

Simplifica tareas, ahorra problemas /
Simplifie les tâches, évite les problèmes /
Simplify tasks, save on problems /



Simplifica tareas, ahorra problemas

Hunix es la nueva gama de machos de roscar universal de Hepvc. Una innovación, de desarrollo propio, que ha dado como resultado una herramienta capaz de mecanizar por si sola hasta el 77% de los materiales.

¿Imaginas lo que supone para un distribuidor reducir sus referencias aumentando la calidad? ¿Y la optimización del proceso de mecanizado de una industria? Disminución de tiempos, reducción de incidencias, simplificación de stock... ¡menos problemas! ¡más eficiencia! Además, gracias a nuestro exclusivo diseño y fabricación, conseguimos hasta 2 veces más de vida útil y mejora en el mecanizado.

HUNIX / VAP



VAP

Básico para una mejor lubricación
La base d'une meilleure lubrification
Basic for better lubrication

» **HUNIX-TAP** puede mecanizar
P + M + K + N = 77% de los materiales

» **HUNIX-TAP** peut usiner
P + M + K + N = 77% des matériaux

» The **HUNIX-TAP** machines
P + M + K + N = 77% of materials

Acero inoxidable
Acier inoxydable
Stainless steel

M

Materiales no féreos
Matériaux non ferreux
Non-ferrous materials

N

Aceros
Aciers
Steels

P

S

Súper aleaciones
Super alliages
Super-alloys

K

Fundición
Fonte
Cast iron

INNOVATION »

Simplifie les tâches, évite les problèmes

Hunix est la nouvelle gamme filetages universels de Hepyc. Une innovation, développée en interne qui a donné naissance à un outil capable d'usiner seul jusqu'à 77% des matériaux.

Pouvez-vous imaginer ce que cela signifie pour un distributeur de réduire ses références en augmentant la qualité ? Et qu'en est-il de l'optimisation du processus d'usinage dans une industrie ? Réduction des temps, réduction des incidents, simplification du stock... moins de problèmes ! plus d'efficacité ! De plus, grâce à notre conception et à notre fabrication exclusive, nous obtenons jusqu'à 2 fois plus de durée de vie utile et d'amélioration de l'usinage.

Simplify tasks, save on problems

Hunix is the new Hepyc range of universal tap screws. A proprietary innovation that has resulted in a tool capable of machining up to 77% of materials by itself.

Can you imagine what it means for a distributor to reduce his references while increasing quality? And the optimization of the machining process of an industry? Decrease in production times, reduction of incidents, stock simplification... less problems! More efficiency! Moreover, thanks to our exclusive design and manufacturing, we achieve over a useful life over 2 times longer and machining improvements.

HUNIX / **TIN+**



TIN+

Tratamiento bicapa
Traitement à deux couches
Two-layer coating

HUNIX / **PM**



PM

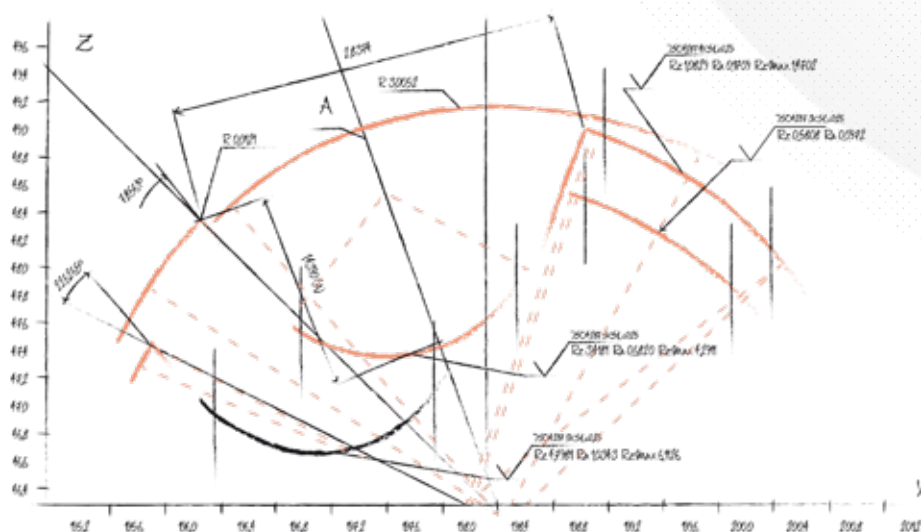
Acero pulvimetalúrgicos
Acier fritté
Powder-metallurgy steel

Único por su geometría universal
Unique par sa géométrie universelle
Unique for its universal design

Perfil de ranura optimizado
 Profil de rainure optimisé
 Optimized flute profile

Ranuras helicoidales progresivas
Rainures hélicoïdales progressives
Progressives spiral flutes

Destalonado adaptado
Détalonnage adapté
Adapted undercuts



Perfil de ranura optimizado / Profil de rainure optimisé / Optimized groove profile

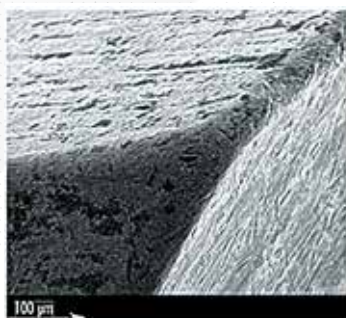
Único por su tecnología Microfinish
Unique par sa technologie Microfinish
Unique for its Microfinish



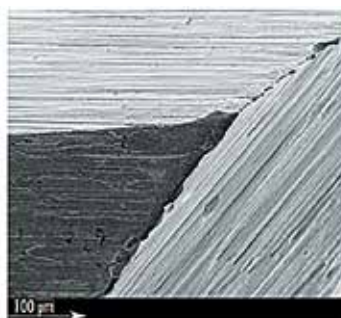
Redondeo de aristas de corte para mayor estabilidad y control del desgaste de la herramienta.
Filo de corte continuo para un mejor acabado de la rosca.
Evita roturas prematuras por su menor rugosidad superficial, lo que disminuye la fricción durante el roscado.

Arrondissement des arêtes de coupe pour une plus grande stabilité et contrôle l'usure des outils.
Arête de coupe continue pour une meilleure finition du filetage.
Prévient les cassures prématurées grâce à une moindre rugosité de la surface, ce qui réduit le frottement lors du filetage.

Rounded cutting edges to increase the stability and control of the tool wear.
Continuous cutting blade for a better tap finish.
Avoid premature breakdowns with decreased surface texture, which lessens tapping friction.



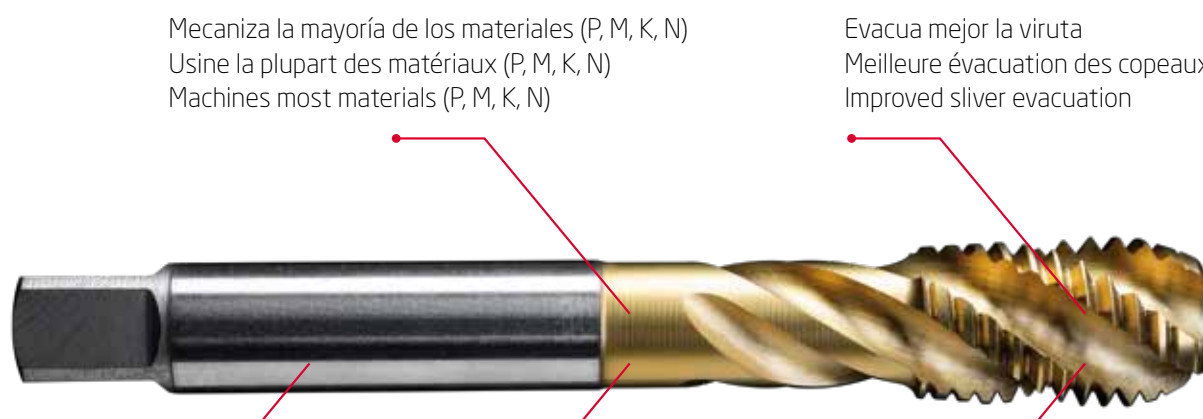
Con Microfinish
Avec Microfinish
Microfinished



Sin Microfinish
Sans Microfinish
Non-microfinished

Único por su tratamiento de última generación
Unique par son traitement de pointe
Unique for its latest-generation treatment

TIN+



Mecaniza la mayoría de los materiales (P, M, K, N)
Usine la plupart des matériaux (P, M, K, N)
Machines most materials (P, M, K, N)

Evacua mejor la viruta
Meilleure évacuation des copeaux
Improved sliver evacuation

El doble de vida útil
Durée de vie double
Doubled service life

Mecanizado estable y correcto
dimensionado de la rosca
Usinage de filets stables et
correctement dimensionnés
Stable tap machining and proper
tap sizing

El mejor en calidad-precio
Le meilleur en termes de qualité et de prix
The best price-quality ratio

TIN+

Recubrimiento/ Revêtement/ Coating: **TiAlN + TiN**

Estructura/ Structure/ Structure: **Bicapa / Deux couches / Dual layer**

Dureza/ Dureté / Hardness: **3500 HV0,05**

Coef. de fricción/ Coeff. de friction / Friction coefficient: **0,3**

Max. temperatura/ Température max/ Max. temperature: **800°C**

Color/ Couleur/ Colour: **Dorado / Doré / Golden**

Espesor/ Épaisseur/ Thickness: **4-5 µm**



TIN+ coating cross-section

Rendimientos / Rendements / Performances

(Límite hasta 3.000 roscas / Limite jusqu'à 3.000 taraudages / Limit up to 3,000 threads)



P Aceros / Aciers / Steels

Condiciones de corte/ Conditions de coupe/ Cutting conditions

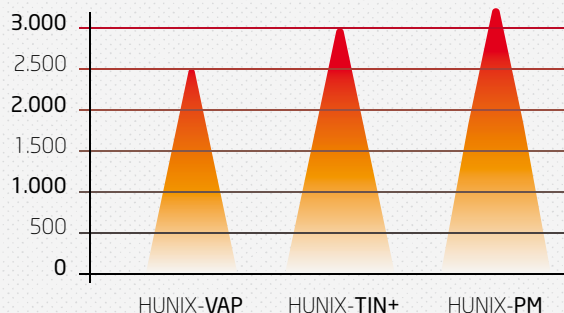
Material/ Matériau/ Material: **F114**

Ø: **M6**

Agujero/ Trou/ Hole: **Pasante/ Passant/ Through**

Profundidad/ Profondeur/ Depth: **2,5xD**

Vc: **11m/min**



M Acero inoxidable / Acier inoxydable / Stainless steel

Condiciones de corte/ Conditions de coupe/ Cutting conditions

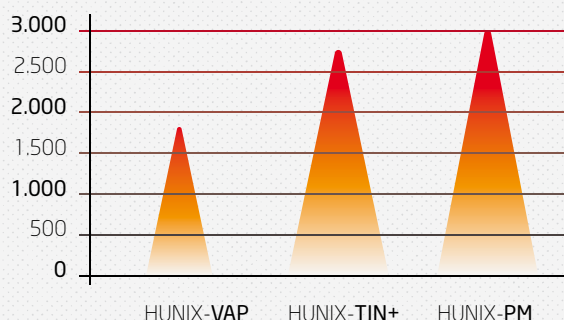
Material/ Matériau/ Material: **Aisi 304**

Ø: **M6**

Agujero/ Trou/ Hole: **Pasante/ Passant/ Through**

Profundidad/ Profondeur/ Depth: **2,5xD**

Vc: **6m/min**



N Materiales no féreos / Matériaux non ferreux / Non-ferrous materials

Condiciones de corte/ Conditions de coupe/ Cutting conditions

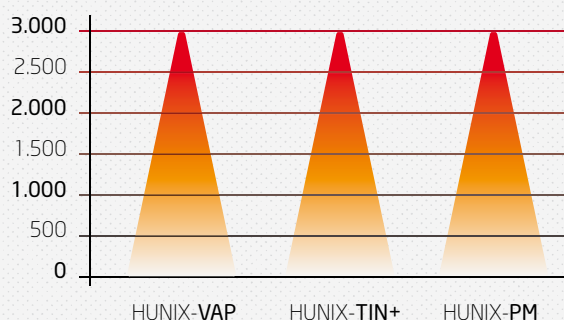
Material/ Matériau/ Material:

Ø: **M6**

Agujero/ Trou/ Hole: **Ciego/ Borgne/ Blind**

Profundidad/ Profondeur/ Depth: **1,5xD**

Vc: **20m/min**



Machos de máquina / Tarauds machine / Machine taps (M-MF)

	2250	HSSE	DIN 371	VAP		M DIN 13	Form. B "Gun"	Tol. 6H	3XD	R	MF	P M N
	2251	HSSE	DIN 376/374	VAP		M-MF DIN 13	Form. B "Gun"	Tol. 6H	3XD	D	MF	P M N
	2116	HSSE	DIN 371	TIN+		M DIN 13	Form. B "Gun"	Tol. 6H	3XD	R	MF	P M K N
	2115	HSSE	DIN 376	TIN+		M-MF DIN 13	Form. B "Gun"	Tol. 6H	3XD	D	MF	P M K N
NEW	2254	HSSE-PM	DIN 371	HL		M DIN 13	Form. B "Gun"	Tol. 6HX	3XD	R	MF	P M K N S
NEW	2255	HSSE-PM	DIN 376/374	HL		M DIN 13	Form. B "Gun"	Tol. 6HX	3XD	D	MF	P M K N S
	2252	HSSE	DIN 371	VAP		M DIN 13	Form. C	Tol. 6H	35° 3XD	R	MF	P M N
	2253	HSSE	DIN 376/374	VAP		M-MF DIN 13	Form. C	Tol. 6H	35° 3XD	D	MF	P M N
	2118	HSSE	DIN 371	TIN+		M DIN 13	Form. C	Tol. 6H	35° 3XD	R	MF	P M K N
	2117	HSSE	DIN 376/374	TIN+		M-MF DIN 13	Form. C	Tol. 6H	35° 3XD	D	MF	P M K N
NEW	2256	HSSE-PM	DIN 371	HL		M DIN 13	Form. C	Tol. 6HX	45° 3XD	R	MF	P M K N S
NEW	2257	HSSE-PM	DIN 376/374	HL		M DIN 13	Form. C	Tol. 6HX	45° 3XD	D	MF	P M K N S

Machos de máquina / Tarauds machine / Machine taps (UNC-UNF)

	2262	HSSE	DIN 371	VAP		UNC ANSI/ASME B1.3	Form. B "Gun"	Tol. 2B	3XD	R	MF	P M N
	2263	HSSE	DIN 376	VAP		UNC ANSI/ASME B1.3	Form. B "Gun"	Tol. 2B	3XD	D	MF	P M N
	2234	HSSE	DIN 371	TIN+		UNC ANSI/ASME B1.3	Form. B "Gun"	Tol. 2B	3XD	R	MF	P M K N
	2235	HSSE	DIN 376	TIN+		UNC ANSI/ASME B1.3	Form. B "Gun"	Tol. 2B	3XD	D	MF	P M K N
	2264	HSSE	DIN 371	VAP		UNC ANSI/ASME B1.3	Form. C	Tol. 2B	35° 3XD	R	MF	P M N
	2265	HSSE	DIN 371	VAP		UNC ANSI/ASME B1.3	Form. C	Tol. 2B	35° 3XD	D	MF	P M N

2236	HSSE	DIN 371	TIN+		UNC ANGRADE BL1 Form. C Tol. 2B 35° 3XD R MF	P M K N
2237	HSSE	DIN 376	TIN+		UNC ANGRADE BL1 Form. C Tol. 2B 35° 3XD D MF	P M K N
2276	HSSE	DIN 371	VAP		UNF ANGRADE BL1 Form. B "Gun" Tol. 2B 3XD R MF	P M N
2277	HSSE	DIN 374	VAP		UNF ANGRADE BL1 Form. B "Gun" Tol. 2B 3XD D MF	P M N
2280	HSSE	DIN 371	TIN+		UNF ANGRADE BL1 Form. B "Gun" Tol. 2B 3XD R MF	P M K N
2281	HSSE	DIN 374	TIN+		UNF ANGRADE BL1 Form. B "Gun" Tol. 2B 3XD D MF	P M K N
2278	HSSE	DIN 371	VAP		UNF ANGRADE BL1 Form. C Tol. 2B 35° 3XD R MF	P M N
2279	HSSE	DIN 374	VAP		UNF ANGRADE BL1 Form. C Tol. 2B 35° 3XD D MF	P M N
2282	HSSE	DIN 371	TIN+		UNF ANGRADE BL1 Form. C Tol. 2B 35° 3XD R MF	P M K N
2283	HSSE	DIN 374	TIN+		UNF ANGRADE BL1 Form. C Tol. 2B 35° 3XD D MF	P M K N

Machos de máquina / Tarauds machine / Machine taps (G)

2284	HSSE	DIN 5156	VAP		G ISO 228 Form. B "Gun" 3XD D MF	P M N
2286	HSSE	DIN 5156	TIN+		G ISO 228 Form. B "Gun" 3XD D MF	P M K N
2285	HSSE	DIN 5156	VAP		G ISO 228 Form. C 35° 3XD D MF	P M N
2287	HSSE	DIN 5156	TIN+		G ISO 228 Form. C 35° 3XD D MF	P M K N

2250

HSSE DIN 371

M
DIN13

Form.
B
"Gun"



Tol.
6H

3XD



VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	○			●	○		○		○	●		○					
10-25	10-15			5-10	5-8		10-15		10-15	10-20		10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
M2,0	0,40	45	10	2,10	2,8
M2,5	0,45	50	9	2,10	2,8
M3,0	0,50	56	11	2,70	3,5
M3,5	0,60	56	12	3,00	4,0
M4,0	0,70	63	13	3,40	4,5

Ø	P	L mm	l mm	mm	d mm
M5,0	0,80	70	16	4,90	6,0
M6,0	1,00	80	19	4,90	6,0
M8,0	1,25	90	22	6,20	8,0
M10,0	1,50	100	24	8,00	10,0

2251

HSSE DIN 376/374

M-MF
DIN13

Form.
B
"Gun"



Tol.
6H

3XD

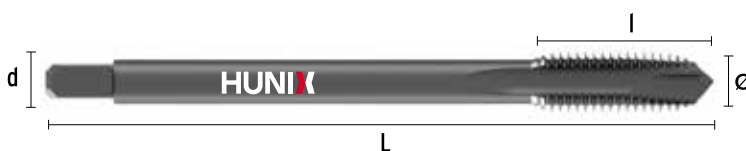


VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	○			●	○		○		○	●		○					
10-25	10-15			5-10	5-8		10-15		10-15	10-20		10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
M3,0	0,50	56	11	2,70	3,5
M4,0	0,70	63	13	2,10	2,8
M5,0	0,80	70	16	2,70	3,5
M6,0	1,00	80	19	3,40	4,5
M8,0	1,00	90	20	4,90	6,0
M8,0	1,25	90	22	4,90	6,0
M10,0	1,00	90	20	5,50	7,0
M10,0	1,25	100	20	5,50	7,0
M10,0	1,50	100	24	5,50	7,0
M12,0	1,00	100	20	7,00	9,0
M12,0	1,25	100	20	7,00	9,0
M12,0	1,50	100	20	7,00	9,0
M12,0	1,75	110	29	7,00	9,0
M14,0	1,00	100	20	9,00	11,0
M14,0	1,25	100	20	9,00	11,0
M14,0	1,50	100	20	9,00	11,0

Ø	P	L mm	l mm	mm	d mm
M14,0	2,00	110	30	9,00	11,0
M16,0	1,00	100	20	9,00	12,0
M16,0	1,50	100	22	9,00	12,0
M16,0	2,00	110	30	9,00	12,0
M18,0	1,00	110	24	11,00	14,0
M18,0	1,50	110	24	11,00	14,0
M18,0	2,50	125	34	11,00	14,0
M20,0	1,00	125	24	12,00	16,0
M20,0	1,50	125	25	12,00	16,0
M20,0	2,50	140	34	12,00	16,0
M22,0	1,00	125	25	14,50	18,0
M22,0	1,50	125	25	14,50	18,0
M22,0	2,50	140	34	14,50	18,0
M24,0	1,50	140	27	14,50	18,0
M24,0	2,00	140	27	14,50	18,0
M24,0	3,00	160	38	14,50	18,0

2116

HSSE DIN 371

M
DIN 13

Form.
B
"Gun"



Tol.
6H

3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 15-30	● 12-18	○ 8-12		● 6-12	○ 6-10	● 10-15	● 15-20		● 15-25	● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
M2,0	0,40	45	10	2,10	2,8
M2,5	0,45	50	9	2,10	2,8
M3,0	0,50	56	11	2,70	3,5
M3,5	0,60	56	12	3,00	4,0
M4,0	0,70	63	13	3,40	4,5

Ø	P	L mm	l mm	mm	d mm
M5,0	0,80	70	16	4,90	6,0
M6,0	1,00	80	19	4,90	6,0
M8,0	1,25	90	22	6,20	8,0
M10,0	1,50	100	24	8,00	10,0

2115

HSSE DIN 376/374

M-MF
DIN13

Form.
B
"Gun"



Tol.
6H

3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 15-30	● 12-18	○ 8-12		● 6-12	○ 6-10	● 10-15	● 15-20		● 15-25	● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
M3,0	0,50	56	11	2,70	3,5
M4,0	0,70	63	13	2,10	2,8
M5,0	0,80	70	16	2,70	3,5
M6,0	1,00	80	19	3,40	4,5
M8,0	1,00	90	20	4,90	6,0
M8,0	1,25	90	22	4,90	6,0
M10,0	1,00	90	20	5,50	7,0
M10,0	1,25	100	20	5,50	7,0
M10,0	1,50	100	24	5,50	7,0
M12,0	1,00	100	20	7,00	9,0
M12,0	1,25	100	20	7,00	9,0
M12,0	1,50	100	20	7,00	9,0
M12,0	1,75	110	29	7,00	9,0
M14,0	1,00	100	20	9,00	11,0
M14,0	1,25	100	20	9,00	11,0
M14,0	1,50	100	20	9,00	11,0

Ø	P	L mm	l mm	mm	d mm
M14,0	2,00	110	30	9,00	11,0
M16,0	1,00	100	20	9,00	12,0
M16,0	1,50	100	22	9,00	12,0
M16,0	2,00	110	30	9,00	12,0
M18,0	1,00	110	24	11,00	14,0
M18,0	1,50	110	24	11,00	14,0
M18,0	2,50	125	34	11,00	14,0
M20,0	1,00	125	24	12,00	16,0
M20,0	1,50	125	25	12,00	16,0
M20,0	2,50	140	34	12,00	16,0
M22,0	1,00	125	25	14,50	18,0
M22,0	1,50	125	25	14,50	18,0
M22,0	2,50	140	34	14,50	18,0
M24,0	1,50	140	27	14,50	18,0
M24,0	2,00	140	27	14,50	18,0
M24,0	3,00	160	38	14,50	18,0

P

Aceros
Aciers
Steels

M

Aceros Inox
Aciers Inox
Stainless Steels

K

Fundición
Fonte
Cast Iron

N

Metales no ferrosos
Métal non Ferreux
Non Ferrous metals

S

Titanio y Superalloys
Titanium et Superalloys
Titanium and Superalloys

H

Materiales Duros
Matériaux Durs
Hard materials

2254

HSSE-PM DIN 371

M
DIN 13

Form.
B
"Gun"



Tol.
6HX

3XD



HL

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ni	Ti	50 HRC	55 HRC	60 HRC
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
20-40	15-30	10-20	5-10	5-15	5-10	10-30	10-30	5-15	10-30	10-30	5-15	10-30	2-8	2-15			

Vc (m/min). • Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY

NEW



Ø	P	L mm	l mm	mm	d mm
M2,0	0,40	45	10	2,10	2,8
M3,0	0,50	56	5	2,70	3,5
M4,0	0,70	63	7	3,40	4,5
M5,0	0,80	70	8	4,90	6,0

Ø	P	L mm	l mm	mm	d mm
M6,0	1,00	80	10	4,90	6,0
M8,0	1,25	90	13	6,20	8,0
M10,0	1,50	100	15	8,00	10,0

2255

HSSE-PM DIN 376/374

M
DIN 13

Form.
B
"Gun"



Tol.
6HX

3XD



HL

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ni	Ti	50 HRC	55 HRC	60 HRC
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
20-40	15-30	10-20	5-10	5-15	5-10	10-30	10-30	5-15	10-30	10-30	5-15	10-30	2-8	2-15			

Vc (m/min). • Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY

NEW



Ø	P	L mm	l mm	mm	d mm
M8,0	1,25	90	15	4,90	6,0
M10,0	1,00	90	10	5,50	7,0
M10,0	1,50	100	17	5,50	7,0
M12,0	1,00	100	10	7,00	9,0
M12,0	1,25	100	15	7,00	9,0
M12,0	1,50	100	15	7,00	9,0
M12,0	1,75	110	18	7,00	9,0
M14,0	1,50	100	15	9,00	11,0
M14,0	2,00	110	20	9,00	11,0

Ø	P	L mm	l mm	mm	d mm
M16,0	1,50	100	15	9,00	12,0
M16,0	2,00	110	20	9,00	12,0
M18,0	1,50	110	17	11,00	14,0
M18,0	2,50	125	25	11,00	14,0
M20,0	1,50	125	17	12,00	16,0
M20,0	2,50	140	25	12,00	16,0
M22,0	2,50	140	25	14,50	18,0
M24,0	3,00	160	30	14,50	18,0

2252

HSSE DIN 371

M
DIN 13

Form.
C



Tol.
6H



3XD



VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15			● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
M2,0	0,40	45	5	2,10	2,8
M2,5	0,45	50	5	2,10	2,8
M3,0	0,50	56	6	2,70	3,5
M3,5	0,60	56	6	3,00	4,0
M4,0	0,70	63	7	3,40	4,5

Ø	P	L mm	I mm	mm	d mm
M5,0	0,80	70	8	4,90	6,0
M6,0	1,00	80	10	4,90	6,0
M8,0	1,25	90	14	6,20	8,0
M10,0	1,50	100	16	8,00	10,0

2253

HSSE DIN 376/374

M-MF
DIN13

Form.
C



Tol.
6H



3XD



VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15			● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
M3,0	0,50	56	5	2,00	2,2
M4,0	0,70	63	7	2,10	2,8
M5,0	0,80	70	8	2,70	3,5
M6,0	1,00	80	10	3,40	4,5
M8,0	1,00	90	10	4,90	6,0
M8,0	1,25	90	14	4,90	6,0
M10,0	1,00	90	10	5,50	7,0
M10,0	1,25	100	15	5,50	7,0
M10,0	1,50	100	16	5,50	7,0
M12,0	1,00	100	10	7,00	9,0
M12,0	1,25	100	15	7,00	9,0
M12,0	1,50	100	15	7,00	9,0
M12,0	1,75	110	18	7,00	9,0
M14,0	1,00	100	10	9,00	11,0
M14,0	1,25	100	15	9,00	11,0
M14,0	1,50	100	15	9,00	11,0

Ø	P	L mm	I mm	mm	d mm
M14,0	2,00	110	20	9,00	11,0
M16,0	1,00	100	10	9,00	12,0
M16,0	1,50	100	15	9,00	12,0
M16,0	2,00	110	20	9,00	12,0
M18,0	1,00	110	13	11,00	14,0
M18,0	1,50	110	20	11,00	14,0
M18,0	2,50	125	25	11,00	14,0
M20,0	1,00	125	13	12,00	16,0
M20,0	1,50	125	20	12,00	16,0
M20,0	2,50	140	25	12,00	16,0
M22,0	1,00	125	13	14,50	18,0
M22,0	1,50	125	17	14,50	18,0
M22,0	2,50	140	27	14,50	18,0
M24,0	1,50	140	20	14,50	18,0
M24,0	2,00	140	20	14,50	18,0
M24,0	3,00	160	30	14,50	18,0

2118

HSSE DIN 371

M
DIN 13

Form.
C



Tol.
6H



3XD



TIN+

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	●	○		●	○		●			●		○					
10-25	12-18	8-12		6-12	6-10		15-20			15-25		12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
M2,0	0,40	45	5	2,10	2,8
M2,5	0,45	50	5	2,10	2,8
M3,0	0,50	56	6	2,70	3,5
M3,5	0,60	56	6	3,00	4,0
M4,0	0,70	63	7	3,40	4,5

Ø	P	L mm	I mm	mm	d mm
M5,0	0,80	70	8	4,90	6,0
M6,0	1,00	80	10	4,90	6,0
M8,0	1,25	90	14	6,20	8,0
M10,0	1,50	100	16	8,00	10,0

2117

HSSE DIN 376/374

M-MF
DIN 13

Form.
C



Tol.
6H



3XD



TIN+

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	●	○		●	○		●			●		○					
10-25	12-18	8-12		6-12	6-10		15-20			15-25		12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
M3,0	0,50	56	5	2,00	2,2
M4,0	0,70	63	7	2,10	2,8
M5,0	0,80	70	8	2,70	3,5
M6,0	1,00	80	10	3,40	4,5
M8,0	1,00	90	10	4,90	6,0
M8,0	1,25	90	14	4,90	6,0
M10,0	1,00	90	10	5,50	7,0
M10,0	1,25	100	15	5,50	7,0
M10,0	1,50	100	16	5,50	7,0
M12,0	1,00	100	10	7,00	9,0
M12,0	1,25	100	15	7,00	9,0
M12,0	1,50	100	15	7,00	9,0
M12,0	1,75	110	18	7,00	9,0
M14,0	1,00	100	10	9,00	11,0
M14,0	1,25	100	15	9,00	11,0
M14,0	1,50	100	15	9,00	11,0

Ø	P	L mm	I mm	mm	d mm
M14,0	2,00	110	20	9,00	11,0
M16,0	1,00	100	10	9,00	12,0
M16,0	1,50	100	15	9,00	12,0
M16,0	2,00	110	20	9,00	12,0
M18,0	1,00	110	13	11,00	14,0
M18,0	1,50	110	20	11,00	14,0
M18,0	2,50	125	25	11,00	14,0
M20,0	1,00	125	13	12,00	16,0
M20,0	1,50	125	20	12,00	16,0
M20,0	2,50	140	25	12,00	16,0
M22,0	1,00	125	13	14,50	18,0
M22,0	1,50	125	17	14,50	18,0
M22,0	2,50	140	27	14,50	18,0
M24,0	1,50	140	20	14,50	18,0
M24,0	2,00	140	20	14,50	18,0
M24,0	3,00	160	30	14,50	18,0

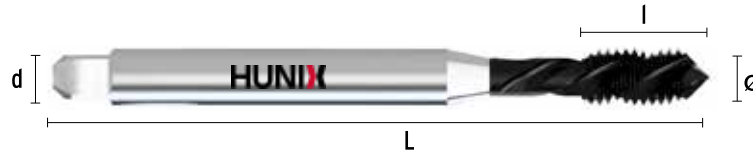
2256 **HSSE-PM DIN 371** **M** **DIN 13** **Form. C** **Tol. 6HX** **45°** **3XD** **R** **HL**

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ni	Ti	50 HRC	55 HRC	60 HRC
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
20-40	15-30	10-20	5-10	5-15	5-10	10-30	10-30	5-15	10-30	10-30	5-15	10-30	2-8	2-15			

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY

NEW



Ø	P	L mm	l mm	mm	d mm
M2,0	0,40	45	10	2,10	2,8
M3,0	0,50	56	5	2,70	3,5
M4,0	0,70	63	7	3,40	4,5
M5,0	0,80	70	8	4,90	6,0

Ø	P	L mm	l mm	mm	d mm
M6,0	1,00	80	10	4,90	6,0
M8,0	1,25	90	13	6,20	8,0
M10,0	1,50	100	15	8,00	10,0

2257 **HSSE-PM DIN 376/374** **M** **DIN 13** **Form. C** **Tol. 6HX** **45°** **3XD** **D** **HL**

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ni	Ti	50 HRC	55 HRC	60 HRC
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
20-40	15-30	10-20	5-10	5-15	5-10	10-30	10-30	5-15	10-30	10-30	5-15	10-30	2-8	2-15			

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY

NEW



Ø	P	L mm	l mm	mm	d mm
M8,0	1,25	90	15	4,90	6,0
M10,0	1,00	90	10	5,50	7,0
M10,0	1,50	100	17	5,50	7,0
M12,0	1,00	100	10	7,00	9,0
M12,0	1,25	100	15	7,00	9,0
M12,0	1,50	100	15	7,00	9,0
M12,0	1,75	110	18	7,00	9,0
M14,0	1,50	100	15	9,00	11,0
M14,0	2,00	110	20	9,00	11,0

Ø	P	L mm	l mm	mm	d mm
M16,0	1,50	100	15	9,00	12,0
M16,0	2,00	110	20	9,00	12,0
M18,0	1,50	110	17	11,00	14,0
M18,0	2,50	125	25	11,00	14,0
M20,0	1,50	125	17	12,00	16,0
M20,0	2,50	140	25	12,00	16,0
M22,0	2,50	140	25	14,50	18,0
M24,0	3,00	160	30	14,50	18,0

2262

HSSE DIN 371

UNC
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B



3XD

VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15		○ 10-15	● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
Nº4	40,00	56	10	2,70	3,5
Nº5	40,00	56	10	2,70	3,5
Nº6	32,00	56	12	3,00	4,0
Nº8	32,00	63	12	3,40	4,5
Nº10	24,00	70	14	4,90	6,0

Ø	P	L mm	l mm	mm	d mm
Nº12	24,00	80	18	4,90	6,0
1/4	20,00	80	18	5,50	7,0
5/16	18,00	90	20	6,20	8,0
3/8	16,00	100	20	8,00	10,0

2263

HSSE DIN 376

UNC
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B



3XD

VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15		○ 10-15	● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
7/16	14,00	100	22	6,20	8,0
1/2	13,00	110	24	7,00	9,0
9/16	12,00	110	25	9,00	11,0
5/8	11,00	110	32	9,00	12,0

Ø	P	L mm	l mm	mm	d mm
3/4	10,00	125	32	11,00	14,0
7/8	9,00	140	32	14,50	18,0
1"	8,00	160	38	16,00	20,0

2234

HSSE DIN 371

UNC
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B



3XD

TIN+

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 15-30	● 12-18	○ 8-12		● 6-12	○ 6-10	● 10-15	● 15-20		● 15-25	● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
Nº4	40,00	56	10	2,70	3,5
Nº5	40,00	56	10	2,70	3,5
Nº6	32,00	56	12	3,00	4,0
Nº8	32,00	63	12	3,40	4,5
Nº10	24,00	70	14	4,90	6,0

Ø	P	L mm	I mm	mm	d mm
Nº12	24,00	80	18	4,90	6,0
1/4	20,00	80	18	5,50	7,0
5/16	18,00	90	20	6,20	8,0
3/8	16,00	100	20	8,00	10,0

2235

HSSE DIN 376

UNC
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B



3XD

TIN+

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 15-30	● 12-18	○ 8-12		● 6-12	○ 6-10	● 10-15	● 15-20		● 15-25	● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
7/16	14,00	100	22	6,20	8,0
1/2	13,00	110	24	7,00	9,0
9/16	12,00	110	25	9,00	11,0
5/8	11,00	110	32	9,00	12,0

Ø	P	L mm	I mm	mm	d mm
3/4	10,00	125	32	11,00	14,0
7/8	9,00	140	32	14,50	18,0
1"	8,00	160	38	16,00	20,0

P

Aceros
Aciers
Steels

M

Aceros Inox
Aciers Inox
Stainless Steels

K

Fundicion
Fonte
Cast Iron

N

Metales no ferrosos
Métal non Ferraux
Non Ferrous metals

S

Titanio y Superalaciones
Titanium et Superaliages
Titanium and Superalloys

H

Materiales Duros
Materiels Durs
Hard materials

2264

HSSE DIN 371

UNC
ANSI/ASME
B1.1

Form.
C



Tol.
2B



3XD

VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15			● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
Nº4	40,00	56	5	2,70	3,5
Nº5	40,00	56	7	2,70	3,5
Nº6	32,00	56	6	3,00	4,0
Nº8	32,00	63	7	3,40	4,5
Nº10	24,00	70	8	4,90	6,0

Ø	P	L mm	l mm	mm	d mm
Nº12	24,00	80	10	4,90	6,0
1/4	20,00	80	13	5,50	7,0
5/16	18,00	90	13	6,20	8,0
3/8	16,00	100	15	8,00	10,0

2265

HSSE DIN 376

UNC
ANSI/ASME

Form.
C



Tol.
2B



3XD

VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15			● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	l mm	mm	d mm
7/16	14,00	100	15	6,20	8,0
1/2	13,00	110	18	7,00	9,0
9/16	12,00	110	20	9,00	11,0
5/8	11,00	110	22	9,00	12,0

Ø	P	L mm	l mm	mm	d mm
3/4	10,00	125	25	11,00	14,0
7/8	9,00	140	30	14,50	18,0
1"	8,00	160	30	16,00	20,0

2236

HSSE DIN 371

UNC
ANSI/ASME
B1.1

Form.
C



Tol.
2B



3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	● 12-18	○ 8-12		● 6-12	○ 6-10		● 15-20			● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative



Ø	P	L mm	I mm	mm	d mm
Nº4	40,00	56	5	2,70	3,5
Nº5	40,00	56	7	2,70	3,5
Nº6	32,00	56	6	3,00	4,0
Nº8	32,00	63	7	3,40	4,5
Nº10	24,00	70	8	4,90	6,0

Ø	P	L mm	I mm	mm	d mm
Nº12	24,00	80	10	4,90	6,0
1/4	20,00	80	13	5,50	7,0
5/16	18,00	90	13	6,20	8,0
3/8	16,00	100	15	8,00	10,0

2237

HSSE DIN 376

UNC
ANSI/ASME
B1.1

Form.
C



Tol.
2B



3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	● 12-18	○ 8-12		● 6-12	○ 6-10		● 15-20			● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative



Ø	P	L mm	I mm	mm	d mm
7/16	14,00	100	15	6,20	8,0
1/2	13,00	110	18	7,00	9,0
9/16	12,00	110	20	9,00	11,0
5/8	11,00	110	22	9,00	12,0

Ø	P	L mm	I mm	mm	d mm
3/4	10,00	125	25	11,00	14,0
7/8	9,00	140	30	14,50	18,0
1"	8,00	160	30	16,00	20,0

P

Aceros
Aciers
Steels

M

Aceros Inox
Aciers Inox
Stainless Steels

K

Fundicion
Fonte
Cast Iron

N

Metales no ferrosos
Métal non Ferreux
Non Ferrous metals

S

Titanio y Superalloys
Titanium et Superalloys
Titanium and Superalloys

H

Materiales Duros
Matériels Durs
Hard materials

2276

HSSE DIN 371

UNF
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B

3XD



VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15		○ 10-15	● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
Nº4	48,00	56	11	2,70	3,5
Nº5	44,00	56	11	2,70	3,5
Nº6	40,00	56	12	3,00	4,0
Nº8	36,00	63	12	3,40	4,5
Nº10	32,00	70	14	4,90	6,0

Ø	P	L mm	I mm	mm	d mm
Nº12	28,00	80	18	4,90	6,0
1/4	20,00	80	18	5,50	7,0
5/16	24,00	90	20	6,20	8,0
3/8	24,00	100	20	8,00	10,0

2277

HSSE DIN 374

UNF
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B

3XD



VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15		○ 10-15	● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
7/16	20,00	100	20	6,20	8,0
1/2	20,00	100	20	7,00	9,0
9/16	18,00	100	20	9,00	11,0
5/8	18,00	100	20	9,00	12,0

Ø	P	L mm	I mm	mm	d mm
3/4	16,00	110	24	11,00	14,0
7/8	14,00	125	24	14,50	18,0
1"	12,00	140	27	14,50	18,0

2280

HSSE DIN 371

UNF
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B

3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 15-30	● 12-18	○ 8-12		● 6-12	○ 6-10	● 10-15	● 15-20		● 15-25	● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
Nº4	48,00	56	11	2,70	3,5
Nº5	44,00	56	11	2,70	3,5
Nº6	40,00	56	12	3,00	4,0
Nº8	36,00	63	12	3,40	4,5
Nº10	32,00	70	14	4,90	6,0

Ø	P	L mm	I mm	mm	d mm
Nº12	28,00	80	18	4,90	6,0
1/4	20,00	80	18	5,50	7,0
5/16	24,00	90	20	6,20	8,0
3/8	24,00	100	20	8,00	10,0

2281

HSSE DIN 374

UNF
ANSI/ASME
B1.1

Form. B
"Gun"



Tol. 2B

3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 15-30	● 12-18	○ 8-12		● 6-12	○ 6-10	● 10-15	● 15-20		● 15-25	● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
7/16	20,00	100	20	6,20	8,0
1/2	20,00	100	20	7,00	9,0
9/16	18,00	100	20	9,00	11,0
5/8	18,00	100	20	9,00	12,0

Ø	P	L mm	I mm	mm	d mm
3/4	16,00	110	24	11,00	14,0
7/8	14,00	125	24	14,50	18,0
1"	12,00	140	27	14,50	18,0

2278

HSSE DIN 371

UNF
ANSI/ASME
B1.1

Form.
C



Tol.
2B



3XD



R

VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15			● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	□ mm	d mm
Nº4	48,00	56	5	2,70	3,5
Nº5	44,00	56	5	2,70	3,5
Nº6	40,00	56	6	3,00	4,0
Nº8	36,00	63	7	3,40	4,5
Nº10	32,00	70	8	4,90	6,0

Ø	P	L mm	I mm	□ mm	d mm
Nº12	28,00	80	10	4,90	6,0
1/4	28,00	80	10	5,50	7,0
5/16	24,00	90	13	6,20	8,0
3/8	24,00	100	15	8,00	10,0

2279

HSSE DIN 374

UNF
ANSI/ASME
B1.1

Form.
C



Tol.
2B



3XD



D

VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15			● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	□ mm	d mm
7/16	20,00	100	20	6,20	8,0
1/2	20,00	100	20	7,00	9,0
9/16	18,00	100	20	9,00	11,0
5/8	18,00	100	20	9,00	12,0

Ø	P	L mm	I mm	□ mm	d mm
3/4	16,00	110	24	11,00	14,0
7/8	14,00	125	24	14,50	18,0
1"	12,00	140	27	14,50	18,0

2282 **HSSE DIN 371** **UNF** **Form. C** **Tol. 2B** **3XD** **R** **TIN+**

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	●	○		●	○		●			●		○					
10-25	12-18	8-12		6-12	6-10		15-20			15-25		12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
Nº4	48,00	56	5	2,70	3,5
Nº5	44,00	56	5	2,70	3,5
Nº6	40,00	56	6	3,00	4,0
Nº8	36,00	63	7	3,40	4,5
Nº10	32,00	70	8	4,90	6,0

Ø	P	L mm	I mm	mm	d mm
Nº12	28,00	80	10	4,90	6,0
1/4	28,00	80	10	5,50	7,0
5/16	24,00	90	13	6,20	8,0
3/8	24,00	100	15	8,00	10,0

2283 **HSSE DIN 374** **UNF** **Form. C** **Tol. 2B** **3XD** **D** **TIN+**

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	●	○		●	○		●			●		○					
10-25	12-18	8-12		6-12	6-10		15-20			15-25		12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
7/16	20,00	100	15	6,20	8,0
1/2	20,00	100	15	7,00	9,0
9/16	18,00	100	15	9,00	11,0
5/8	18,00	100	15	9,00	12,0

Ø	P	L mm	I mm	mm	d mm
3/4	16,00	110	17	11,00	14,0
7/8	14,00	125	17	14,50	18,0
1"	12,00	140	20	14,50	18,0

2284

HSSE DIN 5156

G
ISO 228

Form.
B
"Gun"



3XD

D

VAP

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	○			●	○	●	○		○	●		○					
10-25	10-15			5-10	5-10		10-15		10-15	10-20		10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
1/8	28,00	90	20	5,50	7,0
1/4	19,00	100	22	9,00	11,0
3/8	19,00	100	22	9,00	12,0
1/2	14,00	125	25	12,00	16,0

Ø	P	L mm	I mm	mm	d mm
5/8	14,00	125	25	14,50	18,0
3/4	14,00	140	28	16,00	20,0
7/8	14,00	150	30	18,00	22,0
1"	11,00	160	32	20,00	25,0

2286

HSSE DIN 5156

G
ISO 228

Form.
B
"Gun"



3XD

D

TIN+

P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
●	○	○		●	○	●	○		○	●		○					
15-30	12-18	8-12		6-12	6-10	10-15	15-20		15-25	15-25		12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
1/8	28,00	90	20	5,50	7,0
1/4	19,00	100	22	9,00	11,0
3/8	19,00	100	22	9,00	12,0
1/2	14,00	125	25	12,00	16,0

Ø	P	L mm	I mm	mm	d mm
5/8	14,00	125	25	14,50	18,0
3/4	14,00	140	28	16,00	20,0
7/8	14,00	150	30	18,00	22,0
1"	11,00	160	32	20,00	25,0

2285

HSSE DIN 5156

G
ISO 228

Form.
C



3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	○ 10-15			● 5-10	○ 5-8		○ 10-15			● 10-20		○ 10-15					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
1/8	28,00	90	10	5,50	7,0
1/4	19,00	100	14	9,00	11,0
3/8	19,00	100	15	9,00	12,0
1/2	14,00	125	17	12,00	16,0

Ø	P	L mm	I mm	mm	d mm
5/8	14,00	125	20	14,50	18,0
3/4	14,00	140	20	16,00	20,0
7/8	14,00	150	22	18,00	22,0
1"	11,00	160	24	20,00	25,0

2287

HSSE DIN 5156

G
ISO 228

Form.
C



3XD



P				M		K			N				S		H		
<800	<1.000	<1.200	<1.400	<950	<1.200	<500	<800	<1.400	Al	Cu	Mg/Zn	Plastic	Ti	Ni	50 HRC	55 HRC	60 HRC
● 10-25	● 12-18	○ 8-12		● 6-12	○ 6-10		● 15-20			● 15-25		○ 12-18					

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH
THREADING TECHNOLOGY



Ø	P	L mm	I mm	mm	d mm
1/8	28,00	90	10	5,50	7,0
1/4	19,00	100	14	9,00	11,0
3/8	19,00	100	15	9,00	12,0
1/2	14,00	125	17	12,00	16,0

Ø	P	L mm	I mm	mm	d mm
5/8	14,00	125	20	14,50	18,0
3/4	14,00	140	20	16,00	20,0
7/8	14,00	150	22	18,00	22,0
1"	11,00	160	24	20,00	25,0

P

Aceros
Aciers
Steels

M

Aceros Inox
Aciers Inox
Stainless Steels

K

Fundicion
Fonte
Cast Iron

N

Metales no ferrosos
Métal non Ferreux
Non Ferrous metals

S

Titanio y Superalaciones
Titanium et Superalloys
Titanium and Superalloys

H

Materiales Duros
Materiels Durs
Hard materials

TABLA DE APLICACIONES / GUIDE D'APPLICATION / APPLICATION GUIDE

r.p.m.= $\frac{Vc \times 1.000}{\pi \times \varnothing}$



Ref./ Réf. / Ref.	2250	2251	2116	2115	2254	2255	2252	2253	2118	2117	2256	2257	2262	2263	2234	2235
Rosca/ Filetage/Thread	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	UNC	UNC	UNC	UNC
DIN	371	374 376	371	374 376	371	374 376	371	374 376	371	374 376	371	374 376	371	376	371	376
Form.	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)
Ejec./Exéc./Exec.							R35°	R35°	R35°	R35°	R45°	R45°				
Tol.	6H	6H	6H	6H	6HX	6HX	6H	6H	6H	6H	6HX	6HX	2B	2B	2B	2B
Mat.	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE	HSSE	HSSE	HSSE
Rec./Rev./Coat.	VAP	VAP	TIN+	TIN+	HL	HL	VAP	VAP	TIN+	TIN+	HL	HL	VAP	VAP	TIN+	TIN+
Prof./ Depth	3xD	3xD	3xD	3xD	3xD	3xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	3xD	3xD	3xD	3xD
Gama/Gamme/Range	2-10	3-24	2-10	3-24	2-10	8-24	M2-M10	M3-M24	M2-M10	M3-M24	M2-M10	M8-M24	N.4-3/8	7/16-1"	N.4-3/8	7/16-1"

Mat.																	
P.1	<600	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	<800	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	<1000	○	○	●	●	●	●	○	○	●	●	●	○	○	●	●	●
	<1200			○	○	●	●			○	○	●	○	○		○	○
	<1400					●	●					●	●				
M.1	<950	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		○	○	○	○	●	●	○	○	○	○	○	○	○	○	○	○
	<1200					●	●					●	●				
K.1	<500			●	●	●	●					●	●			●	●
				●	●	●	●					●	●			●	●
	<800			●	●	●	●			●	●	●	●			●	●
		○	○	●	●	●	●	○	○	●	●	●	●	○	○	●	●
	<1400					●	●					●	●				
N.1.1	Al			●	●	●	●					●	●			●	●
		○	○	●	●	●	●					●	●	○	○	●	●
				●	●	●	●					●	●			●	●
	Cu			●	●	●	●			●	●	●	●			●	●
						●	●					●	●				
		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
						●	●					●	●				
	Mg/Zn					●	●					●	●				
		○	○	○	○	●	●	○	○	○	○	○	○	○	○	○	○
						●	●					●	●				
S.1.1	Ni					●	●					●	●				
	Ti					●	●					●	●				
						●	●					●	●				
H.1	50 HRC																
	55 HRC																
	60 HRC																

● Optima / Optimun ○ Alternativo / Alternative

[illegible]

● Optima / Optimun ○ Alternativo / Alternative

TABLA DE MATERIALES / TABLEAU DE MATÉRIAUX / TABLE OF MATERIALS

P

Aceros
Aciers
Steels

M

Acero inoxidable
Acier inoxydable
Stainless steel

K

Fundición
Fonte
Cast iron

N

Materiales no féreos
Matériaux non ferreux
Non-ferrous materials

S

Súper aleaciones
Super alliages
Super-alloys

H

Materiales duros
Matiers durs
Hardened steels

	Material	Matières
P.1	Aceros blandos fácil mecanización	Aciers de décolletage
P.2	Aceros de construcción	Aciers de construction
P.3	Aceros baja aleación y cementación	Aciers de bas alliage et cementés
P.4	Aceros aleados tratados o nitrurados	Aciers alliés traités et nitrurés
P.5	Aceros tratados de alta aleación	Aciers traité du haute alliage
M.1	Ferríticos y martensíticos	Ferritiques et mastensitiques
M.2	Austeníticos	Austénitiques
M.3	Austeníticos- ferríticos (Dúplex)	Austénitiques-ferritiques (Dúplex)
M.4	Austeníticos- ferríticos resistente a la calor (Super Dúplex)	Austénitiques-ferritiques résistants à la chaleur (Super Dúplex)
K.1	Fundición gris con grafito laminar (GJL)	Fontes à graphite lamellaire (GJL)
K.2	Fundición gris con grafito vermicular (GJV)	Fontes à graphite vermiculaire (GJV)
K.3	Fundición gris maleable (GTMW,GJMB)	Fontes à malleables (GTMW,GJMB)
K.4.1	Fundición gris con grafito nodular (GJS)	Fontes à graphite sphéroïdal (GJS)
K.4.2	Fundición gris tratada con grafito nodular (GJH,GJS-ADI)	Fontes traités à graphite sphéroïdal (GJH,GJS-ADI)
N.1.1	Aluminio no aleado y aleaciones forjables	Aluminium non allié et alliages corroyés
N.1.2	Fundición de aluminio Si <1.2%	Fontes d'aluminium à Si<1.2%
N.1.3	Fundición de aluminio Si >1.2%	Fontes d'aluminium à Si>1.2%
N.2.1	Cobre puro o poco aleado	Cuivre pur et faiblement allié
N.2.2	Aleaciones de cobre de viruta corta	Alliages de cuivre - copeau curt
N.2.3	Aleaciones de cobre de viruta larga	Alliages de cuivre - copeau long
N.2.4	Aleaciones de cobre de alta resistencia	Alliages de cuivre du haute résistance
N.3.1	Aleaciones de magnesio y zinc	Alliages de magnésium et zinc
N.4.1	Termoplásticos	Termoplastiques
N.4.2	Duroplásticos	Duroplastiques
N.4.3	Plásticos reforzados con fibras	Plastiques chargées en fibres
S.1.1	Aleaciones de níquel y hierro	Alliages de nickel et fer
S.1.2	Aleaciones de níquel y hierro	Alliages de nickel et fer
S.2.1	Titanio puro	Titane pur
S.2.2	Aleaciones de titanio tipo δ	Alliages de titane δ type
S.2.3	Aleaciones de titanio tipo B	Alliages de titane B type
H.1	Aceros templados <50 HRC	Aciers traités <50 HRC
H.2	Aceros templados <55 HRC	Aciers traités <55 HRC
H.3	Aceros templados <60 HRC	Aciers traités <60 HRC

Materiales según norma ISO / Matériaux conformes à la norme ISO / Materials as per ISO

Material	(N/mm ²)	HB 30	HRC	Mat-Nr	DIN	AISI	UNE	Brand name
Free-machining steels	<600	<175		1.0722	10SPb20	1108	10S20	
Construction steels	<800	<240		1.0503	C45	1045	F114	
Low alloyed and case hardening steels	<1000	<300	<30	1.7225	42CrMo4	4140	F-1252	
Alloyed heat-treatable and nitriding steels	<1200	<360	<38	1.8159	51CrV4	6150	51CrV4	
High alloyed hardened steels	<1400	<430	<44	1.8523	40CrMoV13-9			
Ferritics and martensitics	<950	<285		1.4104	X14CrMoS17	430 F	F-3431	
Austenitics	<950	<285		1.4301	X5CrNi18-10	304	F-3551	
Austenitics-ferritics (Dúplex)	<1000	<300		1.4462	X2CrNiMoN22-5-3	2205		
Heat resistant austenitics-ferritics (Super Dúplex)	<1200	<360	<38	1.4410	X2CrNiMoN25-7-4	2507		
Cast iron with lamellar graphite (GJL)	<450	<130		0.6010	EN-GJL-100	A48-20 B	GG 10	
Cast iron with vermicular graphite (GJV)	<500	<150			EN-GJV-400			GGV 400
Malleable cast iron (GTMW,GJMB)	<800	<240		0.8045	EN-GJMW-450-7	MB 450-7	GTW 45	
Cast iron with nodular graphite (GJS)	<700	<210		0.7040	EN-GJS-400-15	60-40-18	GGG 40	GGG 40
Hardened cast iron with nodular graphite (GJS)	<1400	<430	<44		EN-GJS-1200-2			ADI 1200
Aluminium non alloyed and wrought alloys	<500	<150		3.2315	AlMgSi1		L-3451	ENAW-6082
Cast aluminium alloys Si<12%	<350	<100		3.2581	G-AlSi12	A 413.2		ENAC-44200
Cast aluminium alloys Si>12%	<450	<130			G-AlSi17Cu4Mg			ENAC-48100
Pure and low alloyed cooper	<400	<120		2.0065	E-Cu58			Cu-ETP
Cooper alloys - short chipping	<400	<120		2.0402	CuZn40Pb2 (Ms58)	C38500		Ms58
Cooper alloys - long chipping	<700	<210		2.0321	CuZn37 (Ms63)	C27200		Ms63
High strength cooper alloys	<1000	<300						AMPCO 45
Magnesium and zinc alloys	<500	<150			ZnAl4 (Z400)	AG40A		ZAMAK
Termoplastiques	<50							PVC
Hard plastics	<80							Baquelita
Fibre reinforced plastics	<200			GFK				GFK
Nickel and Iron alloys	<850	<255		2.4360	NiCu30Fe			Monel 400
Nickel and Iron alloys	<1400	<430	<44	2.4668	NiCr19FeNbMo			Inconel 718
Pure titanium	<700	<200		3.7025	Ti99.8			
Titanium alloys δ type	<900	<270		3.7165	Ti-6Al-4V	R56400		T-A6V
Titanium alloys β type	<1200	<360	<38		Ti-10V-2Fe-3AL			
Hardened steel <50 HRC			<50					Hardox 500
Hardened steel <55 HRC			<55					Hardox 550
Hardened steel <60 HRC			<60					Hardox 600

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