09.

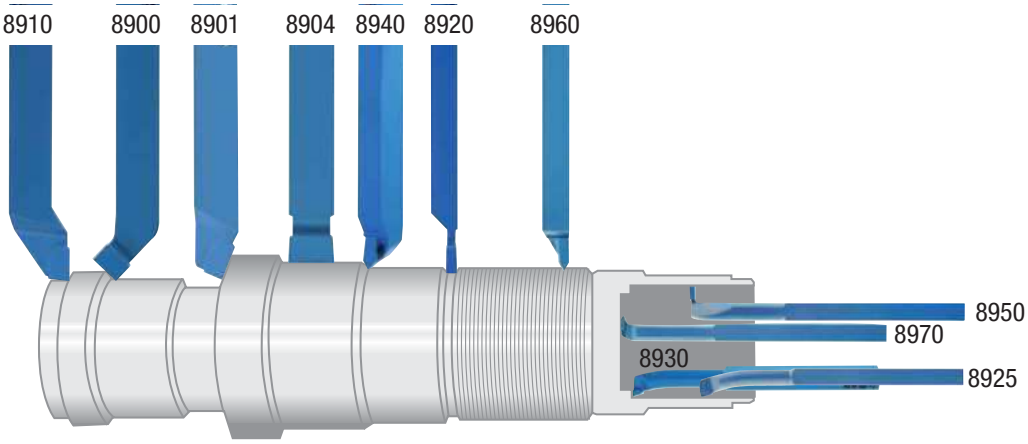
TORNEADO

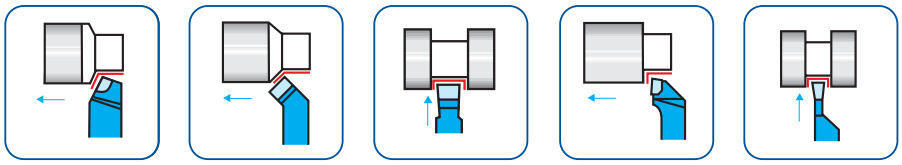
Turning

Tournage

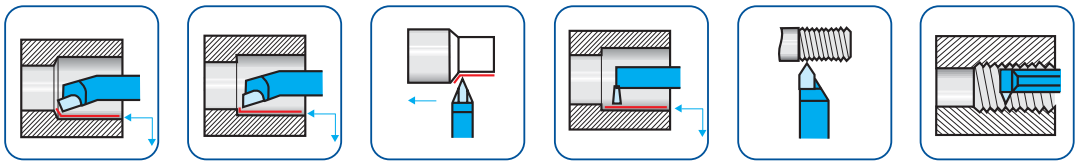
HERRAMIENTAS SOLDADAS
Brazed Turning Tools
Outils de tour plaquette soudé 491

CUCHILLAS HSSE
HSSE Turning Blades
Outils de tour HSSE 497





ISO 1 - 8901 | **ISO 2** - 8900 | **ISO 4** - 8904 | **ISO 6** - 8910 | **ISO 7** - 8920



ISO 8 - 8925 | **ISO 9** - 8930 | **ISO 10** - 8940 | **ISO 11** - 8950 | **ISO 12** - 8960 | **ISO 13** - 8970

P20		Avance 0,1-1,2 mm/rev. Feed Pas
Material		Velocidad Corte Cutting Speed Vitesse de coupe (m/min.)
P	P.1	160 - 100 - 60
	P.2	140 - 80 - 40
	P.3	60 - 40 - 25
	P.5	50 - 40 - 24
M		50 - 40 - 24
K	K.1	90 - 70 - 45
	K.2	70 - 50 - 30

M20		Avance 0,1-1,2 mm/rev. Feed Pas
Material		Velocidad Corte Cutting Speed Vitesse de coupe (m/min.)
P	P.1	110 - 80 - 45
P	P.5	40 - 30 - 20
M		40 - 30 - 20
K	K.1	100 - 60 - 40
	K.2	80 - 50 - 25

K10		Avance 0,1-1,2 mm/rev. Feed Pas
Material		Velocidad Corte Cutting Speed Vitesse de coupe (m/min.)
K	K.1	140 - 100 - 50
	K.2	120 - 80 - 40
N	N.1	400-300-200
	N.2	
	N.3	400-300-200
	N.4	
	N.5	200-150-80

Calidad P20

Especialmente destinada a mecanizados de gran precisión y semi-acabado en aceros al carbono y aleados, a grandes velocidades de corte y avances moderados.

P20 Quality

Specially destined for high precision and semi-finishing machining of carbon & alloy steels, at high cutting speeds and moderate feeds.

Qualité P20

Notamment pour usinages haute précision et semi-finition en aciers au carbone et alliés, a hautes vitesses de coupe et avances modérés.

Calidad M20

Especial para acabado y desbaste suave de aceros, aceros al manganeso, fundición y metales resistentes al calor o no ferrosos, a velocidades de corte medias o bajas.

M20 Quality

Special for finishing and soft roughing of steels, manganese-steels, cast iron and heat-resistant or non-ferrous materials, at medium or low cutting speed.

Qualité M20

Spécial finition et ébauche tendre d´aciers, aciers au manganèse, fonte et aciers resistants au chaud et non ferreux à faibles où moyennes vitesses de coupe.

Calidad K10

Especial para mecanizados de gran precisión y semi-acabado en fundición, aceros aleados, materiales de viruta corta y no ferrosos.

K10 Quality

Special for high precisión and semi-finishing machining of cast iron, alloyed steels, short chipping and non-ferrous materials.

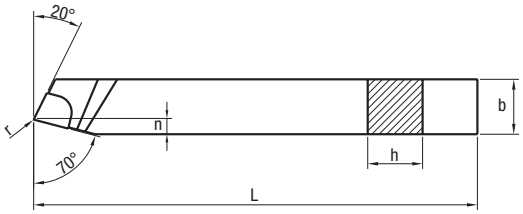
Qualité K10

Spéciale pour usinage d´haute précision et semi-finition fonte, alliages aciers, aciers copeaux courts et non ferreux.

Ref. 8901

HERRAMIENTA TORNEADO PLACA SOLDADA CILINDRADO 70°
70° Straight Brazed Turning Tool
Outil de tour plaquette soudé cylindrage 70°

DIN 4971 | ISO 1

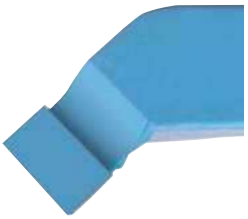


P	P.1 P.2 - P.3 P.5	Aceros Steels Aciers
M	INOX Stainless Steel Acier INOX	
K	Fundición Cast Iron Fonte	
N	N.1 - N.2 N.3 - N.4 N.5	Cobre / Copper / Cuivre Aluminio / Aluminium

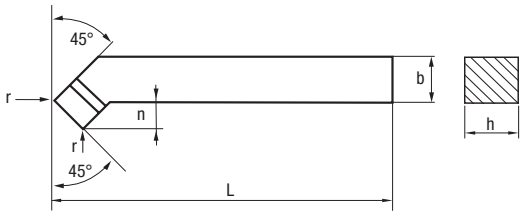
h mm		b mm		L mm		R/L	n mm	r mm	Calidad Quality / Qualité P-20		Calidad Quality / Qualité K-10	
									N° Art.	€	N° Art.	€
10	x	10	x	90	-	L	4	0,2	55888		55889	
10	x	10	x	90	-	R	4	0,2	55893		55891	
12	x	12	x	100	-	L	5	0,4	55894		55897	
12	x	12	x	100	-	R	5	0,4	55896		55899	
16	x	16	x	110	-	L	6	0,4	55903		55905	
16	x	16	x	110	-	R	6	0,4	55904		55906	
20	x	20	x	125	-	L	8	0,8	55911		55913	
20	x	20	x	125	-	R	8	0,8	55912		55914	
25	x	25	x	140	-	L	10	0,8	55917		55919	
25	x	25	x	140	-	R	10	0,8	55918		55920	

Ref. 8900

HERRAMIENTA TORNEADO PLACA SOLDADA ESCUADRADO 45°
45° Bent Brazed Turning Tool
Outil de tour plaquette soudé décolletage 45°



DIN 4972 | ISO 2



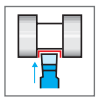
P	P.1 P.2 - P.3 P.5	Aceros Steels Aciers
M	INOX Stainless Steel Acier INOX	
K	Fundición Cast Iron Fonte	
N	N.1 - N.2 N.3 - N.4 N.5	Cobre / Copper / Cuivre Aluminio / Aluminium

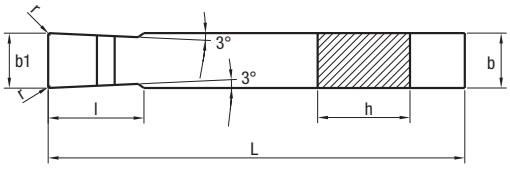
h mm		b mm		L mm		R/L	n mm	r mm	Calidad Quality / Qualité P-20		Calidad Quality / Qualité M-20		Calidad Quality / Qualité K-10	
									N° Art.	€	N° Art.	€	N° Art.	€
12	x	12	x	100	-	L	7	0,4	13586		56073		29179	
12	x	12	x	100	-	R	7	0,4	13585		56074		29153	
16	x	16	x	110	-	L	8	0,4	13589		56076		29181	
16	x	16	x	110	-	R	8	0,4	13588		56077		18258	
20	x	20	x	125	-	L	10	0,8	13592		56078		13051	
20	x	20	x	125	-	R	10	0,8	13591		56079		28343	
25	x	25	x	140	-	L	12	0,8	13597		56080		29182	
25	x	25	x	140	-	R	12	0,8	13594		56082		26003	

Ref. 8904

HERRAMIENTA TORNEADO PLACA SOLDADA RANURADO EXTERIOR
Wide Face Square Nose Brazed Turning Tool
Outil de tour plaquette soudé rainurage exterieur

DIN 4976 | ISO 4





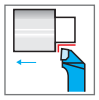
P — P.1 P.2 - P.3 P.5 — Aceros / Steels / Aciers
M — INOX / Stainless Steel / Acier INOX
K — Fundición / Cast Iron / Fonte
K — Fundición / Cast Iron / Fonte
N — N.1 - N.2 N.3 - N.4 N.5 — Cobre / Copper / Cuivre, Aluminio / Aluminium

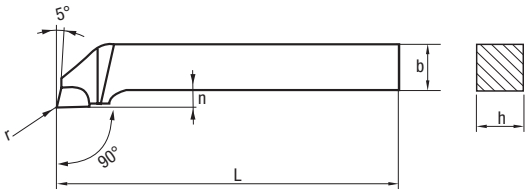
h mm		b mm		L mm	r mm	l mm	b1 mm	Calidad Quality / Qualité P-20 N° Art.	€	Calidad Quality / Qualité K-10 N° Art.	€
20	x	12	x	125	0,4	20	12	55924		55926	
25	x	16	x	140	0,4	25	16	55928		55932	
32	x	20	x	170	0,4	32	20	55936		55938	

Ref. 8910

HERRAMIENTA TORNEADO PLACA SOLDADA ESCUADRADO 90°
90° Offset Side Brazed Turning Tool
Outil de tour plaquette soudé décolletage 90°

DIN 4980 | ISO 6





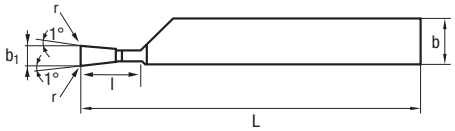
P — P.1 P.2 - P.3 P.5 — Aceros / Steels / Aciers
M — INOX / Stainless Steel / Acier INOX
K — Fundición / Cast Iron / Fonte
M — INOX / Stainless Steel / Acier INOX
K — Fundición / Cast Iron / Fonte
N — N.1 - N.2 N.3 - N.4 N.5 — Cobre / Copper / Cuivre, Aluminio / Aluminium

h mm		b mm		L mm		R/L	n mm	r mm	Calidad Quality / Qualité P-20 N° Art.	€	Calidad Quality / Qualité M-20 N° Art.	€	Calidad Quality / Qualité K-10 N° Art.	€
10	x	10	x	090	-	L	4	0,2	13601		56083		29183	
10	x	10	x	090	-	R	4	0,2	13600		56085		26488	
12	x	12	x	100	-	L	5	0,4	13604		56086		29185	
12	x	12	x	100	-	R	5	0,4	13603		56088		26707	
16	x	16	x	110	-	L	6	0,4	13607		56089		13058	
16	x	16	x	110	-	R	6	0,4	13606		56091		27460	
20	x	20	x	125	-	L	8	0,8	13612		56092		10825	
20	x	20	x	125	-	R	8	0,8	13609		56093		27461	
25	x	25	x	140	-	L	10	0,8	13616		56094		17090	
25	x	25	x	140	-	R	10	0,8	13615		56095		11181	

Ref. 8920

HERRAMIENTA TORNEADO PLACA SOLDADA TRONZADO
Parting Brazed Turning Tool
Outil de tour plaquette soudé tronçonnage

DIN 4981 | ISO 7



P — P.1 P.2 - P.3 P.5 — Aceros Steels Aciers
M — INOX Stainless Steel Acier INOX
K — Fundición Cast Iron Fonte

M — INOX Stainless Steel Acier INOX

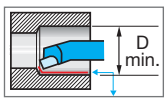
K — Fundición Cast Iron Fonte
N — N.1 - N.2 N.3 - N.4 N.5 — Cobre / Copper / Cuivre Aluminio / Aluminium

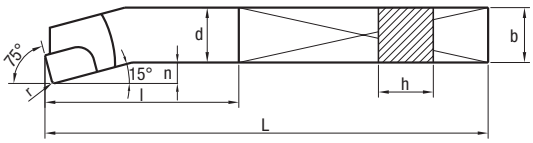
h mm		b mm		L mm		R/L	r mm	l mm	b1 mm	Calidad Quality / Qualité P-20 N° Art.	€	Calidad Quality / Qualité M-20 N° Art.	€	Calidad Quality / Qualité K-10 N° Art.	€
12	x	8	x	100	-	L	0,2	12	3	13619				28344	
12	x	8	x	100	-	R	0,2	12	3	13618		56098		27519	
16	x	10	x	110	-	L	0,2	14	4	13622				29186	
16	x	10	x	110	-	R	0,2	14	4	13621		56100		19523	
20	x	12	x	125	-	L	0,2	16	5	13625				29187	
20	x	12	x	125	-	R	0,2	16	5	13624		56102		22685	
25	x	16	x	140	-	L	0,3	20	6	13628				29189	
25	x	16	x	140	-	R	0,3	20	6	13627		56104		29188	

Ref. 8925

HERRAMIENTA TORNEADO PLACA SOLDADA MANDRINADO
Boring Straight Brazed Turning Tool
Outil de tour plaquette soudé alésage

DIN 4973 | ISO 8





P — P.1 P.2 - P.3 P.5 — Aceros Steels Aciers
M — INOX Stainless Steel Acier INOX
K — Fundición Cast Iron Fonte

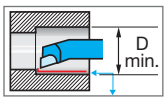
K — Fundición Cast Iron Fonte
N — N.1 - N.2 N.3 - N.4 N.5 — Cobre / Copper / Cuivre Aluminio / Aluminium

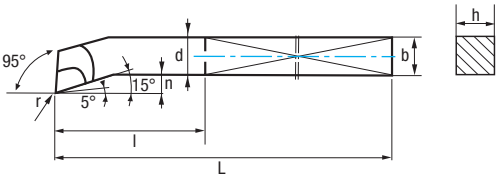
h mm		b mm		L mm	n mm	r mm	D min. mm	Calidad Quality / Qualité P-20 N° Art.	€	Calidad Quality / Qualité K-10 N° Art.	€
8	x	8	x	125	3	0,4	14	38218		38220	
10	x	10	x	150	4	0,4	18	38222		38224	
12	x	12	x	180	5	0,4	21	38227		38391	
16	x	16	x	210	6	0,4	27	38393		38395	
20	x	20	x	250	8	0,4	34	38397		38399	
25	x	25	x	300	10	0,8	43	38401		38403	

Ref. 8930

HERRAMIENTA TORNEADO PLACA SOLDADA CILINDRADO INTERIOR
Internal Sharped Brazed Turning Tool
Outil de tour plaquette soudé cylindrage interieur

DIN 4974 | ISO 9





P — P.1 P.2 - P.3 P.5 — Aceros / Steels / Aciers
M — INOX / Stainless Steel / Acier INOX
K — Fundición / Cast Iron / Fonte

M — INOX / Stainless Steel / Acier INOX

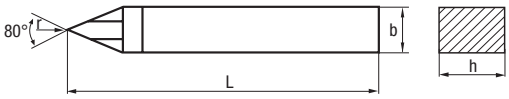
K — Fundición / Cast Iron / Fonte
N — N.1 - N.2 N.3 - N.4 N.5 — Cobre / Copper / Cuivre, Aluminio / Aluminium

h mm		b mm		L mm	d mm	n mm	r mm	l mm	D min. mm	Calidad Quality / Qualité P-20		Calidad Quality / Qualité M-20		Calidad Quality / Qualité K-10	
										N° Art.	€	N° Art.	€	N° Art.	€
8	x	**8**	x	**125**	8	3	0,2	40	14	13630		56114		14971	
10	x	**10**	x	**150**	10	4	0,2	50	18	13631		56115		27462	
12	x	**12**	x	**180**	12	5	0,2	63	21	13633		56116		27464	
16	x	**16**	x	**210**	16	6	0,2	80	27	13634		56117		11152	
20	x	**20**	x	**250**	20	8	0,4	100	34	13636		56118		11754	
25	x	**25**	x	**300**	25	10	0,4	125	43	13639		56119		27518	
32	x	**32**	x	**355**	32	12	0,8	160	52	13642		56121		13896	

Ref. 8940

HERRAMIENTA TORNEADO PLACA SOLDADA CILINDRADO RECTO
Sharped Straight Brazed Turning Tool
Outil de tour plaquette soudé cylindrage droit

DIN 4975 | ISO 10



P — P.1 P.2 - P.3 P.5 — Aceros / Steels / Aciers
M — INOX / Stainless Steel / Acier INOX
K — Fundición / Cast Iron / Fonte

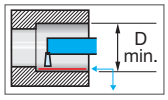
K — Fundición / Cast Iron / Fonte
N — N.1 - N.2 N.3 - N.4 N.5 — Cobre / Copper / Cuivre, Aluminio / Aluminium

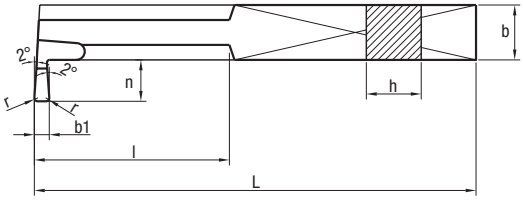
h mm		b mm		L mm	r mm	Calidad Quality / Qualité P-20		Calidad Quality / Qualité K-10	
						N° Art.	€	N° Art.	€
16	x	**10**	x	**110**	0,2	13645		29190	
20	x	**12**	x	**125**	0,4	13646		29191	
25	x	**16**	x	**140**	0,4	13648		29192	

Ref. 8950

HERRAMIENTA TORNEADO PLACA SOLDADA RANURADO INTERIOR
Internal Undercutting Brazed Turning Tool
Outil de tour plaquette soudé rainurage interieur

DIN 263 | ISO 11





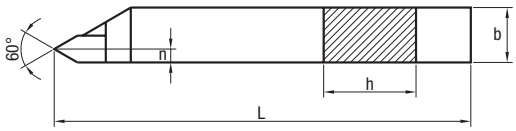
P	P.1 P.2 - P.3 P.5	Aceros Steels Aciers
M	INOX Stainless Steel Acier INOX	
K	Fundición Cast Iron Fonte	
N	N.1 - N.2 N.3 - N.4 N.5	Cobre / Copper / Cuivre Aluminio / Aluminium

h mm		b mm		L mm	n mm	r mm	b1 mm	D min. mm	Calidad Quality / Qualité P-20		Calidad Quality / Qualité K-10	
									N° Art.	€	N° Art.	€
12	x	**12**	x	**180**	10	0,2	4	32	38405		38407	
16	x	**16**	x	**210**	12	0,2	5	40	38409		38411	
20	x	**20**	x	**250**	16	0,4	6	50	38413		38415	
25	x	**25**	x	**300**	20	0,4	8	63	38417		38419	

Ref. 8960

HERRAMIENTA TORNEADO PLACA SOLDADA ROSCADO EXTERIOR
External Threading Brazed Turning Tool
Outil de tour plaquette soudé taraudage exterieur

DIN 282 | ISO 12



P	P.1 P.2 - P.3 P.5	Aceros Steels Aciers
M	INOX Stainless Steel Acier INOX	
K	Fundición Cast Iron Fonte	
N	N.1 - N.2 N.3 - N.4 N.5	Cobre / Copper / Cuivre Aluminio / Aluminium

h mm		b mm		L mm		R/L	n mm	Calidad Quality / Qualité P-20		Calidad Quality / Qualité K-10	
								N° Art.	€	N° Art.	€
16	x	**10**	x	**110**	-	**L**	2,0	38422		38424	
16	x	**10**	x	**110**	-	**R**	2,0	38421		38423	
20	x	**12**	x	**125**	-	**L**	2,5	38426		38428	
20	x	**12**	x	**125**	-	**R**	2,5	38425		38427	
25	x	**16**	x	**140**	-	**L**	3,0	38430		38432	
25	x	**16**	x	**140**	-	**R**	3,0	38429		38431	

Ref. 8970

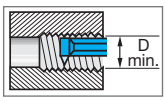
HERRAMIENTA TORNEADO PLACA SOLDADA ROSCADO INTERIOR

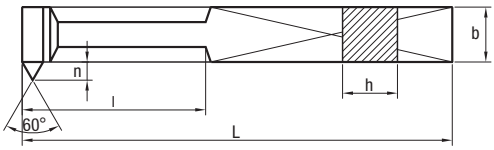
Internal Threading Brazed Turning Tool

Outil de tour plaquette soudé taraudage interieur

DIN 283

ISO 13





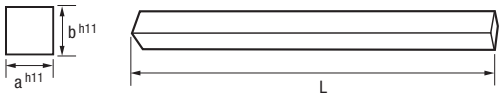
P	P.1 P.2 - P.3 P.5	Aceros Steels Aciers
M	INOX Stainless Steel Acier INOX	
K	Fundición Cast Iron Fonte	

K	Fundición Cast Iron Fonte	
N	N.1 - N.2 N.3 - N.4 N.5	Cobre / Copper / Cuivre Aluminio / Aluminium

h mm		b mm		L mm		R/L	n mm	D min. mm	Calidad Quality / Qualité P-20		Calidad Quality / Qualité K-10	
									N° Art.	€	N° Art.	€
10	x	10	x	150	-	L	5	22	38434		38436	
10	x	10	x	150	-	R	5	22	38433		38435	
12	x	12	x	180	-	L	6	24	38438		38440	
12	x	12	x	180	-	R	6	24	38437		38439	
16	x	16	x	210	-	L	8	32	38442		38444	
16	x	16	x	210	-	R	8	32	38441		38443	
20	x	20	x	250	-	L	10	40	38446		38448	
20	x	20	x	250	-	R	10	40	38445		38447	
25	x	25	x	300	-	L	12	49	38450		38452	
25	x	25	x	300	-	R	12	49	38449		38451	

Ref. 8990

CUCHILLA CUADRADA TORNEADO
Square Turning Blade
Outil de tour carré

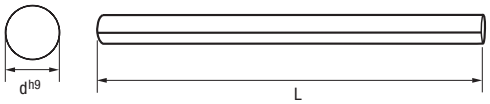


HSSE 10%Co | DIN 4964B | **Cuchillas Torno** Turning Tools Outils de tour

a mm		b mm		L mm	N° Art. 10% Co	€
6	x	6	x	100	35462	
6	x	6	x	160	35463	
6	x	6	x	200	35464	
8	x	8	x	100	35465	
8	x	8	x	160	35466	
8	x	8	x	200	35467	
10	x	10	x	100	35468	
10	x	10	x	160	35469	
10	x	10	x	200	35470	
12	x	12	x	100	35471	
12	x	12	x	160	35472	
12	x	12	x	200	35473	
14	x	14	x	200	35474	
16	x	16	x	200	35475	
18	x	18	x	200	35476	
20	x	20	x	200	35477	
25	x	25	x	200	35478	

Ref. 8991

CUCHILLA REDONDA TORNEADO
Round Turning Blade
Outil de tour rond

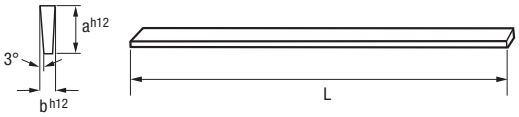


HSSE 10%Co | DIN 4964A | **Cuchillas Torno** Turning Tools Outils de tour

d mm		L mm	N° Art. 10% Co	€
4	x	100	35479	
5	x	100	35480	
5	x	200	35481	
6	x	100	35482	
6	x	160	35484	
6	x	200	35483	
8	x	100	35485	
8	x	160	35486	
8	x	200	35487	
10	x	100	35488	
10	x	160	35489	
10	x	200	35490	
12	x	100	35491	
12	x	200	35492	
14	x	200	35493	
16	x	200	35494	
18	x	200	35495	
20	x	200	35497	

Ref. 8992

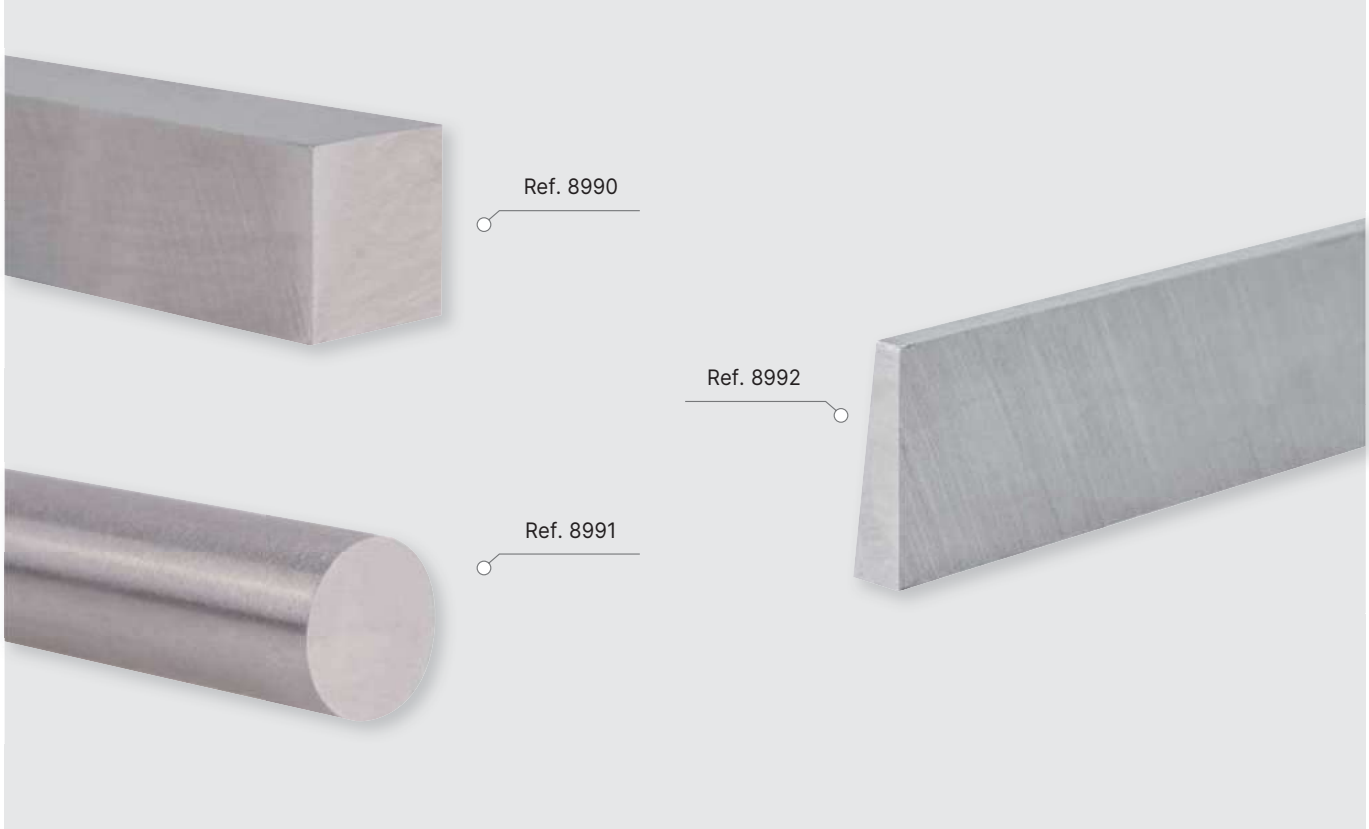
CUCHILLA TRAPEZOIDAL TORNEADO
Trapezoidal Turning Blade
Outil de tour trapézoïdal



HSSE 10%Co

DIN 4964E

a mm		b mm		L mm	N° Art. 10% Co	€
10	x	**2,50**	x	**100**	13690	
12	x	**3,00**	x	**100**	13691	
12	x	**3,00**	x	**160**	13693	
16	x	**4,00**	x	**100**	13782	
16	x	**4,00**	x	**160**	13786	
20	x	**5,00**	x	**160**	13787	
20	x	**5,00**	x	**200**	14213	
25	x	**6,00**	x	**160**	14225	



IZAR CUTTING TOOLS

10.

PLAQUITAS MD

HM Inserts

Plaquettes carbure

INFORMACIÓN TÉCNICA
Technical Information
Information technique 500

TALADRADO
Drilling
Perçage 505

TORNEADO
Turning
Tournage 522

TRONZADO Y RANURADO
Parting & Grooving
Tronçonnage et Rainurage 571

ROSCADO
Threading
Taraudage 580

FRESADO
Milling
Fraisage 591

TABLA USO BROCAS DE CABEZA INTERCAMBIABLE

Drill Bits With Interchangeable Heads Use Table - Tableau usage forets à tête interchangeable

● **Uso Recomendado** / **Recommended Use** / Utilisation conseillée

○ **Uso Alternativo** / **Alternative Use** / Option d´emploi

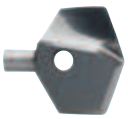
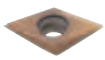
Ref.		Pag.	DIN	Tipo Type	Material	Recubr. Coating Revêt.	P.1 <850 N/mm²	P.2 <1000 N/mm²	P.3 1000-1300 N/mm²	P.4 ANTIDESGASTE Wear-Resistant Anti-Usure	P.5 MARTENSÍTICO Martensitic Martensitique	M INOX AUSTENÍTICO Austenitic Stainless Steel - Aciers inox austénitique	K.1 <700 N/mm² FUNDICIÓN Cast Iron Fonte	K.2 700-1000 N/mm²	S ALEACIONES TERMORRESISTENTES Heat-Resistant Alloys - Alliages thermorésistants	N.1 VIRUTA CORTA Short Chip - Copeaux courts Cu - BRONCE LATÓN Copper Bronze Brass Cuivre Bronze Laiton	N.2 VIRUTA LARGA Long Chip - Copeaux longs Cu - BRONCE LATÓN Copper Bronze Brass Cuivre Bronze Laiton	N.3 NO ALEADO Unalloyed - Sans alliage ALUMINIO - MAGNESIO Aluminium - Magnesium	N.4 < 10% Si ALUMINIO - MAGNESIO Aluminium - Magnesium	N.5 > 10% Si ALUMINIO - MAGNESIO Aluminium - Magnesium	N.6 TERMOPLÁSTICOS Thermoplastics - Thermoplastiques	N.7 DUROPLÁSTICOS Hard Plastics - Plastiques durs	F Composites de Fibras Fiber Composites Composites en fibre	H 45-70 HRC
8380 New!		510			Micro-grano	ALTIN	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
8381 New!		511 512 513	ISO 9766	3XD 5XD 8XD																			

TABLA USO PLAQUITAS MD

HM Inserts Use Table - Tableau usage Plaquettes carbure

TALADRADO - Drilling - Perçage

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8450		515		WCMX
8425		515		ISO 9766 (3XD)
8465		517		SOGX
8470		517		SOMX
8475		518		TOMX
8460		518		DOEX
8431		519		SPS.. 90°
8432		519		SPS.. 90°
8430		520		SPS.. 60°

Set 8431

SET PORTA-PLAQUITAS PUNTEADO SPS.. 90°

SPS.. 90° Spotting Tool-Holder Set

Jeu de porte-plaquettes de repérage SPS.. 90°

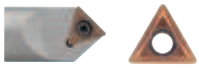
519

Set 8432

SET PORTA-PLAQUITAS PUNTEADO SPS.. 90°

SPS.. 90° Spotting Tool-Holder Set

Jeu de porte-plaquettes de repérage SPS.. 90°



519

TORNEADO - Turning - Tournage

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8500		530	+	CCMT
8501		531	+	CCGT
8510		532	-	CNMG
8512		534	-	CNMM
8515		534	+	DCGT
8520		535	+	DCMT
8530		536	-	DNMG
8535		537	-	KNUX
8536 New!		538	+	RCGT
8537 New!		538	+	RCMT
8540		539	+	SCMT
8550		540	-	SNMG

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8554		540	+	SPUN
8558		541	+	TCGT
8560		541	+	TCMT
8570		542	-	TNMG
8571		544	+	TPMR
8572		544	+	TPUN
8575		545	+	VBMT
8576		545	+	VCGT
8577		546	+	VCMT
8578		546	-	VNMG
8580		547	-	WNMG

Porta-Plaquitas Torneado Exterior - External Turning Tool-Holder - Porte-Plaquettes tournage extérieur

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8726		552	-	CKJN -93°
8706		552	+	CSBP. -75°
8707		553	+	CTGP. -90°
8792 New!		554	-	DDJN. -93°
8790		555	-	DWLN. -95°
8710		555	-	MCLN. -95°
8700		556	-	MTJN. -93°
8724		556	-	MVJN. -93°
8770		557	-	MWLN. -95°
8709		557	-	PCLN. -95°

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8725		558	-	PDJN. -93°
8791		558	-	PSSN -45°
8711 New!		559	-	PWLN. -95°
8704		560	+	SCLC. -95°
8729		561	+	SDJC. -93°
8705 New!		561	+	SRDCN
8723 New!		562	+	SSSC. -45°
8703		563	+	STJC. -93°
8727		563	+	SVJB -93°
8728		564	+	SVJC -93°

TORNEADO - Turning - Tournage

Porta-Plaquitas Torneado Interior - Internal Turning Tool-Holder - Porte-Plaquettes tournage intérieur

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8715		564	+	S-CTFP. -90°
8731		565	–	S-MCLN. -95°
8732		565	–	S-MTUN. -93°
8769		566	–	S-MVUN -93°
8780		567	–	S-MWLN. -95°
8800		567	–	S-MWLN. -95°

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8733		568	–	S-PCLN. -95°
8765		568	–	S-PDUN. -93°
8751		569	+	S-SCLC. -95°
8761		569	+	S-SDUC. -93°
8718		570	+	S-STFC. -90°
8768		570	+	S-SVUC. -93°

Set 8799	589	**SET DE TORNEADO** - Turning Inserts Set - Jeu de tournage

Set 1

Set 2

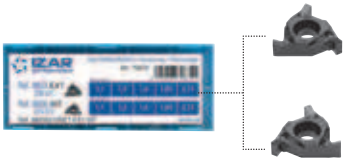
Set 3

TRONZADO Y RANURADO - Parting & Grooving - Tonçonnage et rainurage

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8600		572		LFMX
8601		573		MGMN
8603		574	EXT.	TN..ER.A
8606		575	INT.	TN..IR.A
8850		576		XLCF
8860		576		MS-EN
8870		577		XLCFN

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8875		577		XLCFN
8865		578		XMCG
8866 New!		579		S-GMGG

Set 8605	**SET RANURADO SEEGER®** Grooving Set Seeger® Jeu rainurage Seeger®	575



ROSCADO - Threading - Taraudage

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8610		584	EXT. PERFIL TOTAL	MÉTRICA 60°
8615		584	EXT. PERFIL PARCIAL	TN..ER.M 60°
8620		585	INT. PERFIL TOTAL	MÉTRICA 60°
8625		585	INT. PERFIL PARCIAL	TN..IR.M 60°
8612		586	EXT. PERFIL TOTAL	WHITWORTH 55°
8622		586	INT. PERFIL TOTAL	WHITWORTH 55°

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8820		588	EXT.	SER
8830		588	INT.	SIR

Set 8610	**SET ROSCADO EXTERIOR ROSCA MÉTRICA ISO** ISO Metric External Threading Set Jeu taraudage extérieur filetage métrique ISO	584

FRESADO - Milling - Fraisage

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8231 New!		598		SLO-03
8232		599		A50060
8233 New!		600		SWN-09
8234 New!		601		SSD-12
8230		602		S45SE12F -45°
8235		603		W45SE123F -45°
8240		604		S45OD06 -45°
8236 New!		605		S45SN12
8241		606		S90XN08
8245		607		S90AP10D -90°

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8247		608		S90AP10D-RF -90°
8250		609		S90AP16D -90°
8255		610		W90TP16D -90°
8260		611		W90TP22D -90°
8261 New!		612		SLO-03
8262 New!		613		SSD-12
8264		614		SAP-06
8265		615		SAP-10D
8270		616		SAP-16D
8275		617		S90SN12

Cont. ➜

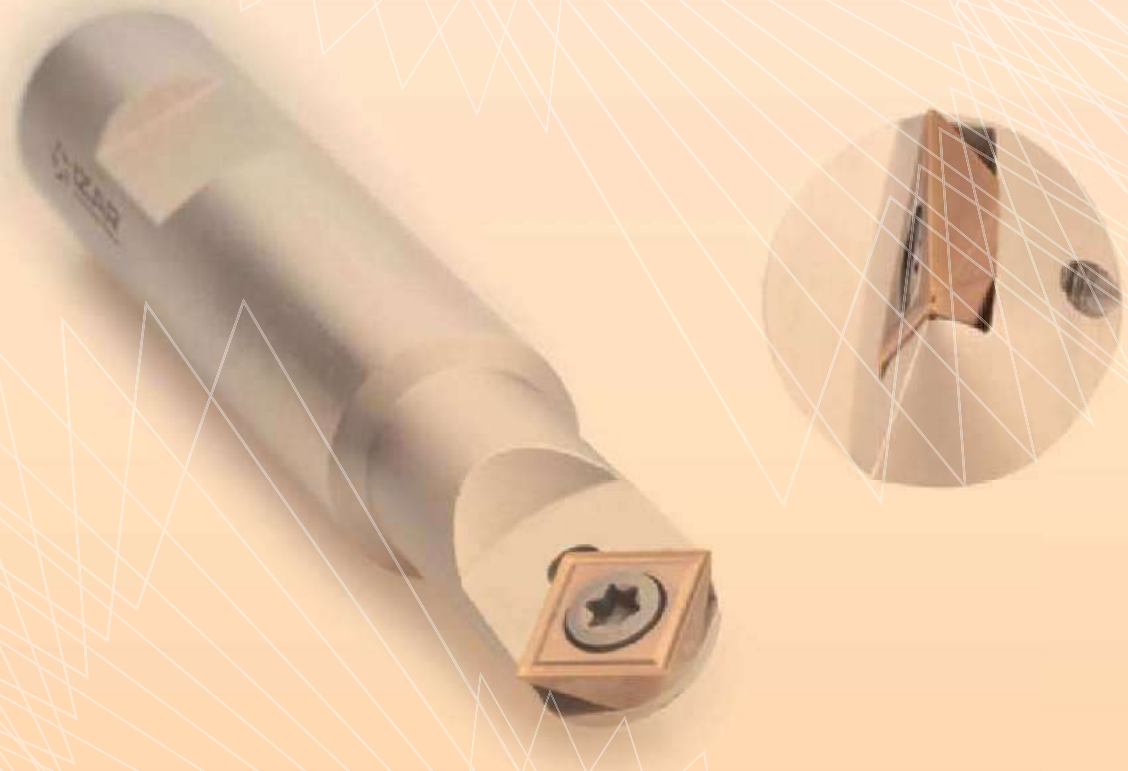
FRESADO - Milling - Fraisage

← Cont.

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8280		618		SCMORD
8285		619		SRD
8290		620		SRC
8295		621		SLC
8296 New!		622		CHS.. A 45º
8297 New!		623		CHS
8633		626	+	APHT-16-FA
8636		626	+	APET-10-FA
8639		626	+	APKT-10-M
8642		627	+	APKT-16
8645		627	+	LC
8691 New!		628	-	LOGX
8648		628	+	ODMT
8651		629	+	RC
8654		629	+	RDHT
8657		629	+	RDHW

Ref.		Pag.	Geometría Geometry Géométrie	Tipo Type
8693 New!		630	+	SDMT
8660		630	+	SEKN-12
8663		631	+	SEKR-12
8666		631	+	SEHT-12
8667		632	+	SEET-12
8669		632	+	SEHT-12
8672		632	+	SNHQ
8673 New!		633	-	SNMX
8665 New!		633	+	SPMG
8675		634	+	TPKN
8678		634	+	TPKR
8679		634	-	XNMX
8680		635	+	XOET
8690		635	+	WNMW
8692 New!		636	-	WNMX

TALADRADO
Drilling
Perçage



BROCAS DE CABEZA INTERCAMBIABLE

Drill Bits With Interchangeable Heads

Forets à tête interchangeable

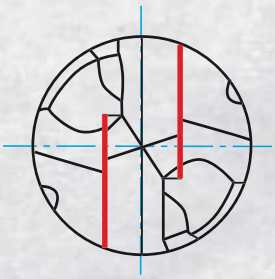
New!

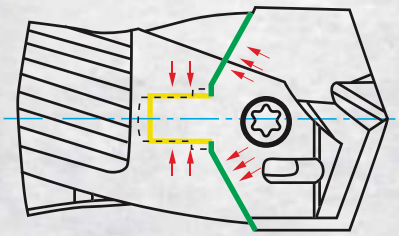
Ref. 8380 Ref. 8381

ALTO AVANCE

High Feed

Avance élevée





La estructura de posicionamiento triple, presenta una fuerza de conexión y una precisión de posicionamiento extraordinarias, y un diseño geométrico óptimo contribuyen a su excelente velocidad de perforación y durabilidad. Debido a la cabeza intercambiable, se puede lograr una combinación flexible de insertos para varias aplicaciones y soportes de diferentes longitudes, satisfaciendo así las necesidades de diferentes materiales a mecanizar, diferentes profundidades de perforación y otras aplicaciones, minimizando la inversión en herramientas.

The triple positioning structure, featuring outstanding connection strength and positioning accuracy, and an optimal geometrical design contribute to its excellent drilling speed and durability. Due to the interchangeable head, a flexible combination of inserts for various applications and holders of different lengths can be achieved, thus meeting the needs of different materials to be machined, different drilling depths and other applications, minimising the investment in tools.

La structure de positionnement triple, caractérisée par une force de connexion et une précision de positionnement exceptionnelles, ainsi qu'un dessin géométrique optimal contribuent à l'excellente vitesse de perçage et à la durabilité. Grâce à la tête interchangeable, il est possible de combiner de manière flexible des plaquettes pour diverses applications et des supports de différentes longueurs, ce qui permet de répondre aux besoins des différents matériaux à usiner, des différentes profondeurs de perçage et d'autres applications, tout en minimisant l'investissement en termes d'outils.

INFORMACIÓN TÉCNICA SOBRE BROCAS DE CABEZA INTERCAMBIABLE
Technical Information on Drill Bits with Interchangeable Heads
Informations techniques sur les forets à tête interchangeable

PROCEDIMIENTO DE INSTALACIÓN DEL INSERTO
Insert installation procedure - Procédure d'installation de l'insert

Valor recomendado de la fuerza de bloqueo del tornillo
Recommended Value of Screw Locking Force
Valeur recommandée de la force de verrouillage de la vis

Rango de diámetro Range of Diameter Plage de diamètres	Par de apriete (Nm) Tightening Torque (Nm) Couple de serrage (Nm)
10,00 - 13,99	0,50
14,00 - 17,99	1,00
18,00 - 23,99	2,00
24,00 - 27,99	3,00
28,00 - 30,99	5,00
31,00 - 36,99	7,50
37,00 - 39,99	15,00

1. **En primer lugar, limpie el inserto y la ranura de montaje con aire comprimido.**
2. **Introduzca el inserto en la ranura de montaje del soporte y empújelo ligeramente.**
3. **Fije el inserto con el perno de sujeción. Se recomienda que los usuarios utilicen una llave dinamométrica en la medida de lo posible y los pares de apriete que se muestran en la figura.**

1. First, clean the insert and mounting groove with compressed air.
2. Load the insert into the mounting groove in the holder and slightly push the insert.
3. Fixt he insert with the fastening bolt. It is recommended that users use a torque wrench as far as possible and the tightening torques are shown in the figure.

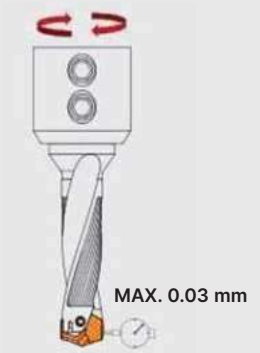
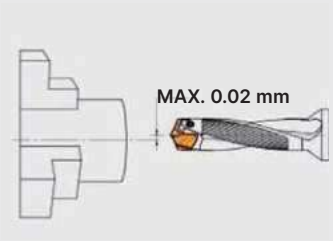
1. D'abord nettoyer l'insert et la rainure de montage à l'air comprimé.
2. Introduire l'insert dans la rainure de montage du support et pousser légèrement l'insert.
3. Fixer l'insert avec le boulon de fixation. Il est recommandé aux utilisateurs d'utiliser une clé dynamométrique dans la mesure du possible. Les couples de serrage sont indiqués dans la figure.

Unas buenas condiciones de trabajo y un apriete correcto son requisitos para la vida útil y la precisión de los taladros.

Good working condition & reliable clamping are requirements for service life and accuracy of drills.

De bonnes conditions de travail et un serrage fiable sont des conditions nécessaires à la durée de vie et à la précision des forets.

Máx. descentrado y desalineación
Max. Runout and Misalignment
Max. excentration et désalignement

Descentrado - **Runout** - Excentration	**Desalineación** - **Misalignment** - Désalignement
	

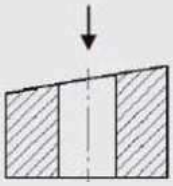
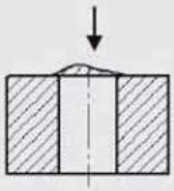
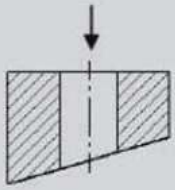
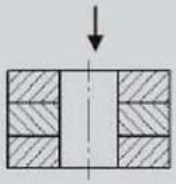
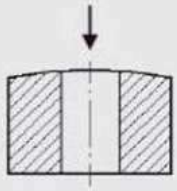
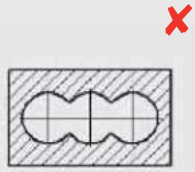
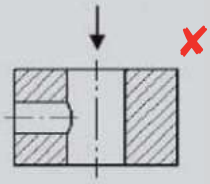
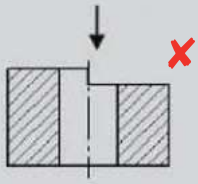
Presión de refrigeración
Cooling Pressure
Pression de refroidissement

Refrigeración interna **Internal Cooling** Refroidissement interne	**Refrigeración externa** **External Cooling** Refroidissement externe	**Corte en seco** **Dry Cutting** Perçage à sec
3 x D: 5 bar ✓ 5 x D: 10 bar ✓ 8 x D: 15 bar ✓ 10 x D: 20 bar ✓	3 x D: 5 bar ✓ 5 x D: 10 bar ✗ 8 x D: 15 bar ✗ 10 x D: 20 bar ✗	✗ **Prohibido su uso en seco** **Strictly prohibited for dry drilling** Perçage à sec interdit

INFORMACIÓN TÉCNICA SOBRE BROCAS DE CABEZA INTERCAMBIABLE

Technical Information on Drill Bits with Interchangeable Heads

Informations techniques sur les forets à tête interchangeable

Condiciones de funcionamiento Operating Condition Conditions de fonctionnement	Instrucciones Instructions Instructions	Condiciones de funcionamiento Operating Condition Conditions de fonctionnement	Instrucciones Instructions Instructions
	**La superficie de entrada está inclinada** **The entry surface is slanted** La surface d'entrée est inclinée **Pendiente** / **Slope** / Inclinaison **< 3°** **Velocidad de avance** / **Feed Rate** / Vitesse d'avance **50%**		**La superficie de entrada está soldada** **The entry surface is welded** La surface d'entrée est soudée **Nivélelo mediante refrentado antes del mecanizado** **Level it through spot facing before machining** Le niveler par surfaçage avant de l'usiner
	**La superficie de salida está inclinada** **The exit surface is slanted** La surface de sortie est inclinée **Pendiente** / **Slope** / Inclinaison **< 3°** **Velocidad de avance** / **Feed Rate** / Vitesse d'avance **50%**		**Placas apiladas** **Stacked Plates** Plaques empilées **La pieza de trabajo se sujetará correctamente** **The workpiece shall be properly clamped** La pièce à usiner doit être correctement serrée
	**La superficie de entrada está arqueada** **The entry surface is arc** La surface d'entrée est en arc **Se permite el taladrado en el centro con avance reducido** **Refrentado necesario si el punto de entrada no se encuentra en el centro del arco** **Drilling at the center at reduced feed rate is allowed** **Spot facing is required if the entry point is not at the center of the arc** Le perçage au centre avec une vitesse d'avance réduite est autorisé Un Spot facing est nécessaire si le point d'entrée n'est pas au centre de l'arc		**Agujero de taladro incompleto** **Drill incomplete hole** Perçage incomplet du trou **No permitido** **Not allowed** Non autorisé
	**Agujero pasante** **Through hole** Trou de passage **No permitido** **Not allowed** Non autorisé		**Escalón en la superficie de entrada** **Step on the entry surface** Étape sur la surface d'entrée **No permitido (el punto de entrada debe estar en un plano horizontal)** **Not allowed (the entry point must be on a horizontal plane)** Non autorisé (le point d'entrée doit être sur un plan horizontal)

PRECAUCIONES - Precautions - Précautions

Proceso de taladrado para soportes con una longitud de 8xD.

Drilling process for holders with a length of 8xD.

Processus de perçage pour les supports d'une longueur de 8xD.

1	2	3	4
Taladre un orificio piloto de 1xD a 1,5xD con una broca **Drill a pilot hole to 1xD to 1,5xD with a short Drill Bit** Percer un trou pilote de 1xD à 1,5xD à l'aide d'un foret court	**Entre en el orificio piloto a baja velocidad y bajo avance** **Enter the pilot hole at a low speed and low feed rate** Introduire le trou pilote à faible vitesse et à faible vitesse d'avance	**Mantenga el refrigerante durante 2 a 3 s** **Keep the coolant lor 2 to 3 s** Maintenir le liquide de refroidissement pendant 2 à 3 secondes	**Realice el taladrado a velocidad continua según los parámetros recomendados** **Reduzca la velocidad y el avance** **Carry out continuou Speed drilling according to the recommended parameters** **Reduce the speed and feed** Effectuer un forage à vitesse continue selon les paramètres recommandés Réduire la vitesse et l'alimentation

CONDICIONES DE CORTE BROCAS DE CABEZA INTERCAMBIABLE
Cutting Conditions Drill Bits with Interchangeable Heads
Conditions de coupe forets à tête interchangeable

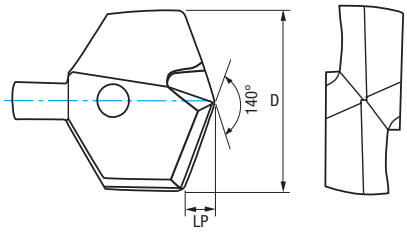
			VC	Avances f/rev. (mm/rev) - Feed - Pas						
GRUPO GROUP GROUPE	SUBGRUPO SUBGROUP S. GROUPE	MATERIALES MATERIALS MATÉRIAUX	MD	10-11,99	12-13,99	14-15,99	16-19,99	20-25,99	26-32,99	33-39,99
P	P.1	**Aceros Construcción - Aceros Cementación** **Structural Steels - Case Hardening Steels** Aciers de construction - Aciers supérieurs	80-150	0,14	0,16	0,2	0,25	0,28	0,3	0,32
		Aceros al Carbono No Aleados - Aceros Bonificados **Unalloyed Carbon Steels - Heat-Treatable Steels** Aciers au carbone sans alliage - Aciers supérieurs	50-100	0,13	0,14	0,18	0,24	0,26	0,29	0,3
	P.2	**Aceros Aleados** **Alloyed Steels** Aciers alliés	65-130	0,14	0,15	0,18	0,23	0,27	0,31	0,35
	P.3	**Aceros Aleados Tratados - Aceros Bonificados** **Heat-Treatable Alloyed Steels** Aciers alliés supérieurs	45-90	0,13	0,15	0,18	0,2	0,24	0,24	0,26
	P.4	**Materiales resistentes al desgaste** **Wear-Resistant Materials** Matériaux résistant a l'usure	15-40	0,08	0,1	0,1	0,12	0,14	0,16	0,16
	P.5	**INOX Ferríticos-Martensíticos Recocidos** **Ferritic-Martensitic Annealed Stainless** INOX Ferritiques-Martensitiques Recuits	30-50	0,14	0,16	0,18	0,24	0,28	0,28	0,28
		INOX Ferríticos-Martensíticos Templados **Ferritic-Martensitic Tempered Stainless** INOX Ferritiques-Martensitiques Trempés	60-90	0,12	0,12	0,14	0,18	0,22	0,22	0,22
M	**Austeníticos** **Austenitics** Austénitiques	**INOX Austeníticos Recodidos** **Austenitic Annealed Stainless** INOX Austénitiques Recuits	40-70	0,12	0,12	0,14	0,16	0,18	0,2	0,23
	Superduplex	**<60% Ferrítico - Ferritic** - Ferritique	40-70	0,1	0,1	0,12	0,14	0,16	0,16	0,19
		>60% Ferrítico - Ferritic - Ferritique	20-60	0,09	0,09	0,1	0,12	0,14	0,14	0,17
K	K.1	**Fundición Gris** **Grey Cast Iron** Fonte grise	70-140	0,25	0,29	0,37	0,41	0,45	0,48	0,5
	K.2	**Fundición Nodular** **Nodular Cast Iron** Fonte nodulaire	65-120	0,25	0,29	0,37	0,41	0,45	0,48	0,5
S		**Aleaciones Termorresistentes (Titanio, Inconel...)** **Heat-Resistant Alloys (Titanium, Inconel...)** Alliages thermorésistants (Titane, Inconel...)	25-45	0,08	0,1	0,14	0,16	0,18	0,2	0,22
N	N.1	**Cobre - Bronce - Latón Viruta Corta** **Copper - Bronze - Brass (Short Chip)** Cuivre - Bronze - Laiton (Copeaux courts)	105-195	0,25	0,28	0,37	0,4	0,45	0,5	0,55
	N.2	**Cobre - Bronce - Latón Viruta Larga** **Copper - Bronze - Brass (Long Chip)** Cuivre - Bronze - Laiton (Copeaux longs)	105-195	0,25	0,28	0,37	0,4	0,45	0,5	0,55
	N.3	**Al - Mg No Aleado** **Unalloyed Al - Mg** Al - Mg Sans alliage	95-180	0,25	0,28	0,37	0,4	0,45	0,5	0,55
	N.4	**Aleaciones Al Si < 10%** **Al Alloys Si < 10%** Alliages Al Si < 10%	95-180	0,25	0,28	0,37	0,4	0,45	0,5	0,55
	N.5	**Aleaciones Al Si > 10%** **Al Alloys Si > 10%** Alliages Al Si > 10%	90-170	0,25	0,28	0,37	0,4	0,45	0,5	0,55
	N.6	**Termoplásticos** **Thermoplastics** Thermoplastiques	105-195	0,25	0,28	0,37	0,4	0,45	0,5	0,55
	N.7	**Duroplásticos** **Hard Plastics** Plastiques durs	105-195	0,25	0,28	0,37	0,4	0,45	0,5	0,55

Ref. 8380

CABEZA BROCA PUNTA INTERCAMBIABLE
Indexable Drill Insert
Tête foret à embout amovible

New!

MD/ HM Carbure Micrograno | ALTIN | 140° | Tol. k7 | IT9~IT10



D mm	LP mm	N° Art. P	N° Art. M	N° Art. K	N° Art. N		€
10,00	1,80	56443	56449	56461	56469	1	
10,20	1,90	56472	56475	56478	56479	1	
10,50	1,90	56525	56561	56577	56580	1	
11,00	2,00	56586	56589	56592	56595	1	
11,50	2,10	56598	56601	56607	56613	1	
12,00	2,20	56616	56619	56631	56635	1	
12,50	2,30	56641	56705	56723	56748	1	
13,00	2,40	56273	56279	56282	56285	1	
13,50	2,50	56751	56863	56884	56887	1	
14,00	2,50	56890	56893	56896	56899	1	
14,50	2,60	56905	56975	56977	56980	1	
15,00	2,70	56984	56991	57000	57038	1	
15,50	2,80	57041	57044	57047	57050	1	
16,00	2,90	56295	56298	56301	56307	1	
16,50	3,00	57053	57056	57059	57062	1	
17,00	3,10	57065	57067	57068	57071	1	
17,50	3,20	57074	57077	57080	57083	1	
18,00	3,30	56358	56370	56376	56382	1	
18,50	3,40	57089	57095	57101	57107	1	
19,00	3,50	57113	57119	57143	57159	1	
19,50	3,50	57160	57166	57228	57242	1	
20,00	3,60	54998	55001	55045	55057	1	
20,50	3,70	57248	57254	57260	57266	1	
21,00	3,80	57269	57272	57278	57296	1	
21,50	3,90	57302	57324	57336	57348	1	
22,00	4,00	55060	55063	55074	55078	1	
22,50	4,10	57360	57372	57408	57420	1	
23,00	4,20	57444	57468	57487	57492	1	
23,50	4,30	57493	57498	57499	57502	1	
24,00	4,40	55090	55096	55108	55117	1	
24,50	4,50	57508	57511	57516	57519	1	

D mm	LP mm	N° Art. P	N° Art. M	N° Art. K	N° Art. N		€
25,00	4,50	57522	57528	57540	57543	1	
25,50	4,60	57566	57569	57572	57575	1	
26,00	4,70	55120	55123	55132	55138	1	
26,50	4,80	57576	57578	57582	57588	1	
27,00	4,90	57603	57609	57623	57626	1	
27,50	5,00	57629	57631	57632	57634	1	
28,00	5,10	57635	57637	57639	57641	1	
28,50	5,20	57644	57645	57681	57684	1	
29,00	5,30	57702	57726	57729	57732	1	
29,50	5,40	57735	57742	57745	57748	1	
30,00	5,50	55144	55244	55246	55254	1	
30,50	5,60	57751	57754	57757	57760	1	
31,00	5,60	57763	57766	57769	57772	1	
31,50	5,70	57775	57778	57781	57798	1	
32,00	5,80	57809	57811	57812	57814	1	
32,50	5,90	57815	57817	57818	57820	1	
33,00	6,00	55396	55402	55408	55417	1	
33,50	6,10	57821	57823	57824	57826	1	
34,00	6,20	57921	57933	57936	57945	1	
34,50	6,30	57947	57950	57951	57953	1	
35,00	6,40	57954	57956	57959	57960	1	
35,50	6,50	57962	57963	57965	57966	1	
36,00	6,60	55420	55429	55441	55447	1	
36,50	6,60	57968	57969	57971	57972	1	
37,00	6,70	57974	57977	57983	57989	1	
37,50	6,80	57990	57992	57995	57999	1	
38,00	6,90	58014	58023	58035	58052	1	
38,50	7,00	58055	58056	58061	58064	1	
39,00	7,10	58067	58083	58092	58107	1	
39,50	7,20	58110	58119	58128	58131	1	
39,99	7,30	58143	58156	58159	58165	1	

P M K **En stock** / **In stock** / En stock

N **Bajo demanda** / **Upon request** / Sur demande

1. **El inserto intercambiable fácil de manipular, facilita el reemplazo del mismo en la propia máquina.**
2. **La combinación de posicionamiento del tornillo de bloqueo central, la ranura en V y la guia cilíndrica mantiene una fuerza de bloqueo y una fuerza de perforación consistentes, estables y fiables.**
3. **Los materiales óptimos, el recubrimiento de última generación y la tecnología de rectificado de precisión maximizan su rendimiento.**
4. **La construcción del inserto de alta resistencia lo hace apto para taladrar con altos avances.**
5. **Portaherramientas con mango ISO-9766.**

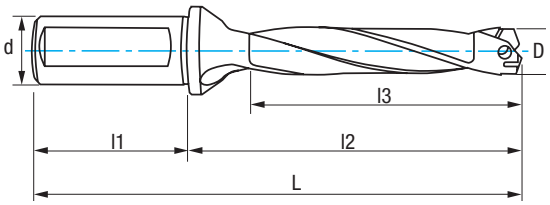
1. **The easy-to-handle interchangeable insert makes it easy to replace the insert on the machine itself.**
2. **The positioning combination of central locking screw, V-groove and cylindrical guide maintains consistent, stable and reliable locking force and drilling force.**
3. **Optimum materials, state-of-the-art coating and precision grinding technology maximise performance.**
4. **The heavy duty insert construction makes it suitable for high feed drilling.**
5. **Tool holder with ISO-9766 shank.**

1. La plaquette interchangeable, facile à manipuler, permet de la remplacer facilement sur la machine elle-même.
2. La combinaison de positionnement de la vis de blocage centrale, de la rainure en V et du guide cylindrique permet d'obtenir une force de blocage et une force de perçage cohérentes, stables et fiables.
3. Des matériaux optimaux, un revêtement de pointe et une technologie de rectification de précision maximisent les performances.
4. La construction robuste de la plaquette permet de réaliser des trous à avance élevée.
5. Porte-outils avec queue ISO-9766.

Ref. 8381

CUERPO BROCA PUNTA INTERCAMBIABLE REFRIGERACIÓN INTERIOR 3XD
3XD Internal Cooling Indexable Drill Body
Corps foret à embout amovible lubrification interne 3XD

New!



3XD

ISO 9766

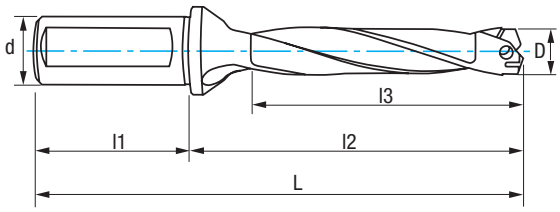
D mm	L mm	l1 mm	l2 mm	l3 mm	d mm		N° Art. HSS	€
10,00-10,49	96	48	48	31,50	16	1	58168	
10,50-10,99	98	48	50	33,00	16	1	58180	
11,00-11,49	100	48	52	34,50	16	1	58195	
11,50-11,99	102	48	54	36,00	16	1	58204	
12,00-12,49	105	48	57	37,50	16	1	58218	
12,50-12,99	107	48	59	39,00	16	1	58228	
13,00-13,49	109	48	61	40,50	16	1	55486	
13,50-13,99	111	48	63	42,00	16	1	58281	
14,00-14,49	113	48	65	43,50	16	1	58357	
14,50-14,99	115	48	67	45,00	16	1	58366	
15,00-15,99	122	50	72	48,00	20	1	58374	
16,00-16,99	127	50	77	51,00	20	1	55509	
17,00-17,99	131	50	81	54,00	20	1	58381	
18,00-18,99	141	56	85	57,00	25	1	55628	
19,00-19,99	146	56	90	60,00	25	1	58388	
20,00-20,99	150	56	94	63,00	25	1	55764	
21,00-21,99	154	56	98	66,00	25	1	58393	
22,00-22,99	158	56	102	69,00	25	1	55895	
23,00-23,99	163	56	107	72,00	25	1	58402	
24,00-24,99	172	60	112	75,00	32	1	55907	
25,00-25,99	176	60	116	78,00	32	1	58410	
26,00-26,99	181	60	121	81,00	32	1	56041	
27,00-27,99	185	60	125	84,00	32	1	58414	
28,00-28,99	189	60	129	87,00	32	1	58429	
29,00-29,99	193	60	133	90,00	32	1	58435	
30,00-30,99	198	60	138	93,00	32	1	56195	
31,00-31,99	202	60	142	96,00	32	1	58444	
32,00-32,99	206	60	146	99,00	32	1	58450	
33,00-33,99	211	60	151	102,00	32	1	56229	
34,00-34,99	226	70	156	105,00	40	1	58459	
35,00-35,99	230	70	160	108,00	40	1	58468	
36,00-36,99	234	70	164	111,00	40	1	56241	
37,00-37,99	239	70	169	114,00	40	1	58477	
38,00-38,99	243	70	173	117,00	40	1	58485	
39,00-39,99	252	70	182	123,00	40	1	58492	

Ref. 8805		Ref. 8801	
TP-06 M2×9 Art. 70331 - €	1	**ZTP-06** Art. 70442 €	1
TP-06 M2×10 Art. 70346 - €			
TP-06 M2×11,5 Art. 70356 - €			
TP-07 M2,5×13 Art. 70359 - €		**ZTP-07** Art. 70445 €	
TP-07 M2,5×15 Art. 70362 - €			
TP-09 M3×16 Art. 70364 - €		**ZTP-09** Art. 70448 €	
TP-09 M3×17 Art. 70370 - €			
TP-09 M3×20 Art. 70373 - €			
TP-10 M3,5×22 Art. 70376 - €		**ZTP-10** Art. 70454 €	
TP-10 M3,5×24 Art. 70382 - €			
TP-15 M4×26 Art. 70388 - €		**ZTP-15** Art. 70457 €	
TP-20 M5×29 Art. 70397 - €		**ZTP-20** Art. 70466 €	
TP-20 M5×32 Art. 70425 - €			
TP-25 M6×35 Art. 70434 - €		**ZTP-25** Art. 70472 €	

Ref. 8381

CUERPO BROCA PUNTA INTERCAMBIABLE REFRIGERACIÓN INTERIOR 5XD
5XD Internal Cooling Indexable Drill Body
Corps foret à embout amovible lubrification interne 5XD

New!



5XD

ISO 9766

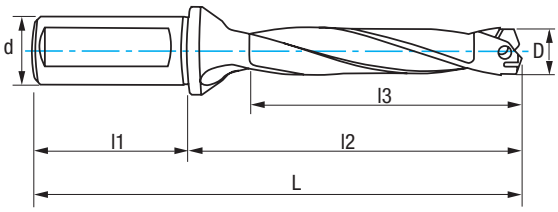
D mm	L mm	l1 mm	l2 mm	l3 mm	d mm		N° Art. HSS	€
10,00-10,49	117	48	69	52,50	16	1	58174	
10,50-10,99	120	48	72	55,00	16	1	58185	
11,00-11,49	123	48	75	57,50	16	1	58197	
11,50-11,99	126	48	78	60,00	16	1	58213	
12,00-12,49	130	48	82	62,50	16	1	58222	
12,50-12,99	133	48	85	65,00	16	1	58267	
13,00-13,49	136	48	88	67,50	16	1	55501	
13,50-13,99	139	48	91	70,00	16	1	58290	
14,00-14,49	142	48	94	72,50	16	1	58360	
14,50-14,99	145	48	97	75,00	16	1	58369	
15,00-15,99	154	50	104	80,00	20	1	58378	
16,00-16,99	161	50	111	85,00	20	1	55576	
17,00-17,99	167	50	117	90,00	20	1	58384	
18,00-18,99	179	56	123	95,00	25	1	55678	
19,00-19,99	186	56	130	100,00	25	1	58390	
20,00-20,99	192	56	136	105,00	25	1	55767	
21,00-21,99	198	56	142	110,00	25	1	58396	
22,00-22,99	204	56	148	115,00	25	1	55898	
23,00-23,99	211	56	155	120,00	25	1	58405	
24,00-24,99	222	60	162	125,00	32	1	55908	
25,00-25,99	228	60	168	130,00	32	1	58411	
26,00-26,99	235	60	175	135,00	32	1	56068	
27,00-27,99	241	60	181	140,00	32	1	58417	
28,00-28,99	247	60	187	145,00	32	1	58431	
29,00-29,99	253	60	193	150,00	32	1	58438	
30,00-30,99	260	60	200	155,00	32	1	56207	
31,00-31,99	266	60	206	160,00	32	1	58446	
32,00-32,99	272	60	212	165,00	32	1	58453	
33,00-33,99	279	60	219	170,00	32	1	56231	
34,00-34,99	296	70	226	175,00	40	1	58462	
35,00-35,99	302	70	232	180,00	40	1	58471	
36,00-36,99	308	70	238	185,00	40	1	56243	
37,00-37,99	315	70	245	190,00	40	1	58480	
38,00-38,99	321	70	251	195,00	40	1	58486	
39,00-39,99	252	70	264	205,00	40	1	58495	

Ref. 8805		Ref. 8801	
TP-06 M2×9 Art. 70331 - €	1	**ZTP-06** Art. 70442 €	1
TP-06 M2×10 Art. 70346 - €			
TP-06 M2×11,5 Art. 70356 - €			
TP-07 M2,5×13 Art. 70359 - €		**ZTP-07** Art. 70445 €	
TP-07 M2,5×15 Art. 70362 - €			
TP-09 M3×16 Art. 70364 €		**ZTP-09** Art. 70448 €	
TP-09 M3×17 Art. 70370 - €			
TP-09 M3×20 Art. 70373 - €			
TP-10 M3,5×22 Art. 70376 - €		**ZTP-10** Art. 70454 €	
TP-10 M3,5×24 Art. 70382 - €			
TP-15 M4×26 Art. 70388 - €		**ZTP-15** Art. 70457 €	
TP-20 M5×29 Art. 70397 - €		**ZTP-20** Art. 70466 €	
TP-20 M5×32 Art. 70425 - €			
TP-25 M6×35 Art. 70434 - €		**ZTP-25** Art. 70472 €	

Ref. 8381

CUERPO BROCA PUNTA INTERCAMBIABLE REFRIGERACIÓN INTERIOR 8XD
8XD Internal Cooling Indexable Drill Body
Corps foret à embout amovible lubrification interne 8XD

New!



8XD

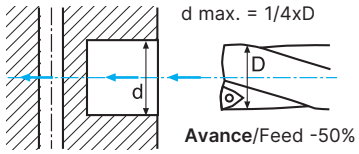
ISO 9766

D mm	L mm	l1 mm	l2 mm	l3 mm	d mm		N° Art. HSS	€
10,00-10,49	148	48	100	84,00	16	1	58177	
10,50-10,99	153	48	105	88,00	16	1	58189	
11,00-11,49	158	48	110	92,00	16	1	58203	
11,50-11,99	162	48	114	96,00	16	1	58216	
12,00-12,49	167	48	119	100,00	16	1	58227	
12,50-12,99	172	48	124	104,00	16	1	58272	
13,00-13,49	176	48	128	108,00	16	1	55507	
13,50-13,99	181	48	133	112,00	16	1	58354	
14,00-14,49	186	48	138	116,00	16	1	58363	
14,50-14,99	190	48	142	120,00	16	1	58372	
15,00-15,99	202	50	152	128,00	20	1	58375	
16,00-16,99	212	50	162	136,00	20	1	55600	
17,00-17,99	221	50	171	144,00	20	1	58387	
18,00-18,99	236	56	180	152,00	25	1	55752	
19,00-19,99	246	56	190	160,00	25	1	58392	
20,00-20,99	255	56	199	168,00	25	1	55773	
21,00-21,99	264	56	208	176,00	25	1	58399	
22,00-22,99	273	56	217	184,00	25	1	55901	
23,00-23,99	283	56	227	192,00	25	1	58408	
24,00-24,99	297	60	237	200,00	32	1	56017	
25,00-25,99	306	60	246	208,00	32	1	58413	
26,00-26,99	316	60	256	216,00	32	1	56128	
27,00-27,99	325	60	265	224,00	32	1	58420	
28,00-28,99	334	60	274	232,00	32	1	58432	
29,00-29,99	343	60	283	240,00	32	1	58441	
30,00-30,99	353	60	293	248,00	32	1	56219	
31,00-31,99	362	60	302	256,00	32	1	58447	
32,00-32,99	371	60	311	264,00	32	1	58456	
33,00-33,99	381	60	321	272,00	32	1	56235	
34,00-34,99	401	70	331	280,00	40	1	58465	
35,00-35,99	410	70	340	288,00	40	1	58474	
36,00-36,99	419	70	349	296,00	40	1	56255	
37,00-37,99	429	70	359	304,00	40	1	58483	
38,00-38,99	438	70	368	312,00	40	1	58489	
39,00-39,99	457	70	387	328,00	40	1	58498	

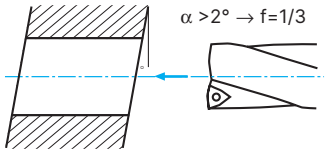
Ref. 8805		Ref. 8801	
TP-06 M2×9 Art. 70331 - €	5	**ZTP-06** Art. 70442 €	1
TP-06 M2×10 Art. 70346 - €			
TP-06 M2×11,5 Art. 70356 - €			
TP-07 M2,5×13 Art. 70359 - €		**ZTP-07** Art. 70445 €	
TP-07 M2,5×15 Art. 70362 - €			
TP-09 M3×16 Art. 70364 €		**ZTP-09** Art. 70448 €	
TP-09 M3×17 Art. 70370 - €			
TP-09 M3×20 Art. 70373 - €			
TP-10 M3,5×22 Art. 70376 - €		**ZTP-10** Art. 70454 €	
TP-10 M3,5×24 Art. 70382 - €			
TP-15 M4×26 Art. 70388 - €		**ZTP-15** Art. 70457 €	
TP-20 M5×29 Art. 70397 - €		**ZTP-20** Art. 70466 €	
TP-20 M5×32 Art. 70425 - €			
TP-25 M6×35 Art. 70434 - €		**ZTP-25** Art. 70472 €	

RECOMENDACIONES PLAQUITAS TALADRADO
Drilling Insert Recommendations
Suggestions plaquettes perçage

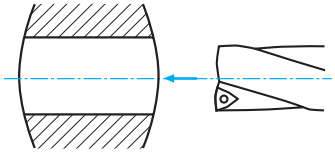
Agujero Previo
Existing Hole - Trou existant



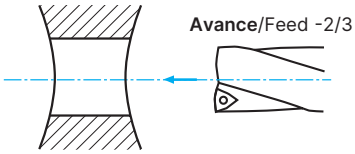
Entrada en Ángulo
Angle Entry - Entrée en angle



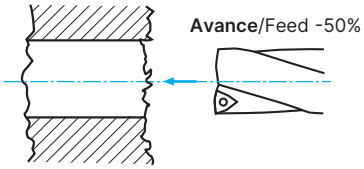
Superficie Convexa
Convex Surface - Surface convexe



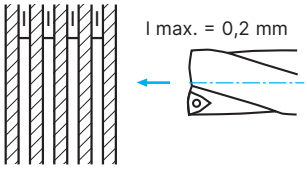
Superficie Cóncava
Concave Surface - Surface concave



Superficie Irregular
Irregular Surface - Surface irreguliére



Material Sandwich
Sandwich Material - Matériel sandwich

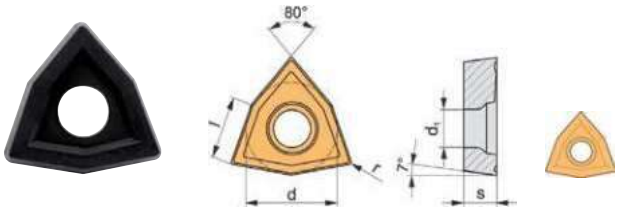


Avances Plaquitas MD Ref. 8450 **HM Insert Feed** Avance plaquettes carbure **(f=mm/rev.)**

Material		Vc (m/min.) MD HM/Carbure	Ø 17-20	Ø 21-25	Ø 26-30	Ø 31-40	Ø 41-50	Ø 51-55
P	<450 N/mm²	180-260	0,050	0,060	0,070	0,080	0,090	0,100-0,120
	400-700 N/mm²	150-240	0,100	0,120	0,140	0,160	0,180	0,180-0,200
	500-900 N/mm²	120-240	0,110	0,150	0,180	0,200	0,220	0,220-0,250
	900-1200 N/mm²	130-220	0,100	0,150	0,180	0,200	0,220	0,220-0,250
M	AUSTENÍTICO Austenitic Austénitique	150-220	0,070	0,090	0,110	0,120	0,130	0,100-0,180
K		120-200	0,150	0,160	0,180	0,200	0,230	0,150-0,220
S		40-80	0,070	0,090	0,100	0,110	0,120	0,090-0,120
N		300-380	0,060	0,070	0,080	0,120	0,160	0,100-0,140
H	HRC 45-60							

Ref. 8450

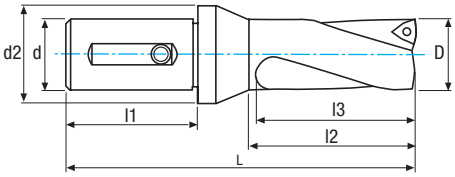
PLAQUITA INTERCAMBIABLE TALADRADO WCMX
WCMX Drilling Indexable Insert
Plaquette perçage WCMX



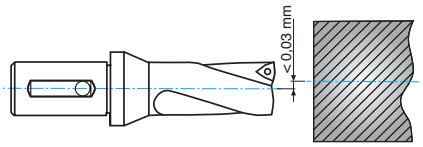
ISO	l mm	d mm	s mm	r mm	d_1 mm		N° Art. P-620	€
WCMX-030208	3,46	5,56	2,38	0,80	2,60	10	17667	
WCMX-040208	3,99	6,35	2,38	0,80	2,90	10	17680	
WCMX-050308	5,07	7,94	3,18	0,80	3,50	10	17681	
WCMX-06T308	6,14	9,52	3,97	0,80	3,90	10	17706	
WCMX-080412	8,14	12,70	4,76	1,20	4,50	10	17708	

Ref. 8425

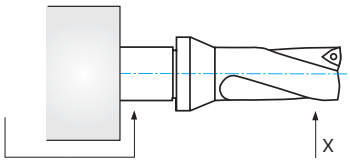
PORTA-PLAQUITAS TALADRADO ISO 9766 (3XD)
(3XD) ISO 9766 Drilling Tool-Holder
Porte-Plaquettes perçage ISO 9766 (3XD)



Ejemplo Ajuste Radial
Radial Adjustment Example
Example fixation rayon

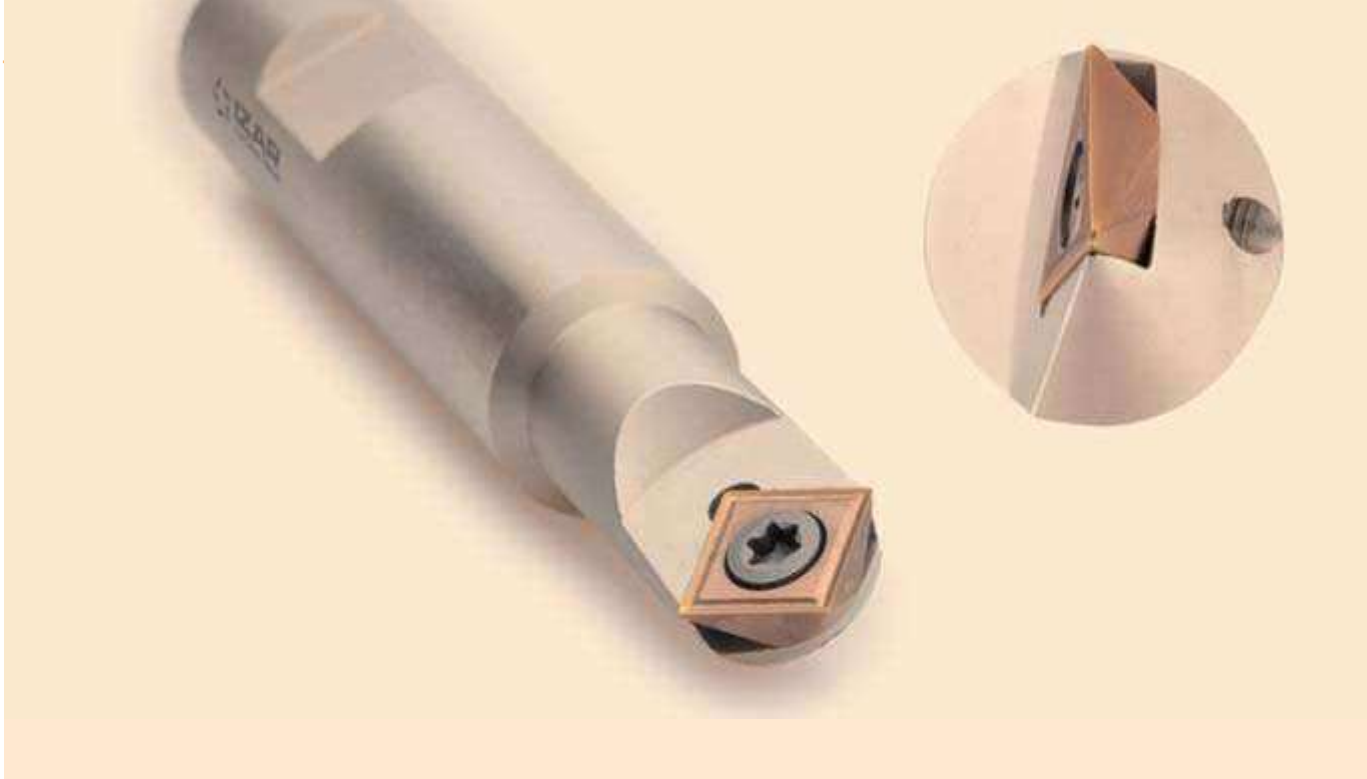


Refrigerante
Coolant
Reffroidissant



D mm	L mm	l_1 mm	l_2 mm	l_3 mm	d mm	d_2 mm	Ajuste radial Radial Fit Réglage rayon D max	N° Art.	€
17,50	122	50	56	53	25	40	+1,00 → 19,5	17385	
18,00	123	50	57	54	25	40	+0,90 → 19,8	17386	
18,50	125	50	59	56	25	40	+0,85 → 20,2	17407	
19,00	126	50	60	57	25	40	+0,80 → 20,6	17444	
20,00	131	50	64	60	25	40	+0,75 → 21,5	17448	
22,00	142	55	69	66	25	40	+1,25 → 24,5	17452	
24,00	150	55	76	72	25	40	+0,75 → 25,5	17453	
25,00	154	55	79	75	25	40	+0,50 → 26,0	17454	
26,00	157	55	81	78	32	50	+2,50 → 31,0	17467	
27,00	160	55	84	81	32	50	+2,20 → 31,4	17476	
28,00	164	55	87	84	32	50	+2,10 → 32,2	17479	
29,00	167	55	90	87	32	50	+1,80 → 32,6	17494	
30,00	172	55	94	90	32	50	+1,80 → 33,0	17587	
31,00	181	60	97	93	40	60	+3,50 → 38,0	17592	
32,00	184	60	100	96	40	60	+3,20 → 38,4	17595	
34,00	191	60	106	102	40	60	+2,80 → 39,6	17596	
35,00	195	60	109	105	40	60	+2,50 → 40,0	17610	
38,00	206	60	118	114	40	60	+1,80 → 41,0	17614	
39,00	209	60	121	117	40	60	+1,50 → 41,6	17625	
40,00	213	60	124	120	40	60	+1,20 → 42,0	17631	
42,00	225	65	130	126	40	60	+4,20 → 51,0	17634	
43,00	229	65	133	129	40	60	+4,00 → 51,4	17643	
45,00	237	65	140	135	40	60	+3,60 → 52,2	17650	
48,00	248	65	149	144	40	60	+2,70 → 53,4	17652	
49,00	251	65	152	147	40	60	+2,50 → 54,0	17655	
50,00	255	65	155	150	40	60	+2,20 → 54,4	17658	
52,00	262	65	161	156	40	60	+1,80 → 55,6	17660	
54,00	269	65	167	162	40	60	+1,20 → 56,4	17661	
55,00	274	65	171	165	40	60	+0,80 → 56,6	17664	

Plaquita Insert Plaquette	Ref. 8805	Ref. 8801
WCMX 030208	**T-03** Ref. 8805 Art. 19572 € (1)	**ZT-07** Ref. 8801 Art. 19569 € (1)
WCMX 040208	**T-04** Ref. 8805 Art. 19573 € (5)	**ZT-08** Ref. 8801 Art. 10506 € (1)
WCMX 050308	**ZM-4** Ref. 8816 Art. 10544 € (5)	**ZT-09** Ref. 8801 Art. 13707 € (1)
WCMX 06T308	**T-06** Ref. 8805 Art. 19576 € (5)	**ZT-10** Ref. 8801 Art. 19570 € (1)
WCMX 080412	**T-08** Ref. 8805 Art. 19579 € (5)	**ZT-15** Ref. 8801 Art. 10512 € (1)



AVANCES PLAQUITAS MD TALADRADO
Drilling HM Inserts Feed
Avance plaquettes carbure perçage

Refs. 8465-8470-8475-8460-8431

Punteado
Spotting
Pointillage

Material		90° Vc (m/min.) Ø2 - Ø4,9	90° Vc (m/min.) Ø >4,9	90° f(mm/rev.) Ø2 - Ø4,9	90° f(mm/rev.) Ø >4,9
P	P.1	80-120	90-220	0,04-0,08	0,06-0,1
	P.2	70-100	80-180	0,04-0,08	0,06-0,1
	P.3	60-90	70-150	0,03-0,06	0,05-0,08
	P.5	50-70	70-130	0,03-0,06	0,05-0,08
M		30-60	50-120	0,02-0,04	0,04-0,06
K		80-110	100-150	0,04-0,06	0,06-0,01
N					
H		20-40	30-60	0,02-0,04	0,04-0,08

Achaflanado/Avellanado
Chamfering/Countersinking
Chanfreins longitudinaux/ Chanfreinage

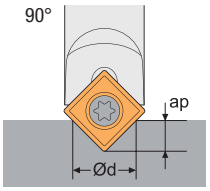
Material		90° Vc (m/min.)	90° f(mm/rev.)	60° Vc (m/min.)	60° f(mm/rev.)
P	P.1	80-270	0,15-0,24	12-180	0,05-0,15
	P.2	70-220	0,15-0,24	12-180	0,05-0,15
	P.3	60-160	0,12-0,2	12-180	0,03-0,12
	P.5	50-140	0,12-0,2	12-180	0,05-0,15
M		40-120	0,1-0,2	12-180	0,05-0,15
K		80-220	0,15-0,25	12-180	0,05-0,15
N				12-180	0,1-0,2
H		20-60	0,03-0,08	12-180	0,03-0,1

Ranurado
Grooving
Rainurage

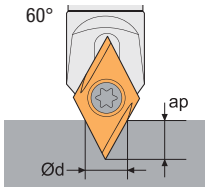
Material		90° Vc (m/min.)	90° f(mm/rev.)	60° Vc (m/min.)	60° f(mm/rev.)
P	P.1	60-140	0,12-0,18	10-170	0,005-0,05
	P.2	70-100	0,04-0,08	10-170	0,005-0,05
	P.3	60-90	0,03-0,06	10-170	0,005-0,03
	P.5	50-70	0,03-0,06	10-170	0,005-0,03
M		30-60	0,02-0,04	10-170	0,005-0,05
K		80-110	0,04-0,06	10-170	0,005-0,03
N				10-170	0,005-0,08
H		20-40	0,02-0,04	10-170	0,005-0,02

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

$$Vf\ (mm/min.) = r.p.m. \times f$$



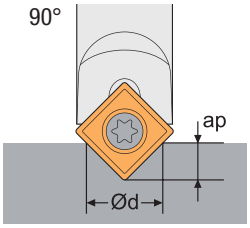
Ød = (ap + 0.3) × 2

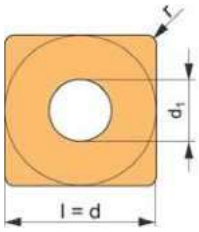


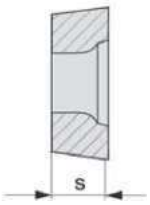
Ød = [(0,577xap)+(0,5xr)]x2

Ref. 8465

PLAQUITA INTERCAMBIABLE PUNTEADO SOGX
SOGX Spotting Indexable Insert
Plaquette de repérage SOGX







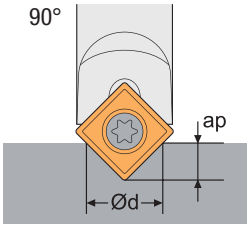
ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Ød Punteado Spotting Pointillage	Grabado Engraving Gravure		N° Art. P-010	€
Aluminio / Aluminium / Aluminium									
SOGX-09T304-ZAL	9,52	9,52	3,97	0,40	2-11	0,8-2,5	10	82213	

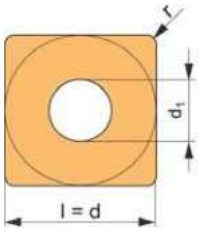
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8465 SOGX-09T304-ZAL P-010

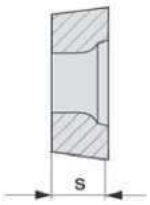
Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 519

Ref. 8470

PLAQUITA INTERCAMBIABLE PUNTEADO SOMX
SOMX Spotting Indexable Insert
Plaquette de repérage SOMX







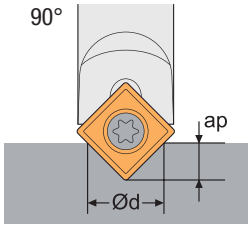
ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Ød Punteado Spotting Pointillage	Grabado Engraving Gravure		N° Art. P-730	€
INOX / Stainless / INOX									
SOMX-09T304-ZMS	9,52	9,52	3,97	0,40	2-11	0,8-2,5	10	82214	
Acabado / Finishing / Finition									
SOMX-09T304-ZMF	9,52	9,52	3,97	0,40	2-11	0,8-2,5	10	82215	

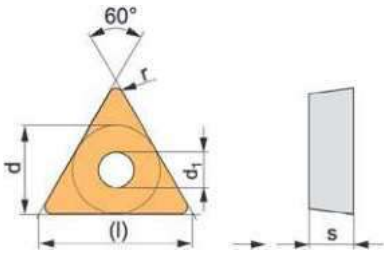
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8470 SOMX-09T304-ZMS P-730

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 519

Ref. 8475

PLAQUITA INTERCAMBIABLE PUNTEADO TOMX
TOMX Spotting Indexable Insert
Plaquette de repérage TOMX





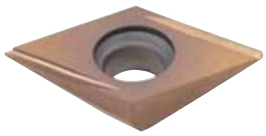
ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Ød Punteado Spotting Pointillage	Ød Grabado Engraving Gravure		N° Art. P-730	€
Semi-Desbaste / Semi-Roughing / Semi-Ébauche									
TOMX-16T308-ZM	16,5	9,52	3,97	0,8	3-20	1,5-4	10	82216	

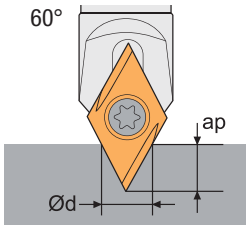
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8475 TOMX-16T308-ZM P-730

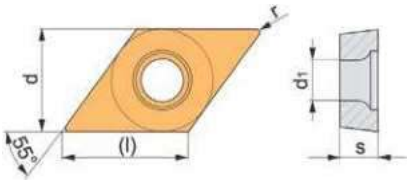
Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 519

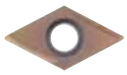
Ref. 8460

PLAQUITA INTERCAMBIABLE PUNTEADO DOEX
DOEX Spotting Indexable Insert
Plaquette de repérage DOEX









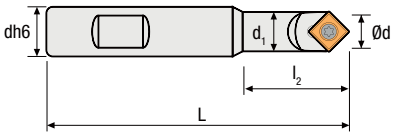
ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Ød Punteado Spotting Pointillage	Ød Grabado Engraving Gravure		N° Art. P-730	€
Acabado / Finishing / Finition									
DOEX-11T301-ER-ZSX	11,6	9,52	3,97	0,1	0,2-6,8	0,2-1	10	82208	
DOEX-11T302-ER-ZSX	11,6	9,52	3,97	0,2	0,4-6,8	0,4-2	10	82209	
DOEX-11T304-ER-ZSX	11,6	9,52	3,97	0,4	0,8-6,8	0,8-3	10	82210	
Desbaste / Roughing / Ébauche									
DOEX-11T304-ER-ZR	11,6	9,52	3,97	0,4	0,8-6,8	0,8-3	10	82211	
DOEX-11T308-ER-ZR	11,6	9,52	3,97	0,8	0,8-6,8	0,8-3	10	82212	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8460 DOEX-11T301-ER-ZSX P-730

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 520

Ref. 8431

PORTA-PLAQUITAS PUNTEADO SPS.. 90°
SPS.. 90° Spotting Tool-Holder
Porte-plaquettes de repérage SPS.. 90º



ISO		dh6 mm	d_1 mm	L mm	l_2 mm	N° Art.	€	Ref. 8816		Ref. 8801	
SPS10H-N09-90	SOGX09 / SOMX09	10	12,2	100	29	82219		T-15-M3,5-7x 3,5xø5,5 Art. 83387 €	5	ZT-15 Art. 10512 €	1
SPS12H-N09-90		12	12,2	100	29	82220					
SPS16H-N09-90		16	12,2	100	29	82221					
SPS16L 130-N09-90		16	12,2	130	29	82222					

	Tornillo Screw Vis
	Destornillador Screwdriver Tournevis

Plaquita / Insert / Plaquette: **Pag. 517**

Set 3 Pcs

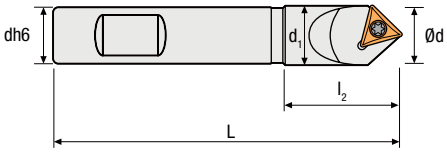
	Cont.		N° Art.	€
1	**Ref. 8431 - Art. 82220 - SPS12H-N09-90 (1pc)** + **Ref. 8470 - Art. 82215 - SOMX-09T304-ZMF (4pcs)** + **Destornillador**-Screwdriver-Tournevis - **T-15 (1pc)**		82224	

Set 3 Pcs

	Cont.		N° Art.	€
2	**Ref. 8431 - Art. 82221 - SPS16H-N09-90 (1pc)** + **Ref. 8470 - Art. 82215 - SOMX-09T304-ZMF (4pcs)** + **Destornillador**-Screwdriver-Tournevis - **T-15 (1pc)**		82225	

Ref. 8432

PORTA-PLAQUITAS PUNTEADO SPS.. 90°
SPS.. 90° Spotting Tool-Holder
Porte-plaquettes de repérage SPS.. 90º



ISO		dh6 mm	d_1 mm	L mm	l_2 mm	N° Art.	€	Ref. 8816		Ref. 8801	
SPS20L 120-N09-90	TOMX16..	20	21,2	120	42	82223		T-15-M3,5-8x 5xø5,3 Art. 83388 €	5	ZT-15 Art. 10512 €	1

	Tornillo Screw Vis
	Destornillador Screwdriver Tournevis

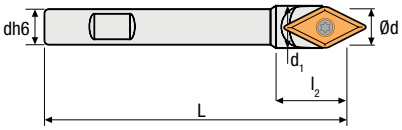
Plaquita / Insert / Plaquette: **Pag. 518**

Set 3 Pcs

Cont.		N° Art.	€
Ref. 8432 - Art. 82223 - SPS20L 120-N09-90 (1pc) + **Ref. 8475 -Art. 82216 - TOMX-16T308-ZM (4pcs)** + **Destornillador**-Screwdriver-Tournevis - **T-15 (1pc)**		82207	

Ref. 8430

PORTA-PLAQUITAS PUNTEADO SPS.. 60°
SPS.. 60° Spotting Tool-Holder
Porte-plaquettes de repérage SPS.. 60°



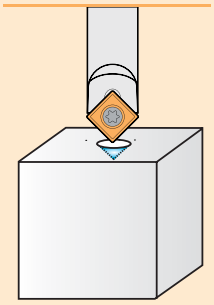
ISO		dh6 mm	d_1 mm	L mm	l_2 mm	N° Art.	€	Ref. 8816		Ref. 8801	
SPS10D-N11-60	DOEX-11..	10	12	60	30	82217		T-15-M3,5-7x 5xø5,5 Art. 83387 €	5	ZT-15 Art. 10512 €	1
SPS12H-N11-60		12	12	100	-	82218					

	Tornillo Screw Vis
	Destornillador Screwdriver Tournevis

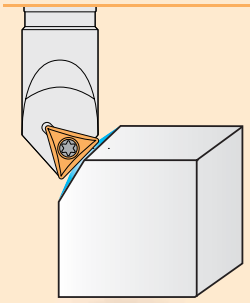
Plaquita / Insert / Plaquette: **Pag. 518**

APLICACIONES REFS. 8430 - 8431 - 8432
Applications refs. 8430 - 8431 - 8432
Applications refs. 8430 - 8431 - 8432

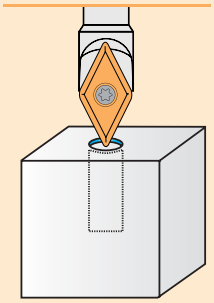
Punteado
Spotting
Pointillage



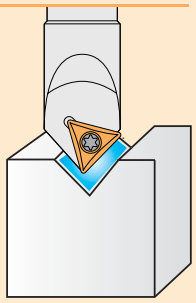
Achaflanado
Chamfering
Chanfreins longitudinaux



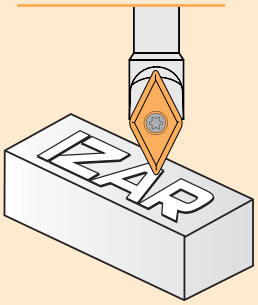
Avellanado
Countersinking
Chanfreinage



Ranurado
Grooving
Rainurage

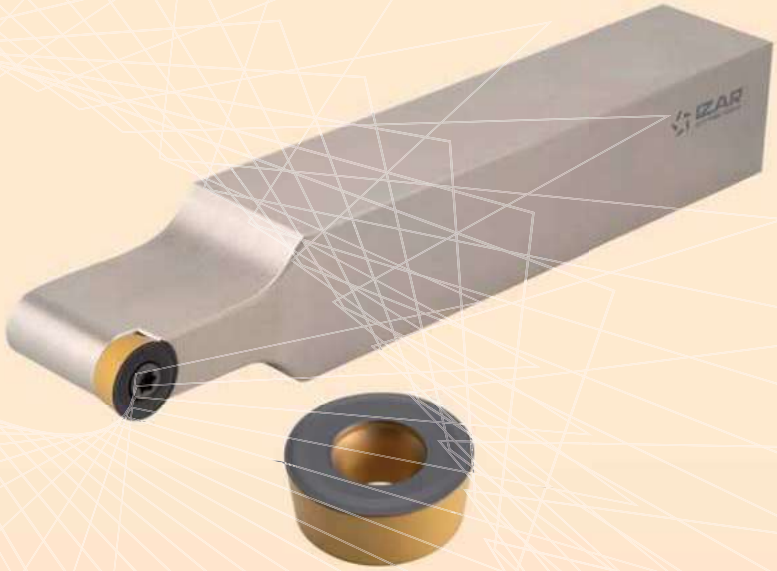


Grabado
Engraving
Gravure



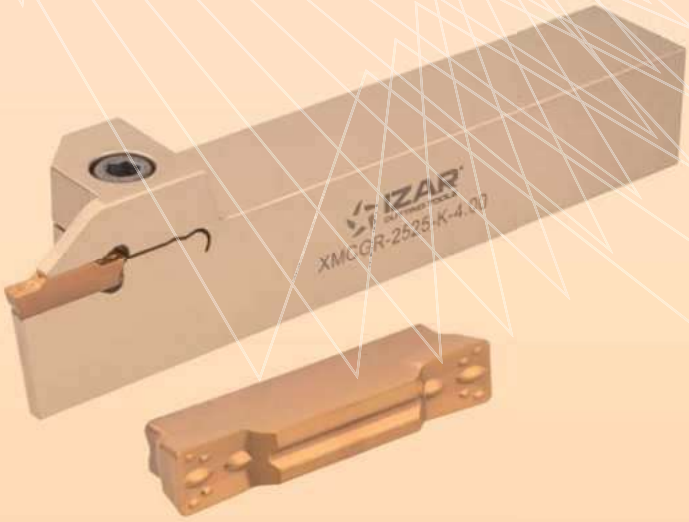
TORNEADO
Turning
Tournage

Pag. 530



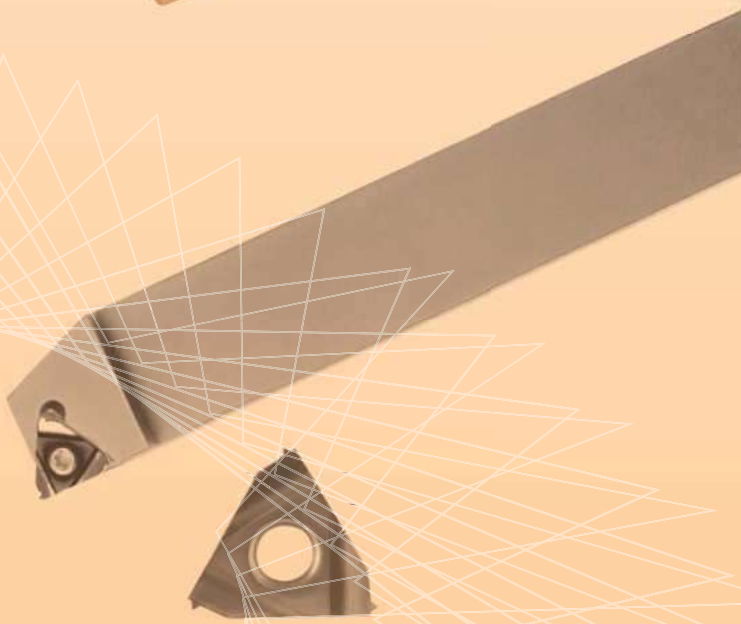
TRONZADO Y RANURADO
Parting & Grooving
Tonçonnage et rainurage

Pag. 572



ROSCADO
Threading
Taraudage

Pag. 584



TORNEADO
Turning
Tournage

GRADOS RECUBRIMIENTO MÉTODOS CVD-PVD TORNEADO
Turning CVD-PVD Methods Coating Grades
Degré revêtement méthodes CVD-PVD tournage

NUEVOS GRADOS PVD - PVD NEW GRADES - NOUVEAUX DEGRÉS PVD

M
Inox
Stainless Steel
Inox

S
Resistencia al desgaste
Wear Resistance
Résistant à l'usure

Algunos grados
Some grades
Quelques degrés

P-6..
P-7..

serán reemplazados por
will be replaced by
seront remplacés pour

> **P-H..**

Grado actual
Current grade
Degré actuel

Nuevo Grado
New Grade
Nouveau degré

NUEVOS GRADOS CVD - CVD NEW GRADES - NOUVEAUX DEGRÉS CVD

P
Acero
Steel
Acier

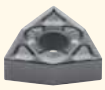
C-5.. > **C-G..**

Nuevo Grado
New Grade
Nouveau degré

M
Inox
Stainless Steel
Inox

C-5.. > **C-S..**

Nuevo Grado
New Grade
Nouveau degré



CLASIFICACIÓN CALIDADES - ELECCIÓN PRINCIPAL TORNEADO

Turning Grade Classification - Main Choice

Classement des qualités - Choix principal tournage

Grupo ISO / ISO Group / Groupe ISO		Torneado - Turning - Tournage			
		Calidades con Recubrimiento / Coated Grades - Qualités avec revêtement			Sin Recubrimiento / Uncoated - Sans revêtement
		Metal Duro - Carbide - Carbure		Cermet	MD/HM Carbure
		CVD	PVD	PVD	
Resistencia al desgaste / Wear resistance / Résistance à l'usure — **P** — Tenacidad / Toughness / Ténacité	P01				
	P05		P-710	P-CERMET	
	P10				
	P15	C-G15 C-515			
	P20		P-620 P-720		
	P25	C-G25 C-525			
	P30	C-G40 C-540			
	P35		P-625		
	P40				
	P45				
	P50				
Resistencia al desgaste / Wear resistance / Résistance à l'usure — **M** — Tenacidad / Toughness / Ténacité	M01		New!		
	M05		P-H10 P-710		
	M10			P-CERMET	
	M15		New! P-H20 P-720		P-010
	M20	C-S25 C-525	P-620		
	M25		P-625		
	M30	C-S40 C-540			
	M35				
	M40				
Resistencia al desgaste / Wear resistance / Résistance à l'usure — **K** — Tenacidad / Toughness / Ténacité	K01				
	K05				
	K10				
	K15	C-515		P-CERMET	P-010
	K20				
	K25	C-525			
	K30				
	K35	C-540			
	K40				
Resistencia al desgaste / Wear resistance / Résistance à l'usure — **S** — Tenacidad / Toughness / Ténacité	S01				
	S05		New!		
	S10		P-H10 P-610		
	S15		New!		P-010
	S20	C-525	P-620 P-720		
	S25	C-540	P-625		
	S30				
Resistencia al desgaste / Wear resistance / Résistance à l'usure — **N** — Tenacidad / Toughness / Ténacité	N01				
	N05				
	N10				
	N15		P-610		
	N20				P-010
	N25				
	N30				
Resistencia al desgaste / Wear resistance / Résistance à l'usure — **H** — Tenacidad / Toughness / Ténacité	H01				
	H05				
	H10		P-610		
	H15				P-010
	H20		P-625		
	H25				
	H30				

GRADOS RECUBRIMIENTO MÉTODOS CVD-PVD TORNEADO

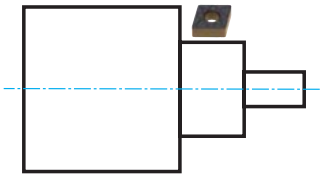
Turning CVD-PVD Methods Coating Grades

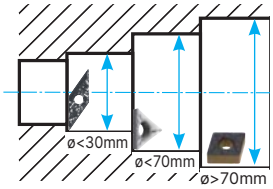
Degré revêtement méthodes CVD-PVD tournage

Grado Grades Degré	Microestructura Microestructure Microstructure	Grupo Material Pieza Trabajo Workpiece Material Group Groupe materiel piece travail	Aplicación Recomendada Recommended Application Application conseillée		
C-515 C-G15	CVD	P M K S N H ● ● ◐	- Sustrato de bajo contenido en cobalto - Recubrimiento de doble capa, con capa principal de TICN, aplicadas por metodos MTCVD y PVD con capas Al_2O_3 - Para materiales del grupo P-K - Elevadas velocidades de corte en condiciones estables y moderadamente interrumpidas	- Substrate with low content of cobalt - Double layered coating, with TICN main layer, applied by MTCVD & PVD methods with layers Al_2O_3 - For materials of groups P-K - High cutting speed in stable conditions and moderate interrupted cut	- Substrat de faible contenu de cobalt - Revêtement double couche, couche principale en TICN, apliquées pour méthodes MTCVD et PVD avec couches Al_2O_3 - Pour Matériaux groupe P-K - Hautes Vc en conditions stables et faiblement intérrompues
C-525 C-G25	CVD	P M K S N H ● ● ◐ ○	- Sustrato versatil y funcional para trabajar en materiales P-M-K - Nuevo recubrimiento por metodo MTCVD de media capa - Pulido después del recubrimiento - Medias y altas velocidades de corte en cortes continuos e interrumpidos	- Versatile & functional substrate for working materials P-M-K - New medium-thick coating applied by MTCVD method - Adjustment after coating - Medium & high Vc in continuous & interrupted cut	- Substrat mutifonction pour travailler en matériaux P-M-K - Nouveau revêtement pour méthode MTCVD de couche moyenne - Polissage après revêtement - Moyennes et Hautes Vc sur coupes continues et intérrrompues
C-540 C-G40	CVD	P M K S N H ● ● ◐ ○	- Sustrato de micrograno con carburos - Recubrimiento fino por metodo MTCVD con capa principal de TICN - Aplicación en desbaste y semi-desbaste en materiales del grupo P-M - Condiciones de corte bajas en cortes interrumpidos	- Submicron substrate with carbides - Thin MTCVD applied coating with main layer of TICN - For roughing and semi-roughing in materials of groups P-M - Low cutting conditions and interrupted cut	- Substrat micrograins avec carbures - Revêtement fin par méthode MTCVD avec couche principale en TICN - Application en ébauche et semi-ébauche en matériaux P-M - Faibles conditions de coupe en coupes interrompues
P-010	Sin rec. No coat. Sans rev.	P M K N ○ ● ○ ● ○	- Sustrato de submicrograno sin carburos y bajo contenido en cobalto - Aplicación general para todos los grupos de materiales menos el P - Sección de viruta corta en condiciones estables	- Submicron substrate without carbides and low cobalt content - General purpose for all material groups but P - Small chip cross-section in stable conditions	- Substrat submicrograin avec faible contenu en cobalt - Application générale pour tous les groupes de matériaux moins le P - Section de copeaux courts en conditions stables
P-620	PVD	P M K S N H ● ● ●	- Sustrato de micrograno de elevada resistencia al desgaste, con bajo contenido en cobalto y con carburos - Nanorecubrimiento por metodo PVD - Recomendada para aplicaciones generales con gran estrés térmico - Secciones de viruta corta en elevadas condiciones de corte - Condiciones de corte estables	- Submicron substrate with high wear resistance, with low content of cobalt and carbides - Nanostructural coating applied by PVD method - Recommended for general purpose with high thermal stress - Small chip cross-section and high cutting conditions - Stable working conditions	- Substrat micrograin d´haute résistance à l´usure , avec faible contenu en cobalt et avec carbures - Nanorevêtement par méthode PVD - Conseillé pour applications générales avec gran stress thérmique - Conditions de coupe stables
P-625	PVD	P M K S N H ● ● ●	- Sustrato de micrograno - Nanorecubrimiento por metodo PVD - Velocidades de corte moderadas - Condiciones de corte menos favorables	- Submicron substrate - Nanostructural coating applied by PVD method - Moderate cutting speed - Less favourable cutting conditions	- Substrat micrograin - Nanorevêtement par méthode PVD - Vitesses de coupe modérées - Conditions de coupe moins favorables
P-710 P-H10	PVD	P M K S N H ● ● ○ ● ○ ○	- Grado PVD de metal duro recubierto (AlTiN) con substrato micrograno muy duro, que mejora la resitencia al desgaste, la disipación del calor y evita el filo de aportación. Gran rendimiento en materiales viscosos. Para torneado ligero de aceros, aceros endurecidos, inoxidables y superraleaciones termorresistentes (HRSA).	- PVD (AlTiN) coated carbide grade with a very hard micro grain substrate improves wear resistance, heat dissipation and avoid built-up edge. High performance on "gummy" materials. For light turning of steels, hardened steels, stainless steels and HRSA.	- Degré PVD de carbure avec AlTiN et un substrat en micrograin très dur, qui améliore la résistance à l'usure, la dissipation thermique et évite le filet avec matériel. Haut rendement dans les matériaux visqueux. Pour le tournage léger des aciers, aciers trempés, aciers inoxydables et superalliages résistants à la chaleur (HRSA).
P-720 P-H20	PVD	P M K S N H ● ● ●	- Sustrato micrograno combinado con recubrimiento ALTIN-PVD - Operaciones de desbaste y acabado en buenas condiciones de corte y ligeramente interrumpido en aceros INOX y HRSA	- Submicron substrate combined with ALTIN-PVD coating - Roughing & Finishing operations with good cutting conditions and barely interrupted in Stainless & HRSA steels	- Substrat Micrograin mélangé avec revêtement ALTIN-PVD - Ébauche et finition avec bonnes conditions de coupe et légèrement coupé en aciers INOX et HRSA
P-CERMET	PVD	P M K S N H ● ● ○	- Sustrato de micrograno con bajo contenido en cobalto combinado con recubrimiento PVD - Aplicaciones en los grupos de materiales P-M - Pequeñas secciones de viruta - Elevadas velocidades de corte en condiciones estables	- Micron substrate with low cobalt content combined with PVD coating - For material groups P-M - Small chip cross-section - High cutting speed in stable conditions	- Substrat micrograin avec faible contenu en cobalt mélangé avec revêtement PVD - Applications pour groupes de matériaux P-M - Petites sections de copeaux - Hautes vitesses de coupe en conditions stables

CRITERIOS ELECCIÓN PLAQUITAS TORNEADO
Turning Insert Choice Norms
Critéres choix plaquettes tournage

IDENTIFICAR TIPO DE MECANIZADO
Identify Machining Type
Identifier type d´usinage





Exterior / External / Extérieur

1ª Rompevirutas Wiper: doble avance y mejor acabado.
2ª Plaquitas positivas: Mecanizado inestable y piezas largas.
3ª Plaquitas negativas: Piezas estables.

1st Wiper: Double feed & better surface finishing.
2nd Positive inserts: Unstable machining & long pieces.
3rd Negative inserts: Stable pcs.

1. Brisecopeaux Wiper: Double avance et meilleure finition
2. Plaquettes Positives: Usinage Inéstable et pieces longues
3. Plaquettes négatives: Pièces stables

Interior / Internal / Intérieur

1ª Plaquitas positivas: ø pequeños + gran voladizo.
2ª Plaquitas negativas: ø grandes y estables.

1st Positive inserts: small ø-s with big projected piece length.
2nd Negative inserts: Big & stable ø-s

1. Plaquettes Positives: Petit ø-s + grand saillant
2. Plaquettes négatives: Grand et stable ø-s

ELECCIÓN GEOMETRÍA PLAQUITAS
Insert Geometry Choice
Coix taille Plaquette

Criterio Elección Criterion Choice Critére choix	Prioridad Elección Choice Priority / Priorité choix						
	1	2	3	4	5	6	7
Filos Corte Utilizables Utilizable Cutting Edges Aretes de coupe a utiliser							
Estabilidad Corte Interrumpido Interrupted Cut Stability Stabilité coupe interrompue							
Accesibilidad Accesibility Accessibilité							
Resistencia Deformación Plástica Plastic Deformation Resistance Plastic deformation resistance							

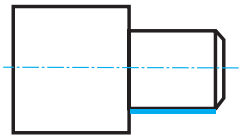
Exterior External Extérieur							
	●	○	○	○	○		○
	○	○	●	○	○		○
		●		○		●	○

● Recomendado Recommended ○ Posible Possible

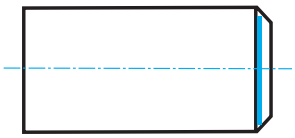
Interior Internal Intérieur						
	○	○	○	●	○	
	●	○		○	○	
		●		○		●

IDENTIFICAR TIPO DE OPERACIÓN
Identify Operation Type
Identifier type d´opération

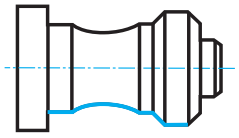
Exterior - External - Extérieur



Torneado Longitudinal
Longitudinal Turning
Tournage longitudinal

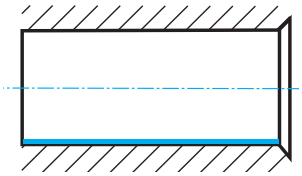


Refrentado
Facing
Façage

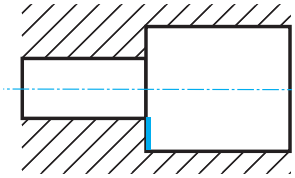


Perfilado
Profiling
Profilage

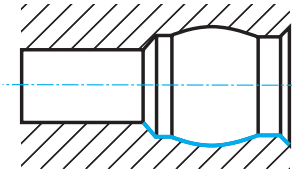
Interior - Internal - Intérieur



Torneado Longitudinal
Longitudinal Turning
Tournage longitudinal

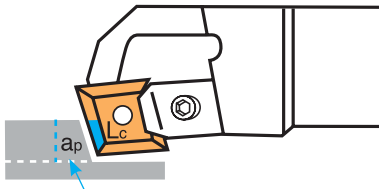


Refrentado
Facing
Façage



Perfilado
Profiling
Profilage

ELECCIÓN TAMAÑO PLAQUITA
Insert Size Choice
Choix taille Plaquette



a_p= **Profundidad corte** Cutting depth Proffondeur coupe

L_c= **Arista corte efectiva** Effective cutting edge Arete coupe qui travaille

Determinar la **Profundidad de Corte más grande (a_p)** a tornear para la elección del tamaño de la plaquita.

Decide on the **biggest Cutting Depth (a_p)** for turning in order to select the insert size.

Determiner la **Proffondeur de coupe plus grande (a_p)** a tourner pour le choix de la taille de la plaquette

FORMA PLAQ. Insert Shape Forme plaq.	Acabado Fino Fine Finishing Finition fine	Acabado Finishing Finition	Semi Desbaste Semi-Roughing Semi-Ébauche	Desbaste Roughing Ébauche
	ap=0,2-1mm	ap=0,8-2 mm	ap=2-4 mm	ap=4-10 mm
C... 80°	06....	06....	12....	16....
		09....		19....
D... 55°	07....	07....	11....	
			15....	
S...	09....	09....	12....	15....
				19....
T... 60°	11....	11....	16....	22....
		16....		
W... 80°	06....	06....	08....	
		08....		
V... 35°	11....	11....	16....	
K... 55°	16....	16....	16....	

CONDICIONES CORTE* CALIDADES TORNEADO
Turning Qualities Cutting Conditions*
Conditions coupe* qualités tournage

***Para vida herramienta de 15 min. sin refrigerante / *For 15 min. tool life without coolant / ***Pour vie outil 15 min. sans réfrigération

Calidad Quality Qualité	P			
	f (mm)		**Factor K- Corrige Vc en función de K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
C-515	0,2 0,4 0,8	350-220 270-205 220-200	**Forjados/fundidos carcasa Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,80
C-525	0,2 0,4 0,8	295-215 240-185 215-170	**Torneado interior Internal turning** Tournage intérieur	K = 0,75-0,85
C-540	0,2 0,4 0,8	250-210 220-180 210-175	**Corte interrumpido Interrupted cut** Coupe interrompue	K = 0,80-0,90
P-620	0,2 0,4 0,8	225-215 230-210 210-210	**Maq. en buen estado Good condition mach.** Mach. en bon état	K = 1,05-1,20
P-625	0,2 0,4 0,8	230-220 220-210 200-200	**Maq. en mal estado Bad condition mach.** Mach. en mauvais état	K = 0,85-0,95
P-720	0,2 0,4 0,8	230-125 220-115 210-100	**Vida plaquita Insert life** Vie plaquette	T_{min} 10 K = 1,10 T_{min} 15 K = 1,00 T_{min} 20 K = 0,93 T_{min} 30 K = 0,84 T_{min} 45 K = 0,76 T_{min} 60 K = 0,71
P-Cermet	0,2 0,4 0,8	390-250		
P-010	0,2 0,4 0,8			

Calidad Quality Qualité	M			
	f (mm)		**Factor K- Corrige Vc en función de K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
C-515	0,2 0,4 0,6	260-230 220-185 200-145	**Forjados/fundidos carcasa Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,80
C-525	0,2 0,4 0,6	230-190 175-150 135-110	**Torneado interior Internal turning** Tournage intérieur	K = 0,75-0,85
C-540	0,2 0,4 0,6	180-160 160-135 135-105	**Corte interrumpido Interrupted cut** Coupe interrompue	K = 0,80-0,90
P-620	0,2 0,4 0,6	310-260 255-205 200-155	**Maq. en buen estado Good condition mach.** Mach. en bon état	K = 1,05-1,20
P-625	0,2 0,4 0,6	300-250 245-195 190-145	**Maq. en mal estado Bad condition mach.** Mach. en mauvais état	K = 0,85-0,95
P-720	0,2 0,4 0,6	235-125 225-115 220-100	**Vida plaquita Insert life** Vie plaquette	T_{min} 10 K = 1,10 T_{min} 15 K = 1,00 T_{min} 20 K = 0,93 T_{min} 30 K = 0,84 T_{min} 45 K = 0,76 T_{min} 60 K = 0,71
P-Cermet	0,2 0,4 0,6	175-110		
P-010	0,2 0,4 0,6			

Calidad Quality Qualité	K			
	f (mm)		**Factor K- Corrige Vc en función de K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
C-515	0,2 0,4 0,6	360-280 280-265 235-220	**Forjados/fundidos carcasa Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,80
C-525	0,2 0,4 0,6	330-250 240-230 220-220	**Torneado interior Internal turning** Tournage intérieur	K = 0,75-0,85
C-540	0,2 0,4 0,6	230-220 215-205 190-185	**Corte interrumpido Interrupted cut** Coupe interrompue	K = 0,80-0,90
P-620	0,2 0,4 0,6		**Maq. en buen estado Good condition mach.** Mach. en bon état	K = 1,05-1,20
P-625	0,2 0,4 0,6	220-200 210-190 200-180	**Maq. en mal estado Bad condition mach.** Mach. en mauvais état	K = 0,85-0,95
P-Cermet	0,2 0,4 0,6	130-85	**Vida plaquita Insert life** Vie plaquette	T_{min} 10 K = 1,10 T_{min} 15 K = 1,00 T_{min} 20 K = 0,93 T_{min} 30 K = 0,84 T_{min} 45 K = 0,76 T_{min} 60 K = 0,71
P-010	0,2 0,4 0,6			

CONDICIONES CORTE* CALIDADES TORNEADO
Turning Qualities Cutting Conditions*
Conditions coupe* qualités tournage

***Para vida herramienta de 15 min. sin refrigerante / *For 15 min. tool life without coolant / ***Pour vie outil 15 min. sans réfrigération

Calidad Quality Qualité	S			
	f (mm)		**Factor K- Corrige Vc en función de K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
C-515	0,10 0,50		**Forjados/fundidos carcasa Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,80
C-525	0,10 0,50		**Torneado interior Internal turning** Tournage intérieur	K = 0,75-0,85
C-540	0,10 0,50		**Corte interrumpido Interrupted cut** Coupe interrompue	K = 0,80-0,90
P-620	0,10 0,50	75-45 50-25	**Maq. en buen estado Good condition mach.** Mach. en bon état	K = 1,05-1,20
P-625	0,10 0,50	75-45 50-25	**Maq. en mal estado Bad condition mach.** Mach. en mauvais état	K = 0,85-0,95
P-720	0,10 0,50	35-80 23-70	**Vida plaquita Insert life** Vie plaquette	T_{min} 10 K = 1,10 T_{min} 15 K = 1,00 T_{min} 20 K = 0,93 T_{min} 30 K = 0,84 T_{min} 45 K = 0,76 T_{min} 60 K = 0,71
P-Cermet	0,10 0,50			
P-010	0,10 0,50			

Calidad Quality Qualité	N			
	f (mm)		**Factor K- Corrige Vc en función de K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
C-515	0,15 0,80		**Forjados/fundidos carcasa Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,80
C-525	0,15 0,80		**Torneado interior Internal turning** Tournage intérieur	K = 0,75-0,85
C-540	0,15 0,80		**Corte interrumpido Interrupted cut** Coupe interrompue	K = 0,80-0,90
P-620	0,15 0,80		**Maq. en buen estado Good condition mach.** Mach. en bon état	K = 1,05-1,20
P-625	0,15 0,80		**Maq. en mal estado Bad condition mach.** Mach. en mauvais état	K = 0,85-0,95
P-Cermet	0,15 0,80		**Vida plaquita Insert life** Vie plaquette	T_{min} 10 K = 1,10 T_{min} 15 K = 1,00 T_{min} 20 K = 0,93 T_{min} 30 K = 0,84 T_{min} 45 K = 0,76 T_{min} 60 K = 0,71
P-010	0,15 0,80	2400-360 240-65		

Calidad Quality Qualité	H			
	f (mm)		**Factor K- Corrige Vc en función de K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
C-515	0,15 0,80		**Forjados/fundidos carcasa Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,80
C-525	0,15 0,80		**Torneado interior Internal turning** Tournage intérieur	K = 0,75-0,85
C-540	0,15 0,80		**Corte interrumpido Interrupted cut** Coupe interrompue	K = 0,80-0,90
P-620	0,15 0,80		**Maq. en buen estado Good condition mach.** Mach. en bon état	K = 1,05-1,20
P-625	0,15 0,80		**Maq. en mal estado Bad condition mach.** Mach. en mauvais état	K = 0,85-0,95
P-Cermet	0,15 0,80		**Vida plaquita Insert life** Vie plaquette	T_{min} 10 K = 1,10 T_{min} 15 K = 1,00 T_{min} 20 K = 0,93 T_{min} 30 K = 0,84 T_{min} 45 K = 0,76 T_{min} 60 K = 0,71
P-010	0,15 0,80			

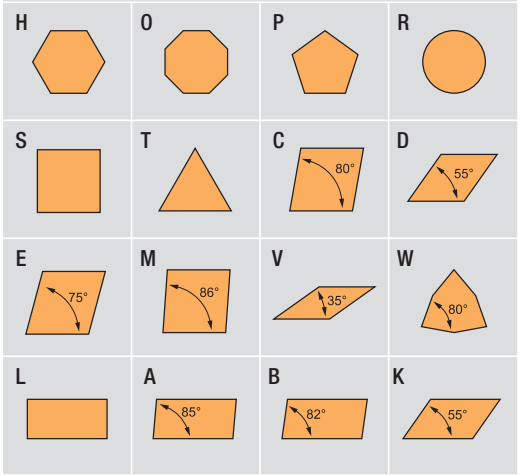
CÓDIGOS ISO ELECCIÓN PLAQUITAS TORNEADO

Turning Insert Choice ISO Codes

Codes ISO choix plaquettes tournage

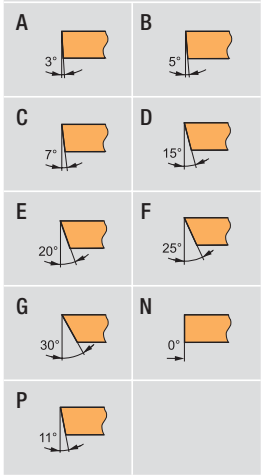
1

Forma Plaquita / Insert Shape / Forme plaquette



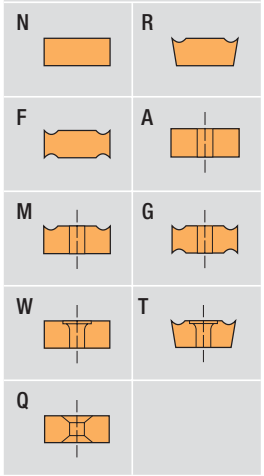
2

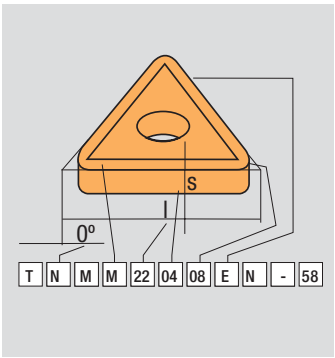
Angulo Incidencia
Clearance Angle / Angle d'incidence



4

Tipo Plaquita
Insert type / Type plaquette





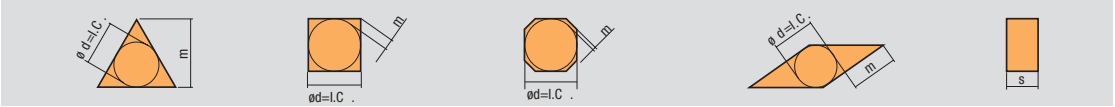
Cod. ISO

1	2	3	4
C	N	M	G

3

Tolerancias / Tolerances / Tolérances

	Tolerancias / Tolerances / Tolérances [mm]			Tolerancias [Pulg.] / Tolerances [Inch] / Tolérances [Pouc.]		
	m (±)	s (±)	d = I.C . (±)	m (±)	s (±)	d = I.C. (±)
A	0,005	0,025	0,025	0,0002	0,001	0,0010
F	0,005	0,025	0,013	0,0002	0,001	0,0005
C	0,013	0,025	0,025	0,0005	0,001	0,0010
H	0,013	0,025	0,013	0,0005	0,001	0,0005
E	0,025	0,025	0,025	0,0010	0,001	0,0010
G	0,025	0,130	0,025	0,0010	0,005	0,0010
J	0,005	0,025	0,05 ÷ 0,13	0,0002	0,001	0,002 ÷ 0,005
K	0,013	0,025	0,05 ÷ 0,13	0,0005	0,001	0,002 ÷ 0,005
L	0,025	0,025	0,05 ÷ 0,13	0,0010	0,001	0,002 ÷ 0,005
M	0,08 ÷ 0,18	0,130	0,05 ÷ 0,13	0,003 ÷ 0,007	0,005	0,002 ÷ 0,005
N	0,08 ÷ 0,18	0,025	0,05 ÷ 0,13	0,003 ÷ 0,007	0,001	0,002 ÷ 0,005
U	0,05 ÷ 0,38	0,130	0,08 ÷ 0,25	0,005 ÷ 0,015	0,005	0,003 ÷ 0,010



CÓDIGOS ISO ELECCIÓN PLAQUITAS TORNEADO
Turning Insert Choice ISO Codes
Codes ISO choix plaquettes tournage

5

Longitud Filo Corte / Cutting Edge Length / Longuer arête coupe

d=I.C. mm	d=I.C. pulg. inch. pouc.	R	S	T	C	D	V	W
3,97	5/32"			06				
5,00		05						
5,56	7/32"			09				03
6,00		06						
6,35	1/4"			11	06	07		04
8,00		08						
9,525	3/8"	09	09	16	09	11	16	06
10,0		10						
12,0		12						
12,7	1/2"	12	12	22	12	15		08
15,875	5/8"	15	15	27	16			
16,0		16						
19,05	3/4"	19	19	33	19			
20,0		20						
25,0		25						
25,4	1"	25	25		25			
31,75	1 1/4"	31						
32,0		32						

6

Espesor / Thickness / Épaisseur

simb. symb.	s mm	s pulg. inch.
01	1,59	1/16"
T1	1,98	
02	2,38	3/32"
03	3,18	1/8"
T3	3,97	5/32"
04	4,76	3/16"
05	5,56	
06	6,35	1/4"
07	7,94	5/16"
09	9,52	3/8"

7

Radio Vértice / Nose Radius / Rayon pointe

simb. symb.	r_1 mm	r_1 pulg. inch. pouc.
00	0	0"
02	0,2	
04	0,4	1/64"
08	08	1/32"
12	1,2	3/64"
16	1,6	1/16"
24	2,4	3/32"
32	3,2	1/8"

5	6	7	8	9
12	04	08	E	-

8

Longitud Filo Corte / Cutting Edge Length / Longuer arête coupe

F — Filos Agudos / Sharp Edges / Arêtes aigües	E — Filos Reforzados / Rounded Edges / Arêtes renforcées
T — Filos con Faceta / Edges with facet / Arêtes avec facette	S — Filos achaflanados y reforzados / Rounded Edges with facet / Arêtes arrondies et renforcées

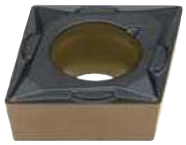
9

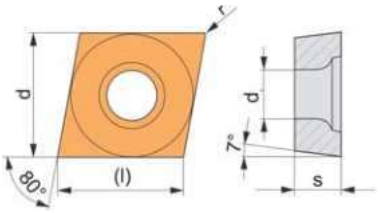
Dirección Avance / Feed Direction / Direction avance

R	Avance / Feed
L	Avance / Feed
N	Avance / Feed — Avance / Feed

Ref. 8500

PLAQUITA INTERCAMBIABLE TORNEADO CCMT
CCMT Turning Indexable Insert
Plaquette tournage CCMT





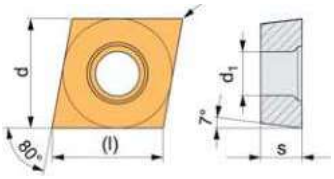
ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. C-G25	N° Art. P-H20 P-720	N° Art. P-Cer-met	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe						
Acabado Fino / Fine Finishing / Finition Fine												
CCMT-060202-E-ZMM	6,40	6,35	2,38	2,80	0,20	0,03-0,11	0,06-1,70	10	59269	59271		
CCMT-060204-E-ZMM	6,40	6,35	2,38	2,80	0,40	0,05-0,17	0,10-1,70	10	59270	59272		
CCMT-09T304-E-ZMM	9,70	9,52	3,97	4,40	0,40	0,06-0,23	0,11-2,00	10	42895	42896		
CCMT-09T308-E-ZMM	9,70	9,52	3,97	4,40	0,80	0,08-0,45	0,15-2,00	10	17842	17844		
CCMT-120404-E-ZMM	12,90	12,70	4,76	5,50	0,40	0,07-0,27	0,14-2,40	10	42898	42899		
CCMT-120408-E-ZMM	12,90	12,70	4,76	5,50	0,80	0,12-0,45	0,60-3,60	10	17845	17856		
Semi-Acabado / Semi-Finishing / Semi-Finition												
CCMT-060202-E-ZRR	6,40	6,35	2,38	2,80	0,20	0,03-0,11	0,06-1,70	10	26277	10233		
CCMT-060204-E-ZRR	6,40	6,35	2,38	2,80	0,40	0,06-0,17	0,20-2,40	10	26278	10242		
CCMT-09T304-E-ZRR	9,70	9,52	3,97	4,40	0,40	0,08-0,23	0,25-3,00	10	26280	10278		
CCMT-09T308-E-ZRR	9,70	9,52	3,97	4,40	0,80	0,10-0,40	0,50-3,00	10	26281	10287		
CCMT-120404-E-ZRR	12,90	12,70	4,76	5,50	0,40	0,09-0,27	0,30-3,60	10	42901			
CCMT-120408-E-ZRR	12,90	12,70	4,76	5,50	0,80	0,12-0,45	0,60-3,60	10	10131			
Acabado / Finishing / Finition												
CCMT-060204-ZFCE	6,40	6,35	2,38	2,80	0,40	0,05-0,40	0,20-1,50	10			19983	
CCMT-09T304-ZFCE	9,70	9,52	3,97	4,40	0,40	0,05-0,40	0,20-1,50	10			19987	
CCMT-09T308-ZFCE	9,70	9,52	3,97	4,40	0,80	0,05-0,40	0,20-1,50	10			19989	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8500 CCMT-09T304-E-ZMM C-G25

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 560, 569

Ref. 8501

PLAQUITA INTERCAMBIABLE TORNEADO CCGT
CCGT Turning Indexable Insert
Plaquette tournage CCGT



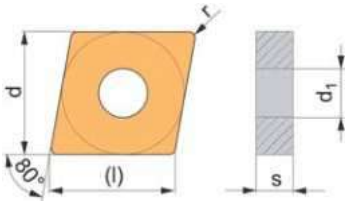
ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. P-710	N° Art. P-010	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe					
Aluminio / Aluminium											
CCGT-060202-F-ZAL	6,40	6,35	2,38	2,80	0,20	0,05-0,12	0,05-3,00	10		42877	
CCGT-060204-F-ZAL	6,40	6,35	2,38	2,80	0,40	0,10-0,20	0,10-3,00	10		42880	
CCGT-09T304-F-ZAL	9,70	9,52	3,97	4,40	0,40	0,10-0,22	0,10-5,00	10		42883	
CCGT-09T308-F-ZAL	9,70	9,52	3,97	4,40	0,80	0,15-0,45	0,10-5,00	10		42894	
CCGT-120402-F-ZAL	12,90	12,70	4,76	5,50	0,20	0,05-0,12	0,05-4,00	10		72544	
CCGT-120404-F-ZAL	12,90	12,70	4,76	5,50	0,40	0,10-0,26	0,10-5,00	10	72061	71634	
CCGT-120408-F-ZAL	12,90	12,70	4,76	5,50	0,80	0,15-0,50	0,10-5,50	10	72064	72066	
INOX / Stainless / Inox											
CCGT-060202-E-ZNF	6,40	6,35	2,38	2,80	0,20	0,05-0,12	0,05-3,00	10	42875		
CCGT-060204-E-ZNF	6,40	6,35	2,38	2,80	0,40	0,10-0,20	0,10-3,00	10	42878		
CCGT-09T304-E-ZNF	9,70	9,52	3,97	4,40	0,40	0,10-0,22	0,10-5,00	10	42881		

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8501 CCGT-060202-F-ZAL P-010

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 560, 569

Ref. 8510

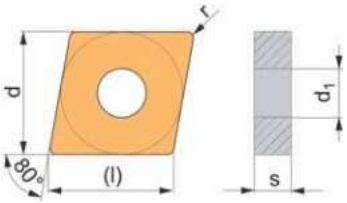
PLAQUITA INTERCAMBIABLE TORNEADO CNMG
CNMG Turning Indexable Insert
Plaquette tournage CNMG



ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. C-G15 C-515	N° Art. C-G25 C-525	N° Art. C-G40 C-540	N° Art. P-710	N° Art. P-720	N° Art. P-Cer-met	N° Art. P-010	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe										
Wiper																
CNMG-120408-E-ZWM	12,90	12,70	4,76	5,16	0,80	0,15-0,60	0,50-5,00	10		17922						
Acabado / Finishing / Finition																
CNMG-090304-E-ZFM	9,70	9,52	3,18	3,81	0,40	0,05-0,25	0,10-1,50	10		59273						
CNMG-090308-E-ZFM	9,70	9,52	3,18	3,81	0,80	0,10-0,40	0,10-1,50	10		59274						
CNMG-120404-E-ZFM	12,90	12,70	4,76	5,16	0,40	0,07-0,30	0,40-2,50	10	17863	26286		17866				
CNMG-120408-E-ZFM	12,90	12,70	4,76	5,16	0,80	0,10-0,40	0,40-2,50	10	42902	42903						
Semi-Desbaste / Semi-Roughing / Semi-Ébauche																
CNMG-120404-E-ZM	12,90	12,70	4,76	5,16	0,40	0,10-0,30	0,40-5,50	10	42905	42906						
CNMG-120408-E-ZM	12,90	12,70	4,76	5,16	0,80	0,15-0,50	0,50-5,50	10	17867	26292	17873					
CNMG-120412-E-ZM	12,90	12,70	4,76	5,16	1,20	0,18-0,60	0,80-5,50	10	17885	26290	28592					
CNMG-190608-E-ZM	19,30	19,05	6,35	7,94	0,80	0,15-0,60	0,80-6,00	10	42907	42908						
CNMG-190612-E-ZM	19,30	19,05	6,35	7,94	1,20	0,18-0,60	0,80-8,60	10	42910	42912						
Desbaste / Roughing / Ébauche																
CNMG-120408-E-ZR	12,90	12,70	4,76	5,16	0,80	0,20-0,55	1,00-7,00	10	17893	26289	17902					
CNMG-120412-E-ZR	12,90	12,70	4,76	5,16	1,20	0,25-0,60	1,00-7,00	10	17909	26293	17911					
CNMG-160608-E-ZR	16,10	15,88	6,35	6,35	0,80	0,20-0,55	1,00-8,00	10	21949	21951						
CNMG-160612-E-ZR	16,10	15,88	6,35	6,35	1,20	0,20-0,55	1,00-8,00	10	21952	21953						
CNMG-190608-E-ZR	19,30	19,05	6,35	7,94	0,80	0,25-0,60	3,00-8,00	10	42913	42914						
CNMG-190612-E-ZR	19,30	19,05	6,35	7,94	1,20	0,25-0,70	2,00-10,00	10	42915	42916						
Acabado / Finishing / Finition																
CNMG-120404-E-ZFCE	12,90	12,70	4,76	5,16	0,40	0,05-0,40	0,30-3,00	10						16630		
Semi-Acabado / Semi-Finishing / Semi-Finition																
CNMG-120408-E-ZMCE	12,90	12,70	4,76	5,16	0,80	0,10-4,00	0,30-3,00	10						19981		
INOX Semi-Desbaste / Semi-Roughing Stainless / INOX Semi-Ébauche																
CNMG-120404-E-ZNM	12,90	12,70	4,76	5,16	0,40	0,10-0,25	0,50-5,70	10					35197			
CNMG-120408-E-ZNM	12,90	12,70	4,76	5,16	0,80	0,12-0,45	0,50-5,70	10					35198			
New! **ALUMINIUM Semi-Desbaste / Semi-Roughing /** Semi-Ébauche																
CNMG-120404-ZAL	12,90	12,70	4,76	5,16	0,40	0,10-0,30	0,40-5,50	10							70097	
CNMG-120408-ZAL	12,90	12,70	4,76	5,16	0,80	0,15-0,50	0,50-5,50	10							70100	
CNMG-120412-ZAL	12,90	12,70	4,76	5,16	1,20	0,18-0,60	0,80-5,50	10							70105	

Ref. 8510

PLAQUITA INTERCAMBIABLE TORNEADO CNMG
CNMG Turning Indexable Insert
Plaquette tournage CNMG



	ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. C-G15	N° Art. C-G25	N° Art. C-S15	N° Art. C-S25	€
	Semi-Desbaste Alto Rendimiento / High Performance Semi-Roughing / Semi-Ébauche Haut Rendement													
	CNMG-120404- ZPM	12,90	12,70	4,76	5,16	0,40	0,10-0,30	0,40-5,50	10	71279	71280			
	CNMG-120408-ZPM	12,90	12,70	4,76	5,16	0,80	0,15-0,50	0,50-5,50	10	71281	71282			
	CNMG-120412-ZPM	12,90	12,70	4,76	5,16	1,20	0,18-0,60	0,80-5,50	10	71283	71284			
	INOX Acabado Alto Rendimiento / High Performance Finishing Stainless / INOX Finition Haut Rendement													
	CNMG-120404-ZNF	12,90	12,70	4,76	5,16	0,40	0,10-0,30	0,40-5,50	10			16950	16954	
	CNMG-120408-ZNF	12,90	12,70	4,76	5,16	0,80	0,15-0,50	0,50-5,50	10			82849	16955	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8510 CNMG-120408-ZWM C-G25

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 555, 557, 565, 568

Rompevirutas
Chipbreaker
Brisecopeaux

ZAL

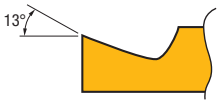
AHORA TAMBIÉN EN PLAQUITAS NEGATIVAS
Now in Negative Inserts too
Maintenant dans des plaquettes négatives aussi

Semi-Desbaste / Semi-Roughing / Semi-Ébauche

CNMG

TNMG

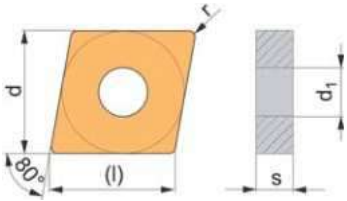
N — **Materiales No Ferrosos**
Non-ferrous materials
Matériaux non ferreux



Arista de corte
Cutting edge
Arete coupe

Ref. 8512

PLAQUITA INTERCAMBIABLE TORNEADO CNMM
CNMM Turning Indexable Insert
Plaquette tournage CNMM



ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G25 C-525	N° Art. P-625*	€
Desbaste / Roughing / Ébauche											
CNMM-120408-E-ZR	12,90	12,70	4,76	5,16	0,80	0,25-0,60	1,00-8,50	10	10750	10756	
CNMM-120412-E-ZR	12,90	12,70	4,76	5,16	1,20	0,25-0,80	1,20-8,50	10	10753		
New! **CNMM-160608-E-ZR**	16,10	15,88	6,35	6,35	0,80	0,20-0,55	1,00-8,00	10	51335		
New! **CNMM-160612-E-ZR**	16,10	15,88	6,35	6,35	1,20	0,25-0,60	1,00-8,00	10	32996		
New! **CNMM-190612-E-ZR**	19,30	19,05	6,35	7,94	1,20	0,25-0,70	2,00-10,00	10	25718		
New! **CNMM-190616-E-ZR**	19,30	19,05	6,35	7,94	1,60	0,32-0,80	2,00-10,00	10	25719		
Desbaste Pesado / Heavy Roughing / Ebauche lourd											
New! **CNMM-190612-E-ZHR**	19,30	19,05	6,35	7,94	1,20	0,50-0,80	2,40-12,00	10	59747		
New! **CNMM-190616-E-ZHR**	19,30	19,05	6,35	7,94	1,60	0,50-1,10	2,40-12,00	10	74857		

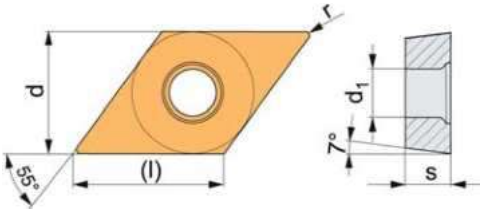
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8512 CNMM-120408-E-ZR C-525

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 555, 557, 565, 568

* **P-625 hasta fin de existencias** / **while stock lasts** / jusqu'à la fin de stock

Ref. 8515

PLAQUITA INTERCAMBIABLE TORNEADO DCGT
DCGT Turning Indexable Insert
Plaquette tournage DCGT



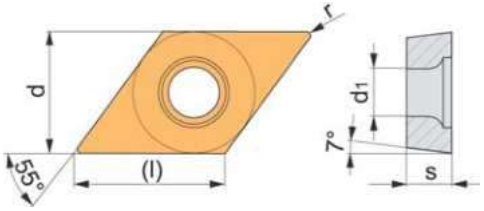
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-010	N° Art. P-H20	€
Aluminio / **Aluminium**											
DCGT-070202-F-ZAL	7,80	6,35	2,38	2,80	0,20	0,02-0,12	0,10-1,50	10	29902		
DCGT-070204-F-ZAL	7,80	6,35	2,38	2,80	0,40	0,10-0,20	0,10-4,00	10	29903		
DCGT-11T302-F-ZAL	11,60	9,52	3,97	4,40	0,20	0,05-0,12	0,05-4,00	10	29906		
DCGT-11T304-F-ZAL	11,60	9,52	3,97	4,40	0,40	0,10-0,22	0,10-5,00	10	29910		
INOX / **Stainless** / Inox											
DCGT-070202-E-ZNF	7,80	6,35	2,38	2,80	0,20	0,02-0,12	0,10-1,50	10		29901	
DCGT-070204-E-ZNF	7,80	6,35	2,38	2,80	0,40	0,10-0,20	0,10-4,00	10		29905	
DCGT-11T302-E-ZNF	11,60	9,52	3,97	4,40	0,20	0,05-0,12	0,05-4,00	10		29908	
DCGT-11T304-E-ZNF	11,60	9,52	3,97	4,40	0,40	0,10-0,22	0,10-5,00	10		29911	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8515 DCGT-070202-F-ZAL P-010

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 561, 569

Ref. 8520

PLAQUITA INTERCAMBIABLE TORNEADO DCMT
DCMT Turning Indexable Insert
Plaquette tournage DCMT



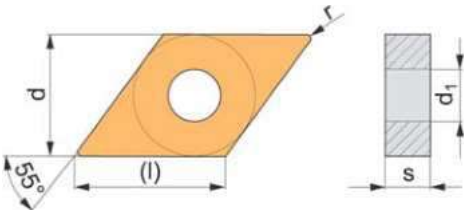
	ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. C-G25	N° Art. P-H20 P-720	N° Art. P-Cer-met	€
		Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe						
	Acabado Fino / Fine Finishing / Finition Fine												
	DCMT-070202-E-ZRR	7,80	6,35	2,38	2,80	0,20	0,03-0,11	0,06-1,50	10	59275	43990		
	DCMT-070204-E-ZRR	7,80	6,35	2,38	2,80	0,40	0,05-0,17	0,08-1,50	10	26295	17927		
	DCMT-11T302-E-ZRR	11,60	9,52	3,97	4,40	0,20	0,04-0,15	0,08-2,00	10	59276	43449		
	DCMT-11T304-E-ZRR	11,60	9,52	3,97	4,40	0,40	0,06-0,23	0,11-2,00	10	26296	17962		
	DCMT-11T308-E-ZRR	11,60	9,52	3,97	4,40	0,80	0,08-0,30	0,15-2,00	10	26298	28593		
	Acabado / Finishing / Finition												
	DCMT-070204-ZFCE	7,80	6,35	2,38	2,80	0,40	0,05-0,40	0,20-1,50	10			19990	
	DCMT-11T304-ZFCE	11,60	9,52	3,97	4,40	0,40	0,05-0,40	0,20-1,50	10			19994	
	DCMT-11T308-ZFCE	11,60	9,52	3,97	4,40	0,80	0,05-0,40	0,20-1,50	10			19996	
	INOX Semi-Desbaste / Semi-Roughing Stainless / Inox Semi-Ébauche												
	DCMT-11T304-E-ZMM	11,60	9,52	3,97	4,40	0,4	0,08-0,23	0,25-3,00	10		66820		
	DCMT-11T308-E-ZMM	11,60	9,52	3,97	4,40	0,8	0,10-0,40	0,50-3,00	10		66821		

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8520 DCMT-070202-E-ZRR C-G25

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 561, 569

Ref. 8530

PLAQUITA INTERCAMBIABLE TORNEADO DNMG
DNMG Turning Indexable Insert
Plaquette tournage DNMG



ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G15 C-515	N° Art. C-G25	N° Art. C-540	N° Art. P-H20	N° Art. P-720	N° Art. P-Cer-met	€
Acabado / Finishing / Finition															
DNMG-110404-E-ZF	11,60	9,52	4,76	3,81	0,40	0,05-0,25	0,10-1,50	10	42917	42918					
DNMG-110408-E-ZF	11,60	9,52	4,76	3,81	0,80	0,10-0,40	0,10-1,50	10	59277	59279					
DNMG-150404-E-ZF	15,50	12,70	4,76	5,16	0,40	0,05-0,25	0,10-1,50	10	17965	26299		17968			
DNMG-150408-E-ZF	15,50	12,70	4,76	5,16	0,80	0,10-0,40	0,10-1,50	10	59278	59280					
Semi-Desbaste / Semi-Roughing / Semi-Ébauche															
DNMG-110408-E-ZM	11,60	9,52	4,76	3,81	0,80	0,10-0,40	0,10-1,50	10		26301	15413				
DNMG-150408-E-ZM	15,50	12,70	4,76	5,16	0,80	0,15-0,50	0,50-6,00	10	17973	26302	17976				
DNMG-150604-E-ZM	15,50	12,70	6,35	5,16	0,40	0,10-0,30	0,40-6,00	10	59281	59282					
DNMG-150608-E-ZM	15,50	12,70	6,35	5,16	0,80	0,15-0,50	0,50-6,00	10	17977	26304	17989				
DNMG-150612-E-ZM	15,50	12,70	6,35	5,16	1,20	0,18-0,60	0,80-6,00	10	17997	26305	18003				
Semi-Desbaste / Semi-Roughing / Semi-Ébauche															
DNMG-150608-EL-ZSX	15,50	12,70	6,35	5,16	0,80	0,14-0,50	0,80-5,00	10		26272					
DNMG-150608-ER-ZSX	15,50	12,70	6,35	5,16	0,80	0,14-0,50	0,80-5,00	10		10341					
Acabado / Finishing / Finition															
DNMG-150404-ZFCE	15,50	12,70	4,76	5,16	0,40	0,05-0,40	0,20-1,50	10						20001	
Semi-Acabado / Semi-Finishing / Semi-Finition															
DNMG-150404-ZMCE	15,50	12,70	4,76	5,16	0,40	0,05-0,40	0,20-1,50	10						20002	
INOX Semi-Desbaste / Semi-Roughing Stainless / INOX Semi-Ébauche															
DNMG-150604-E-ZNM	15,50	12,70	6,35	5,16	0,40	0,10-0,30	0,30-6,00	10					35199		
DNMG-150608-E-ZNM	15,50	12,70	6,35	5,16	0,80	0,12-0,45	0,50-6,40	10					35200		

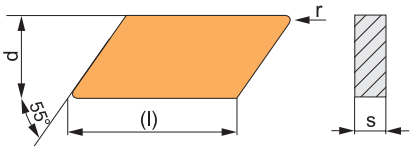
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G15	N° Art. C-G25	N° Art. C-S15	N° Art. C-S25	€
Semi-Desbaste Alto Rendimiento / High Performance Semi-Roughing / Semi-Ébauche Haut Rendement													
DNMG-150404-ZPM	15,50	12,70	4,76	5,16	0,40	0,15-0,50	0,50-6,00	10	71285	71286			
DNMG-150408-ZPM	15,50	12,70	4,76	5,16	0,80	0,15-0,50	0,50-6,00	10	71287	71288			
DNMG-150608-ZPM	15,50	12,70	6,35	5,16	0,80	0,15-0,50	0,50-6,00	10	71289	71290			
INOX Acabado Alto Rendimiento / High Performance Finishing Stainless / INOX Finition Haut Rendement													
DNMG-150604-ZNF	15,50	12,70	6,35	5,16	0,40	0,10-0,30	0,30-6,00	10			16956	16958	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8530 DNMG-110404-E-ZF C-G15

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 558, 568

Ref. 8535

PLAQUITA INTERCAMBIABLE TORNEADO KNUX
KNUX Turning Indexable Insert
Plaquette tournage KNUX



ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G25	€
Semi-Desbaste / Semi-Roughing / Semi-Ébauche									
KNUX-160405-SR-Z3	16,50	9,52	4,76	0,50	0,20-0,35	1,00-6,00	10	13393	
KNUX-160405-SL-Z3	16,50	9,52	4,76	0,50	0,20-0,35	1,00-6,00	10	13396	
KNUX-160410-SR-Z3	16,50	9,52	4,76	1,00	0,40-0,70	1,50-6,00	10	13399	
KNUX-160410-SL-Z3	16,50	9,52	4,76	1,00	0,40-0,70	1,50-6,00	10	13400	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8535 KNUX-160405-SR-Z3 C-G25

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 552**

IZAR VENDING

Ancho: 1050 mm.
Fondo: 970 mm.
Alto: 1825 mm.
- 7 bandejas hasta 10 carriles/ bandeja
- Regulables en ancho y alto
- Hasta 27 unidades de fondo
- **Más armarios y sistemas de dispensación disponibles**

Width: 1050 mm.
Depth: 970 mm.
Height: 1825 mm.
- 7 trays. Up to 10rails/tray
- Adjustable height and width
- Up to 27 units in depth per lane
- **Other cabinet models available**

Largeur: 1050 mm.
Profondeur: 970 mm.
Hauteur: 1825 mm.
- 7 plateaux jusqu'à 10 voies / plateau.
- Réglable en largeur et en hauteur.
- Jusqu'à 27 unités d'arrière-plan.
- Plus de systèmes de vente et de distribution disponibles.

PROBLEMAS A LOS QUE HACE FRENTE
- Abuso en el consumo de productos.
- Conciencia del gasto por los empleados.
- Con elevador, evita las roturas de herramienta.
- Identificación (tarjeta) compatible con el de la empresa.

IT ADDRESSES THE FOLLOWING PROBLEMS
- Unnecessary consumption.
- Consumption awareness.
- The elevator avoids the damaging of the tools.
- Identification card compatible with the employee´s company card.

PROBLÈMES QUI IL FACE
- Abus dans la consommation de produits.
- Conscience des dépenses des employés.
- Avec ascenseur, empêche la casse de l'outil.
- Identification (carte) compatible avec celle de l'entreprise.

BENEFICIOS PARA EL USUARIO
OPTIMIZACIÓN DE PRODUCTIVIDAD EN TIEMPOS Y COSTES
- Producen un efecto autorregulador en los empleados racionalizando el consumo.
- Optimizan el trabajo y la gestión en los almacenes.
- Sencillez en la implantación de cambios en el sistema según las necesidades particulares.

BENEFITS FOR THE USER
PRODUCTIVITY OPTIMISATION BOTH IN TIME AND COST
- It produces a self-regulatory effect, reducing the average consumption.
- It improves the warehouse workflow.
- Easily customizable to suit the needs of each particular client.

AVANTAGES POUR L'UTILISATEUR
OPTIMISATION DE LA PRODUCTIVITÉ EN TEMPS ET EN COÛTS
- Ils produisent un effet d'autorégulation sur les employés en rationalisant la consommation.
- Ils optimisent le travail et la gestion dans les entrepôts.
- Simplicité dans la mise en œuvre des changements dans le système en fonction des besoins particuliers.

Precio: A consultar
comercial@izartool.com
94 630 02 41
Servicio Técnico 24h 365 días
Sencilla instalación y uso

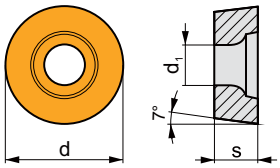
Price: Please contact us for quotation requests at:
export@izartool.com
+34 94 630 02 46
24/7/365 Technical support
Simple installation. Ease of use.

Prix : Consulter
france@izartool.com
+34 94 630 02 45
Service technique 24h/24 / 365
Installation et utilisation simples

Ref. 8536

PLAQUITA INTERCAMBIABLE TORNEADO RCGT
RCGT Turning Indexable Insert
Plaquette tournage RCGT

New!



ISO	Dimensiones Dimensions d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-010	€
Acabado / Finishing / Finition								
RCGT-0803M0-F-ZAL	8,00	3,18	3,40	0,05-0,25	0,50-2,50	10	70773	
RCGT-1003M0-F-ZAL	10,00	3,18	4,40	0,10-0,30	1,00-3,00	10	48761	
RCGT-1204M0-F-ZAL	12,00	4,76	4,40	0,10-0,35	1,00-3,50	10	45170	

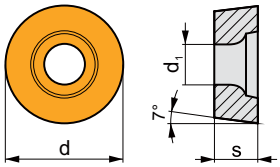
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8536 **RCGT-0803M0-F-ZAL P-010**

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 561**

Ref. 8537

PLAQUITA INTERCAMBIABLE TORNEADO RCMT
RCMT Turning Indexable Insert
Plaquette tournage RCMT

New!



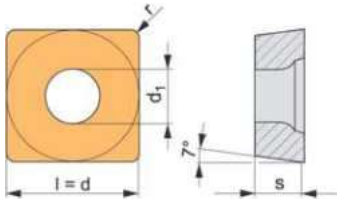
ISO	Dimensiones Dimensions d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G15	N° Art. C-G25	N° Art. P-H10	€
Semi-Desbaste / Semi-Roughing / Semi-Ébauche										
RCMT-0803M0-E-ZRR	8,00	3,18	3,40	0,10-0,80	0,80-3,20	10	70749	77229		
RCMT-1003M0-E-ZRR	10,00	3,18	4,40	0,12-1,00	1,00-4,00	10	70752	13773		
RCMT-10T3M0-E-ZRR	10,00	3,97	4,40	0,16-1,40	1,00-4,00	10	80783	80786		
RCMT-1204M0-E-ZRR	12,00	4,76	4,40	0,20-1,80	1,20-4,80	10	70755	44214		
RCMT-1606M0-E-ZRR	16,00	6,35	5,50	0,25-2,30	1,60-6,40	10	70758	69051		
INOX Semi-Acabado / Semi-Finishing Stainless / Inox Semi-Finition										
RCMT-0803M0-E-ZMM	8,00	3,18	3,40	0,15-0,40	0,50-3,00	10			24544	
RCMT-1003M0-E-ZMM	10,00	3,18	4,40	0,15-0,45	0,75-4,00	10			53622	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8537 **RCMT-0803M0-E-ZRR C-G15**

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 561**

Ref. 8540

PLAQUITA INTERCAMBIABLE TORNEADO SCMT
SCMT Turning Indexable Insert
Plaquette tournage SCMT



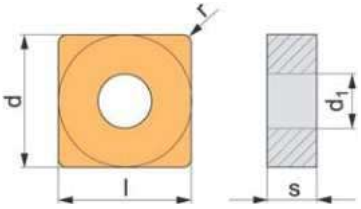
	ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe r mm	f mm	a_p mm		Nº Art. C-525	Nº Art. P-720	€
	Acabado / Finishing / Finition											
	SCMT-09T304-E-Z7	9,52	9,52	3,97	4,40	0,40	0,06-0,23	0,11-2,00	10	26307		
	SCMT-09T308-E-Z7	9,52	9,52	3,97	4,40	0,80	0,08-0,30	0,15-2,00	10	26308		
	Semi-Acabado / Semi-Finishing / Semi-Finition											
	SCMT-120408-E-Z8	12,70	12,70	4,76	5,50	0,80	0,12-0,45	0,60-3,60	10	26310		
	SCMT-120412-E-Z8	12,70	12,70	4,76	5,50	1,20	0,14-0,60	0,72-3,60	10	26311		
	Semi-Desbaste / Semi-Roughing / Semi-Ébauche											
	SCMT-120404-E-ZRR	12,70	12,70	4,76	5,50	0,40	0,09-0,27	0,30-3,60	10		81193	
	SCMT-120408-E-ZRR	12,70	12,70	4,76	5,50	0,80	0,12-0,45	0,60-3,60	10	18015	18021	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8540 SCMT-09T304-E-Z7 C-525

Porta Plaquitas bajo demanda / Tool Holder upon request / Porte-Plaquettes sur demande

Ref. 8550

PLAQUITA INTERCAMBIABLE TORNEADO SNMG
SNMG Turning Indexable Insert
Plaquette tournage SNMG



ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G15 C-515	N° Art. C-G25 C-525	N° Art. C-G40 C-540	N° Art. P-710	N° Art. P-720	€
Acabado / Finishing / Finition														
SNMG-120404-E-ZFM	12,70	12,70	4,76	5,16	0,40	0,05-0,25	0,10-1,50	10	18039	26313		18044		
SNMG-120408-E-ZFM	12,70	12,70	4,76	5,16	0,80	0,10-0,40	0,10-1,50	10		42919				
Semi-Desbaste / Semi-Roughing / Semi-Ébauche														
SNMG-120408-E-ZM	12,70	12,70	4,76	5,16	0,80	0,15-0,50	0,50-6,00	10	18045	26314				
SNMG-120412-E-ZM	12,70	12,70	4,76	5,16	1,20	0,18-0,60	0,80-6,00	10	18047	26316	18055			
Desbaste / Roughing / Ébauche														
SNMG-120408-E-ZR	12,70	12,70	4,76	5,16	0,80	0,20-0,55	0,80-7,00	10		18078	18079			
SNMG-120412-E-ZR	12,70	12,70	4,76	5,16	1,20	0,25-0,70	1,00-7,00	10	18085		18171			
INOX Semi-Desbaste / Semi-Roughing Stainless / INOX Semi-Ébauche														
SNMG-090304-E-ZNM	9,52	9,52	3,18	3,81	0,40	0,10-0,30	0,50-4,50	10					73532	
SNMG-120408-E-ZNM	12,70	12,70	4,76	5,16	0,80	0,12-0,45	0,50-6,40	10					35206	
SNMG-120412-E-ZNM	12,70	12,70	4,76	5,16	1,20	0,15-0,60	0,50-6,40	10					72894	

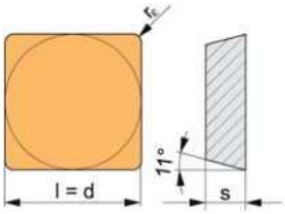
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-S15	N° Art. C-S25	€
INOX Acabado Alto Rendimiento / High Performance Finishing Stainless / INOX Finition Haut Rendement											
SNMG-120408-ZNF	12,70	12,70	4,76	5,16	0,80	0,12-0,45	0,50-6,40	10	81957	16979	
SNMG-120412-ZNF	12,70	12,70	4,76	5,16	1,20	0,15-0,60	0,50-6,40	10	16984	16985	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8550 SNMG-120404-E-ZFM C-515

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 558**

Ref. 8554

PLAQUITA INTERCAMBIABLE TORNEADO SPUN
SPUN Turning Indexable Insert
Plaquette tournage SPUN



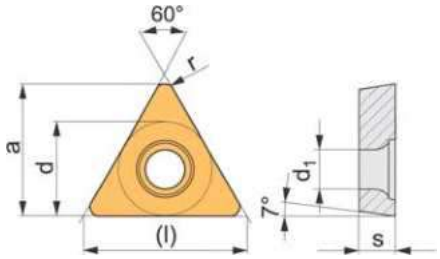
ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-525	€
SPUN-120308	12,70	12,70	3,18	0,80	0,15-0,40	1,00-5,00	10	42920	
SPUN-120312	12,70	12,70	3,18	1,20	0,20-0,50	1,00-5,00	10	42921	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8554 SPUN-120308 C-525

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 552**

Ref. 8558

PLAQUITA INTERCAMBIABLE TORNEADO TCGT
TCGT Turning Indexable Insert
Plaquette tournage TCGT



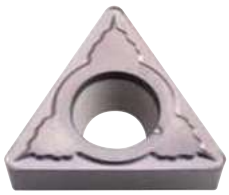
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-010	N° Art. P-710	N° Art. P-720	€
Aluminio / Aluminium												
TCGT-110202-F-ZAL	11,00	6,35	2,38	2,80	0,20	0,07-0,15	0,05-4,00	10	18177	18172		
TCGT-110204-F-ZAL	11,00	6,35	2,38	2,80	0,40	0,10-0,20	0,10-4,00	10	18345			
TCGT-16T304-F-ZAL	16,50	9,52	3,97	4,40	0,40	0,10-0,20	0,10-5,50	10	18388	18351		
TCGT-16T308-F-ZAL	16,50	9,52	3,97	4,40	0,80	0,15-0,50	0,10-5,50	10	18400	18391		
INOX / Stainless / Inox												
TCGT-110204-E-ZNF	11,00	6,35	2,38	2,80	0,40	0,10-0,20	0,10-4,00	10			18318	

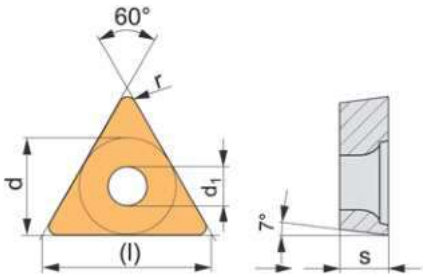
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8558 TCGT-110202-F-ZAL P-010

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 563, 570, 623

Ref. 8560

PLAQUITA INTERCAMBIABLE TORNEADO TCMT
TCMT Turning Indexable Insert
Plaquette tournage TCMT





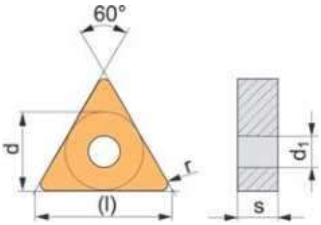
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G25	N° Art. P-H20 P-720	N° Art. P-Cermet	€
Acabado / Finishing / Finition												
TCMT-090204-E-ZMM	9,63	5,56	2,38	2,50	0,40	0,05-0,19	0,10-1,70	10		77228		
TCMT-110202-E-ZMM	11,00	6,35	2,38	2,80	0,20	0,03-0,13	0,06-1,70	10		26317		
TCMT-110204-E-ZMM	11,00	6,35	2,38	2,80	0,40	0,05-0,19	0,10-1,70	10		26320		
TCMT-16T304-E-ZMM	16,50	9,52	3,97	4,40	0,40	0,06-0,23	0,11-2,00	10		26322		
Semi-Desbaste / Semi-Roughing / Semi-Ébauche												
TCMT-16T304-E-ZRR	16,50	9,52	3,97	4,40	0,40	0,08-0,25	0,25-3,00	10	23957			
TCMT-16T308-E-ZRR	16,50	9,52	3,97	4,40	0,80	0,10-0,45	0,50-3,00	10	26323	10778		
Semi-Acabado / Semi-Finishing / Semi-Finition												
TCMT-16T308-ZMCE	16,50	9,52	3,97	4,40	0,80	0,10-0,40	0,30-3,00	10			20029	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8560 TCMT-110202-E-ZMM P-H20

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 563, 570, 623

Ref. 8570

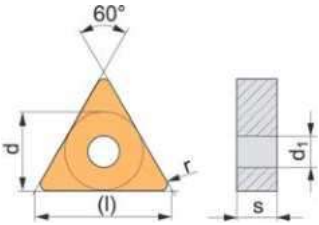
PLAQUITA INTERCAMBIABLE TORNEADO TNMG
TNMG Turning Indexable Insert
Plaquette tournage TNMG



	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe										
ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		Nº Art. C-G15 C-515	Nº Art. C-G25 C-525	Nº Art. C-G40 C-540	Nº Art. P-625	Nº Art. P-720	Nº Art. P-Cermet	Nº Art. P-010	€
Acabado / Finishing / Finition																
TNMG-160404-E-ZFM	16,50	9,52	4,76	3,81	0,40	0,05-0,25	0,10-1,50	10	18811	26325		18812				
TNMG-160408-E-ZFM	16,50	9,52	4,76	3,81	0,80	0,10-0,40	0,10-1,50	10	42922	42924						
Semi-Desbaste / Semi-Roughing / Semi-Ébauche																
TNMG-160404-E-ZM	16,50	9,52	4,76	3,81	0,40	0,10-0,30	0,40-5,00	10	42925	42927						
TNMG-160408-E-ZM	16,50	9,52	4,76	3,81	0,80	0,15-0,40	0,50-5,00	10	18924	26326	19006					
TNMG-160412-E-ZM	16,50	9,52	4,76	3,81	1,20	0,18-0,60	0,80-5,00	10		26327	19195					
TNMG-220408-E-ZM	22,00	12,70	4,76	5,16	0,80	0,15-0,50	0,50-6,50	10	42928	42929						
TNMG-220412-E-ZM	22,00	12,70	4,76	5,16	1,20	0,18-0,60	0,80-6,60	10	42930	42931						
Desbaste / Roughing / Ébauche																
TNMG-160408-E-ZR	16,50	9,52	4,76	3,81	0,80	0,20-0,55	0,80-6,00	10	59284	59285						
TNMG-160412-E-ZR	16,50	9,52	4,76	3,81	1,20	0,18-0,60	0,80-5,00	10	59286	59287						
TNMG-220408-E-ZR	22,00	12,70	4,76	5,16	0,80	0,20-0,55	0,80-6,50	10	19213	26275	19215					
TNMG-220412-E-ZR	22,00	12,70	4,76	5,16	1,20	0,25-0,70	1,00-7,00	10	19228	11272	10790					
Semi-Desbaste / Semi-Roughing / Semi-Ébauche																
TNMG-160404-ER-ZSX	16,50	9,52	4,76	3,81	0,40	0,12-0,30	1,00-3,50	10		11274						
TNMG-160408-ER-ZSX	16,50	9,52	4,76	3,81	0,80	0,15-0,50	1,30-3,50	10		11277						
Semi-Desbaste / Semi-Roughing / Semi-Ébauche																
TNMG-160404-EL-ZSX	16,50	9,52	4,76	3,81	0,40	0,12-0,30	1,00-3,50	10		11275						
TNMG-160408-EL-ZSX	16,50	9,52	4,76	3,81	0,80	0,15-0,50	1,30-3,50	10		11278						
Acabado / Finishing / Finition																
TNMG-160404-ZFCE	16,50	9,52	4,76	3,81	0,40	0,05-0,40	0,20-1,50	10						20032		
Semi-Acabado / Semi-Finishing / Semi-Finition																
TNMG-160408-ZMCE	16,50	9,52	4,76	3,81	0,80	0,10-0,40	0,30-3,00	10						20033		
INOX Semi-Desbaste / Semi-Roughing Stainless / INOX Semi-Ébauche																
TNMG-160404-E-ZNM	16,50	9,52	4,76	3,81	0,40	0,10-0,30	0,50-4,00	10					35207			
TNMG-160408-E-ZNM	16,50	9,52	4,76	3,81	0,80	0,12-0,45	0,50-4,80	10					35209			
New! **ALUMINIUM Semi-Desbaste / Semi-Roughing /** Semi-Ébauche																
TNMG-160404-ZAL	16,50	9,52	4,76	3,81	0,40	0,10-0,20	0,30-3,80	10							70118	
TNMG-160408-ZAL	16,50	9,52	4,76	3,81	0,80	0,10-0,40	0,30-3,80	10							70124	
TNMG-160412-ZAL	16,50	9,52	4,76	3,81	1,20	0,15-0,60	0,40-3,80	10							70136	

Ref. 8570

PLAQUITA INTERCAMBIABLE TORNEADO TNMG
TNMG Turning Indexable Insert
Plaquette tournage TNMG



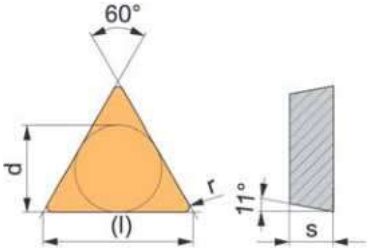
ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. C-G15	N° Art. C-G25	N° Art. C-S15	N° Art. C-S25	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe							
Semi-Desbaste Alto Rendimiento / High Performance Semi-Roughing / Semi-Ébauche Haut Rendement													
TNMG-160404-ZPM	15,50	12,70	4,76	3,81	0,40	0,15-0,50	0,50-6,00	10	71291	71292			
TNMG-160408-ZPM	15,50	12,70	4,76	3,81	0,80	0,15-0,50	0,50-6,00	10	71293	71294			
TNMG-160412-ZPM	15,50	12,70	6,35	3,81	1,20	0,15-0,50	0,50-6,00	10	71295	71296			
TNMG-220408-ZPM	22,00	12,70	4,76	5,16	0,80	0,20-0,55	0,80-6,50	10	17073	62421			
TNMG-220412-ZPM	22,00	12,70	4,76	5,16	1,20	0,25-0,70	1,00-7,00	10	17074	17085			
INOX Acabado Alto Rendimiento/ High Performance Finishing Stainless / INOX Finition Haut Rendement													
TNMG-160404-ZNF	16,50	9,52	4,76	3,81	0,40	0,10-0,30	0,50-4,00	10			16992	77508	
TNMG-160408-ZNF	16,50	9,52	4,76	3,81	0,80	0,12-0,45	0,50-4,80	10			81956	77509	
TNMG-160412-ZNF	16,50	9,52	4,76	3,81	1,20	0,18-0,60	0,80-5,00	10			16993	17019	
TNMG-220404-ZNF	22,00	12,70	4,76	5,16	0,40	0,12-0,40	0,40-6,00	10			82749	17027	
TNMG-220408-ZNF	22,00	12,70	4,76	5,16	0,80	0,20-0,55	0,80-6,50	10			17038	17042	
TNMG-220412-ZNF	22,00	12,70	4,76	5,16	1,20	0,25-0,70	1,00-7,00	10			17052	17068	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8570 TNMG-160404-E-ZFM C-G15

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 556, 565

Ref. 8571

PLAQUITA INTERCAMBIABLE TORNEADO TPMR
TPMR Turning Indexable Insert
Plaquette tournage TPMR



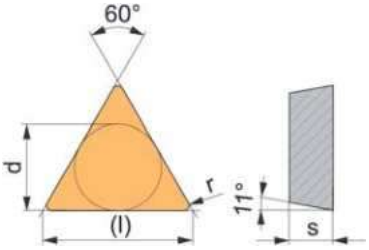
ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-515	N° Art. C-525	€
Acabado / Finishing / Finition										
TPMR-160304-E-Z7	16,50	9,52	3,18	0,40	0,08-0,20	0,50-2,00	10	29914	13406	
TPMR-160308-E-Z7	16,50	9,52	3,18	0,80	0,08-0,35	0,50-3,00	10	29915	13408	
TPMR-160312-E-Z7	16,50	9,52	3,18	1,20	0,08-0,55	0,50-3,00	10	29917	13411	
Semi-Desbaste / Semi-Roughing / Semi-Ébauche										
TPMR-160308-E-Z1	16,50	9,52	3,18	0,80	0,13-0,40	1,00-5,00	10	29919	13414	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8571 TPMR-160304-E-Z7 C-525

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 553, 564**

Ref. 8572

PLAQUITA INTERCAMBIABLE TORNEADO TPUN
TPUN Turning Indexable Insert
Plaquette tournage TPUN



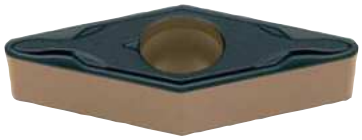
ISO	Dimensiones Dimensions l mm	d mm	s mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-525	N° Art. P-620	€
Acabado/Semi-Desbaste/Desbaste - Finishing/Semi-Roughing/Roughing- Finition/Semi-Ébauche/Ébauche										
TPUN-160304	16,50	9,52	3,18	0,40	0,10-0,30	1,00-5,00	10	11291	29930	
TPUN-160308	16,50	9,52	3,18	0,80	0,15-0,40	1,00-5,00	10	11292	29933	
TPUN-220408	22,00	12,70	4,76	0,80	0,15-0,40	1,50-7,00	10	11293		
TPUN-220412	22,00	12,70	4,76	1,20	0,20-0,50	1,50-7,00	10	11295	29937	

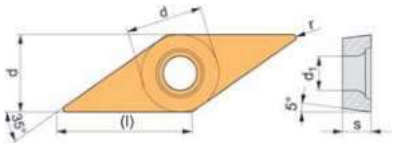
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8572 TPUN-160304 C-525

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 553, 564**

Ref. 8575

PLAQUITA INTERCAMBIABLE TORNEADO VBMT
VBMT Turning Indexable Insert
Plaquette tournage VBMT





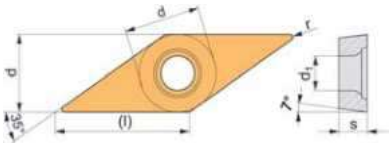
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G25	€
Acabado/Semi-Acabado - Finishing/Semi-Finishing - Finition/Semi-Finition										
VBMT-110304-E-ZRR	11,10	6,35	3,18	2,80	0,40	0,05-0,19	0,10-1,70	10	11284	
VBMT-110308-E-ZRR	11,10	6,35	3,18	2,80	0,80	0,05-0,19	0,10-1,70	10	11286	
VBMT-160404-E-ZRR	16,60	9,52	4,76	4,40	0,40	0,05-0,20	0,10-1,80	10	11288	
VBMT-160408-E-ZRR	16,60	9,52	4,76	4,40	0,80	0,07-0,27	0,14-1,80	10	11289	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8575 VBMT-1103-04-E-ZRR C-G25

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 563

Ref. 8576

PLAQUITA INTERCAMBIABLE TORNEADO VCGT
VCGT Turning Indexable Insert
Plaquette tournage VCGT



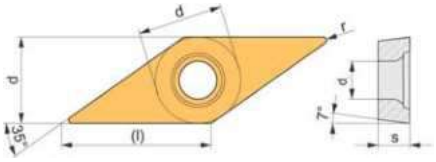
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-010	N° Art. P-710	€
Semi-Acabado / Semi-Finishing / Semi-Finition											
VCGT-110302-F-ZAL	11,10	6,35	3,18	2,80	0,20	0,05-0,12	0,05-3,00	10	78838		
VCGT-110304-F-ZAL	11,10	6,35	3,18	2,80	0,40	0,10-0,25	0,05-3,00	10	29870		
VCGT-110308-F-ZAL	11,10	6,35	3,18	2,80	0,80	0,15-0,45	0,05-3,00	10	78839		
VCGT-160404-F-ZAL	16,60	9,52	4,76	4,40	0,40	0,10-0,25	0,10-5,00	10	71115	78840	
VCGT-160408-F-ZAL	16,60	9,52	4,76	4,40	0,80	0,15-0,45	0,10-5,00	10	78841		
INOX / **Stainless** / Inox											
VCGT-110302-E-ZNF	11,10	6,35	3,18	2,80	0,20	0,05-0,12	0,05-3,00	10		81513	
VCGT-110304-E-ZNF	11,10	6,35	3,18	2,80	0,40	0,10-0,25	0,05-3,00	10		81514	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8576 VCGT-110302-F-ZAL P-010

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 564, 570

Ref. 8577

PLAQUITA INTERCAMBIABLE TORNEADO VCMT
VCMT Turning Indexable Insert
Plaquette tournage VCMT



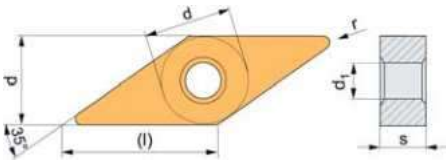
ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. C-G15	N° Art. C-G25	N° Art. P-720	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe						
Acabado / Finishing / Finition												
VCMT-110304-E-ZMM	11,10	6,35	3,18	2,80	0,40	0,05-0,20	0,10-1,50	10		19317	19325	
VCMT-110308-E-ZMM	11,10	6,35	3,18	2,80	0,80	0,13-0,33	0,60-2,55	10		19334	19348	
VCMT-160404-E-ZMM	16,60	9,52	4,76	4,40	0,40	0,05-0,20	0,10-1,80	10	81646	19359	19372	
VCMT-160408-E-ZMM	16,60	9,52	4,76	4,40	0,80	0,07-0,27	0,14-1,80	10	17086	19373	19378	
Semidesbaste / Semiroughing / Semiébauche												
VCMT-160404-E-ZRR	16,60	9,52	4,76	4,40	0,40	0,07-0,20	0,20-2,70	10		18873		
VCMT-160408-E-ZRR	16,60	9,52	4,76	4,40	0,80	0,09-0,27	0,50-2,70	10		19345		

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8577 VCMT-110304-E-ZMM C-G25

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 564, 570

Ref. 8578

PLAQUITA INTERCAMBIABLE TORNEADO VNMG
VNMG Turning Indexable Insert
Plaquette tournage VNMG



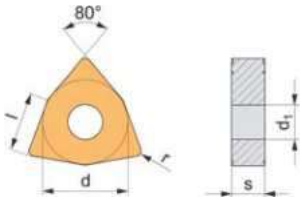
ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. C-G15	N° Art. C-G25	N° Art. C-S15	N° Art. C-S25	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe							
Acabado / Finishing / Finition													
VNMG-160404-E-ZFM	16,50	9,52	4,76	3,81	0,40	0,05-0,25	0,10-1,50	10	29938	29939			
VNMG-160408-E-ZFM	16,50	9,52	4,76	3,81	0,80	0,10-0,40	0,10-1,50	10	29940	29941			
VNMG-160412-E-ZFM	16,50	9,52	4,76	3,81	1,20	0,15-0,60	1,20-3,00	10	29942	29944			
INOX Acabado Alto Rendimiento / High Performance Finishing Stainless / INOX Finition Haut Rendement													
VNMG-160404-ZNF	16,50	9,52	4,76	3,81	0,40	0,05-0,25	0,10-1,50	10			17092	17096	
VNMG-160408-ZNF	16,50	9,52	4,76	3,81	0,80	0,10-0,40	0,10-1,50	10			17100	17102	
VNMG-160412-ZNF	16,50	9,52	4,76	3,81	1,20	0,15-0,60	1,20-3,00	10			17107	17108	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8578 VNMG-160404-E-ZFM C-G15

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 556, 566

Ref. 8580

PLAQUITA INTERCAMBIABLE TORNEADO WNMG
WNMG Turning Indexable Insert
Plaquette tournage WNMG



ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G15 C-515	N° Art. C-G25 C-525	N° Art. C-G40	N° Art. P-720	€
Wiper													
WNMG-060408-E-ZWM	6,50	9,52	4,76	3,81	0,80	0,15-0,60	0,50-3,50	10		19401			
WNMG-060412-E-ZWM	6,50	9,52	4,76	3,81	1,20	0,20-0,90	0,80-3,50	10		19402			
WNMG-080408-E-ZWM	8,70	12,70	4,76	5,16	0,80	0,15-0,60	0,50-5,00	10		19404			
Acabado / Finishing / Finition													
WNMG-080404-E-ZF	8,70	12,70	4,76	5,16	0,40	0,05-0,30	0,10-2,00	10	19383	26331			
WNMG-080408-E-ZF	8,70	12,70	4,76	5,16	0,80	0,10-0,40	0,10-2,00	10		30519			
Semi-Desbaste / Semi-Roughing / Semi-Ébauche													
WNMG-060404-E-ZM	6,50	9,52	4,76	3,81	0,40	0,10-0,30	0,50-3,00	10		42933			
WNMG-060408-E-ZM	6,50	9,52	4,76	3,81	0,80	0,15-0,50	0,50-3,00	10	19386	26328			
WNMG-080408-E-ZFM	8,70	12,70	4,76	5,16	0,80	0,20-0,40	0,70-4,00	10	42934			42935	
WNMG-080408-E-ZM	8,70	12,70	4,76	5,16	0,80	0,15-0,40	0,50-4,00	10	19389	26332	19392		
WNMG-080412-E-ZM	8,70	12,70	4,76	5,16	1,20	0,18-0,60	0,80-4,00	10		26333			
Desbaste / Roughing / Ébauche													
WNMG-080408-E-ZR	8,70	12,70	4,76	5,16	0,80	0,20-0,55	0,80-5,00	10	13854	11281	19396		
WNMG-080412-E-ZR	8,70	12,70	4,76	5,16	1,20	0,25-0,70	1,50-5,00	10	13855	11280	19398		
INOX / Stainless / INOX													
WNMG-080404-E-ZNM	8,70	12,70	4,76	5,16	0,40	0,12-0,30	0,50-3,00	10				35210	
WNMG-080408-E-ZNM	8,70	12,70	4,76	5,16	0,80	0,20-0,40	0,70-4,00	10				35211	

ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-G15	N° Art. C-G25	N° Art. C-S15	N° Art. C-S25	€
Semi-Desbaste Alto Rendimiento / High Performance Semi-Roughing / Semi-Ébauche Haut Rendement													
WNMG-080404-ZPM	8,70	12,70	4,76	5,16	0,40	0,20-0,40	0,50-4,00	10	71298	71299			
WNMG-080408-ZPM	8,70	12,70	4,76	5,16	0,80	0,20-0,40	0,50-4,00	10	71300	71301			
WNMG-080412-ZPM	8,70	12,70	4,76	5,16	1,20	0,18-0,60	0,80-4,00	10	71302	71303			
INOX Acabado Alto Rendimiento / High Performance Finishing Stainless / INOX Finition Haut Rendement													
WNMG-060404-ZNF	6,50	9,52	4,76	3,81	0,40	0,10-0,30	0,50-3,00	10			17120	17122	
WNMG-060408-ZNF	6,50	9,52	4,76	3,81	0,80	0,15-0,50	0,50-3,00	10			17125	17126	
WNMG-060412-ZNF	6,50	9,52	4,76	3,81	1,20	0,20-0,90	0,80-3,50	10			81332	81333	
WNMG-080404-ZNF	8,70	12,70	4,76	5,16	0,40	0,20-0,40	0,50-4,00	10			17127	17132	
WNMG-080408-ZNF	8,70	12,70	4,76	5,16	0,80	0,20-0,40	0,50-4,00	10			79345	17137	
WNMG-080412-ZNF	8,70	12,70	4,76	5,16	1,20	0,18-0,60	0,80-4,00	10			17140	17141	

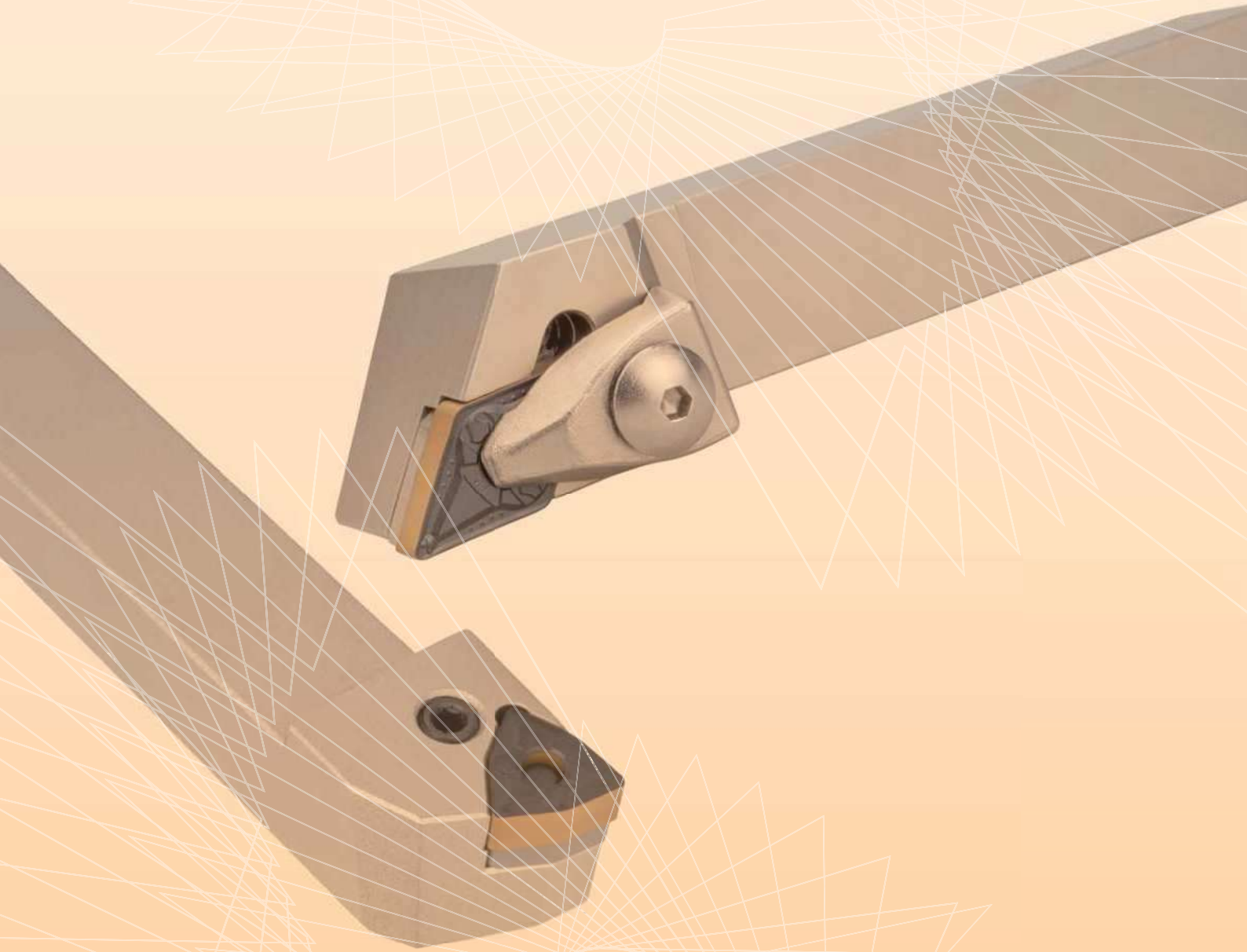
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8580 WNMG-060408-E-ZWM C-G25

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 555, 557, 567

PORTA-PLAQUITAS TORNEADO

Turning Tool-Holders

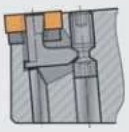
Porte-Plaquettes tournage



ELECCIÓN PORTA-PLAQUITAS TORNEADO
Turning Tool-Holder Choice
Choix Porte-Plaquettes tournage

SISTEMAS ANCLAJE - Clamping Systems - Systèmes fixation

ISO P

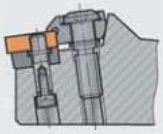


Anclaje para plaquitas negativas con agujero en torneado exterior (acabado o desbaste). Alternativa en torneado interior de agujeros de grandes diámetros

Clamping for negative hole-inserts in external turning (finishing or roughing). Alternate for large diameters holes internal turning

Fixation pour plaquettes négatives avec trou sur tournage extérieur (finition ou ébauche). Option pour tournage intérieur trous de grands diamètres

ISO M (D)



Para mismo tipo de plaquitas que el ISO-P. Usado sobre todo en portas con carga dinámica elevada para torneado exterior

For the same insert-type as ISO-P. Used mainly in enhanced dynamic load holders for external turning

Mêmes plaquettes que l´ISO-P. Employées sur Porteplaquettes avec charge dinamique pour tournage extérieur

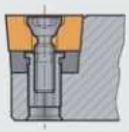
ISO C

Para plaquitas positivas o negativas sin agujero, con o sin rompevirutas y para torneado interior o exterior

For positive or negative inserts without hole, with or without chipbreakers and for internal or external turning

Pour plaquettes positives où negatives sans trou, avec ou sans brisecopeaux pour tournage intérieur ou extérieur

ISO S

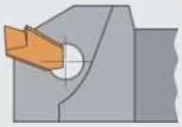


Para portas con cuadradillo pequeño usados en torneado interior o exterior. Con esta solución se evitan obstáculos para evacuar la viruta

For small cross-section holders, used in external or internal turning. Convenient solution as there is no obstacle for chip flow

Pour portes plaquettes avec cage petite employées en tournage intérieur où extérieur. Avec cette solution, on supprime les obstacles pour évacuer les copeaux

ISO X

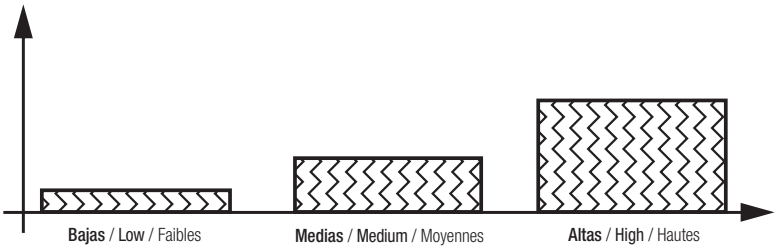


Marca que identifica portas con sistema de anclaje especial (diferente segun el fabricante). Para tronzado y ranurado

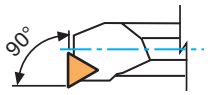
Marking that identifies an special clamping-system (different depending on the manufacturer). For parting & grooving

Marque qui identifie porteplaquettes avec système de fixation spécial (différent selon le fabricant). Pour tronzage et rainurage

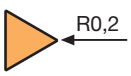
BARRAS MANDRINAR
Boring Bars
Barreaux mandrins



1. **Seleccionar un Angulo de Posición aproximado a 90° con un Radio de Punta pequeño.**

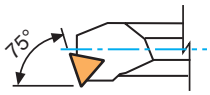


1. Select a **Position Angle** aproximately at **90° with a small Nose Radius.**

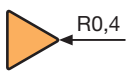


1. **Selectionner l´angle de position aproximatif à 90° avec un rayon petit de la pointe.**

2. **Nunca** seleccionar un Angulo de Posición **menor de 75°**

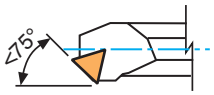


2. **Never** select a Position Angle **smaller than 75°**

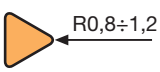


2. **Jamais** selectionner un angle de position **inférieur à 75°**

3. A **mayor Radio** en la Punta **mayor Vibracion**



3. **Bigger** Nose **Radius** = **more Vibration**



3. **A plus grand Rayon** sur la Pointe = **plus de Vibrations**

Seleccionar Herramientas y Plaquitas positivas.

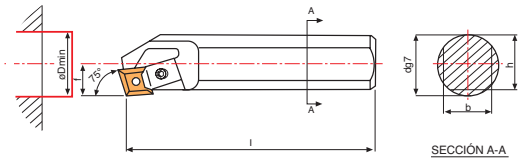
Dm/mm = Tener en cuenta el diámetro menor del agujero para que la herramienta no roce contra el material a trabajar.

Select **Positive Tools & Inserts**.

Dm/mm = Have in mind the **hole minor diameter** in order the tool not to touch the working material.

Selectionner **outils et plaquettes positives**.

Dm/mm = Prendre en considération **le diamètre inférieur du trou** pour que le trou ne touche pas le matériel à usiner.



	d mm	f mm	l mm	D_{min} mm
CNMG 1204...	25	17	250	32
	25	17	250	32
	32	22	300	40
	32	22	300	40

CÓDIGOS ISO ELECCIÓN PORTA-PLAQUITAS TORNEADO EXTERIOR

External Turning Tool-Holder Choice ISO Codes

Codes ISO choix Porte-Plaquettes tournage extérieur

1
Designación Amarre
Clamping Designation
Type attachement

C	
D	
P	
M	
S	
X	
G	

2
Forma Plaquita
Insert Shape
Forme plaquette

S	C 80°
T	D 55°
R	K 55°
W 80°	V 35°
L	

3
Tipo Herramienta - Ángulo Filo Corte
Tool Style - Cutting Edge Angle
Type outil - Angle arête de coupe

A 90°	B 75°	C 90°	D 45°	D
E 60°	F 90°	G 90°	H 107°30´	J 93°
K 75°	L 95°	M 50°	N 62°30´	P 117°30´
Q 107°30´	R 75°	S 45°	S	T 60°
U 93°	V 72°30´	W 60°		Y 85°
Z				

4
Angulo Incidencia
Clearance Angle
Angle d'incidence

N	C	P
α_n=0°	α_n=7°	α_n=11°

5
Dirección Corte
Direction of Cut
Direction coupe

R	
L	
N	

1	2	3	4	5		6	7	8	9
P	C	L	N	R	-	32	25	L	12

6
Altura Mango (mm)
Shank Height (mm)
Hauteur queue (mm)

08	10	12	16	20	25
32	38	40	45	50	

7
Ancho Mango (mm)
Shank Width (mm)
Epaisseur queue (mm)

08	10	12	16	20	25
32	38	40	45	50	

8
Longitud Total
Total Lenght
Longueur totale

	l_1 [mm]
D	60
E	70
F	80
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Spec.
Y	500

9
Longitud Filo Corte
Cutting Edge Length
Longueur arête coupe

d [mm]	S	C	D	V	K	W	T	R
6,00								06
6,35		06	07	11			11	
8,00								08
9,525	09	09	11	16	19	06	16	
10,00								10
12,00								12
12,70	12	12	15			08	22	12
15,875	15	16					27	15
16,00								16
19,05	19	19						19
20,00								20
25,00								25
25,40	25	25						25

CÓDIGOS ISO ELECCIÓN PORTA-PLAQUITAS TORNEADO INTERIOR

Internal Turning Tool-Holder Choice ISO Codes

Codes ISO choix Porte-Plaquettes tournage intérieur

1	
Mango Shank Queue	
S	Mango Acero Steel Shank Queue acier
A	Mango Acero Agujero Refrigeración Steel Shank with Coolant Hole Queue acier lubrification interne

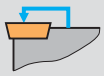
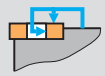
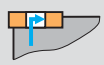
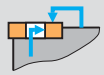
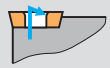
2				
Mango Ø (mm) Shank Ø (mm) Queue Ø (mm)				
08	10	12	16	20
25	32	40	50	60

1	2	3		4	5	6	7	8	9
A	40	T	-	P	C	L	N	L	12

3 — Longitud Total / Total Length / Longueur totale

	l_1 [mm]
D	60
E	70
F	80
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Spec.
Y	500

4 — Designación Amarre / Clamping Designation / Type attachement

C	
D	
P	
M	
S	
X	
G	

5 — Forma Plaquita / Insert Shape / Forme plaquette

S	C (80°)
T	D (55°)
R	K (55°)
W (80°)	V (35°)
L	

6 — Tipo Herramienta - Ángulo Filo Corte / Tool Style - Cutting Edge Angle / Type outil - Angle arête de coupe

A 90°	B 75°	C 90°	D 45°	D
E 60°	F 90°	G 90°	H 107°30´	J 93°
K 75°	L 95°	M 50°	N 62°30´	P 117°30´
Q 107°30´	R 75°	S 45°	S	T 60°
U 93°	V 72°30´	W 60°		Y 85°
Z				

7 — Angulo Incidencia / Clearance Angle / Angle d'incidence

N	C	P
α_n=0°	α_n=7°	α_n=11°

8 — Dirección Corte / Direction of Cut / Direction coupe

R	
L	

9 — Longitud Filo de Corte / Cutting Edge Length / Longueur arête coupe

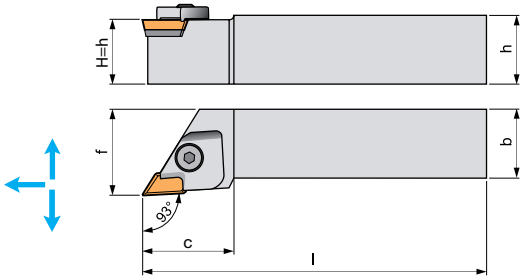
d [mm]	S	C	D	V	K	W	T	R
6,00								06
6,35		06	07	11			11	
8,00								08
9,525	09	09	11	16	19	06	16	
10,00								10
12,00								12
12,70	12	12	15			08	22	12
15,875	15	16					27	15
16,00								16
19,05	19	19						19
20,00								20
25,00								25
25,40	25	25						25

Ref. 8726

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS CKJN-93°

CKJN-93° Negative Inserts External Turning Tool-Holder

Porte-Plaquettes tournage extérieur plaquettes negatives CKJN-93°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8814		Ref. 8812		Ref. 8816	
CKJNR-2525M16	●	13517		13519	KNUX 1604..	25	25	150	34	32		9,25×14,5 Art. 13824 €	5	3×10 Art. 10955 €	5	23,5×2,5 Art. 13827 €	1	4-W1/4x 25,5xø10 Art. 13832 €	5
CKJNL-2525M16			●			25	25	150	34	32		9,25×14,5 Art. 13825 €	5			2,5×23,5 Art. 13829 €	1		

Plaquita / Insert / Plaquette: **Pag. 537**

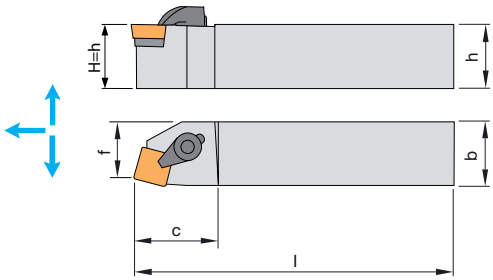
	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Brida - Clamp - Bride
	Tornillo - Screw - Vis

Ref. 8706

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS CSBP.-75°

CSBP.-75° Positive Inserts External Turning Tool-Holder

Porte-Plaquettes tournage extérieur plaquettes positives CSBP.-75°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8814		Ref. 8812		Ref. 8815	
CSBPR-2020-K12	●	42954		42955	SPUN 1203..	20	20	125	34	17		2,1×10 Art. 13826 €	5	M6×1 – 21×5 Art. 10945 €	1	CSB-PR-20-25 Art. 43592 €	5
CSBPL-2020-K12			●			20	20	125	34	17							
CSBPR-2525-M12	●	42957		42958		25	25	150	34	22							
CSBPL-2525-M12			●			25	25	150	34	22							

Plaquita / Insert / Plaquette: **Pag. 540**

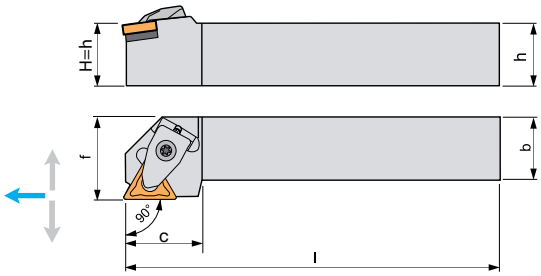
	Pasador - Pin - Goupille
	Brida - Clamp - Bride
	Placa Base - Base Plate - Plaque de base

Ref. 8707

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS CTGP.-90°

CTGP.-90° Positive Inserts External Turning Tool-Holder

Porte-Plaquettes tournage extérieur plaquettes positives CTGP.-90°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8814		Ref. 8812	
CTGPR-2525M16	●	19407			TP.. 1603..	25	25	150	28	32,0		CTG-PR-2525 Art. 13834 €	5	2,1×10 Art. 13826 €	5	M6×1 – 21×5 Art. 10945 €	1
CTGPL-2525M16			●	19408		25	25	150	28	32,0							
CTGPR-3232P22	●	19410			TP.. 2204..	32	32	170	34	40,0		CTG-PR-3232 Art. 13835 €	5	3×10 Art. 10955 €	5	M8×1 - 24×7,6 Art. 10954 €	1
CTGPL-3232P22			●	19411		32	32	170	34	40,0							

Plaquita / Insert / Plaquette: **Pag. 544**

	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Brida - Clamp - Bride

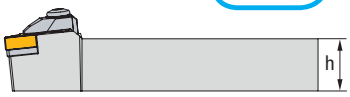
Ref. 8792

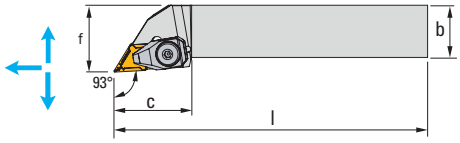
PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS DDJN.-93º

DDJN.-93º Negative Inserts External Turning Tool-Holder

Porte-plaquettes tournage exterieur plaquettes negatives DDJN.-93º

New!





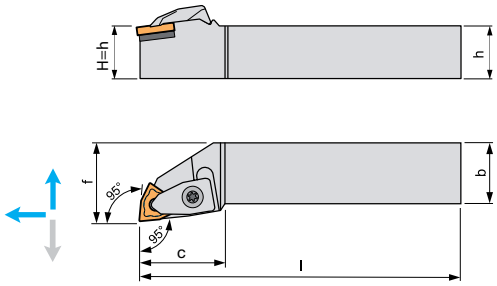
ISO	R Dcha.	Nº Art.	L Izda.	Nº Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815	Ref.8812	Ref.8816	Ref. 8816	Ref. 8812	Ref. 8812
DDJNR-2020K11	●	31140			DN... 1104	20	20	125	30	25		Art. 31237 €	Art. 31239 €	Art. 31241 €	Art. 31243 €	Art. 31245 €	Art. 31247 €
DDJNL-2020K11			●	31191		20	20	125	30	25							
DDJNR-2525M11	●	31200				25	25	150	30	32							
DDJNL-2525M11			●	31233		25	25	150	30	32							
DDJNR-2020K15	●	31234			DN... 1504	20	20	125	38	25		Art. 31238 €	Art. 31240 €	Art. 31242 €	Art. 31244 €	Art. 31246 €	Art. 31248 €
DDJNL-2020K15			●	31235		20	20	125	38	25							
DDJNR-2525M15	●	31236				25	25	150	38	38							
DDJNL-2525M15			●	31019		25	25	150	38	38							
DDJNR-2020K15-N	●	31249			DN... 1506	20	20	125	35	25							
DDJNL-2020K15-N			●	31250		20	20	125	35	25							
DDJNR-2525M15-N	●	31251				25	25	150	35	32							
DDJNL-2525M15-N			●	31261		25	25	150	35	32							

Plaquita / Insert / Plaquette: **Pag. 536**

	Placa Base - Base Plate - Plaque de base
	Brida - Clamp - Bride
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Muelle - Spring - Resorte
	Arandela - Washer - Machine à laver

Ref. 8790

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS DWLN.-95°
DWLN.-95° Negative Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes negatives DWLN.-95°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815	Ref. 8812	Ref. 8816	Ref. 8816	Ref. 8812	Ref. 8812
DWLNR-2020K08	●	26511			WNMG 0804..	20	20	125	34	25		DWLN-20-25 Art. 10843 € (5)	STJC-16 Art. 31240 € (1)	DWLN M6 Art. 35215 € (5)	M4×1x 13,5x 9,5xø8 Art. 30568 € (5)	Muelle Spring Ressort M6 Art. 31246 € (5)	Arandela Clamp Rondelle M6 Art. 31248 € (5)
DWLNL-2020K08			●	26512		20	20	125	34	25							
DWLNR-2525M08	●	26514				25	25	150	34	32							
DWLNL-2525M08			●	26515		25	25	150	34	32							

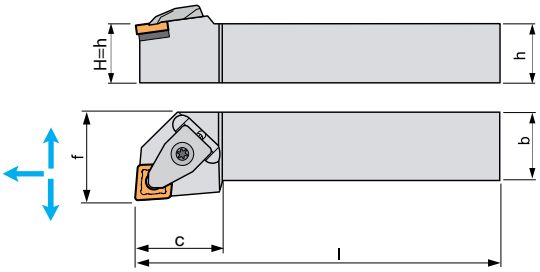
Plaquita / Insert / Plaquette: **Pag. 547**

Placa Base - Base Plate - Plaque de base	**Tornillo Placa** - Plate Screw - Vis Plaque
Brida - Clamp - Bride	**Muelle** - Spring - Ressort
Tornillo Brida - Clamp Screw - Vis Bride	**Arandela** - Clamp - Rondelle

Ref. 8710

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS MCLN.-95°
MCLN.-95° Negative Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes negatives MCLN.-95°

Placa Base - Base Plate - Plaque de base	
Pasador - Pin - Goupille	
Brida - Clamp - Bride	
Tornillo - Screw - Vis	



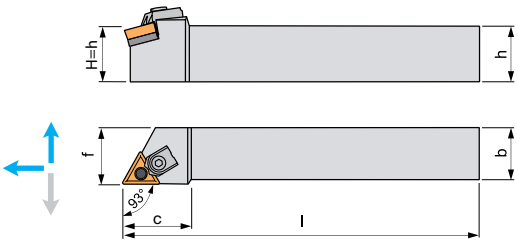
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815	Ref. 8814	Ref. 8812	Ref. 8816
MCLNR-2020K12	●	26439			CNM. 1204..	20	20	125	34	25		7,4×12,45x 12,45 Art. 26553 € (5)	MCLN-20-25 Art. 26562 € (5)	MCLN Art. 26557 € (1)	M4×0,7-8, 6×6,1x ø6,9 Art. 35214 € (5)
MCLNL-2020K12			●	26440		20	20	125	34	25					
MCLNR-2525M12	●	26442				25	25	150	34	32					
MCLNL-2525M12			●	26443		25	25	150	34	32					
MCLNR-2525M19	●	42948			CNM. 19..	25	25	150	42	32		26×17,85x 4,76 Art. 66181 € (5)	16,5×9 Art. 66182 € (5)	20×7,75 Art. 66183 € (1)	M6×1-13,9×10x 9,75 Art. 66184 € (5)
MCLNL-2525M19			●	42949		25	25	150	42	32					
MCLNR-3225P19	●	42951				32	25	170	42	40					
MCLNL-3225P19			●	42952		32	25	170	42	40					

Plaquita / Insert / Plaquette: **Pag. 532, 534**

Ref. 8700

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS MTJN.-93°
MTJN.-93° Negative Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes negatives MTJN.-93°

	Placa Base - Base Plate - Plaque de base
	Brida - Clamp - Bride
	Tornillo Brida - Clamp Screw - Vis Bride
	Pasador - Pin - Goupille
	Muelle - Spring - Ressort
	Arandela - Clamp - Rondelle

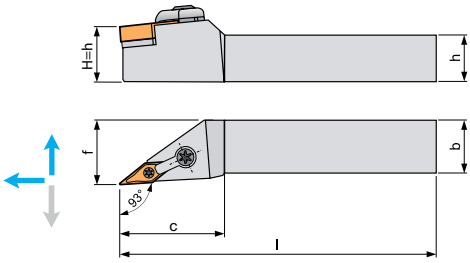


ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815	Ref. 8812	Ref. 8816	Ref. 8814	Ref. 8812	Ref. 8812
MTJNR-2020K16	●	26431			TNMG 1604..	20	20	125	34	25		MTJN-20-25 Art. 26554 € (5)	15,56x19 Art. 26556 € (1)	DWLN M5 Art. 69818 € (5)	ø6×10 Art. 26560 € (5)	Muelle Spring Ressort M5 Art. 69821 € (5)	Arandela Clamp Rondelle M5 Art. 69824 € (5)
MTJNL-2020K16			●	26433		20	20	125	34	25							
MTJNR-2525M16	●	26434				25	25	150	34	32							
MTJNL-2525M16			●	26437		25	25	150	34	32							
MTJNR-2525M22	●	11296			TNMG 2204..	25	25	150	42	32		MTJN-25 Art. 13864 € (5)	15,52x23,5 Art. 13866 € (1)	DWLN M6 Art. 35215 € (5)	ø7×15 Art. 30575 € (5)	Muelle Spring Ressort M6 Art. 31246 € (5)	Arandela Clamp Rondelle M6 Art. 31248 € (5)
MTJNL-2525M22			●	11298		25	25	150	42	32							

Plaquita / Insert / Plaquette: **Pag. 542**

Ref. 8724

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS MVJN.-93°
MVJN.-93° Negative Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes negatives MVJN.-93°



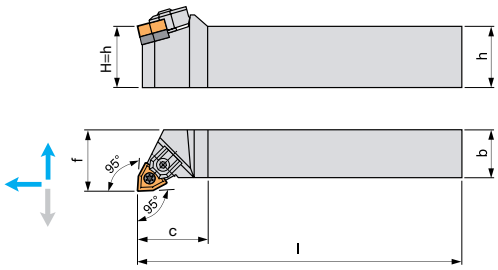
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815	Ref. 8814	Ref. 8812	Ref. 8816
MVJNR-2020K16	●	29960			VNMG 1604..	20	20	125	43	25		6,7x 25,9×9,2 Art. 29971 € (5)	M5x 0,8-13x 2,3×5 Art. 29967 € (5)	M6×1-24x 13,5xø9,5 Art. 29964 € (1)	M6×1-R-L-20,5×7,1 Art. 29965 € (5)
MVJNL-2020K16			●	29961		20	20	125	43	25					
MVJNR-2525K16	●	29962				25	25	150	43	32					
MVJNL-2525K16			●	29963		25	25	150	43	32					

Plaquita / Insert / Plaquette: **Pag. 546**

	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Brida - Clamp - Bride
	Tornillo - Screw - Vis

Ref. 8770

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS MWLN.-95°
MWLN.-95° Negative Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes negatives MWLN.-95°



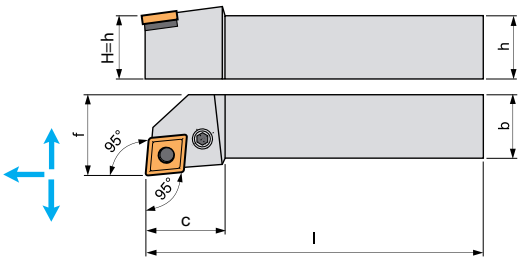
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8812		Ref. 8814	
MWLNR-2020K06	●	26499			WNMG 0604..	20	20	125	25	25		5,1x 10,85x 11,3 Art. 10567 €	5	M3×0,8-7×4x ø5,5 Art. 10544 €	5	M5×0,5-16,6x 6,8 Art. 10540 €	1	M3x 0,5-ø4,5x 13,2×7,6 Art. 86279 €	5
MWLNL-2020K06			●	26500		20	20	125	25	25									
MWLNR-2525M06	●	26502				25	25	150	25	32									
MWLNL-2525M06			●	26503		25	25	150	25	32									

Plaquita / Insert / Plaquette: **Pag. 547**

	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Brida - Clamp - Bride
	Pasador - Pin - Goupille

Ref. 8709

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS PCLN.-95°
PCLN.-95° Negative Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes negatives PCLN.-95°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8813		Ref. 8816	
PCLNR-2020K12	●	34924			CNM. 1204..	20	20	125	28	25		6,4×3,18x 11,6×17,1 Art. 44952 €	5	13,1x 13,5 Art. 35231 €	5	3-M8x 1-20,7x 8,75xø8 Art. 35230 €	5
PCLNL-2020K12			●	72037		20	20	125	28	25							
PCLNR-2525M12	●	23095				25	25	150	28	32							
PCLNL-2525M12			●	72040		25	25	150	28	32							

Plaquita / Insert / Plaquette: **Pag. 532, 534**

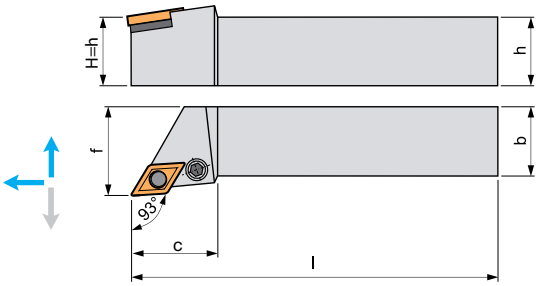
	Placa Base - Base Plate - Plaque de base
	Palanca - Lever - Levier
	Tornillo - Screw - Vis

Ref. 8725

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS PDJN.-93°

PDJN.-93° Negative Inserts External Turning Tool-Holder

Porte-Plaquettes tournage extérieur plaquettes negatives PDJN.-93°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8813	
PDJNR-2020K11	●	13520			DNM. 1104..	20	20	125	28	25		4,9x 17×8,5 Art. 13794 €	5	M6×1-16,7x 8,65xø6 Art. 13795 €	5	12×10,2 Art. 13797 €	5
PDJNL-2020K11			●	13522		20	20	125	28	25							
PDJNR-2020K15	●	11300			DNM. 1506..	20	20	125	34	25		6,4x 23,4×11,6 Art. 13869 €	5	M8×1-21,1x 10,35xø8 Art. 13822 €	5	14,7×16,2 Art. 13868 €	5
PDJNL-2020K15			●	11301		20	20	125	34	25							

Plaquita / Insert / Plaquette: **Pag. 536**

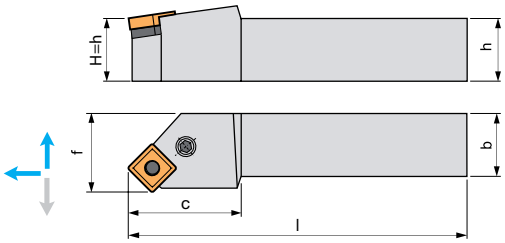
	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Palanca - Lever - Levier

Ref. 8791

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS PSSN-45°

PSSN-45° Negative Inserts External Turning Tool-Holder

Porte-Plaquettes tournage extérieur plaquettes negatives PSSN-45°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8813	
PSSNR-2020K12	●	35223			SNM. 1204..	20	20	125	28	25		6,35x 11,66 Art. 35229 €	5	M8x 1-20,7x 8,75xø8 Art. 35230 €	5	13,1×13,5 Art. 35231 €	5
PSSNL-2020K12			●	35224		20	20	125	28	25							
PSSNR-2525M12	●	35225				25	25	150	28	32							
PSSNL-2525M12			●	35226		25	25	150	28	32							
PSSNR-3225P12	●	35227				32	25	170	28	32							
PSSNL-3225P12			●	35228		32	25	170	28	32							

Plaquita / Insert / Plaquette: **Pag. 540**

	Placa Base - Base Plate - Plaque de base		**Tornillo** - Screw - Vis		**Palanca** - Lever - Levier

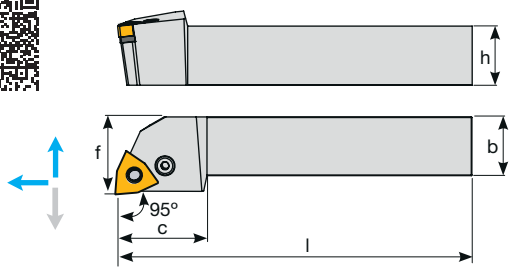
Ref. 8711

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS NEGATIVAS PWLN.-95º

PWLN.-95º Negative Inserts External Turning Tool-Holder

Porte-plaquettes tournage exterieur plaquettes negatives PWLN.-95º

New!



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8813		Ref. 8816	
PWLNR-1616H06	●	72344			WNMG-0604..	16	16	100	25	20		PWLN-06 Art. 59086 €	5	3,5×12,2 Art. 25953 €	5	M6×1-17 Art. 25955 €	5
PWLNL-1616H06			●	25720		16	16	100	25	20							
PWLNR-2020K06	●	25723				20	20	125	25	25							
PWLNL-2020K06			●	25724		20	20	125	25	25							
PWLNR-2525M06	●	25736				25	25	150	25	32							
PWLNL-2525M06			●	80529		25	25	150	25	32							
PWLNR-2525M08	●	74976			WNMG-0804..	25	25	150	34	32		PWLN-08 Art. 25952 €	5	4,5×13 Art. 25954 €	5	M8×1-21 Art. 25956 €	5
PWLNL-2525M08			●	25741		25	25	150	34	32							
PWLNR-3232P08	●	25748				32	32	170	34	40							
PWLNL-3232P08			●	25759		32	32	170	34	40							

Plaquita / Insert / Plaquette: **Pag. 547**

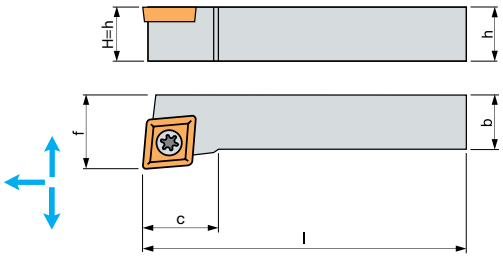
	Placa Base - Base Plate - Plaque de base
	Palanca - Lever - Levier
	Tornillo - Screw - Vis

Ref. 8704

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS SCLC.-95°

SCLC.-95° Positive Inserts External Turning Tool-Holder

Porte-Plaquettes tournage extérieur plaquettes positives SCLC.-95°



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8816		Ref. 8816		Ref. 8801		Ref. 8815	
SCLCR-0808-D06	●	42936			CC..06..	08	8	60	10	10				T-07 Art. 10846 €	5	ZT-07 Art. 19569 €	1		
SCLCL-0808-D06			●	42937		08	8	60	10	10									
SCLCR-1010-E06	●	42938				10	10	70	10	12									
SCLCL-1010-E06			●	42940		10	10	70	10	12									
SCLCR-1212-F09	●	42941			CC..09..	12	12	80	16	16				T-15 Art. 10895 €	5	ZT-15 Art. 10512 €	1		
SCLCL-1212-F09			●	42942		12	12	80	16	16									
SCLCR-1616-H09	●	42943				16	16	100	16	20									
SCLCL-1616-H09			●	42944		16	16	100	16	20									
SCLCR-2020-K09	●	42945				20	20	125	16	25									
SCLCL-2020-K09			●	42946		20	20	125	16	25									
SCLCR-2525-M12	●	67771			CC..12..	25	25	150	25	32		M4×0,5x M6×0,75x 10×5,5xø7,7 Art. 19007 €	5	T-15 Art. 30686 €	1			3,95×11,40 x11,40 Art. 54065 €	5
SCLCL-2525-M12			●	72069		25	25	150	25	32									

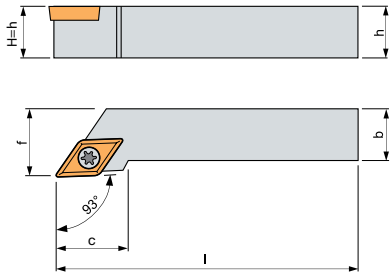
Plaquita / Insert / Plaquette: **Pag. 530**

	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Ref. 8729

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS SDJC.-93°
SDJC.-93° Positive Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes positives SDJC.-93°

	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis



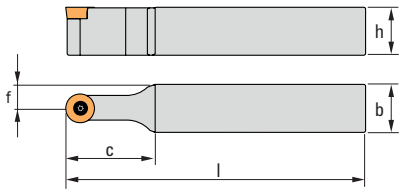
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8816		Ref. 8801	
SDJCR-1010E07	●	29946			DC.. 0702..	10	10	70	16	12						T-07 Art. 10846 €	5	ZT-07 Art. 19569 €	1
SDJCL-1010E07			●	29947		10	10	70	16	12									
SDJCR-1212F07	●	29949				12	12	80	18	16									
SDJCL-1212F07			●	29950		12	12	80	18	16									
SDJCR-1212F11	●	29951			DC.. 11T3..	12	12	80	18	16						T-15 Art. 10895 €	5	ZT-15 Art. 10512 €	1
SDJCL-1212F11			●	29952		12	12	80	18	16									
SDJCR-1616H11	●	29953				16	16	100	22	20		6,6x 17,48×8,5 Art. 29958 €	5	M3,5×0,6x M5×0,5x 8,5×5xø6,25 Art. 29959 €	5	T-15 Art. 10847 €	5	ZT-16 Art. 10856 €	1
SDJCL-1616H11			●	29954		16	16	100	22	20									

Plaquita / Insert / Plaquette: **Pags. 534, 535**

Ref. 8705

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS SRDCN
SRDCN Positive Inserts External Turning Tool-Holder
Porte-plaquettes tournage exterieur plaquettes positives SRDCN

New!



ISO	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8816		Ref. 8801	
SRDCN-2020K08	70728	RC..0803	20	20	125	37	10,00		M3×7 Art. 70192 €	5	ZT-8 Art. 10506 €	1
SRDCN-2525M08	70731		25	25	150	37	12,50					
SRDCN-2020K10	24355	RC..1003 / RC..10T3	20	20	125	35	10,00		M3,5×8,5 Art. 70740 €	5	ZT-15 Art. 10512 €	1
SRDCN-2525M10	67610		25	25	150	35	12,50					
SRDCN-2020K12	34448	RC..1204	20	20	125	38	10,00					
SRDCN-2525M12	70733		25	25	150	38	12,50					
SRDCN-2525M16	70735	RC..1606	25	25	150	35	12,50		M5×12 Art. 70746 €	5	ZT-20 Art. 13845 €	1

	Tornillo - Screw - Vis
	Destornillador Screwdriver Tournevis

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8705 SRDCN-2020K08

Plaquita / Insert / Plaquette: **Pag. 538**

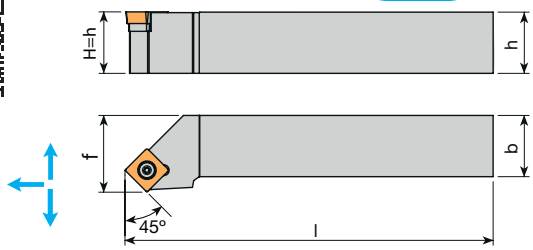
Ref. 8723

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS SSSC.-45º

SSSC.-45º Positive Inserts External Turning Tool-Holder

Porte-plaquettes tournage exterieur plaquettes positives SSSC.-45º

New!



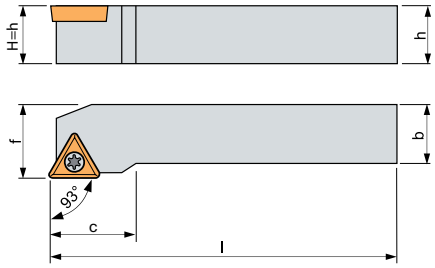
ISO	R Dcha.	Nº Art.	L Izda.	Nº Art.		h mm	b mm	l mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8816		Ref. 8801	
SSSCR-1212F09	●	28386			SC.. 09T3	12	12	80	16		-		-		T-15-M3,5×11 Art. 31558 €	5	ZT-15 Art. 10512 €	1
SSSCL-1212F09			●	67800		12	12	80	16		-		-					
SSSCR-1616H09	●	69642				16	16	100	20		SSSC-09 Art. 31553 €	5	M3,5×0,6x M5×0,5×11,3x 3,5xø6 Art. 31556 €	5	T-15-3,5×14 Art. 31560 €	5		
SSSCL-1616H09			●	28392		16	16	100	20									
SSSCR-2020K12	●	68959			SC.. 1204	20	20	125	25		SSSC-12 Art. 16147 €	5	M4,5×0,75x M6×0,75×13x 4,5×7,5 Art. 31557 €	5	T-20-M4,5×16 Art. 31559 €	5	ZT-20 Art. 13845 €	1
SSSCL-2020K12			●	28393		20	20	125	25									
SSSCR-2525M12	●	39344				25	25	150	32									
SSSCL-2525M12			●	28394		25	25	150	32									

Plaquita / Insert / Plaquette: **Pag. 539**

	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Ref. 8703

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS STJC.-93°
STJC.-93° Positive Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes positives STJC.-93°



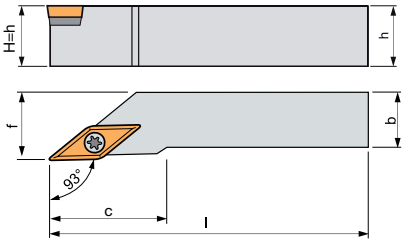
	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

	ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8801	
New!	STJCR-1010E09	●	83741			TC.. 0902..	10	10	70	14	12				T-06 Art. 83748 €	5	ZT-06 Art. 83747 €	1
New!	STJCL-1010E09			●	83742		10	10	70	14	12							
	STJCR-1616H11	●	18596			TC.. 1102..	16	16	100	22	20				T-07 Art. 10846 €	5	ZT-07 Art. 19569 €	1
	STJCL-1616H11			●	18649		16	16	100	22	20							
	STJCR-2020K16	●	18660			TC.. 16T3..	20	20	125	22	25		6,6×11,95x 13,55 Art. 26554 €	5	T-15 Art. 10847 €	5	ZT-16 Art. 10856 €	1
	STJCL-2020K16			●	18664		20	20	125	22	25							

Plaquita / Insert / Plaquette: **Pag. 541**

Ref. 8727

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS SVJB-93°
SVJB-93° Positive Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes positives SVJB-93°



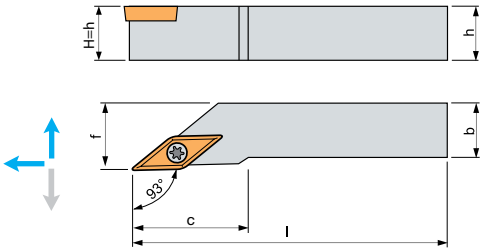
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8816		Ref. 8801	
SVJBR-1616H11	●	82835			VBMT 1103..	16	16	100	20	20		-		T-07 Art. 10846 €	5	-		ZT-07 Art. 19569 €	1
SVJBL-1616H11			●	82836		16	16	100	20	20									
SVJBR-2020K16	●	22041			VBMT 1604..	20	20	125	34	25		6,7x 26×8,4 Art. 10865 €	5	T-15 Art. 10847 €	5	M3,5x 0,6xM5x 0,5× 8,5x 5×6,2 Art. 29959 €	5	ZT-16 Art. 10856 €	1
SVJBL-2020K16			●	64137		20	20	125	34	25									
SVJBR-2525M16	●	82833				25	25	150	34	32									
SVJBL-2525M16			●	82834		25	25	150	34	32									

Plaquita / Insert / Plaquette: **Pag. 545**

	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Ref. 8728

PORTA-PLAQUITAS TORNEADO EXTERIOR PLAQUITAS POSITIVAS SVJC-93°
SVJC-93° Positive Inserts External Turning Tool-Holder
Porte-Plaquettes tournage extérieur plaquettes positives SVJC-93°



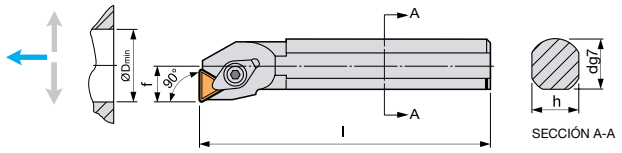
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		h mm	b mm	l mm	c mm	f mm	€	Ref. 8815		Ref. 8816		Ref. 8816		Ref. 8801	
SVJCR-1212F11	●	19413			VC.. 1103..	12	12	80	25	16						T-07 Art. 10846 €	5	ZT-07 Art. 19569 €	1
SVJCL-1212F11			●	19414		12	12	80	25	16									
SVJCR-2020K16	●	19417			VC.. 1604..	20	20	125	37	25		6,7×26×8,4 Art. 10865 €	5	M3,5×0,6x M5×0,5× 8,5x 5xø6,25 Art. 29959 €	5	T-15 Art. 10847 €	5	ZT-16 Art. 10856 €	1
SVJCL-2020K16			●	19419		20	20	125	37	25									

Plaquita / Insert / Plaquette: **Pag. 545**

Placa Base - Base Plate - Plaque de base | **Tornillo** - Screw - Vis | **Tornillo** - Screw - Vis | **Destornillador** - Screwdriver - Tournevis

Ref. 8715

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS POSITIVAS S-CTFP.-90°
S-CTFP.-90° Positive Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes positives S-CTFP.-90°



D_{min} = Diám. mín. Int. Pieza / Piece Int. min. Diam. / Diam. min intérieur pièce

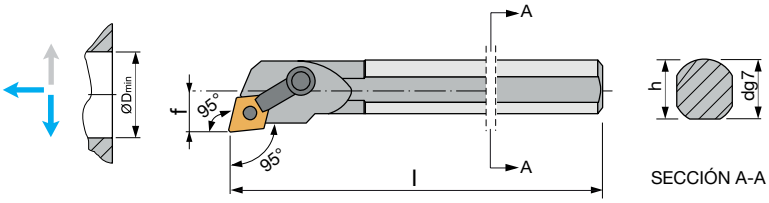
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	h mm	l mm	D_{min} mm	€	Ref. 8812	
S16R-CTFPR16	●	10882			TP.. 1603..	16	11	15	200	20		M6×1-15,3X5,2 Art. 10886 €	1
S16R-CTFPL16			●	10883		16	11	15	200	20			
S25T-CTFPR16	●	11546				25	17	23	300	32		M6×1-16,3X5 Art. 35216 €	1
S25T-CTFPL16			●	11560		25	17	23	300	32			

Plaquita / Insert / Plaquette: **Pag. 544**

Brida - Clamp - Bride

Ref. 8731

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS NEGATIVAS S-MCLN.-95°
S-MCLN.-95° Negative Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes negatives S-MCLN.-95°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

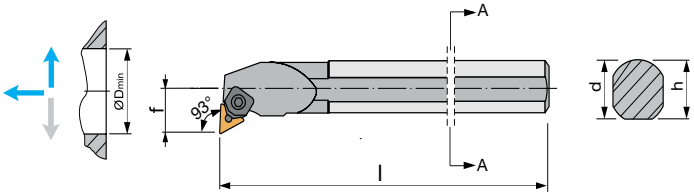
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8814		Ref. 8812		Ref. 8816	
S25T-MCL-NR12	●	19420			CNM. 1204..	25	17	300	32				2,5-1/4"x26-13,3×3,5×4,2 Art. 10897 €	5	M6x 1-18,5x 13,5 Art. 10901 €	1	M6x 1-7,1x 7,1x 20,5 Art. 21413 €	1
S25T-MCLNL12			●	19425		25	17	300	32									
S32U-MCL-NR12	●	19426				32	22	350	40		7,4×12,45 x12,45 Art. 26553 €	5	2,5-1/4"x26-17,2×4×5,3 Art. 10900 €	5			M6x 1-18,5x 13,5 Art. 59918 €	1
S32U-MCLNL12			●	19429		32	22	350	40									

Plaquita / Insert / Plaquette: **Pag. 532, 534**

Placa Base - Base Plate - Plaque de base | **Pasador** - Pin - Goupille | **Brida** - Clamp - Bride

Ref. 8732

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS NEGATIVAS S-MTUN.-93°
S-MTUN.-93° Negative Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes negatives S-MTUN.-93°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

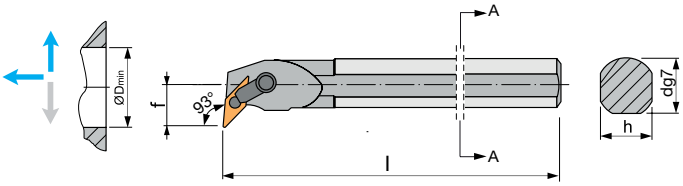
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8814		Ref. 8812		Ref. 8816	
S25T-MTUNR16	●	35233			TNM. 1604..	25	17	300	34		6,6×11,95 x13,55 Art. 26554 €	5	M3×0,5-ø4,5x 10,1×5 Art. 30573 €	5	M8x 1-23,7 Art. 26556 €	1	M3×0,5-5,9×4,1xø5,5 Art. 35239 €	5
S25T-MTUNL16			●	35234		25	17	300	34									
S32U-MTUNR16	●	35235				32	22	350	39								M3×0,8-7×4xø5,5 Art. 10544 €	5
S32U-MTUNL16			●	35236		32	22	350	39									
S40V-MTUNR22	●	35237			TNM. 2204..	40	27	400	48		7,4×17,3 x19,7 Art. 13864 €	5						
S40V-MTUNL22			●	35238		40	27	400	48									

Plaquita / Insert / Plaquette: **Pag. 542**

Placa Base - Base Plate - Plaque de base | **Pasador** - Pin - Goupille | **Brida** - Clamp - Bride | **Tornillo** - Screw - Vis

Ref. 8769

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS NEGATIVAS S-MVUN-93°
S-MVUN-93° Negative Inserts Internal Turning Tool-Holder
Porte-Plaquettes Tournage Intérieur Plaquettes Negatives S-MVUN-93°



D_{min} = Diám. mín. Int. Pieza / Piece Int. min. Diam. / Diam. min intérieur pièce

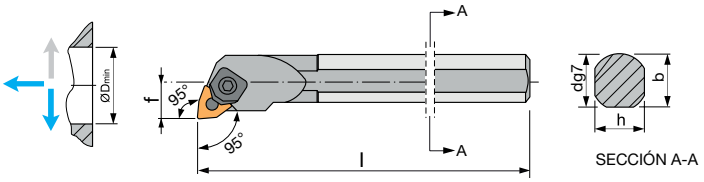
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	h mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8814		Ref. 8816		Ref. 8812	
S25T-MVUNR16	●	29968			VNMG 1604..	25	17	23	300	31		**MVJN-16** Art. 30576 **€**	5	**M5x 0,8-13x 2,3×5** Art. 29967 **€**	5	**M6x 1-R-L-20,5x 7,1** Art. 29965 **€**	5	**M6x 1-21,7x 13,5** Art. 29970 **€**	1
S25T-MVUNL16			●	29969		25	17	23	300	31									

Plaquita / Insert / Plaquette: **Pag. 546**

	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Tornillo - Screw - Vis
	Brida - Clamp - Bride

Ref. 8780

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS NEGATIVAS S-MWLN.-95°
S-MWLN.-95° Negative Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes negatives S-MWLN.-95°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

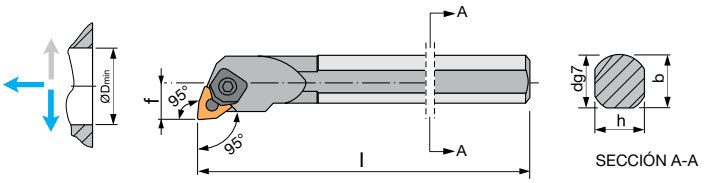
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8814		Ref. 8812		Ref. 8816	
S25T-MWL-NR06	●	19461			WNMG 0604..	25	17	300	32		5,1x 10,85 x11,3 Art. 10567 €	5	M3x 0,5-ø4,5x 10,1×5 Art. 30573 €	5	M5×0,5-16,6×6,8 Art. 10540 €	1	M3×0,8-7×4xø5,5 Art. 10544 €	5
S25T-MWL-NL06			●	19463		25	17	300	32									

Plaquita / Insert / Plaquette: **Pag. 547**

	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Brida - Clamp - Bride
	Tornillo - Screw - Vis

Ref. 8800

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS NEGATIVAS S-MWLN.-95°
S-MWLN.-95° Negative Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes negatives S-MWLN.-95°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

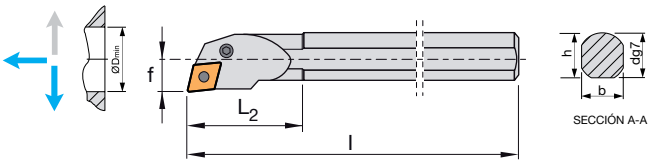
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8814		Ref. 8812		Ref. 8816	
S25T-MWLNR08	●	19527			WNMG 0804..	25	17	300	32				S25-MWLN-08 Art. 30574 €	5	P/MW-08 Art. 61061 €	1	2,5-M4x 0,7-5,5x 3,7 Art. 30571 €	5
S25T-MWLNL08			●	19529		25	17	300	32									
S32U-MWLNR08	●	19551				32	22	350	40		7,4×15,35 x15,95 Art. 35232 €	5	M4×0,7-ø6×12,5×5,6 Art. 30575 €	5				
S32U-MWLNL08			●	19567		32	22	350	40									

Plaquita / Insert / Plaquette: **Pag. 547**

	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Brida - Clamp - Bride
	Tornillo - Screw - Vis

Ref. 8733

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS NEGATIVAS S-PCLN.-95°
S-PCLN.-95° Negative Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes negatives S-PCLN.-95°



D_{min} = Diám. mín. Int. Pieza / Piece Int. min. Diam. / Diam. min intérieur pièce

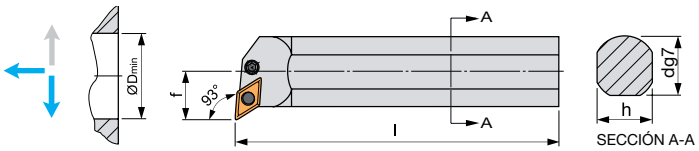
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8813		Ref. 8816	
S25T-PCLNR12	●	72042			CNM. 1204..	25	17	300	25				13,4X12,1X4,7 Art. 72057 €	5	M6X1-13,4X6 Art. 72060 €	1
S25T-PCLNL12			●	72043		25	17	300	25							
S32U-PCLNR12	●	44562				32	22	350	32		11,68X6,80X3,18 Art. 44952 €	1	13,5X13,2X4,2 Art. 72058 €	5	M8X1-17X8 Art. 44950 €	1
S32U-PCLNL12			●	72046		32	22	350	32							

Plaquita / Insert / Plaquette: **Pag. 532, 534**

	Placa Base - Base Plate - Plaque de base
	Palanca - Lever - Levier
	Tornillo - Screw - Vis

Ref. 8765

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS NEGATIVAS S-PDUN.-93°
S-PDUN.-93° Negative Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes negatives S-PDUN.-93°



D_{min} = Diám. mín. Int. Pieza / Piece Int. min. Diam. / Diam. min intérieur pièce

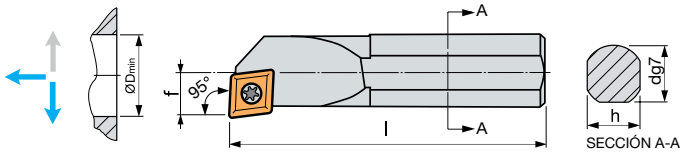
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	h mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8813		Ref. 8814		Ref. 8816	
S25T-PDUNR11	●	13528			DNMG 1104..	25	17	23	300	32		4,9x 17×8,5 Art. 13794 €	5	12x 10,2 Art. 13797 €	5	4,9x ø5,79x 4,6×5,2 Art. 35218 €	5	M6x 1-16,7x 8,65xø6 Art. 13795 €	5
S25T-PDUNL11			●	13529		25	17	23	300	32									
S32U-PDUNR15	●	11346			DNMG 1504..	32	22	30	350	40		6,4x 23,4×11,6 Art. 13869 €	5	14,7x 16,2 Art. 13868 €	5	6,6x ø7x 5,8×5,2 Art. 35219 €	5	M8x 1-17x 9,1xø8 Art. 13819 €	5
S32U-PDUNL15			●	11488		32	22	30	350	40									

Plaquita / Insert / Plaquette: **Pag. 536**

	Placa Base - Base Plate - Plaque de base
	Palanca - Lever - Levier
	Pasador - Pin - Goupille
	Tornillo - Screw - Vis

Ref. 8751

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS POSITIVAS S-SCLC.-95°
S-SCLC.-95° Positive Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes positives S-SCLC.-95°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

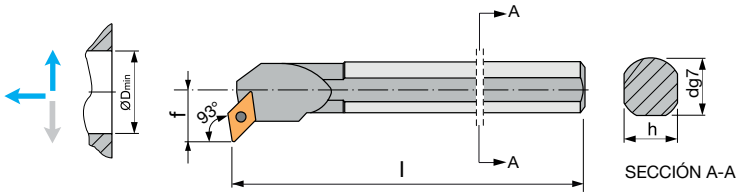
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	l mm	h mm	D_{min} mm	€	Ref. 8816		Ref. 8801	
S08K-SCLCR06	●	19432			CC.. 060204	08	5	125	7	11		T-07 Art. 21056 €	5	ZT-07 Art. 19569 €	1
S08K-SCLCL06			●	19434		08	5	125	7	11					
S10M-SCLCR06	●	19435				10	7	150	9	13					
S10M-SCLCL06			●	19438		10	7	150	9	13					
S12M-SCLCR06	●	26469				12	9	150	11	16					
S12M-SCLCL06			●	26473		12	9	150	11	16					
S16R-SCLCR09	●	19440			CC.. 09T308	16	11	200	15	20		T-15 Art. 35217 €	5	ZT-15 Art. 10512 €	1
S16R-SCLCL09			●	19441		16	11	200	15	20					
S20S-SCLCR09	●	19443				20	13	250	18	25					
S20S-SCLCL09			●	19444		20	13	250	18	25					

Plaquita / Insert / Plaquette: **Pag. 530**

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Ref. 8761

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS POSITIVAS S-SDUC.-93°
S-SDUC.-93° Positive Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes positives S-SDUC.-93°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

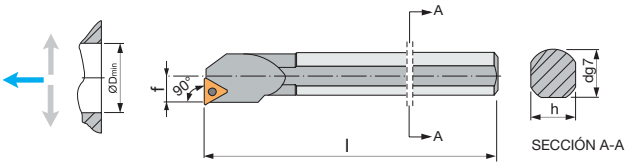
ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	l mm	h mm	D_{min} mm	€	Ref. 8816		Ref. 8801	
S12M-SDUCR07	●	26478			DC.. 0702..	12	9	150	11	16		T-07 Art. 10846 €	5	ZT-07 Art. 19569 €	1
S12M-SDUCL07			●	26479		12	9	150	11	16					
S16R-SDUCR07	●	19446				16	11	200	15	20					
S16R-SDUCL07			●	19449		16	11	200	15	20					
S20S-SDUCR11	●	19450			DC.. 11T3..	20	13	250	18	25		T-15 Art. 10895 €	5	ZT-15 Art. 10512 €	1
S20S-SDUCL11			●	19452		20	13	250	18	25					

Plaquita / Insert / Plaquette: **Pag. 534, 535**

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Ref. 8718

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS POSITIVAS S-STFC.-90°
S-STFC.-90° Positive Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes positives S-STFC.-90°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

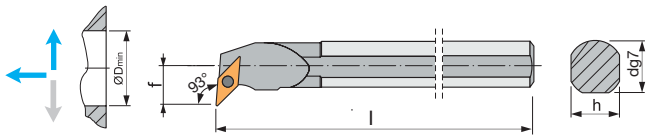
	ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	h mm	l mm	D_{min} mm	€	Ref. 8816		Ref. 8801	
New!	S10M-STFCR09	●	17134			TC.. 0902..	10	7	9	150	13		T-06 Art. 83748 €	5	ZT-06 Art. 83747 €	1
New!	S10M-STFCL09			●	83743		10	7	9	150	13					
	S12M-STFCR11	●	18761			TC.. 1102..	12	9	11	150	16		T-07 Art. 10846 €	5	ZT-07 Art. 19569 €	1
	S12M-STFCL11			●	18791		12	9	11	150	16					
	S25T-STFCR16	●	18789			TC.. 16T3..	25	17	23	300	32		T-15 M3,5 Art. 88333 €	5	ZT-15 Art. 10512 €	1
	S25T-STFCL16			●	18804		25	17	23	300	32		T-15 Art. 10895 €			

Plaquita / Insert / Plaquette: **Pag. 541**

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Ref. 8768

PORTA-PLAQUITAS TORNEADO INTERIOR PLAQUITAS POSITIVAS S-SVUC.-93°
S-SVUC.-93° Positive Inserts Internal Turning Tool-Holder
Porte-Plaquettes tournage intérieur plaquettes positives S-SVUC.-93°



D_{min} = **Diám. mín. Int. Pieza** / Piece Int. min. Diam. / Diam. min intérieur pièce

ISO	R Dcha.	N° Art.	L Izda.	N° Art.		d mm	f mm	h mm	l mm	D_{min} mm	€	Ref. 8815		Ref. 8816		Ref. 8816		Ref. 8801	
S16R-SVUCR11	●	19455			VC.. 1103..	16	11	15	200	20						T-07 Art. 10846 €	5	ZT-07 Art. 19569 €	1
S16R-SVUCL11			●	19456		16	11	15	200	20									
S25T-SVUCR16	●	19457			VC.. 1604..	25	17	23	300	32		6,7x 26×8,4 Art. 10865 €	5	M3,5×0,6x M5×0,5 x8,5×5xø6,25 Art. 29959 €	5	T-15 Art. 10847 €	5	ZT-16 Art. 10856 €	1
S25T-SVUCL16			●	10910		25	17	23	300	32									

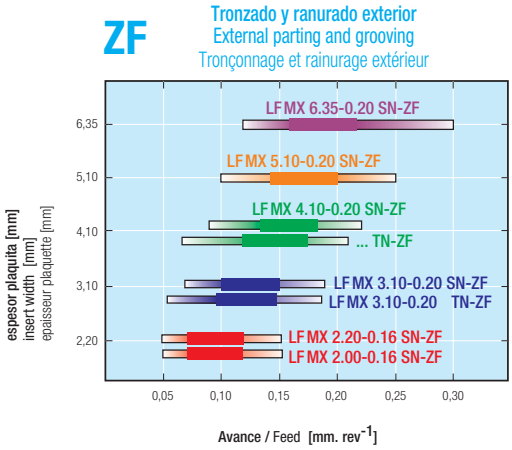
Plaquita / Insert / Plaquette: **Pag. 545**

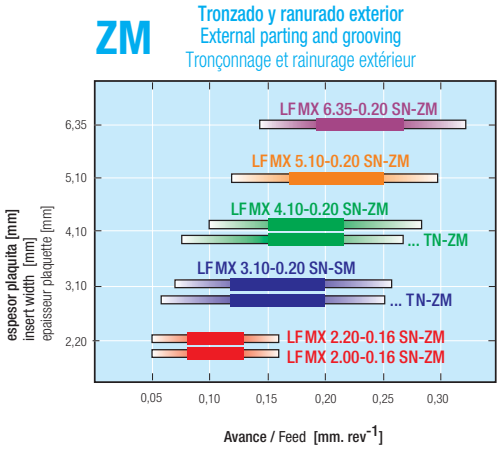
	Placa Base - Base Plate - Plaque de base
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

TRONZADO Y RANURADO
Parting & Grooving
Tonçonnage et rainurage

PLAQUITAS INTERCAMBIABLES TRONZADO Y RANURADO
Parting & Grooving Indexable Inserts
Plaquettes interchangeables tronçonnage et rainurage

VELOCIDADES DE CORTE RECOMENDADAS PARA TRONZADO Y RANURADO
Recommended Cutting Speeds for Parting and Grooving
Vitesses de coupe conseillées pour tronçonnage et rainurage





VELOCIDADES INICIALES RECOMENDADAS TRONZADO Y RANURADO EXTERIOR
Recommended initial Speeds for External Parting & Grooving
Vitesses initiales conseillées tronçonnage et rainurage

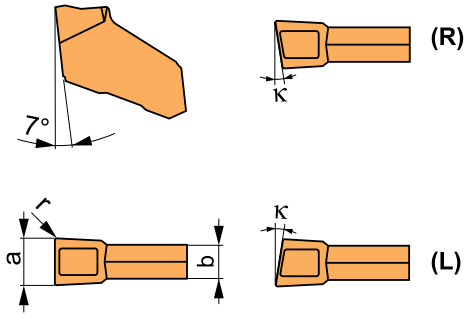
Grad.	P	M	K	S	N-Al	N-Cu	H
C-540	120-230	70-120	60-120	-	-	-	-
P-625	110-220	60-115	55-110	-	-	80-120	-

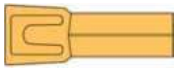
VC. INICIALES RECOMENDADAS PARA RANURADO
Recommended initial Speeds for Grooving
Vc initiales conseillées pour rainurage

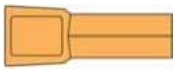
Grad.	P	M	K	S	N-Al	N-Cu	H
C-540	90-160	50-100	40-90	-	-	-	-
P-625	80-130	40-85	40-80	-	-	-	-

Ref. 8600

PLAQUITA INTERCAMBIABLE TRONZADO Y RANURADO LFMX
LFMX Parting & Grooving Indexable Insert
Plaquette tronçonnage et rainurage LFMX







ISO	Dimensiones Dimensions a ±0,06 mm	b mm	r mm	k°		N° Art. C-540	N° Art. P-625	€
Corte continuo - Constant cut - Coupe constante								
LFMX-2.00-0.16-SN-ZF	2,00	1,60	0,16		10	29981	13418	
LFMX-3.10-0.20-SN-ZF	3,10	2,60	0,20		10	13421	13423	
LFMX-3.10-0.20-TN-ZF	3,10	2,60	0,20		10	30441	13429	
Corte interrumpido - Interrupted cut - Coupe interrompue								
LFMX-2.00-0.16-SN-ZM	2,00	1,60	0,16		10	30153	13420	
LFMX-3.10-0.20-SN-ZM	3,10	2,60	0,20		10	30154	13424	
LFMX-3.10-0.20-SL-ZM	3,10	2,60	0,20	8	10		13426	
LFMX-3.10-0.20-SR-ZM	3,10	2,60	0,20	8	10		13427	
LFMX-3.10-0.20-TN-ZM	3,10	2,60	0,20		10	30448	13430	
LFMX-4.10-0.20-SN-ZM	4,10	3,60	0,20		10	13432	13433	
LFMX-4.10-0.20-SL-ZM	4,10	3,60	0,20	8	10		13435	
LFMX-4.10-0.20-SR-ZM	4,10	3,60	0,20	8	10		13436	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8600 LFMX-2,00-0,16-SN-ZF C-540

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 576, 577**

SN

Geometría idonea para aceros al carbono, fundición y piezas forjadas.
Ideal geometry for carbon steels, cast iron & forged pieces.
Géométríe idéal pour aciers carbure, fonte et pièces forgés.

TN

Geometría idonea para aluminio, cobre y aleaciones de titanio.
Ideal geometry for aluminium, copper & titanium alloys.
Géométríe idéal pour aluminium, cuivre et alliages de titane.

ZF

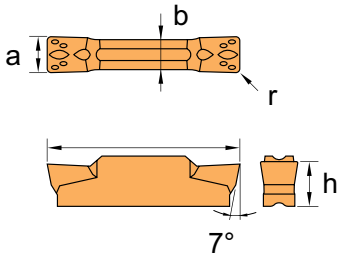
Rompevirutas ZF para tronzado y ranurado en acero y fundición.
Para corte continuo.
ZF Chipbreaker for parting & grooving in steel & cast iron.
For constant cut.
Brisecopeaux ZF pour tronçonnage et rainurage en acier et fonte.
Pour coupe constante.

ZM

Rompevirutas ZM para tronzar aceros de baja aleación e INOX austenítico.
Corte interrumpido moderado.
ZM Chipbreaker for parting in low alloy steel & austenitic stainless. Reasonably interrupted cut.
Brisecopeaux ZM pour tronçonnage aciers de faible alliage et INOX Austénitique.
Coupe raisonnablement interrompue.

Ref. 8601

PLAQUITA INTERCAMBIABLE TRONZADO Y RANURADO MGMN
MGMN Parting & Grooving Indexable Insert
Plaquette tronçonnage et rainurage MGMN

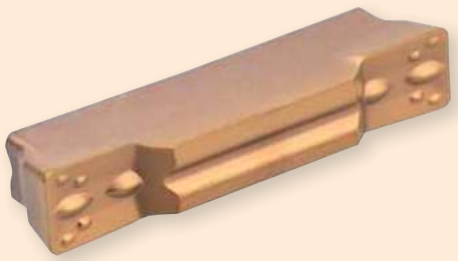


ISO	a mm	b mm	l mm	h mm	r mm		N° Art. P-625	N° Art. P-640	€
MGMN-2.00-0.20-GC-ZF	2	1,60	16	3,50	0,20	10	12708	19184	
MGMN-3.00-0.40-GC-ZF	3	2,35	21	4,80	0,40	10	12712	19188	
MGMN-4.00-0.40-GC-ZF	4	3,30	21	4,80	0,40	10	12713	19190	

*** Recomendamos la calidad P-625 para corte continuo y la calidad P-640 para corte discontinuo**
* We recommend grade P-625 for continuous cutting and grade P-640 for interrupted cutting
* Nous recommandons le degré P-625 pour une coupe continue et le degré P-640 pour une coupe interrompue

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8601 MGMN-2.00-0.20-GC-ZF P-625

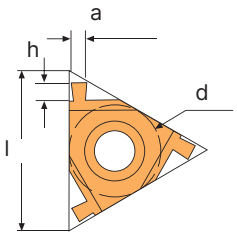
Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 578**

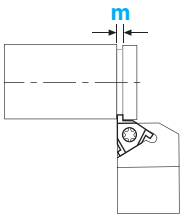


Ref. 8603

PLAQUITA INTERCAMBIABLE RANURADO EXTERIOR TN..ER.A
TN..ER.A External Grooving Indexable Insert
Plaquette rainurage extérieur TN..ER.A

EXT. **RANURADO Seeger®**
Grooving Seeger®
Rainurage Seeger®





ISO * ER=IL	DIN 471 m mm (min.)	Dimensiones Dimensions d mm	l mm	a mm	h mm		N° Art. P-625	€
TN-16-ER-A-100	**0,90**	9,525	16,00	1,00	1,40	10	79738	
TN-16-ER-A-120	**1,10**	9,525	16,00	1,20	1,60	10	79739	
TN-16-ER-A-140	**1,30**	9,525	16,00	1,40	1,80	10	79740	
TN-16-ER-A-170	**1,60**	9,525	16,00	1,70	2,00	10	79741	
TN-16-ER-A-195	**1,85**	9,525	16,00	1,95	2,00	10	79742	
TN-16-ER-A-225	**2,15**	9,525	16,00	2,25	2,25	10	79743	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8603 TN-16-ER-A-100 P-625

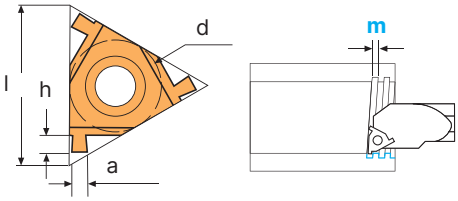
Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 588**

*** ER = IL** → **Exterior Derecha válida para Interior Izquierda**
Right External valid for Left Internal
Extérieur droit valide pour intérieur gauche

Ref. 8606

PLAQUITA INTERCAMBIABLE RANURADO INTERIOR TN..IR.A
TN..IR.A Internal Grooving Indexable Insert
Plaquette rainurage intérieur TN..IR.A

INT. **RANURADO Seeger®**
Grooving Seeger®
Rainurage Seeger®



ISO * EL=IR	DIN 472 m mm (min.)	Dimensiones Dimensions d mm	l mm	a mm	h mm		N° Art. P-625	€
TN-16-IR-A-100	**0,90**	9,525	16,00	1,00	1,40	10	79748	
TN-16-IR-A-120	**1,10**	9,525	16,00	1,20	1,60	10	79749	
TN-16-IR-A-140	**1,30**	9,525	16,00	1,40	1,80	10	79750	
TN-16-IR-A-170	**1,60**	9,525	16,00	1,70	2,00	10	79751	
TN-16-IR-A-195	**1,85**	9,525	16,00	1,95	2,00	10	79752	
TN-16-IR-A-225	**2,15**	9,525	16,00	2,25	2,25	10	79753	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8606 TN-16-IR-A-100 P-625

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 588**

*** EL = IR** → **Exterior Izquierda válida para Interior Derecha**
Left External valid for Right Internal
Extérieur gauche valide pour intérieur droit

Ref. 8605

SET RANURADO SEEGER®
Grooving Set Seeger®
Jeu rainurage Seeger®

Plaquitas especiales
para ranuras de anillos tipo Seeger®

Special inserts
for Seeger® type rings

Plaquettes spéciales
pour bagues Seeger®

EXT.

INT.

ER=IL

Ref. 8603
RANURADO EXTERIOR
External Grooving
Rainurage extérieur

EL=IR

Ref. 8606
RANURADO INTERIOR
Internal Grooving
Rainurage intérieur

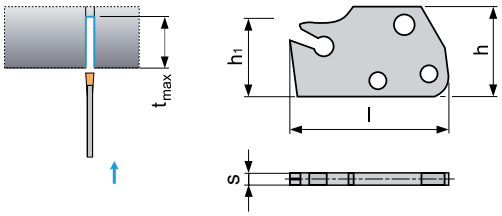
Set 10 Pcs

Cont	N° Art.	€
Ref. 8603 EXT (DIN 471) - TN-16-ER-A 1,20 - 1,40 - 1,70 1,95 - 2,25 **Ref. 8606 INT** (DIN 472) - TN-16-IR-A 1,20 - 1,40 - 1,70 1,95 - 2,25	79672	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: Pag. 588

Ref. 8850

LAMA PORTA-PLAQUITAS TRONZADO Y RANURADO XLCF
XLCF Parting & Grooving Tool-Holder Blade
Lame Porte-Plaquettes tronçonnage et rainurage XLCF



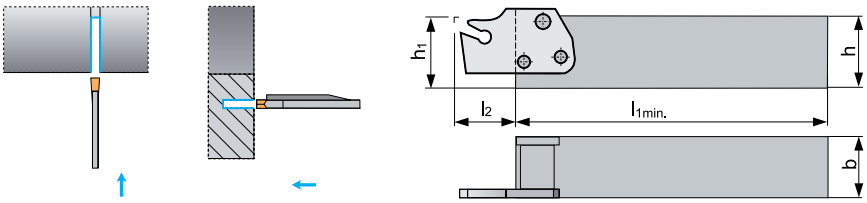
ISO	N° Art.		h_1 mm	h mm	l mm	s mm	t_{max} mm	€
XLCFR-160115-2	13543	LFMX-2.00....	12,3	25	34	1,4	15	
XLCFL-160115-2	13544		12,3	25	34	1,4	15	
XLCFN-160220-3	13549	LFMX-3.10....	12,3	25	40	2,4	20	
XLCFR-250115-2	13546	LFMX-2.00....	24,0	29	40	1,4	15	
XLCFL-250115-2	13547		24,0	29	40	1,4	15	
XLCFN-250225-3	13550	LFMX-3.10....	24,0	29	50	2,4	25	
XLCFN-250325-4	13552	LFMX-4.10....	24,0	29	50	3,4	25	

XLCFN: Neutra Neutral Neutre
XLCFR: Derecha Right Droite
XLCFL: Izquierda Left Gauche

Plaquita / Insert / Plaquette: **Pag. 572**

Ref. 8860

PORTA-PLAQUITAS TRONZADO Y RANURADO MS-EN
MS-EN Parting & Grooving Tool-Holder
Porte-Plaquettes tronçonnage et rainurage MS-EN



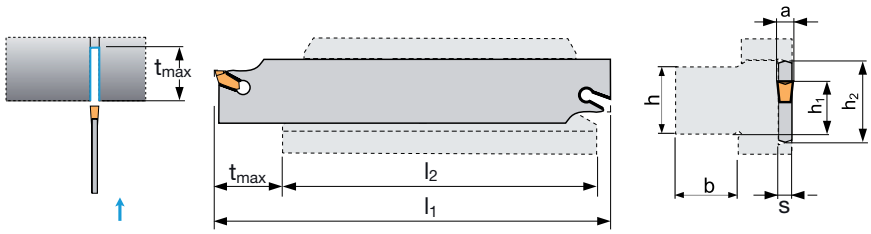
ISO	N° Art.		h_1 mm	h mm	b mm	l_1 mm	l_2 mm	€			Ref. 8802		Ref. 8801	
MS-EN-1616-H	13553	XLCF - 160115 / 160220	16	16	16	100	20		T-15 Ref. 8816 Art. 10895 €	5	-		ZT-1 Art. 10512 €	1
MS-EN-2020-K	13555	XLCF - 250115 / 250225	20	20	20	125	25		ZUS-45 Ref. 8802 Art. 13852 €	5	ZUS-46 Art. 13853 €	5	ZT-20 Art. 13845 €	1
MS-EN-2525-M	13556	XLCF - 25..15 / 25..25	25	25	25	150	25							

Plaquita / Insert / Plaquette: **Pag. 572**

	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Ref. 8870

LAMA PORTA-PLAQUITAS TRONZADO Y RANURADO XLCFN
XLCFN Parting & Grooving Tool-Holder Blade
Lame Porte-Plaquettes tronçonnage et rainurage XLCFN

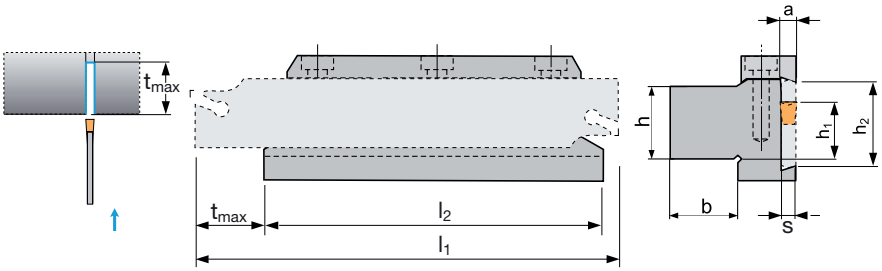


ISO	N° Art.		h_1 mm	h_2 mm	l_1 mm	s mm	t_{max} mm	€
XLCFN-2601-J-2.00	13558	LFMX-2.00....	20	26	110	1,6	25	
XLCFN-2602-J-3.00	13561	LFMX-3.10....	20	26	110	2,4	40	
XLCFN-2603-J-4.00	13564	LFMX-4.10....	20	26	110	3,4	40	
XLCFN-3201-M-2.00	13565	LFMX-2.00....	25	32	150	1,6	25	
XLCFN-3202-M-3.00	13567	LFMX-3.10....	25	32	150	2,4	50	
XLCFN-3203-M-4.00	13568	LFMX-4.10....	25	32	150	3,4	50	

Plaquita / Insert / Plaquette: **Pag. 572**

Ref. 8875

PORTA-PLAQUITAS TRONZADO Y RANURADO XLCFN
XLCFN Parting & Grooving Tool-Holder
Porte-Plaquettes tronçonnage et rainurage XLCFN



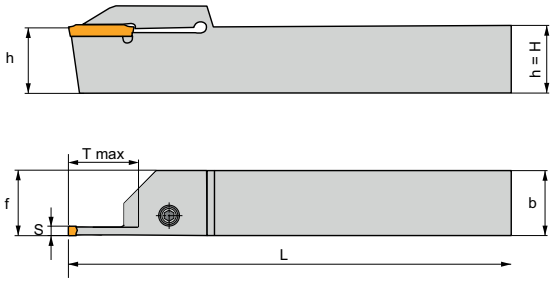
ISO	N° Art.		h_1 mm	h_2 mm	b mm	l_2 mm	€		
								Ref. 8802	
26-DU-2020	13570	XLCFN-26....	20	26	20	90		ZM-6X20 Art. 13849 €	5
32-DU-2532	13571	XLCFN-32....	25	32	25	110			

Plaquita / Insert / Plaquette: **Pag. 572**

Tornillo - Screw - Vis

Ref. 8865

PORTA-PLAQUITAS TRONZADO Y RANURADO XMCG
XMCG Parting & Grooving Tool-Holder Blade
Porte plaquettes tronçonnage et rainurage XMCG



ISO	R Dcha.	N° Art.	L Izda.	N° Art.		H mm	b mm	f mm	S mm	L mm	Tmax mm	€	Ref. 8816	
XMCGR-1212-K-2.00	●	24534			MGMN-2.00....	12	12	12	2	125	16		M5×16 Art. 19194 €	5
XMCGL-1212-K-2.00			●	70269		12	12	12	2	125	16			
XMCGR-1616-K-2.00	●	12727				16	16	16	2	125	16			
XMCGL-1616-K-2.00			●	20052		16	16	16	2	125	16			
XMCGR-1616-K-3.00	●	19699			MGMN-3.00....	16	16	16	3	125	18			
XMCGL-1616-K-3.00			●	19700		16	16	16	3	125	18			
XMCGR-2020-K-3.00	●	12729				20	20	20	3	125	18		M5×20 Art. 19196 €	5
XMCGL-2020-K-3.00			●	20060		20	20	20	3	125	18			
XMCGR-2020-M-4.00	●	70280			MGMN-4.00....	20	20	20	4	150	18			
XMCGL-2020-M-4.00			●	70272		20	20	20	4	150	18			
XMCGR-2525-M-4.00	●	12730				25	25	25	4	150	18		M6×20 Art. 19216 €	5
XMCGL-2525-M-4.00			●	20067		25	25	25	4	150	18			

Plaquita / Insert / Plaquette: **Pag. 573**

Tornillo - Screw - Vis

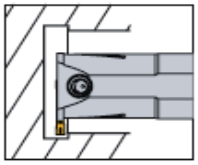
Ref. 8866

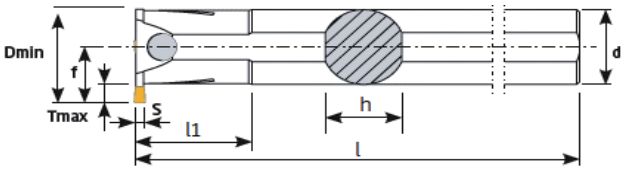
PORTA-PLAQUITAS DE RANURADO INTERIOR S-GMGG

S-GMGG Internal Grooving Tool-Holder

Porte-plaquettes rainurage intérieur S-GMGG

New!



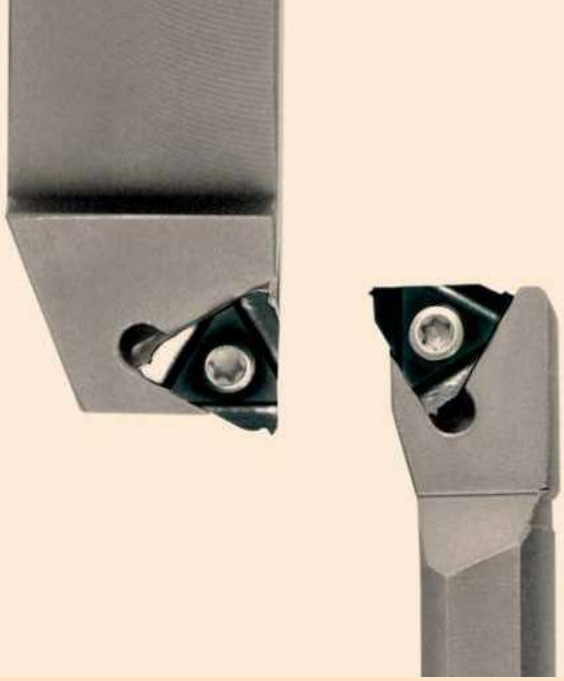


ISO	R Dcha.	N° Art.		d mm	h mm	f mm	l mm	l1 mm	Dmin mm	Tmax mm	s mm	€	Ref. 8816	
S16Q-GMGGR02	●	25493	MGMN-2.00....	16	15	12,50	180	35	21	5,00	2		M5×12 Art. 25531 €	5
S20Q-GMGGR03	●	25494	MGMN-3.00....	20	18	15,50	180	35	26	6,00	3			
S25R-GMGGR03	●	25504		25	23	19,00	200	40	32	6,70	3		M5×16 Art. 19194 €	5
S25R-GMGGR04	●	25506	MGMN-4.00....	25	23	18,20	200	40	31	6,00	4			
S32S-GMGGR04	●	25507		32	30	21,50	250	60	38	6,00	4		M6×20 Art. 19216 €	5

*** Portaplaquitas a izquierdas bajo demanda**
*** Left-Hand Tool-Holder upon request**
* Porte-plaquettes à gauche sur demande

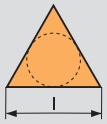
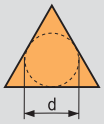
Plaquita / Insert / Plaquette: **Pag. 573**

Tornillo - Screw - Vis



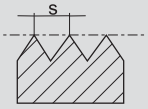
ROSCADO
Threading
Taraudage

CÓDIGOS ISO ELECCIÓN PLAQUITAS ROSCADO
Threading insert Choice ISO Codes
Codes ISO choix plaquettes taraudage

1	2	3		4
Forma Plaquita Insert Shape Forme plaquette	**Angulo Incidencia** Clearance Angle Angle d'incidence	**Longitud Filo de Corte** Cutting Edge Length Longueur arête coupe		**Exterior - Interior** External - Internal Extérieur - Intérieur
				**Exterior** - External - Extérieur
				E
		11	11,0	**Interior** - Internal - Intérieur
		16	9,525	
T	**N**	22	12,7	**I**

1	2	3	4	5	6	7
T	**N**	**16**	**E**	**R**	**175**	**M**

5
Tipo Plaquita Insert type Type plaquette
Dcha. - Right - Droit
R
Izda. - Left - Gauche
L
Neutra - Neutral - Neutre
N

6	
Paso Rosca Thread pitch Pas filetage	
Paso Rosca Thread pitch Pas filetage	**N.º Pasos / Pulgada** Number of pitches per inch Nombre Pas / Pouces
 s x 100	**N.º Pasos / Pulgada x 10** Number of pitches per inch x 10 Nombre Pas / Pouces x 10

7	
Perfil Rosca Thread profile Profil filetage	
M	métrica / metric / métrique 60° ISO
W	Whitworth 55°

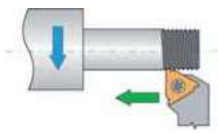
TÉCNICAS PRODUCCIÓN Y AVANCE PLAQUITAS ROSCADO
Threading Insert Production & Feed Techniques
Téchniques production et avance plaquettes taraudage

Roscado hacia el Plato: Los apoyos originales sirven para la mayoría de las operaciones.

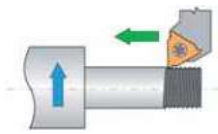
Threading through the Face Plate: The original supports are suitable for most operations.

Taraudage vers le plateau: Les appuis originaux s´emploient dans la plupart des operations.

Roscado Exterior Derecha
External Right Threading
Taraudage Extérieur Droite



Roscado Exterior Izquierda
External Left Threading
Taraudage Extérieur Gauche

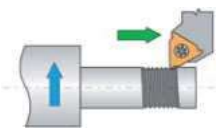


Roscado desde el Plato

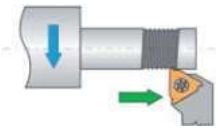
Threading from the Face Plate

Taraudage depuis le plateau

Roscado Exterior Derecha
External Right Threading
Taraudage Extérieur Droite



Roscado Exterior Izquierda
External Left Threading
Taraudage Extérieur Gauche

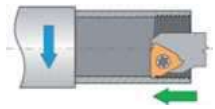


Roscado hacia el Plato: Los apoyos originales sirven para la mayoría de las operaciones.

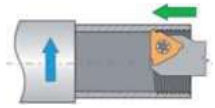
Threading through the Face Plate: The original supports are suitable for most operations.

Taraudage vers le plateau: Les appuis originaux s´emploient dans la plupart des operations.

Roscado Interior Derecha
Internal Right Threading
Taraudage Intérieur Droite



Roscado Interior Izquierda
Internal Left Threading
Taraudage Intérieur Gauche

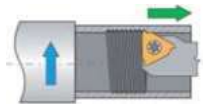


Roscado desde el Plato: La viruta se evacua correctamente hacia el exterior.

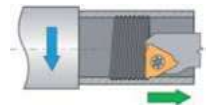
Threading from the Face Plate: Good chipping-off through the outside.

Taraudage depuis le plateau: Les copeaux s´évacuent correctemment vers l´extérieur.

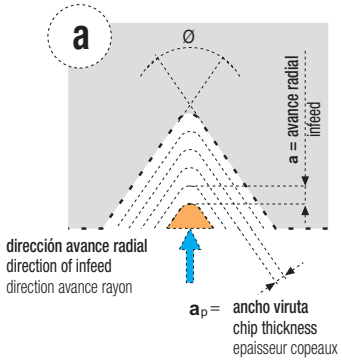
Roscado Interior Derecha
Internal Right Threading
Taraudage Intérieur Droite



Roscado Interior Izquierda
Internal Left Threading
Taraudage Intérieur Gauche



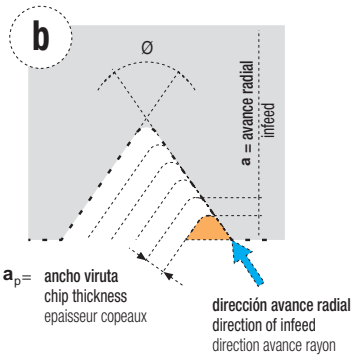
Existen diferentes Técnicas de Avance: **a) Avance Radial** **b) Avance Lateral** **c) Avance Lateral Modificado** **d) Avance Alternativo**
There are different Infeed Techniques: **a) Radial Infeed** **b) Side Infeed** **c) Modified Side Infeed** **d) Alternate Infeed**
Ils existent Différentes types d´avance: a) Avance rayon b) Avance latéral c) Avance latéral modifié d) Avance altérnatif



El metodo más común, para máquinas convencionales. 1ª elección en materiales que se auto-endurecen al ser mecanizados, p.e. INOX austenítico.

Commonest technique, for conventional machines. 1st choice in auto-hardened materials while machining, f.e. austenitic stainless.

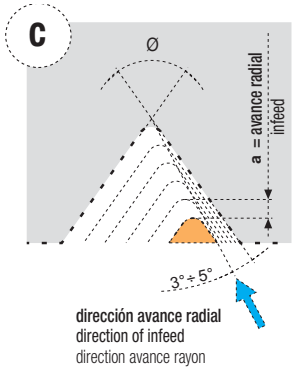
La méthode la plus employée pour machines conventionnelles. 1er Choix pour matériaux qui augmentent sa dureté sur l´usinage, Par example. INOX Austénitique.



Para máquinas convencionales y CNC, buen control de viruta y no apropiado para materiales que se auto-endurecen.

For conventional & CNC machines, good chip-control & not suitable for auto-hardened materials.

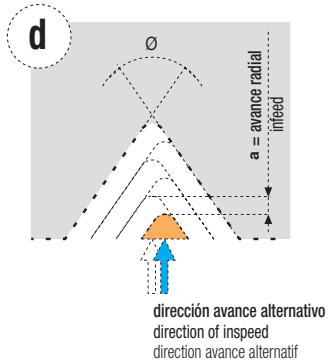
Pour machines conventionnelles et CNC, bon contrôle des copeaux et pas convenable pour matériaux qui augmentent eux même sa dureté.



Buen control de viruta, adecuada para roscas de grandes pasos e interiores. Para evitar un excesivo desgaste por el roce del filo posterior, el áng. de avance debe ser 3-5° menor que el áng. de rosca.

Good chip-control, suitable for internal & large pitch threads. To avoid an excessive wear due to the back edge friction, feed angle should be 3-5° smaller than thread angle.

Bon Contrôle des copeaux, Idéale pour taraudages grands pas e intérieurs. Pour éviter une excesive usure du au filet postérieur, l´angle d´avance doit être 3-5° inférieur que l´angle de taraudage.



Permite un desgaste uniforme de la plaquita e incrementa su vida. 1ª opción en roscas de paso grande.

Allows a uniform insert wear and in-creases its life. 1st choice in big pitch threads.

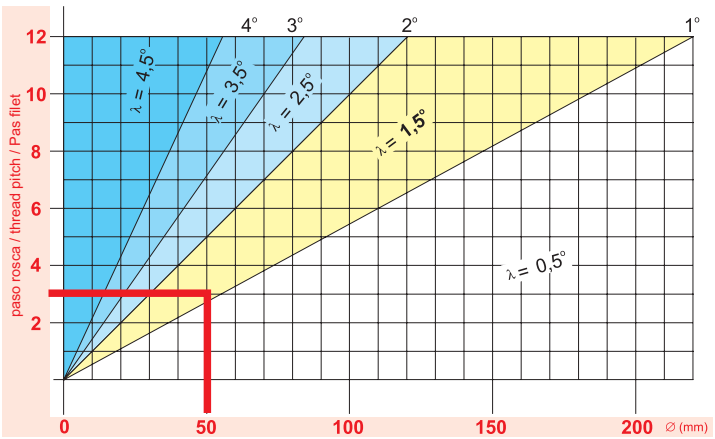
Permet une usure uniforme de la plaquette et augmente sa vie utile. 1ere option pour taraudages avec pas grand.

ELECCIÓN ANGULO INCLINACIÓN Y VC PLAQUITAS ROSCADO
Threading Insert Inclination Angle & Vc Choice
Choix angle inclinaison & Vc plaquettes taraudage

Las placas de apoyo para los portas de roscado tienen una inclinación de 1,5°, que sirven para la mayoría de los pasos de roscado, como se indica en el diagrama inferior.
Ejemplo: Diámetro torneado 50 mm + Paso 3 mm = Placa apoyo 1,5°
Las placas de apoyo que no se correspondan con estos grados de inclinación se servirán bajo demanda.

Shims for threading tool-holders have an **inclination of 1,5°**, that make them suitable for most threading pitches, as showed in the diagram below.
Example: Turning diameter 50 mm + Pitch 3 mm = Shim 1,5°
Shims that do not belong to these inclination grades will be served upon request.

Les plaques d´appui pour les porte-outils taraudage ont une **inclinaison de 1.5°**, qui s´emploient pour la plupart des pas de taraudage, comme on indique sur le diagramme.
Exemple: Diamètre tournage 50 mm + Pas 3 mm : Plaque d´appui 1,5°
Les plaques d´appui qui ne se correspondent avec ces degrès d´inclinaison seront livrées à la demande.

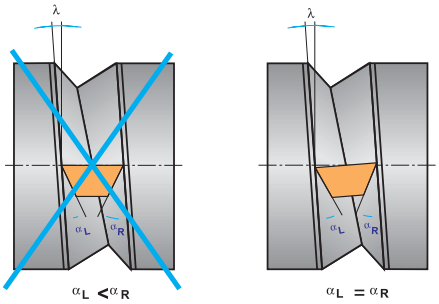


Angulo Inclinación Inclination Angle Angle d´inclinaison	Positivo Positive					Negativo Negative	
	4,5°	3,5°	2,5°	1,5°	0,5°	-0,5°	-1,5°
Porta-Roscado **Threading Tool** - Mandrin-Filetage	**Placa Apoyo** **Shim Plaque** - Plaque d´appui						
SER .... .16 SIL .... .16	PE16+4,5	PE16+3,5	PE16+2,5	PE16+1,5	PE16+0,5	PE16-0,5	PE16-1,5
SEL .... .16 SIR .... .16	PI16+4,5	PI16+3,5	PI16+2,5	PI16+1,5	PI16+0,5	PI16-0,5	PI16-1,5
SER .... .22 SIL .... .22	PE22+4,5	PE22+3,5	PE22+2,5	PE22+1,5	PE22+0,5	PE22-0,5	PE22-1,5
SEL .... .22 SIR .... .22	PI22+4,5	PI22+3,5	PI22+2,5	PI22+1,5	PI22+0,5	PI22-0,5	PI22-1,5
SER-S .... .16 SIL .... .16	PE16S+4,5	PE16S+3,5	PE16S+2,5	PE16S+1,5	PE16S+0,5	PE16S-0,5	PE16S-1,5
SEL-S .... .16 SIR .... .16	PI16S+4,5	PI16S+3,5	PI16S+2,5	PI16S+1,5	PI16S+0,5	PI16S-0,5	PI16S-1,5
SER-S .... .16 SIL .... .16	PE22S+4,5	PE22S+3,5	PE22S+2,5	PE22S+1,5	PE22S+0,5	PE22S-0,5	PE22S-1,5
SEL-S .... .16 SIR .... .16	PI22S+4,5	PI22S+3,5	PI22S+2,5	PI22S+1,5	PI22S+0,5	PI22S-0,5	PI22S-1,5

APOYO PLAQUITA
Insert Setting - Appui plaquette

¡Incorrecto!
Wrong! Incorrect!

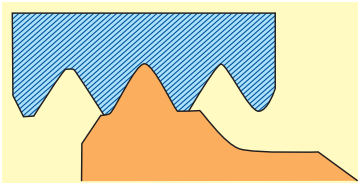
Correcto
Correct



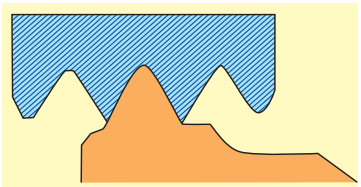
Para obtener un perfil de rosca correcto y un desgaste uniforme de la plaquita, el ángulo de inclinación del filo de corte debe ser igual al ángulo de la hélice.

In order to obtain a correct thread profile and an insert uniform wear, the cutting edge inclination angle should be the same as the helix angle.

Pour obtenir un profil de taraudage correct et une usure uniforme de la plaquette, l´angle d´inclinaison du filet de coupe doit être égal à l´angle d´hélice.



Perfil Total: Hace la rosca completa sin rebaba, solo se necesita una herramienta y a la pieza no le hace falta ser premecanizada al diámetro exacto.
Full Profile: It makes the whole thread without burrs, only one tool is needed and the piece does not need premachining the exact diameter.
Profil total: Permet que le filetage soit complet et sans bavures, seulement on a besoin d´un outil et que la pièce ne soit pas usinée au diamètre exact.



Perfil Parcial: Cubre una amplio gama de diferentes pasos. Se requiere que la pieza a roscar tenga un diámetro correcto.
Partial Profile: It covers a wide range of different pitches. It is needed the thread-piece to have a correct diameter.
Profil parciel: Couvre une gamme longue de différents pas. On a besoin que la pièce à tarauder soit usinée au diamètre exact.

VELOCIDADES INICIALES DE CORTE RECOMENDADAS
Recommended Initial Cutting Speeds
Vitesses de coupe initiales recommandées

Grados Recubiertos Coated Grades Degré revêtements	P-620					
Tipo Plaquita **Insert Type** - Type plaquette	P	M	K	S	N	H
TN.	120 - 160	110 - 130	120 - 150	10 - 20	200 - 300	30 - 45

DATOS CORTE ROSCADO
Threading Cutting Data
Données coupe taraudage

- **No conviene hacer una rosca de una sola pasada a causa de la fragilidad del filo de corte.**
- **Debe dividirse la profundidad total en varias pasadas.**
- **Todas las pasadas deben llevar una misma área de viruta.**
- **Seguir las recomendaciones de las tablas en esta misma página para encontrar el correcto numero de pasadas y la profundidad de cada una, tanto en roscado exterior como interior.**
- **En ningun caso las pasadas deben ser inferiores a 0,05 mm.**

- Threads should not be made just by one infeed due to the edge fragility.
- Total Depth should be divided into some infeeds.
- Every infeed should obtain the same chipping volume.
- Follow this same page tables in order to find the correct number of infeeds and their depths, both in external or internal threading.
- Never make an infeed smaller than 0,05 mm.

- Pas faire un taraudage d´une seule passade à cause de la fragilité du filet de coupe.
- Pas diviser la proffondeur totale en diffèrentes passades.
- Toutes les passades doivent évacuer une même quantité de copeaux.
- Suivre les conseils des tableaux sur cette page pour trouver le nombre correct de passades et leur proffondeur en taraudage extérieur et intérieur.
- En aucun cas, les passades doivent être inférieures à 0.05 mm.

Rosca ISO Métrica Interna
Internal Metric ISO Thread Taraudage ISO métrique interne

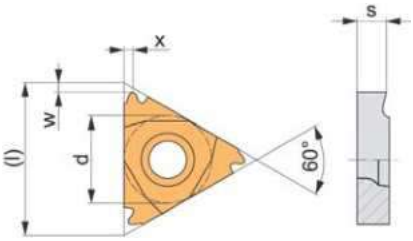
N° Pasadas / N° Infeed / N° Passades	reduzca la velocidad de corte proporcionalmente al incremento del paso / reduce cutting speed proportionally to increasing the thread pitch / réduisez la vitesse de coupe en proportion à l´augmentation du pas														
	paso (mm) pitch pas	0,50	0,75	1,00	1,25	1,50	1,75	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00
	Avance Radial (mm) Radial Infeed (mm) Avance Rayon (mm)															
1		0,11	0,17	0,19	0,20	0,22	0,22	0,25	0,27	0,28	0,32	0,33	0,36	0,41	0,41	0,44
2		0,09	0,14	0,16	0,17	0,21	0,21	0,23	0,25	0,26	0,30	0,31	0,33	0,38	0,38	0,41
3		0,07	0,10	0,11	0,13	0,15	0,15	0,17	0,18	0,20	0,23	0,24	0,27	0,30	0,32	0,35
4		0,07	0,07	0,09	0,10	0,13	0,13	0,14	0,15	0,16	0,19	0,21	0,23	0,25	0,26	0,28
5		0,34	0,48	0,08	0,09	0,11	0,10	0,12	0,13	0,14	0,17	0,18	0,21	0,22	0,22	0,24
6				0,63	0,08	0,08	0,09	0,11	0,12	0,13	0,15	0,15	0,19	0,20	0,20	0,22
7					0,77	0,90	0,09	0,10	0,11	0,13	0,14	0,14	0,16	0,17	0,18	0,20
8							0,08	0,08	0,10	0,11	0,13	0,13	0,15	0,16	0,17	0,19
9							1,07	1,20	0,10	0,10	0,12	0,12	0,14	0,15	0,16	0,18
10									0,08	0,10	0,11	0,12	0,13	0,15	0,15	0,16
11									1,49	0,09	0,10	0,11	0,12	0,14	0,14	0,15
12										0,08	0,08	0,10	0,12	0,14	0,14	0,15
13										1,77	2,04	0,10	0,11	0,12	0,13	0,14
14												0,08	0,10	0,10	0,12	0,13
15												2,32	2,62	2,89	0,12	0,12
16															0,10	0,10
	Profundidad Total Total Depth Profondeur Totale:														3,20	3,46

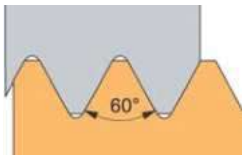
Rosca ISO Métrica Externa
External Metric ISO Thread Taraudage ISO métrique externe

N° Pasadas / N° Infeed / N° Passades	reduzca la velocidad de corte proporcionalmente al incremento del paso / reduce cutting speed proportionally to increasing the thread pitch / réduisez la vitesse de coupe en proportion à l´augmentation du pas														
	paso (mm) pitch pas	0,50	0,75	1,00	1,25	1,50	1,75	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00
	Avance Radial (mm) Radial Infeed (mm) Avance Rayon (mm)															
1		0,11	0,17	0,19	0,20	0,22	0,22	0,25	0,27	0,28	0,34	0,34	0,37	0,41	0,43	0,46
2		0,09	0,15	0,16	0,17	0,21	0,21	0,24	0,25	0,26	0,31	0,32	0,34	0,39	0,40	0,43
3		0,07	0,11	0,13	0,14	0,17	0,17	0,18	0,19	0,21	0,25	0,25	0,28	0,32	0,32	0,35
4		0,07	0,07	0,11	0,11	0,14	0,14	0,16	0,17	0,18	0,21	0,22	0,24	0,27	0,27	0,30
5		0,34	0,48	0,08	0,10	0,12	0,12	0,14	0,15	0,16	0,18	0,19	0,22	0,24	0,24	0,27
6				0,67	0,08	0,08	0,10	0,12	0,13	0,14	0,17	0,17	0,20	0,22	0,22	0,24
7					0,80	0,94	0,10	0,11	0,12	0,13	0,15	0,16	0,18	0,20	0,20	0,22
8							0,08	0,08	0,11	0,12	0,14	0,15	0,17	0,19	0,19	0,21
9							1,14	1,28	0,11	0,12	0,14	0,14	0,16	0,18	0,18	0,20
10									0,08	0,11	0,12	0,13	0,15	0,17	0,17	0,19
11									1,58	0,10	0,11	0,12	0,14	0,16	0,16	0,18
12										0,08	0,08	0,12	0,13	0,15	0,15	0,16
13										1,89	2,20	0,11	0,12	0,12	0,13	0,15
14												0,08	0,10	0,10	0,13	0,14
15												2,50	2,80	3,12	0,12	0,12
16															0,10	0,10
	Profundidad Total Total Depth Profondeur Totale:														3,41	3,72

Ref. 8610

PLAQUITA INTERCAMBIABLE ROSCADO EXTERIOR TN..ER.M
TN..ER.M External Threading Indexable Insert
Plaquette taraudage extérieur TN..ER.M





Rosca Externa Perfil Total
Full Profile External Thread
Filetage extérieur profil total

ISO	P	l mm	d mm	s mm	x mm	w mm		N° Art. P-620	€
TN-16-ER-050-M	0,50	16	9,525	3,47	0,4	0,6	10	13438	
TN-16-ER-075-M	0,75	16	9,525	3,47	0,6	0,6	10	13441	
TN-16-ER-100-M	1,00	16	9,525	3,47	0,7	0,7	10	13444	
TN-16-ER-125-M	1,25	16	9,525	3,47	0,9	0,8	10	13445	
TN-16-ER-150-M	1,50	16	9,525	3,47	1,0	0,8	10	13446	
TN-16-ER-175-M	1,75	16	9,525	3,47	1,2	0,9	10	13447	
TN-16-ER-200-M	2,00	16	9,525	3,47	1,3	1,0	10	13448	
TN-16-ER-250-M	2,50	16	9,525	3,47	1,5	1,1	10	13449	
TN-16-ER-300-M	3,00	16	9,525	3,47	1,5	1,2	10	13450	
TN-22-ER-350-M	3,50	22	12,700	4,71	2,3	1,6	10	13452	
TN-22-ER-400-M	4,00	22	12,700	4,71	2,3	1,6	10	13453	
TN-22-ER-450-M	4,50	22	12,700	4,71	2,4	1,7	10	13454	
TN-22-ER-500-M	5,00	22	12,700	4,71	2,5	1,7	10	13455	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8610 TN-16-ER-050-M P-620

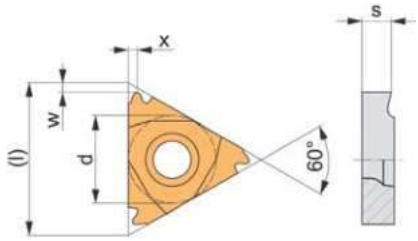
Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 588**

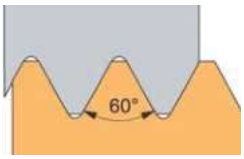
Set 4 Pcs

Cont.		N° Art.	€
1 plaquita por paso - 1 insert per Pitch - 1 plaquette par pas **P= 0,5-3 (9pcs)** **+** **1 Porta-Plaquitas** - 1 Tool-Holder - 1 porte-plaquettes **Exterior** - External - Extérieur **Ref. 8820 - Art. 13576 - SER-2525-M16** **+** **1 placa base** - 1 Base Plate - 1 Plaque de Base **Ref. 8815 - Art. 36144** **+** **Destornillador** - Screwdriver - Tournevis - **T-15 (1pc)**		32649	

Ref. 8615

PLAQUITA INTERCAMBIABLE ROSCADO EXTERIOR TN..ER.M
TN..ER.M External Threading Indexable Insert
Plaquette taraudage extérieur TN..ER.M





Rosca Externa Perfil Parcial
Partial Profile External Thread
Filetage extérieur profil partiel

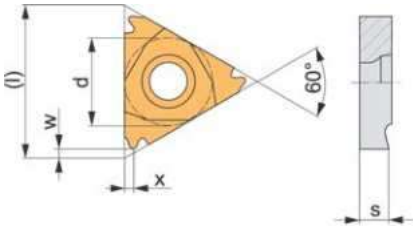
ISO	P	l mm	d mm	s mm	x mm	w mm		N° Art. P-620	€
TN-16-ER-A60	0,50-1,50	16	9,525	3,47	0,9	0,8	10	13508	
TN-16-ER-AG60	0,50-3,00	16	9,525	3,47	1,7	1,2	10	78788	
TN-16-ER-G60	1,75-3,00	16	9,525	3,47	1,7	1,2	10	13510	
TN-22-ER-N60	3,50-5,00	22	12,700	4,71	2,5	1,7	10	81506	

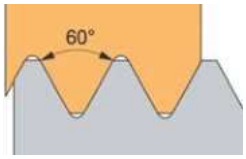
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8615 TN-16-ER-A60 P-620

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 588**

Ref. 8620

PLAQUITA INTERCAMBIABLE ROSCADO INTERIOR TN..IR.M
TN..IR.M Internal Threading Indexable Insert
Plaquette taraudage intérieur TN..IR.M





Rosca Interna Perfil Total
Full Profile Internal Thread
Filetage intérieur profil total

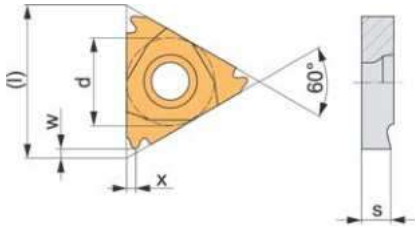
ISO	P	l mm	d mm	s mm	x mm	w mm		N° Art. P-620	€
TN-11-IR-100-M	1,00	11	6,350	3,00	0,7	0,7	10	13480	
TN-11-IR-125-M	1,25	11	6,350	3,00	0,9	0,8	10	13481	
TN-11-IR-150-M	1,50	11	6,350	3,00	1,0	0,8	10	13484	
TN-16-IR-100-M	1,00	16	9,525	3,47	0,7	0,8	10	13486	
TN-16-IR-125-M	1,25	16	9,525	3,47	0,9	0,8	10	13487	
TN-16-IR-150-M	1,50	16	9,525	3,47	1,0	0,8	10	13492	
TN-16-IR-175-M	1,75	16	9,525	3,47	1,2	0,9	10	13493	
TN-16-IR-200-M	2,00	16	9,525	3,47	1,3	1,0	10	13495	
TN-16-IR-250-M	2,50	16	9,525	3,47	1,5	1,1	10	13496	
TN-16-IR-300-M	3,00	16	9,525	3,47	1,5	1,2	10	13498	

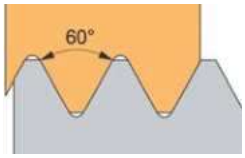
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8620 TN-11-IR-100-M P-620

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 588**

Ref. 8625

PLAQUITA INTERCAMBIABLE ROSCADO INTERIOR TN..IR.M
TN..IR.M Internal Threading Indexable Insert
Plaquette taraudage intérieur TN..IR.M





Rosca Interna Perfil Parcial
Partial Profile Internal Thread
Filetage intérieur profil partiel

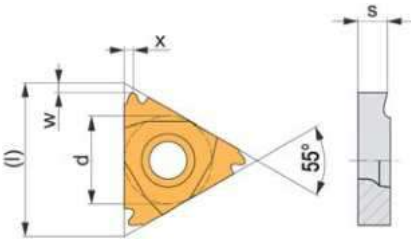
ISO	P	l mm	d mm	s mm	x mm	w mm		N° Art. P-620	€
TN-11-IR-A60	0,50-1,50	11	6,350	3,00	0,9	0,8	10	81507	
TN-16-IR-A60	0,50-1,50	16	9,525	3,47	0,9	0,8	10	13511	
TN-16-IR-AG60	0,50-3,00	16	9,525	3,47	1,7	1,2	10	78789	
TN-16-IR-G60	1,75-3,00	16	9,525	3,47	1,7	1,2	10	13513	

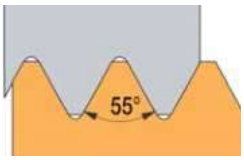
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8625 TN-16-IR-A60 P-620

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 588**

Ref. 8612

PLAQUITA INTERCAMBIABLE ROSCADO EXTERIOR WHITWORTH 55°
55° Whitworth External Threading Indexable Insert
Plaquette taraudage extérieur Whitworth 55°





Rosca Interna Perfil Total
Full Profile Internal Thread
Filetage Intérieur Profil total

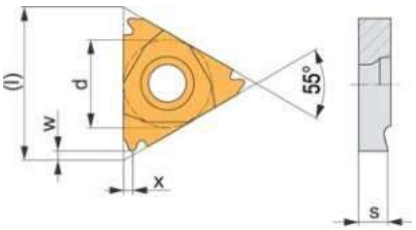
ISO	P (N° Hilos / Threads / Filets)	l mm	d mm	s mm	x mm	w mm		N° Art. P-620	€
TN-16-ER-080-W	8	16	9,525	3,47	1,5	1,2	10	59314	
TN-16-ER-100-W	10	16	9,525	3,47	1,5	1,1	10	59311	
TN-16-ER-110-W	11	16	9,525	3,47	1,5	1,1	10	59310	
TN-16-ER-120-W	12	16	9,525	3,47	1,4	1,1	10	59309	
TN-16-ER-140-W	14	16	9,525	3,47	1,2	1,0	10	59308	
TN-16-ER-160-W	16	16	9,525	3,47	1,1	0,9	10	59307	
TN-16-ER-180-W	18	16	9,525	3,47	1,0	0,8	10	59306	
TN-16-ER-200-W	20	16	9,525	3,47	0,9	0,8	10	59305	

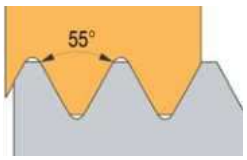
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8612 TN-16-ER-100-W P-620

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 588**

Ref. 8622

PLAQUITA INTERCAMBIABLE ROSCADO INTERIOR WHITWORTH 55°
55° Whitworth Internal Threading Indexable Insert
Plaquette taraudage intérieur Whitworth 55°





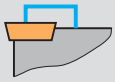
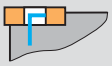
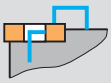
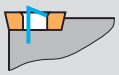
Rosca Interna Perfil Total
Full Profile Internal Thread
Filetage Intérieur Profil total

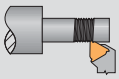
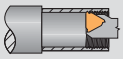
ISO	P (N° Hilos / Threads / Filets)	l mm	d mm	s mm	x mm	w mm		N° Art. P-620	€
TN-16-IR-080-W	8	16	9,525	3,47	1,5	1,2	10	59321	
TN-16-IR-100-W	10	16	9,525	3,47	1,5	1,1	10	59320	
TN-16-IR-110-W	11	16	9,525	3,47	1,5	1,1	10	60000	
TN-16-IR-120-W	12	16	9,525	3,47	1,4	1,1	10	59319	
TN-16-IR-140-W	14	16	9,525	3,47	1,2	1,0	10	59318	
TN-16-IR-160-W	16	16	9,525	3,47	1,1	0,9	10	59317	
TN-16-IR-180-W	18	16	9,525	3,47	1,0	0,8	10	59316	
TN-16-IR-200-W	20	16	9,525	3,47	0,9	0,8	10	59315	

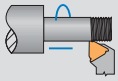
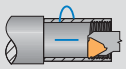
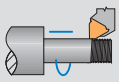
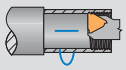
Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8622 TN-16-IR-100-W P-620

Porta Plaquitas / Tool Holder
Porte-Plaquettes: **Pag. 588**

CÓDIGOS ISO ELECCIÓN PORTA-PLAQUITAS ROSCADO
Threading Tool-Holder Choice ISO Codes
Codes ISO choix Porte-Plaquettes taraudage

1	
Sistema Anclaje Clamping system Type attachement	
C	
P	
M	
S	

2		
Tipo Mecanizado Way of machining Type usinage		
E	Exterior External Extérieur	
I	Interior Internal Intérieur	

3		
Dirección Corte Direction of cut Direction coupe		
R - Dcha./Right/Droit	Interior Internal Intérieur	
	Exterior External Extérieur	
L - Izda./Left/Gauche	Interior Internal Intérieur	
	Exterior External Extérieur	

4	
Tipo de Fabricación Type of Fabrication Type fabrication	
-	**normal** / normal / normal
S	**especial** / special / spécial

1	2	3		4	5	6	7
S	E	R	-	-	2525	M	16

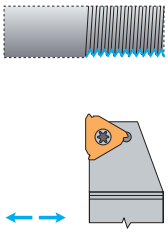
5		
Dimensiones (mm) Dimensions (mm) Dimensions (mm)		
Torneado exterior External turning Tournage extérieur	2525	25 x 25 mm
Torneado interior Internal turning Tournage intérieur	1416	mango / shank /queue 14 mm ancho mango / shank width largeur queue 16 mm

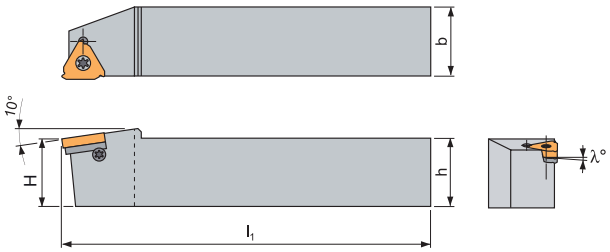
6		
Largo total Total length Longueur total		
		l_1 [mm]
	H	100
	J	110
	K	125
	L	140
	M	150
	N	160
	P	170
	Q	180
	R	200
	S	250
	T	300
	U	350
	V	400
	W	450
	X	Spec.
	Y	500

7	
Dimensiones (mm) Dimensions (mm) Dimensions (mm)	
	T
d [mm]	
6,350	11
9,525	16
12,700	22

Ref. 8820

PORTA-PLAQUITAS ROSCADO EXTERIOR SER
SER External Threading Tool-Holder
Porte-Plaquettes taraudage extérieur SER





Nota: Grado Inclinación Standard Porta-Plaquitas λ = 1,5°
Note: Holder Standard Inclination Angle λ = 1,5°
Note: Degré inclinaison standard Porte-Plaquettes λ = 1,5°

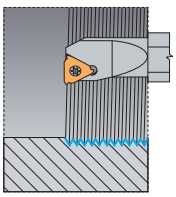
ISO	N° Art.		h=H mm	b mm	l mm	λ°	€	Ref. 8803		Ref. 8803		Ref. 8803		Ref. 8801		Ref. 8815	
SER-1616-H16	83024	TN-16-ER	16	16	100	1,5		Z-12 Art. 13848 €	5	-		ZSY3 Art. 74798 €	5	ZT-15 Art. 10512 €	1	Art. 36144 €	5
SER-2020-K16	13573		20	20	125	1,5											
SER-2525-M16	13576		25	25	150	1,5											
SER-3232-P22	13577	TN-22-ER	32	32	170	1,5		Z-13 Art. 13843 €	5	ZSP-405 Art. 13844 €	5	-		ZT-20 Art. 13845 €	1	Art. 32581 €	5

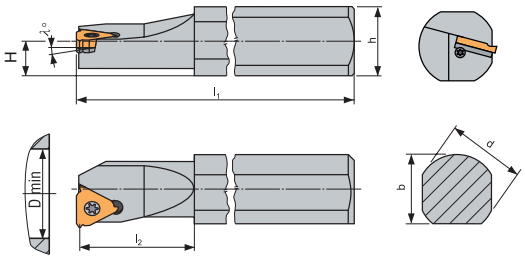
Plaquita / Insert / Plaquette: **Pag. 574, 584**

Tornillo - Screw - Vis	**Destornillador** - Screwdriver - Tournevis
Tornillo - Screw - Vis	**Placa Base** - Base Plate - Plaque de base
Tornillo - Screw - Vis	

Ref. 8830

PORTA-PLAQUITAS ROSCADO INTERIOR SIR
SIR Internal Threading Tool-Holder
Porte-Plaquettes taraudage intérieur SIR





ISO	N° Art.		d mm	l_1 mm	l_2 mm	H mm	D min.	h mm	b mm	€	Ref. 8803		Ref. 8803		Ref. 8801		Ref. 8815	
SIR-0910-K11	13579	TN-11-IR	10	125	16	4,5	13	9	14,5		T-07 Art. 87200 €	5	-		ZT-08 Art. 10506 €	1	-	
SIR-1516-M16	13582	TN-16-IR	16	150	25	7,5	22	15	14,0		Z-09 Art. 13847 €	5			ZT-15 Art. 10512 €	1		
SIR-2325-R16	13583		25	200	35	11,5	29	23,0	23,5		Z-12 Art. 13848 €	5	ZSY3 Art. 74798 €	5			ZYI3 Art. 22701 €	5

Plaquita / Insert / Plaquette: **Pag. 575, 585**

Tornillo - Screw - Vis	**Destornillador** - Screwdriver - Tournevis
Tornillo - Screw - Vis	**Placa Base** - Base Plate - Plaque de base

TORNEADO - Turning - Tournage

Set 8799

SETS DE TORNEADO
Turning Inserts Sets
Jeux de tournage

Set 1

5 Pcs

Cont.		N° Art.	€
Plaquita - Insert - Plaquette **Ref. 8560 - Art. 26323** **TCMT-16T308-E-ZRR C-525 (20pcs)** **+** **Porta-Plaquita** - Tool-Holder - Porte-Plaquettes **Exterior** - External - Extérieur **Ref. 8703 - Art.18660** **STJCR-2020K16 (1pc)** **Interior** - Internal - Intérieur **Ref. 8718 - Art. 18789** **S25T-STFCR-16 (1pc)** **+** **Destornillador** - Screwdriver - Tournevis **T-15 (1pc)**		83386	Set Price!

Set 2

7 Pcs

Cont.		N° Art.	€
Plaquita Torneado- Turning Insert - Plaquette tournage **Ref. 8500 - Art. 26281 (10 pcs)** **CCMT 09T308-E-ZRR** **Ref. 8500 - Art. 59270 (10 pcs)** **CCMT 060204-E-ZMM** **+** **Porta-Plaquita** - Tool-Holder - Porte-Plaquettes **Exterior** - External - Extérieur **Ref. 8704 - Art. 42945 (1 pc)** **SCLCR 2020 K09** **Interior** - Internal - Intérieur **Ref. 8751 - Art. 19443 (1 pc)** **S20S-SCLCR 09** **Ref. 8751 - Art. 19435 (1 pc)** **S10M-SCLCR 06** **+** **Destornillador** - Screwdriver - Tournevis **T-15 (1pc) - T-07 (1pc)**		20098	Set Price!

Set 3

7 Pcs

Cont.		N° Art.	€
Plaquita Torneado - Turning Insert - Plaquette tournage **Ref. 8500 - Art. 26281 (10 pcs)** **CCMT 09T308-E-ZRR** **Plaquita Tronzado**- Parting Insert - Plaquette tronçonnage **Ref. 8601 MGMN - Art. 12712 (10 pcs)** **3.00-0.40-GC-ZF** **+** **Porta-Plaquita** - Tool-Holder - Porte-Plaquettes **Exterior** - External - Extérieur **Ref. 8704 - Art. 42945 (1 pc)** **SCLCR 2020 K09** **Interior** - Internal - Intérieur **Ref. 8751 - Art. 19443 (1 pc)** **S20S-SCLCR 09** **Porta-plaquita Tronzado** Parting Tool-Holder - Porte-Plaquettes tronçonnage **Ref. 8865 - Art. 12729 (1 pc)** **XMCGR-2020-K-3.00** **+** **Destornillador** - Screwdriver - Tournevis **T-15 (1pc)** **+** **Allen 4 (1pc)**		20099	Set Price!

Mejora continua del control de calidad

izartool.com

FRESADO
Milling
Fraisage

CLASIFICACIÓN CALIDADES - ELECCIÓN PRINCIPAL FRESADO
Milling Grade Classification - Main Choice
Classement des Qualités - Choix principal fraisage

Grupo ISO / ISO Group / Groupe ISO		Fresado - Milling - Fraisage				Taladrado/Roscado/Tronzado Drilling/Threading/Parting Perçage/Taraudage/Tronçonnage	
		Calidades con Recubrimiento Coated Grades - Qualités avec revêtement			Sin Recubrimiento Unc. - Sans rev.	Calidades con Recubrimiento Coated - Avec revêtement	
		Metal Duro - Carbide - Carbure			MD/HM Carbure	Metal Duro - Carbide - Carbure	
		CVD	PVD			CVD	PVD
P – Resistencia al desgaste / Wear resistance / Résistance à l'usure – Tenacidad / Toughness / Ténacité	P01						
	P05		P-605				
	P10		P-610				
	P15			P-615			
	P20						
	P25	C-526					P-620
	P30			P-620		C-540	
	P35			P-630			P-625
	P40				P-640		
	P45						
	P50						
M – Resistencia al desgaste / Wear resistance / Résistance à l'usure – Tenacidad / Toughness / Ténacité	M01						
	M05						
	M10		P-610				
	M15			P-615	P-010		P-620
	M20	C-526					
	M25			P-625			P-625
	M30			P-630	P-640	C-540	
	M35						
	M40						
K – Resistencia al desgaste / Wear resistance / Résistance à l'usure – Tenacidad / Toughness / Ténacité	K01						
	K05						
	K10						
	K15		P-610	P-615			
	K20				P-010		
	K25	C-526			P-630		
	K30			P-620	P-640		P-625
	K35					C-540	
	K40						
S – Resistencia al desgaste / Wear resistance / Résistance à l'usure – Tenacidad / Toughness / Ténacité	S01						
	S05						
	S10		P-610	P-615			
	S15				P-010		P-620
	S20			P-630			P-625
	S25				P-640	C-540	
	S30						
N – Resistencia al desgaste / Wear resistance / Résistance à l'usure – Tenacidad / Toughness / Ténacité	N01						
	N05						
	N10						
	N15		P-610	P-615			
	N20				P-010		
	N25			P-630			P-625
	N30						
H – Resistencia al desgaste / Wear resistance / Résistance à l'usure – Tenacidad / Toughness / Ténacité	H01						
	H05		P-605				
	H10		P-610	P-615			
	H15	C-526			P-010		
	H20			P-630			P-625
	H25						
	H30						

ELECCIÓN CONDICIONES CORTE SEGUN CALIDADES FRESADO

Milling Cutting Condition Choice depending on Qualities

Choix de conditions de coupe à cause de qualités fraisage

P

Porta-Plaquitas Tool-Holder Porte-Plaquettes	Plaquitas Inserts Plaquettes	Condiciones Corte Cutting Conditions Conditions coupe	Calidades Qualities Qualités C-526	P-610	P-615	P-625	P-630	P-640	P-010
S90XN08 S90AP-10 S90AP-16 S90XO-06 SAP-16D	XNMX APKT XOET APET	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	315 300 280			230 220 180	180 170 150	160 150 130	
S-45-SN-12 50060	SEHT WNMW	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	315 300 280	250 230 180		230 220 180		160 150 130	
S-45OD06-45 W45SE-12	ODMT SEKR SEKN	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	315 300 280	250 210 200		230 220 180		160 150 130	
W90TP-22	TPKN TPKR	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	315 300 280			230 220 180		160 150 130	
S90...	SNHQ	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche						280 270 260	
S-45OD06-45 W45SE-12	RDHT RDHW	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche		250 210 200		230 220 180		160 150 130	
SRC SLC	RC LC	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche			310 295 280		270 240 200		

Factor K- Corrige Vc en función de K Factor- Correct Vc depending on Facteur K- Vc correct à cause de

Forjados/fundidos carcasa Forging/melting w. frame Forgeage/fondu carcasse	K = 0,70-0,90
Maq. en buen estado Good condition mach. Mach. en bon état	K = 1,05-1,20
Maq. en mal estado Bad condition mach. Mach. en mauvais état	K = 0,80-0,95

Vida plaquita Insert life Vie plaquette

T_{min} 15	K = 1,23
T_{min} 20	K = 1,13
T_{min} 30	K = 1,00
T_{min} 45	K = 0,89
T_{min} 60	K = 0,81
T_{min} 90	K = 0,72

M

Porta-Plaquitas Tool-Holder Porte-Plaquettes	Plaquitas Inserts Plaquettes	Condiciones Corte Cutting Conditions Conditions coupe	Calidades Qualities Qualités C-526	P-610	P-615	P-625	P-630	P-640	P-010
S90XN08 S90AP-10 S90AP-16 S90XO-06 SAP-16D	XNMX APKT XOET APET	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	185 180 165			170 165 155		150 145 140	
S-45-SN-12 50060	SEHT WNMW	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	185 180 165			160 150 110		120 110 100	
S-45OD06-45 W45SE-12	ODMT SEKR SEKN	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	185 180 165	160 150 110				120 110 100	
W90TP-22	TPKN TPKR	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche				160 150 110		120 110 100	
S90...	SNHQ	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche						165 160 155	
S-45OD06-45 W45SE-12	RDHT RDHW	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche				160 150 110		120 110 100	
SRC SLC	RC LC	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche			185 175 165		155 150 140		

Factor K- Corrige Vc en función de K Factor- Correct Vc depending on Facteur K- Vc correct à cause de

Forjados/fundidos carcasa Forging/melting w. frame Forgeage/fondu carcasse	K = 0,70-0,90
Maq. en buen estado Good condition mach. Mach. en bon état	K = 1,05-1,20
Maq. en mal estado Bad condition mach. Mach. en mauvais état	K = 0,80-0,95

Vida plaquita Insert life Vie plaquette

T_{min} 15	K = 1,23
T_{min} 20	K = 1,13
T_{min} 30	K = 1,00
T_{min} 45	K = 0,89
T_{min} 60	K = 0,81
T_{min} 90	K = 0,72

K

Porta-Plaquitas Tool-Holder Porte-Plaquettes	Plaquitas Inserts Plaquettes	Condiciones Corte Cutting Conditions Conditions coupe	Calidades Qualities Qualités C-526	P-610	P-615	P-625	P-630	P-640	P-010
S90XN08 S90AP-10 S90AP-16 S90XO-06 SAP-16D	XNMX APKT XOET APET	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	480 440 395			280 230 190	230 225 180	250 220 170	
S-45-SN-12 50060	SEHT WNMW	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	450 415 380	300 250 190		280 230 190		250 220 170	
S-45OD06-45 W45SE-12	ODMT SEKR SEKN	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche	450 415 370	300 250 210		280 230 190		250 220 170	
W90TP-22	TPKN TPKR	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche							
S90...	SNHQ	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche						255 245	
S-45OD06-45 W45SE-12	RDHT RDHW	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche		300 250 210		280 230 190		250 220 170	
SRC SLC	RC LC	Acabado - Finishing - Finition Semidesbaste - Semiroughing - Semiébauche Desbaste - Roughing - Ébauche			290 280 265		250 235 220		

Factor K- Corrige Vc en función de K Factor- Correct Vc depending on Facteur K- Vc correct à cause de

Forjados/fundidos carcasa Forging/melting w. frame Forgeage/fondu carcasse	K = 0,70-0,90
Maq. en buen estado Good condition mach. Mach. en bon état	K = 1,05-1,20
Maq. en mal estado Bad condition mach. Mach. en mauvais état	K = 0,80-0,95

Vida plaquita Insert life Vie plaquette

T_{min} 15	K = 1,23
T_{min} 20	K = 1,13
T_{min} 30	K = 1,00
T_{min} 45	K = 0,89
T_{min} 60	K = 0,81
T_{min} 90	K = 0,72

ELECCIÓN CONDICIONES CORTE SEGUN CALIDADES FRESADO

Milling Cutting Condition Choice depending on Qualities

Choix de conditions de coupe à cause de qualités fraisage

S

Porta-Plaquitas Tool-Holder Porte-Plaquettes	Plaquitas Inserts Plaquettes	Condiciones Corte Cutting Conditions Conditions coupe	Calidades Qualities Qualités								
			C-526	P-610	P-615	P-625	P-630	P-640	P-010		
S90XN08 S90AP-10 S90AP-16 S90XO-06 SAP-16D	XNMX APKT XOET APET	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche		50			45 40	75 70		**Factor K- Corrige Vc en función de** **K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
S-45-SN-12 50060	SEHT WNMW	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche				90 50 20		80 40 20		**Forjados/fundidos carcasa** **Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,90
S-45OD06-45 W45SE-12	ODMT SEKR SEKN	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche		50		90 85		80 75		**Maq. en buen estado** **Good condition mach.** Mach. en bon état	K = 1,05-1,20
W90TP-22	TPKN TPKR	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche								**Maq. en mal estado** **Bad condition mach.** Mach. en mauvais état	K = 0,80-0,95
S90...	SNHQ	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche						80 80		**Vida plaquita** **Insert life** Vie plaquette	T_{min} 15 K = 1,23 T_{min} 20 K = 1,13 T_{min} 30 K = 1,00 T_{min} 45 K = 0,89 T_{min} 60 K = 0,81 T_{min} 90 K = 0,72
S-45OD06-45 W45SE-12	RDHT RDHW	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche					90 50 20	80 40 20			
SRC SLC	RC LC	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche			90 85		50				

N

Porta-Plaquitas Tool-Holder Porte-Plaquettes	Plaquitas Inserts Plaquettes	Condiciones Corte Cutting Conditions Conditions coupe	Calidades Qualities Qualités								
			C-526	P-610	P-615	P-625	P-630	P-640	P-010		
S90XN08 S90AP-10 S90AP-16 S90XO-06 SAP-16D	XNMX APKT XOET APET	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche							900 400 350	**Factor K- Corrige Vc en función de** **K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
S-45-SN-12 50060	SEHT WNMW	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche							900 400 350	**Forjados/fundidos carcasa** **Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,90
S-45OD06-45 W45SE-12	ODMT SEKR SEKN	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche								**Maq. en buen estado** **Good condition mach.** Mach. en bon état	K = 1,05-1,20
W90TP-22	TPKN TPKR	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche								**Maq. en mal estado** **Bad condition mach.** Mach. en mauvais état	K = 0,80-0,95
S90...	SNHQ	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche								**Vida plaquita** **Insert life** Vie plaquette	T_{min} 15 K = 1,23 T_{min} 20 K = 1,13 T_{min} 30 K = 1,00 T_{min} 45 K = 0,89 T_{min} 60 K = 0,81 T_{min} 90 K = 0,72
S-45OD06-45 W45SE-12	RDHT RDHW	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche									
SRC SLC	RC LC	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche			775 735 700		660 625 580				

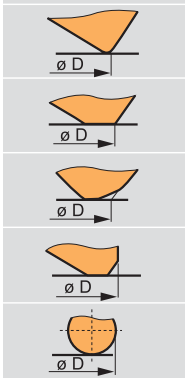
H

Porta-Plaquitas Tool-Holder Porte Plaquettes	Plaquitas Inserts Plaquettes	Condiciones Corte Cutting Conditions Conditions coupe	Calidades Qualities Qualités								
			C-526	P-610	P-615	P-625	P-630	P-640	P-010		
S90XN08 S90AP-10 S90AP-16 S90XO-06 SAP-16D	XNMX APKT XOET APET	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche		40 35			55 55			**Factor K- Corrige Vc en función de** **K Factor- Correct Vc depending on** Facteur K- Vc correct à cause de	
S-45-SN-12 50060	SEHT WNMW	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche	55 50		40 35					**Forjados/fundidos carcasa** **Forging/melting w. frame** Forgeage/fondu carcasse	K = 0,70-0,90
S-45OD06-45 W45SE-12	ODMT SEKR SEKN	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche	55 50	45 35		60 55				**Maq. en buen estado** **Good condition mach.** Mach. en bon état	K = 1,05-1,20
W90TP-22	TPKN TPKR	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche								**Maq. en mal estado** **Bad condition mach.** Mach. en mauvais état	K = 0,80-0,95
S90...	SNHQ	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche								**Vida plaquita** **Insert life** Vie plaquette	T_{min} 15 K = 1,23 T_{min} 20 K = 1,13 T_{min} 30 K = 1,00 T_{min} 45 K = 0,89 T_{min} 60 K = 0,81 T_{min} 90 K = 0,72
S-45OD06-45 W45SE-12	RDHT RDHW	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche									
SRC SLC	RC LC	**Acabado - Finishing -** Finition **Semidesbaste - Semiroughing -** Semiébauche **Desbaste - Roughing -** Ébauche		55 50							

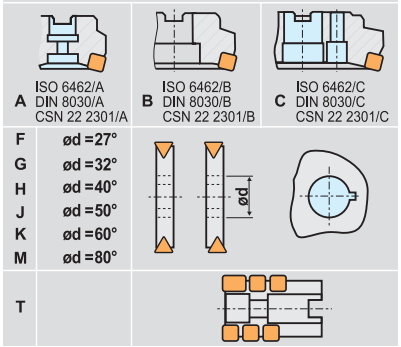
CÓDIGOS ISO ELECCIÓN PORTA-PLAQUITAS PLATO FRESADO
Milling SHELL Tool-Holder Choice ISO Codes
Codes ISO choix Porte-Plaquettes PLATEAU fraisage

ISO 7406-88 DIN 8029/1

1
Diámetro filo corte
Cutter diameter
Diamétre filet coupe

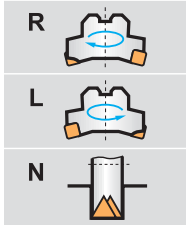


2
Tipo de corte, designación y/o tamaño anclaje
Cutter type, designation and/or size of clamping
Type coupe, nom et/oú taille fixation

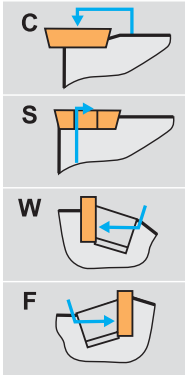


3
Nº filos trabajando
Nº of working edges
Numéro filets qui travaillent

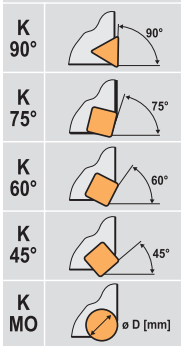
4
Dirección corte
Direction of cut
Direction coupe



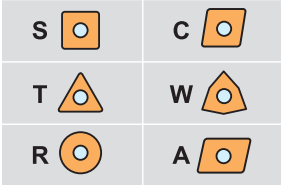
5
Designación anclaje
Clamping desgnation
Type fixation



6
Angulo entrada
Setting angle
Angle entrée



7
Forma plaquita
Insert shape
Forme plaquette



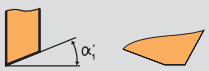
8
Angulo incidencia
Clearance angle
Angle incidence

N	α_1 = 0°	D	α_1 = 15°
C	α_1 = 7°	E	α_1 = 20°
P	α_1 = 11°	F	α_1 = 25°

9
Tamaño plaquita o longitud filo corte
Insert size or cutting edge length
Taille plaquette oú longueur filet coupe

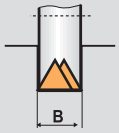
d [mm]	S	C	T	W	R	A
6,35						09/11
7,94				05		
8,00					08	
9,525	09	09	16	06		12
10,00					10	
12,00					12	
12,70	12	12	22	08		15
15,875	15					
16,00					16	
25,00					25	
25,40	25					

10
Angulo incidencia
Clearance angle
Angle incidence

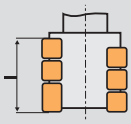


N	α_1' = 0°	E	α_1' = 20°
P	α_1' = 11°	F	α_1' = 25°
D	α_1' = 15°		

11
Longitud (ancho) filo corte
Cutting edge length (width)
Longueur arête de coupe



B [mm]



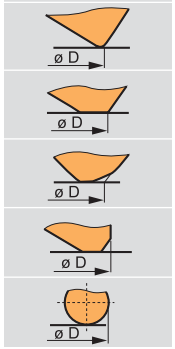
l [mm]

1	2	3	4		5	6	7	8	9	10	11
160	H	05	N		F	90	T	P	16	P	22
250	C	16	R	–	W	45	S	E	12	F	

CÓDIGOS ISO ELECCIÓN PORTA-PLAQUITAS MANGO FRESADO
Milling END Tool-Holder Choice ISO Codes
Codes ISO choix Porte-Plaquettes QUEUE fraisage

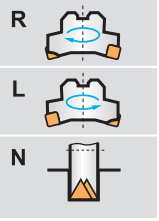
ISO 7548-86 DIN 8029/2

1
Diámetro filo corte
Cutter diameter
Diamètre filet coupe

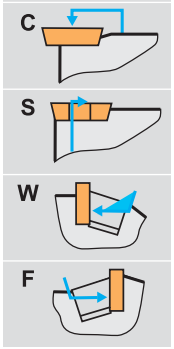


3
Nº filos trabajando
Nº of working edges
Numéro filets qui travaillent

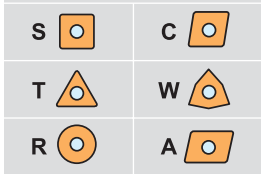
4
Dirección corte
Direction of cut
Direction coupe



5
Designación anclaje
Clamping designation
Type fixation



7
Forma Plaquita
Insert Shape
Forme plaquette



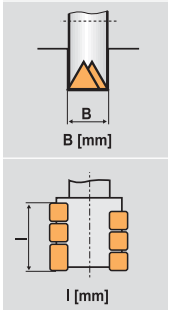
8
Angulo Incidencia
Clearance Angle
Angle d'incidence

N	α_1 = 0°	D	α_1 = 15°
C	α_1 = 7°	E	α_1 = 20°
P	α_1 = 11°	F	α_1 = 25°

9
Tamaño plaquita o longitud filo corte
Insert size or cutting edge length
Taille plaquette oú longueur filet coupe

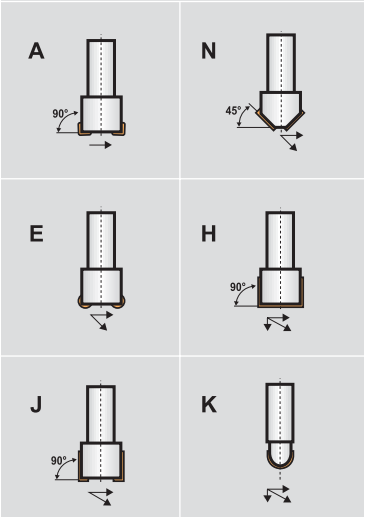
d [mm]	S	C	T	W	R	A
6,35						09/11
7,94				05		
8,00					08	
9,525	09	09	16	06		12
10,00					10	
12,00					12	
12,70	12	12	22	08		15
15,875	15					
16,00					16	
25,00					25	
25,40	25					

11
Longitud (ancho) filo corte
Cutting edge length (width)
Longueur arête de coupe

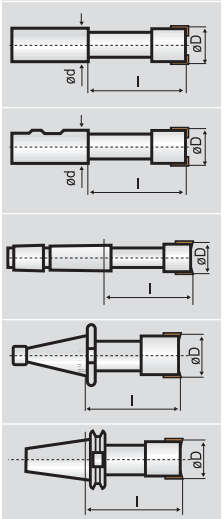


1	1a	3	4	2a	3a	4a		5	7	8	9(11)
63	J	4	R	150	H	50	–	S	SA	P	95
32	A	3	R	040	B	32		S	A	D	12

1a
Tipo de corte y ángulo de entrada
Cutter type & setting angle
Type coupe et angle d'entrée



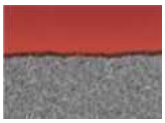
2a
Tipo de corte y ángulo de entrada
Cutter type & setting angle
Type coupe et angle d'entrée



3a / 4a

3a		4a	
Designación mango Shank designation Type fixation		Tamaño mango Shank size Type queue	
		ø D	ø d
A	DIN 1835/1-A	08 + 32	10 + 32
		ø D	ø d
B	ISO 3338/B DIN 1835/1-B CSN 22 0412	10; 12; 16 20 25 32; 40	16 20 25 32
		ø D	MORSE No.
E	ISO 296 DIN 228/A CSN 22 0420	10; 12; 16 20; 25; 32 40	02 03 04
		ø D	7:24 No.
G	ISO 297 DIN 2080/1 CSN 22 0430	32; 40 (50; 63)	40
X	CSN 22 0432	50; 63; 80	50
		ø D	7:24 No.
H	ISO 7388/1 DIN 69871/A CSN 22 0434	32; 40 50; 63; 80	40 50

GRADOS RECUBRIMIENTO MÉTODOS CVD-PVD FRESADO
Milling CVD-PVD Methods Coating Grades
Degré revêtement méthodes CVD-PVD fraisage

Grado Grades Degré	Microestructura Microestructure Microstructure	Grupo Material Pieza Trabajo Workpiece Material Group Groupe materiel piece travail	Aplicación Recomendada Recommended Application Application conseillée		
C-526	CVD 	P M K S N H ● ○ ● ○	- Sustrato de metal duro sin carburos - Capa fina de recubrimiento depositada por metodo CVD - Recomendada para materiales P-K y plaquitas con ángulo posición 90° - Grandes secciones de viruta - Buenas condiciones de corte y elevadas Vc sin refrigeración	- Substrate without carbides. - Thin coated layer applied by MTCVD method - Suitable for materials group P-K & cutting inserts with rake angle of 90° - Big chip cross section - Good cutting conditions and high Vc without coolant	- Substrat Carbure sans carbures - Couche Fine Revêtement par méthode CVD - Conseillée pour matériaux P-K et plaquettes avec angle de position 90° - Grandes sections de copeaux - Bonnes conditions de coupe et hautes Vc sans refroidissemment
P-605	PVD 	P M K S N H ● ○ ○ ○ ○ ●	- Sustrato de micrograno sin carburos y bajo contenido de cobalto - Recubrimiento nanocapa con contenido Al2 por metodo PVD - Recomendada para condiciones de trabajo con elevada fatiga térmica - Aplicación general - Secciones de viruta corta. Elevadas Vc en condiciones estables	- Fine grained substrate without carbides with low cobalt content - Nanostructural coating with high Al2 content, applied by PVD method - Recommended for cutting conditions with high thermal stress - General purpose. Small chip cross section. High Vc in stable conditions	- Substrat micrograin sans carbures et faible contenu en cobalt - Revêtement nanocouche avec contenu AL2 par méthode PVD - Conseillée pour conditions de travail avec faible fatigue thérmique - Appl. générale. Sections copeaux courts, hautes Vc en conditions stables
P-610	PVD 	P M K S N H ○ ◐ ● ○ ● ●	- Sustrato de micrograno sin carburos y bajo contenido de cobalto - Recubrimiento nanocapa con contenido Al2 por metodo PVD - Recomendada para condiciones de trabajo con elevada fatiga térmica - Aplicación general - Secciones de viruta corta. Elevadas Vc en condiciones estables	- Fine grained substrate without carbides with low cobalt content - Nanostructural coating with high Al2 content, applied by PVD method - Recommended for cutting conditions with high thermal stress - General purpose. Small chip cross section. High Vc in stable conditions	- General purpose. Small chip cross section. High Vc in stable conditions - Substrat micrograin sans carbures et faible contenu en cobalt - Revêtement nanocouche avec contenu AL2 par méthode PVD - Conseillée pour conditions de travail avec faible fatigue thérmique - Appl. générale. Sections copeaux courts, hautes Vc en conditions stables
P-615	PVD 	P M K S N H ◐ ◐ ● ○ ◐ ●	- Sustrato de ultramicrograno sin carburos - Nuevo recubrimiento de PVD - Alta resistencia a la oxidación - Medias y bajas secciones de viruta - Medias a altas Vc en condiciones de trabajo estables	- Submicron substrate without carbides. - New PVD coating - High resistance against oxidation - Lower up to medium chip cross-section - Medium up to high cutting speed in stable working conditions	- Substrat ultramircrograin sans carbures - Nouveau revêtement PVD - Haute résistance à l´oxidation - Moyennes et Faibles sections de copeaux - Moyennes et Hautes Vc en conditions de travail stables
P-620	PVD 	P M K S N H ● ● ◐	- Sustrato de micrograno con alto contenido en carburos - Recubrimiento de nanocapa con elevado contenido en Al2 - Recomendada para materiales del grupo P-M - Moderados y elevados avances en condiciones estables	- Substrate with high content of carbides - Nanostructural coating with high content of Al2 - Recommended for materials of groups P-M - Medium up to high feed in stable conditions	- Substrat micrograin avec un haut contenu en carbures - Revêtement nanocouche avec haut contenu en AL2 - Conseillée pour matériaux du groupe P-M - Hauts et Modérés avances en conditions stables
P-625	PVD 	P M K S N H ● ◐ ◐	- Sustrato de micrograno con alto contenido en carburos - Recubrimiento de nanocapa con elevado contenido en Al2 - Recomendada para materiales del grupo P-M - Moderados y elevados avances en condiciones estables	- Substrate with high content of carbides - Nanostructural coating with high content of Al2 - Recommended for materials of groups P-M - Medium up to high feed in stable conditions	- Substrat micrograin avec un haut contenu en carbures - Revêtement nanocouche avec haut contenu en AL2 - Conseillée pour matériaux du groupe P-M - Hauts et Modérés avances en conditions stables
P-630	CVD 	P M K N H ● ◐ ● ◐ ◐ ◐	- Sustrato de ultramicrograno sin carburos con alto contenido en cobalto - Nuevo recubrimiento de PVD con gran resistencia contra la oxidación - Medias y bajas secciones de viruta - Aplicable en todos grupos de materiales en condiciones desfavorables	- Submicron substrate without carbides with high content of cobalt - New PVD coating with increased resistance against oxidation - Low up to medium chip cross-section - Suitable for all material groups in worse working conditions	- Substrat ultramicrograin sans carbures avec un haut contenu en cobalt - Nouveau revêtement PVD avec haute résistance à l´oxidation - Moyennes et faibles sections de copeaux - Application sur tous les groupes de matériaux en conditions défavorables
P-640	PVD 	P M K S N H ● ● ◐ ●	- Sustrato de gran tenacidad sin carburos y elevado contenido en cobalto - Nanorecubrimiento por metodo PVD - Recomendada en condiciones de trabajo con elevada fatiga térmica - Velocidades de corte bajas en condiciones inestables	- High tenacity substrate without carbides and high cobalt content - Nanostructural coating a pplied by PVD method - Recommended for cutting conditions with high thermal stress - Low cutting speed in non-stable conditions	- Substrat très tenace sans carbures et haut contenu en cobalt - Nanorevêtement par méthode PVD - Conseillée en conditions de travail avec haute fatigue thermique - Vitesses de coupe faible en conditions pas stables
P-010	Sin rec. No coat.-Sans rev. 	P M K S N H ○ ● ○ ● ○	- Sustrato de submicrograno sin carburos y bajo contenido en cobalto - Aplicación general en todos los materiales menos el grupo P - Secciones de viruta corta en condiciones de trabajo estables	- Submicron substrate without carbides and low content of cobalt - General purpose for all materials but group P - Small chip cross-section in stable working conditions	- Substrat submicrograin sans carbures et faible contenu en cobalt - Application générale sur tous les matériaux sauf le groupe P - Sections de copeaux courtes en conditions de travail stables

PORTA-PLAQUITAS FRESADO ALTO AVANCE
High Feed Tool-Holders
Porte-Plaquettes fraisage haute avance

ALTO AVANCE
High Feed
Haute avance

REFRIGERACIÓN INTERIOR - Internal Cooling - Lubrification interne

Ref. 8231
SLO-03

Ref. 8232
A50060

Ref. 8233
SWN-09

Ref. 8234
SSD-12

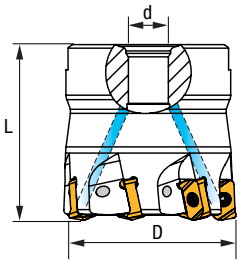
Ref. 8261
SLO-03

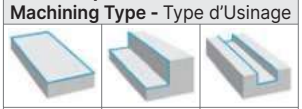
Ref. 8262
SSD-12

Ref. 8231

PORTA-PLAQUITAS FRESADO ALTO AVANCE SLO-03 REFRIGERACIÓN INTERIOR
Internal Cooling SLO-03 High Feed Tool-Holder
Porte-Plaquettes fraisage haute avance SLO-03 lubrification interne

New!



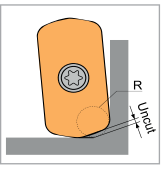
Tipo Mecanizado Machining Type - Type d'Usinage		
		
●		
●		

ISO	ø D	ø d H7	Z	L	N° Art.	€	Ref. 8804		Ref. 8801	
40E6R40-SLO03	40	16	6	40	48491		M3×7 Art. 70192 €	5	ZT-8 Art. 10506 €	1
50E7R50-SLO03	50	22	7	50	48500					
63E9R50-SLO03	63	22	9	50	70191					

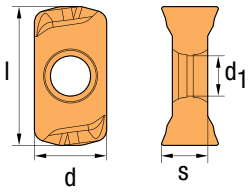
Plaquita / Insert / Plaquette:
Pag. 628

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Programación del radio de esquina
Programming of the corner radius
Programmation du rayon de coin

Descripción Designation Description	Approx. R (mm)		
	Input R	Uncut	
LOGX-030310	1,6	0,39	

Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,30-1,60	0,30-0,90



LOGX

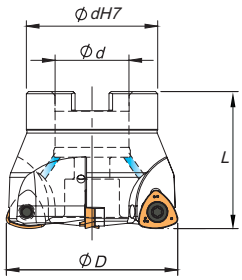
ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1
LOGX-030310-ZSG							●	●		11,90	6,20	3,96	3,45

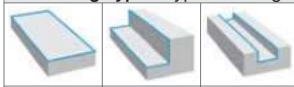
Plaquita / Insert / Plaquette:
Pag. 628

Ref. 8232

PORTA-PLAQUITAS FRESADO ALTO AVANCE A50060 REFRIGERACIÓN INTERIOR
Internal Cooling A50060 Milling High Feed Tool-Holder
Porte-Plaquettes fraisage haute avance A50060 lubrification interne

TRABAJO DE INTERPOLACIÓN
Interpolation Work
Travail d'Interpolation



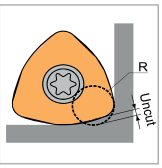
Tipo Mecanizado Machining Type - Type d'Usinage		
		
●		
●		

ISO	D	dH7	L	Z	N° Art.	€	Ref. 8804		Ref. 8801	
052-A50060-03	52	22	45	3	59764		Z-052-80 Art. 59770 €	5	ZT-20 Art. 13845 €	1
063-A50060-04	63	27	50	4	59765					
080-A50060-05	80	27	50	5	59766					

Plaquita / Insert / Plaquette:
Pag. 635

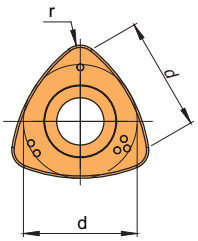
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

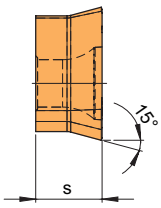
Programación del radio de esquina
Programming of the corner radius
Programmation du rayon de coin

Descripción Designation Description	Approx. R (mm)		
	Input R	Uncut	
WNMW-1207SP	3,50	0,90	

Condiciones Corte Cutting Conditions Conditions coupe	
f_z mm	a_p mm
0,30-1,50	1,80

WNMW





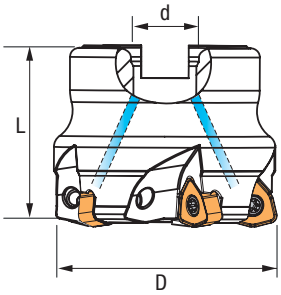
ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions		
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	d	s	r
WNMW-1207SP			●		●					12	7,00	2

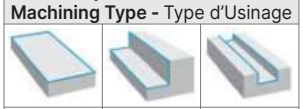
Plaquita / Insert / Plaquette:
Pag. 635

Ref. 8233

PORTA-PLAQUITAS FRESADO ALTO AVANCE SWN-09 REFRIGERACIÓN INTERIOR
Internal Cooling SWN-09 High Feed Tool-Holder
Porte-Plaquettes fraisage haute avance SWN-09 lubrification interne

New!



Tipo Mecanizado Machining Type - Type d'Usinage		
		
●		
●		

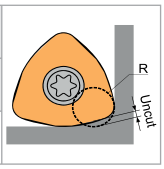
ISO	D	dH7	L	Z	N° Art.	€	Ref. 8816		Ref. 8801	
040E4R40-SWN09	40	16	40	4	48647		M3×7 Art. 70192 €	5	ZT-8 Art. 10506 €	1
050E5R40-SWN09	50	22	40	5	48650					
063E6R40-SWN09	63	22	40	6	74821					

Plaquita / Insert / Plaquette: **Pag. 636**

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

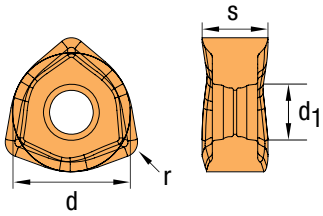
Programación del radio de esquina
Programming of the corner radius
Programmation du rayon de coin

Descripción Designation Description	Approx. R (mm)	
	Input R	Uncut
WNMX09T3	2,5	0,60



Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,40-1,50	0,40-1,35

WNMX



ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	d	s	r	d_1
WNMX-09T316-ZMG							●	●		9,53	3,97	1,60	3,60

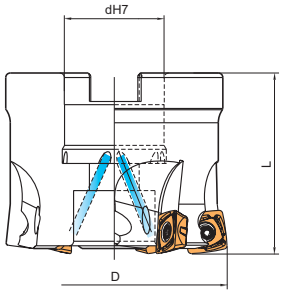
Plaquita / Insert / Plaquette: **Pag. 636**

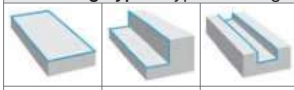
Ref. 8234

PORTA-PLAQUITAS FRESADO ALTO AVANCE SSD-12 REFRIGERACIÓN INTERIOR
Internal Cooling SSD-12 High Feed Tool-Holder
Porte-Plaquettes fraisage haute avance SSD-12 lubrification interne

New!

ALTO AVANCE
High Feed
Haute avance



Tipo Mecanizado Machining Type - Type d'Usinage		
		
●		
●		

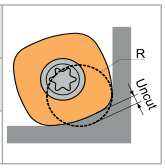
ISO	D	dH7	L	Z	N° Art.	€	Ref. 8804		Ref. 8801	
50E4R40-SSD12	50	22	40	4	77740		M4×8 Art. 77794 €	5	ZT-15 Art. 10512 €	1
63E5R40-SSD12	63	22	40	5	77749					

Plaquita / Insert / Plaquette:
Pag. 630

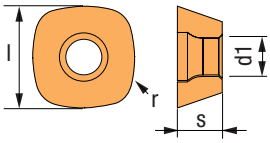
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Programación del radio de esquina
Programming of the corner radius
Programmation du rayon de coin

Descripción Designation Description	Approx. R (mm)	
	Input R	Uncut
SDMT1205	4,5	0,83



Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,50-1,80	0,30-1,50



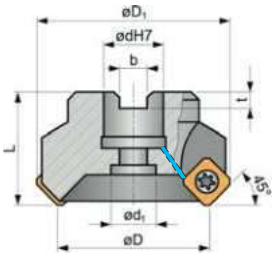
SDMT

ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	s	r	d_1
SDMT-1205ZDTN-ZMG					●		●			12,7	5,56	15	4,60

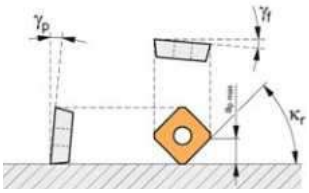
Plaquita / Insert / Plaquette:
Pag. 630

Ref. 8230

PORTA-PLAQUITAS FRESADO S45SE12F-45° REFRIGERACIÓN INTERIOR
Internal Cooling S45SE12F-45° Milling Tool-Holder
Porte-Plaquettes fraisage S45SE12F-45° lubrification interne



γ_p	+18°	K_r	45°
γ_f	-6°	$a_{p\,max}$	6,00 mm



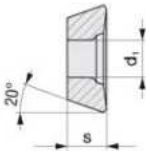
ISO	D	dH7	L	D_1	Z	Nº Art.	€
050R-S45SE12F	50	22	40	62	4	20566	
063R-S45SE12F	63	22	50	75	5	20567	
080R-S45SE12F	80	27	50	92	6	20596	
100R-S45SE12F	100	32	50	112	6	20600	
125R-S45SE12F	125	40	63	132	7	20607	

Ref. 8804		Ref. 8804		Ref. 8801	
Z-155 Art. 21009 €	5	Z-910 Art. 20998 €	5	ZT-20 Art. 13845 €	1
		Z-912 Art. 20999 €	5		
		Z-917 Art. 21001 €	5		
		-			

Tipo Mecanizado Machining Type - Type d'Usinage		
●		
		●

Plaquita / Insert / Plaquette: **Pag. 630, 632**

	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis



SEHT

ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1	m_ε
	Calidades / Qualities / Qualités									Dimensiones Dimensions				
SEHT 1204AFSN	●									12,70	12,70	4,76	5,50	1,6
SEHT 1204AFTN					●			●		12,70	12,70	4,76	5,50	1,6
SEHT 1204AFFN-FA			●						●	12,70	12,70	4,76	5,50	1,6

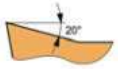
Plaquita / Insert / Plaquette: **Pag. 630, 632**

SEHT FA

Geometría / Geometry / Géométrie

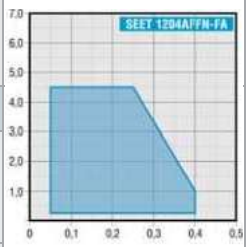
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition					●	
Desb. Medio / Roug. & Finish. / Semi-Finition					●	
Desb. Grueso / Coarse Rough. / Ébauche					●	



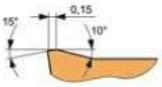
Condiciones Corte / Cutting Conditions / Conditions coupe	
f_z	0,10-0,30 mm/z
a_p	1,00-6,00 mm

SEHT

Geometría / Geometry / Géométrie

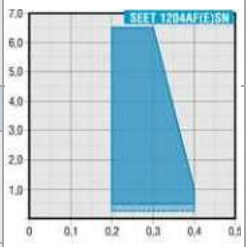
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	●	●	◐	◐		○
Desb. Medio / Roug. & Finish. / Semi-Finition	●	●	◐	◐		○
Desb. Grueso / Coarse Rough. / Ébauche	●	●	◐	◐		○

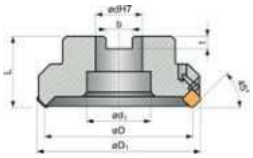


Condiciones Corte / Cutting Conditions / Conditions coupe	
f_z	0,10-0,30 mm/z
a_p	1,00-6,00 mm

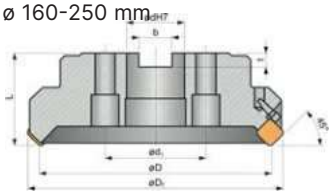
Ref. 8235

PORTA-PLAQUITAS FRESADO W45SE123F-45°
W45SE123F-45° Milling Tool-Holder
Porte-Plaquettes fraisage W45SE123F-45°

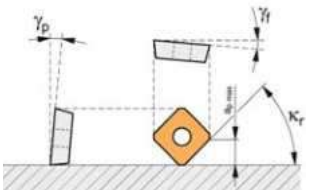
ø63-125mm



ø 160-250 mm

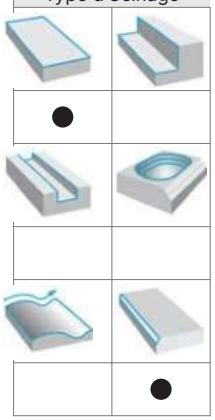


γ_p	+18°	K_r	45°
γ_f	-3°	$a_{p\,max}$	6,5 mm



ISO	D	dH7	L	D_1	Z	N° Art.	€	Ref. 8804	Ref. 8806	Ref. 8809	Ref. 8814	Ref. 8804	
080R-W45SE1203F	80	27	50	98	6	20608		5	5	5	5	Z-912 Art. 20999 €	5
100R-W45SE1203F	100	32	50	108	6	20614		Z-106 Art. 21004 €	Z-206 Art. 21367 €	Z-301 Art. 21372 €	3×10 Art. 10955 €	Z-917 Art. 21001 €	5
125R-W45SE1203F	125	40	63	139	7	20616						-	
160R-W45SE1203F	160	40	63	174	8	20617						Z-952 Art. 21003 €	5

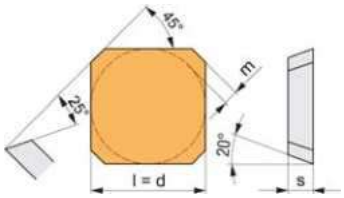
Tipo Mecanizado
Machining Type
Type d'Usinage

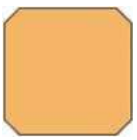


Plaquita / Insert / Plaquette: **Pag. 630**

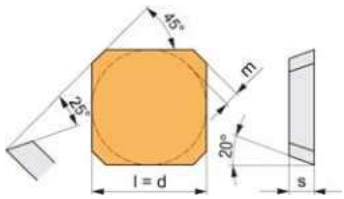
	Tornillo - Screw - Vis
	Arandela - Clamp - Rondelle
	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Tornillo - Screw - Vis

SEKR





SEKN



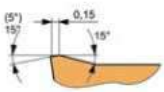
ISO	Calidades Qualities Qualités C-526	P-620	P-640	Dimensiones Dimensions l	d	s	m_ϵ
SEKR-1203AFSN	●	●	●	12,70	12,70	3,18	1,6
SEKN-1203AFSN	●	●		12,70	12,70	3,18	1,6

Plaquita / Insert / Plaquette: **Pag. 630**

Geometría Geometry Géométrie — **SEKR**

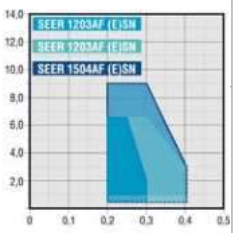
Foto Picture Photo

Filo Corte Cutting Edge Arête coupe



Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail

Fresado Milling Fraisage	P	M	K	S	N	H
Acabado Finishing Finition	●	●	◎	◎		○
Desb. Medio Roug. & Finish. Semi-Finition	●	●	◎	◎		○
Desb. Grueso Coarse Rough. Ébauche	●	●	◎	◎		○



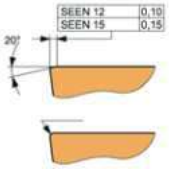
Condiciones Corte Cutting Conditions Conditions coupe

f_z	**Segun Dimensiones plaquita** According to insert dimensions Suivant dimensions plaquette
a_p	

Geometría Geometry Géométrie — **SEKN**

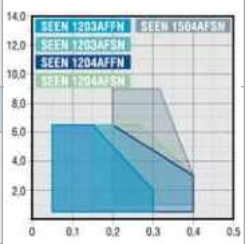
Foto Picture Photo

Filo Corte Cutting Edge Arête coupe



Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail

Fresado Milling Fraisage	P	M	K	S	N	H
Acabado Finishing Finition	◎	○	●			●
Desb. Medio Roug. & Finish. Semi-Finition	◎	○	●			●
Desb. Grueso Coarse Rough. Ébauche	◎	○	●			●

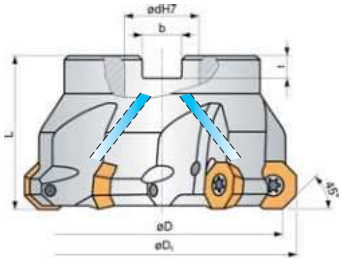


Condiciones Corte Cutting Conditions Conditions coupe

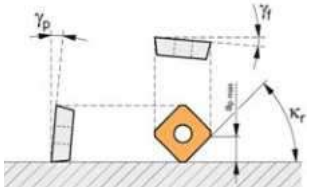
f_z	**Segun Dimensiones plaquita** According to insert dimensions Suivant dimensions plaquette
a_p	

Ref. 8240

PORTA-PLAQUITAS FRESADO S45OD06-45° REFRIGERACIÓN INTERIOR
Internal Cooling S45OD06-45° Milling Tool-Holder
Porte-Plaquettes fraisage S45OD06-45° lubrification interne



λ_p	+5°	K_r	45°
λ_f	0°	a_{pmax}	8,6 mm



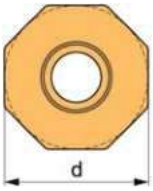
ISO	D	dH7	L	Z	N° Art.	€
063R-S45OD06	63	27	50	5	20623	
080R-S45OD06	80	32	50	6	20656	
100R-S45OD06	100	40	50	7	20659	
125R-S45OD06	125	40	63	8	20660	

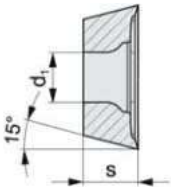
Ref. 8804	Ref. 8804		Ref. 8801
5	Z-912 Art. 20999 €	5	1
Z-125 Art. 21008 €	Z-917 Art. 21001 €	5	ZT-07 Art. 19569 €
	Z-920 Art. 21002 €	5	
	-		

Plaquita / Insert / Plaquette: **Pag. 628**

Tipo Mecanizado Machining Type - Type d'Usinage		
●		
		●

	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis



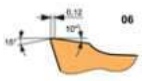


ODMT

ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	d	s	d_1
ODMT 0605ZZN	●						●	●		15,87	5,56	5,50

Calidades / Qualities / Qualités — Dimensiones / Dimensions

Plaquita / Insert / Plaquette: **Pag. 628**

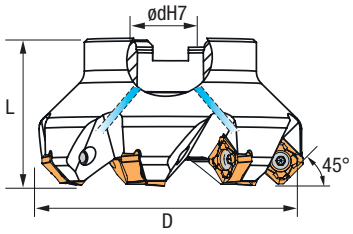
Geometría / Geometry / Géométrie	Foto / Picture / Photo	Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail	P	M	K	S	N	H
ODMT		Fresado / Milling / Fraisage						
		Acabado / Finishing / Finition	●	◐	●	○		○
		Desb. Medio / Roug. & Finish. / Semi-Finition	●	◐	●	○		○
	Filo Corte / Cutting Edge / Arête coupe 	Desb. Grueso / Coarse Rough. / Ebauche	●	◐	●			

Condiciones Corte / Cutting Conditions / Conditions coupe	
f_z	0,15-0,45 mm/z
a_p	1,00-8,60 mm

Ref. 8236

PORTA-PLAQUITAS FRESADO S45SN12 REFRIGERACIÓN INTERIOR
Internal Cooling S45SN12 Tool-Holder
Porte-Plaquettes fraisage S45SN12 lubrification interne

New!



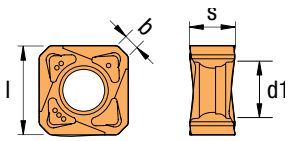
Tipo Mecanizado Machining Type - Type d'Usinage		
●		
		●

ISO	D	dH7	L	Z	N° Art.	€	Ref. 8816		Ref. 8801	
050E5R40-S45SN12	50	22	40	5	70916		M5×12 Art. 70746 €	5	ZT-20 Art. 13845 €	1
063E6R40-S45SN12	63	22	40	6	48653					
080E7R50-S45SN12	80	27	50	7	70949					
100E8R50-S45SN12	100	32	50	8	70955					
125E10R63-S45SN12	125	40	63	10	70986					

Plaquita / Insert / Plaquette: **Pag. 633**

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

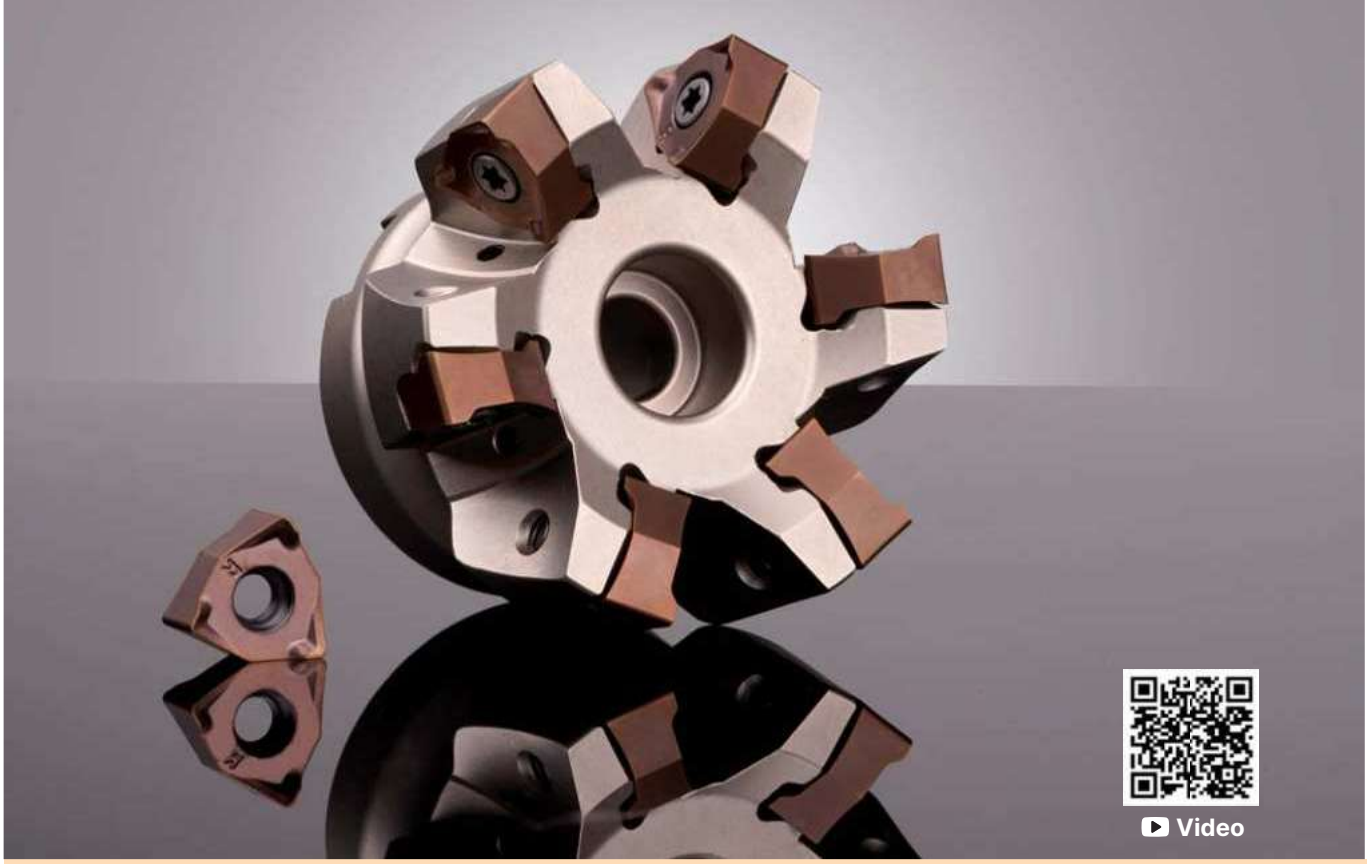
Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,08-0,30	0,30-6,00



SNMX

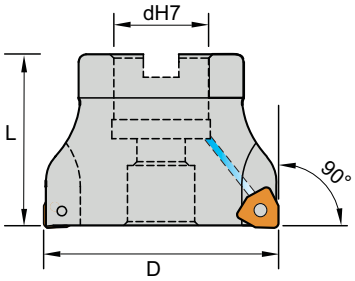
ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions				
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l mm	d mm	s mm	b mm	d_1 mm
SNMX-1205-ZMG							●	●		12,7	12,7	6,4	1,5	6
SNMX-1205-ZRG							●	●		12,7	12,7	6,4	1,5	6

Plaquita / Insert / Plaquette: **Pag. 633**



Ref. 8241

PORTA-PLAQUITAS FRESADO ESCUADRA S90XN08 REFRIGERACIÓN INTERIOR
Internal Cooling S90XN08 Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre S90XN08 lubrification interne

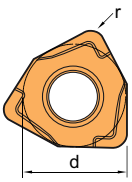


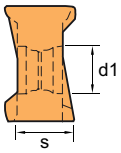
Tipo Mecanizado Machining Type - Type d'Usinage		
●	●	○
○		

ISO	D	dH7	Z	L	N° Art.	€	8804		8801	
050B5R-S90XN08	50	22	5	45	17144		M4×12,5 Art. 20689 €	5	ZT-15 Art. 10512 €	5
063B6R-S90XN08	63	22	6	45	17147					
080B7R-S90XN08	80	27	7	50	17208					
100B7R-S90XN08	100	32	7	52	17256					
125B10R-S90XN08	125	40	10	60	17267					

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Plaquita / Insert / Plaquette: **Pag. 634**





Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,10-0,30	0,30-7,00

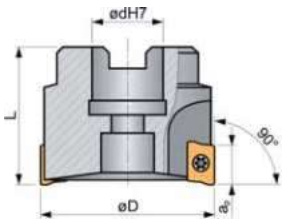
XNMX

ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	d mm	s mm	d_1 mm	r mm
XNMX-080608-ZMG					●		●			12,53	6,5	4,5	0,8
XNMX-080608-ZRG								●		12,53	6,5	4,5	0,8

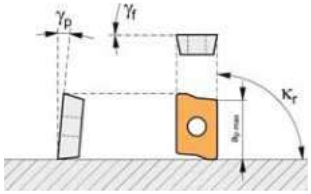
Plaquita / Insert / Plaquette: **Pag. 634**

Ref. 8245

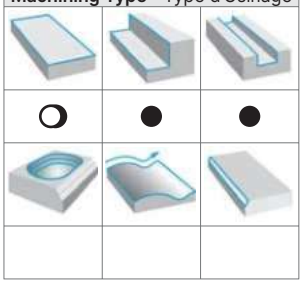
PORTA-PLAQUITAS FRESADO ESCUADRA S90AP10D-90°
S90AP10D-90° Square Milling Tool-Holder
Porte Plaquettes fraisage équerre S90AP10D-90°



γ_p	+3°	K_r	90°
γ_f	0°	$a_{p\,max}$	9 mm



Tipo Mecanizado
Machining Type - Type d'Usinage

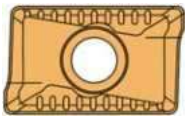


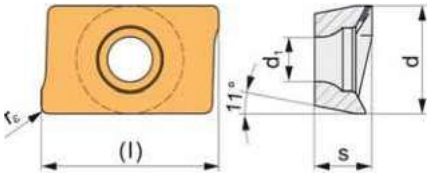
ISO	D	dH7	L	Z	N° Art.	€
040R-S90AP10D	40	16	40	6	20662	
050R-S90AP10D	50	22	40	7	20665	
063R-S90AP10D	63	22	50	9	20670	

Ref. 8816	Ref. 8804		Ref. 8801
5	**Z-105** Art. 20997 €	5	1
T-07 Art. 10846 €	**Z-910** Art. 20998 €	5	**ZT-07** Art. 19569 €

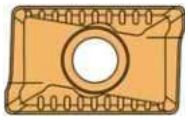
Plaquita / Insert / Plaquette: **Pag. 626**

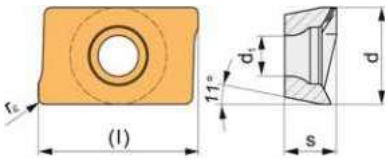
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis





APKT





APET FA
Al

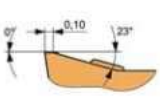
ISO	Calidades / Qualities / Qualités									Dimensiones / Dimensions				
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1	r_ε
APKT 1003PDER-M	●				●		●	●		10	6,7	3,50	2,88	0,5
APET 1003PDFR-FA									●	10	6,7	3,50	2,88	0,5

Plaquita / Insert / Plaquette: **Pag. 626**

Geometría / Geometry / Géométrie — **APKT-10..**

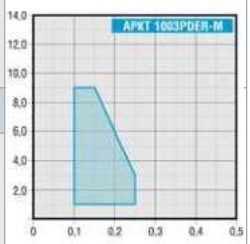
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

	Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado Finishing Finition		●	●	●	○		
Desb. Medio Roug. & Finish. Semi-Finition		●	●	●	○		
Desb. Grueso Coarse Rough. Ébauche		○	○	○	○		



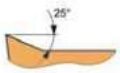
Condiciones Corte / Cutting Conditions / Conditions coupe

f_z	0,08-0,20 mm/z
a_p	1,00-9,00 mm

Geometría / Geometry / Géométrie — **APET FA**

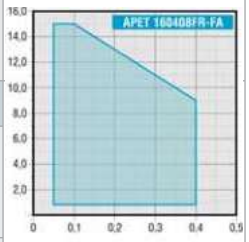
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

	Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado Finishing Finition						●	
Desb. Medio Roug. & Finish. Semi-Finition						●	
Desb. Grueso Coarse Rough. Ébauche						●	

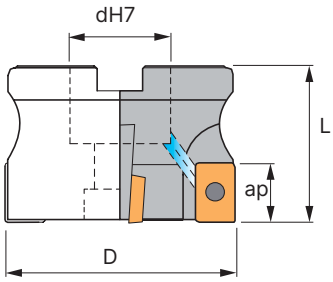


Condiciones Corte / Cutting Conditions / Conditions coupe

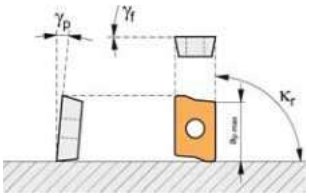
f_z	0,07-0,20 mm/z
a_p	1,00-9,00 mm

Ref. 8247

PORTA-PLAQUITAS FRESADO ESCUADRA S90AP10D-RF-90º REFRIGERACIÓN INTERIOR
Internal Cooling S90AP10D-RF-90º-Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre S90AP10D-RF-90º lubrification interne



γ_p	+3°	K_r	90°
γ_f	0°	$a_{p\,max}$	9 mm



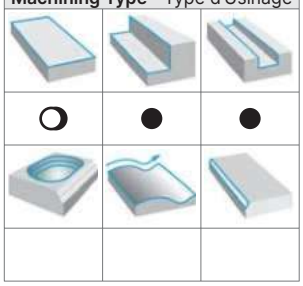
ISO	D	dH7	L	Z	Nº Art.	€
040R-S90AP10D-RF	40	16	40	6	80595	
050R-S90AP10D-RF	50	22	40	7	80596	
063R-S90AP10D-RF	63	22	50	9	80597	

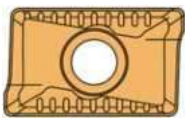
Ref. 8816	Ref. 8804		Ref. 8801
5	Z-105 Art. 20997 €	5	1
T-07 Art. 10846 €	Z-910 Art. 20998 €	5	ZT-07 Art. 19569 €

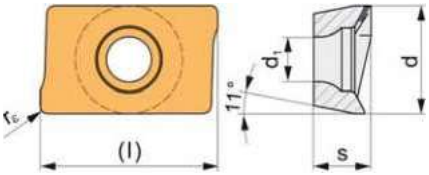
Plaquita / Insert / Plaquette: **Pag. 626**

	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

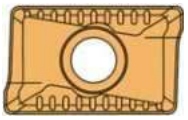
Tipo Mecanizado
Machining Type - Type d'Usinage

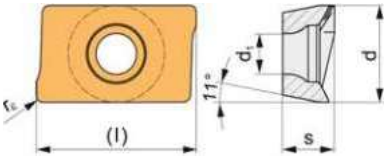






APKT





APET FA
Al

ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1	r_ϵ
	Calidades / Qualities / Qualités									Dimensiones / Dimensions				
APKT 1003PDER-M	●				●		●	●		10	6,7	3,50	2,88	0,5
APET 1003PDFR-FA									●	10	6,7	3,50	2,88	0,5

Plaquita / Insert / Plaquette: **Pag. 626**

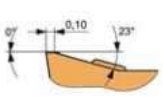
Geometría Geometry Géométrie

Foto Picture Photo

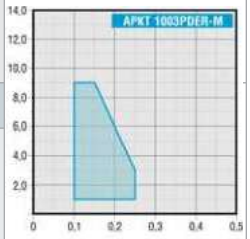
Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail

APKT-10..

Filo Corte Cutting Edge Arête coupe



Fresado Milling Fraisage	P	M	K	S	N	H
Acabado Finishing Finition	●	●	●	◐		
Desb. Medio Roug. & Finish. Semi-Finition	●	●	●	◐		
Desb. Grueso Coarse Rough. Ébauche	◐	◐	◐	○		



Condiciones Corte Cutting Conditions Conditions coupe

f_z	0,08-0,20 mm/z
a_p	1,00-9,00 mm

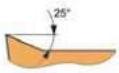
Geometría Geometry Géométrie

Foto Picture Photo

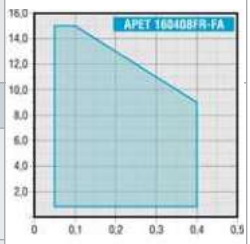
Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail

APET FA

Filo Corte Cutting Edge Arête coupe



Fresado Milling Fraisage	P	M	K	S	N	H
Acabado Finishing Finition					●	
Desb. Medio Roug. & Finish. Semi-Finition					●	
Desb. Grueso Coarse Rough. Ébauche					●	

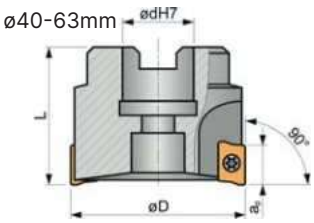


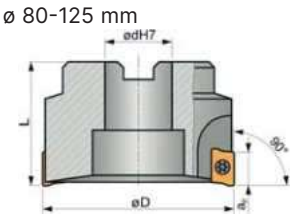
Condiciones Corte Cutting Conditions Conditions coupe

f_z	0,07-0,20 mm/z
a_p	1,00-9,00 mm

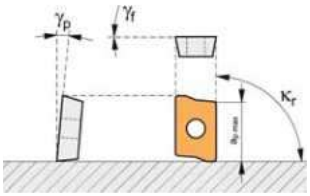
Ref. 8250

PORTA-PLAQUITAS FRESADO ESCUADRA S90AP16D-90°
S90AP16D-90° Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre S90AP16D-90°



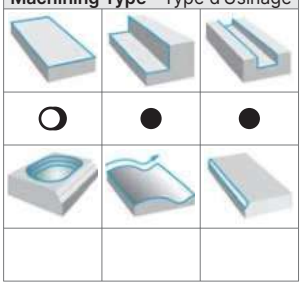


γ_p	+6°	K_r	90°
γ_f	0°	$a_{p\,max}$	13,50 mm



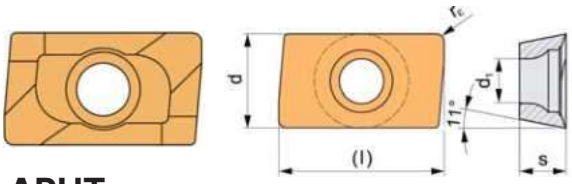
ISO	D	dH7	L	Z	N° Art.	€	Ref. 8816	Ref. 8804		Ref. 8801
050R-S90AP16D	50	22	40	5	20671		T-15 Art. 10895 € (5)	Z-910 Art. 20998 €	5	ZT-15 Art. 10512 € (1)
063R-S90AP16D	63	27	50	6	20674			Z-912 Art. 20999 €	5	
080R-S90AP16D	80	27	50	7	20683					
100R-S90AP16D	100	32	50	8	20692			Z-916 Art. 21000 €	5	
125R-S90AP16D	125	40	63	8	20693			-		

Tipo Mecanizado
Machining Type - Type d'Usinage

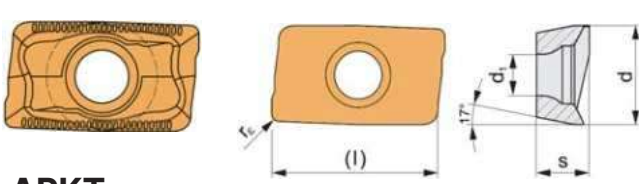


Plaquita / Insert / Plaquette: **Pag. 626, 627**

Tornillo - Screw - Vis | **Tornillo** - Screw - Vis | **Destornillador** - Screwdriver - Tournevis



APHT



APKT

ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1	r_ϵ
	Calidades / Qualities / Qualités									**Dimensiones** Dimensions				
APHT 160408FR-FA									●	16	9,45	5,35	4,5	0,8
APKT 1604PDER	●				●		●	●		16	9,45	5,35	4,6	0,8

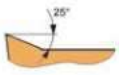
Plaquita / Insert / Plaquette: **Pag. 626, 627**

APHT

Geometría / Geometry / Géométrie

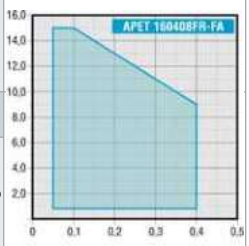
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition					●	○
Desb. Medio / Roug. & Finish. / Semi-Finition					●	○
Desb. Grueso / Coarse Rough. / Ébauche					●	○



Condiciones Corte / Cutting Conditions / Conditions coupe

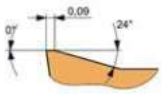
f_z	0,07-0,20 mm/z
a_p	1,00-13,50 mm

APKT-PDER

Geometría / Geometry / Géométrie

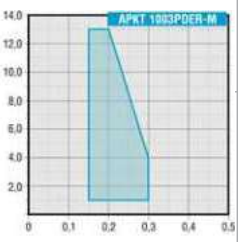
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête Coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	●	●	●		●	
Desb. Medio / Roug. & Finish. / Semi-Finition	●	●	●		●	
Desb. Grueso / Coarse Rough. / Ébauche	●	●	●		○	

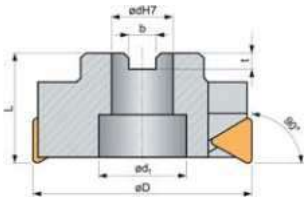


Condiciones Corte / Cutting Conditions / Conditions coupe

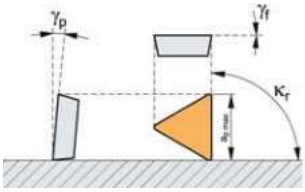
f_z	0,07-0,20 mm/z
a_p	1,00-13,50 mm

Ref. 8255

PORTA-PLAQUITAS FRESADO ESCUADRA W90TP16D-90°
W90TP16D-90° Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre W90TP16D-90°



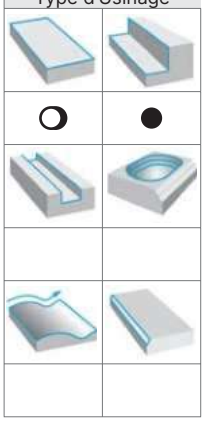
γ_p	+5°	K_r	90°
γ_f	0°	$a_{p\,max}$	13 mm



ISO	D	dH7	L	Z	N° Art.	€
050R-W90TP16D	50	22	40	4	20698	
063R-W90TP16D	63	27	50	4	20708	
080R-W90TP16D	80	32	50	5	20723	
100R-W90TP16D	100	40	50	6	20738	

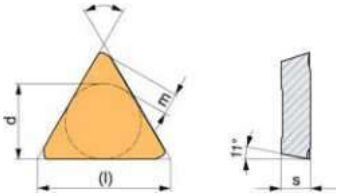
Ref. 8804		Ref. 8806	Ref. 8809	Ref. 8807	Ref. 8804	
Z-116 Art. 21005 €	5	5	-	-	Z-910 Art. 20998 €	5
Z-106 Art. 21004 €	5	Z-206 Art. 21367 €	5 Z-316 Art. 21373 €	5 Z-416 Art. 21371 €	Z-912 Art. 20999 €	5
					Z-916 Art. 21000 €	5
					Z-920 Art. 21002 €	5

Tipo Mecanizado
Machining Type
Type d'Usinage



Plaquita / Insert / Plaquette: **Pag. 634**

TPKN-TPKR



	Tornillo - Screw - Vis
	Arandela - Clamp - Rondelle
	Placa Base - Base Plate - Plaque de base
	Pasador - Pin - Goupille
	Tornillo - Screw - Vis

ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	m
TPKN 1603PDSR					●			●	●	16,5	9,53	3,18	2,45
TPKR 1603PDSR					●			●		16,5	9,53	3,18	2,45

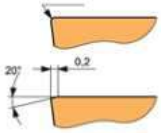
Plaquita / Insert / Plaquette: **Pag. 634**

TPKN

Geometría / Geometry / Géométrie

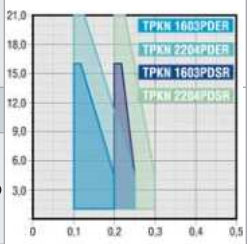
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	◐	○	●			●
Desb. Medio / Roug. & Finish. / Semi-Finition	◐	○	●			●
Desb. Grueso / Coarse Rough. / Ébauche						



Condiciones Corte
Cutting Conditions
Conditions coupe

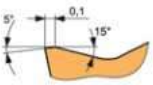
f_z	0,08-0,20 mm/z
a_p	1,00-13,00 mm

TPKR

Geometría / Geometry / Géométrie

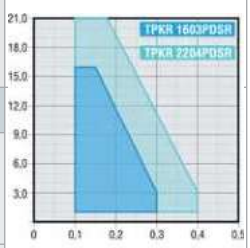
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	●	◐	●			
Desb. Medio / Roug. & Finish. / Semi-Finition	●	◐	●			
Desb. Grueso / Coarse Rough. / Ébauche						

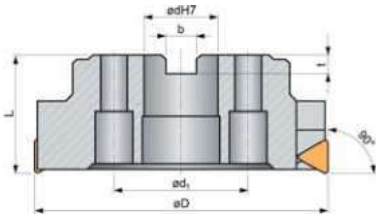


Condiciones Corte
Cutting Conditions
Conditions coupe

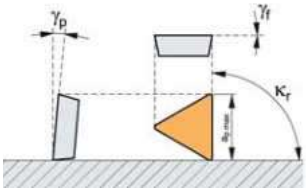
f_z	0,08-0,20 mm/z
a_p	1,00-13,00 mm

Ref. 8260

PORTA-PLAQUITAS FRESADO ESCUADRA W90TP22D-90°
W90TP22D-90° Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre W90TP22D-90°



γ_p	+5°	K_r	90°
γ_f	0°	$a_{p\,max}$	18 mm



Tipo Mecanizado Machining Type - Type d'Usinage		
○	●	

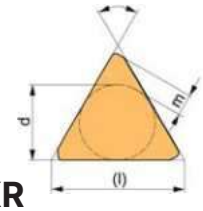
ISO	D	dH7	L	Z	N° Art.	€	Ref. 8804	Ref. 8810	Ref. 8810	Ref. 8811	Ref. 8804	Ref. 8804		Ref. 8801
160R-W90TP22D	160	40	63	9	20743		5 Z-077 Art. 21374 €	5 Z-434 Art. 21376 €	5 Z-436 Art. 21390 €	5 Z-942 Art. 21392 €	5 Z-116 Art. 21005 €	Z-912 Art. 20999 € Z-916 Art. 21000 € -	5 5	1 ZT-20 Art. 13845 €

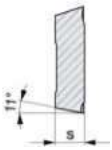
Ref. 8260 hasta fin de existencias / while stock lasts / jusqu'à la fin de stock

Plaquita / Insert / Plaquette: **Pag. 634**

	Tornillo - Screw - Vis
	Brida - Clamp - Pince
	Cuña - Wedge - Cale
	Tope - Stop
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

TPKN-TPKR





ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	m
	Calidades / Qualities / Qualités									Dimensiones Dimensions			
TPKN 2204PDSR			●		●			●	●	22	12,70	4,76	3,55
TPKR 2204PDSR					●			●		22	12,70	4,76	3,55

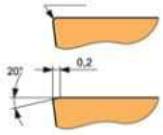
Plaquita / Insert / Plaquette: **Pag. 634**

TPKN

Geometría / Geometry / Géométrie

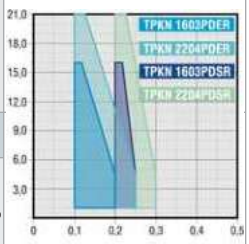
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	●	○	●			●
Desb. Medio / Roug. & Finish. / Semi-Finition	●	○	●			●
Desb. Grueso / Coarse Rough. / Ébauche						



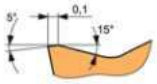
Condiciones Corte Cutting Conditions Conditions coupe	
f_z	0,10-0,30 mm/z
a_p	1,00-18,00 mm

TPKR

Geometría / Geometry / Géométrie

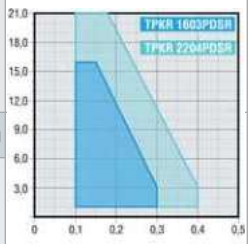
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	●	●	●			
Desb. Medio / Roug. & Finish. / Semi-Finition	●	●	●			
Desb. Grueso / Coarse Rough. / Ébauche						



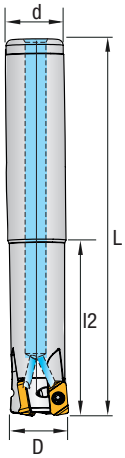
Condiciones Corte Cutting Conditions Conditions coupe	
f_z	0,10-0,30 mm/z
a_p	1,00-18,00 mm

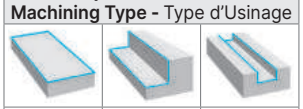
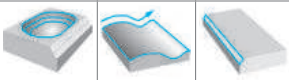
Ref. 8261

PORTA-PLAQUITAS FRESADO ALTO AVANCE SLO-03 REFRIGERACIÓN INTERIOR
Internal Cooling SLO-03 High Feed Tool-Holder
Porte-Plaquettes fraisage haute avance SLO-03 lubrification interne

New!

ALTO AVANCE
High Feed
Haute avance



Tipo Mecanizado Machining Type - Type d'Usinage		
		
●		
		
●		

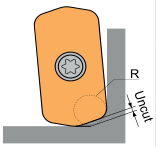
	ISO	D	dH6	L	l2	Z	N° Art.	€	Ref. 8804		Ref. 8801	
New!	16-SLO-03	16	16	150	30	2	87303		M3×7 Art. 70192 €	5	ZT-8 Art. 10506 €	1
	20-SLO-03	20	20	150	60	3	44837					
	25-SLO-03	25	25	150	60	4	44930					
New!	32-SLO-03 *	32	32	150	70	5	87304					

* **Sin refrigeración interior**
Without Internal Cooling
Sans lubrification interne

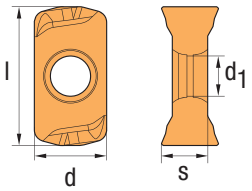
Plaquita / Insert / Plaquette:
Pag. 628

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Programación del radio de esquina
Programming of the corner radius
Programmation du rayon de coin

Descripción Designation Description	Approx. R (mm)		
	Input R	Uncut	
LOGX-030310	1,6	0,39	

Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,30-1,60	0,30-0,90



LOGX

ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1
LOGX-030310-ZSG							●	●		11,90	6,20	3,96	3,45

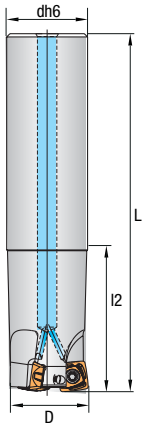
Plaquita / Insert / Plaquette:
Pag. 628

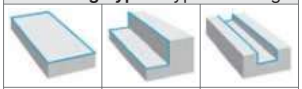
Ref. 8262

PORTA-PLAQUITAS FRESADO ALTO AVANCE SSD-12 REFRIGERACIÓN INTERIOR
Internal Cooling SSD-12 High Feed Tool-Holder
Porte-Plaquettes fraisage haute avance SSD-12 lubrification interne

New!

ALTO AVANCE
High Feed
Haute avance



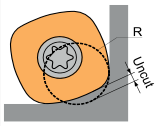
Tipo Mecanizado Machining Type - Type d'Usinage		
		
●		
●		

ISO	D	dh6	L	l2	Z	N° Art.	€	Ref. 8804		Ref. 8801	
32-SSD-12	32	32	160	70	2	77795		M4×8 Art. 77794 €	5	ZT-15 Art. 10512 €	1
40-SSD-12	40	32	200	70	3	77796					

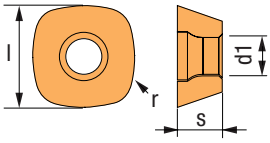
Plaquita / Insert / Plaquette:
Pag. 630

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Programación del radio de esquina
Programming of the corner radius
Programmation du rayon de coin

Descripción Designation Description	Approx. R (mm)		
	Input R	Uncut	
SDMT1205	4,5	0,83	

Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,50-1,80	0,30-1,50



SDMT

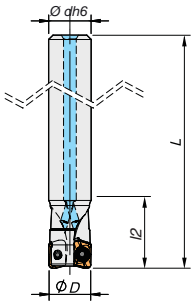
ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	s	r	d_1
SDMT-1205ZDTN-ZMG					●		●			12,7	5,56	15	4,60

Plaquita / Insert / Plaquette:
Pag. 630

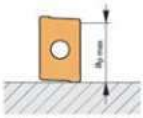
Ref. 8264

PORTA-PLAQUITAS FRESADO ESCUADRA SAP-06
SAP-06 Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre SAP-06

EXCLUSIVO
Exclusive
Exclusif
IZAR CUTTING TOOLS

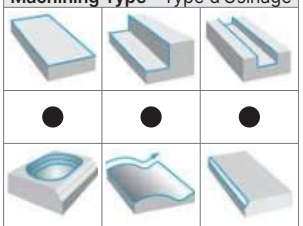


γ_p		K_r	
γ_f		$a_{p\,max}$	4 mm



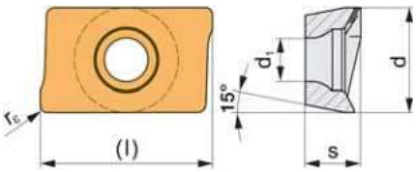
ISO	dh6	D	L	l_2	Z	N° Art.	€	Ref. 8804	
10-SAP-06	10	10	55	16	2	19833		P-180300 Art. 30435 €	5
12-SAP-06	12	12	80	17	2	19835			
16-SAP-06	16	16	90	20	3	20028		P-180400 Art. 30437 €	5

Tipo Mecanizado
Machining Type - Type d'Usinage



Plaquita / Insert / Plaquette: **Pag. 635**

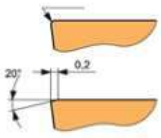
Tornillo - Screw - Vis



XOET

ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions				
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1	r
XOET-060204					●					6,96	3,98	2,30	1,92	0,4
XOET-060208					●					6,96	3,98	2,30	1,92	0,8

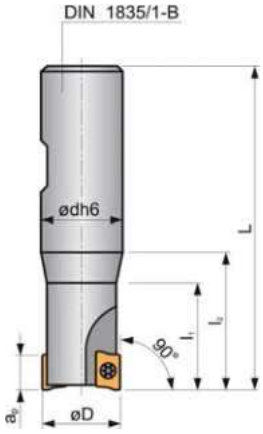
Plaquita / Insert / Plaquette: **Pag. 635**

Geometría Geometry Géométrie	Foto Picture Photo	Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail	P	M	K	S	N	H
XOET		Fresado Milling Fraisage						
		Acabado Finishing Finition	●	●	●	●		
	Filo Corte Cutting Edge Arête coupe	Desb. Medio Roug. & Finish. Semi-Finition	●	●	●	●		
		Desb. Grueso Coarse Rough. Ebauche	●	●	●	●		

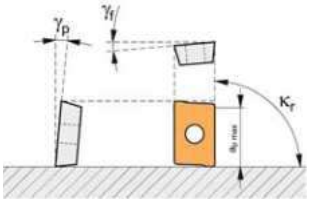
Condiciones Corte Cutting Conditions Conditions coupe	
f_z	0,05-0,07 mm/z
a_p	1-4 mm

Ref. 8265

PORTA-PLAQUITAS FRESADO ESCUADRA SAP-10D
SAP-10D Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre SAP-10D



γ_p	+4-10°	K_r	90°
γ_f	12°	$a_{p\,max}$	9 mm



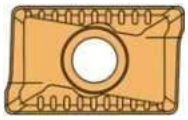
Tipo Mecanizado Machining Type - Type d'Usinage		
○	●	●
		○

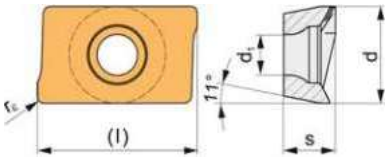
ISO	dh6	D	L	l_2	Z	N° Art.	€
16-SAP-10D	20	16	90	25	2	20746	
20-SAP-10D	20	20	95	30	3	20750	
25-SAP-10D	25	25	95	30	4	20752	

Ref. 8816		Ref. 8801	
T-0 Art. 10846 €	5	ZT-07 Art. 19569 €	1

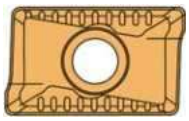
Plaquita / Insert / Plaquette: **Pag. 626**

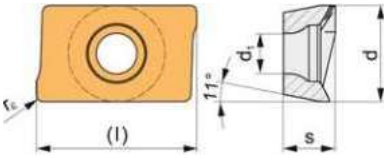
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis





APKT





APET FA
Al

ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1	r_ε
	Calidades / Qualities / Qualités									Dimensiones / Dimensions				
APKT-1003PDER-M	●				●		●	●		10	6,7	3,50	2,88	0,5
APET 1003PDFR-FA									●	10	6,7	3,50	2,88	0,5

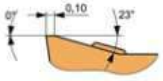
Plaquita / Insert / Plaquette: **Pag. 626**

APKT-10..

Geometría / Geometry / Géométrie

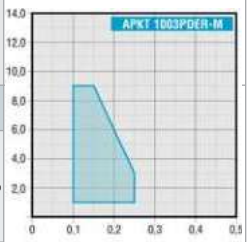
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	●	●	●			○
Desb. Medio / Roug. & Finish. / Semi-Finition	●	●	●			○
Desb. Grueso / Coarse Rough. / Ébauche	○	○	○	○		



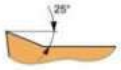
Condiciones Corte / Cutting Conditions / Conditions coupe	
f_z	0,10-0,25 mm/z
a_p	1,00-9,00 mm

APET FA

Geometría / Geometry / Géométrie

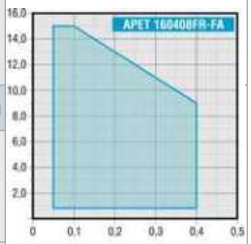
Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail

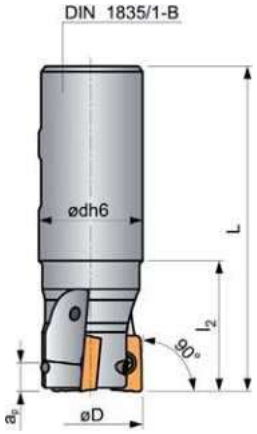
Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition					●	
Desb. Medio / Roug. & Finish. / Semi-Finition					●	
Desb. Grueso / Coarse Rough. / Ébauche					●	



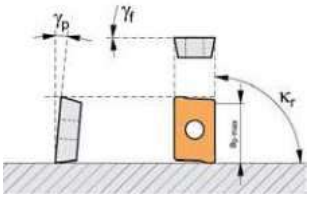
Condiciones Corte / Cutting Conditions / Conditions coupe	
f_z	0,05-0,40 mm/z
a_p	0,80-15,00 mm

Ref. 8270

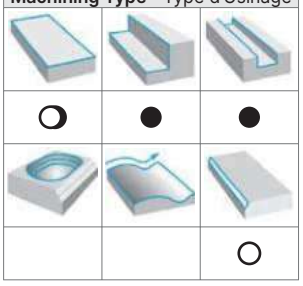
PORTA-PLAQUITAS FRESADO ESCUADRA SAP-16D
SAP-16D Square Milling Tool-Holder
Porte-Plaquettes fraisage équerre SAP-16D



γ_p	+0-8°	K_r	90°
γ_f	0°	$a_{p\,max}$	13,50 mm



Tipo Mecanizado
Machining Type - Type d'Usinage



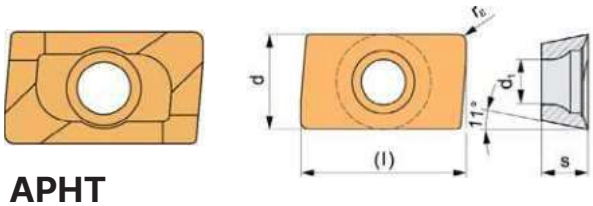
ISO	dh6	D	L	l_2	Z	N° Art.	€
25-SAP-16D	25	25	100	30	2	20759	
32-SAP-16D	32	32	110	35	3	20762	
40-SAP-16D	32	40	110	35	4	20789	

Ref. 8816		Ref. 8801
T 15 Art. 35217 €	5	1 ZT-15 Art. 10512 €
T-15 Art. 10895 €	5	

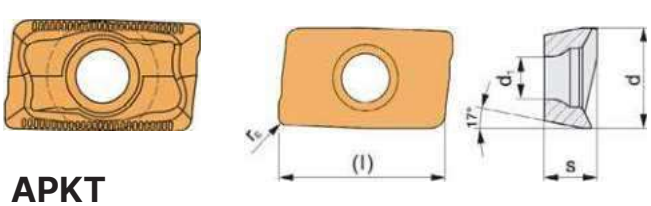
Tornillo - Screw - Vis

Destornillador Screwdriver Tournevis

Plaquita / Insert / Plaquette: **Pag. 626, 627**



APHT



APKT

ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d_1	r_ε
APHT-160408PDFR-FA									●	16	9,45	5,35	4,5	0,8
APKT-1604PDER	●				●		●	●		16	9,45	5,35	4,6	0,8

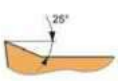
Calidades / Qualities / Qualités — Dimensiones / Dimensions

Plaquita / Insert / Plaquette: **Pag. 626, 627**

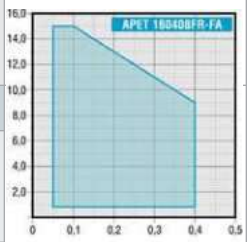
APHT

Geometría / Geometry / Géométrie — Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail — Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition					●	
Desb. Medio / Rough. & Finish. / Semi-Finition					●	
Desb. Grueso / Coarse Rough. / Ébauche					●	



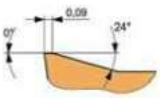
Condiciones Corte / Cutting Conditions / Conditions coupe

f_z	0,07-0,20 mm/z
a_p	1,00-13,50 mm

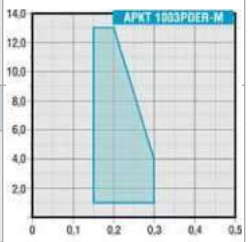
APKT-PDER

Geometría / Geometry / Géométrie — Foto / Picture / Photo

Filo Corte / Cutting Edge / Arête coupe



Grupo Materiales Pieza Trabajo / Workpiece Material Group / Groupe matériaux pièce travail — Fresado / Milling / Fraisage	P	M	K	S	N	H
Acabado / Finishing / Finition	●	●	●	○		
Desb. Medio / Rough. & Finish. / Semi-Finition	●	●	●	○		
Desb. Grueso / Coarse Rough. / Ébauche	○	○	○	○		

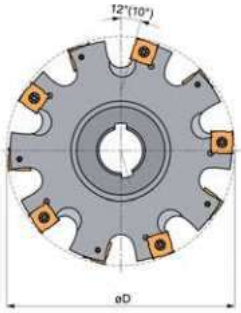


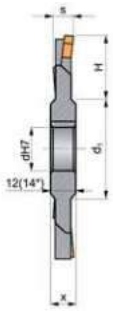
Condiciones Corte / Cutting Conditions / Conditions coupe

f_z	0,07-0,15 mm/z
a_p	1,00-13,50 mm

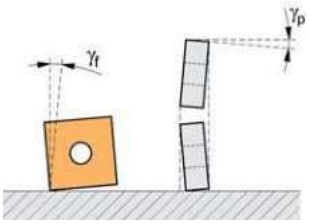
Ref. 8275

PORTA-PLAQUITAS RANURADO S90SN12
S90SN12 Side & Face Milling Tool-Holder
Porte-Plaquettes rainurage S90SN12





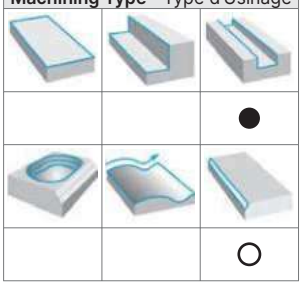
γ_p	-0°30´	K_r	90°
γ_f	+2°30´	$a_{p\,max}$	H



ISO	D	dH7	H	s	d_1	Z	Plaquita Insert Plaquette	N° Art.	€	Ref. 8804		Ref. 8801
S90-100-06	100	27	25	6	41	10	SNH.-1203..	20840		Z-745 Art. 21315 €	5	ZT-15 Art. 10512 € (1)
S90-125-06	125	32	40	6	48	12	SNH.-1203..	20869				
S90-160-06	160	40	44	6	58	16	SNH.-1203..	20873				
S90-100-08	100	27	25	8	41	10	SNH.-1204..	20855		Z-846 Art. 21364 €	5	
S90-125-08	125	32	40	8	48	12	SNH.-1204..	20870				
S90-160-08	160	40	44	8	58	16	SNH.-1204..	20874				
S90-100-10	100	27	25	10	41	10	SNH.-1205..	20858		Z-845 Art. 21349 €	5	
S90-125-10	125	32	40	10	48	12	SNH.-1205..	20871				
S90-160-10	160	40	44	10	58	16	SNH.-1205..	20876				
S90-100-12	100	27	25	12	41	10	SNH.-1207..	20867		Z-847 Art. 21365 €	5	
S90-125-12	125	32	40	12	48	12	SNH.-1207..	20872				
S90-160-12	160	40	44	12	58	16	SNH.-1207..	20877				

Plaquita / Insert / Plaquette: **Plaquette: Pag. 632**

Tipo Mecanizado
Machining Type - Type d'Usinage

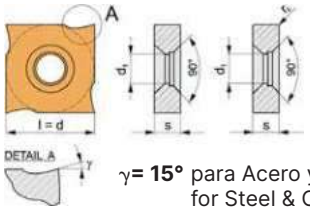


		●
		○

Tornillo - Screw - Vis

Destornillador Screwdriver Tournevis

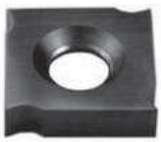
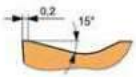
SNHQ

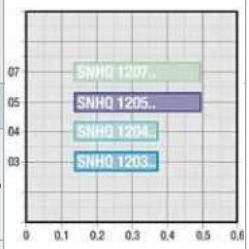


γ= 15° para Acero y Fundición
for Steel & Cast Iron
Pour acier et fonte

ISO	Calidades Qualities Qualités P-640	Dimensiones Dimensions l	s	d_1
SNHQ 1203AZTN	●	12,70	3,20	5
SNHQ 1204AZTN	●	12,70	4,50	5
SNHQ 1205AZTN	●	12,70	5,40	5
SNHQ 1207AZTN	●	12,70	7,00	5

Plaquita / Insert / Plaquette: **Pag. 632**

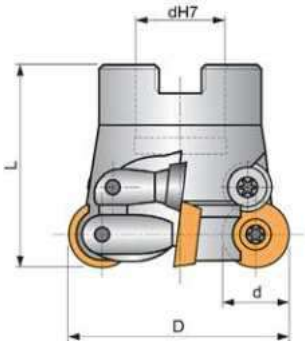
Geometría Geometry Géométrie	Foto Picture Photo	Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail	P	M	K	S	N	H
SNHQ		Acabado Finishing Finition	●	●	●	◐	○	○
		Desb. Medio Roug. & Finish. Semi-Finition	●	●	●	◐	○	○
	Filo Corte Cutting Edge Arête coupe 	Desb. Grueso Coarse Rough. Ébauche	●	●	●	◐	○	○



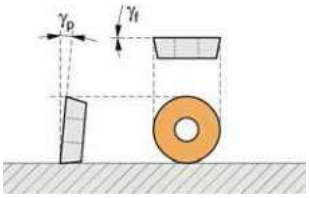
Condiciones Corte Cutting Conditions Conditions coupe	
f_z	0,20-0,50 mm/z

Ref. 8280

PORTA-PLAQUITAS PERFILADO SCMORD
SCMORD Profile Tool-Holder
Porte-Plaquettes profilage SCMORD

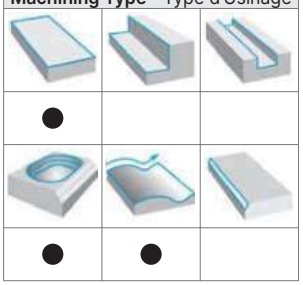


γ_p	+5°	$a_{p\ max}$	2,50 mm
γ_f	0°		3,50 mm



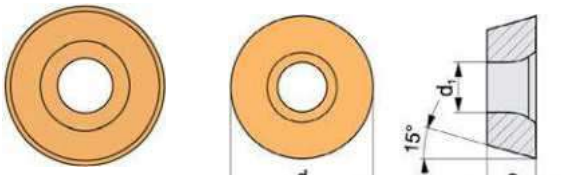
	Tornillo - Screw - Vis
	Arandela - Clamp - Rondelle
	Destornillador - Screwdriver Tournevis

Tipo Mecanizado
Machining Type - Type d'Usinage

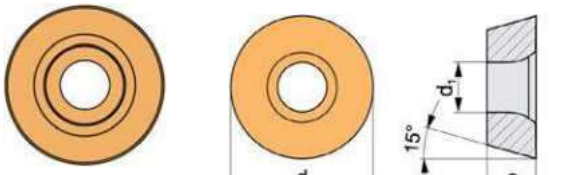


ISO	D	d	dH7	L	Z	Plaquita Insert - Plaquette	N° Art.	€	Ref. 8804		Ref. 8806		Ref. 8801	
52-SCMORD-12	52	12	22	50	5	RD..12T3	20883		Z-235 Art. 21011 €	5	Z-209 Art. 21368 €	5	ZT-15 Art. 10512 €	1
66-SCMORD-12	66	12	27	50	6	RD..12T3	20885							
80-SCMORD-12	80	12	27	50	7	RD..12T3	20886							
52-SCMORD-16	52	16	22	50	4	RD..1604	20887		Z-245 Art. 21013 €	5	Z-210 Art. 21369 €	5	ZT-20 Art. 13845 €	1
66-SCMORD-16	66	16	27	50	5	RD..1604	20891							
80-SCMORD-16	80	16	27	50	6	RD..1604	20892							

Plaquita / Insert / Plaquette: **Pag. 629**



RDHW



RDHT

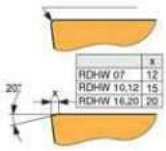
ISO	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	D	d_1	s
	Calidades / Qualities / Qualités									**Dimensiones** Dimensions		
RDHW 12T3MOT			●		●					12,00	3,90	3,97
RDHT 12T3MOT			●		●					12,00	3,90	3,97
RDHW 1604MOT			●		●					16,00	5,20	4,76
RDHT 1604MOT			●		●					16,00	5,20	4,76

Plaquita / Insert / Plaquette: **Pag. 629**

Geometría Geometry Géométrie — **RDHW**

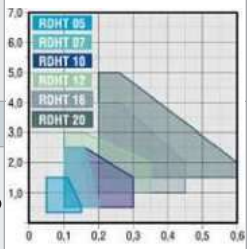
Foto Picture Photo

Filo Corte Cutting Edge Arête coupe



Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail

Fresado Milling Fraisage	P	M	K	S	N	H
Acabado Finishing Finition	○	○	●			●
Desb. Medio Roug. & Finish. Semi-Finition	○	○	●			●
Desb. Grueso Coarse Rough. Ébauche	○	○	●			●



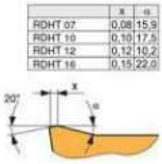
Condiciones Corte Cutting Conditions Conditions coupe

f_z	0,10-0,27 mm/z
a_p	**Segun Dimensiones plaquita** According to insert dimensions Suivant dimensions plaquette

Geometría Geometry Géométrie — **RDHT**

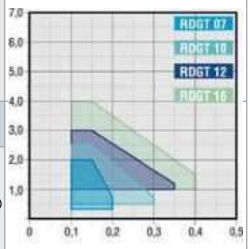
Foto Picture Photo

Filo Corte Cutting Edge Arête coupe



Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail

Fresado Milling Fraisage	P	M	K	S	N	H
Acabado Finishing Finition	●	●	○	○		○
Desb. Medio Roug. & Finish. Semi-Finition	●	●	○	○		○
Desb. Grueso Coarse Rough. Ébauche	●	●	○	○		○

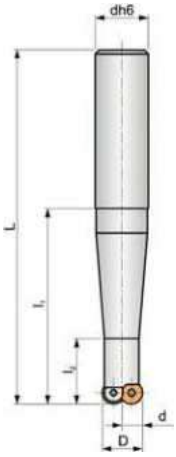


Condiciones Corte Cutting Conditions Conditions coupe

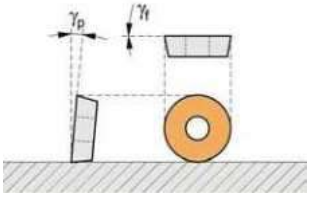
f_z	0,10-0,27 mm/z
a_p	**Segun Dimensiones plaquita** According to insert dimensions Suivant dimensions plaquette

Ref. 8285

PORTA-PLAQUITAS PERFILADO SRD
SRD Profile Tool-Holder
Porte-Plaquettes profilage SRD



γ_p	+5°	$a_{p\ max}$	1,50 mm
γ_f	0°		2,50 mm



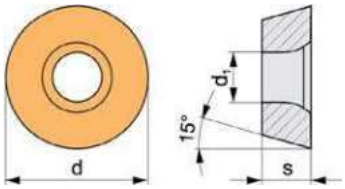
	Tornillo - Screw - Vis
	Arandela - Clamp - Rondelle
	Destornillador - Screwdriver Tournevis

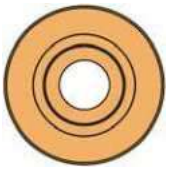
Tipo Mecanizado Machining Type - Type d'Usinage		
○		
●	●	

ISO	D	dh6	L	l_2	Z	Plaquita Insert - Plaquette	N° Art.	€				
											Ref. 8801	
15-SRD-07	15	20	100	40	2	RD..0702	20894		T-07 Ref. 8816 - Art. 10846 €	5	ZT-07 Art. 19569 €	1
15-SRD-07	15	20	150	40	2	RD..0702	20896					
20-SRD-10	20	20	100	40	2	RD..1003	20901		Z-435 Ref. 8804 - Art. 21058 €	5		
20-SRD-10	20	20	150	40	2	RD..1003	20906					

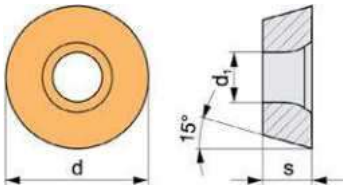
Plaquita / Insert / Plaquette: **Pag. 629**

RDHW



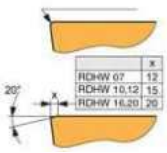


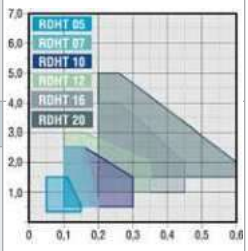
RDHT



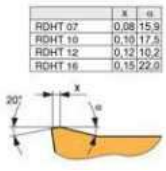
ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions		
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	D	d_1	s
RDHW 0702MOT			●		●					7,00	2,80	2,38
RDHT 0702MOT			●		●					7,00	3,90	2,38
RDHW 1003MOT			●		●					10,00	2,80	2,38
RDHT 1003MOT			●		●					10,00	3,90	3,18

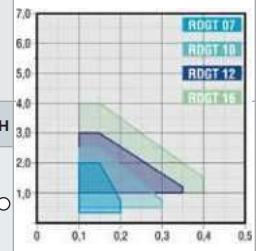
Plaquita / Insert / Plaquette: **Pag. 629**

Geometría Geometry Géométrie	Foto Picture Photo	Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail	P	M	K	S	N	H
RDHW		Fresado Milling Fraisage						
		Acabado Finishing Finition	●	○	●			●
	Filo Corte Cutting Edge Arête coupe	Desb. Medio Roug. & Finish. Semi-Finition	●	○	●			●
		Desb. Grueso Coarse Rough. Ébauche	●	○	●			●



Condiciones Corte Cutting Conditions Conditions coupe	
f_z	0,10-0,24 mm/z
a_p	Segun Dimensiones plaquita According to insert dimensions Suivant dimensions plaquette

Geometría Geometry Géométrie	Foto Picture Photo	Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail	P	M	K	S	N	H
RDHT		Fresado Milling Fraisage						
		Acabado Finishing Finition	●	●	●	●		○
	Filo Corte Cutting Edge Arête Coupe	Desb. Medio Roug. & Finish. Semi-Finition	●	●	●	●		○
		Desb. Grueso Coarse Rough. Ébauche	●	●	●	●		○

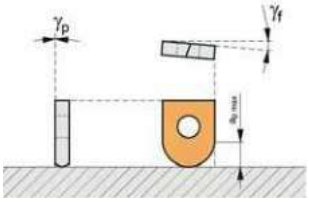


Condiciones Corte Cutting Conditions Conditions coupe	
f_z	0,10-0,24 mm/z
a_p	Segun Dimensiones plaquita According to insert dimensions Suivant dimensions plaquette

Ref. 8290

PORTA-PLAQUITAS COPIADO SRC
SRC Copy Tool-Holder
Porte-Plaquettes copiage SRC

γ_p	0°	$a_{p\ max}$	2-6 mm
γ_f	-7-14°		



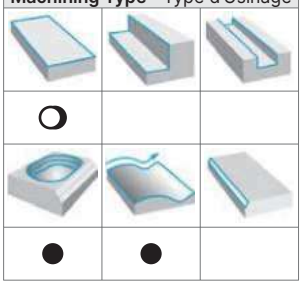
ISO	D	L	l_2	dh6	Plaquita Insert - Plaquette	N° Art.	€
SRC-10	10	105	35	12	RC10	20910	
SRC-10	10	150	50	12	RC10	20911	
SRC-12	12	105	35	16	RC12	20913	
SRC-12	12	160	50	16	RC12	20914	
SRC-16	16	105	45	20	RC16	20916	
SRC-16	16	180	70	20	RC16	20918	
SRC-20	20	125	50	25	RC20	20919	
SRC-20	20	200	70	25	RC20	20920	
SRC-25	25	125	55	32	RC25	20921	
SRC-25	25	220	100	32	RC25	20923	

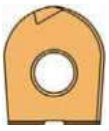
Ref. 8804		Ref. 8801	
Z-359 Art. 21016 €	5	ZT-15 Art. 10512 €	1
Z-509 Art. 21155 €	5	ZT-20 Art. 13845 €	1
Z-519 Art. 21156 €	5		
Z-529 Art. 21229 €	5		
Z-609 Art. 21230 €	5	ZT-30 Art. 21588 €	1

Plaquita / Insert / Plaquette: **Pag. 629**

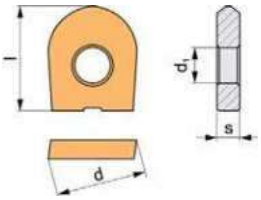
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Tipo Mecanizado
Machining Type - Type d'Usinage



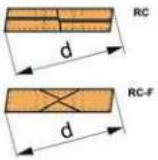


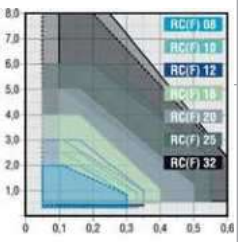
RC



ISO	Calidades Qualities Qualités P-615	P-640	Dimensiones Dimensions D	l	d_1	s
RC-10	●	●	10,00	11,50	4,00	2,50
RC-12	●	●	12,00	12,00	5,00	2,50
RC-16	●	●	16,00	14,00	5,00	3,00
RC-20	●	●	20,00	16,00	5,00	3,00
RC-25	●	●	25,00	21,50	6,00	4,00

Plaquita / Insert / Plaquette: **Pag. 629**

Geometría Geometry Géométrie	Foto Picture Photo	Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail	P	M	K	S	N	H
RC		Fresado Milling Fraisage						
		Acabado Finishing Finition	●		●			●
	Filo Corte Cutting Edge Arête coupe	Desb. Medio Roug. & Finish. Semi-Finition	●		●			◐
		Desb. Grueso Coarse Rough. Ébauche	◐		◐			○

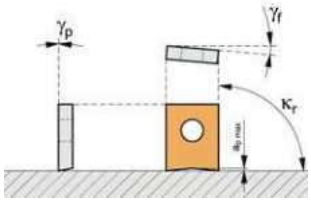


Condiciones Corte Cutting Conditions Conditions coupe	
f_z	Segun Dimensiones plaquita According to insert dimensions Suivant dimensions plaquette
a_p	

Ref. 8295

PORTA-PLAQUITAS COPIADO SLC
SLC Copy Tool-Holder
Porte-Plaquettes copiage SLC

γ_p	0°	K_r	90°
γ_f	-7-14°	$a_{p\,max}$	0,6-1,6mm



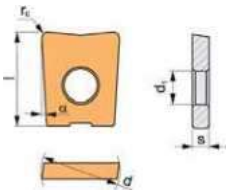
ISO	D	dh6	d_1	L	l_2	Plaquita Insert - Plaquette	Nº Art.	€	Ref. 8804		Ref. 8801	
SLC-12	12	12	10	130	30	LCK12	20924		Z-354 Art. 21015 €	5	ZT-20 Art. 13845 €	1
SLC-16	16	16	14	140	35	LCK16	20925		Z-619 Art. 21295 €	5		
SLC-20	20	20	18	160	45	LCK20	20926		Z-629 Art. 21298 €	5		

Plaquita / Insert / Plaquette: **Pag. 627**

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis

Tipo Mecanizado Machining Type - Type d'Usinage		
○	◑	○
●	●	

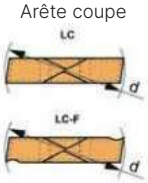
LC

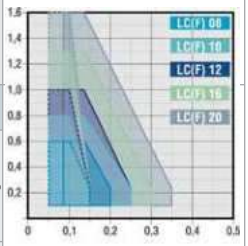


ISO	Calidades Qualities Qualités P-615	Dimensiones Dimensions d	l	d_1	s	r
LC-1210	●	12,00	14,00	5,00	2,50	1,00
LC-1610	●	16,00	16,00	5,00	3,00	1,00
LC-2010	●	20,00	18,00	5,00	3,00	1,00

Plaquita / Insert / Plaquette: **Pag. 627**

Geometría Geometry Géométrie	Foto Picture Photo	Grupo Materiales Pieza Trabajo Workpiece Material Group Groupe matériaux pièce travail	P	M	K	S	N	H
LC		Fresado Milling Fraisage						
		Acabado Finishing Finition	●		●			◐
		Desb. Medio Roug. & Finish. Semi-Finition	◐		◐			○
		Desb. Grueso Coarse Rough. Ébauche	○		○			○



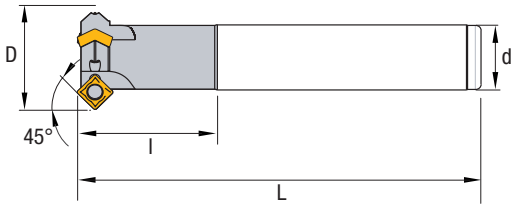


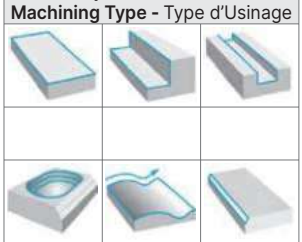
Condiciones Corte Cutting Conditions Conditions coupe	
f_z	Segun Dimensiones plaquita According to insert dimensions Suivant dimensions plaquette
a_p	

Ref. 8296

PORTA-PLAQUITAS DE ACHAFLANADO CHS.. A 45º
45º CHS.. Chamfering Tool-Holder
Porte-Plaquettes chanfreinage CHS.. 45º

New!

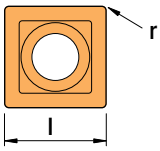


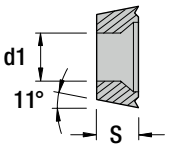
Tipo Mecanizado Machining Type - Type d'Usinage		
		
		●

ISO	D	d	L	l	Z	Nº Art.	€	Ref. 8816		Ref. 8801	
25M-32CHSP09	32	25	150	30	2	26647		M3,5X8,5 Art. 70740 €	5	ZT-15 Art. 10512 €	1
25M-40CHSP09	40	25	150	50	3	77477					

Plaquita / Insert / Plaquette:
Pag. 633

	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis





Condiciones Corte Cutting Conditions Conditions coupe	
f mm	a_p mm
0,10-2,50	2,50

SPMG

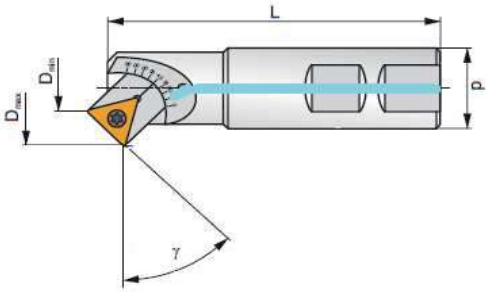
ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions			
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	S	d1	r
SPMG-090408-ZMG							●			9,8	4,3	4,5	0,8
SPMG-090408-ZRG								●		9,8	4,3	4,5	0,8

Plaquita / Insert / Plaquette:
Pag. 633

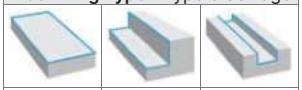
Ref. 8297

PORTA-PLAQUITAS ACHAFLANADO AJUSTABLE CHS REFRIGERACIÓN INTERIOR
Internal Cooling CHS Adjustable Angle Chamfering Tool-Holder
Porte-plaquettes chanfreinage angle réglable CHS lubrification interne

New!



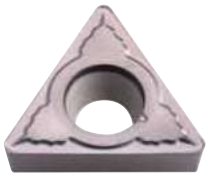
*** Ángulo ajustable**
Adjustable Angle
Angle réglable

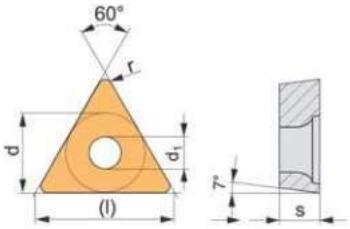
Tipo Mecanizado Machining Type - Type d'Usinage		
		
		●

ISO	Dmax	Dmin	d	L	γ°	N° Art.	€	Ref. 8811		Ref. 8816		Ref. 8816		Ref. 8801	
CHS25H-05-31-TC16	31	5	25	100	10-80	77499		Z-H21 Art. 77503 €	1	M6X15 Art. 77504 €	5	M3,5X8,5 Art. 70740 €	5	ZT-15 Art. 10512 €	1

Plaquita / Insert / Plaquette:
Pag. 541

	Placa Base - Base Plate - Plaque dae base
	Tornillo - Screw - Vis
	Tornillo - Screw - Vis
	Destornillador - Screwdriver - Tournevis





TCMT

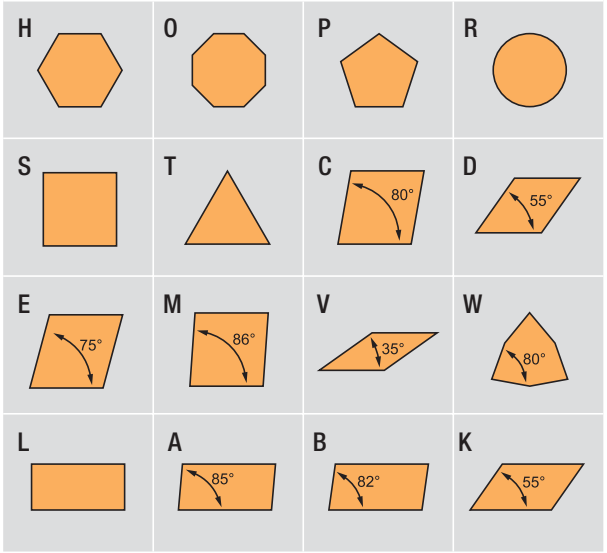
ISO	Calidades / Qualities / Qualités									Dimensiones Dimensions				
	C-526	P-605	P-610	P-615	P-620	P-625	P-630	P-640	P-010	l	d	s	d1	r
TCMT-16T308-E-ZRR						●				16,5	9,5	3,97	4,4	0,8
TCGT-16T308-F-ZAL									●	16,5	9,5	3,97	4,4	0,8

Plaquita / Insert / Plaquette:
Pag. 541

CÓDIGOS ISO ELECCIÓN PLAQUITAS FRESADO
Milling Insert Choice ISO Codes
Codes ISO choix **plaquettes fraisage**

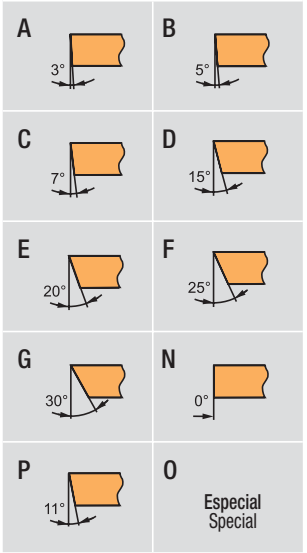
1

Forma Plaquita / Insert Shape / Forme plaquette



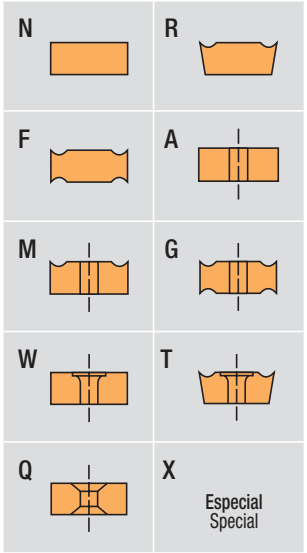
2

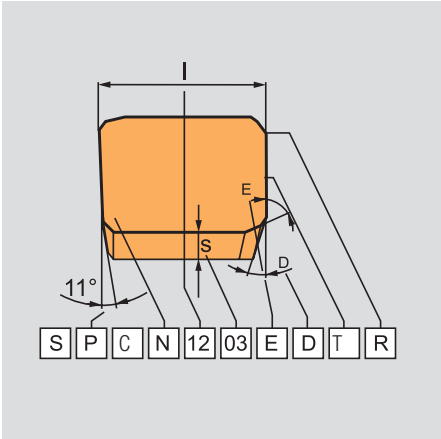
Angulo Incidencia
Clearance Angle / Angle d'incidence



4

Tipo Plaquita
Insert type / Type plaquette



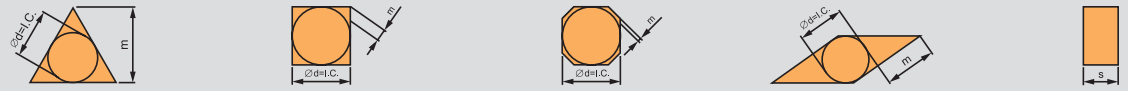


	1	2	3	4
ISO	S	P	G	N
	S	P	K	N
ANSI	S	P	G	
	S	P	K	N

3

Tolerancias / Tolerances / Tolérances

Símbolo Symbol Symbole	Tolerancias / Tolerances / Tolérances [mm]			Tolerancias [Pulg.] / Tolerances [Inch] / Tolérances [Pouc.]		
	m (±)	s (±)	d = I.C. (±)	m (±)	s (±)	d = I.C. (±)
A	0,005	0,025	0,025	0,0002	0,001	0,0010
F	0,005	0,025	0,013	0,0002	0,001	0,0005
C	0,013	0,025	0,025	0,0005	0,001	0,0010
H	0,013	0,025	0,013	0,0005	0,001	0,0005
E	0,025	0,025	0,025	0,0010	0,001	0,0010
G	0,025	0,130	0,025	0,0010	0,005	0,0010
J	0,005	0,025	0,05 ÷ 0,13	0,0002	0,001	0,002 ÷ 0,005
K	0,013	0,025	0,05 ÷ 0,13	0,0005	0,001	0,002 ÷ 0,005
L	0,025	0,025	0,05 ÷ 0,13	0,0010	0,001	0,002 ÷ 0 005
M	0,08 ÷ 0,18	0,130	0,05 ÷ 0,13	0,003 ÷ 0,007	0,005	0,002 ÷ 0 005
N	0,08 ÷ 0,18	0,025	0,05 ÷ 0,13	0,003 ÷ 0,007	0,001	0,002 ÷ 0,005
U	0,05 ÷ 0,38	0,130	0,05 ÷ 0,13	0,005 ÷ 0,015	0,005	0,003 ÷ 0,010



CÓDIGOS ISO ELECCIÓN PLAQUITAS FRESADO
Milling Insert Choice ISO Codes
Codes ISO choix **plaquettes fraisage**

5

Longitud Filo Corte / Cutting Edge Length / Longuer arête coupe

d = I.C.		R	S	T	C	D	V	W
mm	["]							
3,97	5/32"			06				
5,00	-	05						
5,56	7/32"			09				03
6,00	-	06						
6,35	1/4"			11	06	07		04
8,00	-	08						
9,525	3/8"	09	09	16	09	11	16	06
10,0	-	10						
12,0	-	12						
12,7	1/2"	12	12	22	12	15		08
15,875	5/8"	15	15	27	16			
16,0	-	16						
19,05	3/4"	19	19	33	19			
20,0	-	20						
25,0	-	25						
25,4	1"	25	25		25			
31,75	1 1/4"	31						
32,0	-	32						

6

Espesor / Thickness / Épaisseur

Símbolo /Symbol	s [m m]	s ["]
01	1,59	1/16"
T1	1,98	5,64"
02	2,38	3/32"
03	3,18	1/8"
T3	3,97	5,32"
04	4,76	3/16"
05	5,56	7/32"
06	6,35	1/4"
07	7,94	5/16"
09	9,52	3/8"

7

Angulo filo corte Cutting edge angle Angle arête coupe		Angulo incidencia Clearance angle Angle incidence	
	χ_r		α'_n
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	Especial / Special	F	25°
		G	30°
		N	0°
		P	11°
		Z	Especial / Special

ZZ - Especial / Special

5	6	7	8	9
12	03	08		
12	03	ED	S	R

5a	6a	7a	8	9
4	2	2		
4	2	ED	S	R

ANSI

5a

Círculo inscrito
Inscribed circle / Cercle inscrite

Symbol	d = I.C. [m m]	d = I.C. ["]
1	3,175	1/8"
(1.2)	3,969	5/32"
(1.5)	4,763	3/16"
(1.8)	5,556	7/32"
2	6,350	1/4"
(2.5)	7,938	5/16"
3	9,525	3/8"
4	12,700	1/2"
5	15,875	5/8"
6	19,050	3/4"
7	22,225	7/8"
8	25,400	1"
10	31,750	5/8"

6a

Espesor
Thickness / Épaisseur

Symbol	s [m m]	s ["]
1	1,588	1/16"
(1.2)	1,984	5/64"
(1.5)	2,381	3/32"
(1.8)	3,175	1/8"
2	3,969	5/32"
(2.5)	4,763	3/16"
3	5,556	7/32"
4	6,350	1/4"
5	7,938	5/16"
6	9,525	3/8"
7	11,113	7/16"
8	12,700	1/2"
9	14,288	9/16"
10	15,875	5/8"

7a

Radio vértice
Nose radius / Rayon pointe

Symbol	r_ε [m m]	r_ε ["]
0	0,050	1/512"
(0.2)	0,099	1/256"
(0.5)	0,198	1/128"
1	0,397	1/64"
2	0,794	1/32"
3	1,191	3/64"
4	1,588	1/16"
5	1,984	5/64"
6	2,381	3/32"
7	2,778	7/64"
8	3,175	1/8"
10	3,969	5/32"
12	4,763	3/16"
14	5,556	7/32"
16	6,350	1/4"
x	Otros/Others/Autres	

8

Designación Filo Corte / Cutting Edge Condition / Description arête coupe

F	Filos agudos Sharp edges Arêtes aigües	E	Filos redondeados Rounded edges Arêtes arrondes
T	Filos con faceta Edges with facet Arêtes avec facette	S	Filos redondeados con faceta Rounded edges with facet Arêtes arrondes avec facette
K	Filos con doble faceta Edges with double facet Arêtes avec double facette	P	Filos redondeados con doble faceta Rounded edges with double facet Arêtes arrondes avec double facette

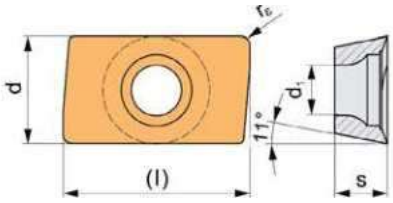
9

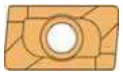
Dirección Avance / Feed Direction / Direction avance

R		Avance Feed
L	Avance Feed	
N	Avance Feed	Avance Feed

Ref. 8633

PLAQUITA INTERCAMBIABLE FRESADO APHT
APHT Milling Indexable Insert
Plaquette fraisage APHT



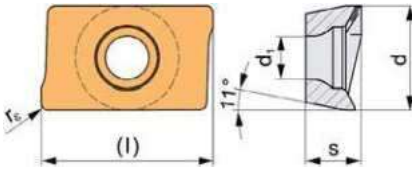


ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. P-010	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe				
Aluminio - Aluminium - Aluminium										
APHT-160408PDFR-FA	16,00	9,45	4,76	4,50	0,80	0,07-0,20	1,00-13,50	10	20929	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 609, 616**

Ref. 8636

PLAQUITA INTERCAMBIABLE FRESADO APET 10F
APET 10F Milling Indexable Insert
Plaquette fraisage APET 10F

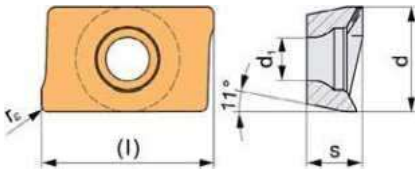


ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. P-010	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe				
Aluminio - Aluminium - Aluminium										
APET-1003PDFR-FA	10,00	6,70	3,50	2,88	0,50	0,07-0,20	1,00-9,00	10	20933	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 608, 615**

Ref. 8639

PLAQUITA INTERCAMBIABLE FRESADO APKT 10M
APKT 10M Milling Indexable Insert
Plaquette fraisage APKT 10M

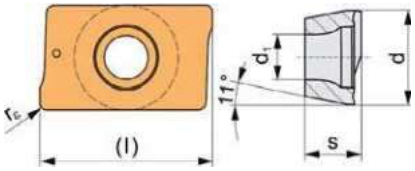


ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. P-620	N° Art. P-630	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe					
APKT-1003PDER-M	10,00	6,70	3,50	2,88	0,50	0,08-0,20	1,00-9,00	10	20934	20935	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 608, 615**

Ref. 8642

PLAQUITA INTERCAMBIABLE FRESADO APKT 16
APKT 16 Milling Indexable Insert
Plaquette fraisage APKT 16

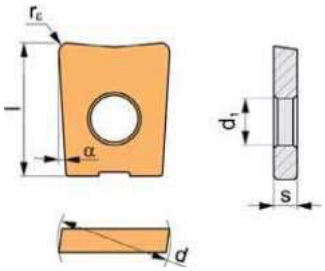


ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. P-620	N° Art. P-630	N° Art. P-640	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe						
APKT-1604PDER	16,00	9,45	5,35	4,50	0,80	0,07-0,20	1,00-13,50	10	35175	20938	20939	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 609, 616**

Ref. 8645

PLAQUITA INTERCAMBIABLE FRESADO LC
LC Milling Indexable Insert
Plaquette fraisage LC



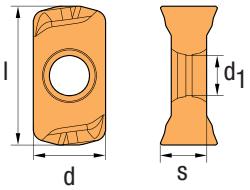
ISO	l mm	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. P-615	€
	Dimensiones Dimensions					Condiciones Corte Cutting Conditions Conditions coupe				
LC-1210	14,00	12,00	2,50	5,00	1,00	0,08-0,25	0,10-1,00	10	20940	
LC-1610	16,00	16,00	3,00	5,00	1,00	0,08-0,30	0,10-1,00	10	20941	
LC-2010	18,00	20,00	3,00	5,00	1,00	0,08-0,30	0,10-1,00	10	20942	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 621**

Ref. 8691

PLAQUITA INTERCAMBIABLE FRESADO LOGX
LOGX Milling Indexable Insert
Plaquette fraisage LOGX

New!



ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-630	N° Art. P-640	€
Semi-Acabado / **Semi-Finishing** / Semi-Finition										
LOGX-030310-ZSG	11,90	6,20	3,96	3,45	0,30-1,60	0,30-0,90	10	44834	70190	

Ejemplo Pedido / Order Example / Exemple commande:
Ref. 8691 LOGX-030310-ZSG P-630

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pags. 612, 598**

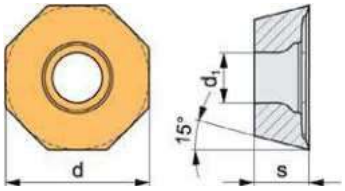
- **Con las plaquitas de fresado de doble cara LOGX obtenemos 4 filos de corte**
- **Los filos de corte de alta precisión y alto avance son adecuados para el mecanizado de aleaciones termorresistentes y consiguen un excelente acabado superficial**
- **Profundidad máxima de corte de 0,90 mm**

- **With LOGX double-sided milling inserts, we obtain 4 cutting edges.**
- **The high-precision and high-feed cutting edges are suitable for machining heat-resistant alloys and achieve an excellent surface finish.**
- **Maximum cutting depth of 0.90 mm.**

- Avec des plaquettes de fraisage double face LOGX, nous obtenons 4 arêtes de coupe.
- Les arêtes de coupe haute précision et à avance élevée conviennent à l'usinage des alliages résistants à la chaleur et permettent d'obtenir une excellente finition de surface.
- Profondeur de coupe maximale de 0,90 mm.

Ref. 8648

PLAQUITA INTERCAMBIABLE FRESADO ODMT
ODMT Milling Indexable Insert
Plaquette fraisage ODMT

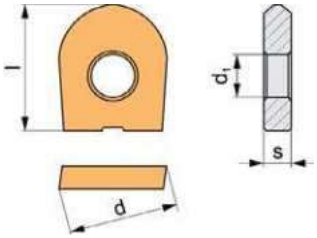


ISO	Dimensiones Dimensions d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-526	N° Art. P-630	N° Art. P-640	€
ODMT-0605ZZN	15,87	5,56	5,50	0,15-0,45	1,00-8,60	10	30137	20943	20944	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 604**

Ref. 8651

PLAQUITA INTERCAMBIABLE FRESADO RC
RC Milling Indexable Insert
Plaquette fraisage RC



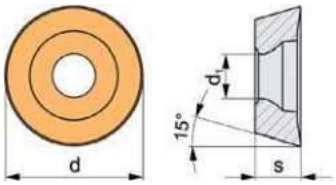
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-615	N° Art. P-640*	€
RC-10	11,50	10,00	2,50	4,00	0,10-0,33	0,30-2,50	10	20945		
RC-12	12,00	12,00	2,50	5,00	0,10-0,35	0,40-3,00	10	20947		
RC-16	14,00	16,00	3,00	5,00	0,10-0,40	0,50-4,00	10	20949		
RC-20	16,00	20,00	3,00	5,00	0,10-0,50	0,60-5,00	10	20951	20952	
RC-25	21,50	25,00	4,00	6,00	0,10-0,55	0,60-6,00	10	20953	20954	

* **Hasta fin de existencias**
while stock lasts / jusqu'à la fin de stock

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 620**

Ref. 8654

PLAQUITA INTERCAMBIABLE FRESADO RDHT
RDHT Milling Indexable Insert
Plaquette fraisage RDHT



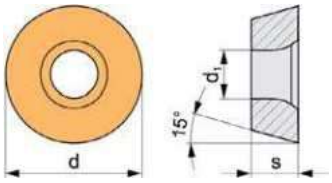
ISO	Dimensiones Dimensions d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-610*	N° Art. P-620	€
RDHT-0702MOT	7,00	2,38	2,90	0,10-0,18	0,50-1,50	10	29974	20955	
RDHT-1003MOT	10,00	3,18	4,10	0,10-0,24	0,50-2,50	10		20956	
RDHT-12T3MOT	12,00	3,97	4,10	0,10-0,27	1,00-2,50	10		20957	
RDHT-1604MOT	16,00	4,76	5,20	0,10-0,33	1,00-3,50	10		20958	

* **Hasta fin de existencias**
while stock lasts / jusqu'à la fin de stock

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 618, 619**

Ref. 8657

PLAQUITA INTERCAMBIABLE FRESADO RDHW
RDHW Milling Indexable Insert
Plaquette fraisage RDHW



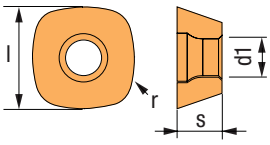
ISO	Dimensiones Dimensions d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-610	N° Art. P-620	€
RDHW-0702MOT	7,00	2,38	2,90	0,10-0,18	0,50-1,50	10	20959	20960	
RDHW-1003MOT	10,00	3,18	4,10	0,10-0,24	0,50-2,50	10	20961	20962	
RDHW-12T3MOT	12,00	3,97	4,10	0,10-0,27	1,00-2,50	10	20963	20964	
RDHW-1604MOT	16,00	4,76	5,20	0,10-0,33	1,00-3,50	10	20965	20966	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 618, 619**

Ref. 8693

PLAQUITA INTERCAMBIABLE FRESADO SDMT
SDMT Milling Indexable Insert
Plaquette fraisage SDMT

New!



	Dimensiones Dimensions				Condiciones Corte Cutting Conditions Conditions coupe					
ISO	l mm	r mm	s mm	d_1 mm	f mm	a_p mm		N° Art. P-620	N° Art. P-630	€
SDMT-1205ZDTN-ZMG	12,7	15	5,56	4,6	0,5-1,8	0,3-1,5	10	54992	48659	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pags. 613, 601**

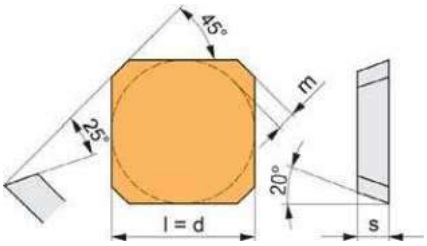
- **Plaquita económica con 4 robustos filos de corte y de alto avance para una amplia variedad de materiales y aplicaciones.**
- **Profundidad máxima de corte de 1,5 mm**

- **Economical insert with 4 strong cutting edges and high feed for a wide variety of materials and applications**
- **Maximum cutting depth of 1.5 mm**

- Plaquette économique avec 4 arêtes de coupe robustes et avance élevée pour une large gamme de matériaux et d'applications
- Profondeur de coupe maximale de 1,5 mm

Ref. 8660

PLAQUITA INTERCAMBIABLE FRESADO SEKN FSN
SEKN FSN Milling Indexable Insert
Plaquette fraisage SEKN FSN

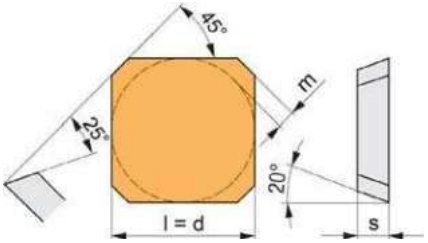


	Dimensiones Dimensions				Condiciones Corte Cutting Conditions Conditions coupe				
ISO	l mm	d mm	s mm	m mm	f mm	a_p mm		N° Art. P-620	€
SEKN-1203AFSN	12,70	12,70	3,18	1,60	0,15-0,30	1,00-6,50	10	20968	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 603**

Ref. 8663

PLAQUITA INTERCAMBIABLE FRESADO SEKR FSN
SEKR FSN Milling Indexable Insert
Plaquette fraisage SEKR FSN

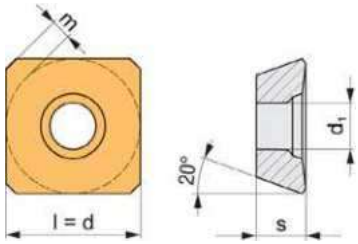


ISO	Dimensiones Dimensions l mm	d mm	s mm	m mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-620	€
SEKR-1203AFSN	12,70	12,70	3,18	1,60	0,20-0,30	1,00-6,50	10	20969	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 603**

Ref. 8666

PLAQUITA INTERCAMBIABLE FRESADO SEHT FSN/FTN
SEHT FSN/FTN Milling Indexable Insert
Plaquette fraisage SEHT FSN/FTN

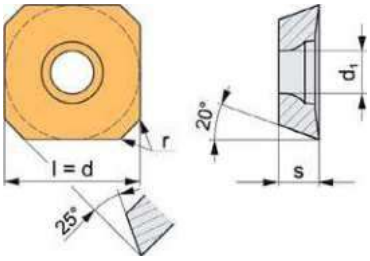


ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	m mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-526	N° Art. P-620	N° Art. P-640	€
SEHT-1204AFSN	12,70	12,70	4,76	5,50	1,60	0,10-0,30	1,00-6,50	10	30532			
SEHT-1204AFTN	12,70	12,70	4,76	5,50	1,60	0,10-0,30	1,00-6,50	10		20971	20973	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 602**

Ref. 8667

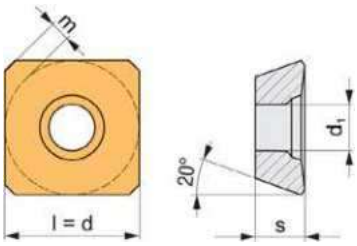
PLAQUITA INTERCAMBIABLE FRESADO SEET PM
SEET PM Milling Indexable Insert
Plaquette fraisage SEET PM



ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. C-526	N° Art. P-630	N° Art. P-640	€
SEET-12T3M-PM	13,40	13,40	3,97	4,20	0,20-0,35	1,00-6,50	10	29979	26219	29980	

Ref. 8669

PLAQUITA INTERCAMBIABLE FRESADO SEHT FA
SEHT FA Milling Indexable Insert
Plaquette fraisage SEHT FA

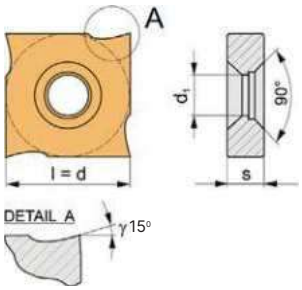


ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	m mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-610	N° Art. P-010	€
Aluminio - Aluminium - Aluminium											
SEHT-1204AFFN-FA	12,70	12,70	4,76	5,50	1,60	0,10-0,30	0,20-0,45	10	20974	20975	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 602**

Ref. 8672

PLAQUITA INTERCAMBIABLE FRESADO SNHQ
SNHQ Milling Indexable Insert
Plaquette fraisage SNHQ



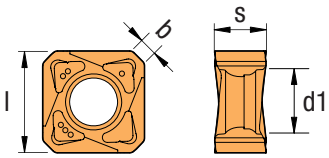
ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm		N° Art. P-640	€
SNHQ-1203-AZTN	12,70	12,70	3,20	5,00	0,20-0,40	10	38106	
SNHQ-1204-AZTN	12,70	12,70	4,50	5,00	0,20-0,40	10	38410	
SNHQ-1205-AZTN	12,70	12,70	5,40	5,00	0,20-0,50	10	38412	
SNHQ-1207-AZTN	12,70	12,70	7,00	5,00	0,20-0,50	10	38980	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 617**

Ref. 8673

PLAQUITA INTERCAMBIABLE FRESADO SNMX
SNMX Milling Indexable Insert
Plaquette fraisage SNMX

New!



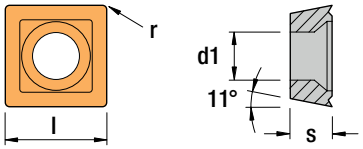
ISO	Dimensiones Dimensions l mm	d mm	s mm	b mm	d_1 mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-630	N° Art. P-640	€
SNMX-1205-ZMG	12,7	12,7	6,4	1,5	6	0,08-0,3	0,3-6	10	48665	70785	
SNMX-1205-ZRG	12,7	12,7	6,4	1,5	6	0,08-0,3	0,3-6	10	70788	70829	

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 605

Ref. 8665

PLAQUITA INTERCAMBIABLE FRESADO SPMG
SPMG Milling Indexable Insert
Plaquette fraisage SPMG

New!

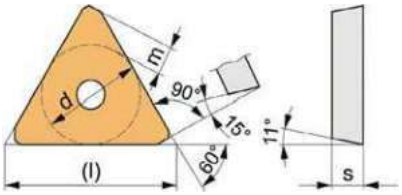


ISO	Dimensiones Dimensions l mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-630	N° Art. P-640	€
SPMG-090408-ZMG	9,8	4,3	4,05	0,8	0,10-0,15	2,5	10	26654		
SPMG-090408-ZRG	9,8	4,3	4,05	0,8	0,10-0,15	2,5	10		77476	

Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 622

Ref. 8675

PLAQUITA INTERCAMBIABLE FRESADO TPKN
TPKN Milling Indexable Insert
Plaquette fraisage TPKN

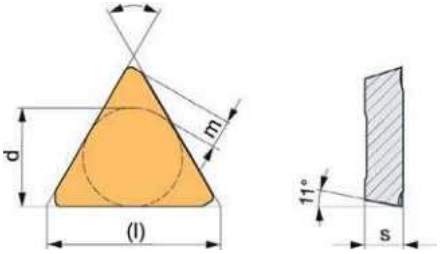


ISO	l mm	d mm	s mm	m mm	f mm	a_p mm		N° Art. P-610	N° Art. P-620	N° Art. P-640	€
	Dimensiones Dimensions				Condiciones Corte Cutting Conditions Conditions coupe						
TPKN-1603PDSR	16,50	9,52	3,18	2,45	0,08-0,20	1,00-13,00	10		20984	20985	
TPKN-2204PDSR	22,00	12,70	4,76	3,55	0,10-0,30	1,00-18,00	10	35176	20990	20991	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 610, 611**

Ref. 8678

PLAQUITA INTERCAMBIABLE FRESADO TPKR
TPKR Milling Indexable Insert
Plaquette fraisage TPKR



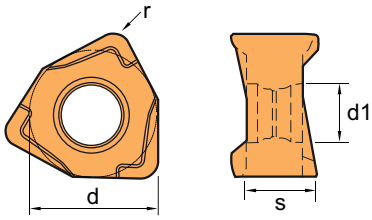
ISO	l mm	d mm	s mm	m mm	f mm	a_p mm		N° Art. P-620	N° Art. P-640	€
	Dimensiones Dimensions				Condiciones Corte Cutting Conditions Conditions coupe					
TPKR-1603PDSR	16,50	9,52	3,18	2,45	0,08-0,20	1,00-16,00	10	20993		
TPKR-2204PDSR	22,00	12,70	4,76	3,55	0,10-0,30	1,00-22,00	10	20995	20996	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 610, 611**

Ref. 8679

PLAQUITA INTERCAMBIABLE FRESADO XNMX
XNMX Milling Indexable Insert
Plaquette fraisage XNMX

Video



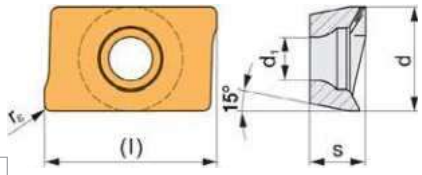
ISO	d mm	s mm	d_1 mm	r mm	f mm	a_p mm		N° Art. P-620	N° Art. P-630	N° Art. P-640	€
	Dimensiones Dimensions				Condiciones Corte Cutting Conditions Conditions coupe						
XNMX-080608-ZMG	12,53	6,5	4,5	0,8	0,1-0,3	0,3-7,0	10	30930	83759		
XNMX-080608-ZRG	12,53	6,5	4,5	0,8	0,1-0,3	0,3-7,0	10			83760	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 606**

Ref. 8680

PLAQUITA INTERCAMBIABLE FRESADO XOET
XOET Milling Indexable Insert
Plaquette fraisage XOET

ALTO RENDIMIENTO
High Performance
Haut rendement

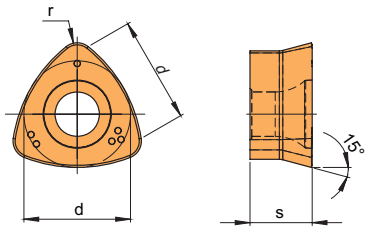


ISO	Dimensiones Dimensions l mm	d mm	s mm	d_1 mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-720	€
XOET-060204	6,96	3,98	2,30	1,92	0,4	0,05-0,07	1,00-4,00	10	19646	
XOET-060208	6,96	3,98	2,30	1,92	0,8	0,05-0,07	1,00-4,00	10	19647	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 614**

Ref. 8690

PLAQUITA INTERCAMBIABLE FRESADO WNMW
WNMW Milling Indexable Insert
Plaquette fraisage WNMW



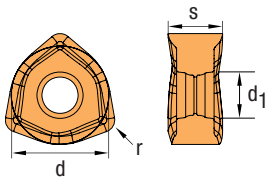
ISO	Dimensiones Dimensions d mm	s mm	r mm	Condiciones Corte Cutting Conditions Conditions coupe f mm	a_p mm		N° Art. P-610	N° Art. P-620	€
WNMW-1207SP	12,70	7,00	2,00	0,30-1,50	0,50-1,80	10	59772	59773	

Porta Plaquitas / Tool Holder / Porte-Plaquettes: **Pag. 599**

Ref. 8692

PLACA INTERCAMBIABLE FRESADO WNMX
WNMX Milling Indexable Insert
Plaquette fraisage WNMX

New!



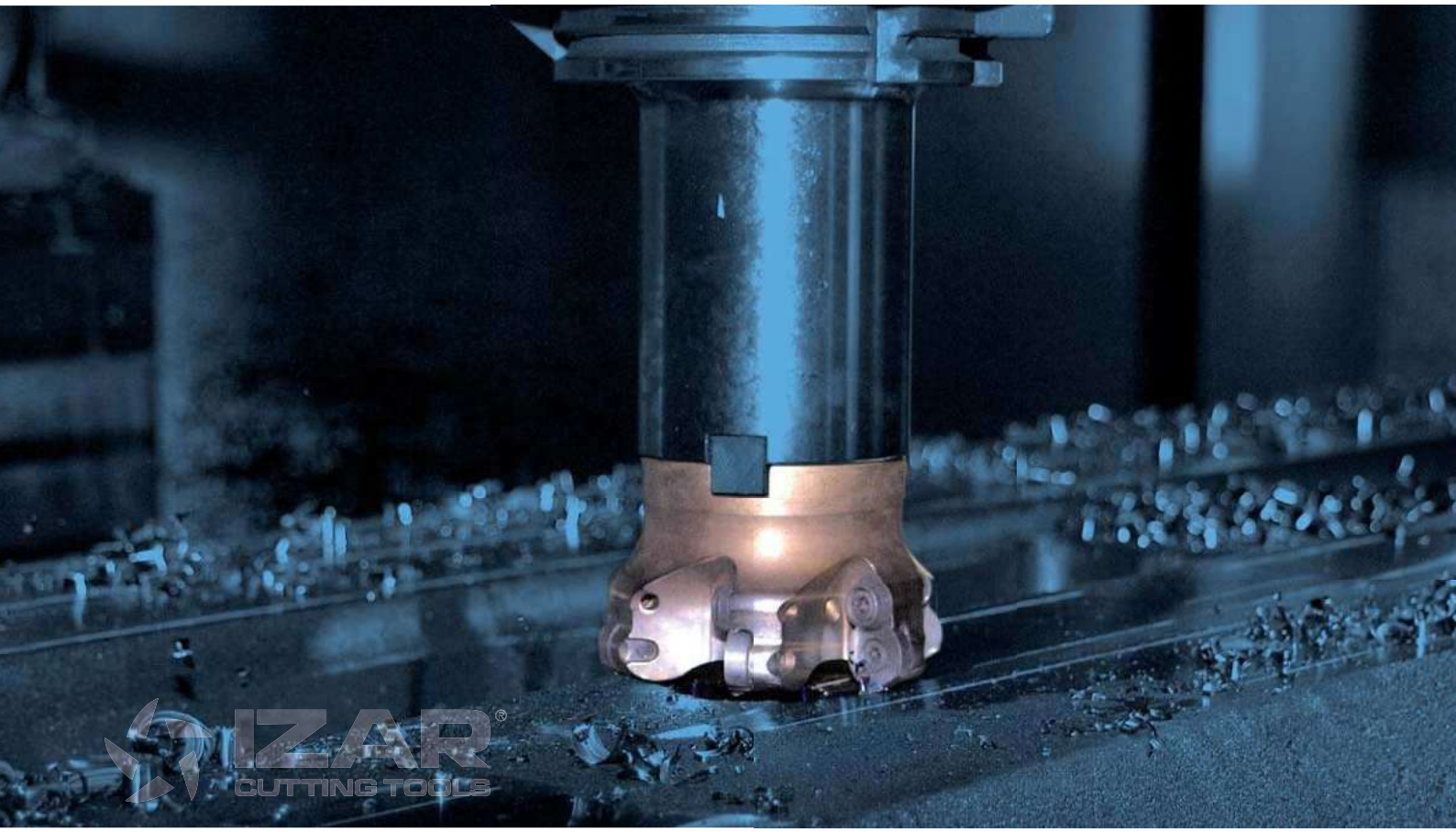
	Dimensiones Dimensions				Condiciones Corte Cutting Conditions Conditions coupe					
ISO	d mm	s mm	r mm	d_1 mm	f mm	a_p mm		N° Art. P-630	N° Art. P-640	€
WNMX-09T316-ZMG	9,53	3,97	1,60	3,60	0,40-1,50	0,40-1,35	10	48662	74819	

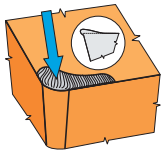
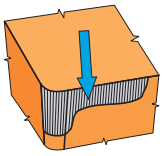
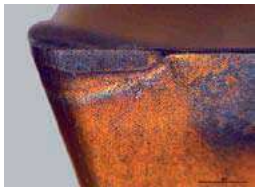
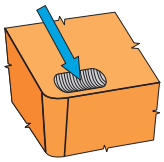
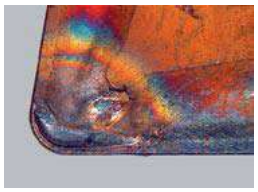
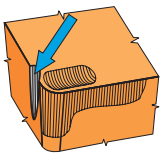
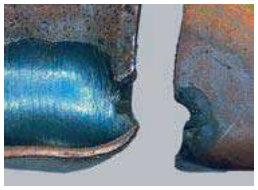
Porta Plaquitas / Tool Holder / Porte-Plaquettes:
Pag. 600

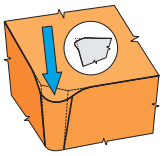
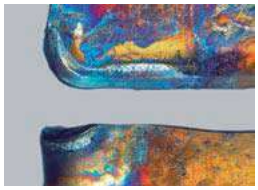
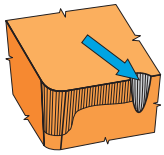
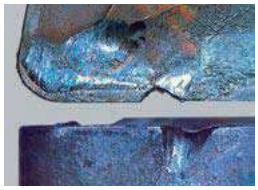
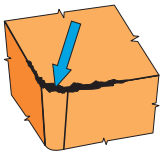
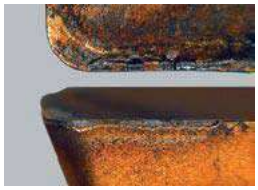
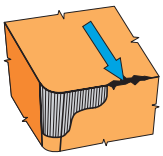
- **Con las plaquitas de fresado de doble cara WNMX obtenemos 6 filos de corte.**
- **Plaquita económica de alto avance multifuncional.**
- **Profundidad máxima de corte de 1,35 mm.**

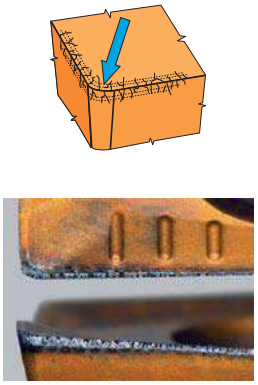
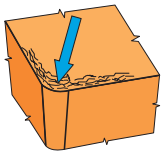
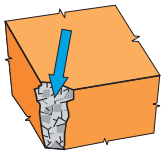
- **With double-sided WNMX milling inserts, we obtain 6 cutting edges.**
- **An economical, high-feed multi-functional insert.**
- **Maximum cutting depth of 1.35 mm.**

- Avec les plaquettes de fraisage double face WNMX, nous obtenons 6 arêtes de coupe.
- Une plaquette économique à avance élevée multifonctionnelle.
- Profondeur de coupe maximale de 1,35 mm.



	**FILO APORTACIÓN** **Causas:** Adherencia del material trabajado en la arista de corte; su ruptura puede causar el astillado de la arista y, como consecuencia, mal acabado superficial. **Soluciones:** - Incrementar Vc y avance - Utilizar calidades con recubrimiento - Utilizar una geometría de corte diferente - No utilizar refrigeración	**BUILT-UP EDGE** **Causes:** Sticking of machined material on the cutting edge. Its tear-off can cause the brittle crack of the edge, consequently the surface quality gets worse. **Solutions:** - Increase cutting speed & feed - Use coated grade - Use different cutting geometry - No coolant	**FILET AVEC MATÉRIEL** **Causes:** Matériel usiné reste soudé au filet de coupe, lui créant dommages. Mauvaise finition de surface. **Solutions:** - Augmenter vitesse coupe et avance - Appliquer types de matériaux revêtus (spéciallement avec PVD) - Employer une diffèrente géométrie de coupe (plus positive et affutée) - Pas de refroidissement
 	**DESGASTE INCIDENCIA** **Causas:** Causado por la fricción entre la plaquita y el material a trabajar. No es posible eliminarlo, solamente reducirlo. **Soluciones:** - Usar una calidad con mayor resistencia al desgaste - Reducir la velocidad de corte - Incrementar el avance - Usar refrigerante o aumentar la presión	**FLANK WEAR** **Causes:** One of the main criteria of tool life. It appears due to friction of insert to the machined material. It's not possible to fully eliminate it, just to reduce. **Solutions:** - Use more wear resistant grade - Reduce cutting speed - Increase feed - Use coolant or increase its intensity	**USURE ANGLE D´INCIDENCE** **Causes**: Conséquence de friction entre plaquette et matériel à usiner. **Solutions:** - Employer une qualité avec plus haute resistance à l´usure - Employer huile de coupe où augmenter l´intensité - Reduire la vitesse de coupe - Augmenter l´avance si < 0.1 mm/tour (pour qualités CVD)
 	**CRATERIZACIÓN** **Causas:** Aparece frecuentemente en plaquitas sin rompevirutas. **Soluciones:** - Usar una calidad con mayor resistencia al desgaste - Utilizar una calidad con recubrimiento - Usar una geometría de corte positiva - Reducir Vc - Usar refrigerante o aumentar su presión	**CRATERING** **Causes:** It appears usually on inserts with plain face. **Solutions:** - Use more wear resistance grade - Use coated grade - Use positive cutting geometry - Reduce cutting speed - Use coolant or increase its intensity	**CRATÈRES** **Causes:** Apparait beaucoup en plaquette sans brisecopeaux. **Solutions:** - Employer une qualité avec plus haute résistance à l´usure. - Employer huile de coupe où augmenter l´intensité - Reduire la 1ere vitesse de coupe et/où avance - Employer une géométrie de coupe différente (plus positive) - Employer une qualité avec revêtement
 	**DESGASTE ARISTA SECUNDARIA** **Causas:** Aparece frecuentemente en el torneado y limita la vida de la plaquita por oxidación y craterización. **Soluciones:** - Usar una calidad más resistente al desgaste, con recubrimiento Al_2O_3 - Reducir Vc - Usar refrigerante o elevar su intensidad	**OXIDATION GROOVE ON THE MINOR EDGE** **Causes:** The main criterion which limits the tool life, usually appeared at turning. Oxidation and cratering combined. **Solutions:** - Use more wear-resistant grade, if possible Al_2O_3 coated - Reduce cutting speed - Use coolant or increase its intensity	**USURE ARÊTE SECONDAIRE** **Causes:** Apparait beaucoup sur tournage et limite la vie de la plaquette par oxidation et cratères. **Solutions:** - Employer une quatlité avec plus haute résistance à l´usure - Employer plaquettes avec Al_2O_3 si les conditions sont convenables - Employer huile de coupe où augmenter l´intensité - Reduire la vitesse de coupe

 	**DEFORMACIÓN PLÁSTICA** **Causas:** Elevada fatiga térmica de la arista de corte por la elevada Vc. **Soluciones:** - Usar una calidad con mayor resistencia al desgaste - Reducir Vc y avance. - Usar una plaquita con un radio mayor - Usar refrigerante o elevar su intensidad	**PLASTIC DEFORMATION** **Causes:** Caused by high thermal stress of the cutting edge (high feed and cutting speed). **Solutions:** - Use a more wear-resistant grade - Reduce Vc and feed - Use an insert with bigger nose radius - Use coolant or increase its intensity	**DÉFORMATION PLASTIQUE** **Causes:** Trop de pression sur le filet à cause d´une haute vitesse de coupe et avance. **Solutions:** - Employer une Qualité plus résistante à l´usure - Reduire la vitesse de coupe et/ou avance - Employer huile de coupe où augmenter l´intensité - Employer une plaquette avec un rayon plus grand
 	**DESGASTE EN LA ARISTA PRINCIPAL** **Causas:** Rotura creada en el area de contacto entre arista de corte y superficie de la pieza; causada por el endurecimiento de la superficie mecanizada y por rebabas. Suele aparecer en INOX austeníticos AISI-316-304. **Soluciones:** - Usar una calidad más resistente al desgaste y con recubrimiento Al_2O_3 - Utilizar una herramienta con menor ángulo de posición	**NOTCH WEAR** **Causes:** Created in area of contact of the cutting edge with the surface of the work piece. Mainly caused by hardening of the surface layer of work piece and burrs. Usually appears on austenitic stainless steel AISI-316-304. **Solutions:** - Use more wear resistante grade and Al_2O_3 coated. - Use a smaller setting angle tool	**USURE EN ARÊTE PRINCIPALE** **Causes:** Rupture sur la surface de contact entre arête de coupe et surface de la pièce, a cause d´augmenter la dureté de la surface usiner et par bavures. Surtout en INOX austénitiques AISI 316-304. **Solutions:** - Employer une qualité plus résistante à l´´ usure et avec revêtement AL_2O_3 - Employer un outil avec angle d´aproximation inférieur
 	**ASTILLADO DE LA ARISTA DE CORTE** **Causas:** Aparece junto con otro tipo de fallo causado por la baja rigidez entre máquina/herramienta/pieza o por formación de viruta. **Soluciones:** - Incrementar Vc - Reducir el avance - Fresado convencional - Mejorar evacuación de viruta - Cambiar posición herramienta - Mejorar la estabilidad	**CHIPPING OF CUTTING EDGE** **Causes:** It mainly appears with another type of wear, caused by low ridigity of machine-tool-work piece or hard chip forming. **Solutions:** - Increase the cutting speed - Reduce the feed rate - Conventional milling - Improve chip evacuation - Change cutter positioning - Improve stability	**COPEAUX SUR LES ARÊTES DE COUPE** **Causes:** A cause de la faiblesse de la pièce à usiner sur la machine où à cause d´une énorme formation de copeaux. **Solutions:** - Augmenter la vitesse de coupe - Reduire l´avance - Fraisage Conventionnel - Améliorer l´évacuation de copeaux - Changer la position de l´outil - Améliore la stabilité
	**ASTILLADO DE LA ARISTA (FUERA DEL CORTE)** **Causas:** Causada por una formación de virutas incorrecta, que dañan la arista. **Soluciones:** - Variar el avance - Usar una herramienta con un ángulo de aproximación diferente - Usar una geometría de plaquita diferente - Utilizar una calidad más tenaz	**CHIPPING OF CUTTING EDGE (OUT OF CUT)** **Causes:** Caused by inconvenient chip forming. The chip damages the edge. **Solutions:** - Change feed. - Use a different setting angle tool. - Use different insert geometry - Use tougher grade	**COPEAUX DEHORS DES ARÊTES DE COUPE** **Causes:** Formation de copeaux déviées jusqu`aux filets de coupe. **Solutions:** - Varier l´avance - Employer un outil avec un angle d´aproximation différent - Employer une géométrie de coupe différentes (un autre brise copeaux)

	**FISURAS TÉRMICAS** **Causas:** Causadas por fatiga térmica en la arista de corte por cortes interrumpidos. **Soluciones:** - Usar abundante refrigeración o anularla - Reducir la velocidad de corte - Reducir el avance - Usar una calidad más tenaz	**COMB CRACKS** **Causes:** High thermal stress of the cutting edge at interrupted cut. **Solutions:** - Use an abundant flow of coolant or shut off the coolant - Reduce the cutting speed - Reduce the feed rate - Use tougher grade	**FISURES THERMIQUES** **Causes:** Trop de fatigue thermique sur l´arête de coupe par coupe interrompue. **Solutions:** - Employer beaucoup de lubrifiant où la fermer - Réduire la vitesse de coupe - Réduire l´avance - Employer le Degré le plus fort - Employer une qualité plus tenace
	**FISURAS A LO LARGO DEL FLANCO** **Causas:** Generada por fatiga dinámica en el area posterior de la arista de corte. **Soluciones:** - Usar una calidad más tenaz - Cambiar condiciones de corte - Usar plaquitas de fresado con geometría diferente (...T, ...S, ...K, ...P) - Cambiar el avance - Modificar la posición del porta-fresas	**CRACKS ALONG THE FLANK** **Causes:** High dynamic stress of the area behind the cutting edge. **Solutions:** - Use tougher grade - Change the cutting conditions - Use different geometry of milling insert or inserts with different cutting edge condition (...T, ...S, ...K, ...P) - Change the feed - Change the cutter positioning	**FISURES AU COURS DU FILET** **Causes:** Trop de stress dynamique de la zone postèrieure à l´arête de coupe. **Solutions:** - Employer une qualité plus tenace - Changer les conditions de coupe - Employer un géométrie de coupe différente de la plaquette de fraisage où plaquettes avec diffèrente conditions du filet de coupe (...T, ...S, ...K, ...P) - Changer l´avance - Changer la position du porte-fraises
	**ROTURA DE LA PLAQUITA** **Causas:** Causas variadas dependiendo del material, condiciones de corte, rigidez de la máquina, calidad del metal duro... **Soluciones:** - Usar una calidad más tenaz - Reducir avance y profundidad de corte - Usar plaquitas con mayor radio - Mejorar la rigidez en su conjunto	**INSERT FRACTURE** **Causes:** Various causes depending on work piece material, grade, condition and rigidity of machine-tool-work piece, extend and wear type, cutting conditions... **Solutions:** - Use a tougher grade - Reduce feed & cutting depth. - Use a bigger corner radius insert - Improve stability	**RUPTURE PLAQUETTE** **Causes:** Variées en fonction du matériel, conditions de coupe, rigidité de la machine, qualité du carbure... **Solutions:** - Employer une qualité plus tenace - Reduire avance et profondeur de coupe - Employer plaquettes avec Rayon plus grand - Augmenter la rigidité de l´ensemble

IZAR®
CUTTING TOOLS