	4.5	3	4.70	103007	103118		
1/4	32	6.35	66	19.0	30	6.3	5.0	3	5.60	103006	103117		
5/16	32	7.93	72	22.0	35	8.0	6.3	3	7.20	103009	103120		
3/8	32	9.52	80	24.0	39	10.0	8.0	3	8.75	103008	103119		
7/16	28	11.11	85	22.0		8.0	6.3	3	10.25			103615	103754
1/2	28	12.70	89	24.0		9.0	7.1	3	11.85			103609	103749
9/16	24	14.28	95	24.0		11.2	9.0	3	13.20			103617	103756
5/8	24	15.87	102	32.0		12.5	10.0	3	14.80			103614	103753
11/16	24	17.46	104	26.0		14.0	11.2	4	16.40			103611	
3/4	20	19.05	112	33.0		14.0	11.2	4	17.80			103613	* 103752
7/8	20	22.22	115	32.0		16.0	12.5	4	21.00			103616	* 103755
1	20	25.40	120	30.0		18.0	14.0	4	24.10			103610	* 103750



# UNS, UN ANSI B1.1

HSSE


























									N410-3	N460-3	N460V-3																																																																																							
																																																																																																		
<div><div>N410-3</div><div></div><div><div>31</div><div>62</div><div>74</div></div></div>																																																																																																		
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<div><div>N460V-3</div><div><div>V</div></div><div><div>11</div><div>12</div><div>13</div><div>14</div><div>21</div><div>32</div></div></div>																																																																																																		
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<table><tr><th>Ø" d<sub>1</sub></th><th>P</th><th>d<sub>1</sub></th><th>l<sub>1</sub></th><th>l<sub>2</sub></th><th>d<sub>2</sub></th><th>a</th><th></th><th></th></tr><tr><th>UNS</th><th>TPI</th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th></th><th></th></tr><tr><td>1/4</td><td>36</td><td>6.35</td><td>80</td><td>17.0</td><td>4.5</td><td>3.4</td><td>3</td><td>5.65</td></tr><tr><td>1/2</td><td>24</td><td>12.70</td><td>100</td><td>24.0</td><td>9.0</td><td>7.0</td><td>3</td><td>11.60</td></tr><tr><td>1</td><td>14</td><td>25.40</td><td>140</td><td>34.0</td><td>18.0</td><td>14.5</td><td>4</td><td>23.60</td></tr><tr><td>1</td><td>14</td><td>25.40</td><td>140</td><td>22.0</td><td>18.0</td><td>14.5</td><td>4</td><td>23.60</td></tr></table>									Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	a			UNS	TPI	mm	mm	mm	mm	mm			1/4	36	6.35	80	17.0	4.5	3.4	3	5.65	1/2	24	12.70	100	24.0	9.0	7.0	3	11.60	1	14	25.40	140	34.0	18.0	14.5	4	23.60	1	14	25.40	140	22.0	18.0	14.5	4	23.60	<table><tr><th>ID</th><th>ID</th><th>ID</th></tr><tr><td>104899</td><td></td><td></td></tr><tr><td>104900</td><td></td><td></td></tr><tr><td>104898</td><td></td><td></td></tr><tr><td></td><td>102437</td><td>142789</td></tr></table>				ID	ID	ID	104899			104900			104898				102437	142789																	
Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	a																																																																																												
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1/2	24	12.70	100	24.0	9.0	7.0	3	11.60																																																																																										
1	14	25.40	140	34.0	18.0	14.5	4	23.60																																																																																										
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<table><tr><th>Ø" d<sub>1</sub></th><th>P</th><th>d<sub>1</sub></th><th>l<sub>1</sub></th><th>l<sub>2</sub></th><th>d<sub>2</sub></th><th>a</th><th></th><th></th></tr><tr><th>UN</th><th>TPI</th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th></th><th></th></tr><tr><td>1 1/8</td><td>8</td><td>28.57</td><td>180</td><td>30.0</td><td>22.0</td><td>18.0</td><td>4</td><td>25.50</td></tr><tr><td>1 1/4</td><td>8</td><td>31.75</td><td>180</td><td>30.0</td><td>22.0</td><td>18.0</td><td>4</td><td>28.70</td></tr><tr><td>1 3/8</td><td>8</td><td>34.92</td><td>200</td><td>36.0</td><td>28.0</td><td>22.0</td><td>5</td><td>31.80</td></tr><tr><td>1 1/2</td><td>8</td><td>38.10</td><td>200</td><td>40.0</td><td>32.0</td><td>24.0</td><td>5</td><td>35.00</td></tr><tr><td>1 3/4</td><td>8</td><td>44.45</td><td>220</td><td>44.0</td><td>36.0</td><td>29.0</td><td>5</td><td>41.40</td></tr><tr><td>2</td><td>8</td><td>50.80</td><td>250</td><td>38.0</td><td>40.0</td><td>32.0</td><td>5</td><td>47.70</td></tr></table>									Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	a			UN	TPI	mm	mm	mm	mm	mm			1 1/8	8	28.57	180	30.0	22.0	18.0	4	25.50	1 1/4	8	31.75	180	30.0	22.0	18.0	4	28.70	1 3/8	8	34.92	200	36.0	28.0	22.0	5	31.80	1 1/2	8	38.10	200	40.0	32.0	24.0	5	35.00	1 3/4	8	44.45	220	44.0	36.0	29.0	5	41.40	2	8	50.80	250	38.0	40.0	32.0	5	47.70	<table><tr><th>ID</th><th>ID</th></tr><tr><td>102415</td><td>142790</td></tr><tr><td>102414</td><td>142520</td></tr><tr><td>104896</td><td>142792</td></tr><tr><td>102413</td><td>142793</td></tr><tr><td></td><td>115198</td></tr><tr><td></td><td>111622</td></tr></table>				ID	ID	102415	142790	102414	142520	104896	142792	102413	142793		115198		111622
Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	a																																																																																												
UN	TPI	mm	mm	mm	mm	mm																																																																																												
1 1/8	8	28.57	180	30.0	22.0	18.0	4	25.50																																																																																										
1 1/4	8	31.75	180	30.0	22.0	18.0	4	28.70																																																																																										
1 3/8	8	34.92	200	36.0	28.0	22.0	5	31.80																																																																																										
1 1/2	8	38.10	200	40.0	32.0	24.0	5	35.00																																																																																										
1 3/4	8	44.45	220	44.0	36.0	29.0	5	41.40																																																																																										
2	8	50.80	250	38.0	40.0	32.0	5	47.70																																																																																										
ID	ID																																																																																																	
102415	142790																																																																																																	
102414	142520																																																																																																	
104896	142792																																																																																																	
102413	142793																																																																																																	
	115198																																																																																																	
	111622																																																																																																	

UNJF, UNS, UN

# G Répertoire - Tarauds à machine G (gaz) DIN ISO 228

## Rubrica - Maschi a macchina G (gas) DIN ISO 228

	N						
Caractéristiques Caratteristiche		 V	 TiN	 R40	 V	 R40	 TiN
							
Genre de trou Tipo di foro							
							
	N410-3	N420-4 N420V-4	N420TN-4	N460-3	N460V-3	N462V-3	N460TN-3
DIN longue DIN lungo	DIN 5156	156	157	157	158	158	158
DIN courte DIN corto	DIN 5157						
LH Filetage à gauche LH Filettatura sinistra	DIN 5156	156					



























# G






















## Rubrica - Maschi a macchina e a mano G (gas) DIN ISO 228

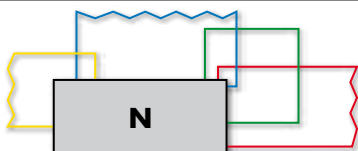



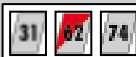




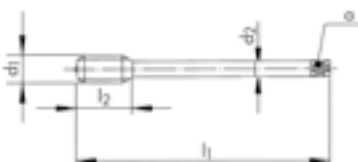





**G (BSP),  
Rp, Rc, W**

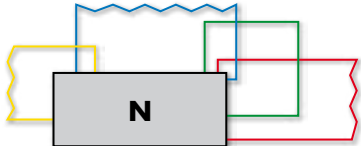






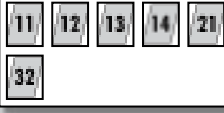








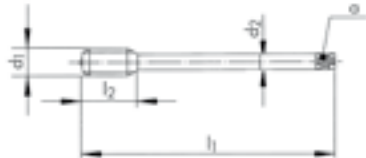






# G

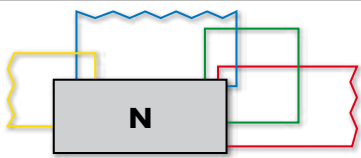

















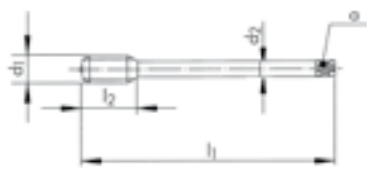










**Répertoire - Tarauds à machine et à refouler G (gaz) DIN ISO 228**  
**Rubrica - Maschi a macchina e a rullare G (gas) DIN ISO 228**

	H	GG	RTS	RTS	FPS	FAS	
<b>Caractéristiques</b> <b>Caratteristiche</b>		 	 	  	 	 	
							
<b>Genre de trou</b> <b>Tipo di foro</b>							
							
	<b>H450-3</b>	<b>GG450NV-3</b>	<b>RTS462VS-3</b>	<b>RTS462VS-5</b>	<b>FPS481VS-3</b>	<b>FAS481VS-3</b>	
<b>DIN longue</b> <b>DIN lungo</b> <b>DIN 5156</b>	159	159					
<b>DIN longue</b> <b>DIN lungo</b> <b>~DIN 376</b>			161	161			
<b>DIN longue</b> <b>DIN lungo</b> <b>~DIN 2189</b>					162	162	

	N						
<b>Caractéristiques</b> <b>Caratteristiche</b>		 		 		 <b>HSS</b>  1.75 x P ≥ 0.3	
							
<b>Genre de trou</b> <b>Tipo di foro</b>							
				<b>N1110-3</b>	<b>N1120-4</b>	<b>N5120</b>	
<b>ISO courte</b> <b>ISO corto</b> <b>ISO 529</b>				<b>166</b>	<b>166</b>		
<b>W</b> <b>ISO 529</b>				<b>166/167</b>	<b>166</b>		
<b>SV</b> <b>ISO 529</b>				<b>167</b>			
	<b>N420-3</b>	<b>N410-3</b>	<b>D5800</b>	<b>N1210-3</b>	<b>N1220-4</b>		
<b>DIN longue</b> <b>DIN lungo</b> <b>DIN 5156</b>	<b>164</b>						
<b>DIN longue</b> <b>DIN lungo</b> <b>DC</b>		<b>164</b>	<b>165</b>				
<b>ISO courte</b> <b>ISO corto</b> <b>ISO 529</b>				<b>166</b>	<b>166</b>		
<b>Rp</b> <b>DIN 5156</b>	<b>164</b>						
<b>Rc</b> <b>DC</b>		<b>164</b>	<b>165</b>				
<b>W</b> <b>ISO 529</b>				<b>166</b>	<b>166</b>		
<b>SV</b> <b>ISO 529/DC</b>				<b>167</b>		<b>167</b>	

									N410-3	N410-3 LH		
<div><div>N410-3</div><div></div><div></div></div> <div><div>N410-3 LH</div><div></div><div>LH</div><div></div></div>									 			
									 			
 									 			
$\varnothing'' d_1$ G	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID		
1/8	28	9.72	90	22.0	7.0	5.5	3	8.75	101855			
1/4	19	13.15	100	20.0	11.0	9.0	3	11.60	101853	101854		
3/8	19	16.66	100	20.0	12.0	9.0	4	15.20	101861	101862		
1/2	14	20.95	125	22.0	16.0	12.0	4	18.90	101851	101852		
3/4	14	26.44	140	28.0	20.0	16.0	4	24.40	101859	* 101860		
1	11	33.24	160	32.0	25.0	20.0	4	30.70	101857	* 101858		
1 1/4	11	41.91	170	32.0	32.0	24.0	5	39.30	101850			
1 1/2	11	47.80	190	32.0	36.0	29.0	5	45.20	101849			

									N420-4	N420V-4	N420TN-4	
<b>N420-4</b>  												
<b>N420V-4</b>  <b>V</b> 												
<b>N420TN-4</b>  <b>TiN</b> 												
 												
$\varnothing'' d_1$ <b>G</b>	<b>P</b> TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID	
1/16	28	7.72	90	18.0	6.0	4.9	3	6.75	102045			
1/8	28	9.72	90	22.0	7.0	5.5	3	8.75	102048	102258	102236	
1/4	19	13.15	100	20.0	11.0	9.0	3	11.60	102047	102257	102235	
3/8	19	16.66	100	20.0	12.0	9.0	3	15.20	102053	102261	102238	
1/2	14	20.95	125	22.0	16.0	12.0	4	18.90	102046	102256	102234	
5/8	14	22.91	125	25.0	18.0	14.5	4	20.90	102054	144722		
3/4	14	26.44	140	28.0	20.0	16.0	4	24.40	102052	102260	102237	
1	11	33.24	160	32.0	25.0	20.0	4	30.70	102049	102259		
1 1/4	11	41.91	170	32.0	32.0	24.0	5	39.30	102043			
1 1/2	11	47.80	190	32.0	36.0	29.0	5	45.20	102042			
2	11	59.61	220	36.0	45.0	35.0	5	57.00	102051			
2 1/2	11	75.18	280	36.0	50.0	39.0	6	72.60	102050			

									N460-3		N460V-3		N460TN-3		N462V-3																																																																																																																																																													
<div><div>N460-3</div><div></div><div><div><div>61</div><div>63</div><div>71</div><div>72</div><div>73</div></div><div><div>81</div></div></div></div>									  		  		  		  																																																																																																																																																													
<div><div>N460V-3</div><div></div><div><div><div>11</div><div>12</div><div>13</div><div>14</div><div>21</div></div><div><div>32</div></div></div></div>																																																																																																																																																																												
<div><div>N460TN-3</div><div></div><div><div><div>11</div><div>12</div><div>13</div><div>14</div><div>21</div></div><div><div>31</div><div>32</div><div>73</div><div>74</div></div></div></div>																																																																																																																																																																												
<div><div>N462V-3</div><div></div><div><div><div>11</div><div>12</div><div>13</div><div>14</div><div>21</div></div><div><div>32</div></div></div></div>																																																																																																																																																																												
<div></div>																																																																																																																																																																												
<table><tr><th>Ø" d<sub>1</sub> G</th><th>P TPI</th><th>d<sub>1</sub> mm</th><th>l<sub>1</sub> mm</th><th>l<sub>2</sub> mm</th><th>d<sub>2</sub> mm</th><th>a mm</th><th></th><th></th><th>ID</th><th>ID</th><th>ID</th><th>ID</th></tr><tr><td>1/16</td><td>28</td><td>7.72</td><td>90</td><td>12.5</td><td>6.0</td><td>4.9</td><td>3</td><td>6.75</td><td>102341</td><td></td><td></td><td></td></tr><tr><td>1/8</td><td>28</td><td>9.72</td><td>90</td><td>14.0</td><td>7.0</td><td>5.5</td><td>3</td><td>8.75</td><td>102344</td><td>102457</td><td>102444</td><td>143687</td></tr><tr><td>1/4</td><td>19</td><td>13.15</td><td>100</td><td>14.0</td><td>11.0</td><td>9.0</td><td>3</td><td>11.60</td><td>102343</td><td>102456</td><td>102443</td><td>143600</td></tr><tr><td>3/8</td><td>19</td><td>16.66</td><td>100</td><td>14.0</td><td>12.0</td><td>9.0</td><td>4</td><td>15.20</td><td>102348</td><td>102460</td><td>102446</td><td>143431</td></tr><tr><td>1/2</td><td>14</td><td>20.95</td><td>125</td><td>20.0</td><td>16.0</td><td>12.0</td><td>4</td><td>18.90</td><td>102342</td><td>102455</td><td>102442</td><td>143921</td></tr><tr><td>5/8</td><td>14</td><td>22.91</td><td>125</td><td>20.0</td><td>18.0</td><td>14.5</td><td>4</td><td>20.90</td><td>102349</td><td>143711</td><td></td><td></td></tr><tr><td>3/4</td><td>14</td><td>26.44</td><td>140</td><td>22.0</td><td>20.0</td><td>16.0</td><td>4</td><td>24.40</td><td>102347</td><td>102459</td><td>102445</td><td>143688</td></tr><tr><td>1</td><td>11</td><td>33.24</td><td>160</td><td>26.0</td><td>25.0</td><td>20.0</td><td>4</td><td>30.70</td><td>102345</td><td>102458</td><td></td><td></td></tr><tr><td>1 1/4</td><td>11</td><td>41.91</td><td>170</td><td>30.0</td><td>32.0</td><td>24.0</td><td>5</td><td>39.30</td><td>102340</td><td>111608</td><td></td><td></td></tr><tr><td>1 1/2</td><td>11</td><td>47.80</td><td>190</td><td>35.0</td><td>36.0</td><td>29.0</td><td>5</td><td>45.20</td><td>102339</td><td>111609</td><td></td><td></td></tr><tr><td>2</td><td>11</td><td>59.61</td><td>220</td><td>41.0</td><td>45.0</td><td>35.0</td><td>6</td><td>57.00</td><td>102346</td><td>111503</td><td></td><td></td></tr></table>									Ø" d <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID	1/16	28	7.72	90	12.5	6.0	4.9	3	6.75	102341				1/8	28	9.72	90	14.0	7.0	5.5	3	8.75	102344	102457	102444	143687	1/4	19	13.15	100	14.0	11.0	9.0	3	11.60	102343	102456	102443	143600	3/8	19	16.66	100	14.0	12.0	9.0	4	15.20	102348	102460	102446	143431	1/2	14	20.95	125	20.0	16.0	12.0	4	18.90	102342	102455	102442	143921	5/8	14	22.91	125	20.0	18.0	14.5	4	20.90	102349	143711			3/4	14	26.44	140	22.0	20.0	16.0	4	24.40	102347	102459	102445	143688	1	11	33.24	160	26.0	25.0	20.0	4	30.70	102345	102458			1 1/4	11	41.91	170	30.0	32.0	24.0	5	39.30	102340	111608			1 1/2	11	47.80	190	35.0	36.0	29.0	5	45.20	102339	111609			2	11	59.61	220	41.0	45.0	35.0	6	57.00	102346	111503										
Ø" d <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID																																																																																																																																																																
1/16	28	7.72	90	12.5	6.0	4.9	3	6.75	102341																																																																																																																																																																			
1/8	28	9.72	90	14.0	7.0	5.5	3	8.75	102344	102457	102444	143687																																																																																																																																																																
1/4	19	13.15	100	14.0	11.0	9.0	3	11.60	102343	102456	102443	143600																																																																																																																																																																
3/8	19	16.66	100	14.0	12.0	9.0	4	15.20	102348	102460	102446	143431																																																																																																																																																																
1/2	14	20.95	125	20.0	16.0	12.0	4	18.90	102342	102455	102442	143921																																																																																																																																																																
5/8	14	22.91	125	20.0	18.0	14.5	4	20.90	102349	143711																																																																																																																																																																		
3/4	14	26.44	140	22.0	20.0	16.0	4	24.40	102347	102459	102445	143688																																																																																																																																																																
1	11	33.24	160	26.0	25.0	20.0	4	30.70	102345	102458																																																																																																																																																																		
1 1/4	11	41.91	170	30.0	32.0	24.0	5	39.30	102340	111608																																																																																																																																																																		
1 1/2	11	47.80	190	35.0	36.0	29.0	5	45.20	102339	111609																																																																																																																																																																		
2	11	59.61	220	41.0	45.0	35.0	6	57.00	102346	111503																																																																																																																																																																		



# G DIN ISO 228 (BSP)

≤ Ø 25.4 > Ø 25.4  
**PM** **HSSE**  
H/GG H/GG

**HSSE**  
W



									W460-5		W460DL-5		H450-3		GG450NV-3	
<div>W460-5<div></div><div><div>71</div><div>72</div><div>81</div></div></div>																
<div>W460DL-5<div></div><div>DL</div><div><div>71</div><div>72</div><div>81</div></div></div>																
<div>H450-3<div></div><div><div>15</div><div>16</div><div>82</div><div>82</div></div></div>																
<div>GG450NV-3<div></div><div>NV</div><div><div>31</div><div>74</div></div></div>																
$\frac{\text{Ø}''}{\text{G}}$	$d_1$	P	$d_1$	$l_1$	$l_2$	$d_2$	$\alpha$			ID	ID	ID				
1/8		28	9.72	90	14.0	7.0	5.5	3	8.75	119350	176728	101298				
1/4		19	13.15	100	14.0	11.0	9.0	* 4	11.60	119300	176729	101297				
3/8		19	16.66	100	14.0	12.0	9.0	4	15.20	119682	176730	101301				
1/2		14	20.95	125	20.0	16.0	12.0	4	18.90	119199	176731	101296				
3/4		14	26.44	140	22.0	20.0	16.0	4	24.40			101300				
1		11	33.24	160	26.0	25.0	20.0	4	30.70			101299				
* W460-5 =  3																
$\frac{\text{Ø}''}{\text{G}}$	$d_1$	P	$d_1$	$l_1$	$l_2$	$d_2$	$\alpha$			ID						
1/8		28	9.72	90	22.0	7.0	5.5	4	8.75	102309						
1/4		19	13.15	100	20.0	11.0	9.0	4	11.60	102308						
3/8		19	16.66	100	20.0	12.0	9.0	4	15.20	102312						
1/2		14	20.95	125	22.0	16.0	12.0	4	18.90	102307						
3/4		14	26.44	140	28.0	20.0	16.0	4	24.40	102311						
1		11	33.24	160	32.0	25.0	20.0	4	30.70	102310						

# G DIN ISO 228 (BSP)

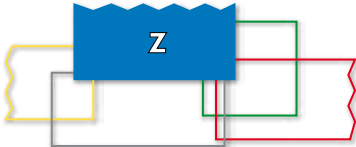












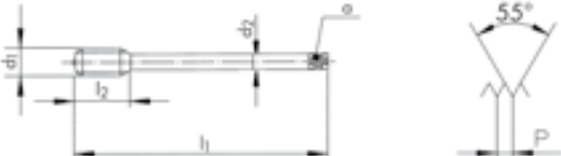







< Ø 25.4 > Ø 25.4

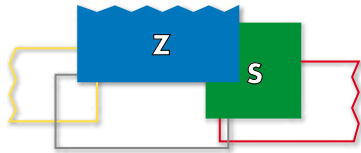
**PM**  
Z420

**HSSE**  
Z420

**HSSE**  
Z460



<div></div>									Z420V-4	Z420VS-4	Z460V-3	
<div><div><div>Z420V-4</div><div></div><div><div>21</div><div>22</div><div>23</div><div>41</div><div>42</div><div>51</div></div></div><div><div>Z420VS-4</div><div></div><div><div>21</div><div>22</div><div>23</div><div>24</div><div>51</div><div>61</div></div></div><div><div>Z460V-3</div><div></div><div><div>22</div><div>23</div><div>51</div></div></div></div>												
												
<div></div>												
Ø" d <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID	ID		
1/8	28	9.72	90	22.0	7.0	5.5	3	8.75	142794	142800		
1/4	19	13.15	100	20.0	11.0	9.0	3	11.60	142795	119303		
3/8	19	16.66	100	20.0	12.0	9.0	3	15.20	142796	142802		
1/2	14	20.95	125	22.0	16.0	12.0	4	18.90	142797	142803		
3/4	14	26.44	140	28.0	20.0	16.0	4	24.40	142798			
1	11	33.24	160	32.0	25.0	20.0	4	30.70	142799			
Ø" d <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			ID			
1/8	28	9.72	90	14.0	7.0	5.5	3	8.75	104726			
1/4	19	13.15	100	14.0	11.0	9.0	3	11.60	104725			
3/8	19	16.66	100	14.0	12.0	9.0	4	15.20	104728			
1/2	14	20.95	125	20.0	16.0	12.0	4	18.90	104724			
3/4	14	26.44	140	22.0	20.0	16.0	4	24.40	104727			
1	11	33.24	160	26.0	25.0	20.0	4	30.70	105142			



Z470VS-3



VS



**RTS**  
Rigid Tapping Synchro

RTS462VS-3



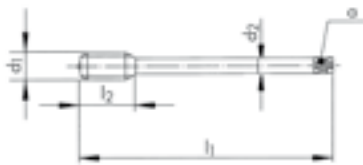
VS



RTS462VS-5



VS



Z470VS-3



RTS462VS-3



RTS462VS-5



Ø" d <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> h6 mm	α mm		
1/8	28	9.72	100	14.0	*8.0	*6.2	3	8.75
1/4	19	13.15	110	14.0	*12.0	*9.0	4	11.60
3/8	19	16.66	110	18.0	12.0	9.0	4	15.20
1/2	14	20.95	125	20.0	16.0	12.0	4	18.90

\* Norme DC / \* DC Norm / \* Norma DC

ID

165198

165199

165200

165201

Ø" d <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> h6 mm	α mm		
1/8	28	9.72	100	14.0	*8.0	*6.2	3	8.75
1/4	19	13.15	110	14.0	*12.0	*9.0	3	11.60
3/8	19	16.66	110	18.0	12.0	9.0	4	15.20
1/2	14	20.95	125	20.0	16.0	12.0	4	18.90

\* Norme DC / \* DC Norm / \* Norma DC

ID

ID

151861

170629

151868

170631

151872







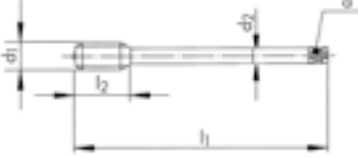




170633

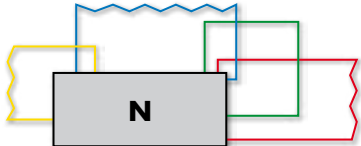


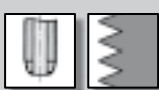


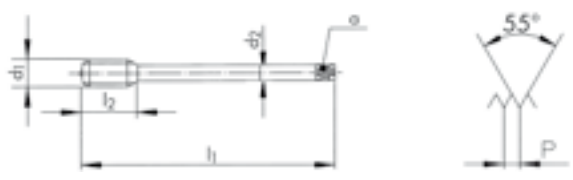







150685

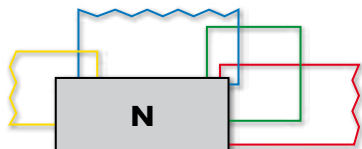









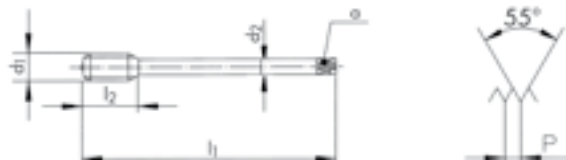







170635





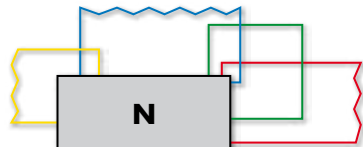


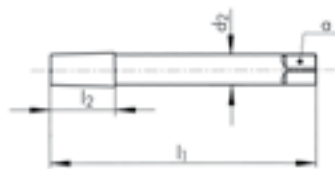
sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido

<div> <div>FPS FAS</div> <div>FORMING</div> </div>								FPS481VS-3	FAS481VS-3
<div> <div>FPS481VS-3</div> <div>  <div>VS</div> </div> <div> <div>11 12 13 14 15</div> <div>21 24 63</div> </div> </div>									
<div> <div>FAS481VS-3</div> <div>  <div>VS</div> </div> <div> <div>12 13 14 15 21 22</div> <div>23 24 41 51 61 63</div> </div> </div>									
<div>   </div>									
$\varnothing'' d_1$ G	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm	 Tol.	ID	ID
1/8	28	9.72	90	22.0	7.0	5.5	9.25 + 0.05	166721	166733
1/4	19	13.15	100	20.0	11.0	9.0	12.50 + 0.05	166722	166734
3/8	19	16.66	100	20.0	12.0	9.0	16.00 + 0.05	166723	166735
1/2	14	20.95	125	22.0	16.0	12.0	20.00 + 0.05	166724	166736

									N210-1	N210-3	N210-S					
<b>N210-1</b> 																
<b>N210-3</b>  																
<b>N210-S</b> 																
																
																
$\varnothing'' d_1$ G	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$a$ mm			ID	ID	ID					
1/16	28	7.72	63	18.0	6.0	4.9	3	6.75		101418						
1/8	28	9.72	63	22.0	7.0	5.5	3	8.75	101404	101421	119386					
1/4	19	13.15	70	20.0	11.0	9.0	3	11.60	101403	101420	119336					
3/8	19	16.66	70	20.0	12.0	9.0	4	15.20	101409	101427	110938					
1/2	14	20.95	80	22.0	16.0	12.0	4	18.90	101402	101419	119264					
5/8	14	22.91	80	25.0	18.0	14.5	4	20.90	101411	105140	110940					
3/4	14	26.44	90	28.0	20.0	16.0	4	24.40	101408	101426	110937					
7/8	14	30.20	90	28.0	22.0	18.0	4	28.20	* 101412	* 101429						
1	11	33.24	100	32.0	25.0	20.0	4	30.70	101405	101422	110933					
1 1/8	11	37.89	125	32.0	28.0	22.0	4	35.30		101415						
1 1/4	11	41.91	125	32.0	32.0	24.0	5	39.30	101400	101414	111425					
1 3/8	11	44.32	125	32.0	36.0	29.0	5	41.80		* 101417						
1 1/2	11	47.80	140	32.0	36.0	29.0	5	45.20	101399	101413	110934					
1 3/4	11	53.74	140	36.0	40.0	32.0	5	51.20		* 101416						
2	11	59.61	160	36.0	45.0	35.0	5	57.00	101407	101425	110935					
2 1/2	11	75.18	160	36.0	50.0	39.0	6	72.60		101423						
3	11	87.88	160	40.0	50.0	39.0	6	85.30		* 101428						

		N420-3				N410-3		
<b>N420-3</b>  								
<b>N410-3</b>  		  						
		 		 				
$\varnothing'' d_1$ Rp	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm	 	ID
1/8	28	9.72	90	22.0	7.0	5.5	3 8.60	104911
1/4	19	13.15	100	20.0	11.0	9.0	3 11.50	104912
3/8	19	16.66	100	20.0	12.0	9.0	3 15.00	104913
1/2	14	20.95	125	22.0	16.0	12.0	4 18.50	104914
3/4	14	26.44	140	28.0	20.0	16.0	4 24.00	104915
1	11	33.24	160	32.0	25.0	20.0	4 30.25	104916
$\varnothing'' d_1$ Rc	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm		ID
1/8	28	9.72	71	13.0	8.0	6.2	5	104917
1/4	19	13.15	80	20.0	11.0	9.0	5	104918
3/8	19	16.66	90	20.0	12.0	9.0	5	104919
1/2	14	20.95	100	26.0	16.0	12.0	5	104920
3/4	14	26.44	110	26.0	20.0	16.0	5	104921
1	11	33.24	125	32.0	25.0	20.0	5	104922

Vc (m/min) Ø d1				
Rc	1/16" - 1/4"	3/8" - 1/2"	3/4" - 1"	1.1/4" - 2"
	10	8	7	5
	18	15	13	10

					<b>D5800</b>			
<b>D5800</b> 								
								
Ø" Rc	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	α mm	ID			
1/16	70	17.0	6.0	4.9	118701			
1/8	70	17.0	8.0	6.2	110531			
1/4	80	27.0	10.0	8.0	110530			
3/8	85	27.0	12.0	9.0	110535			
1/2	95	35.0	16.0	12.0	110529			
3/4	105	35.0	20.0	16.0	110534			
1	130	43.0	25.0	20.0	110532			

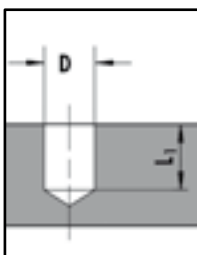
## Avant-trous pour filetages gaz coniques selon DIN EN 10226 Prefori per filettature gas conici secondo DIN EN 10226

### Avant-trous cylindriques

Usure plus rapide du taraud, à éviter

### Preforo cilindrico

Comporta un'usura più rapida del maschio, da evitare

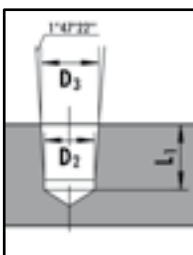


### Avant-trous coniques 1:16

Percer cylindrique selon Ø D<sub>2</sub> et aléser conique selon Ø D<sub>3</sub>

### Preforo conico 1:16

Forare con punta cilindrica secondo il Ø D<sub>2</sub> e quindi aléser conico secondo Ø D<sub>3</sub>

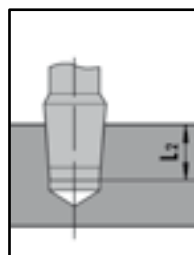


### Taradage

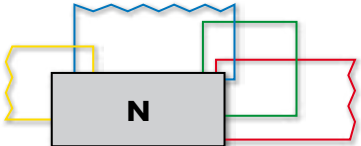



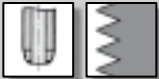








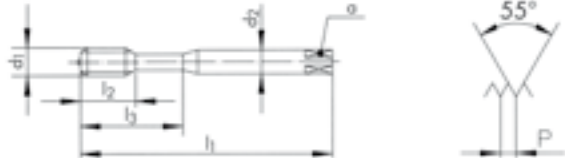



Tarauder jusqu'à la profondeur L<sub>2</sub> = Ø nominal

### Filettatura

Filettare fino alla profondità L<sub>2</sub> = Ø nominale



Ø" Rc	L <sub>1</sub> min. mm	D <sub>1</sub> mm	D <sub>2</sub> mm	D <sub>3</sub> mm	L <sub>2</sub> mm
1/16	11.90	6.20	6.10	6.56	10.60
1/8	11.90	8.20	8.10	8.57	10.60
1/4	17.70	11.00	10.75	11.45	15.70
3/8	18.10	14.50	14.25	14.95	16.10
1/2	24.00	18.00	17.75	18.63	21.40
3/4	25.30	23.50	23.00	24.12	21.50
1	30.60	29.50	29.00	30.29	26.30













										N1110-3	N1210-3	N1120-4	N1220-4
<b>N1110-3</b>  													
<b>N1210-3</b>  													
<b>N1120-4</b>  													
<b>N1220-4</b>  													
													
Ø" d <sub>1</sub> W	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm			ID	ID	ID	ID
1/8	40	3.17	48	11.0	18	3.15	2.50	3	2.50	103025		103126	
5/32	32	3.96	53	13.0	21	4.00	3.15	3	3.10	103031		103130	
3/16	24	4.76	58	16.0	25	5.00	4.00	3	3.60	103026		103127	
1/4	20	6.35	66	19.0	30	6.30	5.00	3	4.90	103024		103125	
5/16	18	7.93	72	22.0	35	8.00	6.30	3	6.40	103030		103129	
3/8	16	9.52	80	24.0	39	10.00	8.00	3	7.70	103028		103128	
7/16	14	11.11	85	22.0		8.00	6.30	3	9.10		103642		103771
1/2	12	12.70	89	24.0		9.00	7.10	3	10.30		103634		103767
9/16	12	14.28	95	24.0		11.20	9.00	3	11.90		* 103644		
5/8	11	15.87	102	32.0		12.50	10.00	3	13.30		103641		103770
3/4	10	19.05	112	33.0		14.00	11.20	3	16.20		103640		103769
1	8	25.40	130	45.0		18.00	14.00	4	21.90		* 103635		























										N1110-3		N1210-3		N5120																																																																									
<div><div>N1110-3</div><div></div></div> <div><div>N1210-3</div><div></div></div> <div><div>N5120</div><div></div></div>																																																																																							
										NEW		NEW		NEW																																																																									
<table><tr><th>Ø" d<sub>1</sub></th><th>P</th><th></th><th>l<sub>1</sub></th><th>l<sub>2</sub></th><th>l<sub>3</sub></th><th>d<sub>2</sub></th><th>a</th><th></th><th></th></tr><tr><th>W</th><th>TPI/mm</th><th></th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th></th><th></th></tr><tr><td>5</td><td>36 TPI/1"</td><td>B6</td><td>58</td><td>16.0</td><td>25</td><td>5.0</td><td>4.0</td><td>3</td><td>4.20*</td></tr><tr><td>6.82</td><td>0.625</td><td>B8</td><td>66</td><td>19.0</td><td>30</td><td>7.1</td><td>5.6</td><td>3</td><td>6.15*</td></tr></table>										Ø" d <sub>1</sub>	P		l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a			W	TPI/mm		mm	mm	mm	mm	mm			5	36 TPI/1"	B6	58	16.0	25	5.0	4.0	3	4.20*	6.82	0.625	B8	66	19.0	30	7.1	5.6	3	6.15*	ID		ID		ID		ID																															
Ø" d <sub>1</sub>	P		l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a																																																																																
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5	36 TPI/1"	B6	58	16.0	25	5.0	4.0	3	4.20*																																																																														
6.82	0.625	B8	66	19.0	30	7.1	5.6	3	6.15*																																																																														
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<table><tr><th>Ø" d<sub>1</sub></th><th>P</th><th></th><th>l<sub>1</sub></th><th>l<sub>2</sub></th><th>l<sub>3</sub></th><th>d<sub>2</sub></th><th>a</th><th></th><th></th></tr><tr><th>SV</th><th>mm</th><th></th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th>mm</th><th></th><th></th></tr><tr><td>10</td><td>0.833</td><td>W10</td><td>80</td><td>24.0</td><td>39</td><td>10.0</td><td>8.0</td><td>3</td><td>8.80*</td></tr><tr><td>12</td><td>1.250</td><td>W12</td><td>89</td><td>24.0</td><td></td><td>9.0</td><td>7.1</td><td>3</td><td>10.50*</td></tr><tr><td>15</td><td>1.250</td><td>W15</td><td>90</td><td>23.0</td><td></td><td>11.2</td><td>9.0</td><td>3</td><td>13.50*</td></tr><tr><td>20</td><td>1.666</td><td>W20</td><td>112</td><td>37.0</td><td></td><td>14.0</td><td>11.2</td><td>4</td><td>17.80*</td></tr><tr><td>25</td><td>1.693</td><td>W25</td><td>120</td><td>30.0</td><td></td><td>18.0</td><td>14.0</td><td>4</td><td>22.70*</td></tr></table>										Ø" d <sub>1</sub>	P		l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a			SV	mm		mm	mm	mm	mm	mm			10	0.833	W10	80	24.0	39	10.0	8.0	3	8.80*	12	1.250	W12	89	24.0		9.0	7.1	3	10.50*	15	1.250	W15	90	23.0		11.2	9.0	3	13.50*	20	1.666	W20	112	37.0		14.0	11.2	4	17.80*	25	1.693	W25	120	30.0		18.0	14.0	4	22.70*	ID		ID		ID		ID	
Ø" d <sub>1</sub>	P		l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a																																																																																
SV	mm		mm	mm	mm	mm	mm																																																																																
10	0.833	W10	80	24.0	39	10.0	8.0	3	8.80*																																																																														
12	1.250	W12	89	24.0		9.0	7.1	3	10.50*																																																																														
15	1.250	W15	90	23.0		11.2	9.0	3	13.50*																																																																														
20	1.666	W20	112	37.0		14.0	11.2	4	17.80*																																																																														
25	1.693	W25	120	30.0		18.0	14.0	4	22.70*																																																																														
										130429		103591		103592		103593																																																																							
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*Tol. $\begin{matrix} +0.1 \text{ mm} \\ 0 \end{matrix}$																																																																																							
<table><tr><th>Ø d<sub>1</sub></th><th>P</th><th></th><th>d<sub>2</sub></th><th>l<sub>1</sub></th><th></th><th></th></tr><tr><th>W</th><th>mm</th><th></th><th>mm</th><th>mm</th><th></th><th></th></tr><tr><td>6.82</td><td>0.625</td><td>B6</td><td>25.0</td><td>9.0</td><td>4</td><td>6.77</td></tr></table>										Ø d <sub>1</sub>	P		d <sub>2</sub>	l <sub>1</sub>			W	mm		mm	mm			6.82	0.625	B6	25.0	9.0	4	6.77							ID																																																		
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6.82	0.625	B6	25.0	9.0	4	6.77																																																																																	
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# NPT, NPTF

Répertoire - Tarauds à machine NPT ANSI B1.20.1 et NPTF B1.20.3  
 Rubrica - Maschi a macchina NPT ANSI B1.20.1 e NPTF B1.20.3

	N						
Caractéristiques Caratteristiche		 	 				
							
Genre de trou Tipo di foro							
							
	N410-3	N410V-3	N411V-3	D5800			
NPT DIN longue NPT DIN lungo DC	170	170	170	171			
NPTF DIN longue NPTF DIN lungo DC	170			171			

	N						
Caractéristiques Caratteristiche							
							
Genre de trou Tipo di foro							
							
	N420-3	N410-1	N410-2	N410-3	N410-S	N410-8	
PG DIN longue PG DIN lungo	DIN 40433						
TR DIN longue TR DIN lungo	DC	173	173	173	173	172	
Tolérance Tolleranza	TR 7H			173	173	172	

# NPT, NPTF

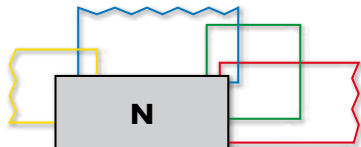


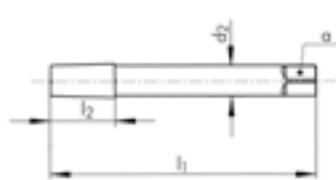
ANSI B1.20.1, ANSI B1.20.3

HSSE



							N410-3	N410V-3	N411V-3	N410-3
N410-3										
N410V-3										
N411V-3										
N410-3										
							NPT	NPT	NPT	NPTF
							ID	ID	ID	ID
1/16							101961	102021	102031	101971
1/8							101964	102024	102034	101974
1/4							101963	102023	102033	101973
3/8							101968	102028	102038	101978
1/2							101962	102022	102032	101972
3/4							101967	102027	102037	101977
1							101965	102025	102035	101975
1 1/4							101960	102020		
1 1/2							101959	102019		
2							101966	102026		

Vc (m/min) Ø d1				
NPT, NPTF	1/16" - 1/4"	3/8" - 1/2"	3/4" - 1"	1.1/4" - 2"
	6	5	4	3
	5	4	3	2
	10	8	7	5
	18	15	13	10

					<b>D5800</b>			
<b>D5800</b> 								
								
$\varnothing$ " NPT, NPTF	$l_1$ mm	$l_2$ mm	$d_2$ mm	$a$ mm	ID			
1/16	70	17.0	6.0	4.9	118701			
1/8	70	17.0	8.0	6.2	110531			
1/4	80	27.0	10.0	8.0	110530			
3/8	85	27.0	12.0	9.0	110535			
1/2	95	35.0	16.0	12.0	110529			
3/4	105	35.0	20.0	16.0	110534			
1	130	43.0	25.0	20.0	110532			

### Avant-trous pour filetages NPT et NPTF Prefori per filettature NPT et NPTF

#### Avant-trous cylindriques

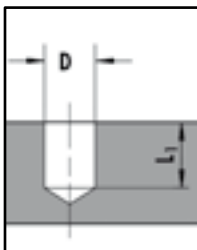
Usure plus rapide du taraud, à éviter

#### Preforo cilindrico

Comporta un'usura più rapida del maschio, da evitare

\*Il est recommandé d'alerer D<sub>3</sub> au maximum

\*Si raccomanda d'alesare D<sub>3</sub> al valore massimo

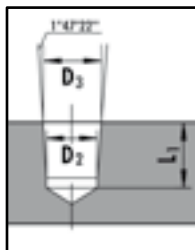


#### Avant-trous coniques 1:16

Perçer cylindrique selon Ø D<sub>2</sub> et aléser conique selon Ø D<sub>3</sub>

#### Preforo conico 1:16

Forare con punta cilindrica secondo il Ø D<sub>2</sub> e quindi alesare conico secondo Ø D<sub>3</sub>

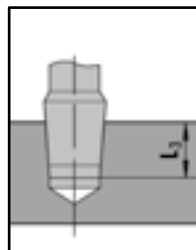


#### Taroudage

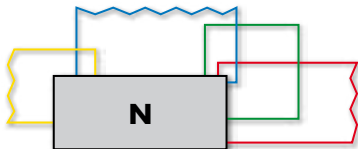








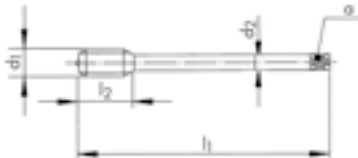




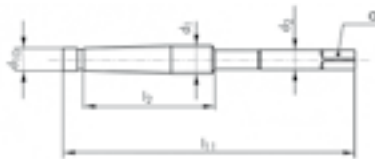




Tarauder jusqu'à la profondeur L<sub>3</sub> = Ø nominal

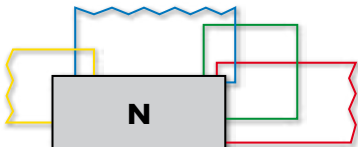





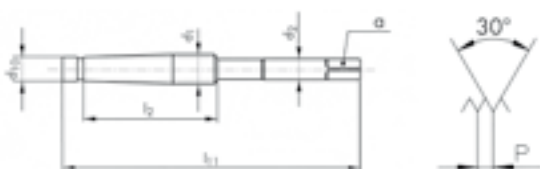



#### Filettatura































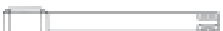
Filettare fino alla profondità L<sub>3</sub> = Ø nominale



Ø" NPT, NPTF	D mm	L <sub>1</sub> mm	D <sub>2</sub> mm	NPT D <sub>3</sub> (+0.05) mm	NPTF D <sub>3</sub> (+0.05) mm	L <sub>3</sub> mm
1/16	6.15	12.00	6.00	6.39	6.41	10.20
1/8	8.50	12.00	8.30	8.74	8.76	10.30
1/4	11.00	17.50	10.80	11.36	11.40	15.10
3/8	14.50	17.50	14.20	14.80	14.84	15.30
1/2	17.90	23.00	17.50	18.32	18.33	20.00
3/4	23.20	23.00	22.80	23.67	23.68	20.50
1	29.00	28.00	28.60	29.69	29.72	24.60

		N420-3			N410-8				
<b>N420-3</b>  									
<b>N410-8</b>  									
 									
$\varnothing d_1$ PG	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm			ID
7	20	12.50	100	24.0	9.0	7.0	3	11.30	104901
9	18	15.20	100	26.0	12.0	9.0	3	13.90	104902
11	18	18.60	110	26.0	14.0	11.0	4	17.30	104903
13.5	18	20.40	125	28.0	16.0	12.0	4	19.10	104904
16	18	22.50	125	28.0	18.0	14.5	4	21.20	104905
21	16	28.30	150	36.0	22.0	18.0	4	26.80	104906
29	16	37.00	170	38.0	28.0	22.0	4	35.50	104907
36	16	47.00	190	38.0	36.0	29.0	5	45.50	104908
 									
$\varnothing d_1$ TR	P mm	$l_{11}$ mm	$l_2$ mm	$d_{10}$ mm	$d_2$ mm	$\alpha$ mm			ID
10	2.00	100	45.0	8.20	7.0	5.5	3	8.20	102008
12	3.00	140	75.0	9.25	8.0	6.2	3	9.25	102009
14	3.00	150	75.0	11.25	10.0	8.0	3	11.25	102010
16	4.00	180	100.0	12.25	11.0	9.0	3	12.25	102011
18	4.00	180	100.0	14.25	12.0	9.0	3	14.25	102012
20	4.00	190	100.0	16.25	14.0	11.0	3	16.25	102013
22	5.00	220	110.0	17.25	16.0	12.0	4	17.25	111616
24	5.00	220	110.0	19.25	18.0	14.5	4	19.25	102015

									N410-1	N410-2	N410-3	N410-S
<div>N410-1</div> <div>N410-2</div> <div>N410-3</div> <div>N410-S</div>												
												
									7H		7H	
$\varnothing d_1$ TR	P mm	$l_1$ mm	$l_2$ mm	$d_{10}$ mm	$d_2$ mm	$\alpha$ mm			ID	ID	ID	ID
10	2.00	85	30.0	8.20	7.0	5.5	3	8.20	* 101827	* 101838	* 101979	* 110972
12	3.00	115	45.0	9.25	8.0	6.2	3	9.25	* 101828	* 101839	* 101980	* 110973
16	4.00	165	65.0	12.25	11.0	9.0	3	12.25	* 101830	* 101841	* 101982	* 110975
20	4.00	175	65.0	16.25	14.0	11.0	3	16.25	* 101832	* 101843	* 101984	* 110977

	N				Z	S	
<b>Caractéristiques</b> <b>Caratteristiche</b> 	 	 	 	 	 	 	 
							
<b>Genre de trou</b> <b>Tipo di foro</b>							
	N320-4	N320V-4	N360-3	N360V-3	Z370VS-3	S320VS-4	S360VS-3
<b>DIN longue</b> <b>DIN lungo</b>	~DIN 40435	176	176	177	177		
<b>DIN longue</b> <b>DIN lungo</b>	~DIN 2184-1	180/183		180/183	181/184	184	184
<b>Filetage</b> <b>Filettatura</b>	EG M	176	176	177	177		
<b>Filetage</b> <b>Filettatura</b>	EG UNC	180		180	181		
<b>Filetage</b> <b>Filettatura</b>	EG UNF	183		183	184	184	184
	N420-4	N420V-4	N460-3	N460V-3			
<b>DIN longue</b> <b>DIN lungo</b>	~DIN 40435	176	176	177	177		
<b>DIN longue</b> <b>DIN lungo</b>	~DIN 2184-1	180/183		180/183			
<b>Filetage</b> <b>Filettatura</b>	EG M	176	176	177	177		
<b>Filetage</b> <b>Filettatura</b>	EG UNC	180		180			
<b>Filetage</b> <b>Filettatura</b>	EG UNF	183		183			



**EG** Répertoire - Tarausds à machine pour filets rapportés EG M, EG UNC, EG UNF  
 Rubrica - Maschi a macchina per filetti riportati EG M, EG UNC, EG UNF

**Répertoire - Tarauds à machine pour filets rapportés EG M, EG UNC, EG UNF**  
**Rubrica - Maschi a macchina per filetti riportati EG M, EG UNC, EG UNF**

[illegible]

# THREADING TECHNOLOGY



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**EG M, EG UN**

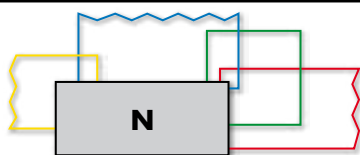
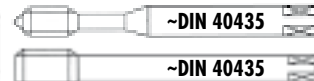


≤ Ø 2.8

> Ø 2.8

PM

HSSE



N320-4



N320V-4



N420-4



N420V-4



N320-4

N320V-4

N420-4

N420V-4



Ø d <sub>1</sub> EG M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
2	0.40	2.520	50	10.0		2.8	2.1	3	2.10
2.5	0.45	3.084	56	12.0	18	3.5	2.7	3	2.65
3	0.50	3.650	56	13.0	20	4.0	3.0	3	3.15
4	0.70	4.910	70	15.0	25	6.0	4.9	3	4.20
5	0.80	6.040	80	17.0	30	6.0	4.9	3	5.25
6	1.00	7.300	80	17.0	30	7.0	5.5	3	6.30
8	1.25	9.624	100	22.0	39	10.0	8.0	3	8.40
10	1.50	11.948	100	24.0		9.0	7.0	3	10.40
12	1.75	14.274	110	28.0		11.0	9.0	3	12.50
14	2.00	16.598	110	30.0		12.0	9.0	3	14.60
16	2.00	18.598	125	33.0		14.0	11.0	3	16.60

ID

ID

ID

ID

101537

118788

101538

101539

142804

101540

142805

101541

142806

101542

142807

101543

142808

102252

142809

102253

142810

\* 142811

102255

142812

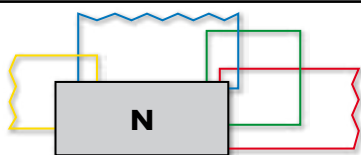
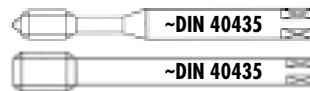


≤ Ø 2.8

> Ø 2.8

PM

HSSE



N360-3

N360V-3

N460-3

N460V-3



N360-3



N360V-3



N460-3



N460V-3



Ø d <sub>1</sub> EG M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
2	0.40	2.520	50	9.0		2.8	2.1	2	2.10
2.5	0.45	3.084	56	5.5	18	3.5	2.7	3	2.65
3	0.50	3.650	56	6.5	20	4.0	3.0	3	3.15
4	0.70	4.910	70	9.0	25	6.0	4.9	3	4.20
5	0.80	6.040	80	11.0	30	6.0	4.9	3	5.25
6	1.00	7.300	80	11.0	30	7.0	5.5	3	6.30
8	1.25	9.624	100	14.0	39	10.0	8.0	3	8.40
10	1.50	11.948	100	14.0		9.0	7.0	3	10.40
12	1.75	14.274	110	14.0		11.0	9.0	3	12.50
14	2.00	16.598	110	18.0		12.0	9.0	3	14.60
16	2.00	18.598	125	21.0		14.0	11.0	3	16.60

ID

ID

ID

ID

101599

101600

101601

142813

101602

142814

101603

142815

101604

142816

101605

142817

102335

142818

102336

142819

102337

142820

102338

142821



## aero

**SA320-4**

**52 53**
**SA350-3**

**52 53**
**TL320VS-4**

**VS**
**41 42**
**TL351VS-3**

**VS**
**41 42**

**SA320-4**
**SA350-3**
**TL320VS-4**
**TL351VS-3**


$\varnothing d_1$ EG M	P mm	$d_1$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$d_2$ mm	$\alpha$ mm		
3	0.50	3.650	56	13.0		4.0	3.0	3	3.15
4	0.70	4.910	70	15.0		6.0	4.9	3	4.20
5	0.80	6.040	80	15.0	23	6.0	4.9	3	5.25
6	1.00	7.300	80	15.0	23	7.0	5.5	3	6.30
8	1.25	9.624	100	20.0	33	10.0	8.0	3	8.40

**ID**
**ID**
**ID**
**ID**
**147676**
**147682**
**\* 152001**
**150478**
**147678**
**147684**
**\* 152002**
**152003**
**147680**
**147686**
**150184**
**147688**
**147692**
**\* 152004**
**152005**
**149354**
**149356**
**\* 152088**
**152089**



# aero

SA390-3



53

SA390-3



$\varnothing d_1$ EG M	P mm	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm		
3	0.50	3.650	56	13.0	4.0	3.0	3	3.15
4	0.70	4.910	70	15.0	6.0	4.9	3	4.20
5	0.80	6.040	80	20.0	6.0	4.9	3	5.25
6	1.00	7.300	80	20.0	7.0	5.5	3	6.30
8	1.25	9.624	100	30.0	10.0	8.0	3	8.40
10	1.50	11.948	110	35.0	12.0	9.0	3	10.40

ID

149669

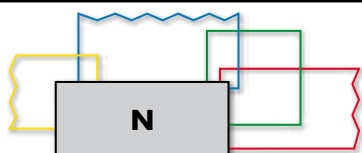
149688

149710

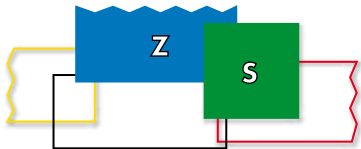
149723

149748

149767



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Z370VS-3



Z370VS-3



3B



Ø" d <sub>1</sub> EG UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	α mm		
4	40	3.67	56	6.5	20	4.0 (h9)	3.0	3	3.05
6	32	4.53	70	9.0	25	6.0	4.9	3	3.75
8	32	5.19	70	9.0	25	6.0	4.9	3	4.45

ID

165126  
165127  
165128



## aero

SA320-4



32 53

SA350-3



32 53

TL320VS-4



VS

41 42

TL351VS-3



VS

41 42



SA320-4

SA350-3

TL320VS-4

TL351VS-3



3B

3B

3B

3B

Ø" d <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	a		
EG UNC	TPI	mm	mm	mm	mm	mm	mm		
4	40	3.67	56	13.0		4.0	3.0	3	3.05
6	32	4.53	70	15.0		6.0	4.9	3	3.75
8	32	5.19	70	15.0		6.0	4.9	3	4.45
1/4	20	8.00	90	18.0	29	8.0	6.2	3	6.70
5/16	18	9.77	100	20.0	33	10.0	8.0	3	8.40

ID

ID

ID

ID

149073

149075

\* 152030

152031

149121

149123

\* 152040

152041

149170

149172

\* 152052

152053

149284

149286

\* 152073

152074

\* 149358

\* 149360

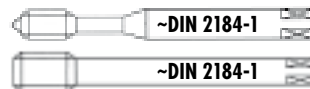
\* 152090

\* 152091





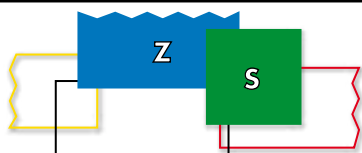
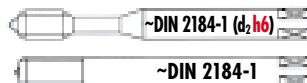
HSSE



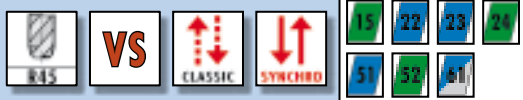
										N320-4	N420-4	N360-3	N460-3



PM



Z370VS-3



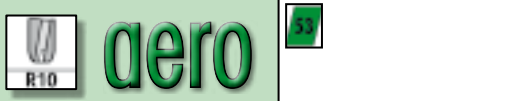
S320VS-4



S360VS-3



SA390-3



Z370VS-3

S320VS-4

S360VS-3

SA390-3



3B

3B

3B

3B



Ø" d <sub>1</sub> EG UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	a mm		
10	32	5.85	80	11.0	30	6.0	4.9	3	5.10
1/4	28	7.52	90	12.5	35	8.0	6.2	3	6.65
5/16	24	9.31	90	12.5	35	*8.0	*6.2	3	8.20

\* Norme DC / \* DC Norm / \* Norma DC

Ø" d <sub>1</sub> EG UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
10	32	5.85	80	17.0	30	6.0	4.9	3	5.10
1/4	28	7.52	90	20.0	35	8.0	6.2	3	6.65
5/16	24	9.31	90	20.0	35	9.0	7.0	3	8.20

Ø" d <sub>1</sub> EG UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	a mm		
10	32	5.85	80	11.0	30	6.0	4.9	3	5.10
1/4	28	7.52	90	12.5	35	8.0	6.2	3	6.65
5/16	24	9.31	90	12.5	35	9.0	7.0	3	8.20

Ø" d <sub>1</sub> EG UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	a mm			
10	32	5.85	80	20.0	6.0	4.9	3	5.10	
1/4	28	7.52	90	25.0	8.0	6.2	3	6.65	

ID

165129

165130

165131

ID

111821

111822

111823

ID

111811

111812

111824

ID

149702

149724



## aero

SA320-4

SA350-3

TL320VS-4

TL351VS-3

SA320-4



52 53

SA350-3



52 53

TL320VS-4



VS

41 42

TL351VS-3



VS

41 42



Ø" d <sub>1</sub> EG UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	α mm		
10	32	5.85	80	15.0	23	6.0	4.9	3	5.10
1/4	28	7.52	90	18.0	29	8.0	6.2	3	6.65
5/16	24	9.31	90	20.0	31	9.0	7.0	3	8.20

ID

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ID

149190

149192

\* 148009

148008

146099

149268

\* 148015

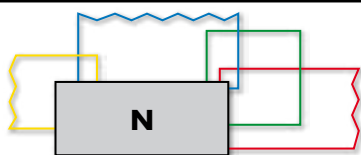
148014

149336

149338

148021

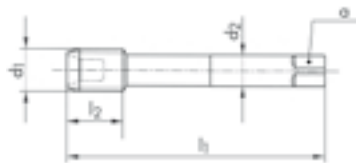






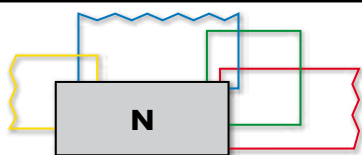
N470V-4

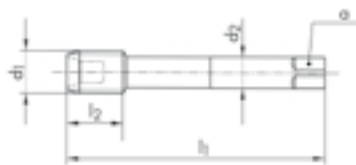




N470V-4



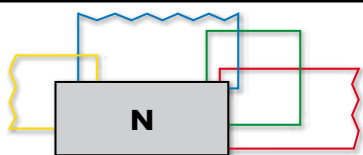
$\varnothing d_1$ M	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	a mm			ID
30	3.50	180	39.0	22.0	18.0	5	26.50	102575
33	3.50	180	39.0	22.0	18.0	5	29.50	* 102576
36	4.00	200	43.0	25.0	20.0	5	32.00	102577
39	4.00	200	43.0	25.0	20.0	5	35.00	102578
42	4.50	220	47.0	28.0	22.0	5	37.50	102579
45	4.50	220	47.0	28.0	22.0	5	40.50	102580
48	5.00	240	52.0	32.0	24.0	5	43.00	102581
52	5.00	240	52.0	32.0	24.0	5	47.00	102582
56	5.50	260	58.0	36.0	29.0	6	50.50	102583
60	5.50	260	58.0	36.0	29.0	6	54.50	102584
64	6.00	290	64.0	40.0	32.0	6	58.00	102585
68	6.00	290	64.0	40.0	32.0	6	62.00	* 102586


**N470V-3**

**N470V-3**


$\varnothing d_1$ MF	P mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	a mm			ID
$\Delta 22$	1.50	125	28.0	18.0	14.5	4	20.50	* 102526
$\Delta 26$	1.50	140	30.0	18.0	14.5	4	24.50	* 102529
$\Delta 28$	1.50	140	30.0	20.0	16.0	4	26.50	* 102530
30	1.50	160	32.0	22.0	18.0	5	28.50	* 102531
32	1.50	160	32.0	22.0	18.0	5	30.50	* 102533
34	1.50	160	26.0	22.0	18.0	5	32.50	* 102537
35	1.50	175	28.0	25.0	20.0	5	33.50	* 102538
36	2.00	175	35.0	25.0	20.0	5	34.00	102540
36	3.00	200	43.0	25.0	20.0	5	33.00	102541
38	1.50	175	28.0	25.0	20.0	5	36.50	* 102542
40	1.50	190	31.0	28.0	22.0	5	38.50	* 102543
40	2.00	190	38.0	28.0	22.0	5	38.00	* 102544
42	2.00	190	38.0	28.0	22.0	5	40.00	102546
42	3.00	220	47.0	28.0	22.0	5	39.00	102547
48	1.50	205	34.0	32.0	24.0	5	46.50	* 102551
48	3.00	205	41.0	32.0	24.0	5	45.00	102553
52	3.00	205	41.0	32.0	24.0	5	49.00	102557
56	4.00	260	58.0	36.0	29.0	6	52.00	102559
64	4.00	290	64.0	40.0	32.0	6	60.00	102561
80	4.00	270	56.0	45.0	35.0	7	76.00	* 102564





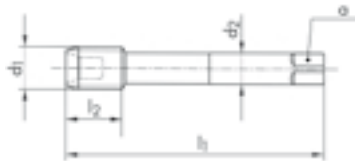
N470V-3





N470V-3



2B



$\varnothing'' d_1$ UN	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$a$ mm		
1 1/4	8	31.75	180	39.0	22.0	18.0	5	28.70
1 3/8	8	34.92	180	39.0	22.0	18.0	5	31.80
1 1/2	8	38.10	200	43.0	25.0	20.0	5	35.00
1 5/8	8	41.27	220	47.0	28.0	22.0	5	38.20
1 3/4	8	44.45	220	47.0	28.0	22.0	5	41.40
1 7/8	8	47.62	240	52.0	32.0	24.0	5	44.50
2	8	50.80	205	41.0	32.0	24.0	5	47.70
2 1/4	8	57.15	220	45.0	36.0	29.0	6	54.10
2 1/2	8	63.50	220	45.0	36.0	29.0	6	60.40

ID

102566

102568

102565

102569

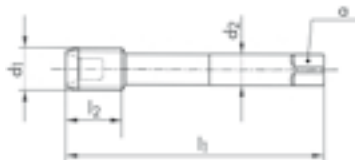
102567



102570

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102571

111879



$\varnothing'' d_1$ G	P TPI	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm	$a$ mm		
$\Delta$ 1/2	14	20.95	140	32.0	16.0	12.0	4	18.90
$\Delta$ 3/4	14	26.44	150	34.0	20.0	16.0	4	24.40
1	11	33.24	160	32.0	22.0	18.0	5	30.70
1 1/4	11	41.91	190	38.0	28.0	22.0	5	39.30
1 1/2	11	47.80	205	41.0	32.0	24.0	5	45.20
1 3/4	11	53.74	205	41.0	32.0	24.0	5	51.20
2	11	59.61	220	45.0	36.0	29.0	6	57.00

ID

\* 102521

102525

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102518

\* 102520

102524

 $\Delta$ 

# FORETS-TARAUDEURS

## Généralités

Le foret-taraudeur DC est un outil qui permet de percer et de tarauder une pièce en une seule opération sans changement d'outillage.

Son utilisation est idéale sur des machines CNC, des machines transfert, des tours revolver et des taraudeuses.

## Champs d'application

Les matières aptes à être travaillées avec le foret-taraudeur DC, sont celles se situant jusqu'à 750 N/mm<sup>2</sup>, dont les aciers, la fonte grise, la fonte grise ductile, le laiton et l'aluminium.

## Exigences

- L'avant-trou doit être percé entièrement avant que le taraud commence son travail.
- Pour les matières à copeaux courts, la profondeur du taraudage ne doit pas excéder 1.8 x D (2 x D pour N5952).
- Pour les matières à copeaux longs, la profondeur du taraudage ne doit pas excéder 1.2 x D.
- La lubrification est identique à celle du taraudage.

## Vitesses de coupe

Lorsque les machines le permettent, il est préférable de travailler aux vitesses de perçage et de taraudage appropriées (voir table de utilisation en page 7).

Sur les machines où les vitesses de perçage et de taraudage ne peuvent pas être variées, il est recommandé d'appliquer les valeurs indiquées dans le tableau ci-dessous.

## Utilisation

### Chanfreins:

Centrer et chanfreiner simultanément.

### Programmation avec avance et rotation, 100 % synchronisées (cas idéal):

- 1) Placer le foret-taraudeur en accéléré à sa place de travail
- 2) Perçage:
  - régler les tours
  - régler l'avance
  - éviter les copeaux longs
  - éliminer les copeaux
- 3) Positionner le foret-taraudeur pour amorcer le file
- 4) Taraudage:
  - régler la vitesse de taraudage
  - l'avance doit correspondre au 100 % du pas
  - régler la profondeur
  - le taraud doit être libre de copeaux au moment de commencer le travail
- 5) Revenir avec l'outil à la position de départ

### Programmation sans une synchronisation totale de l'avance et de la rotation:

Important: utiliser un mandrin avec ressort de compression bloqué et une extension axiale libre.

- 1) Placer le foret-taraudeur en accéléré à sa place de travail
- 2) Perçage:
  - régler les tours
  - régler l'avance
  - éviter les copeaux longs
  - éliminer les copeaux
- 3) Positionner le foret-taraudeur pour amorcer le file
- 4) Taraudage:
  - régler la vitesse de taraudage
  - l'avance doit correspondre à 90 - 95 % du pas
  - régler la profondeur du filetage
- 5) Revenir avec l'outil à la position de départ.

## Vitesses de coupe et tours/min (directives)

Groupes de matières	Vc (m/min)	Ø et nombre de tours/min										
		M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
Aciers jusqu'à 500 N/mm <sup>2</sup>	20	2120	1600	1270	1060	800	640	530	460	400	360	320
Aciers dès 500 N/mm <sup>2</sup>	15	1600	1200	950	800	600	480	400	340	300	270	240
Fonte grise ductile	20	2120	1600	1270	1060	800	640	530	460	400	360	320
Fonte grise	15	1600	1200	950	800	600	480	400	340	300	270	240
Laiton	25	2650	2000	1600	1330	950	800	660	570	500	450	400
Aluminium	25	2650	2000	1600	1330	950	800	660	570	500	450	400



# PUNTE MASCHIATRICI

## Generalità

La punta maschiatrice DC è un utensile che permette di forare e maschiare un pezzo in un'unica operazione senza cambio di utensile.

Il suo impiego è ideale con macchine CNC, transfert, torni revolver e maschiatrici.

## Campi d'impiego

I materiali che si prestano ad essere lavorati con la punta maschiatrice DC, sono quelli sino a 750 N/mm<sup>2</sup> e pertanto: acciai da costruzione, ghisa grigia malleabile, ghisa grigia, ottone ed alluminio.

## Esigenze

- Il preforo deve essere completamente eseguito prima che il maschio inizi a lavorare.
- Nei materiali a truciolo corto, la profondità del filetto non deve superare 1.8 x D (2 x D con l'utensile N5952).
- Nei materiali a truciolo lungo, la profondità del filetto non deve superare 1.2 x D.
- La lubrificazione è identica a quella per la maschiatura.

## Velocità di taglio

Quando le macchine lo consentono, è preferibile lavorare con velocità di foratura e maschiatura appropriata (vedere la tabella d'impiego a pag. 7).

Sulle macchine ove le velocità di foratura e maschiatura non possono essere variate, si raccomanda di applicare i valori indicati nella tabella sottoriportata.

## Impiego

### Smussi :

Centrare e smussare simultaneamente.

### Programmazione con avanzamento e rotazione, 100 % sincronizzati (caso ideale) :

- 1) Posizionare la punta maschiatrice, in accelerazione, nel punto di lavoro
- 2) Foratura :
  - regolare il numero di giri
  - regolare l'avanzamento
  - evitare i trucioli lunghi
  - eliminare i trucioli
- 3) Posizionare la punta maschiatrice per iniziare il filetto
- 4) Maschiatura :
  - regolare la velocità
  - avanzamento = 100 % del passo
  - regolare la profondità della filettatura
- 5) Ritornare con la punta maschiatrice alla posizione di partenza.







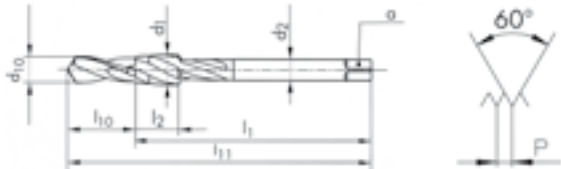
### Programmazione senza sincronizzazione totale dell'avanzamento e della rotazione :

Importante : utilizzare un maschiatore con molla di compressione bloccata ed estensione assiale libera.

- 1) Posizionare la punta maschiatrice, in accelerazione, nel punto di lavoro
- 2) Foratura :
  - regolare il numero di giri
  - regolare l'avanzamento
  - evitare i trucioli lunghi
  - eliminare i trucioli
- 3) Posizionare la punta maschiatrice per iniziare il filetto
- 4) Maschiatura :
  - regolare la velocità
  - avanzamento = 90 - 95 % del passo
  - regolare la profondità della filettatura
- 5) Ritornare con la punta maschiatrice alla posizione di partenza.

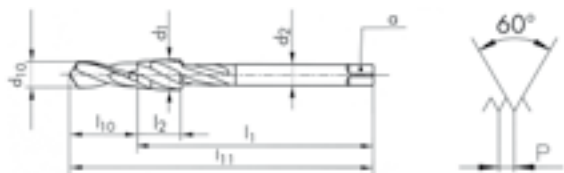
## Velocità di taglio e giri/min (valori indicativi)

Gruppi di materiali	Vc (m/min)	Ø e numero di giri/min										
		M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
Acciai < 500 N/mm <sup>2</sup>	20	2120	1600	1270	1060	800	640	530	460	400	360	320
Acciai > 500 N/mm <sup>2</sup>	15	1600	1200	950	800	600	480	400	340	300	270	240
Ghisa grigia malleabile	20	2120	1600	1270	1060	800	640	530	460	400	360	320
Ghisa grigia	15	1600	1200	950	800	600	480	400	340	300	270	240
Ottone	25	2650	2000	1600	1330	950	800	660	570	500	450	400
Alluminio	25	2650	2000	1600	1330	950	800	660	570	500	450	400

								N5951	N5952	N5951	
<b>N5951</b> 											
<b>N5952</b> 											
<b>N5951</b> 											
								<b>ISO 2 6H</b>	<b>ISO 2 6H</b>	<b>7H EN 60423</b>	
Ø d <sub>1</sub>	P	l <sub>11</sub>	l <sub>2</sub>	d <sub>2</sub>	a	d <sub>10</sub>	l <sub>10</sub>	ID			
M	mm	mm	mm	mm	mm	mm	mm				
3	0.50	62.0	12.5	3.5	2.7	2.55	9.0	104578			
4	0.70	66.0	16.0	4.5	3.4	3.36	10.0	104580			
5	0.80	75.5	18.0	6.0	4.9	4.26	12.5	104583			
6	1.00	81.0	20.0	6.0	4.9	5.05	14.0	104585			
8	1.25	93.0	12.0	6.0	4.9	6.80	20.0	104588			
10	1.50	99.0	14.0	7.0	5.5	8.55	22.0	104571			
12	1.75	106.0	16.0	9.0	7.0	10.30	25.0	104573			
16	2.00	123.0	20.0	12.0	9.0	14.10	32.0	104576			
20	2.50	132.0	22.0	16.0	12.0	17.60	36.0	104577			
Ø d <sub>1</sub>	P	l <sub>11</sub>	l <sub>2</sub>	d <sub>2</sub>	a	d <sub>10</sub>	l <sub>10</sub>	ID			
M	mm	mm	mm	mm	mm	mm	mm				
4	0.70	77.0	16.0	4.5	3.4	3.36	21.0	104608			
5	0.80	87.0	18.0	6.0	4.9	4.26	24.0	104609			
6	1.00	94.0	20.0	6.0	4.9	5.05	27.0	104610			
8	1.25	109.0	12.0	6.0	4.9	6.80	36.0	104611			
10	1.50	118.0	14.0	7.0	5.5	8.55	41.0	104603			
Ø d <sub>1</sub>	P	l <sub>11</sub>	l <sub>2</sub>	d <sub>2</sub>	a	d <sub>10</sub>	l <sub>10</sub>	ID			
MF	mm	mm	mm	mm	mm	mm	mm				
4	0.50	66.0	16.0	4.5	3.4	3.55	10.0	* 104579			
5	0.75	75.5	18.0	6.0	4.9	4.31	12.5	* 123379			
8	1.00	93.0	12.0	6.0	4.9	7.05	20.0	104587			
10	1.00	99.0	14.0	7.0	5.5	9.05	22.0	104570			
Ø d <sub>1</sub>	P	l <sub>11</sub>	l <sub>2</sub>	d <sub>2</sub>	a	d <sub>10</sub>	l <sub>10</sub>	ID			
MF	mm	mm	mm	mm	mm	mm	mm				
12	1.50	106.0	16.0	9.0	7.0	10.55	25.0	142825			
16	1.50	123.0	16.0	12.0	9.0	14.55	32.0	142826			
20	1.50	132.0	18.0	16.0	12.0	18.55	36.0	111844			
25	1.50	155.0	22.0	18.0	14.5	23.55	45.0	111845			
32	1.50	170.0	24.0	22.0	18.0	30.55	50.0	111846			

**N5951**

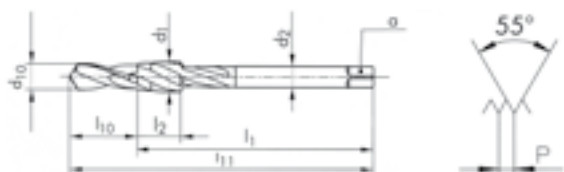
**N5951**

**2B**


$\varnothing'' d_1$ UNC	P TPI	$d_1$ mm	$l_{11}$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm	$d_{10}$ mm	$l_{10}$ mm
6	32	3.50	66.0	16.0	4.0	3.0	2.80	10.0
10	24	4.82	75.5	18.0	4.5	3.4	3.86	12.5
1/4	20	6.35	81.0	20.0	7.0	5.5	5.15	14.0
1/2	13	12.70	106.0	16.0	9.0	7.0	10.85	25.0

**ID**

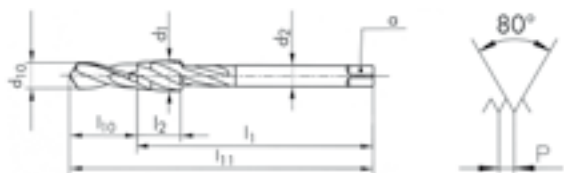
\* 104601  
\* 104598  
\* 104597  
\* 104596



$\varnothing'' d_1$ G	P TPI	$d_1$ mm	$l_{11}$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm	$d_{10}$ mm	$l_{10}$ mm
1/8	28	9.72	93.0	12.0	7.0	5.5	8.75	20.0
1/4	19	13.15	106.0	14.0	11.0	9.0	11.75	25.0
3/8	19	16.66	123.0	16.0	12.0	9.0	15.25	32.0
1/2	14	20.95	132.0	18.0	16.0	12.0	19.00	36.0
3/4	14	26.44	155.0	22.0	18.0	14.5	24.45	45.0

**ID**

104567  
104566  
104569  
104565  
\* 104568



$\varnothing d_1$ PG	P TPI	$d_1$ mm	$l_{11}$ mm	$l_2$ mm	$d_2$ mm	$\alpha$ mm	$d_{10}$ mm	$l_{10}$ mm
7	20	12.50	106.0	14.0	9.0	7.0	11.40	25.0
9	18	15.20	114.0	15.0	12.0	9.0	13.95	28.0
13.5	18	20.40	132.0	18.0	16.0	12.0	19.15	36.0
16	18	22.50	142.0	20.0	18.0	14.5	21.25	40.0
29	16	37.00	203.0	28.0	28.0	22.0	35.65	63.0

**ID**

\* 104594  
\* 104595  
\* 104590  
\* 104591  
\* 104593



# CODIFICATION - CODIFICA

## Fraises à tourbillonner en carbure Frese per microfilettature in metallo duro



Exemple - Esempio

Fraises à tourbillonner	Fresa per microfilettature	GW				
Une dent	Monodente		10			
Multi dents à un profil	Multidenti ad un profilo		20			
Multi dents à double profil	Multidenti a doppio profilo		30			
Multi dents avec profil complet	Multidenti con profilo completo		40			
Longueur fileté 2.5 x D <sub>i</sub>	Lunghezza di filettatura 2.5 x D <sub>i</sub>			16		
Longueur fileté 4 x D <sub>i</sub>	Lunghezza di filettatura 4 x D <sub>i</sub>			19		
Protection contre l'usure	Protezione antiusura				VS	
Exécution spéciale	Esecuzione speciale					SP

## Fraises à fileter en carbure Frese a filettare in metallo duro



Exemple - Esempio

Exécution standard	Esecuzione standard	GF					
Pour aciers trempés (55 - 63 HRC)	Per acciai temprati (55 - 63 HRC)	GFH					
Avec coupe chanfreinante à 45°	Con taglio per smusso a 45°	GFS					
Fraise à fileter polyvalente	Fresa polivalente	GFM					
Fraise à percer/fileter	Fresa a forare/filettare	BGF					
Goujures hélicoïdales 27° (GF), 10° (GFH)	Scanalature elicoidali 27° (GF), 10° (GFH)		61				
Goujures hélicoïdales 27° (GFS)	Scanalature elicoidali 27° (GFS)		66				
Goujures hélicoïdales 15° (GFM)	Scanalature elicoidali 15° (GFM)		62				
Fraise à percer/fileter 2 lèvres	Fresa a forare/filettare 2 taglienti		67				
Fraise à percer/fileter 3 lèvres	Fresa a forare/filettare 3 taglienti		68				
Lubrification extérieure	Lubrificazione esterna			1			
Lubrification intérieure	Lubrificazione interna			6			
Longueur fileté 1.5 x D	Lunghezza di filettatura 1.5 x D				0		
Longueur fileté 2 x D	Lunghezza di filettatura 2 x D				5		
Longueur fileté 2.5 x D	Lunghezza di filettatura 2.5 x D				6		
Protection contre l'usure	Protezione antiusura					VS	
Exécution spéciale	Esecuzione speciale						SP

# FRAISES À TOURBILLONNER, À FILETER ET À PERCER/FILETER EN CARBURE MONOBLOC MICROFRESE, FRESE A FILETTARE E FORARE/FILETTARE IN METALLO DURO INTEGRALE

## Pictogrammes - Simboli



Carbure monobloc  
Metallo duro



Goujures hélicoïdales avec hélice à 10° à droite  
Scanalature elicoidali con elica a 10° a destra



Goujures hélicoïdales avec hélice à 15° à droite  
Scanalature elicoidali con elica a 15° a destra



Goujures hélicoïdales avec hélice à 27° à droite  
Scanalature elicoidali con elica a 27° a destra



Goujures hélicoïdales avec hélice à 27° à droite  
Scanalature elicoidali con elica a 27° a destra



Avec coupe chanfreinante à 45°  
Con taglio per smusso a 45°



Nombre de lèvres (Z)  
Numero dei taglienti (Z)



Canal de lubrification  
Canale di lubrificazione



Canal de lubrification (BGF, 2 lèvres)  
Canale di lubrificazione (BGF, 2 taglienti)



Canal de lubrification (BGF, 3 lèvres)  
Canale di lubrificazione (BGF, 3 taglienti)



Protection contre l'usure (DC)  
Protezione antiusura (DC)



Filetage EG  
Filettatura EG



Longueur filetée 2.5 x D<sub>1</sub>  
Lunghezza di filettatura 2.5 x D<sub>1</sub>



Longueur filetée 4 x D<sub>1</sub>  
Lunghezza di filettatura 4 x D<sub>1</sub>



Diamètre d'avant-trou  
Prefori



Longueur filetée 1.5 x D<sub>1</sub>  
Lunghezza di filettatura 1.5 x D<sub>1</sub>



Longueur filetée 2 x D<sub>1</sub>  
Lunghezza di filettatura 2 x D<sub>1</sub>



Longueur filetée 2.5 x D<sub>1</sub>  
Lunghezza di filettatura 2.5 x D<sub>1</sub>



Filetage intérieur  
Filettatura interna



Filetage extérieur  
Filettatura esterna



Pour trou borgne (BGF)  
Per foro cieco (BGF)



Pour trou traversant (BGF)  
Per foro passante (BGF)



BGF, 2 lèvres  
BGF, 2 taglienti



BGF, 3 lèvres  
BGF, 3 taglienti



Pour matières ≤ 63 HRC (GFH)  
Per materiali ≤ 63 HRC (GFH)



Filetage conique 1:16 (NPT - NPTF)  
Filettatura conica 1:16 (NPT - NPTF)



Coaxialité  
Coassialità



Classe de tolérance h5  
Classe di tolleranza h5



Angle d'hélice  
Angolo d'elica



Normes de l'industrie horlogère suisse  
Norme industriali dell'orologeria svizzera

## Notice GFM



Pour éviter de recouper le profil, le diamètre de la fraise ne doit pas excéder  $\frac{2}{3}$  du diamètre à réaliser pour les pas standards ( $\frac{3}{4}$  pour les pas fins).

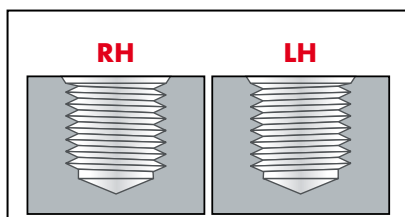


Per evitare di ritagliare il profilo, il diametro della fresa non deve superare  $\frac{2}{3}$  del diametro da realizzare per i passi standard e  $\frac{3}{4}$  per i passi fini.

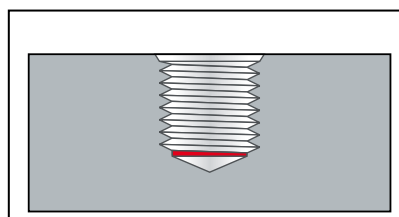
## Nota GFM

# AVANTAGES - VANTAGGI

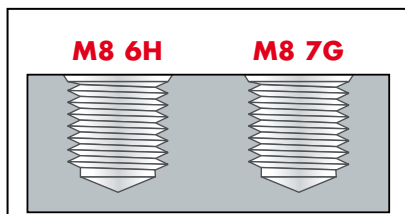
## GW-GF-GFH-GFS-GFM



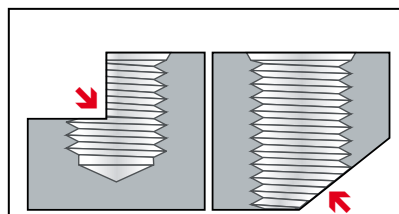
Une seule fraise pour filetages à droite et à gauche  
Una sola fresa per filetti destri e sinistri



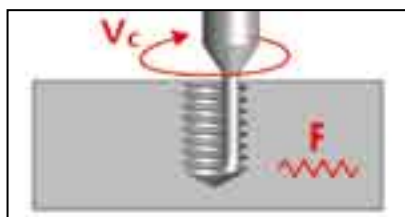
Profondeur du filetage utile proche du fond du trou  
Profondità del filetto utile vicino al fondo del preforo



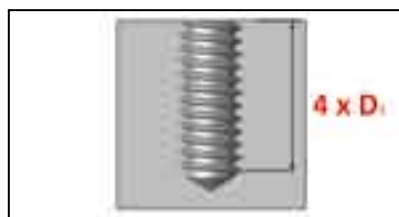
Tolérances requises réglables à choix  
Tolleranze regolabili a piacere



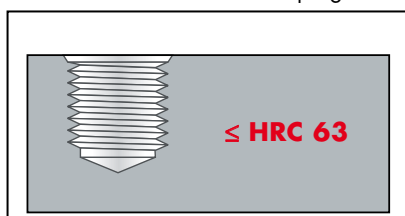
Possibilité de réaliser des filetages incomplets ou interrompus  
Possibilità di realizzare filettature incomplete o interrotte



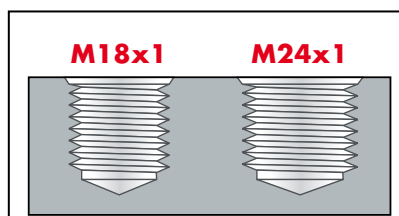
Vitesse de coupe et avance réglable individuellement  
en fonction de la matière à usiner.  
Velocità di taglio ed avanzamento regolabili singolarmente  
in funzione del materiale impiegato.



Idéal pour trous borgnes profonds.  
Ideale per fori ciechi profondi.

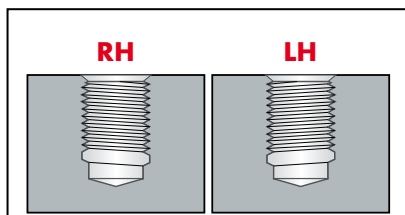


Possibilité de réaliser des filetages dans des aciers trempés  
Possibilità di realizzare filettature negli acciai temprati

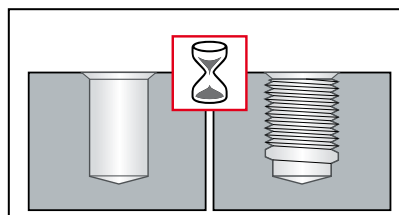


Une seule fraise pour une grande plage de filetages  
Una sola fresa per un'ampia gamma di diametri

## BGF



Une seule fraise pour filetages à droite et à gauche  
Una sola fresa per filetti destri e sinistri

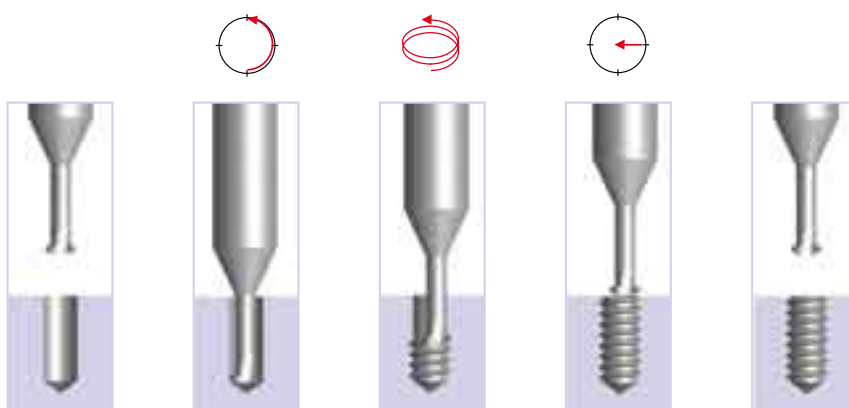


Economie de temps et gain de place dans le magasin d'outils  
Ridotti tempi di lavorazione e diminuzione dello spazio nel magazzino

# CYCLE DE PROGRAMMATION - CICLO DI PROGRAMMAZIONE

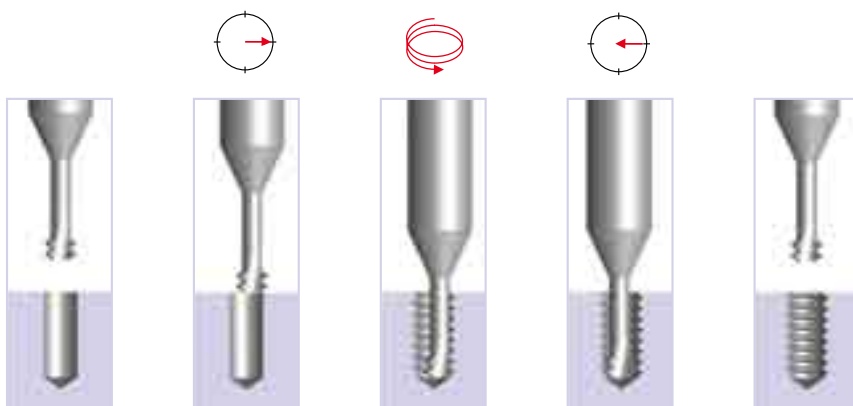
## *Filetage à droite en avalant – Filettatura destra a favore*

GW1016  
GW1016VS  
GW2016  
GW2016VS

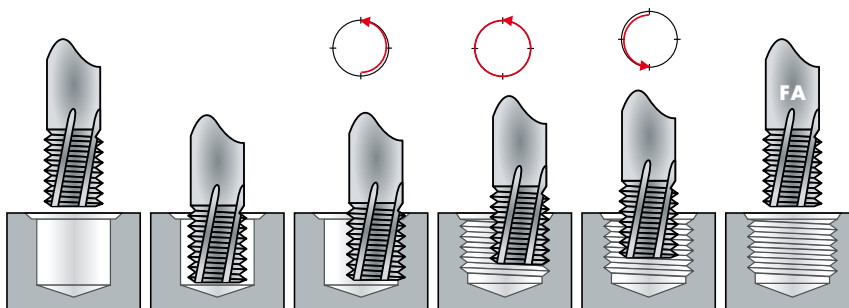


## *Filetage à droite en opposition – Filettatura destra in opposizione*

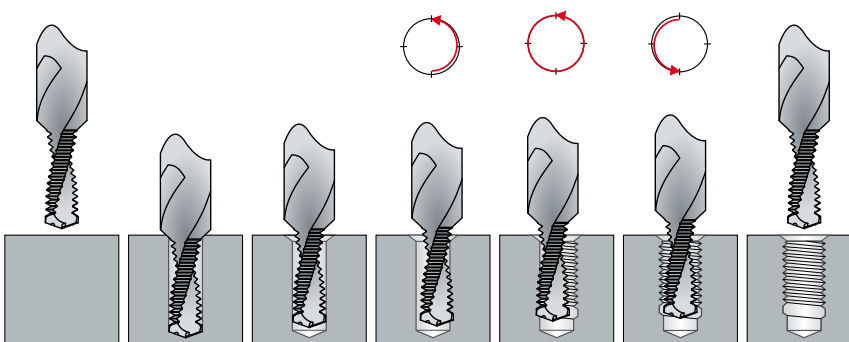
GW3016  
GW3016VS  
GW3019  
GW3019VS  
GW4016  
GW4016VS  
GW4019  
GW4019VS



## *Cycle de fonctionnement type GF - Ciclo di funzionamento tipo GF*



## *Cycle de fonctionnement type BGF - Ciclo di funzionamento tipo BGF*



# TABELLES DE VITESSES DE COUPE ET AVANCES

## TABELLE DELLE VELOCITÀ DI TAGLIO E DEGLI AVANZAMENTI

### Exigences particulières – Esigenze particolari



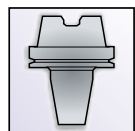
Commande CNC à 3 axes  
synchronisés

Comando CNC a 3 assi  
sincronizzati



Usinage HSC

Lavorazione HSC



Concentricité parfaite  
du dispositif de serrage

Concentricità perfetta  
del dispositivo di serraggio



### Tabelle d'utilisation pour fraise à tourbillonner

### Tabella per microfresa GW



Groupes de matières Gruppi di materiali	Désignation des matières	Designazione dei materiali	Dureté Durezza (HB)	Résistance Resistenza Rm (N/mm²)
<b>10</b> Aciers Acciai	<b>11</b> Aciers de décolletage	Acciai da tornitura	< 200	< 700
	<b>12</b> Aciers de construction / cémentation	Acciai da costruzione / da cementazione	< 200	< 700
	<b>13</b> Aciers au carbone	Acciai al carbonio	< 300	< 1000
	<b>14</b> Aciers alliés < 850 N/mm²	Acciai legati < 850 N/mm²	< 250	< 850
	<b>15</b> Aciers alliés / traités > 850 - < 1150 N/mm²	Acciai legati / trattati > 850 - < 1150 N/mm²	> 250	> 850
	<b>16</b> Aciers haute résistance < 55 HRC	Acciai ad alta resistenza < 55 HRC	> 250	> 850
<b>20</b> Aciers inox oxydables Acciai inox	<b>21</b> Aciers inoxydables / soufrés	Acciai inox allo zolfo	< 250	< 850
	<b>22</b> Austénitiques	Acciai inox austenitici	< 250	< 850
	<b>23</b> Ferritiques et martensitiques < 850 N/mm²	Ferritici e martensitici < 850 N/mm²	< 250	< 850
	<b>24</b> Ferritiques et martens. > 850 - < 1150 N/mm²	Ferritici e martensitici > 850 - < 1150 N/mm²	> 250	> 850
<b>30</b> Fonte Ghisa	<b>31</b> Fonte grise	Ghisa grigia	< 250	< 850
	<b>32</b> Fonte à graphite sphéroïdale et malleable	Ghisa grafitica sferoidale e malleabile	< 250	< 850
<b>40</b> Titane Titanio	<b>41</b> Titane pur	Titanio puro	< 250	< 850
	<b>42</b> Alliage de titane	Leghe al titanio	> 250	> 850
<b>50</b> Nickel Nickel	<b>51</b> Alliage de Nickel 1 < 850 N/mm²	Leghe al Nickel 1 < 850 N/mm²	< 250	< 850
	<b>52</b> Alliage de Nickel 2 > 850 - < 1150 N/mm²	Leghe al Nickel 2 > 850 - < 1150 N/mm²	> 250	> 850
	<b>53</b> Alliage de Nickel 3 > 1150 - ≤ 1600 N/mm²	Leghe al Nickel 3 > 1150 - ≤ 1600 N/mm²	> 340	> 1150
<b>60</b> Cuivre Rame	<b>61</b> Cuivre pur (électrolytique)	Rame puro (elettrolitico)	< 120	< 400
	<b>62</b> Laiton, bronze (copesaux courts)	Ottone, bronzo (trucioli corti)	< 200	< 700
	<b>63</b> Laiton (copesaux longs)	Ottone (trucioli lunghi)	< 200	< 700
<b>70</b> Aluminium Magnésium Alluminio Magnesio	<b>71</b> Al non allié	Alluminio non legato	< 100	< 350
	<b>72</b> Al allié Si < 1.5 %	Leghe di alluminio Si < 1.5 %	< 150	< 500
	<b>73</b> Al allié Si > 1.5 % - < 10 %	Leghe di alluminio Si > 1.5 % - < 10 %	< 120	< 400
	<b>74</b> Al allié Si > 10 %, Alliages Magnésium	Leghe di all. Si > 10 %, Leghe al magnesio	< 120	< 400
<b>80</b> Matières plastiques Materie plastica	<b>81</b> Matières thermoplastiques	Materie termoplastiche	-	-
	<b>82</b> Matières duroplastiques	Materie termoindurenti	-	-
	<b>83</b> Matières plastiques renforcées par fibres	Materie plastiche rinforzate con fibre	-	-
<b>90</b> M. Préc. M. Prez.	<b>91</b> Or jaune	Oro giallo	-	-
	<b>92</b> Or rose	Oro rosso	-	-
	<b>93</b> Or gris	Oro bianco	-	-
	<b>94</b> Argent	Argento	-	-

### Utilisation – Impiego

 Optimale avec huile de coupe  
 Fonctionnelle avec huile de coupe

 Ottimale con olio da taglio  
 Funzionale con olio da taglio

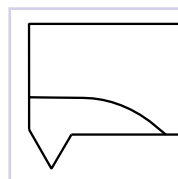
 Optimale avec émulsion  
 Fonctionnelle avec émulsion

 Ottimale con emulsione  
 Funzionale con emulsione

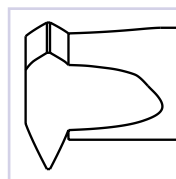


# GW

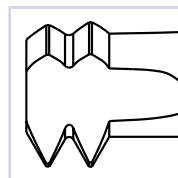
GW1016



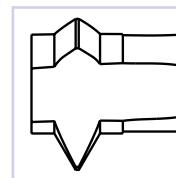
GW2016



GW3016/19



GW4016/19



GW								Vc (m/min)		Avance fz (mm/dent)		Avanz. fz (mm/dente)		
GW1016	GW1016S	GW2016	GW2016S	GW3016	GW3019	GW3016S	GW3019S	Standard	Revêtu Rivestito	0.3 - 1.0	1.01 - 3.0	3.01 - 6.0	6.01 - 12.0	
								60 - 80	80 - 100	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	11
								60 - 80	80 - 100	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	12
								50 - 70	70 - 90	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.05 - 0.15	13
								50 - 70	70 - 90	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.05 - 0.15	14
								15 - 35	30 - 50	0.004 - 0.01	0.01 - 0.05	0.02 - 0.08	0.04 - 0.15	15
									15 - 40	0.003 - 0.01	0.006 - 0.03	0.008 - 0.05	0.01 - 0.08	16
									40 - 60	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.05 - 0.15	21
									30 - 50	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	22
									30 - 50	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	23
									30 - 50	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	24
								60 - 90	90 - 120	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	31
								50 - 70	70 - 90	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.05 - 0.15	32
								15 - 35	20 - 40	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	41
								10 - 30	15 - 35	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	42
									20 - 40	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	51
									20 - 40	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	52
									20 - 30	0.003 - 0.01	0.006 - 0.03	0.008 - 0.05	0.01 - 0.08	53
								150 - 200	200 - 250	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.05 - 0.15	61
								100 - 150	150 - 200	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	62
								100 - 150	150 - 200	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.05 - 0.15	63
								150 - 250		0.004 - 0.01	0.01 - 0.05	0.05 - 0.10	0.10 - 0.20	71
								150 - 250		0.004 - 0.01	0.01 - 0.05	0.05 - 0.10	0.10 - 0.20	72
								150 - 250	200 - 300	0.004 - 0.01	0.01 - 0.05	0.05 - 0.10	0.10 - 0.20	73
								150 - 250	200 - 300	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	74
								150 - 250	200 - 300	0.004 - 0.01	0.01 - 0.05	0.05 - 0.10	0.10 - 0.20	81
								80 - 150	100 - 200	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	82
									80 - 100	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	83
								100 - 150	150 - 200	0.004 - 0.01	0.01 - 0.05	0.04 - 0.10	0.08 - 0.15	91
								60 - 90	90 - 120	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.04 - 0.15	92
									30 - 50	0.004 - 0.01	0.01 - 0.03	0.02 - 0.05	0.03 - 0.08	93
								60 - 90	90 - 120	0.004 - 0.01	0.01 - 0.05	0.02 - 0.10	0.04 - 0.15	94

Les valeurs ci-dessus sont indicatives. I valori sopracitati sono indicativi.

# TABELLES DE VITESSES DE COUPE ET AVANCES

## TABELLE DELLE VELOCITÀ DI TAGLIO E DEGLI AVANZAMENTI

**Table d'utilisation  $\text{DC}$  pour fraises à fileter et fraises à percer/fileter**  
**Tabella  $\text{DC}$  per frese a filettare e a forare/filettare**

Groupes de matières Gruppi di materiali		Désignation des matières <i>Exemples de matières, voir pages 5-6.</i>	Designazione dei materiali <i>Esempi di materiali, vedere pag. 5-6.</i>	Dureté Durezza (HB)	Résistance Resistenza Rm (N/mm <sup>2</sup> )
10 Aciers Acciai	11	Aciers de décolletage	Acciai da tornitura	< 200	< 700
	12	Aciers de construction / cémentation	Acciai da costruzione / da cementazione	< 200	< 700
	13	Aciers au carbone	Acciai al carbonio	< 300	< 1000
	14	Aciers alliés <850 N/mm <sup>2</sup>	Acciai legati <850 N/mm <sup>2</sup>	< 250	< 850
	15	Aciers alliés / traités >850 - <1150 N/mm <sup>2</sup>	Acciai legati / trattati >850 - <1150 N/mm <sup>2</sup>	> 250	> 850
	16	Aciers haute résistance	Acciai ad alta resistenza	> 250	> 850
	*	Aciers haute résistance 55 - 63 HRC	Acciai ad alta resistenza 55 - 63 HRC	> 560	> 2000
20 Aciers inoxydables Acciai inox	21	Aciers inoxydables / soufrés	Acciai inox allo zolfo	< 250	< 850
	22	Austénitiques	Acciai inox austenitici	< 250	< 850
	23	Ferritiques et martensitiques <850 N/mm <sup>2</sup>	Ferritici e martensitici <850 N/mm <sup>2</sup>	< 250	< 850
	24	Ferritiques et martens. >850 - <1150 N/mm <sup>2</sup>	Ferritici e martensitici >850 - <1150 N/mm <sup>2</sup>	> 250	> 850
30 Fonte Ghisa	31	Fonte grise	Ghisa grigia	< 250	< 850
	32	Fonte à graphite sphéroïdale et malleable	Ghisa grafitica sferoidale e malleabile	< 250	< 850
40 Titane Titanio	41	Titane pur	Titanio puro	< 250	< 850
	42	Alliage au titane	Leghe al titanio	> 250	> 850
50 Nickel Nickel	51	Alliage au Nickel 1 <850 N/mm <sup>2</sup>	Leghe al Nickel 1 <850 N/mm <sup>2</sup>	< 250	< 850
	52	Alliage au Nickel 2 >850 - <1150 N/mm <sup>2</sup>	Leghe al Nickel 2 >850 - <1150 N/mm <sup>2</sup>	> 250	> 850
	53	Alliage au Nickel 3 >1150 - ≤1600 N/mm <sup>2</sup>	Leghe al Nickel 3 >1150 - ≤1600 N/mm <sup>2</sup>	> 340	> 1150
60 Cuivre Rame	61	Cuivre pur (électrolytique)	Rame puro (elettrolitico)	< 120	< 400
	62	Laiton, bronze (copeaux courts)	Ottone, bronzo (trucioli corti)	< 200	< 700
	63	Laiton (copeaux longs)	Ottone (trucioli lunghi)	< 200	< 700
70 Aluminium Magnésium Alluminio Magnesio	71	Al non allié	Alluminio non legato	< 100	< 350
	72	Al allié Si < 1.5 %	Leghe di alluminio Si < 1.5 %	< 150	< 500
	73	Al allié Si > 1.5 % - < 10 %	Leghe di alluminio Si > 1.5 % - < 10 %	< 120	< 400
	74	Al allié Si > 10 %, Alliages Magnésium	Leghe di all. Si > 10 %, leghe al magnesio	< 120	< 400
80 Matières plastiques Materie plastiche	81	Matériaux thermoplastiques	Materie termoplastiche	-	-
	82	Matériaux duroplastiques	Materie termoindurenti	-	-
	83	Matériaux plastiques renforcées par fibres	Materie plastiche rinforzate con fibre	-	-

\* Fraise à fileter type GFH

Frese a filettare tipo GFH

### Formule de calcul "avance de fraisage"

Avance contournage  $V_{fk} = f_z \times Z \times n$

Avance centre de l'outil  $V_{fm} = \frac{V_{fk} \times (\varnothing \text{ nominal du filetage} - \varnothing \text{ de la fraise})}{\varnothing \text{ nominal du filetage}}$

Pour les CNC ne calculant pas automatiquement l'avance du centre de l'outil, la valeur "avance centre de l'outil  $V_{fm}$ " doit être prise en considération.

### Formula di calcolo per l'avanzamento di fresatura

Avanzamento in contornatura  $V_{fk} = f_z \times Z \times n$





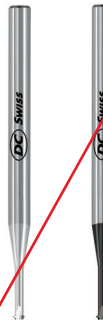







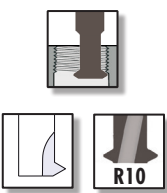
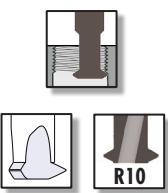
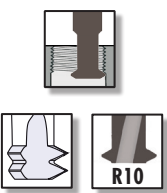
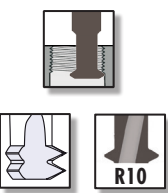
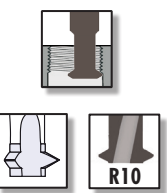
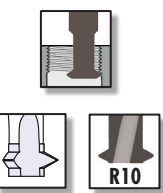
Avanzamento dal centro dell'utensile  $V_{fm} = \frac{V_{fk} \times (\varnothing \text{ nominale della filettatura} - \varnothing \text{ della fresa})}{\varnothing \text{ nominale della filettatura}}$

Per i CNC, che non calcolano automaticamente l'avanzamento dal centro dell'utensile, deve essere preso in considerazione il valore "avanzamento dal centro dell'utensile  $V_{fm}$ ".
























# Répertoire - Fraises à tourbillonner en carbure monobloc type GW















## Rubrica - Frese per microfilettature in metallo duro integrale tipo GW

		GW					
Type Tipo		GW1016 GW1016VS	GW2016 GW2016VS	GW3016 GW3016VS	GW3019 GW3019VS	GW4016 <sup>*</sup> GW4016VS <sup>*</sup>	GW4019 <sup>*</sup> GW4019VS <sup>*</sup>
Revêtement Rivestimento		VS	VS	VS	VS	VS	VS
							
Longueur filetée Lungh. filettatura							
Caractéristiques Caratteristiche							
M	ISO DIN 13 ISO DIN 14		207	208/209	208/209	212	212
MF	ISO DIN 13			208/209	208/209		
UNC	ANSI B1.1			210	210	213	213
UNF	ANSI B1.1			211	211	213	213
S	NIHS	206	207				

**Répertoire - Fraises à fileter en carbure monobloc type GF**  
**Rubrica - Frese a filettare in metallo duro integrale tipo GF**



























		GF					
Type Tipo		GF6110 GF6110VS	GF6160 GF6160VS	GF6115 GF6115VS	GF6165 GF6165VS	GF6116 GF6116VS	GF6166 GF6166VS
Revêtement Rivestimento							
							
Longueur filetée Lungh. filettatura							
Caractéristiques Caratteristiche							
<b>M</b>	ISO DIN 13	214		215	215	216	216
<b>MF</b>	ISO DIN 13	217			218		218
<b>UNC</b>	ANSI B1.1	219			220		220
<b>UNF</b>	ANSI B1.1	221			222		222
<b>UN</b>	ANSI B1.1						
<b>G (BSP)</b>	DIN ISO 228				223		223
<b>PG</b>	DIN 40430						
<b>NPT</b>	ANSI B1.20.1		224				
<b>NPTF</b>	ANSI B1.20.3		224				
<b>EG M</b>	DIN 8140						

**Répertoire - Fraises à fileter en carbure monobloc type GFH et GFS**  
**Rubrica - Frese a filettare in metallo duro integrale tipo GFH e GFS**

		GFH	GFS					
Type Tipo		GFH6110VS	GFS6610 GFS6610VS	GFS6660 GFS6660VS	GFS6615 GFS6615VS	GFS6665 GFS6665VS	GFS6616 GFS6616VS	
Revêtement Rivestimento		<div>VS</div>	<div>VS</div>	<div>VS</div>	<div>VS</div>	<div>VS</div>	<div>VS</div>	
								
Longueur filetée Lungh. filettatura		<div> 1.5 x D<sub>t</sub></div>	<div> 1.5 x D<sub>t</sub></div>	<div> 1.5 x D<sub>t</sub></div>	<div> 2 x D<sub>t</sub></div>	<div> 2 x D<sub>t</sub></div>	<div> 2.5 x D<sub>t</sub></div>	
Caractéristiques Caratteristiche		<div><div>HRC ≤ 63</div></div>		<div></div>		<div></div>		
M	ISO DIN 13	214	225	225	226	226	227	
MF	ISO DIN 13		228	228	229	229		
UNC	ANSI B1.1		230	230	231	231		
UNF	ANSI B1.1		232	232	233	233		
UN/EF/S	ANSI B1.1							
G (BSP)	DIN ISO 228			234		234		
PG	DIN 40430							
NPT	ANSI B1.20.1			235				
NPTF	ANSI B1.20.3			235				
EG M	DIN 8140							

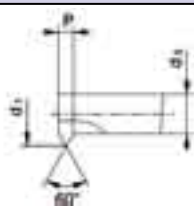
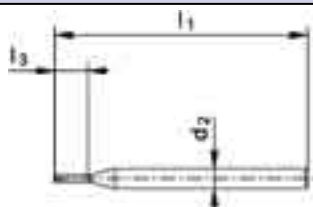
**Répertoire - Fraises à fileter et à percer/fileter en carbure monobloc type GFM et BGF**  
**Rubrica - Frese a filettare e forare/filettare in metallo duro integrale tipo GFM e BGF**

GW-GF-GFH-  
GFS-GFM-BGF

		GFM		BGF									
GFS6666	GFS6666VS	GFM6260	GFM6260VS	BGF6760	BGF6760VS	BGF6765	BGF6765VS	BGF6766	BGF6766VS	BGF6865	BGF6865VS	BGF6866	BGF6866VS
VS		VS		VS		VS		VS		VS		VS	
													
													
		 		 		 		 		 		 	
227	236	240	241	241	242	242							
	236	243	243										
	237												
	237												
	237												
	238												
	239												
	239												

# GW

**GW1016**

**GW1016VS**

**GW1016**
**GW1016VS**


∅ D <sub>1</sub> S	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
0.3	0.08	0.21	39	0.9	3	0.10	1	0.23 *
0.4	0.10	0.29	39	1.2	3	0.15	1	0.32 *
0.5	0.125	0.36	39	1.5	3	0.19	1	0.40 *
0.6	0.15	0.43	39	1.7	3	0.23	1	0.48 *
0.7	0.175	0.50	39	2.0	3	0.27	1	0.56 *
0.8	0.20	0.57	39	2.3	3	0.31	1	0.64 *
0.9	0.225	0.64	39	2.6	3	0.34	1	0.72 *
1.0	0.25	0.71	39	2.9	3	0.38	1	0.80 *
1.2	0.25	0.91	39	3.4	3	0.58	1	1.00 *
1.4	0.30	1.06	39	3.9	3	0.66	1	1.15 *

**ID**
**ID**

166930

166940

166931

166941

166932

166942

166933

166943

166934

166944

166935

166945

166936

166946

166937

166947

166938

166948

166939

166949

**\*Tol.**

+0.02 mm  
0

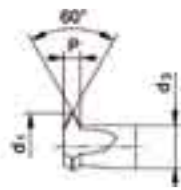
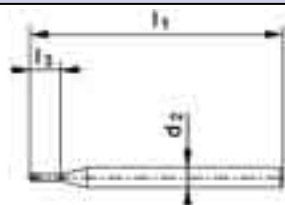


# GW

GW2016



GW2016VS



GW2016

GW2016VS



Ø D <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>3</sub>	d <sub>2</sub> h5	d <sub>3</sub>		
S	mm	mm	mm	mm	mm	mm		→ ←
0.8	0.20	0.57	39	2.3	3	0.29	3	0.64 *
0.9	0.225	0.64	39	2.6	3	0.33	3	0.72 *
1.0	0.25	0.71	39	2.9	3	0.36	3	0.80 *
1.2	0.25	0.91	39	3.4	3	0.56	3	1.00 *
1.4	0.30	1.06	39	3.9	3	0.64	3	1.15 *

ID

ID

166969	166988
166970	166989
166971	166990
166972	166991
166973	166992

Ø D <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>3</sub>	d <sub>2</sub> h5	d <sub>3</sub>		
M	mm	mm	mm	mm	mm	mm		→ ←
0.8	0.20	0.57	39	2.3	3	0.29	3	0.62
0.9	0.225	0.64	39	2.6	3	0.33	3	0.70
1.0	0.25	0.71	39	2.9	3	0.36	3	0.75
1.2	0.25	0.91	39	3.4	3	0.56	3	0.95
1.4	0.30	1.06	39	3.9	3	0.64	3	1.10
1.6	0.35	1.20	39	4.5	3	0.71	3	1.25
1.8	0.35	1.40	39	5.0	3	0.91	3	1.45
2.0	0.40	1.54	39	5.6	3	0.98	3	1.60
2.5	0.45	1.98	39	6.9	3	1.35	3	2.05
3.0	0.50	2.43	51	8.4	5	1.73	4	2.50
3.5	0.60	2.81	51	9.9	5	1.97	4	2.90
4.0	0.70	3.20	51	11.3	5	2.22	4	3.30
5.0	0.80	4.08	51	14.0	5	2.96	4	4.20
6.0	1.00	4.90	51	16.8	5	3.50	4	5.00

ID

ID

166974	166993
166975	166994
166976	166995
166977	166996
166978	166997
166979	166998
166980	166999
166981	167000
166982	167001
166983	167002
166984	167003
166985	167004
166986	167005
166987	167006

\*Tol. +0.02 mm  
0

# GW

GW3016



GW3016VS



VS

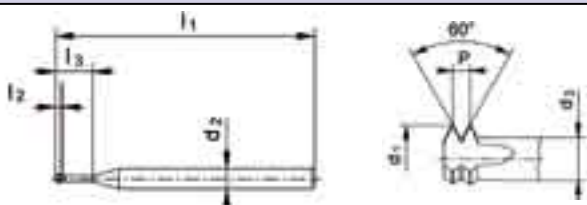
GW3019



GW3019VS



VS



GW3016

GW3016VS

GW3019

GW3019VS



Ø D <sub>1</sub> M, MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
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0.8	0.20	0.57	39	2.3	3	0.29	3	0.62
0.9	0.225	0.64	39	2.6	3	0.33	3	0.70
1.0	0.25	0.71	39	2.9	3	0.36	3	0.75
1.2	0.25	0.91	39	3.4	3	0.56	3	0.95
1.4	0.30	1.06	39	3.9	3	0.64	3	1.10
1.6	0.35	1.20	39	4.5	3	0.71	3	1.25
1.8	0.35	1.40	39	5.0	3	0.91	3	1.45
2.0	0.20	1.77	39	5.3	3	1.49	3	1.80
2.0	0.40	1.54	39	5.6	3	0.98	3	1.60
2.5	0.20	2.27	39	6.6	3	1.99	3	2.30
2.5	0.25	2.21	39	6.6	3	1.86	3	2.25
2.5	0.45	1.98	39	6.9	3	1.35	3	2.05

ID

ID

167021	167035
167022	167036
167023	167037
167024	167038
167025	167039
167026	167040
167027	167041
175225	171442
167028	167042
175226	175241
175227	167299
167029	167043

Ø D <sub>1</sub> M, MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
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0.8	0.20	0.57	39	3.5	3	0.29	3	0.62
0.9	0.225	0.64	39	3.9	3	0.33	3	0.70
1.0	0.25	0.71	39	4.4	3	0.36	3	0.75
1.2	0.25	0.91	39	5.2	3	0.56	3	0.95
1.4	0.30	1.06	39	6.0	3	0.64	3	1.10
1.6	0.35	1.20	39	6.9	3	0.71	3	1.25
1.8	0.35	1.40	39	7.7	3	0.91	3	1.45
2.0	0.20	1.77	39	8.3	3	1.49	3	1.80
2.0	0.40	1.54	39	8.6	3	0.98	3	1.60
2.5	0.20	2.27	39	10.3	3	1.99	3	2.30
2.5	0.25	2.21	39	10.4	3	1.86	3	2.25
2.5	0.45	1.98	39	10.6	3	1.35	3	2.05

ID

ID

167063	167077
167064	167078
167065	167079
167066	167080
167067	167081
167068	167082
167069	167083
175254	175270
167070	167084
175255	175271
175256	175272
167071	167085

## GW

GW3016



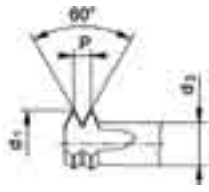
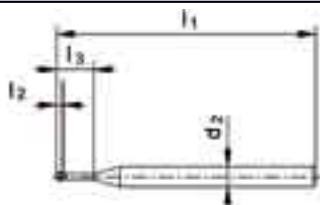
GW3016VS



GW3019



GW3019VS



GW3016

GW3016VS

GW3019

GW3019VS



Ø D <sub>1</sub> M, MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
3.0	0.35	2.60	51	8.2	5	2.11	4	2.65
3.0	0.50	2.43	51	8.4	5	1.73	4	2.50
3.5	0.60	2.81	51	9.9	5	1.97	4	2.90
4.0	0.70	3.20	51	11.3	5	2.22	4	3.30
5.0	0.80	4.08	51	14.0	5	2.96	4	4.20
6.0	1.00	4.85	51	16.8	5	3.45	4	5.00
8.0	1.25	5.95	63	23.0	6*	4.20	5	6.80
10.0	1.50	7.95	67	28.0	8*	5.85	5	8.50
12.0	1.75	9.95	76	34.0	10*	7.50	5	10.20

ID

ID

175228

175242

167030

167044

167031

167045

167032

167046

167033

167047

167034

167048

175229

175243

175230

175244

175231

175245

Ø D <sub>1</sub> M, MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
3.0	0.35	2.60	51	12.7	5	2.11	4	2.65
3.0	0.50	2.43	51	12.9	5	1.73	4	2.50
3.5	0.60	2.81	51	15.1	5	1.97	4	2.90
4.0	0.70	3.20	51	17.3	5	2.22	4	3.30
5.0	0.80	4.08	51	21.5	5	2.96	4	4.20
6.0	1.00	4.85	51	25.8	5	3.45	4	5.00
8.0	1.25	5.95	75	35.0	6*	4.20	5	6.80
10.0	1.50	7.95	83	43.0	8*	5.85	5	8.50
12.0	1.75	9.95	95	52.0	10*	7.50	5	10.20

ID

ID

175257

175273

167072

167086

167073

167087

167074

167088

167075

167089

167076

167090

175258

175274

175259

175275

175260

175276

\*Tol. h6

## GW

GW3016



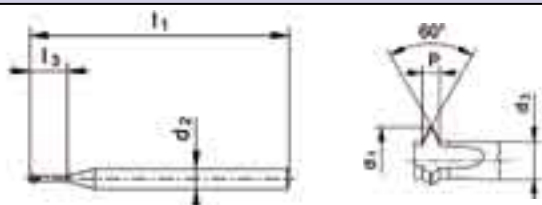
GW3016VS



GW3019



GW3019VS



GW3016

GW3016VS

GW3019

GW3019VS



Ø D <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
2	56	1.66	39	6.1	3	1.02	3	1.75
4	40	2.11	39	8.0	3	1.22	3	2.25
6	32	2.59	51	10.2	5	1.48	4	2.75
8	32	3.25	51	11.9	5	2.14	4	3.40
10	24	3.60	51	14.0	5	2.12	4	3.80
1/4	20	4.89	51	18.2	5	3.11	4	5.10
5/16	18	5.95	63	23.0	6*	3.97	5	6.50
3/8	16	7.10	67	27.0	8*	4.87	5	8.00
1/2	13	9.95	76	36.0	10*	7.21	5	10.80

ID

ID

167472	167500
167473	167501
167474	167502
167475	167503
173983	173986
167476	167504
175232	175246
175233	173546
175234	175247

Ø D <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
2	56	1.66	39	9.4	3	1.02	3	1.75
4	40	2.11	39	12.2	3	1.22	3	2.25
6	32	2.59	51	15.5	5	1.48	4	2.75
8	32	3.25	51	18.1	5	2.14	4	3.40
10	24	3.60	51	21.3	5	2.12	4	3.80
1/4	20	4.89	51	27.7	5	3.11	4	5.10
5/16	18	5.95	75	35.0	6*	3.97	5	6.50
3/8	16	7.10	83	41.0	8*	4.87	5	8.00
1/2	13	9.95	95	55.0	10*	7.21	5	10.80

ID

ID

167479	167507
167480	167508
167481	167509
167482	167510
173982	173979
167483	167511
175261	175277
175262	175278
175263	175279

\*Tol. h6

## GW

GW3016



GW3016VS



VS

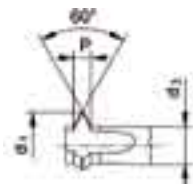
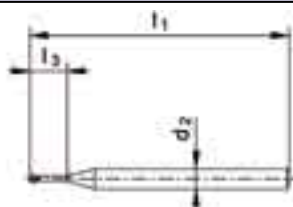
GW3019



GW3019VS



VS



GW3016

GW3016VS

GW3019

GW3019VS



Ø D <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
0	80	1.15	39	4.3	3	0.71	3	1.20
1	72	1.44	39	5.1	3	0.95	3	1.50
4	48	2.23	39	7.9	3	1.49	3	2.35
8	36	3.35	51	11.7	5	2.36	4	3.50
10	32	3.91	51	13.5	5	2.80	4	4.05
1/4	28	4.95	51	17.6	5	3.68	4	5.50
5/16	24	5.95	63	22.0	6*	4.47	5	6.90
3/8	24	7.10	67	26.0	8*	5.62	5	8.50

ID

ID

175235

175248

175236

175249

175237

175250

175238

175251

167477

167505

167478

167506

175239

175252

175240

175253

Ø D <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
0	80	1.15	39	6.6	3	0.71	3	1.20
1	72	1.44	39	7.9	3	0.95	3	1.50
4	48	2.23	39	12.1	3	1.49	3	2.35
8	36	3.35	51	18.0	5	2.36	4	3.50
10	32	3.91	51	20.8	5	2.80	4	4.05
1/4	28	4.95	51	27.1	5	3.68	4	5.50
5/16	24	5.95	75	34.0	6*	4.47	5	6.90
3/8	24	7.10	83	40.0	8*	5.62	5	8.50

ID

ID

175264

175280

175265

175281

175266

175282

175267

175283

167484

167512

167485

167513

175268

175284

175269

175285

\*Tol. h6

## GW

GW4016



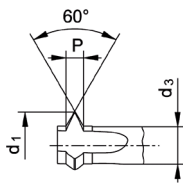
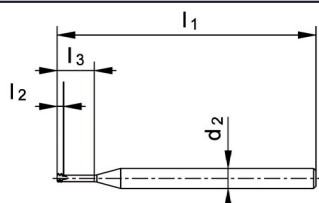
GW4016VS



GW4019



GW4019VS



GW4016\*

GW4016VS\*

GW4019\*

GW4019VS\*



Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
0.8	0.20	0.51	39	0.40	2.3	3	0.23	3	0.58*
0.9	0.225	0.57	39	0.45	2.6	3	0.26	3	0.65*
1.0	0.25	0.64	39	0.50	2.9	3	0.29	3	0.70*
1.2	0.25	0.84	39	0.50	3.4	3	0.49	3	0.90*
1.4	0.30	0.97	39	0.60	4.0	3	0.55	3	1.05*
1.6	0.35	1.09	39	0.70	4.6	3	0.60	3	1.19*
1.8	0.35	1.29	39	0.70	5.1	3	0.80	3	1.39*
2.0	0.40	1.42	39	0.80	5.6	3	0.86	3	1.54*
2.5	0.45	1.85	39	0.90	7.0	3	1.22	3	1.98*
3.0	0.50	2.28	51	1.00	8.5	5	1.58	4	2.43*
3.5	0.60	2.63	51	1.20	10.0	5	1.79	4	2.80*
4.0	0.70	2.99	51	1.40	11.4	5	2.01	4	3.20*
5.0	0.80	3.84	51	1.60	14.1	5	2.72	4	4.10*
6.0	1.00	4.55	51	2.00	17.0	5	3.15	4	4.90*

ID

ID

167105	167119
167106	167120
167107	167121
167108	167122
167109	167123
167110	167124
167111	167125
167112	167126
167113	167127
167114	167128
167115	167129
167116	167130
167117	167131
167118	167132

Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h5 mm	d <sub>3</sub> mm		
0.8	0.20	0.51	39	0.40	3.5	3	0.23	3	0.58*
0.9	0.225	0.57	39	0.45	4.0	3	0.26	3	0.65*
1.0	0.25	0.64	39	0.50	4.4	3	0.29	3	0.70*
1.2	0.25	0.84	39	0.50	5.2	3	0.49	3	0.90*
1.4	0.30	0.97	39	0.60	6.1	3	0.55	3	1.05*
1.6	0.35	1.09	39	0.70	7.0	3	0.60	3	1.19*
1.8	0.35	1.29	39	0.70	7.8	3	0.80	3	1.39*
2.0	0.40	1.42	39	0.80	8.6	3	0.86	3	1.54*
2.5	0.45	1.85	39	0.90	10.7	3	1.22	3	1.98*
3.0	0.50	2.28	51	1.00	13.0	5	1.58	4	2.43*
3.5	0.60	2.63	51	1.20	15.2	5	1.79	4	2.80*
4.0	0.70	2.99	51	1.40	17.4	5	2.01	4	3.20*
5.0	0.80	3.84	51	1.60	21.6	5	2.72	4	4.10*
6.0	1.00	4.55	51	2.00	26.0	5	3.15	4	4.90*

ID

ID

167147	167161
167148	167162
167149	167163
167150	167164
167151	167165
167152	167166
167153	167167
167154	167168
167155	167169
167156	167170
167157	167171
167158	167172
167159	167173
167160	167174

\*Tol.  
+0.03 mm  
0

# UNC-UNF

ANSI B1.1



DC

h5

## GW

GW4016



GW4016VS



VS

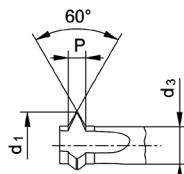
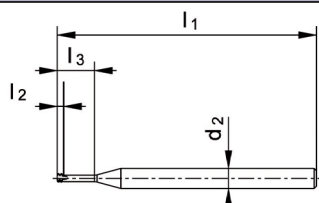
GW4019



GW4019VS



VS



GW4016\*

GW4016VS\*

GW4019\*

GW4019VS\*



ID

ID

2.5 x D<sub>1</sub>

2.5 x D<sub>1</sub>

4 x D<sub>1</sub>

4 x D<sub>1</sub>

Ø" D <sub>1</sub>	P	d <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	d <sub>2</sub> h5	d <sub>3</sub>		
UNC	TPI	mm	mm	mm	mm	mm	mm		
2	56	1.52	39	0.91	6.2	3	0.89	3	1.65*
4	40	1.92	39	1.27	8.1	3	1.03	3	2.10*
6	32	2.35	51	1.59	10.4	5	1.24	4	2.60*
1/4	20	4.51	51	2.54	18.5	5	2.73	4	5.00*

167486

167514

167487

167515

167488

167516

167490

167518

Ø" D <sub>1</sub>	P	d <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	d <sub>2</sub> h5	d <sub>3</sub>		
UNF	TPI	mm	mm	mm	mm	mm	mm		
10	32	3.67	51	1.59	13.7	5	2.56	4	3.95*
1/4	28	4.95	51	1.81	17.7	5	3.68	4	5.35*

ID

ID

167491

167519

167492

167520

Ø" D <sub>1</sub>	P	d <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	d <sub>2</sub> h5	d <sub>3</sub>		
UNC	TPI	mm	mm	mm	mm	mm	mm		
2	56	1.52	39	0.90	9.5	3	0.89	3	1.65*
4	40	1.92	39	1.27	12.4	3	1.03	3	2.10*
6	32	2.35	51	1.59	15.6	5	1.24	4	2.60*
1/4	20	4.51	51	2.54	28.0	5	2.73	4	5.00*

ID

ID

167493

167521

167494

167522

167495

167523

167497

167525

Ø" D <sub>1</sub>	P	d <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	d <sub>2</sub> h5	d <sub>3</sub>		
UNF	TPI	mm	mm	mm	mm	mm	mm		
10	32	3.67	51	1.59	20.9	5	2.56	4	3.95*
1/4	28	4.95	51	1.81	27.3	5	3.68	4	5.35*

ID

ID

167498

167526

167499

167527

\*Tol. +0.03 mm  
0

\*Remplacé par GW4116/ GW4119  
Rimpiazzati da GW4116/ GW4119





## GF - GFH

GF6110



GF6110VS

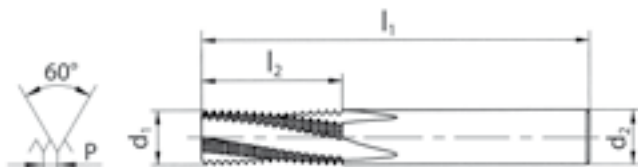


VS

GFH6110VS



VS



GF6110

GF6110VS

GFH6110VS



HRC  
≤ 63



Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	GF	GFH	
2	0.40	1.50	48	3.4	6	2		1.60
2.5	0.45	1.90	48	4.3	6	3		2.05
3	0.50	2.30	48	5.3	6	3	3	2.50
3.5	0.60	2.70	48	6.3	6	3		2.90
4	0.70	3.00	48	7.4	6	3	3	3.30
5	0.80	3.80	48	9.2	6	3	4	4.20
6	1.00	4.50	54	10.5	6		4	5.00
8	1.25	5.95	54	13.1	6		5	6.80
10	1.50	7.95	64	17.3	8		5	8.50
12	1.75	9.95	74	20.1	10		5	10.20

ID

ID

ID

125233

115993

150565

152124

125660

116395

150072

116350

135217

125944

116396

150073

126158

116397

150074

150075

150076

150077

151326



## GF

GF6115



GF6115VS



VS

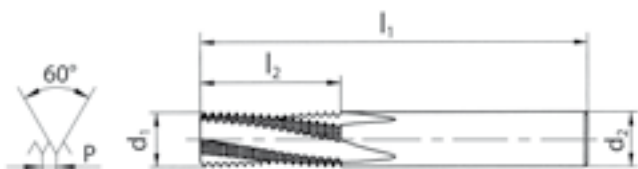
GF6165



GF6165VS



VS



GF6115



GF6115VS



GF6165



GF6165VS



ID

ID

ID

ID

$\varnothing D_1$ M	P mm	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm		
4	0.70	3.00	48	8.8	6	3	3.30
5	0.80	3.80	48	10.8	6	3	4.20
6	1.00	4.50	54	13.5	6	3	5.00
8	1.25	5.95	54	18.1	6	3	6.80
10	1.50	7.95	64	21.8	8	4	8.50
12	1.75	9.95	72	25.4	10	4	10.20
14	2.00	9.95	74	31.0	10	4	12.00
16	2.00	11.95	80	35.0	12	4	14.00
18	2.50	13.95	90	41.3	14	4	15.50
20							17.50

146298

146969

146299

146970

146300

146971

126350

116398

146321

146972

126586

116399

146322

146973

124836

116400

116342

116401

125066

116402

125114

115990

125229

116403



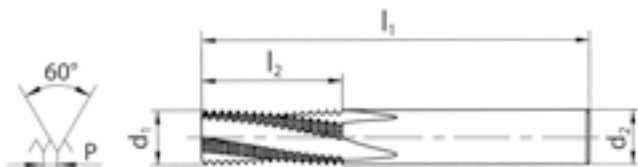
# GF

**GF6116**

**GF6116VS**

**VS**
**GF6166**

**GF6166VS**

**VS**

**GF6116**
**GF6116VS**
**GF6166**
**GF6166VS**


$\varnothing D_1$ M	P mm	$d_1$ mm	$l_1$ mm	$l_2$ mm	$d_2$ mm		
4	0.70	3.00	48	10.9	6	3	3.30
5	0.80	3.80	48	13.2	6	3	4.20
6	1.00	4.50	54	16.5	6	3	5.00
8	1.25	5.95	54	21.9	6	3	6.80
10	1.50	7.95	64	26.3	8	4	8.50
12	1.75	9.95	74	32.4	10	4	10.20
14	2.00	9.95	74	37.0	10	4	12.00
16	2.00	11.95	90	43.0	12	4	14.00
18	2.50	13.95	105	53.8	14	4	15.50
20							17.50

**ID**
**ID**
**ID**
**ID**
**155365**
**155370**
**155366**
**155371**
**155367**
**155372**
**155375**
**155382**
**155368**
**155373**
**155376**
**155383**
**155369**
**155374**
**155377**
**155384**
**155378**
**155385**
**155379**
**155386**
**155380**
**155387**
**155381**
**155388**



## GF

GF6110



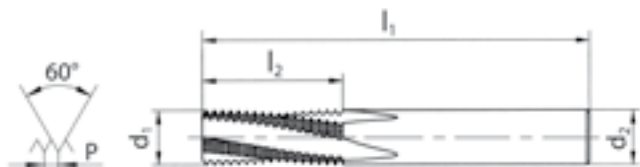
GF6110VS



VS

GF6110

GF6110VS



Ø D <sub>1</sub> MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm		
------------------------	---------	----------------------	----------------------	----------------------	----------------------	--	--

4	0.50	3.00	48	7.3	6	3	3.50
5	0.50	3.80	48	8.8	6	3	4.50

ID

ID

135218

135219

135069

135220



## GF

GF6165



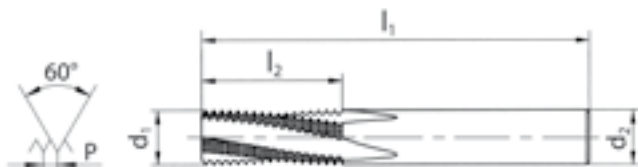
GF6165VS



GF6166



GF6166VS



GF6165

GF6165VS

GF6166

GF6166VS



Ø D <sub>1</sub> MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm		
6	0.50	4.50	54	12.8	6	3	5.50
6	0.75	4.50	54	13.1	6	3	5.25
8	0.50	5.95	54	17.8	6	3	7.50
8	0.75	5.95	54	16.9	6	3	7.25
8	1.00	5.95	54	17.5	6	3	7.00
10	1.00	7.95	64	21.5	8	4	9.00
10	1.25	7.95	64	21.9	8	4	8.80
12	1.00	9.95	72	25.5	10	4	11.00
12	1.50	9.95	72	26.3	10	4	10.50

ID

ID

135221

135222

123664

123665

135002

135223

143110

135224

124239

116404

119986

116405

120102

116406

120303

116407

120392

120393

Ø D <sub>1</sub> MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm		
6	0.50	4.50	54	15.8	6	3	5.50
6	0.75	4.50	54	16.1	6	3	5.25
8	0.50	5.95	54	20.8	6	3	7.50
8	0.75	5.95	54	20.6	6	3	7.25
8	1.00	5.95	54	21.5	6	3	7.00
10	1.00	7.95	64	26.5	8	4	9.00
10	1.25	7.95	64	26.9	8	4	8.80
12	1.00	9.95	74	31.5	10	4	11.00
12	1.50	9.95	74	32.3	10	4	10.50

ID

ID

155389

155398

155390

155399

155391

155400

155392

155401

155393

155402

155394

155403

155395

155404

155396

155405

155397

155406



## GF

GF6110



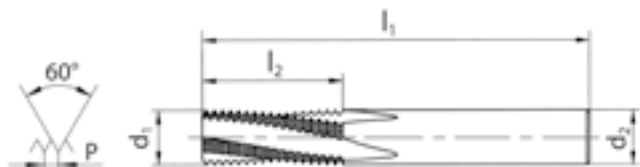
GF6110VS



VS

GF6110

GF6110VS



Ø" D <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>		
UNC	TPI	mm	mm	mm	mm		

10	24	3.60	48	10.1	6.0	3	3.80
12	24	4.10	48	10.1	6.0	3	4.40
1/4	20	4.80	54	12.1	6.0	3	5.10

ID

ID

135225

135226

135227

135228

135229

135230



## GF

GF6165



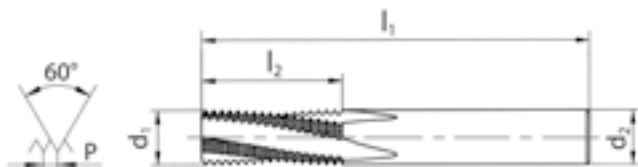
GF6165VS



GF6166



GF6166VS



Ø" D <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm		
1/4	20	4.80	54	14.6	6.0	3	5.10
5/16	18	5.95	54	17.6	6.0	3	6.50
3/8	16	7.10	64	21.5	8.0	4	8.00
7/16	14	7.95	64	24.5	8.0	4	9.30
1/2	13	9.95	72	28.4	10.0	4	10.80

Ø" D <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm		
1/4	20	4.80	54	17.1	6.0	3	5.10
5/16	18	5.95	54	21.9	6.0	3	6.50
3/8	16	7.10	64	26.2	8.0	4	8.00
7/16	14	7.95	64	29.9	8.0	4	9.30
1/2	13	9.95	74	34.2	10.0	4	10.80

GF6165



GF6165VS



GF6166



GF6166VS



ID

ID

155407

155408

116047

135231

135232

135233

116049

135234

135235

135236

ID

ID

155409

155414

155410

155415

155411

155416

155412

155417

155413

155418



## GF

GF6110



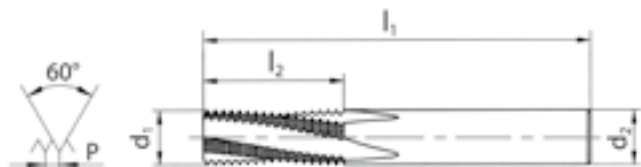
GF6110VS



VS

GF6110

GF6110VS



Ø" D <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>		
UNF	TPI	mm	mm	mm	mm		

10	32	3.60	48	8.3	6.0	3	4.05
12	28	4.10	48	9.5	6.0	3	4.60
1/4	28	4.80	54	11.3	6.0	3	5.50

ID

ID

128659

135237

135238

135239

135240

135176



## GF

GF6165



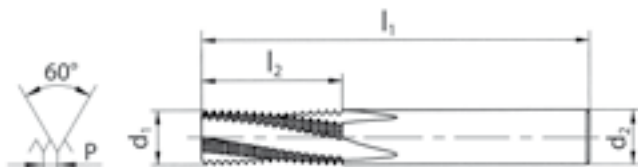
GF6165VS



GF6166



GF6166VS



Ø" D <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>		
UNF	TPI	mm	mm	mm	mm		
1/4	28	4.80	54	14.1	6.0	3	5.50
5/16	24	5.95	54	17.5	6.0	3	6.90
3/8	24	7.10	64	20.6	8.0	4	8.50
7/16	20	7.95	64	24.8	8.0	4	9.80
1/2	20	9.95	72	27.3	10.0	4	11.40

Ø" D <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>		
UNF	TPI	mm	mm	mm	mm		
1/4	28	4.80	54	16.8	6.0	3	5.50
5/16	24	5.95	54	20.6	6.0	3	6.90
3/8	24	7.10	64	24.9	8.0	4	8.50
7/16	20	7.95	64	28.6	8.0	4	9.80
1/2	20	9.95	74	33.7	10.0	4	11.40

GF6165



GF6165VS



GF6166



GF6166VS



ID

ID

155419

155420

135242

135243

135182

135245

135246

135247

135183

135249

ID

ID

155421

155426

155422

155427

155423

155428

155424

155429

155425

155430





GF

GF6165



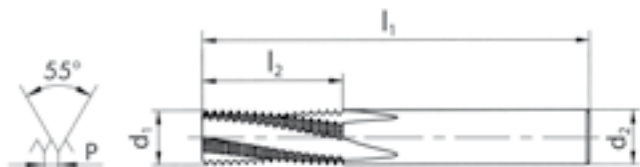
GF6165VS



GF6166



GF6166VS



GF6165

GF6165VS

GF6166

GF6166VS



Ø" D <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm		
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1/8	28	7.95	64	21.3	8.0	4	8.75
1/4	19	9.95	72	28.7	10.0	4	11.60
3/8	19	13.60	80	35.4	14.0	4	15.20

ID

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119678

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Ø" D <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm		
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1/8	28	7.95	64	24.9	8.0	4	8.75
1/4	19	9.95	74	34.1	10.0	4	11.60
3/8	19	13.60	90	43.4	14.0	4	15.20

ID

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## GF

GF6160

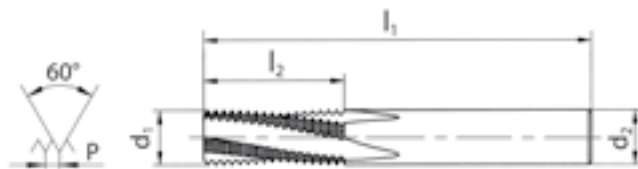


GF6160VS



GF6160

GF6160VS



Ø" D <sub>1</sub> NPT	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	
1/8	27	7.30	64	9.9	8.0	4
1/4	18	9.95	72	14.8	12.0	4
3/8	18	12.50	80	14.8	14.0	4
1/2	14	14.70	90	19.1	16.0	4

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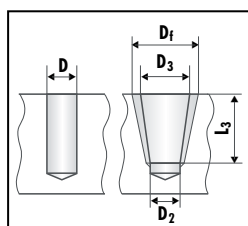
116371	116435
135250	135251
135252	135253
155437	155438

Ø" D <sub>1</sub> NPTF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	
1/8	27	7.30	64	9.9	8.0	4
1/4	18	9.95	72	14.8	12.0	4
3/8	18	12.50	80	14.8	14.0	4
1/2	14	14.70	90	19.1	16.0	4

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* 135256	* 135257
* 135258	* 135259
* 155439	* 155440



Avant-trou Prefori				
Ø D <sub>1</sub>	D	D <sub>2</sub>	NPT NPTF D <sub>3</sub> (+0.05)	
1/8	8.5	8.3	8.74	8.76
1/4	11.0	10.8	11.36	11.40
3/8	14.5	14.2	14.80	14.84
1/2	17.9	17.5	18.32	18.33

Fraisage Fresatura	
D <sub>f</sub>	L <sub>3</sub>
9.81	6.92
12.99	10.02
16.41	10.33
20.37	13.57



## GFS

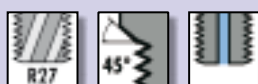
GFS6610



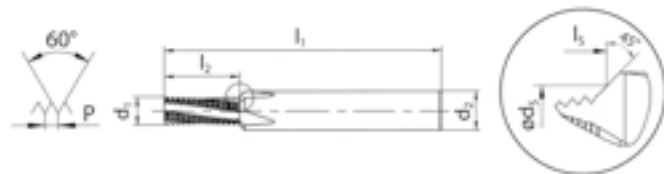
GFS6610VS



GFS6660



GFS6660VS



GFS6610

GFS6610VS

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GFS6660VS



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Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
2	0.40	1.50	48	3.4	3.7	2.1	6	2	1.60
2.5	0.45	1.90	48	4.3	4.7	2.6	6	3	2.05
3	0.50	2.30	48	5.3	5.6	3.1	6	3	2.50
3.5	0.60	2.70	48	5.7	6.2	3.6	6	3	2.90
4	0.70	3.00	48	7.3	7.9	4.1	6	3	3.30
5	0.80	3.80	54	9.2	9.9	5.1	6	3	4.20
6	1.00	4.50	62	10.5	11.3	6.2	8	3	5.00
8	1.25	5.95	74	13.1	14.3	8.2	10	3	6.80
10	1.50	7.95	80	17.3	18.4	10.3	12	4	8.50
12	1.75	9.95	90	20.1	21.3	12.3	14	4	10.20
14	2.00	10.80	102	25.0	26.8	14.4	16	4	12.00
16	2.00	12.80	102	27.0	28.8	16.4	18	4	14.00
18	2.50	13.95	125	33.8	36.0	18.5	25	4	15.50
20					37.0	20.5			17.50

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## GFS

GFS6615



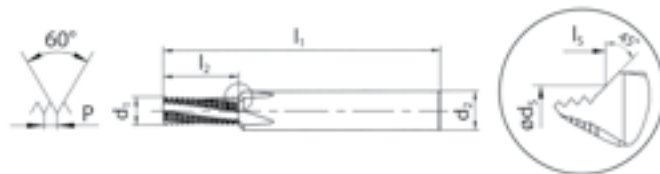
GFS6615VS



GFS6665



GFS6665VS



GFS6615

GFS6615VS

GFS6665

GFS6665VS



Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
2	0.40	1.50	48	4.6	4.9	2.1	6	2	1.60
2.5	0.45	1.90	48	5.6	6.0	2.6	6	3	2.05
3	0.50	2.30	48	6.8	7.1	3.1	6	3	2.50
3.5	0.60	2.70	48	7.5	8.0	3.6	6	3	2.90
4	0.70	3.00	48	8.8	9.3	4.1	6	3	3.30
5	0.80	3.80	54	10.8	11.5	5.1	6	3	4.20
6	1.00	4.50	62	13.5	14.3	6.2	8	3	5.00
8	1.25	5.95	74	18.1	19.3	8.2	10	3	6.80
10	1.50	7.95	80	21.8	22.9	10.3	12	4	8.50
12	1.75	9.95	90	25.4	26.6	12.3	14	4	10.20
14	2.00	10.80	102	31.0	32.8	14.4	16	4	12.00
16	2.00	12.80	102	35.0	36.8	16.4	18	4	14.00
18	2.50	13.95	125	41.3	43.5	18.5	25	4	15.50
20					44.5	20.5			17.50

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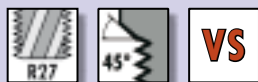


## GFS

GFS6616



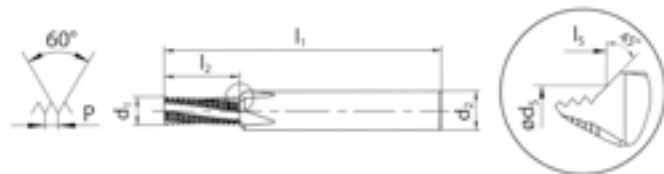
GFS6616VS



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GFS6666VS



GFS6616

GFS6616VS

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GFS6666VS



Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>5</sub> mm	d <sub>2</sub> mm		
3	0.50	2.30	48	8.3	8.7	3.1	6	3	2.50
4	0.70	3.00	48	10.9	11.5	4.1	6	3	3.30
5	0.80	3.80	54	13.2	13.9	5.1	6	3	4.20
6	1.00	4.50	62	16.5	17.4	6.2	8	3	5.00
8	1.25	5.95	74	21.9	23.0	8.2	10	3	6.80
10	1.50	7.95	80	26.3	27.5	10.3	12	4	8.50
12	1.75	9.95	90	32.4	33.6	12.3	14	4	10.20
14	2.00	10.80	102	37.0	38.8	14.4	16	4	12.00
16	2.00	12.80	102	43.0	44.8	16.4	18	4	14.00
18	2.50	13.95	125	53.8	56.1	18.5	25	4	15.50
20					57.1	20.5			17.50

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## GFS

GFS6610



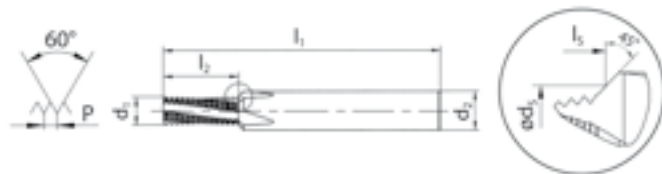
GFS6610VS



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GFS6660VS



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GFS6660VS



Ø D <sub>1</sub> MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
4	0.50	3.00	48	7.3	7.8	4.1	6	3	3.50
5	0.50	3.80	54	8.8	9.4	5.1	6	3	4.50
6	0.50	4.50	62	9.8	10.6	6.2	8	3	5.50
6	0.75	4.50	62	10.1	11.0	6.2	8	3	5.25
8	0.50	5.95	74	12.8	13.9	8.2	10	3	7.50
8	0.75	5.95	74	13.1	14.3	8.2	10	3	7.25
8	1.00	5.95	74	13.5	14.6	8.2	10	3	7.00
10	1.00	7.95	80	16.5	17.7	10.3	12	4	9.00
10	1.25	7.95	80	16.9	18.1	10.3	12	4	8.80
12	1.00	9.95	90	19.5	20.7	12.3	14	4	11.00
12	1.50	9.95	90	20.3	21.4	12.3	14	4	10.50
14	1.50	10.80	102	23.3	25.0	14.4	16	4	12.50
16	1.50	12.80	102	26.3	28.1	16.4	18	4	14.50

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## GFS

GFS6615



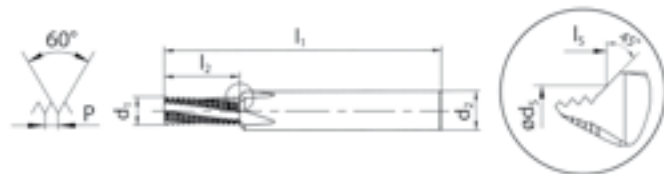
GFS6615VS



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GFS6665VS



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Ø D <sub>1</sub> MF	P mm	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
4	0.50	3.00	48	8.8	9.3	4.1	6	3	3.50
5	0.50	3.80	54	10.8	11.4	5.1	6	3	4.50
6	0.50	4.50	62	12.8	13.6	6.2	8	3	5.50
6	0.75	4.50	62	13.1	14.0	6.2	8	3	5.25
8	0.50	5.95	74	17.8	18.9	8.2	10	3	7.50
8	0.75	5.95	74	16.9	18.0	8.2	10	3	7.25
8	1.00	5.95	74	17.5	18.6	8.2	10	3	7.00
10	1.00	7.95	80	21.5	22.7	10.3	12	4	9.00
10	1.25	7.95	80	21.9	23.0	10.3	12	4	8.80
12	1.00	9.95	90	25.5	26.7	12.3	14	4	11.00
12	1.50	9.95	90	26.3	27.4	12.3	14	4	10.50
14	1.50	10.80	102	30.8	32.5	14.4	16	4	12.50
16	1.50	12.80	102	33.8	35.6	16.4	18	4	14.50

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## GFS

GFS6610



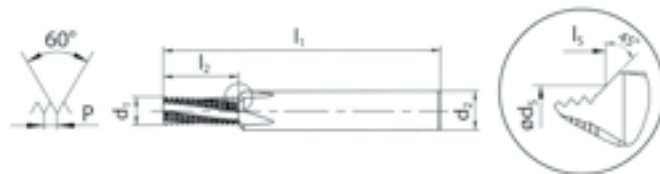
GFS6610VS



GFS6660



GFS6660VS



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GFS6660VS



Ø" D <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
10	24	3.60	54	10.1	10.7	4.9	6	3	3.80
12	24	4.10	54	10.1	10.8	5.6	6	3	4.40
1/4	20	4.80	62	12.1	12.9	6.5	8	3	5.10
5/16	18	5.95	74	14.8	15.9	8.1	10	3	6.50
3/8	16	7.10	80	16.7	18.0	9.8	12	4	8.00
7/16	14	7.95	80	19.0	20.8	11.4	12	4	9.30
1/2	13	9.95	90	22.5	24.0	13.0	14	4	10.80
9/16	12	10.80	102	24.4	26.3	14.6	16	4	12.20
5/8	11	11.90	102	26.5	28.8	16.3	18	4	13.60

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## GFS

GFS6615



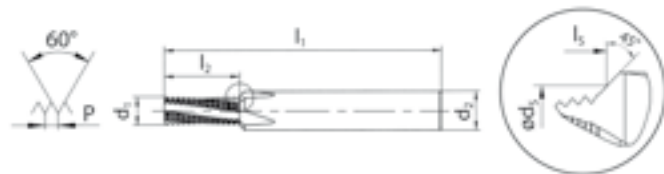
GFS6615VS



GFS6665



GFS6665VS



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GFS6665VS



Ø" D <sub>1</sub> UNC	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>5</sub> mm	d <sub>2</sub> mm		
10	24	3.60	54	12.2	12.8	4.9	6	3	3.80
12	24	4.10	54	13.2	14.0	5.6	6	3	4.40
1/4	20	4.80	62	14.6	15.5	6.5	8	3	5.10
5/16	18	5.95	74	17.6	18.7	8.1	10	3	6.50
3/8	16	7.10	80	21.5	22.8	9.8	12	4	8.00
7/16	14	7.95	80	24.5	26.2	11.4	12	4	9.30
1/2	13	9.95	90	28.4	29.9	13.0	14	4	10.80
9/16	12	10.80	102	32.8	34.7	14.6	16	4	12.20
5/8	11	11.90	102	35.8	38.0	16.3	18	4	13.60

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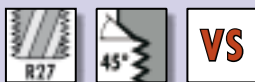


## GFS

GFS6610



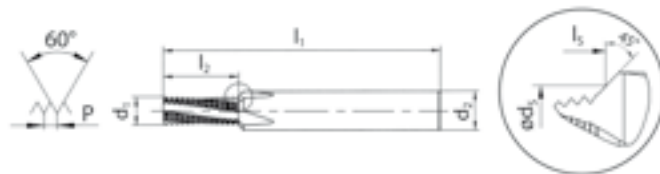
GFS6610VS



GFS6660



GFS6660VS



GFS6610



GFS6610VS



GFS6660



GFS6660VS



Ø" D <sub>1</sub>	P	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>3</sub>	d <sub>2</sub>		
UNF	TPI	mm	mm	mm	mm	mm	mm		
10	32	3.60	54	8.3	9.0	4.9	6	3	4.05
12	28	4.10	54	9.5	10.3	5.6	6	3	4.60
1/4	28	4.80	62	11.3	12.2	6.5	8	3	5.50
5/16	24	5.95	74	13.2	14.3	8.1	10	3	6.90
3/8	24	7.10	80	16.4	17.3	9.8	12	4	8.50
7/16	20	7.95	80	18.4	20.1	11.4	12	4	9.80
1/2	20	9.95	90	21.0	22.5	13.0	14	4	11.40
9/16	18	11.60	102	23.3	24.8	14.6	16	4	12.90
5/8	18	11.90	102	26.1	28.3	16.3	18	4	14.50

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## GFS

GFS6615



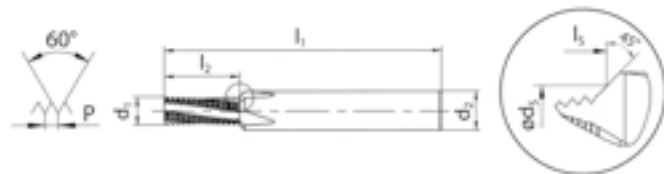
GFS6615VS



GFS6665



GFS6665VS



GFS6615

GFS6615VS

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GFS6665VS



Ø" D <sub>1</sub> UNF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
10	32	3.60	54	11.5	12.2	4.9	6	3	4.05
12	28	4.10	54	12.3	13.0	5.6	6	3	4.60
1/4	28	4.80	62	14.1	14.9	6.5	8	3	5.50
5/16	24	5.95	74	17.5	18.6	8.1	10	3	6.90
3/8	24	7.10	80	20.6	21.5	9.8	12	4	8.50
7/16	20	7.95	80	24.8	26.5	11.4	12	4	9.80
1/2	20	9.95	90	27.3	28.8	13.0	14	4	11.40
9/16	18	11.60	102	30.4	31.9	14.6	16	4	12.90
5/8	18	11.90	102	34.6	36.8	16.3	18	4	14.50

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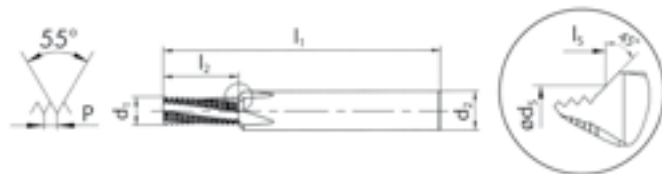


## GFS

**GFS6660**

**GFS6660VS**

**GFS6665**

**GFS6665VS**


Ø" D <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
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1/8	28	7.95	80	15.9	16.9	10.0	12	4	8.75
1/4	19	9.95	90	22.1	23.8	13.5	14	4	11.60
3/8	19	12.80	102	27.4	29.5	17.1	18	4	15.20

**GFS6660**
**GFS6660VS**
**GFS6665**
**GFS6665VS**

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Ø" D <sub>1</sub> G	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm		
------------------------	----------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	--	--

1/8	28	7.95	80	21.3	22.3	10.0	12	4	8.75
1/4	19	9.95	90	28.7	30.5	13.5	14	4	11.60
3/8	19	12.80	102	35.4	37.6	17.1	18	4	15.20

**ID**
**ID**

\* 119349

\* 135417

\* 119298

\* 135418

\* 119680

\* 135419



## GFS

GFS6660

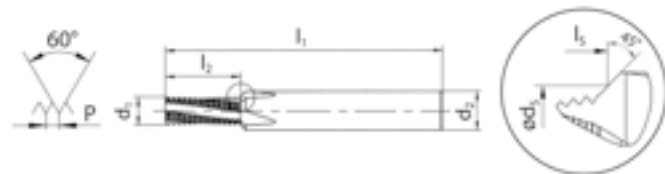


GFS6660VS



GFS6660

GFS6660VS



Ø" D <sub>1</sub> NPT	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm	
--------------------------	----------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	--

1/8	27	7.30	70	9.9	11.2	10.6	12	4
1/4	18	9.95	80	14.8	16.4	14.0	16	4
3/8	18	12.50	80	14.8	16.9	17.6	18	4

ID

ID

* 126910	* 135490
* 126899	* 135491
* 126928	* 135492

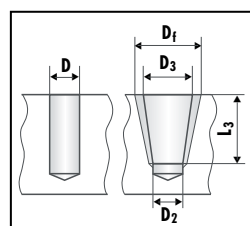
Ø" D <sub>1</sub> NPTF	P TPI	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>3</sub> mm	d <sub>2</sub> mm	
---------------------------	----------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	--

1/8	27	7.30	70	9.9	11.2	10.6	12	4
1/4	18	9.95	80	14.8	16.4	14.0	16	4
3/8	18	12.50	80	14.8	16.9	17.6	18	4

ID

ID

* 135493	* 135494
* 135495	* 135496
* 135497	* 135498



Avant-Trou Prefori				
Ø D <sub>1</sub>	D	D <sub>2</sub>	NPT NPTF D <sub>3</sub> (+0.05)	
1/8	8.5	8.3	8.74	8.76
1/4	11.0	10.8	11.36	11.40
3/8	14.5	14.2	14.80	14.84

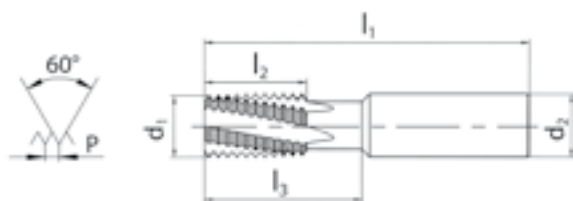
Fraisage  
Fresatura

D <sub>f</sub>	L <sub>3</sub>
9.81	6.92
12.99	10.02
16.41	10.33

## GFM

**GFM6260**

**GFM6260VS**

**GFM6260**
**GFM6260VS**


d <sub>1</sub> mm	P mm	Ø D <sub>1</sub> ≥ M, MF	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm		ID	ID
8	0.50	10	64	16.0	16	8.0	4	116450	135260
8	0.75	10	64	15.8	16	8.0	4	116340	135261
10	0.75	14	70	15.8	26	10.0	4	116128	135262
10	1.00	14	70	16.0	26	10.0	4	118657	135263
10	1.25	14	70	16.3	26	10.0	4	118659	135264
10	1.50	14	70	16.5	26	10.0	4	118661	135265
12	0.50	18	80	20.0	32	12.0	4	116129	135214
12	0.75	18	80	20.3	32	12.0	4	155526	155527
12	1.00	18	80	20.0	32	12.0	4	118664	135007
12	1.50	18	80	21.0	32	12.0	4	118669	135181
12	2.00	18	80	20.0	32	12.0	4	118673	135269
16	1.00	24	90	25.0	42	16.0	4	118680	135270
16	1.50	24	90	25.5	42	16.0	4	118682	116017
16	2.00	24	90	26.0	42	16.0	4	118684	135271
16	2.50	24	90	25.0	42	16.0	4	118689	135272
16	3.00	24	90	27.0	42	16.0	4	158760	150564
20	1.00	30	105	33.0	52	20.0	5	135273	135274
20	1.50	30	105	33.0	52	20.0	5	118694	135275
20	2.00	30	105	34.0	52	20.0	5	116338	135276
20	2.50	30	105	32.5	52	20.0	5	* 135277	
20	3.00	30	105	33.0	52	20.0	5	118699	135279
20	3.50	30	105	38.5	52	20.0	5	144195	144065

## GFM

GFM6260

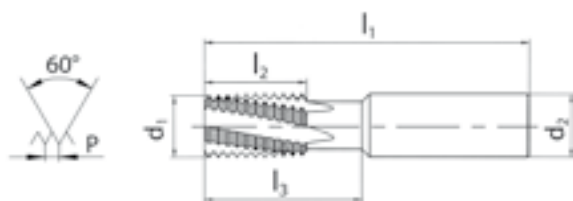


GFM6260VS



GFM6260

GFM6260VS



d <sub>1</sub> mm	P TPI	Ø" D <sub>1</sub> ≥ UN	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm		ID	ID
10	24	1/2	70	15.9	26	10	4	135288	135289
12	24	3/4	80	20.1	32	12	4	135290	135291
12	20	3/4	80	20.3	32	12	4	135292	135293
12	18	3/4	80	19.8	32	12	4	135294	135295
12	16	3/4	80	20.6	32	12	4	135296	135297
12	10	3/4	80	20.3	32	12	4	150963	155494
16	24	1	90	25.4	42	16	4	135298	135299
16	20	1	90	25.4	42	16	4	135300	135301
16	18	1	90	25.4	42	16	4	135302	135303
16	16	1	90	25.4	42	16	4	135304	135305
16	14	1	90	25.4	42	16	4	135306	135307
16	12	1	90	25.4	42	16	4	135308	135309
16	9	1	90	25.4	42	16	4	150964	155495
16	8	1	90	25.4	42	16	4	150965	155496
20	24	1 1/4	105	32.8	52	20	5	* 135310	* 135311
20	20	1 1/4	105	33.0	52	20	5	* 135312	* 135313
20	18	1 1/4	105	32.5	52	20	5	135314	135315
20	16	1 1/4	105	33.4	52	20	5	118697	135316
20	14	1 1/4	105	32.7	52	20	5	135317	135318
20	12	1 1/4	105	31.8	52	20	5	135319	135320
20	8	1 1/4	105	31.8	52	20	5	135321	135322
20	7	1 1/4	105	32.7	52	20	5	150962	155497

# GFM

GFM6260

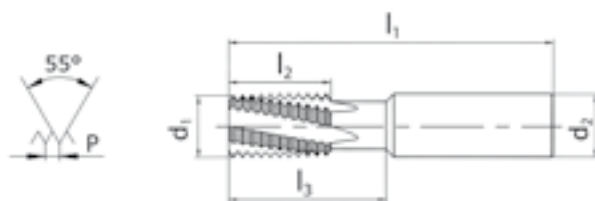


GFM6260VS



GFM6260

GFM6260VS



d <sub>1</sub> mm	P TPI	Ø" D <sub>1</sub> G	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> mm	
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10	19	1/4 - 3/8	70	16.0	26	10	4
16	14	1/2 - 7/8	90	25.4	42	16	4
20	11	≥ 1	105	32.3	52	20	5

ID

ID

118655

135280

118678

135281

118691

135282

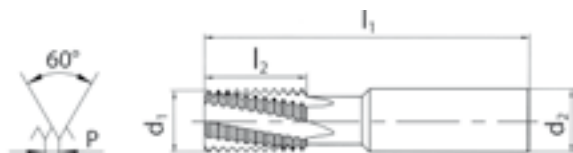


## GFM

GFM6260



GFM6260VS



d <sub>1</sub> mm	P TPI	Ø" D <sub>1</sub> ≥ NPT	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	
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14.5	14	1/2	90	19.1	16	4
18.5	11.5	1	90	23.2	20	5

GFM6260

GFM6260VS



ID

ID

135323

135324

135325

135326

d <sub>1</sub> mm	P TPI	Ø" D <sub>1</sub> ≥ NPTF	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	
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14.5	14	1/2	90	19.1	16	4
18.5	11.5	1	90	23.2	20	5

ID

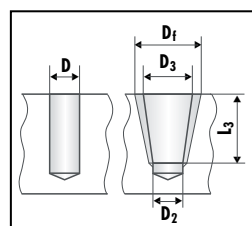
ID

\* 135327

\* 135328

\* 135329

\* 135330



Avant-Hrou Prefori				
Ø D <sub>1</sub>	D	D <sub>2</sub>	NPT NPTF D <sub>3</sub> (+0.05)	
1/2	17.9	17.5	18.32	18.33
3/4	23.2	22.8	23.67	23.68
1	29.0	28.6	29.69	29.72
1 1/4	37.7	37.3	38.45	38.48
1 1/2	44.0	43.5	44.52	44.55
2	56.0	55.5	56.56	56.59

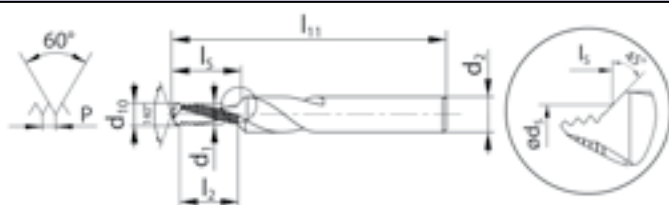
Fraisage  
Fresatura

D <sub>f</sub>	L <sub>3</sub>
20.37	13.57
25.69	14.05
32.18	16.79
40.90	17.30
49.67	17.30
58.99	17.70

# BGF

**BGF6760**

**BGF6760VS**

**VS**

**BGF6760**
**BGF6760VS**


$\varnothing D_1$ M	P mm	$d_1$ mm	$d_{10}$ mm	$l_{11}$ mm	$l_2$ mm	$l_3$ mm	$d_3$ mm	$d_2$ mm	
4	0.70	3.10	3.30	48	5.6	7.4	4.1	6	2
5	0.80	4.00	4.20	54	7.2	9.4	5.1	6	2
6	1.00	4.75	5.00	62	9.0	11.7	6.2	8	2
8	1.25	6.50	6.75	74	11.2	14.6	8.2	10	2
10	1.50	8.25	8.50	80	14.9	19.1	10.3	12	2
12	1.75	9.95	10.25	90	17.4	22.1	12.3	14	2
14	2.00	11.60	12.00	102	19.9	25.1	14.4	16	2
16	2.00	13.60	14.00	102	23.9	29.5	16.4	18	2

**ID**
**ID**

153400

153415

153401

153416

153402

153417

151911

153418

153403

151442

153404

153419

\* 153405

\* 153420

\* 153406

\* 153421



## BGF

BGF6765



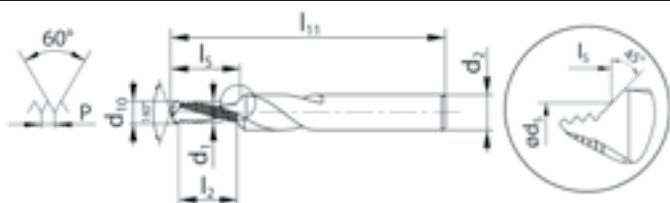
BGF6765VS



BGF6766



BGF6766VS



BGF6765

BGF6765VS

BGF6766

BGF6766VS



Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	d <sub>10</sub> mm	l <sub>11</sub> mm	l <sub>2</sub> mm	l <sub>s</sub> mm	d <sub>s</sub> mm	d <sub>2</sub> mm	
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4	0.70	3.10	3.30	48	7.7	9.5	4.1	6	2
5	0.80	4.00	4.20	54	9.6	11.8	5.1	6	2
6	1.00	4.75	5.00	62	12.0	14.7	6.2	8	2
8	1.25	6.50	6.75	74	15.0	18.4	8.2	10	2
10	1.50	8.25	8.50	80	19.4	23.6	10.3	12	2
12	1.75	9.95	10.25	90	22.7	27.3	12.3	14	2
14	2.00	11.60	12.00	102	27.9	33.1	14.4	16	2
16	2.00	13.60	14.00	102	31.9	37.5	16.4	18	2

ID

ID

153430	153442
151305	151306
150933	151776
153431	150588
153432	150589
153433	150927
* 153434	* 153443
* 153435	* 151324

Ø D <sub>1</sub> M	P mm	d <sub>1</sub> mm	d <sub>10</sub> mm	l <sub>11</sub> mm	l <sub>2</sub> mm	l <sub>s</sub> mm	d <sub>s</sub> mm	d <sub>2</sub> mm	
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6	1.00	4.75	5.00	62	15.0	17.7	6.2	8	2
8	1.25	6.50	6.75	74	20.0	23.4	8.2	10	2
10	1.50	8.25	8.50	80	23.9	28.1	10.3	12	2
12	1.75	9.95	10.25	90	29.7	34.3	12.3	14	2
14	2.00	11.60	12.00	102	35.9	41.1	14.4	16	2
16	2.00	13.60	14.00	102	39.9	45.5	16.4	18	2

ID

ID

153451	153467
153452	153468
153453	153469
153454	153470
* 153455	* 153471
* 153456	* 153472



## BGF

BGF6865



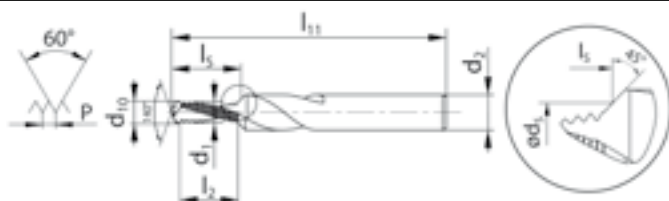
BGF6865VS



BGF6866



BGF6866VS



$\varnothing D_1$ M	P mm	$d_1$ mm	$d_{10}$ mm	$l_{11}$ mm	$l_2$ mm	$l_3$ mm	$d_5$ mm	$d_2$ mm	
6	1.00	4.75	5.00	62	12.0	14.7	6.2	8	3
8	1.25	6.50	6.75	74	14.9	18.4	8.2	10	3
10	1.50	8.25	8.50	80	19.4	23.6	10.3	12	3
12	1.75	9.95	10.25	90	22.7	27.3	12.3	14	3
14	2.00	11.60	12.00	102	27.9	33.1	14.4	16	3
16	2.00	13.60	14.00	102	31.9	37.5	16.4	18	3

$\varnothing D_1$ M	P mm	$d_1$ mm	$d_{10}$ mm	$l_{11}$ mm	$l_2$ mm	$l_3$ mm	$d_5$ mm	$d_2$ mm	
6	1.00	4.75	5.00	62	15.0	17.7	6.2	8	3
8	1.25	6.50	6.75	74	20.0	23.4	8.2	10	3
10	1.50	8.25	8.50	80	23.9	28.1	10.3	12	3
12	1.75	9.95	10.25	90	29.7	34.3	12.3	14	3
14	2.00	11.60	12.00	102	35.9	41.1	14.4	16	3
16	2.00	13.60	14.00	102	39.9	45.5	16.4	18	3

BGF6865

BGF6865VS

BGF6866

BGF6866VS



ID

ID

\* 153577

\* 153589

\* 153578

\* 153590

\* 153579

\* 153591

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\* 153592

\* 153581

\* 153593

\* 153582

\* 153594

ID

ID

\* 153601

\* 153613

\* 153602

\* 153614

\* 153603

\* 153615

\* 153604

\* 153616

\* 153605

\* 153617

\* 153606

\* 153618



## BGF

BGF6760



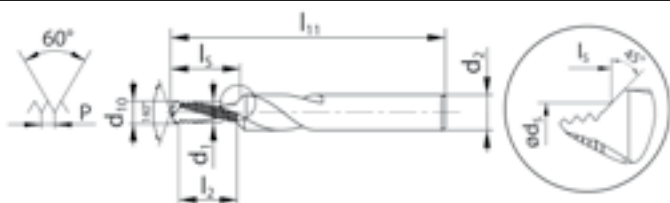
BGF6760VS



BGF6765



BGF6765VS



BGF6760



BGF6760VS



BGF6765



BGF6765VS



Ø D <sub>1</sub> MF	P mm	d <sub>1</sub> mm	d <sub>10</sub> mm	l <sub>11</sub> mm	l <sub>2</sub> mm	l <sub>s</sub> mm	d <sub>s</sub> mm	d <sub>2</sub> mm	
6	0.75	5.00	5.25	62	9.0	11.4	6.2	8	2
8	1.00	6.75	7.00	74	12.0	15.0	8.2	10	2
10	1.00	8.75	9.00	80	15.0	18.5	10.3	12	2
12	1.00	10.70	11.00	90	18.0	21.9	12.3	14	2
12	1.50	10.20	10.50	90	17.9	22.5	12.3	14	2
14	1.50	12.10	12.50	102	20.9	26.0	14.4	16	2
16	1.50	14.10	14.50	102	23.9	29.4	16.4	18	2

ID

ID

\* 153759

\* 153780

\* 153761

\* 153782

\* 153762

\* 153783

\* 153764

\* 153785

\* 153765

\* 153786

\* 153766

\* 153787

\* 153767

\* 153788

Ø D <sub>1</sub> MF	P mm	d <sub>1</sub> mm	d <sub>10</sub> mm	l <sub>11</sub> mm	l <sub>2</sub> mm	l <sub>s</sub> mm	d <sub>s</sub> mm	d <sub>2</sub> mm	
6	0.75	5.00	5.25	62	9.0	11.4	6.2	8	2
8	1.00	6.75	7.00	74	12.0	15.0	8.2	10	2
10	1.00	8.75	9.00	80	15.0	18.5	10.3	12	2
12	1.00	10.70	11.00	90	18.0	21.9	12.3	14	2
12	1.50	10.20	10.50	90	17.9	22.5	12.3	14	2
14	1.50	12.10	12.50	102	20.9	26.0	14.4	16	2
16	1.50	14.10	14.50	102	23.9	29.4	16.4	18	2

ID

ID

\* 153802

\* 153824

\* 153804

\* 153826

\* 153805

\* 153827

\* 153807

\* 153829

\* 153808

\* 153830

\* 153809































\* 153831








\* 153810

\* 153832

# Répertoire - Filières rondes, filières pour automates, écrous égalisateurs et filières cloches

## Rubrica - Filiere tonda, filiere per torni automatici, dadi compensatori e filiere a campana

		N		MS	Z		N	Z
<b>Caractéristiques</b> <b>Caratteristiche</b>								
								
								
								
								
		N5110	N5120	MS5120	Z5120	Z5120LL	N5220	Z5220
M 6g	DIN 13	246	246		247	247	260	260
M 6e	DIN 13		246				260	
M 6g LH	DIN 13		246					
MF 6g	DIN 13	248	248-250		248-249		261	
MF 6e	DIN 13		248-249					
MF 6g LH	DIN 13		248-250					
UNC	ANSI B1.1	251	251					
UNF	ANSI B1.1	252	252					
UNEF	ANSI B1.1		253					
UN	ANSI B1.1		253					
UNS	ANSI B1.1		253					
G (BSP)	DIN ISO 228		254	255	255			
G (BSP) LH	DIN ISO 228		254					
G (BSP) -0.1 mm	DIN ISO 228			255				
R (BSPT)	DIN EN 10226		256					
NPT	ANSI B1.20.1		257					
NPTF	ANSI B1.20.3		257					
PG	DIN 40430		258					
TR	DIN 103		258					
W (BSW)	BS 84		259					
W (BSW) LH	BS 84		259					

N	
	
	
	
	
<b>N5310</b>	<b>N5420</b>
262	263
262	
263	
263	

## Pictogrammes - Simboli



HSS  
HSS



HSSE  
HSSE



1.25 filets d'entrée  
1.25 filetti d'imbocco



1.75 filets d'entrée  
1.75 filetti d'imbocco



2 filets d'entrée  
2 filetti d'imbocco



Entrée à hélice dès Ø 3 mm  
Imbocco corretto a partire da Ø 3 mm



Entrée à hélice des 2 côtés dès Ø 3 mm  
Imbocco corretto dei 2 lati a partire da Ø 3 mm



Nombre de lèvres  
Numero delle scanalature



Diamètre de tournage  
Diametro di tornitura



Nitruration ( $d_1 \geq 3 \text{ mm}$ ,  $P \geq 0.5 \text{ mm}$ )  
Nitrurazione ( $d_1 \geq 3 \text{ mm}$ ,  $P \geq 0.5 \text{ mm}$ )



Filière avec 2 trous de fixation  
Filiere con 2 fori di fissaggio



Tolérance 6g  
Tolleranza 6g



Tolérance 6e  
Tolleranza 6e



Tolérance "Medium Class"  
Tolleranza "Medium Class"




Tolérance A  
Tolleranza A



Filetage conique 1:16 (NPT - NPTF - R)  
Filettatura conica 1:16 (NPT - NPTF - R)







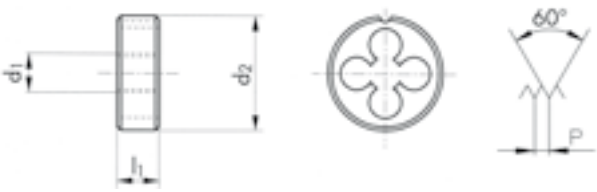







Filetage à gauche  
Filettatura sinistra

<div> <div>N5110</div> <div> <div>11</div> <div>12</div> </div> </div>								N5110	N5120	N5120 LH	N5120
<div> <div>N5120</div> <div> <div>11</div> <div>12</div> </div> </div>											
<div> <div>N5120 LH</div> <div> <div>11</div> <div>12</div> </div> <div>LH</div> </div>											
<div> <div>N5120</div> <div> <div>11</div> <div>12</div> </div> </div>											
<div>  </div>								<div>1.75 x P</div>	<div>1.75 x P</div>	<div>1.75 x P</div>	<div>1.75 x P</div>
								<div>6g</div>	<div>6g</div>	<div>6g</div>	<div>6e</div>
<div>Ø d<sub>1</sub></div> <div>M</div>	<div>P</div> <div>mm</div>	<div>d<sub>2</sub></div> <div>mm</div>	<div>l<sub>1</sub></div> <div>mm</div>	<div>6g</div>	<div>LH / 6e</div>	<div>→ 6g ←</div>	<div>→ 6e ←</div>	ID	ID	ID	ID 6g - mm
1	0.25	16.0	5.0	3		0.97		103851			
1.1	0.25	16.0	5.0	3		1.07		124659			
1.2	0.25	16.0	5.0	3		1.17		103852			
1.4	0.30	16.0	5.0	3		1.36		103853			
1.6	0.35	16.0	5.0	3		1.54		103855			
1.7	0.35	16.0	5.0	3		1.64		103856			
1.8	0.35	16.0	5.0	3		1.74		103857			
2	0.40	16.0	5.0	3		1.93	1.90	103864			
2.2	0.45	16.0	5.0	3		2.13		103867			
2.3	0.40	16.0	5.0	3		2.23		103869			
2.5	0.45	16.0	5.0	3		2.43	2.40	103872			
2.6	0.45	16.0	5.0	3		2.53		103876			
3	0.50	20.0	5.0	3	4	2.92	2.90	103879	104067	104068	104066 0.030
3.5	0.60	20.0	5.0	3	4	3.41	3.38	103880	104071	104072	* 104070 0.030
4	0.70	20.0	5.0	3	4	3.91	3.87	103881	104114	104115	104113 0.035
4.5	0.75	20.0	7.0	4		4.40		103882	104117		
5	0.80	20.0	7.0	4	4	4.90	4.87	103883	104146	104147	104145 0.035
5.5	0.90	20.0	7.0	4		5.40		103884			
6	1.00	20.0	7.0	4	4	5.88	5.85	103885	104165	104166	104164 0.035
7	1.00	25.0	9.0	4	4	6.88		103886	104174	104175	
8	1.25	25.0	9.0	4	4	7.87	7.83	103887	104186	104187	104185 0.035
9	1.25	25.0	9.0	4		8.87		103888	104191		
10	1.50	30.0	11.0	4	4	9.85	9.82	103858	103953	103954	103952 0.035
12	1.75	38.0	14.0	4	4	11.83	11.80	103859	103973	103974	103972 0.035
14	2.00	38.0	14.0	4	4	13.82		103860	103989	103990	
16	2.00	45.0	18.0	4	4	15.82	15.79		104003	104004	* 104002 0.035
18	2.50	45.0	18.0	5		17.79		* 103862	104015		
20	2.50	45.0	18.0	5	5	19.79		103878	104028	104029	
22	2.50	55.0	22.0	5		21.79			104035		
24	3.00	55.0	22.0	5	5	23.76			104043	104044	
27	3.00	65.0	25.0	5		26.76			104058		
30	3.50	65.0	25.0	5	5	29.73			104079	104080	
33	3.50	65.0	25.0	6		32.73			104089		
36	4.00	65.0	25.0	7		35.70			104100		


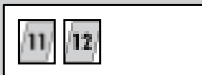
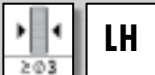
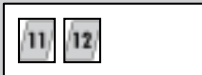





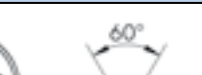




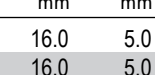
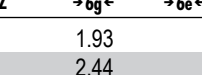

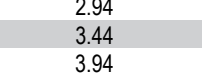
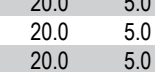

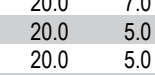
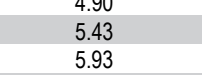

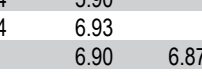

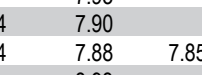
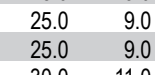
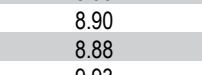

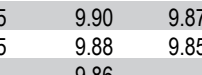
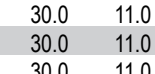
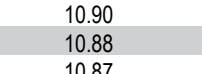
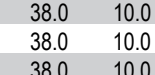
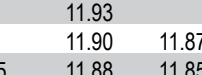

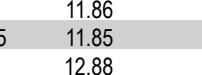






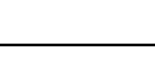
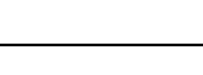




≤ M1.4


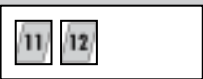

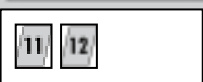

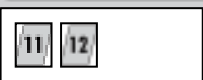






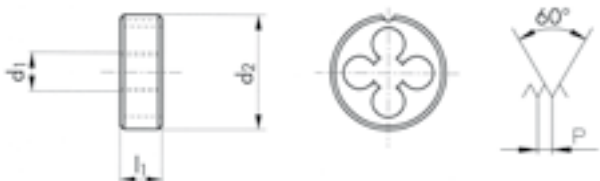












6h






















<div> <div>Z5120</div> <div>  <div>NI</div> </div> <div> <div>13</div> <div>14</div> <div>21</div> </div> </div> <div> <div>Z5120 LL</div> <div>  <div>NI</div> </div> <div> <div>13</div> <div>14</div> <div>15</div> <div>21</div> </div> </div>							Z5120	Z5120 LL		
							 			
										
										
$\varnothing d_1$ M	P mm	$d_2$ mm	$l_1$ mm	 Z5120	 Z5120LL	 6g	ID	ID		
2	0.40	16.0	3.5	4	4	1.93	125269	105115		
2.5	0.45	16.0	5.0	4	4	2.43	104779	105116		
2.6	0.45	16.0	5.0	4		2.53	104780			
3	0.50	20.0	5.0	4	5	2.92	104788	105117		
3.5	0.60	20.0	5.0	4		3.41	104789			
4	0.70	20.0	5.0	4	5	3.91	104790	105118		
5	0.80	20.0	7.0	4	5	4.90	104792	105119		
6	1.00	20.0	7.0	4	5	5.88	104795	105120		
7	1.00	25.0	9.0	4		6.88	111424			
8	1.25	25.0	9.0	5	6	7.87	104798	105121		
10	1.50	30.0	11.0	5	6	9.85	104767	105122		
12	1.75	38.0	14.0	5	6	11.83	104770	105123		
14	2.00	38.0	14.0	5		13.82	104773			
16	2.00	45.0	18.0	5		15.82	104776			
18	2.50	45.0	18.0	5		17.79	104778			
20	2.50	45.0	18.0	5		19.79	104783			
24	3.00	55.0	22.0	6		23.76	104787			











N5120								N5120		N5120 LH		N5120		Z5120			
																	
																	
																	
																	
																	
																	
																	
																	

N5120						N5120		N5120 LH		N5120		Z5120			
N5120 LH				LH											
N5120															
Z5120				NI											
															
															
Ø d <sub>1</sub> MF	P mm	d <sub>2</sub> mm	l <sub>1</sub> mm	 N	 Z	 6g	 6e	ID	ID	ID	6g - mm	ID			
14	0.50	38.0	10.0	5		13.93		103977							
14	0.75	38.0	10.0	5		13.90		103979							
14	1.00	38.0	10.0	5	5	13.88		103981	103982			104771			
14	1.25	38.0	10.0	5		13.86		103983							
14	1.50	38.0	10.0	5	5	13.85		103986	103987			104772			
15	1.00	38.0	10.0	5		14.88		103991							
15	1.50	38.0	10.0	5		14.85		103992							
16	1.00	45.0	14.0	5	5	15.88	15.85	103996	103997	* 103995	0.035	104774			
16	1.25	45.0	14.0	5		15.87		103998							
16	1.50	45.0	14.0	5	5	15.85		104000	104001			104775			
17	1.00	45.0	14.0	5		16.88		104005							
18	1.00	45.0	14.0	5		17.88		104008							
18	1.50	45.0	14.0	5	5	17.85		104011	104012						
18	2.00	45.0	14.0	5		17.82		104013							
19	1.00	45.0	14.0	6		18.88		104017							
20	1.00	45.0	14.0	6	6	19.88		104021	104022			104781			
20	1.50	45.0	14.0	6	6	19.85		104024	104025			104782			
20	2.00	45.0	14.0	6		19.82		104026	* 104027						
21	1.00	45.0	14.0	7		20.88		111386							
22	1.00	55.0	16.0	6		21.88		104030							
22	1.50	55.0	16.0	5	6	21.85		104032							
22	2.00	55.0	16.0	5		21.82		104034							
23	1.00	55.0	16.0	6		22.88		121704							
24	1.00	55.0	16.0	6		23.88		104037							
24	1.50	55.0	16.0	6	6	23.85		104039							
24	2.00	55.0	16.0	6		23.82		104041	104042						
25	1.00	55.0	16.0	6		24.88		104045							
25	1.50	55.0	16.0	6		24.85		104046							
26	1.00	55.0	16.0	7		25.88		104049							
26	1.50	55.0	16.0	6		25.85		104050							
26	2.00	55.0	16.0	6		25.82		104052							
27	1.00	65.0	18.0	6		26.88		104053							
27	1.50	65.0	18.0	6		26.85		104054	* 104055						
27	2.00	65.0	18.0	6		26.82		104056							

<div> <div>N5120</div> <div>  <div> <div>11</div> <div>12</div> </div> </div> </div> <div> <div>N5120 LH</div> <div>  <div>LH</div> <div> <div>11</div> <div>12</div> </div> </div> </div>						N5120	N5120 LH		
 									
									
									
<div> <div>Ø d<sub>1</sub></div> <div>MF</div> </div>	P mm	d <sub>2</sub> mm	l <sub>1</sub> mm		 → 6g ←	ID	ID		
28	1.00	65.0	18.0	6	27.88	104060			
28	1.50	65.0	18.0	6	27.85	104061			
30	1.00	65.0	18.0	7	29.88	104073			
30	1.50	65.0	18.0	6	29.85	104074			
30	2.00	65.0	18.0	6	29.82	104076			
32	1.50	65.0	18.0	7	31.85	104082	* 104083		
33	1.50	65.0	18.0	7	32.85	104085			
33	2.00	65.0	18.0	7	32.82	104086			
33	3.00	65.0	25.0	7	32.76	* 104088			
34	1.50	65.0	18.0	7	33.85	104091			
35	1.50	65.0	18.0	8	34.85	104092	* 104093		
36	1.50	65.0	18.0	8	35.85	104095	* 104096		
36	2.00	65.0	18.0	8	35.82	104097			
36	3.00	65.0	25.0	7	35.76	104099			
38	1.50	75.0	20.0	7	37.85	104101			
39	1.50	75.0	20.0	7	38.85	104104			
40	1.50	75.0	20.0	8	39.85	104118	* 104119		
40	2.00	75.0	20.0	7	39.82	104120			
42	1.50	75.0	20.0	8	41.85	104122			
42	3.00	75.0	20.0	8	41.76	104125			
45	1.50	90.0	22.0	7	44.85	104127			
45	2.00	90.0	22.0	7	44.82	104129			
48	1.50	90.0	22.0	8	47.85	104133	* 104134		
48	2.00	90.0	22.0	8	47.82	104135			
48	3.00	90.0	22.0	7	47.76	104137			
50	1.50	90.0	22.0	8	49.85	104150			
60	2.00	105.0	22.0	9	59.82	104168			

N5110						N5110		N5120			
N5120											
											
											
$\varnothing'' d_1$ UNC	P TPI	$d_2$ mm	$l_1$ mm		 →2A←	ID	ID				
1	64	16.0	5.0	3	1.79	103893					
2	56	16.0	5.0	4	2.12	103894					
3	48	16.0	5.0	4	2.44	103895					
4	40	16.0	5.0	4	2.76	103896					
5	40	20.0	5.0	4	3.09		104263				
6	32	20.0	7.0	4	3.41		104266				
8	32	20.0	7.0	4	4.07		104269				
10	24	20.0	7.0	4	4.71		104258				
12	24	20.0	7.0	4	5.37		104259				
1/4	20	20.0	7.0	4	6.22		104256				
5/16	18	25.0	9.0	4	7.80		104264				
3/8	16	30.0	11.0	4	9.37		104262				
7/16	14	30.0	11.0	4	10.95		104267				
1/2	13	38.0	14.0	4	12.52		111387				
9/16	12	38.0	14.0	4	14.10		104270				
5/8	11	45.0	18.0	4	15.68		104265				
3/4	10	45.0	18.0	5	18.84		104261				
7/8	9	55.0	22.0	5	22.00		104268				
1	8	55.0	22.0	5	25.16		104257				
1 1/4	7	65.0	25.0	6	31.49		104251				
1 1/2	6	75.0	30.0	6	37.81		104250				
2	4.5	90.0	36.0	7	50.45		* 104260				













N5110						N5110		N5120			
N5120											
											
											
Ø" d <sub>1</sub> UNF	P TPI	d <sub>2</sub> mm	l <sub>1</sub> mm			ID	ID				
0	80	16.0	5.0	3	1.47	103897					
1	72	16.0	5.0	3	1.79	103898					
2	64	16.0	5.0	4	2.12	103899					
3	56	16.0	5.0	4	2.44	103900					
4	48	16.0	5.0	4	2.77	103901					
5	44	20.0	5.0	4	3.10		104299				
6	40	20.0	5.0	4	3.42		104302				
8	36	20.0	7.0	4	4.08		104305				
10	32	20.0	7.0	4	4.73		104295				
12	28	20.0	7.0	4	5.38		104296				
1/4	28	20.0	7.0	4	6.24		104293				
5/16	24	25.0	9.0	4	7.82		104300				
3/8	24	30.0	11.0	4	9.41		104298				
7/16	20	30.0	11.0	5	10.98		104303				
1/2	20	38.0	10.0	5	12.56		104292				
9/16	18	38.0	10.0	5	14.14		104306				
5/8	18	45.0	14.0	5	15.73		104301				
3/4	16	45.0	14.0	6	18.89		104297				
7/8	14	55.0	16.0	5	22.05		104304				
1	12	55.0	16.0	6	25.21		104294				
1 1/4	12	65.0	18.0	7	31.56		104289				
1 1/2	12	75.0	20.0	7	37.91		111390				



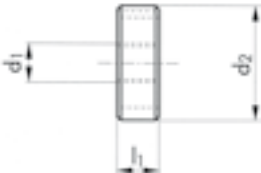




# UNEF, UNS, UN

ANSI B1.1

HSS



<b>N5120</b>  						<b>N5120</b>			
									
									
									
$\varnothing'' d_1$ UNEF	P TPI	$d_2$ mm	$l_1$ mm		 →2A←	ID			
12	32	20.0	7.0	4	5.39	104278			
1/4	32	20.0	7.0	4	6.25	104275			
5/16	32	25.0	9.0	4	7.84	104283			
3/8	32	30.0	11.0	4	9.42	104282			
7/16	28	30.0	11.0	5	11.00	104285			
1/2	28	38.0	10.0	5	12.59	104274			
9/16	24	38.0	10.0	5	14.17	104287			
5/8	24	45.0	14.0	5	15.75	104284			
3/4	20	45.0	14.0	5	18.91	104281			
13/16	20	45.0	14.0	6	20.50	* 104279			
7/8	20	55.0	16.0	5	22.09	* 104286			
1	20	55.0	16.0	6	25.26	* 104276			
$\varnothing'' d_1$ UNS	P TPI	$d_2$ mm	$l_1$ mm		 →2A←	ID			
1/4	40	20.0	5.0	4	6.26	104309			
1/4	36	20.0	5.0	4	6.26	104308			
7/16	24	30.0	11.0	5	10.99	104311			
1/2	24	38.0	10.0	5	12.58	104307			
1	14	55.0	16.0	6	25.23	104310			
$\varnothing'' d_1$ UN	P TPI	$d_2$ mm	$l_1$ mm		 →2A←	ID			
1 1/8	8	65.0	25.0	5	28.33	104246			
1 1/4	8	65.0	25.0	6	31.51	104245			
1 1/2	8	75.0	20.0	7	37.85	104244			
1 3/4	8	90.0	22.0	7	44.20	104247			

<div> <div>N5120</div> <div>  <div> <div>11</div> <div>12</div> </div> </div> </div> <div> <div>N5120 LH</div> <div>  <div> <div>LH</div> <div> <div>11</div> <div>12</div> </div> </div> </div> </div>						N5120	N5120 LH		
  									
						<div>A</div>	<div>A</div>		
<div> <div> <div>Ø" d<sub>1</sub></div> <div>G</div> </div> <div>P</div> <div>TPI</div> </div>	<div> <div>d<sub>2</sub></div> <div>mm</div> </div>	<div> <div>l<sub>1</sub></div> <div>mm</div> </div>	<div> <div>⊕</div> </div>	<div> <div>→ A ←</div> </div>		ID	ID		
1/8	28	30.0	11.0	5	9.62	103926			
1/4	19	38.0	10.0	5	13.03	103924	103925		
3/8	19	45.0	14.0	5	16.54	103935	103936		
1/2	14	45.0	14.0	6	20.81	103922	103923		
5/8	14	55.0	16.0	5	22.77	103938			
3/4	14	55.0	16.0	6	26.30	103933	103934		
7/8	14	65.0	18.0	6	30.06	103940			
1	11	65.0	18.0	7	33.07	103928			
1 1/4	11	75.0	20.0	8	41.73	103918			
1 3/8	11	90.0	22.0	7	44.14	* 103921			
1 1/2	11	90.0	22.0	8	47.62	103917			
2	11	105.0	22.0	9	59.43	103932			
2 1/2	11	120.0	22.0	10	74.97	103930			










# G DIN ISO 228 (BSP)

Z  
HSSE

MS  
HSS

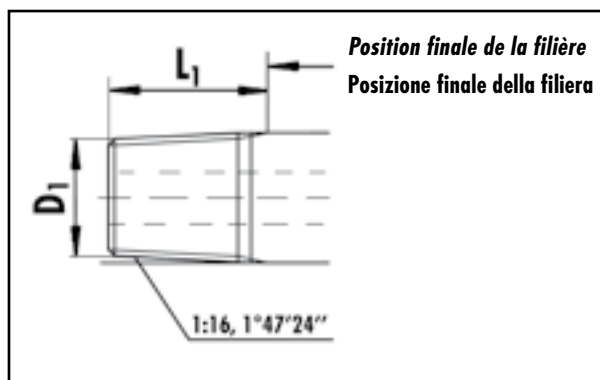


Z5120		NI		13	14	21	Z5120	MS5120	MS5120	
MS5120										
MS5120										
Ø" d <sub>1</sub> G	P TPI	d <sub>2</sub> mm	l <sub>1</sub> mm	Z	MS	→ A ←	ID	ID	ID	
1/8	28	30.0	11.0	5	5	9.62	104761	* 101339	* 142831	
1/4	19	38.0	10.0	5	5	13.03	104760	101338	* 142832	
3/8	19	45.0	14.0	5	5	16.54	104764	101342	119716	
1/2	14	45.0	14.0	6	6	20.81	104759	101337	119243	
3/4	14	55.0	16.0	6	6	26.30	104763	101341	119648	
1	11	65.0	18.0	8	7	33.07	104762	101340	135186	
1 1/2	11	90.0	22.0		8	47.62		* 142830		


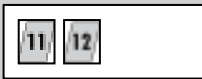











<b>N5120</b>  					<b>N5120</b>			
								
								
								
$\varnothing'' d_1$ R	P TPI	$d_2$ mm	$l_1$ mm		<b>ID</b>			
1/8	28	30.0	11.0	5	104226			
1/4	19	38.0	14.0	5	104225			
3/8	19	45.0	14.0	5	104230			
1/2	14	45.0	18.0	6	104224			
3/4	14	55.0	22.0	6	104229			
1	11	65.0	25.0	7	104227			

## Valeurs indicatives pour diamètres de tournage

## Valori teorici per diametri di tornitura

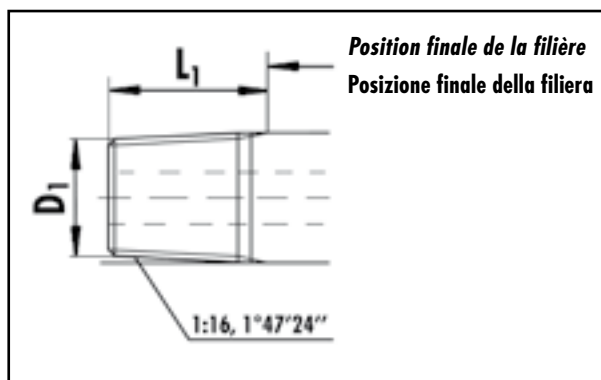


$\varnothing''$ R	$D_1$ mini mm	$D_1$ maxi mm	$D_1$ (guide line) mm	$L_1$ (guide line) mm
1/8	9.422	9.534	9.48	8.2
1/4	12.700	12.863	12.78	12.1
3/8	16.181	16.343	16.26	12.5
1/2	20.330	20.555	20.44	16.4
3/4	25.735	25.960	25.85	17.7
1	32.455	32.743	32.60	20.9




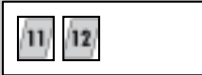











N5120			N5120	N5120		
N5120			NPT	NPTF		
						
						
$\varnothing'' d_1$ NPT, NPTF	P TPI	$d_2$ mm	$l_1$ mm		ID	ID
1/16	27	25.0	9.0	4	104194	
1/8	27	30.0	11.0	5	104197	* 104207
1/4	18	38.0	14.0	5	104196	
3/8	18	45.0	14.0	5	104201	
1/2	14	45.0	18.0	6	104195	* 104205
3/4	14	55.0	22.0	6	104200	
1	11.5	65.0	25.0	7	104198	* 104208
1 1/4	11.5	75.0	26.0	8	104193	












### Valeurs indicatives pour diamètres de tournage

### Valori teorici per diametri di tornitura










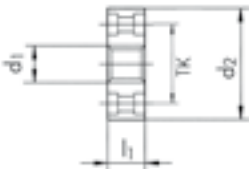






$\varnothing''$ NPT	$D_1$ mini mm	$D_1$ maxi mm	$D_1$ (guide line) mm	$L_1$ (guide line) mm	$\varnothing''$ NPTF	$D_1$ mini mm	$D_1$ maxi mm	$D_1$ (guide line) mm	$L_1$ (guide line) mm
1/16	7.521	7.643	7.58	8.4	1/16	7.525	7.617	7.57	8.4
1/8	9.866	9.988	9.93	8.5	1/8	9.870	9.962	9.92	8.5
1/4	13.099	13.255	13.18	12.7	1/4	13.129	13.215	13.17	12.7
3/8	16.518	16.674	16.60	12.9	3/8	16.548	16.634	16.59	12.9
1/2	20.551	20.713	20.63	16.8	1/2	20.617	20.703	20.66	16.8
3/4	25.866	26.028	25.95	17.1	3/4	25.932	26.018	25.98	17.1
1	32.419	32.591	32.51	21.3	1	32.475	32.561	32.52	21.3
1 1/4	41.144	41.316	41.23	21.9					

<div> <div>N5120</div> <div>   </div> </div> <div> <div>N5120</div> <div>   </div> </div>						<div>N5120</div> <div> <div>PG</div>  </div>	<div>N5120</div> <div> <div>TR</div>  </div>		
  									
<div> <div>Ø d<sub>1</sub></div> <div>PG</div> </div>	P	d <sub>2</sub>	l <sub>1</sub>	<div> <div>⊕</div> <div>→ ←</div> </div>	<div> <div>→ ←</div> </div>	ID			
7	20	38.0	10.0	5	12.40	104220			
9	18	38.0	10.0	5	15.10	104221			
11	18	45.0	14.0	5	18.50	104212			
13.5	18	45.0	14.0	6	20.30	104213			
16	18	55.0	16.0	5	22.40	104214			
21	16	65.0	18.0	6	28.15	* 104215			
29	16	65.0	18.0	8	36.85	* 104216			
36	16	90.0	22.0	8	46.85	* 104217			
42	16	90.0	22.0	10	53.85	* 104218			
48	16	105.0	22.0	9	59.15	* 104219			
  									
						<div>7e</div>			
<div> <div>Ø d<sub>1</sub></div> <div>TR</div> </div>	P	d <sub>2</sub>	l <sub>1</sub>	<div> <div>⊕</div> <div>→ ←</div> </div>	<div> <div>→ ←</div> </div>	ID			
* 10	2	38.0	14.0	4	9.91	* 104231			
12	3	38.0	14.0	4	11.88	* 104232			
16	4	45.0	18.0	4	15.85	* 104234			
26	5	65.0	25.0	5	25.83	* 104239			
28	5	65.0	25.0	5	27.83	* 104240			
32	6	65.0	25.0	6	31.81	* 104242			
36	6	65.0	25.0	6	35.81	* 104243			
<div> <div>*</div> <div>  </div> </div>									

<div> <div>N5120</div> <div>  <div> <div>11</div> <div>12</div> </div> </div> </div> <div> <div>N5120 LH</div> <div>  <div> <div>LH</div> <div> <div>11</div> <div>12</div> </div> </div> </div> </div>						N5120	N5120 LH		
 									
									
									
$\varnothing'' d_1$ W	P TPI	$d_2$ mm	$l_1$ mm			ID	ID		
1/8	40	20.0	5.0	4	3.09	104320			
5/32	32	20.0	7.0	4	3.88	104333			
3/16	24	20.0	7.0	4	4.66	104325			
1/4	20	20.0	7.0	4	6.24	104318			
5/16	18	25.0	9.0	4	7.82	104331			
3/8	16	30.0	11.0	4	9.40	104329			
7/16	14	30.0	11.0	4	10.98	104336			
1/2	12	38.0	14.0	4	12.56	104316			
5/8	11	45.0	18.0	4	15.72	104334	* 104335		
3/4	10	45.0	18.0	5	18.89	104327	* 104328		
7/8	9	55.0	22.0	5	22.10	* 104338			
1	8	55.0	22.0	5	25.27	104322			
1 3/8	6	65.0	25.0	6	34.77	* 104315			



N5310							N5310			
<div>11 12</div>										
							<div>1.75 x P</div> <div>6g</div>			
Ø d <sub>1</sub> M	P mm	s mm	l <sub>1</sub> mm	+	→ ←		ID			
3	0.50	18.0	5.0	3	2.92		104464			
3.5	0.60	18.0	5.0	3	3.41		* 104465			
4	0.70	18.0	5.0	3	3.91		104478			
4.5	0.75	18.0	7.0	3	4.41		* 104479			
5	0.80	18.0	7.0	4	4.90		104487			
6	1.00	18.0	7.0	4	5.88		104493			
7	1.00	21.0	9.0	4	6.88		* 104497			
8	1.25	21.0	9.0	4	7.87		104502			
9	1.25	21.0	9.0	5	8.87		* 104503			
10	1.50	27.0	11.0	4	9.85		104438			
12	1.75	36.0	14.0	4	11.83		104443			
14	2.00	36.0	14.0	4	13.82		104445			
16	2.00	41.0	18.0	4	15.82		104447			
18	2.50	41.0	18.0	5	17.79		104450			
20	2.50	41.0	18.0	5	19.79		104453			
22	2.50	50.0	22.0	5	21.79		104456			
24	3.00	50.0	22.0	5	23.76		104459			
27	3.00	60.0	25.0	5	26.76		* 104463			
30	3.50	60.0	25.0	5	29.73		104468			
52	5.00	85.0	36.0	8	51.66		* 104489			
Ø d <sub>1</sub> MF	P mm	s mm	l <sub>1</sub> mm	+	→ ←		ID			
6	0.75	18.0	7.0	4	5.90		* 104492			
8	0.75	21.0	9.0	4	7.90		* 104500			
8	1.00	21.0	9.0	4	7.88		* 104501			
12	1.00	36.0	10.0	4	11.88		* 104440			
20	1.50	41.0	14.0	6	19.85		* 104451			
27	1.50	60.0	18.0	6	26.85		* 104461			
27	2.00	60.0	18.0	6	26.82		* 104462			
30	2.00	60.0	18.0	6	29.82		* 104467			
33	1.50	60.0	18.0	7	32.85		* 104469			
33	2.00	60.0	18.0	7	32.82		* 104470			
38	1.50	70.0	20.0	8	37.85		* 104475			
39	1.50	70.0	20.0	8	38.85		* 104476			
40	1.50	70.0	20.0	8	39.85		* 104480			
64	2.00	115.0	22.0	8	63.82		* 104495			

N5220							N5220			
   										
  										
										
$\varnothing d_1$ MF	P mm	d <sub>2</sub> mm	l <sub>1</sub> mm		TK mm		ID			
3	0.35	16.0	3.0	4	12.2	2.94	104373			
4	0.35	16.0	3.5	4	12.2	3.94	* 104377			
4	0.50	16.0	4.0	4	12.2	3.93	104378			
5	0.50	20.0	5.0	4	15.0	4.93	104382			
6	0.50	20.0	5.0	4	15.0	5.93	104385			
6	0.75	20.0	7.0	4	15.0	5.90	104386			
7	0.50	25.0	7.0	4	19.0	6.93	* 104389			
7	0.75	25.0	7.0	4	19.0	6.90	* 104390			
8	0.75	25.0	7.0	4	19.0	7.90	* 104394			
8	1.00	25.0	7.0	4	19.0	7.88	* 104395			
10	0.75	30.0	7.0	6	23.0	9.90	* 104350			
10	1.00	30.0	7.0	6	23.0	9.88	* 104351			
10	1.25	25.0	9.0	6	19.0	9.86	* 104352			
12	1.00	30.0	7.0	6	23.0	11.88	* 104355			
12	1.50	30.0	11.0	6	23.0	11.85	* 104356			
14	1.00	35.0	10.0	6	27.5	13.88	* 104359			
14	1.50	35.0	10.0	6	27.5	13.85	* 104360			



N5310						N5310			



**G**

DIN ISO 228 (BSP)

**W**

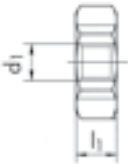








BS 84

**M**

ISO DIN 13









HSS



N5310						N5310	N5310		N5420
N5310									
N5420									
  						  			
						  			
Ø" d <sub>1</sub> G	P TPI	s mm	l <sub>1</sub> mm	⊕	→ ←	ID			
1/4	19	36.0	10.0	5	13.03	104428			
3/8	19	41.0	14.0	5	16.54	104433			
1/2	14	41.0	14.0	6	20.81	104427			
5/8	14	50.0	16.0	6	22.77	* 104434			
3/4	14	50.0	16.0	6	26.30	104432			
7/8	14	60.0	18.0	6	30.06	* 104435			
1	11	60.0	18.0	7	33.07	104430			
1 3/8	11	85.0	22.0	7	44.14	* 104426			
1 3/4	11	100.0	22.0	8	53.57	* 104425			
Ø" d <sub>1</sub> W	P TPI	s mm	l <sub>1</sub> mm	⊕	→ ←	ID			
1/8	40	18.0	5.0	3	3.09	* 104512			
3/16	24	18.0	7.0	3	4.66	* 104515			
7/16	14	27.0	11.0	5	10.98	* 104520			
9/16	12	36.0	14.0	4	14.14	* 104522			
7/8	9	50.0	22.0	5	22.10	* 104521			
1 3/8	6	60.0	25.0	6	34.77	* 104508			
1 1/2	6	70.0	30.0	6	37.95	* 104504			
1 3/4	5	85.0	36.0	6	44.28	* 104507			
2	4.5	85.0	36.0	7	50.63	* 104514			
Ø d <sub>1</sub> M	P mm	d <sub>2</sub> mm	l <sub>1</sub> mm	⊕	→ ←	ID			
2.5	0.45	16.0	8.0	4	2.43	* 104527			
3.5	0.60	16.0	9.5	4	3.41	* 104530			
4	0.70	16.0	9.5	4	3.90	* 104531			
8	1.25	25.0	14.0	5	7.86	* 104535			

**Répertoire - Tampons de filetage, jauges bagues de filetage**  
**Rubrica - Calibri a tampone e ad anello filettati**

<b>Caractéristiques Caratteristiche</b>								
								
		<b>D5701-1</b>	<b>D5701-2</b>	<b>D5703</b>		<b>D5720</b>	<b>D5722</b>	<b>D5725</b>
<b>M 6H / 6g</b>	<b>ISO DIN 13</b>	<b>266</b>	<b>266</b>	<b>266</b>				
<b>M 6G / 6e</b>	<b>ISO DIN 13</b>			<b>266</b>				
<b>M 6H / 6g LH</b>	<b>ISO DIN 13</b>			<b>266</b>				
<b>MF 6H / 6g</b>	<b>ISO DIN 13</b>	<b>268-269</b>	<b>269</b>	<b>268-269</b>				
<b>MF 6G / 6e</b>	<b>ISO DIN 13</b>			<b>268</b>				
<b>MF 6H / 6g LH</b>	<b>ISO DIN 13</b>			<b>268</b>				
<b>UNC</b>	<b>ANSI B1.1</b>	<b>272</b>		<b>272</b>				
<b>UNF</b>	<b>ANSI B1.1</b>	<b>273</b>		<b>273</b>				
<b>UNEF</b>	<b>ANSI B1.1</b>			<b>273</b>				
<b>NPT</b>	<b>ANSI B1.20.1</b>					<b>275</b>		
<b>NPTF</b>	<b>ANSI B1.20.3</b>					<b>275</b>		
<b>G (BSP)</b>	<b>DIN ISO 228</b>	<b>274</b>	<b>274</b>	<b>274</b>				
<b>PG</b>	<b>DIN 40430</b>							<b>274</b>
<b>EG M</b>	<b>ISO DIN 8140</b>			<b>276</b>				
<b>EG UNC</b>	<b>NASM 33537</b>			<b>276</b>				
<b>EG UNF</b>	<b>NASM 33537</b>			<b>276</b>				

			
			
D5704	D5714	D5721	D5723
267	267		
267	267		
267			
270-271	270-271		
270			
272	272		
273	273		
273	273		
		275	
		275	
274	274		
274			

## Pictogrammes - Simboli



"Entre"  
"Passa"



"N'entre pas"  
"Non passa"



"Entre" et "N'entre pas"  
"Passa" e "Non passa"



Tolérance 6H, "Entre"  
Tolleranza 6H, "Passa"



Tolérance 6G, "Entre" et "N'entre pas"  
Tolleranza 6G, "Passa" e "Non passa"




















Tolérance 6g, "N'entre pas"  
Tolleranza 6g, "Non passa"









Filetage à gauche  
Filettatura sinistra





		D5701-1	D5701-2	D5703	D5703 LH	D5703	
D5701-1 M1 - M1.4 =  D5703 M1 - M1.4 = 		    					
					 LH		
Ø d <sub>1</sub> M	P mm	ID	ID	ID	ID	ID	
1	0.25			100242			
1.1	0.25			100243			
1.2	0.25			100244			
1.4	0.30			100245			
1.6	0.35			100246	* 110168		
1.7	0.35			100247			
1.8	0.35			100248	* 110169		
2	0.40			100278	105159	104982	
2.2	0.45			100280			
2.3	0.40			100281			
2.5	0.45			100283	105160	104979	
2.6	0.45	* 100064		100285			
3	0.50			100310	104964	104976	
3.5	0.60			100312		104977	
4	0.70			100333	104966	104978	
4.5	0.75	* 100114					
5	0.80			100348	104967	104980	
6	1.00			100363	104968	104981	
7	1.00			100369	* 110186		
8	1.25			100373	104969	104983	
9	1.25			100375			
10	1.50			100253	104970	104984	
11	1.50			* 100256			
12	1.75			100261	104971	104985	
14	2.00	* 100045		100266		104986	
16	2.00			100271	104973	104987	
18	2.50	* 100055		100276		* 104988	
20	2.50	* 100068		100289	104975	104989	
22	2.50	* 100072		100293	* 110178		
24	3.00	* 100076		100297	110179		
27	3.00			100305	* 110180		
30	3.50			100316			
33	3.50	* 100101		100322			
36	4.00	* 100107		100328			
39	4.00	* 100109		100330			
42	4.50	100119	142843				
45	4.50	100122	142844				
48	5.00	100125	142845				
52	5.00	100132	142846				
56	5.50	100137	142847				



		D5704	D5704 LH	D5704	D5714	D5714	
D5704 M1 - M1.4 = <div>6h</div>		<div></div>					
D5714 M1 - M1.4 = <div>6h</div>							
		<div>6g</div>	<div>6g</div>	LH	<div>6e</div>	<div>6g</div>	<div>6e</div>
Ø d <sub>1</sub> M	P mm	ID	ID	ID	ID	ID	
1	0.25	100480			110419		
1.2	0.25	100481			110420		
1.4	0.30	100482			110421		
1.6	0.35	100483			110422		
1.7	0.35	100484			111439		
1.8	0.35	100485			110423		
2	0.40	100515	105006	* 104997	100734	* 142833	
2.2	0.45	100517			100735		
2.3	0.40	100518			100736		
2.5	0.45	100520		* 104991	100737	* 142834	
2.6	0.45	100522			100738		
3	0.50	100547	105001	* 104990	100763	* 142835	
3.5	0.60	100549	110302	* 110301	100765	* 142836	
4	0.70	100570	105003	* 104992	100774	* 142837	
5	0.80	100585	105004	* 104993	100778	* 143406	
6	1.00	100600	105005	* 104994	100781	* 135556	
7	1.00	100605	* 126560	* 104995	100783	* 142840	
8	1.25	100611	105007	* 104996	100786	* 142841	
9	1.25	100610			100788		
10	1.50	100490	105008	* 104998	100711	* 142842	
11	1.50	* 100493			* 100713		
12	1.75	100498	105009		100718		
14	2.00	100503	105010		100723		
16	2.00	100508	105011	* 105000	100728		
18	2.50	100513	105012		100733		
20	2.50	100526	105013		100742		
22	2.50	100530	110298		100746		
24	3.00	100534			100750		
27	3.00	100542			100758		
30	3.50	100553			100769		
33	3.50	* 100559			* 100770		
36	4.00		* 110305				
39	4.00				* 110440		
42	4.50	* 100577					
45	4.50	* 100580			* 110448		
48	5.00				* 110451		
52	5.00	* 100590			* 110456		
56	5.50	* 100595			* 110461		





		D5701-1	D5703	D5703 LH	D5703		
							
				 			
Ø d <sub>1</sub> MF	P mm	ID	ID	ID	ID		
2.5	0.35		100282				
3	0.35		100309				
4	0.35		100331				
4	0.50		100332				
4.5	0.50		* 100334				
5	0.50		100347	105016	105045		
6	0.50	* 100140	100361	110184			
6	0.75		100362		105046		
7	0.50		100367				
7	0.75	* 100147	100368				
8	0.50	* 100149	100370				
8	0.75		100371	105018	105047		
8	1.00	* 100151	100372	105019	105048		
9	1.00		100374				
10	0.50		100249				
10	0.75		100250				
10	1.00		100251	105020	105049		
10	1.25	* 100031	100252				
11	0.75	* 100033					
11	1.00	* 100034	100255				
12	0.75	* 100036	100257				
12	1.00		100258	105021	105050		
12	1.25		100259				
12	1.50	* 100039	100260	105022			
14	1.00		100263	110171			
14	1.25		100264				
14	1.50	* 100044	100265	105023	105052		
15	1.00	* 100046	100267				
15	1.50		100268				
16	1.00		100269	110172			
16	1.50	* 100049	100270	105024	105053		
17	1.00		100272				
18	1.00		100273				
18	1.50	* 100053	100274	105025	105054		
18	2.00	* 100054	100275				
20	1.00	* 100065	100286				
20	1.50		100287	105026			
20	2.00	* 100067	100288		* 110176		
22	1.00		100290				
22	1.50		100291	110177			
22	2.00		100292				
24	1.00		100294				
24	1.50		100295				
24	2.00		100296				

		D5701-1	D5701-2	D5703			
							
							
Ø d <sub>1</sub> MF	P mm	ID	ID	ID			
25	1.00	* 100077		100298			
25	1.50			100299			
25	2.00			100300			
26	1.00			100301			
26	1.50	* 100081		100302			
27	1.50	* 100082		100303			
27	2.00	* 100083		100304			
28	1.00			100306			
28	1.50	* 100086		100307			
28	2.00	* 100087		100308			
30	1.00	* 100092		100313			
30	1.50			100314			
30	2.00			100315			
32	1.00			100317			
32	1.50	* 100097		100318			
32	2.00			100319			
33	1.50			100320			
33	2.00	* 100100		100321			
35	1.50	* 100102		100323			
36	1.50	* 100104		100325			
36	2.00			100326			
36	3.00			100327			
38	1.50	* 100108		100329			
40	1.50			100336			
40	2.00			100337			
42	1.50	100117	142848				
42	2.00	100118	142849				
45	1.50	100120	110127				
45	2.00	100121	142851				
48	1.50	100123	123180				
48	2.00	100124	142853				
50	1.50	100128	142854				
50	2.00	100129	142855				
52	1.50	100130	123428				
52	2.00	100131	142857				
55	1.50	100133	123468				
55	2.00	100134	142859				
56	1.50	100135	142860				
56	2.00	100136	142861				
58	1.50	100138	142862				
58	2.00	100139	142863				
60	1.50	100143	142864				
60	2.00	100144	142865				








		D5704	D5704 LH	D5714			
							
							
Ø d <sub>1</sub> MF	P mm	ID	ID	ID			
2.5	0.35	100519		110427			
3	0.35	100546		100762			
3.5	0.35	100548		100764			
4	0.35	100568		100772			
4	0.50	100569		100773			
4.5	0.50	100571		100775			
5	0.50	100584	105057	100777			
6	0.50	100598	110307	100779			
6	0.75	100599	105058	100780			
7	0.50	100603		110467			
7	0.75	100604		100782			
8	0.50	100606					
8	0.75	100607	* 105059	100784			
8	1.00	100608	105060	100785			
9	1.00	100609		100787			
10	0.50	100486		100707			
10	0.75	100487		100708			
10	1.00	100488	105061	100709			
10	1.25	100489		100710			
11	1.00	100492		100712			
12	0.75	100494		100714			
12	1.00	100495	105062	100715			
12	1.25	100496		100716			
12	1.50	100497	105063	100717			
13	1.00	100499		100719			
14	1.00	100500	110290	100720			
14	1.25	100501		100721			
14	1.50	100502	105064	100722			
15	1.00	100504		100724			
15	1.50	100505		100725			
16	1.00	100506	110292	100726			
16	1.50	100507	105065	100727			
17	1.00	100509		100729			
18	1.00	100510		100730			
18	1.50	100511	105066	100731			
20	1.00	100523	110295	100739			
20	1.50	100524	105067	100740			
20	2.00	100525		100741			
22	1.00	100527		100743			
22	1.50	100528		100744			
22	2.00	100529		100745			
24	1.00	100531		100747			
24	1.50	100532		100748			
24	2.00	100533					



		D5704	D5714				
							
							
Ø d <sub>1</sub> MF	P mm	ID	ID				
25	1.00	100535					
25	1.50	100536					
26	1.00	100538	* 100754				
26	1.50	100539	* 100755				
27	1.50	100540	* 100756				
27	2.00	100541	* 100757				
28	1.00	100543					
28	1.50	100544	* 100760				
30	1.00	100550					
30	1.50	100551					
30	2.00	100552	* 100768				
32	1.00	100554					
32	1.50	100555					
32	2.00	100556	* 110431				
33	1.50	100557	* 110432				
33	2.00	100558	* 110433				
35	1.50	100560					
36	1.50	100562					
36	2.00	100563					
36	3.00	100564					
38	1.50	100566	* 110439				
40	1.50	100573	* 110441				
42	1.50	100575					
42	2.00	100576					
45	1.50	100578					
45	2.00	100579	* 110447				
48	1.50	100581	* 110449				
48	2.00	100582					
50	1.50	100586	* 110452				
50	2.00	100587	* 110453				
52	1.50		* 110454				
52	2.00	100589					
55	1.50	100591					
55	2.00	100592	* 110458				
56	1.50	100593	* 110459				
56	2.00	100594	* 110460				
58	1.50	100596					
58	2.00	100597	* 110463				
60	1.50	100601	* 110464				
60	2.00	105014					











		D5701-1	D5703	D5704	D5714		
							
							
Ø" d <sub>1</sub> UNC	P TPI	ID	ID	ID	ID		
1	64		100408	110347	110473		
2	56	* 110076	100414	110353	110479		
3	48	* 110077	100416		* 110480		
4	40	* 110080	110224	110357	110483		
5	40		100420	* 110358	* 110484		
6	32	* 110084	100423	110361	110487		
8	32	* 110087	100426	110364	110490		
10	24	* 110074	100412	110351	110477		
12	24		100413				
1/4	20		100410	110349	110475		
5/16	18	* 110082	100421	110359	110485		
3/8	16	* 110079	100418	110356	110482		
7/16	14	* 110085	100424	110362	110488		
1/2	13	* 110071	100409	110348	110474		
9/16	12		100427	110365	* 110491		
5/8	11	* 110083	100422	110360			
3/4	10	* 110078	100417	110355	* 110481		
7/8	9		100425	110363	* 110489		
1	8	* 110073	100411	110350	* 110476		
1 1/8	7	* 110068	100405	* 110345	* 110471		
1 1/4	7	* 110067	100404	* 110344	* 110470		
1 3/8	6	* 110069	100407	* 110346	* 110472		
1 1/2	6	* 110066	100403	* 110343	* 110469		

# UNF, UNEF

ANSI B1.1

ANSI B1.2

		D5701-1	D5703	D5704	D5714		
		<div></div>					
							
Ø" d <sub>1</sub> UNF	P TPI	ID	ID	ID	ID		
0	80		110246	* 110378	* 110503		
1	72	* 110105	110251	110383	110508		
2	64		110256	110389	110514		
3	56	* 110112	110257	110390	110515		
4	48		110260	110393	110518		
5	44	* 110116	* 110261				
6	40		110264	110397	110522		
8	36	* 110122	110267	* 110400			
10	32		110254	110387	110512		
12	28		110255	110388	110513		
1/4	28	* 110107	110006	110385	110510		
5/16	24	* 110117	110262	110395	110520		
3/8	24	* 110114	110259	110392	110517		
7/16	20	* 110120	110265	110398	111440		
1/2	20	* 110106	110252	110384	110509		
9/16	18		110268	110401			
5/8	18	* 110118	110263	110396			
3/4	16		110258	110391	* 110516		
7/8	14		110266	110399			
1	12		128646	110386			
1 1/8	12	* 110103	110249	110381	* 110506		
1 1/4	12	* 110102	110248	110380	* 110505		
1 3/8	12	* 110104	110250	* 110382	* 110507		
1 1/2	12		110247	110379			
Ø" d <sub>1</sub> UNEF	P TPI	ID	ID	ID	ID		
12	32	110238	* 110370	* 110495			
1/4	32	110236	110368	110493			
5/16	32	110241	110373	110498			
3/8	32	110240	110372	110497			
7/16	28	110243	110375	110500			
1/2	28	110235	110367	110492			
9/16	24	110245	110377	110502			
5/8	24	110242	110374	110499			
3/4	20	110239	110371	110496			
7/8	20	110244		* 110501			
1	20	110253	110369	110494			





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# NPT, NPTF



ANSI B1.20.1 / ANSI B1.20.3

ANSI B1.20.1 / ANSI B1.20.5

		D5720	D5721				
							
							
Ø" d <sub>1</sub> NPT	P TPI	ID	ID				
1/16	27	110190	110313				
1/8	27	110193	110316				
1/4	18	110192	110315				
3/8	18	110197	110320				
1/2	14	110191	110314				
3/4	14	110196	110319				
1	11.5	110194	110317				
1 1/4	11.5	110189	110312				
1 1/2	11.5	110188	110311				
2	11.5	110195	110318				
Ø" d <sub>1</sub> NPTF	P TPI	ID	ID				
1/8	27	110201	* 110324				
1/4	18	110200	* 110323				
3/8	18	110204	* 110327				
1/2	14	110199	* 110322				
3/4	14	110203	* 110326				
1	11.5	110202	* 110325				




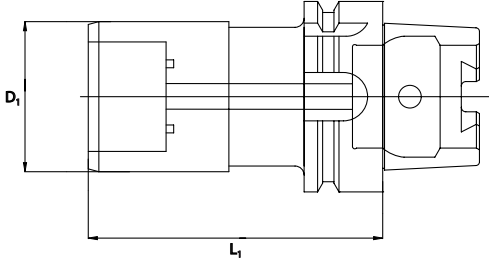
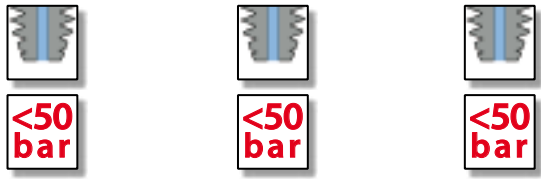



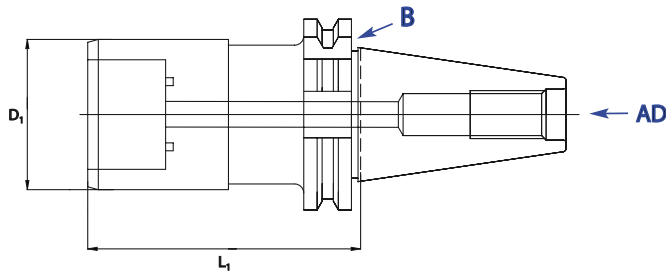
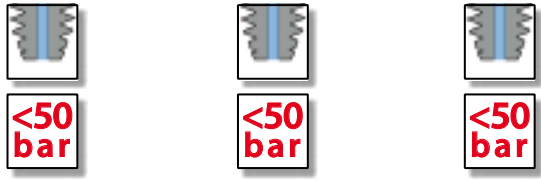


# EG M ISO DIN 8140 ISO DIN 1502 EG UNC, EG UNF NASM 33537

		D5703	D5703	D5703			
							
							
Ø d <sub>1</sub> EG M	P mm	ID					
2.5	0.45	110132					
3	0.50	110133					
4	0.70	110134					
5	0.80	110135					
6	1.00	110136					
8	1.25	110137					
10	1.50	110128					
12	1.75	110129					
16	2.00	110131					
Ø" d <sub>1</sub> EG UNC	P TPI	ID					
4	40	170252					
6	32	170253					
8	32	170254					
10	24	170255					
1/4	20	170256					
5/16	18	170257					
3/8	16	170258					
Ø" d <sub>1</sub> EG UNF	P TPI	ID					
6	40	170259					
8	36	170260					
10	32	161020					
1/4	28	151790					
5/16	24	170261					
3/8	24	160134					







DIN 69 893 A						SRT-HSK63-312	SRT-HSK63-520	SRT-HSK63-1433
<b>HSK</b>								
								
	<b>D<sub>1</sub></b> mm	<b>L<sub>1</sub></b> mm			<b>282</b>	<b>ID</b>	<b>ID</b>	<b>ID</b>
M3 - M12	36	72.0	HSK A 63	S1		170111		
M5 - M20	53	89.0	HSK A 63	S2			170112	
M14 - M33	78	121.0	HSK A 63	S3				170114
<b>MAS/BT Form AD + B</b>						SRT-BT40-312	SRT-BT40-520	SRT-BT40-1433
<b>BT</b>								
								
	<b>D<sub>1</sub></b> mm	<b>L<sub>1</sub></b> mm			<b>282</b>	<b>ID</b>	<b>ID</b>	<b>ID</b>
M3 - M12	36	71.0	BT 40	S1		170133		
M5 - M20	53	85.0	BT 40	S2			170134	
M14 - M33	78	121.0	BT 40	S3				170135

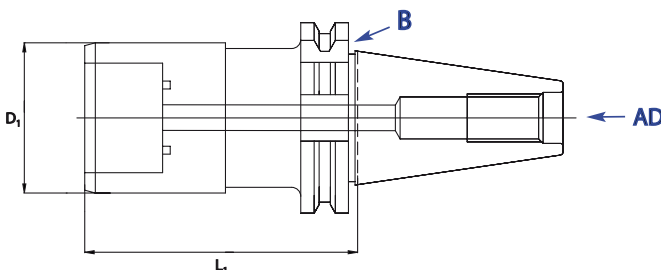




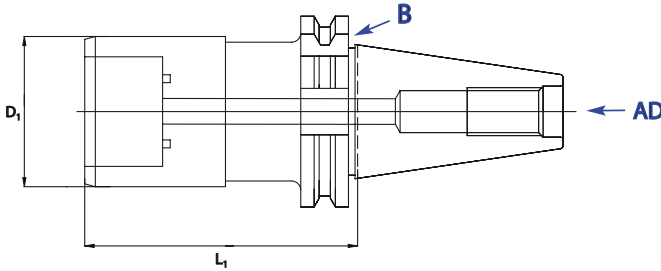






# SRT

**Mandrins de taraudage avec amortisseur axial**  
**Mandrini di maschiatura con ammortizzatore assiale**



Uniquement pour taraudage synchrone  
 Nur für Synchrobohrung  
 Only for rigid tapping  
 Solo per maschiatura sincrona  
 Solo para roscado sincronizado

DIN 69 871 Form AD + B						SRT-SK40-312	SRT-SK40-520	SRT-SK40-1433
<h2>SK</h2> 								
								
	<b>D<sub>1</sub></b> mm	<b>L<sub>1</sub></b> mm			<b>282</b>	<b>ID</b>	<b>ID</b>	<b>ID</b>
M3 - M12	36	65.0	SK 40	S1		170124		
M5 - M20	53	79.0	SK 40	S2			170125	
M14 - M33	78	115.0	SK 40	S3				170126
DIN 69 871 Form AD + B						SRT-SK50-520	SRT-SK50-1433	SRT-SK50-2248
<h2>SK</h2> 								
								
	<b>D<sub>1</sub></b> mm	<b>L<sub>1</sub></b> mm			<b>282</b>	<b>ID</b>	<b>ID</b>	<b>ID</b>
M5 - M20	53	79.0	SK 50	S2		170128		
M14 - M33	78	115.0	SK 50	S3			170129	
M22 - M48	96	170.0	SK 50	S4				170130

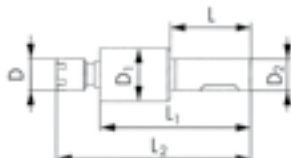

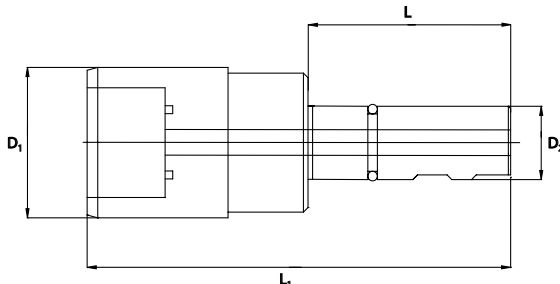






# SRT

## Mandrins de taraudage avec amortisseur axial

## Mandrini di maschiatura con ammortizzatore assiale



Uniquement pour taraudage synchrone  
Nur für Synchronbearbeitung  
Only for rigid tapping  
Solo per maschiatura sincrona  
Solo para roscado sincronizado




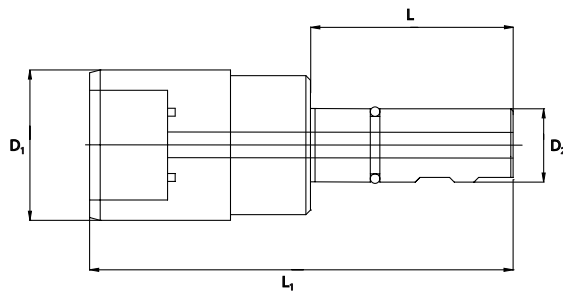








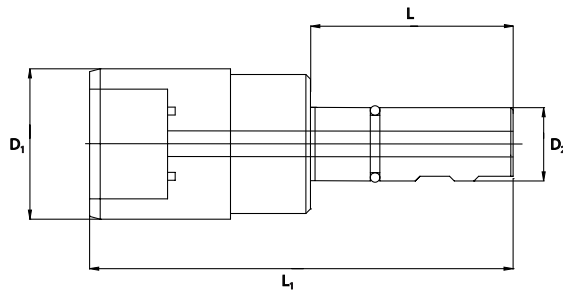





DIN 1835 B	SRT032-D6	SRT054-D12	ER8						
SRT nano									
SRT032 / SRT054		D9865-							
									
		ID	ID						
M0.3 - M2	12	11	6	25	40	56.0	157610		
M0.5 - M4	12	20	12	33	59	75.0		127413	
No	D2	L3	d2	ID					
	mm	mm	mm						
ER8-0200	8.5	13.5	2.0	118895					
ER8-0250	8.5	13.5	2.5	118896					
ER8-0300	8.5	13.5	3.0	118897					
ER8-0350	8.5	13.5	3.5	118898					
ER8-0400	8.5	13.5	4.0	118899					
ER8-0450	8.5	13.5	4.5	118900					
DIN 1835 B	SRT312-D20	SRT312-D25	SRT520-D25						
SRT short									
									
									
				 <b>&lt;30 bar</b>		 <b>&lt;30 bar</b>		 <b>&lt;30 bar</b>	
				ID	ID	ID	ID	ID	ID
M3 - M12	39	20	47	86.0	S1	162832			
M3 - M12	39	25	53	90.0	S1		162831		
M5 - M20	56	25	53	110.0	S2			162833	

# SRT

**Mandrins de taraudage avec amortisseur axial**  
**Mandrini di maschiatura con ammortizzatore assiale**

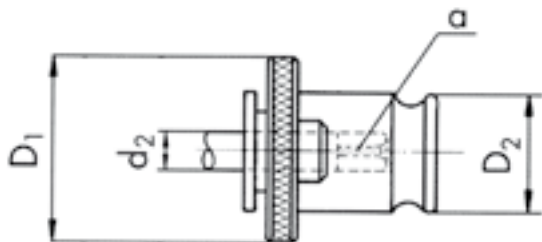


Uniquement pour taraudage synchrone  
 Nur für Synchrobohrung  
 Only for rigid tapping  
 Solo per maschiatura sincrona  
 Solo para roscado sincronizado

DIN 1835 B							SRT-1D20-312	SRT-1D25-312	SRT-2D25-520
<div>SRT</div>							<div><div></div><div></div><div></div></div>		
<div></div>							<div><div></div><div>&lt;50 bar</div></div> <div><div></div><div>&lt;50 bar</div></div> <div><div></div><div>&lt;50 bar</div></div>		
<div><div><div><div>D<sub>1</sub></div><div>mm</div></div><div><div>D<sub>2</sub></div><div>mm</div></div><div><div>L</div><div>mm</div></div><div><div>L<sub>1</sub></div><div>mm</div></div><div></div><div></div><div>282</div></div></div>							ID	ID	ID
M3 - M12362051.097S1							170140		
M3 - M12362557.0103S1								170020	
M5 - M20532557.0131S2									170141
DIN 1835 B							SRT-2D32-520	SRT-3D25-1433	SRT-3D32-1433
<div>SRT</div>							<div><div></div><div></div><div></div></div>		
<div></div>							<div><div></div><div>&lt;50 bar</div></div> <div><div></div><div>&lt;50 bar</div></div> <div><div></div><div>&lt;50 bar</div></div>		
<div><div><div><div>D<sub>1</sub></div><div>mm</div></div><div><div>D<sub>2</sub></div><div>mm</div></div><div><div>L</div><div>mm</div></div><div><div>L<sub>1</sub></div><div>mm</div></div><div></div><div></div><div>282</div></div></div>							ID	ID	ID
M5 - M20533261.5135.5S2							170142		
M14 - M33782557.0164.5S3								170143	
M14 - M33783261.5169.0S3									170144



## SRT



S1-

S2-

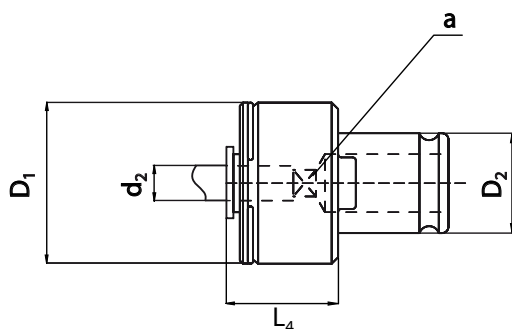
S3-

S4-



No	D <sub>1</sub> mm	D <sub>2</sub> mm	d <sub>2</sub> mm	α mm	ID	ID	ID	ID
S1-0028	30	19.0	2.8	2.1	129915			
S1-0035	30	19.0	3.5	2.7	129916			
S1-0045	30	19.0	4.5	3.4	129918			
S1-0060	30	19.0	6.0	4.9	129920			
S1-0070	30	19.0	7.0	5.5	129921			
S1-0080	30	19.0	8.0	6.2	129922			
S1-0090	30	19.0	9.0	7.0	129923			
S1-0100	30	19.0	10.0	8.0	129924			
S1-0110	30	19.0	11.0	9.0	129925			
S2-0060	48	31.0	6.0	4.9		129927		
S2-0070	48	31.0	7.0	5.5		129928		
S2-0080	48	31.0	8.0	6.2		129929		
S2-0090	48	31.0	9.0	7.0		129930		
S2-0100	48	31.0	10.0	8.0		129931		
S2-0110	48	31.0	11.0	9.0		148303		
S2-0120	48	31.0	12.0	9.0		129932		
S2-0140	48	31.0	14.0	11.0		129933		
S2-0160	48	31.0	16.0	12.0		129934		
S2-0180	48	31.0	18.0	14.5		151355		
S3-0110	70	48.0	11.0	9.0			170145	
S3-0120	70	48.0	12.0	9.0			170146	
S3-0140	70	48.0	14.0	11.0			170147	
S3-0160	70	48.0	16.0	12.0			170148	
S3-0180	70	48.0	18.0	14.5			170149	
S3-0200	70	48.0	20.0	16.0			170150	
S3-0220	70	48.0	22.0	18.0			170151	
S3-0250	70	48.0	25.0	20.0			170152	
S4-0180	96	60.0	18.0	14.5				170153
S4-0200	96	60.0	20.0	16.0				170154
S4-0220	96	60.0	22.0	18.0				170155
S4-0250	96	60.0	25.0	20.0				170156
S4-0280	96	60.0	28.0	22.0				170157
S4-0320	96	60.0	32.0	24.0				170158
S4-0360	96	60.0	36.0	29.0				170159

# CLASSIC



SC1-

SC2-

SC3-

SC4-



No	D <sub>1</sub> mm	D <sub>2</sub> mm	d <sub>2</sub> mm	a mm	L <sub>4</sub> mm	ID	ID	ID	ID
SC1-0028	32	19.0	2.8	2.1	25	170160			
SC1-0035	32	19.0	3.5	2.7	25	170161			
SC1-0045	32	19.0	4.5	3.4	25	170162			
SC1-0060	32	19.0	6.0	4.9	25	170163			
SC1-0070	32	19.0	7.0	5.5	25	170164			
SC1-0080	32	19.0	8.0	6.2	25	170165			
SC1-0090	32	19.0	9.0	7.0	25	170166			
SC1-0100	32	19.0	10.0	8.0	25	170167			
SC2-0060	50	31.0	6.0	4.9	34		170168		
SC2-0070	50	31.0	7.0	5.5	34		170169		
SC2-0080	50	31.0	8.0	6.2	34		170170		
SC2-0090	50	31.0	9.0	7.0	34		170171		
SC2-0100	50	31.0	10.0	8.0	34		170172		
SC2-0110	50	31.0	11.0	9.0	34		170173		
SC2-0120	50	31.0	12.0	9.0	34		170174		
SC2-0140	50	31.0	14.0	11.0	34		170175		
SC2-0160	50	31.0	16.0	12.0	34		170176		
SC2-0180	50	31.0	18.0	14.5	34		170177		
SC3-0110	72	48.0	11.0	9.0	45			170178	
SC3-0120	72	48.0	12.0	9.0	45			170179	
SC3-0140	72	48.0	14.0	11.0	45			170180	
SC3-0160	72	48.0	16.0	12.0	45			170181	
SC3-0180	72	48.0	18.0	14.5	45			170182	
SC3-0200	72	48.0	20.0	16.0	45			170183	
SC3-0220	72	48.0	22.0	18.0	45			170184	
SC3-0250	72	48.0	25.0	20.0	45			170185	
SC4-0180	96	60.0	18.0	14.5	68				170186
SC4-0200	96	60.0	20.0	16.0	68				170187
SC4-0220	96	60.0	22.0	18.0	68				170188
SC4-0250	96	60.0	25.0	20.0	68				170189
SC4-0280	96	60.0	28.0	22.0	68				170190
SC4-0320	96	60.0	32.0	24.0	68				170191
SC4-0360	96	60.0	36.0	29.0	68				170192
















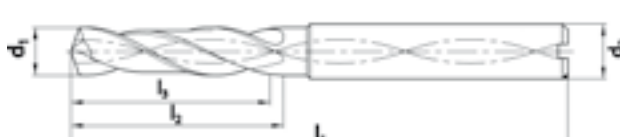




**Forets hélicoïdaux en carbure monobloc**  
**Punte elicoidali in metallo duro integrale**

VHM  
CAR

DC  
DIN 6537 HAK














HBK  
HEK

sur demande  
auf Anfrage  
on request  
su richiesta  
sobre pedido

						F313VS	F285VS	F286VS	
<div><div>F313VS</div><div><div></div><div></div><div>VS</div></div><div><div></div><div></div><div>VS</div></div><div><div><div>11121314</div><div>15212223</div><div>24415163</div><div>71727374</div></div><div><div>1112131415</div><div>1621222324</div><div>3132515271</div><div>727374</div></div></div></div>						<div></div> <div></div> <div></div>			
<div></div>						<div></div> <div></div> <div></div>			
<div><div><div><div><div><math>\varnothing d_1</math> (h<sub>7</sub>)</div><div>d<sub>2</sub> (h<sub>6</sub>) mm</div><div>l<sub>1</sub> mm</div><div>l<sub>2</sub> mm</div></div><div></div><div></div></div><div><div>0.883.038.08.02M 1</div><div>1.083.038.010.02M 1.2</div><div>1.253.038.012.02M 1.4</div><div>1.453.038.012.02M 1.6</div><div>1.653.038.012.02M 1.8</div><div>1.803.038.012.02M 2</div><div>1.953.038.012.02UNC 2-56</div><div>2.303.038.016.02M 2.5</div><div>2.553.038.016.02UNC 4-40</div><div>2.803.038.016.02M 3</div></div></div></div>						<div>ID</div> <div>158515</div> <div>158516</div> <div>158517</div> <div>158518</div> <div>158519</div> <div>158520</div> <div>158521</div> <div>158522</div> <div>158523</div> <div>158524</div>			
<div></div>									
<div><div><div><div><div><math>\varnothing d_1</math> (m<sub>7</sub>)</div><div>d<sub>2</sub> (h<sub>6</sub>) mm</div><div>l<sub>1</sub> mm</div><div>l<sub>2</sub> mm</div><div>l<sub>3</sub> mm</div></div><div></div><div></div></div><div><div>3.256.062.020.014.02M 3.5</div><div>3.706.062.020.014.02M 4</div><div>4.656.066.024.017.02M 5</div><div>5.556.066.028.020.02M 6</div><div>7.408.079.041.029.02M 8</div><div>9.3010.089.047.035.02M 10</div><div>11.2012.0102.055.040.02M 12</div></div></div></div>						<div>ID</div> <div>158527</div> <div>158528</div> <div>158532</div> <div>158534</div> <div>158540</div> <div>158544</div> <div>158546</div>			
<div><div><div><div><div><math>\varnothing d_1</math> (m<sub>7</sub>)</div><div>d<sub>2</sub> (h<sub>6</sub>) mm</div><div>l<sub>1</sub> mm</div><div>l<sub>2</sub> mm</div><div>l<sub>3</sub> mm</div></div><div></div><div></div></div><div><div>3.306.066.028.023.02M 4</div><div>4.206.074.036.029.02M 5</div><div>5.006.082.044.035.02M 6</div><div>6.808.091.053.043.02M 8</div><div>8.5010.0103.061.049.02M 10</div><div>10.2012.0118.071.056.02M 12</div></div></div></div>						<div>ID</div> <div>160989</div> <div>160990</div> <div>160991</div> <div>160992</div> <div>160993</div> <div>160994</div>			


# Assortiments d'outils de filetage

## Assortimenti di maschi

Boxset				D5855	D5860	D5891
D5855		ISO 2 6H	N1110-S M3, M4, M5, M6, M8, M10 N1210-S M12			
D5860		ISO 2 6H	N1110-S M3, M4, M5, M6, M8, M10 N1210-S M12			
		HSS	FO DIN 338 D2.5, 3.3, 4.2, 5.0, 6.8, FO DIN 338 8.5, 10.2			
D5891		ISO 2 6H	N310-3 M3, M4, M5, M6, M8, M10 N410-3 M12			
No D5855 / D5860 / D5891				ID	ID	ID
M3 - M12				118728	118733	170922
Boxset				D5892		
D5892	 	 ISO 2 6H	N320V-4 M3, M4, M5, M6, M8, M10			
No D5892				ID		
M3 - M10				170921		
Boxset				D5896		
D5896	 	 ISO 2 6H	N360V-3 M3, M4, M5, M6, M8, M10			
No D5896				ID		
M3 - M10				167599		

## Porte-filières et tourne-à-gauche

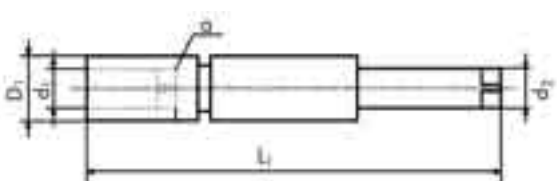

### Porta-filiere e giramaschi

<b>D5810-</b> <i>Porte-filière pour filières rondes, selon normes DIN EN 22568, DIN EN 24230, DIN EN 24231, DIN EN 40434.</i> Porta-filiere per filiere tonde, DIN EN 22568, DIN EN 24230, DIN EN 24231, DIN EN 40434.									<b>D5810-</b>	<b>D5820-</b>
<b>D5820-</b> <i>Tourne-à-gauche réglable DIN 1814</i> Giramaschi regolabili DIN 1814										
DIN EN No D5810-	Ø	M Ø	MF Ø	UNC Ø	UNF Ø	UNEF UNS UN Ø	W Ø	G (BSP) Ø	NPT NPTF R (BSPT) Ø	ID
1	16 x 5	1 - 2.6	2 - 2.6	No 1 - 4	No 1 - 4		1/16" - 3/32"			170712
2	20 x 5	3 - 4	3 - 6	No 5	No 5 - 6		1/8"			170713
3	20 x 7	4.5 - 6		No 6 - 1/4"	No 8 - 1/4"	No 12 - 1/4"	5/32" - 1/4"			170714
4	25 x 9	7 - 9	7 - 9	5/16"	5/16"	5/16"	5/16"		1/16"	170715
5	30 x 11	10 - 11	10 - 11	3/8" - 7/16"	3/8" - 7/16"	3/8" - 7/16"	3/8" - 7/16"	1/8"	1/8"	170716
6	38 x 10		12 - 15		1/2" - 9/16"	1/2" - 9/16"		1/4"		170717
7	38 x 14	12 - 14		1/2" - 9/16"			1/2" - 9/16"		1/4"	170718
8	45 x 14		16 - 20		5/8" - 3/4"	5/8" - 13/16"		3/8" - 1/2"	3/8"	170719
9	45 x 18	16 - 20		5/8" - 3/4"			5/8" - 3/4"		1/2"	170720
10	55 x 16		22 - 26		7/8" - 1"	7/8" - 1"		5/8" - 3/4"		170721
11	55 x 22	22 - 24		7/8" - 1"			7/8" - 1"		3/4"	170722
12	65 x 18		*27 - 36		1 1/8" - 1 3/8"	1 1/16" - 1 3/8"		7/8" - 1"		170723
13	65 x 25	27 - 36		1 1/8" - 1 3/8"			1 1/8" - 1 3/8"		1"	170724
14	75 x 20		38 - 42		1 1/2"	1 7/16" - 1 1/2"		1 1/8" - 1 1/4"		170725
15	75 x 30	39 - 42		1 1/2"			1 1/2" - 1 5/8"			170726
16	90 x 22		45 - 52			1 3/4" - 2"		1 3/8" - 1 3/4"		170727
17	90 x 36	45 - 52		1 3/4" - 2"			1 3/4" - 2"			170728
18	105 x 22		55 - 65					2" - 2 1/4"		170729
* Utiliser le No 13 pour le pas de 3 mm. Per passo 3 mm utilizzare N.13.										
No D5820-	a mm									ID
0	1.9 - 3.0									170730
1	2.5 - 5.5									170731
2	4.3 - 8.0									170732
3	5.5 - 12.0									170733
4	9.5 - 15.5									170734
5	12.5 - 22.4									170735



# Rallonges pour tarauds

## Prolunghe per maschi

<b>D5830-</b> Rallonge pour taraud, ~DIN 377. Prolunghe per maschi, ~DIN 377. <b>D5840-</b> Rallonge pour taraud. Prolunghe per maschi.					<b>D5830-</b>	<b>D5840-</b>		
								
No D5830-	a mm	L <sub>1</sub> mm	D <sub>1</sub> mm		ID			
1	2.10	60	6		110571			
2	2.24	70	6		110572			
3	2.40	70	6		110573			
4	2.50	80	7		110574			
5	2.80	90	7		110575			
6	3.00	90	7		110579			
7	3.15	95	7		110580			
8	3.40	95	8		110581			
9	3.55	100	8		118706			
10	3.80	100	9		118707			
11	4.00	105	10		118708			
12	4.30	105	10		118709			
13	4.50	105	10		118710			
14	4.90	110	10		118711			
15	5.00	110	11		118712			
16	5.50	115	12		118713			
17	5.60	110	12		118714			
18	6.20	120	14		118715			
19	6.30	120	14		118716			
20	7.00	125	15		118717			
21	7.10	120	15		118718			
22	7.50	120	15		118719			
23	8.00	125	17		118720			
24	9.00	130	19		118721			
25	10.00	140	21		110562			
26	11.00	150	23		110563			
27	11.20	145	23		110564			
28	12.00	155	25		110565			
29	12.50	160	25		110566			
30	14.00	165	28		110567			
31	14.50	175	29		110568			
32	16.00	180	30		110569			
33	18.00	200	33		110570			
34	20.00	220	36		110576			
35	22.00	220	40		110577			
36	22.40	240	40		110578			
No D5840-	a mm	L <sub>1</sub> mm	d <sub>2</sub> mm	d <sub>1</sub> mm	D <sub>1</sub> mm	ID		
10	2.70	130	6	3.5	7.5	169928		
11	3.40	130	6	4.5	8.5	169929		
1	4.90	130	6	6.0	12.0	142137		
2	5.50	130	7	7.0	13.0	142138		
3	6.20	130	8	8.0	13.0	142139		
4	7.00	130	9	9.0	17.0	142140		
5	8.00	130	10	10.0	17.0	142141		
6	9.00	130	11	11.0	17.0	142142		
7	9.00	130	12	12.0	20.0	142143		
8	11.00	130	14	14.0	20.0	142144		
9	12.00	130	16	16.0	25.0	142145		

# TABELLE DE DURETÉ - TABELLA DI DUREZZA

HRC	HB	HV	N/mm <sup>2</sup> Mpa
<i>Dureté Rockwell</i>	<i>Dureté Brinell</i>	<i>Dureté Vickers</i>	<i>Résistance à la traction</i>
Durezza Rockwell	Durezza Brinell	Durezza Vickers	Resistenza a la trazione
25	253	266	854
26	254	273	873
27	265	279	897
28	272	286	914
29	274	294	944
30	287	302	970
31	295	310	995
32	302	318	1024
33	311	327	1052
34	320	336	1082
35	329	345	1111
36	337	355	1139
37	346	364	1168
38	354	373	1198
39	363	382	1227
40	373	392	1262
41	382	402	1296
42	392	412	1327
43	402	423	1362
44	413	434	1401
45	424	446	1442
46	436	459	1481
47	448	471	1524
48	460	484	1572
49	474	499	1625
50	488	513	1668
51	502	528	1733
52	518	545	1793
53	532	560	1845
54	548	578	1912
55	566	596	1979
56	585	615	2050
57	603	634	2121
58		654	
59		675	
60		698	

*Table de conversion pour valeurs de dureté, selon DIN 50150*  
*Tabella di conversione per il valore di durezza, sec. DIN 50150*

# POUCES-MM - POLlici-MM

Ø" d <sub>1</sub>	Ø mm	TPI UN												W(BSW)	BSF	G (BSP) R <sub>p</sub>	Ø mm
		UNC	UNF	UNEF	4	6	8	12	16	20	28	32					
0 1/16"	1.52 1.59 1.85 2.18 2.38		80 64 56										48		28	7.72	
3 4 5 1/8"	2.51 2.84 3.17 3.17 3.50	48 40 40 32	56 48 44 40										40		28	9.72	
5/32" 8 3/16" 10 12	3.96 4.16 4.76 4.82 5.48	32 32 24 24	36 32 32 28	32									32 24	32			
7/32" 1/4" 9/32" 5/16" 3/8"	5.55 6.35 7.14 7.93 9.52	20 18 16	28 24 24	32 32						20 20	28 28		24 20 16	28 26 26 20	19 19	13.15 16.66	
7/16" 1/2" 9/16" 5/8" 11/16"	11.11 12.70 14.28 15.87 17.46	14 13 12 11	20 20 18 18	28 28 24 24				12 12	16 16 16 16	20 20 20	28 28 28 28	32 32 32 32	14 12 12 11	18 16 16 14 14	14 14	20.95 22.91	
3/4" 13/16" 7/8" 15/16" 1"	19.05 20.64 22.22 23.81 25.40	10 9 8	16 14 12	20 20 20 20				12 12 12 12	16 16 16 16		28 28 28 28	32 32 32 32	10 9 8	12 11 10	14 14 11	26.44 30.20 33.24	
1 1/16" 1 1/8" 1 3/16" 1 1/4" 1 5/16"	26.99 28.57 30.16 31.75 33.34	7 7	12 12	18 18 18		8 8 8 8	12 12 12	16 16 16 16	20 20 20 20	28 28 28 28			7 7	9 9	11 11	37.89 41.91	
1 3/8" 1 7/16" 1 1/2" 1 9/16" 1 5/8"	34.92 36.51 38.10 39.69 41.28	6 6	12 12	18 18 18 18		6 6 6	8 8 8 8	12 12 12	16 16 16 16	20 20 20	28 28		6 6 5	8 8 8	11 11	44.32 47.80	
1 11/16" 1 3/4" 1 13/16" 1 7/8" 1 15/16"	42.86 44.45 46.04 47.63 49.21	5		18		6 6 6 6	8 8 8 8	12 12 12	16 16 16 16	20 20 20 20			5 4 1/2	7	11	53.74	
2" 2 1/8" 2 1/4" 2 3/8" 2 1/2"	50.80 53.97 57.15 60.32 63.50	4 1/2 4 1/2 4				6 6 6 6	8 8 8 8	12 12 12	16 16 16	20 20 20			4 1/2 4 4	7 6 6	11 11 11	59.61 65.71 75.18	
2 5/8" 2 3/4" 2 7/8" 3" 3 1/8"	66.67 69.85 73.02 76.20 79.37	4 4			4 4 4	6 6 6	8 8 8 8	12 12 12	16 16 16	20 20 20			3 1/2 3 1/2	6 5	11 11	81.53 87.88	
3 1/4" 3 3/8" 3 1/2" 3 5/8" 3 3/4"	82.55 85.72 88.90 92.07 95.25	4 4 4			4 4	6 6 6	8 8 8	12 12	16 16				3 1/4 3 1/4 3	5 4 1/2 4 1/2	11 11 11	93.98 100.33 106.68	
3 7/8" 4"	98.42 101.60	4			4	6 6	8 8	12 12	16 16				3 3	4 1/2 4 1/2	11	113.03	




# TABELLE DE CONVERSION - TABELLA DI CONVERSIONE


		Vc m/min															
		1	2	3	4	5	6	8	10	12	15	20	25	30	40	50	60
		min <sup>-1</sup>															
Ø d <sub>r</sub>	1	318	637	955	1273	1592	1910	2546	3183	3820	4775	6366	7958	9549	12732	15915	19099
	2	159	318	477	637	796	955	1273	1592	1910	2387	3183	3979	4775	6366	7958	9549
3	3	106	212	318	424	531	637	849	1061	1273	1592	2122	2653	3183	4244	5305	6366
	4	80	159	239	318	398	477	637	796	955	1194	1592	1989	2387	3183	3979	4775
5	5	64	127	191	255	318	382	509	637	764	955	1273	1592	1910	2546	3183	3820
	6	53	106	159	212	265	318	424	531	637	796	1061	1326	1592	2122	2653	3183
8	8	40	80	119	159	199	239	318	398	477	597	796	995	1194	1592	1989	2387
	10	32	64	95	127	159	191	255	318	382	477	637	796	955	1273	1592	1910
12	12	27	53	80	106	133	159	212	265	318	398	531	663	796	1061	1326	1592
	14	23	45	68	91	114	136	182	227	273	341	455	568	682	909	1137	1364
16	16	20	40	60	80	99	119	159	199	239	298	398	497	597	796	995	1194
	18	18	35	53	71	88	106	141	177	212	265	354	442	531	707	884	1061
20	20	16	32	48	64	80	95	127	159	191	239	318	398	477	637	796	955
	25	13	25	38	51	64	76	102	127	153	191	255	318	382	509	637	764
30	30	11	21	32	42	53	64	85	106	127	159	212	265	318	424	531	637
	35	9	18	27	36	45	55	73	91	109	136	182	227	273	364	455	546
40	40	8	16	24	32	40	48	64	80	95	119	159	199	239	318	398	477
	45	7	14	21	28	35	42	57	71	85	106	141	177	212	283	354	424
50	50	6	13	19	25	32	38	51	64	76	95	127	159	191	255	318	382

# PERÇAGE D'AVANT-TROUS - PREFORI PER FILETTARE


## M DIN 13, ISO 261, \*5H / 6H

Ø	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
* 1	0.25	0.729	0.785	0.75
* 1.1	0.25	0.829	0.885	0.85
* 1.2	0.25	0.929	0.985	0.95
* 1.4	0.30	1.075	1.142	1.10
1.6	0.35	1.221	1.321	1.25
1.7	0.35	1.321	1.421	1.35
1.8	0.35	1.421	1.521	1.45
2	0.40	1.567	1.679	1.60
2.2	0.45	1.713	1.838	1.75
2.3	0.40	1.867	1.979	1.90
2.5	0.45	2.013	2.138	2.05
2.6	0.45	2.113	2.238	2.15
3	0.50	2.459	2.599	2.50
3.5	0.60	2.850	3.010	2.90
4	0.70	3.242	3.422	3.30
4.5	0.75	3.688	3.878	3.75
5	0.80	4.134	4.334	4.20
6	1.00	4.917	5.153	5.00
7	1.00	5.917	6.153	6.00
8	1.25	6.647	6.912	6.80
9	1.25	7.647	7.912	7.80
10	1.50	8.376	8.676	8.50
11	1.50	9.376	9.676	9.50
12	1.75	10.106	10.441	10.20
14	2.00	11.835	12.210	12.00
16	2.00	13.835	14.210	14.00
18	2.50	15.294	15.744	15.50
20	2.50	17.294	17.744	17.50
22	2.50	19.294	19.744	19.50
24	3.00	20.752	21.252	21.00
27	3.00	23.752	24.252	24.00
30	3.50	26.211	26.771	26.50
33	3.50	29.211	29.771	29.50
36	4.00	31.670	32.270	32.00
39	4.00	34.670	35.270	35.00
42	4.50	37.129	37.799	37.50
45	4.50	40.129	40.799	40.50
48	5.00	42.587	43.297	43.00
52	5.00	46.587	47.297	47.00
56	5.50	50.046	50.796	50.50

## MF DIN 13, ISO 261, 6H

Ø	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
2.5	0.35	2.121	2.221	2.15
3	0.35	2.621	2.721	2.65
3.5	0.35	3.121	3.221	3.15
4	0.50	3.459	3.599	3.50
4.5	0.50	3.959	4.099	4.00
5	0.50	4.459	4.599	4.50
5.5	0.50	4.959	5.099	5.00
6	0.75	5.188	5.378	5.25
7	0.75	6.188	6.378	6.25
8	0.75	7.188	7.378	7.25

## MF DIN 13, ISO 261, 6H


Ø	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
8	1.00	6.917	7.153	7.00
9	0.75	8.188	8.378	8.25
9	1.00	7.917	8.153	8.00
10	0.75	9.188	9.378	9.25
10	1.00	8.917	9.153	9.00
10	1.25	8.647	8.912	8.80
11	0.75	10.188	10.378	10.25
11	1.00	9.917	10.153	10.00
12	1.00	10.917	11.153	11.00
12	1.25	10.647	10.912	10.80
12	1.50	10.376	10.676	10.50
14	1.00	12.917	13.153	13.00
14	1.25	12.647	12.912	12.80
14	1.50	12.376	12.676	12.50
15	1.00	13.917	14.153	14.00
15	1.50	13.376	13.676	13.50
16	1.00	14.917	15.153	15.00
16	1.50	14.376	14.676	14.50
17	1.00	15.917	16.153	16.00
17	1.50	15.376	15.676	15.50
18	1.00	16.917	17.153	17.00
18	1.50	16.376	16.676	16.50
18	2.00	15.835	16.210	16.00
20	1.00	18.917	19.153	19.00
20	1.50	18.376	18.676	18.50
20	2.00	17.835	18.210	18.00
22	1.00	20.917	21.153	21.00
22	1.50	20.376	20.676	20.50
22	2.00	19.835	20.210	20.00
24	1.00	22.917	23.153	23.00
24	1.50	22.376	22.676	22.50
24	2.00	21.835	22.210	22.00
25	1.00	23.917	24.153	24.00
25	1.50	23.376	23.676	23.50
25	2.00	22.835	23.210	23.00
27	1.50	25.376	25.676	25.50
27	2.00	24.835	25.210	25.00
28	1.00	26.917	27.153	27.00
28	1.50	26.376	26.676	26.50
28	2.00	25.835	26.210	26.00
30	1.00	28.917	29.153	29.00
30	1.50	28.376	28.676	28.50
30	2.00	27.835	28.210	28.00
32	1.50	30.376	30.676	30.50
32	2.00	29.835	30.210	30.00
33	1.50	31.376	31.676	31.50
33	2.00	30.835	31.210	31.00
35	1.50	33.376	33.676	33.50
36	1.50	34.376	34.676	34.50
36	2.00	33.835	34.210	34.00
36	3.00	32.752	33.252	33.00
39	1.50	37.376	37.676	37.50
39	2.00	36.835	37.210	37.00
39	3.00	35.752	36.252	36.00
40	1.50	38.376	38.676	38.50






# PERÇAGE D'AVANT-TROUS - PREFORI PER FILETTARE


## MF DIN 13, ISO 261, 6H

Ø	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
40	2.00	37.835	38.210	38.00
40	3.00	36.752	37.252	37.00
42	1.50	40.376	40.676	40.50
42	2.00	39.835	40.210	40.00
42	3.00	38.752	39.252	39.00
45	1.50	43.376	43.676	43.50
45	2.00	42.835	43.210	43.00
45	3.00	41.752	42.252	42.00
48	1.50	46.376	46.676	46.50
48	2.00	45.835	46.210	46.00
48	3.00	44.752	45.252	45.00
50	1.50	48.376	48.676	48.50
50	2.00	47.835	48.210	48.00
50	3.00	46.752	47.252	47.00
52	1.50	50.376	50.676	50.50
52	2.00	49.835	50.210	50.00
52	3.00	48.752	49.252	49.00
55	2.00	52.835	53.210	53.00
60	2.00	57.835	58.210	58.00


## MF EN 60423:1994, 7H

Ø	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
8	1.00	6.917	7.217	7.00
10	1.00	8.917	9.217	9.00
12	1.50	10.376	10.751	10.50
16	1.50	14.376	14.751	14.50
20	1.50	18.376	18.751	18.50
25	1.50	23.376	23.751	23.50
32	1.50	30.376	30.751	30.50
40	1.50	38.376	38.751	38.50
63	1.50	61.376	61.751	61.50


## UNC ANSI B1.1, 2B

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
1	64	0.397	1.425	1.582	1.45
2	56	0.454	1.695	1.871	1.75
3	48	0.529	1.941	2.146	2.00
4	40	0.635	2.157	2.385	2.25
5	40	0.635	2.487	2.697	2.55
6	32	0.794	2.642	2.895	2.75
8	32	0.794	3.302	3.530	3.40
10	24	1.058	3.683	3.962	3.80
12	24	1.058	4.344	4.597	4.40
1/4"	20	1.270	4.979	5.257	5.10
5/16"	18	1.411	6.401	6.731	6.50

## UNC ANSI B1.1, 2B


Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
3/8"	16	1.588	7.798	8.153	8.00
7/16"	14	1.814	9.144	9.550	9.30
1/2"	13	1.954	10.592	11.023	10.80
9/16"	12	2.117	11.989	12.446	12.20
5/8"	11	2.309	13.386	13.868	13.60
3/4"	10	2.540	16.307	16.840	16.60
7/8"	9	2.822	19.177	19.761	19.50
1"	8	3.175	21.971	22.606	22.30
1 1/8"	7	3.629	24.638	25.349	25.00
1 1/4"	7	3.629	27.813	28.524	28.20
1 3/8"	6	4.233	30.353	31.115	30.80
1 1/2"	6	4.233	33.528	34.290	34.00
1 3/4"	5	5.080	38.964	39.827	39.50
2"	4.5	5.644	44.679	45.593	45.30

## UNJC ISO 3161:1999, 3B


Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
4	40	0.635	2.228	2.393	2.30
5	40	0.635	2.558	2.723	2.60
6	32	0.794	2.733	2.939	2.80
8	32	0.794	3.393	3.599	3.45
10	24	1.058	3.795	4.064	3.90
12	24	1.058	4.455	4.704	4.55
1/4"	20	1.270	5.113	5.387	5.20
5/16"	18	1.411	6.563	6.833	6.70
3/8"	16	1.588	7.978	8.255	8.10
7/16"	14	1.814	9.347	9.639	9.40
1/2"	13	1.954	10.798	11.095	10.90
9/16"	12	2.117	12.228	12.482	12.40
5/8"	11	2.309	13.627	13.904	13.80
3/4"	10	2.540	16.576	16.881	16.70

# PERÇAGE D'AVANT-TROUS - PREFORI PER FILETTARE


## UNF ANSI B1.1, 2B

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
0	80	0.318	1.182	1.305	1.20
1	72	0.353	1.474	1.612	1.50
2	64	0.397	1.756	1.912	1.80
3	56	0.454	2.025	2.197	2.10
4	48	0.529	2.271	2.458	2.35
5	44	0.577	2.551	2.740	2.60
6	40	0.635	2.820	3.022	2.90
8	36	0.706	3.404	3.606	3.50
10	32	0.794	3.963	4.165	4.05
12	28	0.907	4.496	4.724	4.60
1/4"	28	0.907	5.360	5.588	5.50
5/16"	24	1.058	6.782	7.035	6.90
3/8"	24	1.058	8.382	8.636	8.50
7/16"	20	1.270	9.729	10.033	9.80
1/2"	20	1.270	11.329	11.607	11.40
9/16"	18	1.411	12.751	13.081	12.90
5/8"	18	1.411	14.351	14.681	14.50
3/4"	16	1.588	17.323	17.678	17.50
7/8"	14	1.814	20.270	20.675	20.40
1"	12	2.117	23.114	23.571	23.30
1 1/8"	12	2.117	26.289	26.746	26.50
1 1/4"	12	2.117	29.464	29.921	29.70
1 3/8"	12	2.117	32.639	33.096	32.80
1 1/2"	12	2.117	35.814	36.271	36.00


## UNJF ISO 3161:1999, 3B

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
0	80	0.318	1.217	1.298	1.25
1	72	0.353	1.511	1.603	1.55
2	64	0.397	1.798	1.902	1.85
3	56	0.454	2.073	2.189	2.15
4	48	0.529	2.329	2.466	2.35
5	44	0.577	2.614	2.764	2.70
6	40	0.635	2.888	3.053	2.95
8	36	0.706	3.480	3.663	3.60
10	32	0.794	4.054	4.255	4.10
12	28	0.907	4.602	4.816	4.70
1/4"	28	0.907	5.466	5.662	5.55
5/16"	24	1.058	6.906	7.109	7.00
3/8"	24	1.058	8.494	8.679	8.60
7/16"	20	1.270	9.876	10.084	10.00
1/2"	20	1.270	11.463	11.661	11.55
9/16"	18	1.411	12.913	13.122	13.05
5/8"	18	1.411	14.501	14.702	14.60
3/4"	16	1.588	17.506	17.722	17.60
7/8"	14	1.814	20.460	20.706	20.50
1"	12	2.117	23.340	23.594	23.40

## UNEF ANSI B1.1, 2B

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
12	32	0.794	4.623	4.826	4.70
1/4"	32	0.794	5.487	5.689	5.60
5/16"	32	0.794	7.087	7.264	7.20
3/8"	32	0.794	8.662	8.864	8.75
7/16"	28	0.907	10.135	10.337	10.25
1/2"	28	0.907	11.710	11.938	11.85
9/16"	24	1.058	13.132	13.385	13.20
5/8"	24	1.058	14.732	14.986	14.80
11/16"	24	1.058	16.307	16.560	16.40
3/4"	20	1.270	17.679	17.957	17.80
13/16"	20	1.270	19.254	19.558	19.40
7/8"	20	1.270	20.854	21.132	21.00
1"	20	1.270	24.029	24.307	24.10


## UN ANSI B1.1, 2B

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
5/16"	20	1.270	6.554	6.858	6.70
3/8"	20	1.270	8.154	8.432	8.30
9/16"	20	1.270	12.904	13.208	13.00
5/8"	20	1.270	14.504	14.782	14.60
1 1/8"	8	3.175	25.146	25.781	25.50
1 1/4"	8	3.175	28.321	28.956	28.70
1 3/8"	8	3.175	31.496	32.131	31.80
1 1/2"	8	3.175	34.671	35.306	35.00
1 5/8"	8	3.175	37.846	38.481	38.20
1 3/4"	8	3.175	41.021	41.656	41.40
1 7/8"	8	3.175	44.196	44.831	44.50
2"	8	3.175	47.371	48.006	47.70
2 1/4"	8	3.175	53.721	54.356	54.10
2 1/2"	8	3.175	60.071	60.706	60.40




# PERÇAGE D'AVANT-TROUS - PREFORI PER FILETTARE


## UNS ANSI B1.1, 2B

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
10	36	0.706	4.064	4.216	4.10
10	40	0.635	4.141	4.292	4.20
10	56	0.454	4.344	4.445	4.40
1/4"	36	0.706	5.588	5.740	5.65
1/4"	40	0.635	5.665	5.816	5.70
1/4"	48	0.529	5.766	5.892	5.80
1/4"	56	0.454	5.868	5.969	5.90
5/16"	36	0.706	7.163	7.340	7.25
3/8"	36	0.706	8.763	8.940	8.80
7/16"	24	1.058	9.957	10.210	10.00
1/2"	24	1.058	11.557	11.811	11.60
1"	14	1.814	23.445	23.825	23.60


## G (BSP) DIN ISO 228

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
1/16"	28	0.907	6.561	6.843	6.75
1/8"	28	0.907	8.566	8.848	8.75
1/4"	19	1.337	11.445	11.890	11.60
3/8"	19	1.337	14.950	15.395	15.20
1/2"	14	1.814	18.631	19.172	18.90
5/8"	14	1.814	20.587	21.128	20.90
3/4"	14	1.814	24.117	24.658	24.40
7/8"	14	1.814	27.877	28.418	28.20
1"	11	2.309	30.291	30.931	30.70
1 1/8"	11	2.309	34.939	35.579	35.30
1 1/4"	11	2.309	38.952	39.592	39.30
1 3/8"	11	2.309	41.365	42.005	41.80
1 1/2"	11	2.309	44.845	45.485	45.20
1 3/4"	11	2.309	50.788	51.428	51.20
2"	11	2.309	56.656	57.296	57.00
2 1/4"	11	2.309	62.752	63.392	63.10
2 1/2"	11	2.309	72.226	72.866	72.60
3"	11	2.309	84.926	85.566	85.30


## W (BSW) BS 84, (DIN11 - 1970)

Ø"	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
(3/32")	48				1.80
1/8"	40	0.635	2.362	2.591	2.50
(5/32")	32				3.10
3/16"	24	1.058	3.406	3.744	3.60
(7/32")	24				4.40
1/4"	20	1.270	4.724	5.156	4.90
5/16"	18	1.411	6.129	6.588	6.40
3/8"	16	1.588	7.493	7.988	7.70
7/16"	14	1.814	8.791	9.332	9.10
1/2"	12	2.117	9.987	10.589	10.30
5/8"	11	2.309	12.918	13.558	13.30
3/4"	10	2.540	15.799	16.484	16.20
7/8"	9	2.822	18.613	19.355	19.25
1"	8	3.175	21.336	22.149	21.90

## PG DIN 40430

Ø	P	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
7	20	1.270	11.28	11.43	11.35
9	18	1.411	13.86	14.01	13.90
11	18	1.411	17.26	17.41	17.30
13.5	18	1.411	19.06	19.21	19.10
16	18	1.411	21.16	21.31	21.20
21	16	1.588	26.78	27.03	26.80
29	16	1.588	35.48	35.73	35.50
36	16	1.588	45.48	45.73	45.50
42	16	1.588	52.48	52.73	52.50
48	16	1.588	57.78	58.03	57.80


## TR ISO 2901-2904, DIN 103, 7H

Ø	P	Ø Noyau - Nocciolo		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
10	2	8	8.236	8.20
12	3	9	9.315	9.25
14	3	11	11.315	11.25
16	4	12	12.375	12.25
18	4	14	14.375	14.25
20	4	16	16.375	16.25
22	5	17	17.450	17.25
24	5	19	19.450	19.25
26	5	21	21.450	21.25
28	5	23	23.450	23.25
30	6	24	24.500	24.25
32	6	26	26.500	26.25




# DIAMÈTRE DE TOURNAGE - DIAMETRI DI TORNITURA


## M DIN 13, ISO 261, \*6h / 6g

Ø	P	Ø Ext. vis - Est. vite		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
* 1	0.25	0.933	1.000	0.97
* 1.1	0.25	1.033	1.100	1.07
* 1.2	0.25	1.133	1.200	1.17
* 1.4	0.30	1.325	1.400	1.36
1.6	0.35	1.496	1.581	1.54
1.7	0.35	1.596	1.681	1.64
1.8	0.35	1.696	1.781	1.74
2	0.40	1.886	1.981	1.93
2.2	0.45	2.080	2.180	2.13
2.3	0.40	2.186	2.300	2.23
2.5	0.45	2.380	2.480	2.43
2.6	0.45	2.480	2.600	2.53
3	0.50	2.874	2.980	2.92
3.5	0.60	3.354	3.479	3.41
4	0.70	3.838	3.978	3.91
4.5	0.75	4.338	4.478	4.40
5	0.80	4.826	4.976	4.90
6	1.00	5.794	5.974	5.88
7	1.00	6.794	6.974	6.88
8	1.25	7.760	7.972	7.87
9	1.25	8.760	8.972	8.87
10	1.50	9.732	9.968	9.85
11	1.50	10.732	10.968	10.85
12	1.75	11.701	11.966	11.83
14	2.00	13.682	13.962	13.82
16	2.00	15.682	15.962	15.82
18	2.50	17.623	17.958	17.79
20	2.50	19.623	19.958	19.79
22	2.50	21.623	21.958	21.79
24	3.00	23.577	23.952	23.76
27	3.00	26.577	26.952	26.76
30	3.50	29.522	29.947	29.73
33	3.50	32.522	32.947	32.73
36	4.00	35.465	35.940	35.70
39	4.00	38.465	38.940	38.70
42	4.50	41.437	41.937	41.69
45	4.50	44.437	44.937	44.69
48	5.00	47.399	47.929	47.66
52	5.00	51.399	51.929	51.66
56	5.50	55.365	55.925	55.65

## MF DIN 13, ISO 261, 6g

Ø	P	Ø Ext. vis - Est. vite		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
2.5	0.35	2.396	2.481	2.44
3	0.35	2.896	2.981	2.94
3.5	0.35	3.396	3.481	3.44
4	0.50	3.874	3.980	3.93
4.5	0.50	4.374	4.480	4.43
5	0.50	4.874	4.980	4.93
5.5	0.50	5.374	5.480	5.43
6	0.75	5.838	5.978	5.90
7	0.75	6.838	6.978	6.90
8	0.75	7.838	7.978	7.90


## MF DIN 13, ISO 261, 6g

Ø	P	Ø Ext. vis - Est. vite		
d <sub>1</sub>	mm	Ø mini	Ø maxi	Ø guide line
8	1.00	7.794	7.974	7.88
9	0.75	8.838	8.978	8.90
9	1.00	8.794	8.974	8.88
10	0.75	9.838	9.978	9.90
10	1.00	9.794	9.974	9.88
10	1.25	9.760	9.972	9.86
11	0.75	10.838	10.978	10.90
11	1.00	10.794	10.974	10.88
12	1.00	11.794	11.974	11.88
12	1.25	11.760	11.972	11.86
12	1.50	11.732	11.968	11.85
14	1.00	13.794	13.974	13.88
14	1.25	13.760	13.972	13.86
14	1.50	13.732	13.968	13.85
15	1.00	14.794	14.974	14.88
15	1.50	14.732	14.968	14.85
16	1.00	15.794	15.974	15.88
16	1.50	15.732	15.968	15.85
17	1.00	16.794	16.974	16.88
17	1.50	16.732	16.968	16.85
18	1.00	17.794	17.974	17.88
18	1.50	17.732	17.968	17.85
18	2.00	17.682	17.962	17.82
20	1.00	19.794	19.974	19.88
20	1.50	19.732	19.968	19.85
20	2.00	19.682	19.962	19.82
22	1.00	21.794	21.974	21.88
22	1.50	21.732	21.968	21.85
22	2.00	21.682	21.962	21.82
24	1.00	23.794	23.974	23.88
24	1.50	23.732	23.968	23.85
24	2.00	23.682	23.962	23.82
25	1.00	24.794	24.974	24.88
25	1.50	24.732	24.968	24.85
25	2.00	24.682	24.962	24.82
27	1.00	26.794	26.974	26.88
27	1.50	26.732	26.968	26.85
27	2.00	26.682	26.962	26.82
28	1.00	27.794	27.974	27.88
28	1.50	27.732	27.968	27.85
28	2.00	27.682	27.962	27.82
30	1.00	29.794	29.974	29.88
30	1.50	29.732	29.968	29.85
30	2.00	29.682	29.962	29.82
30	3.00	29.577	29.952	29.76
32	1.50	31.732	31.968	31.85
32	2.00	31.682	31.962	31.82
33	1.50	32.732	32.968	32.85
33	2.00	32.682	32.962	32.82
33	3.00	32.577	32.952	32.76
35	1.50	34.732	34.968	34.85
36	1.50	35.732	35.968	35.85
36	2.00	35.682	35.962	35.82
36	3.00	35.577	35.952	35.76
39	1.50	38.732	38.968	38.85
39	2.00	38.682	38.962	38.82
39	3.00	38.577	38.952	38.76




# DIAMÈTRE DE TOURNAGE - DIAMETRI DI TORNITURA


## MF DIN 13, ISO 261, 6g

Ø	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	mm	Ø mini	Ø maxi	Ø guide line
40	1.50	39.732	39.968	39.85
40	2.00	39.682	39.962	39.82
40	3.00	39.577	39.952	39.76
42	1.50	41.732	41.968	41.85
42	2.00	41.682	41.962	41.82
42	3.00	41.577	41.952	41.76
45	1.50	44.732	44.968	44.85
45	2.00	44.682	44.962	44.82
45	3.00	44.577	44.952	44.76
48	1.50	47.732	47.968	47.85
48	2.00	47.682	47.962	47.82
48	3.00	47.577	47.952	47.76
50	1.50	49.732	49.968	49.85
50	2.00	49.682	49.962	49.82
50	3.00	49.577	49.952	49.76
52	1.50	51.732	51.968	51.85
52	2.00	51.682	51.962	51.82
52	3.00	51.577	51.952	51.76
52	4.00	51.465	51.940	51.70


## UNC ANSI B1.1, 2A

Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
1	64	0.397	1.743	1.838	1.79
2	56	0.454	2.066	2.169	2.12
3	48	0.529	2.383	2.496	2.44
4	40	0.635	2.695	2.824	2.76
5	40	0.635	3.026	3.154	3.09
6	32	0.794	3.333	3.484	3.41
8	32	0.794	3.991	4.142	4.07
10	24	1.058	4.618	4.800	4.71
12	24	1.058	5.279	5.461	5.37
1/4"	20	1.270	6.117	6.322	6.22
5/16"	18	1.411	7.687	7.907	7.80
3/8"	16	1.588	9.254	9.491	9.37
7/16"	14	1.814	10.816	11.076	10.95
1/2"	13	1.954	12.386	12.661	12.52
9/16"	12	2.117	13.958	14.246	14.10
5/8"	11	2.309	15.528	15.834	15.68
3/4"	10	2.540	18.677	19.004	18.84
7/8"	9	2.822	21.824	22.176	22.00
1"	8	3.175	24.969	25.349	25.16
1 1/8"	7	3.629	28.103	28.519	28.31
1 1/4"	7	3.629	31.278	31.694	31.49
1 3/8"	6	4.233	34.402	34.864	34.63
1 1/2"	6	4.233	37.577	38.039	37.81
1 3/4"	5	5.080	43.860	44.381	44.12
2"	4.5	5.644	50.168	50.726	50.45
2 1/4"	4.5	5.644	56.518	57.076	56.80
2 1/2"	4	6.350	62.817	63.421	63.12
2 3/4"	4	6.350	69.165	69.768	69.47
3"	4	6.350	75.515	76.118	75.82
3 1/4"	4	6.350	81.862	82.466	82.16
3 1/2"	4	6.350	88.212	88.816	88.51


## UNC ANSI B1.1, 2A

Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
3 3/4"	4	6.350	94.560	95.163	94.86
4"	4	6.350	100.910	101.513	101.21

## UNF ANSI B1.1, 2A


Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
0	80	0.318	1.431	1.511	1.47
1	72	0.353	1.751	1.838	1.79
2	64	0.397	2.073	2.169	2.12
3	56	0.454	2.393	2.496	2.44
4	48	0.529	2.713	2.827	2.77
5	44	0.577	3.036	3.157	3.10
6	40	0.635	3.356	3.484	3.42
8	36	0.706	4.006	4.145	4.08
10	32	0.794	4.651	4.803	4.73
12	28	0.907	5.296	5.461	5.38
1/4"	28	0.907	6.160	6.324	6.24
5/16"	24	1.058	7.727	7.909	7.82
3/8"	24	1.058	9.315	9.497	9.41
7/16"	20	1.270	10.874	11.079	10.98
1/2"	20	1.270	12.462	12.666	12.56
9/16"	18	1.411	14.031	14.251	14.14
5/8"	18	1.411	15.619	15.839	15.73
3/4"	16	1.588	18.774	19.011	18.89
7/8"	14	1.814	21.923	22.184	22.05
1"	12	2.117	25.065	25.354	25.21
1 1/8"	12	2.117	28.240	28.529	28.38
1 1/4"	12	2.117	31.415	31.704	31.56
1 3/8"	12	2.117	34.588	34.876	34.73
1 1/2"	12	2.117	37.763	38.051	37.91

## UNEF ANSI B1.1, 2A


Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
12	32	0.794	5.312	5.463	5.39
1/4"	32	0.794	6.173	6.324	6.25
5/16"	32	0.794	7.760	7.912	7.84
3/8"	32	0.794	9.348	9.499	9.42
7/16"	28	0.907	10.920	11.084	11.00
1/2"	28	0.907	12.507	12.672	12.59
9/16"	24	1.058	14.075	14.257	14.17
5/8"	24	1.058	15.662	15.844	15.75
11/16"	24	1.058	17.250	17.432	17.34
3/4"	20	1.270	18.812	19.016	18.91
13/16"	20	1.270	20.339	20.604	20.50
7/8"	20	1.270	21.987	22.191	22.09
15/16"	20	1.270	23.572	23.776	23.67
1"	20	1.270	25.159	25.364	25.26
1 1/8"	18	1.411	28.319	28.539	28.43
1 1/4"	18	1.411	31.491	31.711	31.60
1 1/2"	18	1.411	37.841	38.061	37.95

# DIAMÈTRE DE TOURNAGE - DIAMETRI DI TORNITURA


## UN ANSI B1.1, 2A

Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
5/16"	20	1.270	7.702	7.907	7.80
3/8"	20	1.270	9.289	9.494	9.39
9/16"	20	1.270	14.049	14.254	14.15
5/8"	20	1.270	15.637	15.841	15.74
1 1/8"	8	3.175	28.141	28.521	28.33
1 1/4"	8	3.175	31.316	31.696	31.51
1 3/8"	8	3.175	34.489	34.869	34.68
1 1/2"	8	3.175	37.664	38.044	37.85
1 5/8"	8	3.175	40.839	41.219	41.03
1 3/4"	8	3.175	44.011	44.391	44.20
1 7/8"	8	3.175	47.186	47.566	47.38
2"	8	3.175	50.361	50.741	50.55
2 1/4"	8	3.175	56.709	57.089	56.90
2 1/2"	8	3.175	63.059	63.439	63.25
2 3/4"	8	3.175	69.406	69.786	69.60
3"	8	3.175	75.753	76.133	75.94


## W (BSW) BS 84

Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
1/4"	20	1.270	6.165	6.319	6.24
5/16"	18	1.411	7.737	7.904	7.82
3/8"	16	1.588	9.312	9.489	9.40
7/16"	14	1.814	10.884	11.074	10.98
1/2"	12	2.117	12.456	12.662	12.56
5/8"	11	2.309	15.613	15.832	15.72
3/4"	10	2.540	18.771	19.004	18.89
7/8"	9	2.822	21.979	22.225	22.10
1"	8	3.175	25.138	25.400	25.27
1 1/8"	7	3.629	28.296	28.575	28.44
1 1/4"	7	3.629	31.465	31.750	31.61
1 1/2"	6	4.233	37.793	38.100	37.95
1 3/4"	5	5.080	44.117	44.450	44.28
2"	4.5	5.644	50.449	50.800	50.62
2 1/4"	4	6.350	56.779	57.150	56.96
2 1/2"	4	6.350	63.119	63.500	63.31


## UNS ANSI B1.1, 2A

Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
10	36	0.706	4.664	4.803	4.73
10	40	0.635	4.674	4.803	4.74
10	56	0.454	4.705	4.808	4.76
1/4"	36	0.706	6.188	6.327	6.26
1/4"	40	0.635	6.198	6.327	6.26
1/4"	48	0.529	6.216	6.329	6.27
1/4"	56	0.454	6.226	6.329	6.28
5/16"	36	0.706	7.775	7.914	7.84
3/8"	36	0.706	9.360	9.499	9.43
7/16"	24	1.058	10.902	11.084	10.99
1/2"	24	1.058	12.487	12.669	12.58
1"	14	1.814	25.096	25.356	25.23


## PG DIN 40430

Ø	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
7	20	1.270	12.3	12.5	12.40
9	18	1.411	15.0	15.2	15.10
11	18	1.411	18.4	18.6	18.50
13.5	18	1.411	20.2	20.4	20.30
16	18	1.411	22.3	22.5	22.40
21	16	1.588	28.0	28.3	28.15
29	16	1.588	36.7	37.0	36.85
36	16	1.588	46.7	47.0	46.85
42	16	1.588	53.7	54.0	53.85
48	16	1.588	59.0	59.3	59.15

## G (BSP) DIN ISO 228

Ø"	P	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	TPI	mm	Ø mini	Ø maxi	Ø guide line
1/16"	28	0.907	7.509	7.723	7.62
1/8"	28	0.907	9.514	9.728	9.62
1/4"	19	1.337	12.907	13.157	13.03
3/8"	19	1.337	16.412	16.662	16.54
1/2"	14	1.814	20.671	20.955	20.81
5/8"	14	1.814	22.627	22.911	22.77
3/4"	14	1.814	26.157	26.441	26.30
7/8"	14	1.814	29.917	30.201	30.06
1"	11	2.309	32.889	33.249	33.07
1 1/8"	11	2.309	37.537	37.897	37.72
1 1/4"	11	2.309	41.550	40.910	41.73
1 3/8"	11	2.309	43.963	44.323	44.14
1 1/2"	11	2.309	47.443	47.803	47.62
1 3/4"	11	2.309	53.386	53.746	53.57
2"	11	2.309	59.254	59.614	59.43
2 1/4"	11	2.309	65.276	65.710	65.49
2 1/2"	11	2.309	74.750	75.184	74.97
2 3/4"	11	2.309	81.100	81.534	81.32
3"	11	2.309	87.450	87.884	87.67
3 1/2"	11	2.309	99.896	100.330	100.11

## TR ISO 2901-2904, DIN 103, 7e

Ø	P	Ø Ext. vis - Est. vite		
d <sub>i</sub>	mm	Ø mini	Ø maxi	Ø guide line
10	2	9.820	10.000	9.91
12	3	11.764	12.000	11.88
14	3	13.764	14.000	13.88
16	4	15.700	16.000	15.85
18	4	17.700	18.000	17.85
20	4	19.700	20.000	19.85
22	5	21.665	22.000	21.83
24	5	23.665	24.000	23.83
26	5	25.665	26.000	25.83
28	5	27.665	28.000	27.83
30	6	29.625	30.000	29.81
32	6	31.625	32.000	31.81



# QUESTIONNAIRE TECHNIQUE TARAUDAGE ET TARAUDAGE PAR DÉFORMATION

<i>Demande d'offre</i> <input type="checkbox"/>	<i>Résultat test</i> <input type="checkbox"/>	<i>Réclamation</i> <input type="checkbox"/>
<b>Agent :</b> _____ <b>Contact :</b> _____ <b>Client :</b> _____ <b>E-mail :</b> _____ <b>Tél. ou fax :</b> _____ <b>Date :</b> _____		
<b>1. Type d'outil :</b> _____ <b>Dimension :</b> _____ <b>Particularités :</b> _____ <b>Tolérance :</b> _____		
<b>2. Groupe matière :</b> _____ <b>No de matière :</b> _____ <b>Dureté :</b> _____ N/mm <sup>2</sup> /HB/HRC <b>Norme :</b> _____ <b>Allongement :</b> _____ %		
<b>3. Filetage :</b> <input type="checkbox"/> borgne <input type="checkbox"/> débouchant <b>Longueur filetée :</b> _____ mm <b>Avant-trou Ø :</b> _____ <b>Profondeur :</b> _____ mm <b>Contre-perçage Ø :</b> _____ <b>Profondeur :</b> _____ mm		
<b>4. Vitesse de coupe (V<sub>c</sub>) :</b> _____ m/min _____ l/min <b>Avance (f) :</b> _____ %		
<b>5. Machine :</b> _____ <input type="checkbox"/> arrosage par le centre <b>Position de travail :</b> <input type="checkbox"/> horizontale <input type="checkbox"/> verticale <b>Taraudage synchrone :</b> <input type="checkbox"/> "Soft Rigid Tapping" <input type="checkbox"/> pince <b>Mandrin :</b> <input type="checkbox"/> avec compensation axiale <input type="checkbox"/> Weldon <input type="checkbox"/> dérabotable <input type="checkbox"/> frettage chaud / froid <input type="checkbox"/> réversible <input type="checkbox"/> avec embrayage à friction		
<b>6. Lubrifiant :</b> <input type="checkbox"/> émulsion <input type="checkbox"/> huile <input type="checkbox"/> air <input type="checkbox"/> microlubrification <b>Produit :</b> _____		
<b>7. Raison du changement d'outil :</b> <input type="checkbox"/> usure <input type="checkbox"/> casse de l'outil <input type="checkbox"/> filetage non correct (contrôlé avec une jauge) <input type="checkbox"/> casse des dents d'entrée <input type="checkbox"/> erreur machine <input type="checkbox"/> casse des dents guide		
<b>8. Comparaison du rendement</b> <b>Outil à l'essai :</b> _____ <b>Performance et observations :</b> _____		
<b>Remarques :</b> _____ _____ _____		

Richiesta d'offerta ☐

Risultato test ☐

Reclami ☐

Agente : \_\_\_\_\_

Responsabile : \_\_\_\_\_

Cliente : \_\_\_\_\_

E-mail : \_\_\_\_\_

Tel. o fax : \_\_\_\_\_

Data : \_\_\_\_\_

1. Tipo d'utensile : \_\_\_\_\_

Dimensioni : \_\_\_\_\_

Particolarità : \_\_\_\_\_

Tolleranza : \_\_\_\_\_

2. Tipo di materiale : \_\_\_\_\_

Nr. materiale : \_\_\_\_\_

Durezza : \_\_\_\_\_ N/mm<sup>2</sup> /HB/HRC

Norme : \_\_\_\_\_

Allungamento : \_\_\_\_\_ %

3. Filettatura : ☐ cieco ☐ passante

Lunghezza filettatura : \_\_\_\_\_ mm

Ø Pre-foro : \_\_\_\_\_

Profondità : \_\_\_\_\_ mm

Lamatura Ø : \_\_\_\_\_

Profondità : \_\_\_\_\_ mm

4. Velocità di taglio (V<sub>c</sub>) : \_\_\_\_\_ m/min \_\_\_\_\_ l/min

Avanzamento (f) : \_\_\_\_\_ %

5. Macchina : \_\_\_\_\_

☐ lubrificazione centralizzata

Posizione di lavoro : ☐ orizzontale ☐ verticale

Maschiatura rigida : ☐ "Soft Rigid Tapping"

Maschiatore : ☐ con compensazione assiale

☐ rigida (pinza)

☐ sganciabile

☐ Weldon

☐ reversibile

☐ calettam. a caldo/ freddo

☐ con frizione

6. Lubrificante : ☐ emulsione

☐ olio

☐ aria

☐ lubrif. minima

Marca : \_\_\_\_\_

7. Motivi per il cambio dell'utensile : ☐ usura

☐ rottura del maschio

☐ filettatura non corretta (controllo con calibro)

☐ rottura denti d'imbocco

☐ errore della macchina

☐ scheggiatura denti del maschio

8. Confronto del rendimento

Utensile in prova : \_\_\_\_\_

Performances e osservazioni : \_\_\_\_\_

Note : \_\_\_\_\_

Demande d'offre <input type="checkbox"/>	Résultat test <input type="checkbox"/>	Réclamation <input type="checkbox"/>
<b>Agent :</b> _____ <b>Client :</b> _____ <b>Tél. ou fax :</b> _____		<b>Contact :</b> _____ <b>E-mail :</b> _____ <b>Date :</b> _____
<b>1. Type d'outil :</b> _____ <b>Ø de l'outil :</b> _____ <b>Pas :</b> _____ <b>Série :</b> _____ <b>Revêtement :</b> _____		
<b>2. Groupe matière :</b> _____ <b>No de matière :</b> _____ <b>Dureté :</b> _____ N/mm <sup>2</sup> /HB/HRC <b>Norme :</b> _____ <b>Allongement :</b> _____ %		
<b>3. Filetage :</b> <input type="checkbox"/> intérieur <input type="checkbox"/> extérieur <b>Trou :</b> <input type="checkbox"/> borgne <input type="checkbox"/> débouchant <b>Longueur filetée :</b> _____ mm <b>Avant-trou Ø :</b> _____ <b>Profondeur :</b> _____ mm <b>Contre-perçage Ø :</b> _____ <b>Profondeur :</b> _____ mm		
<b>4. Vitesse de coupe (V<sub>c</sub>) :</b> _____ m/min _____ l/min <b>Avance (f) :</b> _____ mm/tour <b>Avance (f<sub>z</sub>) :</b> _____ mm/dent		
<b>5. Machine :</b> _____ <input type="checkbox"/> arrosage par le centre <b>Position de travail :</b> <input type="checkbox"/> horizontale <input type="checkbox"/> verticale <b>Fixation outil :</b> <input type="checkbox"/> pince <input type="checkbox"/> mandrin hydraulique <input type="checkbox"/> Weldon / Whistle Notch <input type="checkbox"/> frettage chaud / froid		
<b>6. Lubrifiant :</b> <input type="checkbox"/> émulsion <input type="checkbox"/> huile <input type="checkbox"/> air <input type="checkbox"/> microlubrification <b>Produit :</b> _____		
<b>7. Raison du changement d'outil :</b> <input type="checkbox"/> usure <input type="checkbox"/> casse de l'outil <input type="checkbox"/> filetage non correct (contrôlé avec une jauge) <input type="checkbox"/> erreur programme		
<b>8. Comparaison du rendement</b> <b>Outil à l'essai :</b> _____ <b>Performance et observations :</b> _____ _____ _____		
<b>Remarques :</b> _____ _____ _____		

Richiesta d'offerta ☐

Risultato test ☐

Reclami ☐

Agente : \_\_\_\_\_  
 Cliente : \_\_\_\_\_  
 Tel. o fax : \_\_\_\_\_

Responsabile : \_\_\_\_\_  
 E-mail : \_\_\_\_\_  
 Data : \_\_\_\_\_

1. Tipo d'utensile : \_\_\_\_\_  
 Ø dell'utensile : \_\_\_\_\_  
 Serie : \_\_\_\_\_

Passo : \_\_\_\_\_  
 Rivestimento : \_\_\_\_\_

2. Tipo di materiale : \_\_\_\_\_  
 Nr. materiale : \_\_\_\_\_  
 Norme : \_\_\_\_\_

Durezza : \_\_\_\_\_ N/mm<sup>2</sup> /HB/HRC  
 Allungamento : \_\_\_\_\_ %

3. Filettatura : ☐ interna ☐ esterna  
 Lunghezza filettatura : \_\_\_\_\_ mm  
 Ø Pre-foro : \_\_\_\_\_ Profondità : \_\_\_\_\_ mm  
 Lamatura Ø : \_\_\_\_\_ Profondità : \_\_\_\_\_ mm

Foro : ☐ cieco ☐ passante

4. Velocità di taglio (V<sub>c</sub>) : \_\_\_\_\_ m/min \_\_\_\_\_ 1/min

Avanzamento (f) : \_\_\_\_\_ mm/giro

Avanzamento (f<sub>z</sub>) : \_\_\_\_\_ mm/dente

5. Macchina : \_\_\_\_\_  
 Posizione di lavoro : ☐ orizzontale ☐ verticale

☐ lubrificazione centralizzata  
 Bloccaggio : ☐ pinza ☐ Weldon / Whistle Notch  
☐ mandrino idraulico ☐ calettam. a caldo/ freddo

6. Lubrificante : ☐ emulsione ☐ olio  
 Marca : \_\_\_\_\_

☐ aria ☐ lubrif. minima

7. Motivi per il cambio dell'utensile : ☐ usura ☐ rottura dell'utensile  
☐ filettatura non corretta (controllo con calibro) ☐ errore programma

### 8. Confronto del rendimento

Utensile in prova : \_\_\_\_\_  
 Performances e osservazioni : \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Note : \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# CONDITIONS DE LIVRAISON

<b>Commandes</b>	Les commandes qui ne peuvent être livrées du stock seront confirmées. Les articles qui ne sont plus fabriqués, tout en étant encore mentionnés dans le catalogue, seront considérés comme exécutions spéciales et facturés comme telles. Toute annulation de commande doit être consentie par les deux parties et formulée par écrit.
<b>Offres et confirmations de commandes</b>	Tous les descriptifs figurant dans nos offres, documents les accompagnant, indication de poids, de mesures, illustrations et dessins n'engagent le fournisseur que dans la mesure où il y fait expressément référence.
<b>Prix</b>	Nos prix s'entendent sans TVA, pour livraisons franco départ usine, emballage, port et assurance non compris. En cas d'augmentation de prix, nous nous réservons le droit de facturer les outils confirmés aux nouveaux prix.
<b>Paiement</b>	Nos factures sont payables à 30 jours net. En cas de dépassement du délai de paiement, un intérêt moratoire peut être exigé, à compter de l'échéance et calculé sur la base du taux d'escompte du moment. Les frais de remboursement, d'établissement de traite, etc., sont à la charge de l'acheteur.
<b>Réserve de propriété</b>	La marchandise reste notre entière propriété jusqu'au paiement intégral de son prix total, frais complémentaires inclus.
<b>Expéditions</b>	Les marchandises sont expédiées aux risques et périls du client.
<b>Délais de livraison</b>	Les délais de livraison sont confirmés au plus juste. Toutefois ils n'ont qu'une valeur indicative. En cas de dépassement, aucune indemnité ne peut nous être demandée et les commandes ne peuvent être annulées pour ce motif.
<b>Fabrications spéciales</b>	Pour des raisons techniques de fabrication, nous nous réservons le droit de livrer les quantités d'outils spéciaux commandés avec une tolérance de plus ou moins 15 %, voire de 1 à 2 pièces pour les petites quantités.
<b>Garantie</b>	Seuls les outils reconnus défectueux par le fournisseur seront remplacés gratuitement, sans aucun autre dédommagement.
<b>Réclamations</b>	Toute réclamation doit nous parvenir au plus tard 2 semaines après réception de la marchandise.
<b>Illustrations, dessins et croquis</b>	Nos illustrations, dessins, croquis et autres documents se trouvant dans ce catalogue ne peuvent être ni copiés, ni transmis ou cédés à des tiers. Du fait de l'évolution technique et de l'éventuelle entrée en vigueur de nouvelles normes, les indications figurant dans nos catalogues peuvent subir des modifications et sont donc publiées sans engagement.
<b>Conditions spéciales</b>	En cas de force majeure, interruption partielle ou totale de notre exploitation, nous nous réservons le droit de résilier tout ou en partie nos engagements de livraison.
<b>For</b>	Les litiges sont soumis au droit suisse et le lieu de juridiction dont ils dépendent est Moutier (Suisse).



# CONDIZIONI GENERALI DI VENDITA

<b>Ordini</b>	Gli ordini che non possono essere spediti da stock, saranno confermati. Gli articoli usciti di produzione ma ancora menzionati nel catalogo, saranno considerati come esecuzione speciale e pertanto fatturati come tali. Annullamenti degli ordini si accettano unicamente su accordo da convenire per iscritto.
<b>Offerte e conferme</b>	A causa del costante sviluppo dei materiali, tutte le descrizioni che figurano nelle nostre offerte, documenti che l'accompagnano, indicazione di peso, misure, illustrazioni e disegni sono indicativi. I dati hanno valore obbligatorio soltanto se quest'ultimi sono specificati espressamente.
<b>Prezzi</b>	I nostri prezzi s'intendono senza TVA, per merce resa franco fabbrica, materiale imballato, porto e assicurazione escluse. In caso di un aumento dei prezzi, ci riserviamo il diritto di fatturare gli utensili confermati ai nuovi prezzi.
<b>Pagamenti</b>	Entro 30 giorni dalla data della fattura, netto. In caso di mancato o ritardato pagamento alla scadenza, potrà essere richiesto un interesse di mora a partire dalla scadenza della fattura e calcolato sulla base del tasso di sconto in vigore al momento. Spese di rimborso, di emissione tratta, ecc., sono a carico dell' acquirente.
<b>Diritti di proprietà</b>	Il materiale resta di nostra proprietà sino al completo pagamento del prezzo totale, spese supplementari incluse.
<b>Spedizione</b>	La spedizione avviene a rischio dell'acquirente.
<b>Termine di consegna</b>	I termini di consegna, pur se indicati con la massima cura, non sono impegnativi. Non si accettano responsabilità relative a richieste di indennità dovute per perdite causate direttamente o conseguentemente a ritardi di consegna.
<b>Consegna utensili speciali</b>	Ci riserviamo il diritto di fornire fino al 15 % in più o in meno della quantità degli utensili speciali ordinati.
<b>Garanzia</b>	Utensili riconosciuti difettosi saranno sostituiti da noi senza spese.
<b>Reclami</b>	Reclami saranno presi in considerazione entro 15 giorni dal ricevimento della merce.
<b>Illustrazioni, disegni e schemi</b>	E' severamente proibito riprodurre o cedere a terzi disegni o altre documentazioni contenute in questo catalogo. A causa dell'evoluzione tecnica e dell'eventuale introduzione di nuove norme, le indicazioni che figurano nel ns. catalogo, possono subire modifiche senza preavviso e sono pertanto da considerarsi non impegnative.
<b>Condizioni speciali</b>	In caso di forza maggiore, interruzione parziale o totale della nostra produzione, ci riserviamo il diritto di annullare, parzialmente o completamente i nostri impegni di consegna.
<b>Foro competente</b>	Le contestazioni sono soggette alla legge svizzera. Il foro competente è Moutier (Svizzera).

# SUPPLÉMENTS DE PRIX - SUPPLEMENTI DI PREZZO

## Suppléments de prix pour modifications et traitements de surface

	Supplément sur prix brut par pièce	Participation aux frais de mise en train par type et dimension (net)
Modifier l'angle de coupe (Ø 5 à 20 mm)	10 %	sur demande
Rallonger l'entrée (jusqu'au Ø 20 mm)	10 %	sur demande
Raccourcir l'entrée (Ø 3 à 20 mm)	20 %	sur demande
Meuler l'entrée à hélice (Ø 5 à 20 mm)	10 %	sur demande
Enlever pointe de centrage	3 %	sur demande
Tronquer les filets dès Ø 4 mm	12 %	sur demande
Nitruration Plasma + traitement de surface «Vapeur»	10 %	sur demande
Traitement de surface DC "V"	8 %	sur demande
Marquage supplémentaire	5 %	sur demande
Canal de lubrification, avec sortie frontale	sur demande	sur demande
Canal de lubrification, avec sorties latérales	sur demande	sur demande
Revêtements TiN, TiCN, VS, CrN, HL	sur demande	sur demande

## Supplementi di prezzo per modifiche e trattamenti di superficie

	Sui prezzi lordi per pezzo	Partecipazione alle spese per attrezzatura per tipo e dimensioni (netto)
Modifica angolo di taglio (Ø 5 - 20 mm)	10 %	su richiesta
Allungamento dell'imbocco (sino al Ø 20 mm)	10 %	su richiesta
Accorciamento dell'imbocco (Ø 3 - 20 mm)	20 %	su richiesta
Molatura dell'imbocco corretto (Ø 5 - 20 mm)	10 %	su richiesta
Spianatura punte di centraggio	3 %	su richiesta
Troncatura filetti da Ø 4 mm	12 %	su richiesta
Nitrurazione Plasma+trattamento superficiale «V»	10 %	su richiesta
Trattamento DC "V"	8 %	su richiesta
Marcatatura supplementare	5 %	su richiesta
Lubrificazione interna con uscita frontale	su richiesta	su richiesta
Lubrificazione interna con uscite radiali	su richiesta	su richiesta
Rivestimenti TiN, TiCN, VS, CrN, HL	su richiesta	su richiesta

## Frais pour certificat de contrôle - Spese per certificati di controllo

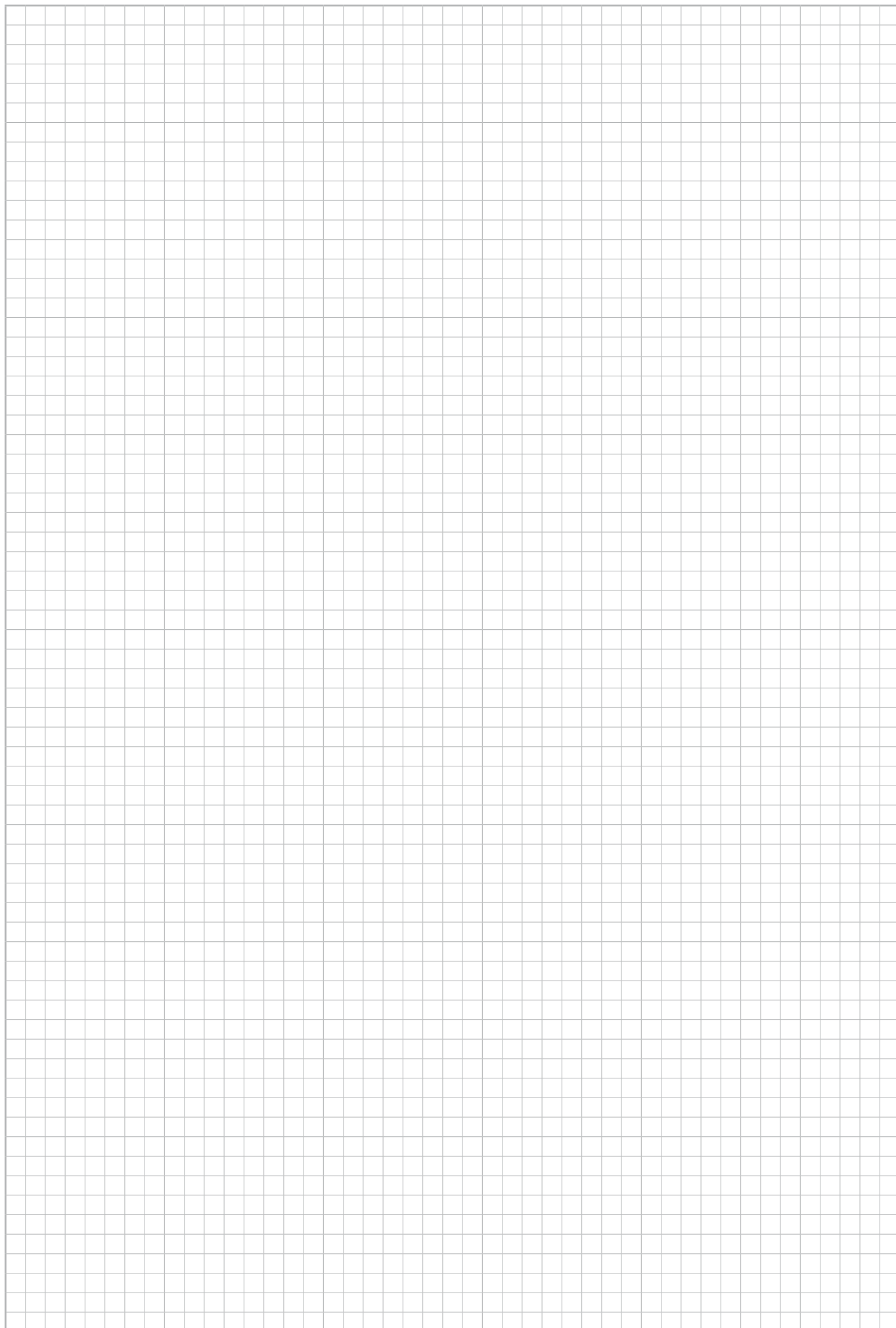
### Pour nouvelles jauges de filetage / insécurité de mesure U95

### Per nuovi calibri filettati / insicurezza di misura U95

			Prix net / Prezzi netti
<b>D5703</b>	<b>D5725</b>	Ø 1 - 2.9 mm	sur demande / su richiesta
		Ø 3 - 40 mm	sur demande / su richiesta
<b>D5701-1</b>	<b>D5701-2</b>	Ø 1 - 2.9 mm	sur demande / su richiesta
		Ø 3 - 40 mm	sur demande / su richiesta
		Ø 41 - 80 mm	sur demande / su richiesta
		Ø 81 - 200 mm	sur demande / su richiesta
<b>D5704</b>	<b>D5714</b>	Ø 1 - 2.9 mm	sur demande / su richiesta
		Ø 3 - 40 mm	sur demande / su richiesta
		Ø 41 - 80 mm	sur demande / su richiesta
		Ø 81 - 200 mm	sur demande / su richiesta
<b>D5720 / D5721</b>	<b>D5722 / D5723</b>	Ø 3 - 40 mm	sur demande / su richiesta
		Ø 41 - 80 mm	sur demande / su richiesta
		Ø > 80 mm	sur demande / su richiesta

Les jauges avec certificat sont livrées avec marquage du numéro d'identification figurant sur le certificat.

Se il calibro è richiesto con certificato, lo stesso viene fornito di Nr. d'identificazione.





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### **Avertissement**

*Une défaillance technique ou la négligence peuvent être à l'origine de la casse partielle ou totale d'un outil de filetage et atteindre à la santé de l'opérateur. Il est impératif de suivre scrupuleusement les dispositions de sécurité et de santé des entreprises actives dans le traitement du métal. Le port de lunettes de protection est indispensable.*

*Le ré-affûtage des outils de filetage provoque de la poussière dangereuse pour la santé et ne peut être exécuté que selon des instructions de sécurité précises.*

### **Avvertenza**

Un guasto tecnico o la negligenza possono essere all'origine della rottura parziale o totale di un utensile per filettare e causare un danno alla salute dell'operatore. E'obbligatorio seguire scrupolosamente le disposizioni in materia di sicurezza e a salvaguardia della salute che le società' prescrivono nel campo della lavorazione dei metalli. E'obbligatorio adottare gli occhiali di protezione.

La riaffilatura dei maschi crea della polvere pericolosa per la salute e puo' essere eseguita solo seguendo precise istruzioni di sicurezza.

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