

Brocas MPS/MSL

Geometría de hélice innovadora y con un filo de corte ondulado. Broca para múltiples aplicaciones en un mecanizado preciso y eficiente.

NEW

L/D40 disponibles

MPS

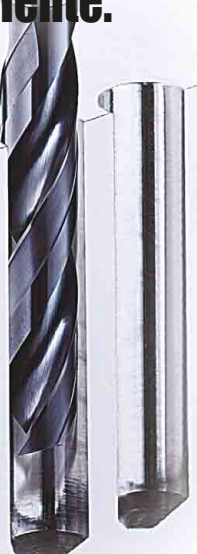
Nuevo tipo de taladrado para alto rendimiento.

Broca con doble margen en la hélice para un mecanizado de gran precisión.

MSL

Único filo de corte ondulado y con una especial geometría de la hélice para una fácil evacuación de la viruta.

Taladrado continuo de agujeros con profundidad desde L/D = 20-30.



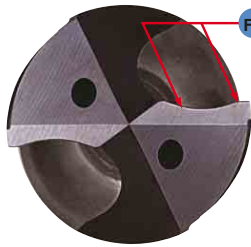
Taladrado (Integral Metal Duro)

Brocas **MPS/MSL**

Características

- **Filo de corte ondulado para mejores resultados en taladrado.**
- **Hélice con doble margen para agujeros de gran precisión.**
- **Recubrimiento de Miracle VP15TF para una vida de la herramienta más larga.**

Forma del filo de corte

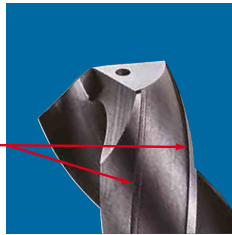


Forma del filo de corte

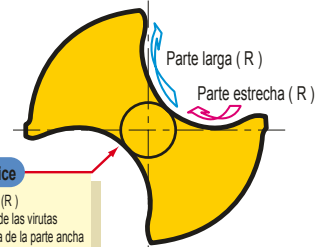
El diseño ondulado del filo de corte mejora el rendimiento de corte periférico con un fuerte corte inicial cerca del centro.

Hélice con doble margen

El tipo con doble margen esta diseñado para dar mayor precisión en el agujero y mejorar la superficie de acabado comparando con la broca tradicional.



Forma del corte seccional

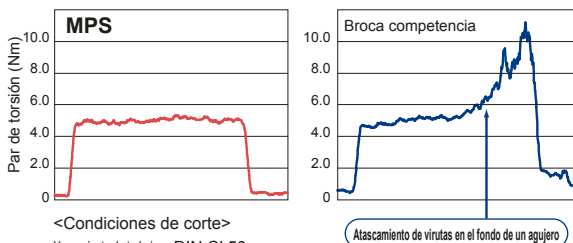


Borde superior de la hélice

La geometría de la parte estrecha (R) genera un enroscamiento inicial de las virutas pero al combinar con la geometría de la parte ancha se produce una suave evacuación de las virutas.

Excelente desprendimiento de virutas

Una geometría especial en la parte superior de la hélice permite un control de virutas superior.



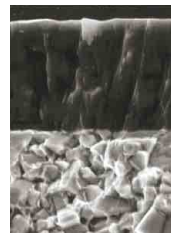
<Condiciones de corte>

Herramienta de trabajo : DIN Ck50
 Diámetro de la broca : ø8mm
 Profundidad del agujero : 64mm (Agujero pasante)
 Velocidad de corte : 120m/min
 Avance : 0,25mm/rev
 Refrigerante : WSO

Atascamiento de virutas en el fondo de un agujero

Tecnología de material

- **Recubrimiento VP15TF MIRACLE®** para una larga vida de la herramienta



VP15TF

Recubrimiento
MIRACLE®
 (Al,Ti)N
 Metal duro
 micrograno
 TF15

Recubrimiento
MIRACLE®

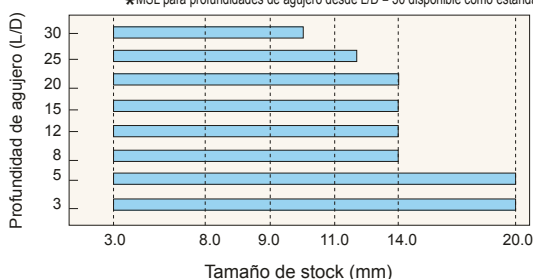
Características de VP15TF

El recubrimiento MIRACLE es ideal para taladrar gracias a su elevada resistencia al recrocimiento del filo. Es apto para el mecanizado de una amplia gama de materiales, desde el acero dulce y el acero aleado hasta el acero inoxidable y la fundición.

Una amplia selección de brocas

El rango incluye brocas para profundidades de agujero de L/D = 3 - 40.

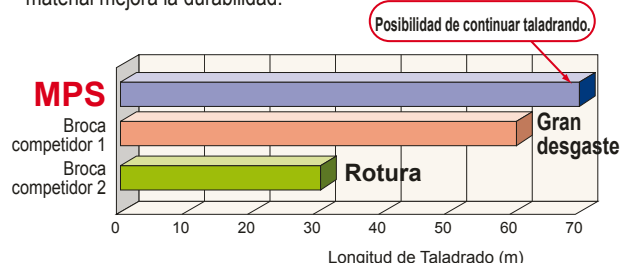
- ★MPS para profundidades de agujero hasta L/D = 40 disponible como estándar.
- ★MSL para profundidades de agujero desde L/D = 30 disponible como estándar.



*Solo disponible en los diámetros indicados, para más detalles por favor consultar la tabla de stock. Otros diámetros solo serán fabricados bajo pedido.

Larga vida de la herramienta

La geometría especial del filo de corte y la avanzada tecnología del material mejora la durabilidad.



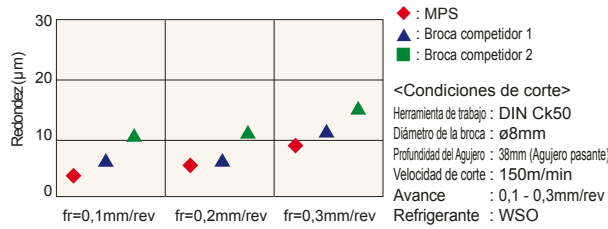
<Condiciones de corte>

Herramienta de trabajo : DIN Ck50
 Diámetro de la broca : ø8mm
 Profundidad del agujero : 38mm (Agujero pasante)
 Velocidad de corte : 140m/min
 Avance : 0,3mm/rev
 Refrigerante : WSO

Rendimiento de corte

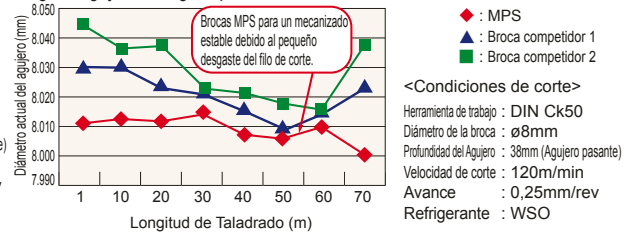
Alta precisión (Redondez)

Broca MPS, MSL para agujeros de gran precisión.



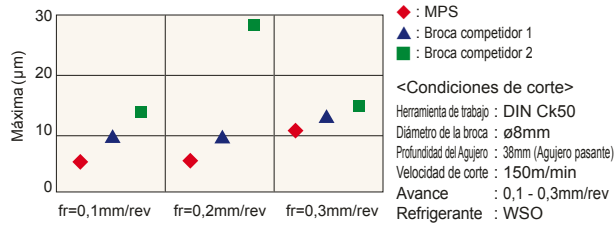
Alta precisión (Diámetro actual agujero)

La geometría especial del filo de corte y la nueva tecnología de materiales asegura agujeros de gran precisión.



Alta precisión (Rugosidad superficial)

MPS/MSL, brocas para acabado superficial de grandes agujeros.

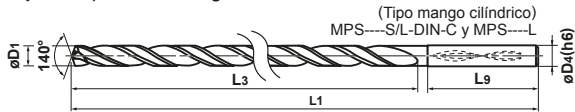


TALADRADO (INTEGRAL METAL DURO)

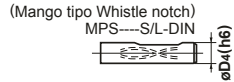
MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)
 MPS---S/L-DIN-C (l/d 3-5)
 MPS---L (l/d 8-40)



● Tipo B Tipo margen estandar



MSL (l/d 20-30)

Tolerancia d1	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
3.0	3	●	MPS0300S-DIN	62	20	36	6	A
	3	●	MPS0300S-DIN-C	62	20	36	6	A
	5	●	MPS0300L-DIN	66	28	36	6	A
	5	●	MPS0300L-DIN-C	66	28	36	6	A
	8	●	MPS0300-L8C	74	34	36	6	A
	10	□	MPS0300-L10C	80	40	36	6	A
	12	●	MPS0300-L12C	86	46	36	6	A
	15	●	MPS0300-L15C	95	55	36	6	A
	20	□	MPS0300-L20C	110	70	36	6	A
	25	□	MPS0300-L25C	125	85	36	6	A
	30	□	MPS0300-L30C	140	100	36	6	A
	40	●	MPS0300-L40C	174	131	36	6	A
3.05	20	●	MSL0300-L20C	110	70	36	6	B
	25	●	MSL0300-L25C	125	85	36	6	B
	30	●	MSL0300-L30C	140	100	36	6	B
	3	●	MPS0305S-DIN	62	20	36	6	A
	3	●	MPS0305S-DIN-C	62	20	36	6	A
3.1	5	●	MPS0305L-DIN	66	28	36	6	A
	5	●	MPS0305L-DIN-C	66	28	36	6	A
	3	●	MPS0310S-DIN	62	20	36	6	A
	3	●	MPS0310S-DIN-C	62	20	36	6	A
	5	●	MPS0310L-DIN	66	28	36	6	A
	5	●	MPS0310L-DIN-C	66	28	36	6	A
	8	●	MPS0310-L8C	80	40	36	6	A
	10	□	MPS0310-L10C	87	47	36	6	A
	12	●	MPS0310-L12C	94	54	36	6	A
	15	●	MPS0310-L15C	104	64	36	6	A
	20	□	MPS0310-L20C	122	82	36	6	A
	25	□	MPS0310-L25C	139	99	36	6	A
30	□	MPS0310-L30C	157	117	36	6	A	
40	□	MPS0310-L40C	191	141	36	6	A	
20	●	MSL0310-L20C	122	82	36	6	B	
25	●	MSL0310-L25C	139	99	36	6	B	
30	●	MSL0310-L30C	157	117	36	6	B	
3.2	3	●	MPS0320S-DIN	62	20	36	6	A
	3	●	MPS0320S-DIN-C	62	20	36	6	A
	5	●	MPS0320L-DIN	66	28	36	6	A
	5	●	MPS0320L-DIN-C	66	28	36	6	A
	8	●	MPS0320-L8C	80	40	36	6	A
	10	□	MPS0320-L10C	87	47	36	6	A
	12	●	MPS0320-L12C	94	54	36	6	A
	15	●	MPS0320-L15C	104	64	36	6	A
	20	□	MPS0320-L20C	122	82	36	6	A
	25	□	MPS0320-L25C	139	99	36	6	A
	30	□	MPS0320-L30C	157	117	36	6	A
	40	□	MPS0320-L40C	191	141	36	6	A
20	●	MSL0320-L20C	122	82	36	6	B	
25	●	MSL0320-L25C	139	99	36	6	B	
30	●	MSL0320-L30C	157	117	36	6	B	

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
3.2	20	□	MPS0320-L20C	122	82	36	6	A
	25	□	MPS0320-L25C	139	99	36	6	A
	30	□	MPS0320-L30C	157	117	36	6	A
	40	□	MPS0320-L40C	191	141	36	6	A
	20	●	MSL0320-L20C	122	82	36	6	B
	25	●	MSL0320-L25C	139	99	36	6	B
	30	●	MSL0320-L30C	157	117	36	6	B
3.3	3	●	MPS0330S-DIN	62	20	36	6	A
	3	●	MPS0330S-DIN-C	62	20	36	6	A
	5	●	MPS0330L-DIN	66	28	36	6	A
	5	●	MPS0330L-DIN-C	66	28	36	6	A
	8	●	MPS0330-L8C	80	40	36	6	A
	10	□	MPS0330-L10C	87	47	36	6	A
	12	●	MPS0330-L12C	94	54	36	6	A
	15	●	MPS0330-L15C	104	64	36	6	A
	20	□	MPS0330-L20C	122	82	36	6	A
	25	□	MPS0330-L25C	139	99	36	6	A
	30	□	MPS0330-L30C	157	117	36	6	A
	40	□	MPS0330-L40C	191	151	36	6	A
20	●	MSL0330-L20C	122	82	36	6	B	
25	●	MSL0330-L25C	139	99	36	6	B	
30	●	MSL0330-L30C	157	117	36	6	B	
3.4	3	●	MPS0340S-DIN	62	20	36	6	A
	3	●	MPS0340S-DIN-C	62	20	36	6	A
	5	●	MPS0340L-DIN	66	28	36	6	A
	5	●	MPS0340L-DIN-C	66	28	36	6	A
	8	●	MPS0340-L8C	80	40	36	6	A
	10	□	MPS0340-L10C	87	47	36	6	A
	12	●	MPS0340-L12C	94	54	36	6	A
	15	●	MPS0340-L15C	104	64	36	6	A
	20	□	MPS0340-L20C	122	82	36	6	A
	25	□	MPS0340-L25C	139	99	36	6	A
	30	□	MPS0340-L30C	157	117	36	6	A
	40	□	MPS0340-L40C	191	151	36	6	A
20	●	MSL0340-L20C	122	82	36	6	B	
25	●	MSL0340-L25C	139	99	36	6	B	
30	●	MSL0340-L30C	157	117	36	6	B	

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo	
		VP15TF			L1	L3	L9	D4		
3.5	3	●		MPS0350S-DIN	62	20	36	6	A	
	3	●		MPS0350S-DIN-C	62	20	36	6	A	
	5	●		MPS0350L-DIN	66	28	36	6	A	
	5	●		MPS0350L-DIN-C	66	28	36	6	A	
	8	●		MPS0350-L8C	80	40	36	6	A	
	10	□		MPS0350-L10C	87	47	36	6	A	
	12	●		MPS0350-L12C	94	54	36	6	A	
	15	●		MPS0350-L15C	104	64	36	6	A	
	20	□		MPS0350-L20C	122	82	36	6	A	
	25	□		MPS0350-L25C	139	99	36	6	A	
	30	□		MPS0350-L30C	157	117	36	6	A	
	NEW	40	●		MPS0350-L40C	191	151	36	6	A
	20	●		MSL0350-L20C	122	82	36	6	B	
25	●		MSL0350-L25C	139	99	36	6	B		
30	●		MSL0350-L30C	157	117	36	6	B		
3.6	3	●		MPS0360S-DIN	62	20	36	6	A	
	3	●		MPS0360S-DIN-C	62	20	36	6	A	
	5	●		MPS0360L-DIN	66	28	36	6	A	
	5	●		MPS0360L-DIN-C	66	28	36	6	A	
	8	●		MPS0360-L8C	85	45	36	6	A	
	10	□		MPS0360-L10C	93	53	36	6	A	
	12	●		MPS0360-L12C	101	61	36	6	A	
	15	●		MPS0360-L15C	113	73	36	6	A	
	20	□		MPS0360-L20C	133	93	36	6	A	
	25	□		MPS0360-L25C	153	113	36	6	A	
	30	□		MPS0360-L30C	173	133	36	6	A	
	NEW	40	●		MPS0360-L40C	213	163	36	6	A
	20	●		MSL0360-L20C	133	93	36	6	B	
25	●		MSL0360-L25C	153	113	36	6	B		
30	●		MSL0360-L30C	173	133	36	6	B		
3.7	3	●		MPS0370S-DIN	62	20	36	6	A	
	3	●		MPS0370S-DIN-C	62	20	36	6	A	
	5	●		MPS0370L-DIN	66	28	36	6	A	
	5	●		MPS0370L-DIN-C	66	28	36	6	A	
	8	●		MPS0370-L8C	85	45	36	6	A	
	10	□		MPS0370-L10C	93	53	36	6	A	
	12	●		MPS0370-L12C	101	61	36	6	A	
	15	●		MPS0370-L15C	113	73	36	6	A	
	20	□		MPS0370-L20C	133	93	36	6	A	
	25	□		MPS0370-L25C	153	113	36	6	A	
	30	□		MPS0370-L30C	173	133	36	6	A	
	NEW	40	□		MPS0370-L40C	213	163	36	6	A
	20	●		MSL0370-L20C	133	93	36	6	B	
25	●		MSL0370-L25C	153	113	36	6	B		
30	●		MSL0370-L30C	173	133	36	6	B		
3.8	3	●		MPS0380S-DIN	66	24	36	6	A	
	3	●		MPS0380S-DIN-C	66	24	36	6	A	
	5	●		MPS0380L-DIN	74	36	36	6	A	
	5	●		MPS0380L-DIN-C	74	36	36	6	A	
	8	●		MPS0380-L8C	85	45	36	6	A	
	10	□		MPS0380-L10C	93	53	36	6	A	
	12	●		MPS0380-L12C	101	61	36	6	A	
	15	●		MPS0380-L15C	113	73	36	6	A	
	20	□		MPS0380-L20C	133	93	36	6	A	
	25	□		MPS0380-L25C	153	113	36	6	A	
	30	□		MPS0380-L30C	173	133	36	6	A	

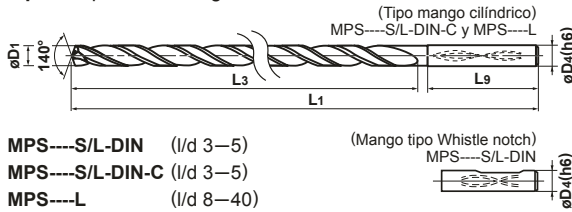
Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo	
		VP15TF			L1	L3	L9	D4		
3.8	NEW	40	□	MPS0380-L40C	213	173	36	6	A	
	20	●		MSL0380-L20C	133	93	36	6	B	
	25	●		MSL0380-L25C	153	113	36	6	B	
	30	●		MSL0380-L30C	173	133	36	6	B	
	3	●		MPS0390S-DIN	66	24	36	6	A	
3.9	3	●		MPS0390S-DIN-C	66	24	36	6	A	
	5	●		MPS0390L-DIN	74	36	36	6	A	
	5	●		MPS0390L-DIN-C	74	36	36	6	A	
	8	●		MPS0390-L8C	85	45	36	6	A	
	10	□		MPS0390-L10C	93	53	36	6	A	
	12	●		MPS0390-L12C	101	61	36	6	A	
	15	●		MPS0390-L15C	113	73	36	6	A	
	20	□		MPS0390-L20C	133	93	36	6	A	
	25	□		MPS0390-L25C	153	113	36	6	A	
	30	□		MPS0390-L30C	173	133	36	6	A	
	NEW	40	□		MPS0390-L40C	213	173	36	6	A
	20	●		MSL0390-L20C	133	93	36	6	B	
	25	●		MSL0390-L25C	153	113	36	6	B	
30	●		MSL0390-L30C	173	133	36	6	B		
4.0	3	●		MPS0400S-DIN	66	24	36	6	A	
	3	●		MPS0400S-DIN-C	66	24	36	6	A	
	5	●		MPS0400L-DIN	74	36	36	6	A	
	5	●		MPS0400L-DIN-C	74	36	36	6	A	
	8	●		MPS0400-L8C	85	45	36	6	A	
	10	□		MPS0400-L10C	93	53	36	6	A	
	12	●		MPS0400-L12C	101	61	36	6	A	
	15	●		MPS0400-L15C	113	73	36	6	A	
	20	□		MPS0400-L20C	133	93	36	6	A	
	25	□		MPS0400-L25C	153	113	36	6	A	
	30	□		MPS0400-L30C	173	133	36	6	A	
	NEW	40	●		MPS0400-L40C	213	173	36	6	A
	20	●		MSL0400-L20C	133	93	36	6	B	
25	●		MSL0400-L25C	153	113	36	6	B		
30	●		MSL0400-L30C	173	133	36	6	B		
4.05	3	●		MPS0405S-DIN	66	24	36	6	A	
	3	●		MPS0405S-DIN-C	66	24	36	6	A	
	5	●		MPS0405L-DIN	74	36	36	6	A	
	5	●		MPS0405L-DIN-C	74	36	36	6	A	
	3	●		MPS0410S-DIN	66	24	36	6	A	
4.1	3	●		MPS0410S-DIN-C	66	24	36	6	A	
	5	●		MPS0410L-DIN	74	36	36	6	A	
	5	●		MPS0410L-DIN-C	74	36	36	6	A	
	8	●		MPS0410-L8C	91	51	36	6	A	
	10	□		MPS0410-L10C	100	60	36	6	A	
	12	●		MPS0410-L12C	109	69	36	6	A	
	15	●		MPS0410-L15C	122	82	36	6	A	
	20	□		MPS0410-L20C	145	105	36	6	A	
	25	□		MPS0410-L25C	167	127	36	6	A	
	30	□		MPS0410-L30C	190	150	36	6	A	
	NEW	40	□		MPS0410-L40C	236	186	36	6	A
	20	●		MSL0410-L20C	145	105	36	6	B	
	25	●		MSL0410-L25C	167	127	36	6	B	
30	●		MSL0410-L30C	190	150	36	6	B		

TALADRADO (INTEGRAL METAL DURO)

MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)

MPS---S/L-DIN-C (l/d 3-5)

MPS---L (l/d 8-40)

● Tipo B Tipo margen estandar



MSL (l/d 20-30)

Tolerancia d1	3.0≤D1≤6.0	6.0<D1≤10.0	10.0<D1≤18.0	18.0<D1≤20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
4.2	3	●	MPS0420S-DIN	66	24	36	6	A
	3	●	MPS0420S-DIN-C	66	24	36	6	A
	5	●	MPS0420L-DIN	74	36	36	6	A
	5	●	MPS0420L-DIN-C	74	36	36	6	A
	8	●	MPS0420-L8C	91	51	36	6	A
	10	□	MPS0420-L10C	100	60	36	6	A
	12	●	MPS0420-L12C	109	69	36	6	A
	15	●	MPS0420-L15C	122	82	36	6	A
	20	□	MPS0420-L20C	145	105	36	6	A
	25	□	MPS0420-L25C	167	127	36	6	A
	30	□	MPS0420-L30C	190	150	36	6	A
	NEW 40	□	MPS0420-L40C	236	186	36	6	A
20	●	MSL0420-L20C	145	105	36	6	B	
25	●	MSL0420-L25C	167	127	36	6	B	
30	●	MSL0420-L30C	190	150	36	6	B	
4.3	3	●	MPS0430S-DIN	66	24	36	6	A
	3	●	MPS0430S-DIN-C	66	24	36	6	A
	5	●	MPS0430L-DIN	74	36	36	6	A
	5	●	MPS0430L-DIN-C	74	36	36	6	A
	8	●	MPS0430-L8C	91	51	36	6	A
	10	□	MPS0430-L10C	100	60	36	6	A
	12	●	MPS0430-L12C	109	69	36	6	A
	15	●	MPS0430-L15C	122	82	36	6	A
	20	□	MPS0430-L20C	145	105	36	6	A
	25	□	MPS0430-L25C	167	127	36	6	A
	30	□	MPS0430-L30C	190	150	36	6	A
	NEW 40	□	MPS0430-L40C	236	196	36	6	A
20	●	MSL0430-L20C	145	105	36	6	B	
25	●	MSL0430-L25C	167	127	36	6	B	
30	●	MSL0430-L30C	190	150	36	6	B	
4.4	3	●	MPS0440S-DIN	66	24	36	6	A
	3	●	MPS0440S-DIN-C	66	24	36	6	A
	5	●	MPS0440L-DIN	74	36	36	6	A
	5	●	MPS0440L-DIN-C	74	36	36	6	A
	8	●	MPS0440-L8C	91	51	36	6	A
	10	□	MPS0440-L10C	100	60	36	6	A
	12	●	MPS0440-L12C	109	69	36	6	A
	15	●	MPS0440-L15C	122	82	36	6	A
	20	□	MPS0440-L20C	145	105	36	6	A
	25	□	MPS0440-L25C	167	127	36	6	A
	30	□	MPS0440-L30C	190	150	36	6	A
	NEW 40	□	MPS0440-L40C	236	196	36	6	A

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
4.4	20	●	MSL0440-L20C	145	105	36	6	B
	25	●	MSL0440-L25C	167	127	36	6	B
	30	●	MSL0440-L30C	190	150	36	6	B
4.5	3	●	MPS0450S-DIN	66	24	36	6	A
	3	●	MPS0450S-DIN-C	66	24	36	6	A
	5	●	MPS0450L-DIN	74	36	36	6	A
	5	●	MPS0450L-DIN-C	74	36	36	6	A
	8	●	MPS0450-L8C	91	51	36	6	A
	10	□	MPS0450-L10C	100	60	36	6	A
	12	●	MPS0450-L12C	109	69	36	6	A
	15	●	MPS0450-L15C	122	82	36	6	A
	20	□	MPS0450-L20C	145	105	36	6	A
	25	□	MPS0450-L25C	167	127	36	6	A
	30	□	MPS0450-L30C	190	150	36	6	A
	NEW 40	●	MPS0450-L40C	236	196	36	6	A
20	●	MSL0450-L20C	145	105	36	6	B	
25	●	MSL0450-L25C	167	127	36	6	B	
30	●	MSL0450-L30C	190	150	36	6	B	
4.6	3	●	MPS0460S-DIN	66	24	36	6	A
	3	●	MPS0460S-DIN-C	66	24	36	6	A
	5	●	MPS0460L-DIN	74	36	36	6	A
	5	●	MPS0460L-DIN-C	74	36	36	6	A
	8	●	MPS0460-L8C	96	55	36	6	A
	10	□	MPS0460-L10C	106	66	36	6	A
	12	●	MPS0460-L12C	116	76	36	6	A
	15	●	MPS0460-L15C	131	91	36	6	A
	20	□	MPS0460-L20C	156	116	36	6	A
	25	□	MPS0460-L25C	181	141	36	6	A
	30	□	MPS0460-L30C	206	166	36	6	A
	NEW 40	□	MPS0460-L40C	255	205	36	6	A
20	●	MSL0460-L20C	156	116	36	6	B	
25	●	MSL0460-L25C	181	141	36	6	B	
30	●	MSL0460-L30C	206	166	36	6	B	
4.65	3	●	MPS0465S-DIN	66	24	36	6	A
	3	●	MPS0465S-DIN-C	66	24	36	6	A
	5	●	MPS0465L-DIN	74	36	36	6	A
	5	●	MPS0465L-DIN-C	74	36	36	6	A

● : Existencia en Europa. □ : A fabricar según demanda.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
4.7	3	●		MPS0470S-DIN	66	24	36	6	A
	3	●		MPS0470S-DIN-C	66	24	36	6	A
	5	●		MPS0470L-DIN	74	36	36	6	A
	5	●		MPS0470L-DIN-C	74	36	36	6	A
	8	●		MPS0470-L8C	96	55	36	6	A
	10	□		MPS0470-L10C	106	66	36	6	A
	12	●		MPS0470-L12C	116	76	36	6	A
	15	●		MPS0470-L15C	131	91	36	6	A
	20	□		MPS0470-L20C	156	116	36	6	A
	25	□		MPS0470-L25C	181	141	36	6	A
	30	□		MPS0470-L30C	206	166	36	6	A
	40	□		MPS0470-L40C	255	205	36	6	A
	20	●		MSL0470-L20C	156	116	36	6	B
	25	●		MSL0470-L25C	181	141	36	6	B
	30	●		MSL0470-L30C	206	166	36	6	B
4.8	3	●		MPS0480S-DIN	66	28	36	6	A
	3	●		MPS0480S-DIN-C	66	28	36	6	A
	5	●		MPS0480L-DIN	82	44	36	6	A
	5	●		MPS0480L-DIN-C	82	44	36	6	A
	8	●		MPS0480-L8C	96	55	36	6	A
	10	□		MPS0480-L10C	106	66	36	6	A
	12	●		MPS0480-L12C	116	76	36	6	A
	15	●		MPS0480-L15C	131	91	36	6	A
	20	□		MPS0480-L20C	156	116	36	6	A
	25	□		MPS0480-L25C	181	141	36	6	A
	30	□		MPS0480-L30C	206	166	36	6	A
	40	□		MPS0480-L40C	255	216	36	6	A
	20	●		MSL0480-L20C	156	116	36	6	B
	25	●		MSL0480-L25C	181	141	36	6	B
	30	●		MSL0480-L30C	206	166	36	6	B
4.9	3	●		MPS0490S-DIN	66	28	36	6	A
	3	●		MPS0490S-DIN-C	66	28	36	6	A
	5	●		MPS0490L-DIN	82	44	36	6	A
	5	●		MPS0490L-DIN-C	82	44	36	6	A
	8	●		MPS0490-L8C	96	55	36	6	A
	10	□		MPS0490-L10C	106	66	36	6	A
	12	●		MPS0490-L12C	116	76	36	6	A
	15	●		MPS0490-L15C	131	91	36	6	A
	20	□		MPS0490-L20C	156	116	36	6	A
	25	□		MPS0490-L25C	181	141	36	6	A
	30	□		MPS0490-L30C	206	166	36	6	A
	40	□		MPS0490-L40C	255	216	36	6	A
	20	●		MSL0490-L20C	156	116	36	6	B
	25	●		MSL0490-L25C	181	141	36	6	B
	30	●		MSL0490-L30C	206	166	36	6	B
5.0	3	●		MPS0500S-DIN	66	28	36	6	A
	3	●		MPS0500S-DIN-C	66	28	36	6	A
	5	●		MPS0500L-DIN	82	44	36	6	A
	5	●		MPS0500L-DIN-C	82	44	36	6	A
	8	●		MPS0500-L8C	96	55	36	6	A
	10	□		MPS0500-L10C	106	66	36	6	A
	12	●		MPS0500-L12C	116	76	36	6	A
	15	●		MPS0500-L15C	131	91	36	6	A
	20	□		MPS0500-L20C	156	116	36	6	A
	25	□		MPS0500-L25C	181	141	36	6	A
	30	□		MPS0500-L30C	206	166	36	6	A

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
5.0	40	●		MPS0500-L40C	255	216	36	6	A
	20	●		MSL0500-L20C	156	116	36	6	B
	25	●		MSL0500-L25C	181	141	36	6	B
	30	●		MSL0500-L30C	206	166	36	6	B
	3	●		MPS0505S-DIN	66	28	36	6	A
5.05	3	●		MPS0505S-DIN-C	66	28	36	6	A
	5	●		MPS0505L-DIN	82	44	36	6	A
	5	●		MPS0505L-DIN-C	82	44	36	6	A
5.1	3	●		MPS0510S-DIN	66	28	36	6	A
	3	●		MPS0510S-DIN-C	66	28	36	6	A
	5	●		MPS0510L-DIN	82	44	36	6	A
	5	●		MPS0510L-DIN-C	82	44	36	6	A
	8	●		MPS0510-L8C	102	62	36	6	A
	10	□		MPS0510-L10C	113	73	36	6	A
	12	●		MPS0510-L12C	124	84	36	6	A
	15	●		MPS0510-L15C	140	100	36	6	A
	20	□		MPS0510-L20C	168	128	36	6	A
	25	□		MPS0510-L25C	195	155	36	6	A
	30	□		MPS0510-L30C	223	183	36	6	A
	40	□		MPS0510-L40C	279	231	36	6	A
	20	●		MSL0510-L20C	168	128	36	6	B
	25	●		MSL0510-L25C	195	155	36	6	B
	30	●		MSL0510-L30C	223	183	36	6	B
5.2	3	●		MPS0520S-DIN	66	28	36	6	A
	3	●		MPS0520S-DIN-C	66	28	36	6	A
	5	●		MPS0520L-DIN	82	44	36	6	A
	5	●		MPS0520L-DIN-C	82	44	36	6	A
	8	●		MPS0520-L8C	102	62	36	6	A
	10	□		MPS0520-L10C	113	73	36	6	A
	12	●		MPS0520-L12C	124	84	36	6	A
	15	●		MPS0520-L15C	140	100	36	6	A
	20	□		MPS0520-L20C	168	128	36	6	A
	25	□		MPS0520-L25C	195	155	36	6	A
	30	□		MPS0520-L30C	223	183	36	6	A
	40	□		MPS0520-L40C	279	231	36	6	A
	20	●		MSL0520-L20C	168	128	36	6	B
	25	●		MSL0520-L25C	195	155	36	6	B
	30	●		MSL0520-L30C	223	183	36	6	B
5.3	3	●		MPS0530S-DIN	66	28	36	6	A
	3	●		MPS0530S-DIN-C	66	28	36	6	A
	5	●		MPS0530L-DIN	82	44	36	6	A
	5	●		MPS0530L-DIN-C	82	44	36	6	A
	8	●		MPS0530-L8C	102	62	36	6	A
	10	□		MPS0530-L10C	113	73	36	6	A
	12	●		MPS0530-L12C	124	84	36	6	A
	15	●		MPS0530-L15C	140	100	36	6	A
	20	□		MPS0530-L20C	168	128	36	6	A
	25	□		MPS0530-L25C	195	155	36	6	A
	30	□		MPS0530-L30C	223	183	36	6	A
	40	□		MPS0530-L40C	279	241	36	6	A
	20	●		MSL0530-L20C	168	128	36	6	B
	25	●		MSL0530-L25C	195	155	36	6	B
	30	●		MSL0530-L30C	223	183	36	6	B

TALADRADO (INTEGRAL METAL DURO)

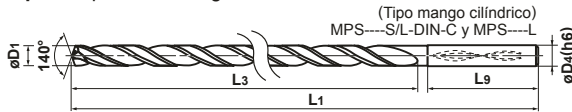
MPS/MSL



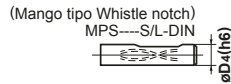
Tolerancia d1	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)
MPS---S/L-DIN-C (l/d 3-5)
MPS---L (l/d 8-40)



● Tipo B Tipo margen estandar



MSL (l/d 20-30)

Diám. Broca D1 (mm)	Profundidad agujero VP15TF (l/d)	Stock	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
5.4	3	●	MPS0540S-DIN	66	28	36	6	A
	3	●	MPS0540S-DIN-C	66	28	36	6	A
	5	●	MPS0540L-DIN	82	44	36	6	A
	5	●	MPS0540L-DIN-C	82	44	36	6	A
	8	●	MPS0540-L8C	102	62	36	6	A
	10	□	MPS0540-L10C	113	73	36	6	A
	12	●	MPS0540-L12C	124	84	36	6	A
	15	●	MPS0540-L15C	140	100	36	6	A
	20	□	MPS0540-L20C	168	128	36	6	A
	25	□	MPS0540-L25C	195	155	36	6	A
	30	□	MPS0540-L30C	223	183	36	6	A
	NEW 40	□	MPS0540-L40C	279	241	36	6	A
20	●	MSL0540-L20C	168	128	36	6	B	
25	●	MSL0540-L25C	195	155	36	6	B	
30	●	MSL0540-L30C	223	183	36	6	B	
5.5	3	●	MPS0550S-DIN	66	28	36	6	A
	3	●	MPS0550S-DIN-C	66	28	36	6	A
	5	●	MPS0550L-DIN	82	44	36	6	A
	5	●	MPS0550L-DIN-C	82	44	36	6	A
	8	●	MPS0550-L8C	102	62	36	6	A
	10	□	MPS0550-L10C	113	73	36	6	A
	12	●	MPS0550-L12C	124	84	36	6	A
	15	●	MPS0550-L15C	140	100	36	6	A
	20	□	MPS0550-L20C	168	128	36	6	A
	25	□	MPS0550-L25C	195	155	36	6	A
	30	□	MPS0550-L30C	223	183	36	6	A
	NEW 40	●	MPS0550-L40C	279	241	36	6	A
20	●	MSL0550-L20C	168	128	36	6	B	
25	●	MSL0550-L25C	195	155	36	6	B	
30	●	MSL0550-L30C	223	183	36	6	B	
5.55	3	●	MPS0555S-DIN	66	28	36	6	A
	3	●	MPS0555S-DIN-C	66	28	36	6	A
	5	●	MPS0555L-DIN	82	44	36	6	A
	5	●	MPS0555L-DIN-C	82	44	36	6	A
5.6	3	●	MPS0560S-DIN	66	28	36	6	A
	3	●	MPS0560S-DIN-C	66	28	36	6	A
	5	●	MPS0560L-DIN	82	44	36	6	A
	5	●	MPS0560L-DIN-C	82	44	36	6	A
	8	●	MPS0560-L8C	107	67	36	6	A
	10	□	MPS0560-L10C	119	79	36	6	A
12	●	MPS0560-L12C	131	91	36	6	A	
15	●	MPS0560-L15C	149	109	36	6	A	

Diám. Broca D1 (mm)	Profundidad agujero VP15TF (l/d)	Stock	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
5.6	20	□	MPS0560-L20C	179	139	36	6	A
	25	□	MPS0560-L25C	209	169	36	6	A
	30	□	MPS0560-L30C	239	199	36	6	A
	NEW 40	□	MPS0560-L40C	299	251	36	6	A
	20	●	MSL0560-L20C	179	139	36	6	B
	25	●	MSL0560-L25C	209	169	36	6	B
30	●	MSL0560-L30C	239	199	36	6	B	
5.7	3	●	MPS0570S-DIN	66	28	36	6	A
	3	●	MPS0570S-DIN-C	66	28	36	6	A
	5	●	MPS0570L-DIN	82	44	36	6	A
	5	●	MPS0570L-DIN-C	82	44	36	6	A
	8	●	MPS0570-L8C	107	67	36	6	A
	10	□	MPS0570-L10C	119	79	36	6	A
	12	●	MPS0570-L12C	131	91	36	6	A
	15	●	MPS0570-L15C	149	109	36	6	A
	20	□	MPS0570-L20C	179	139	36	6	A
	25	□	MPS0570-L25C	209	169	36	6	A
	30	□	MPS0570-L30C	239	199	36	6	A
	NEW 40	□	MPS0570-L40C	299	251	36	6	A
20	●	MSL0570-L20C	179	139	36	6	B	
25	●	MSL0570-L25C	209	169	36	6	B	
30	●	MSL0570-L30C	239	199	36	6	B	
5.8	3	●	MPS0580S-DIN	66	28	36	6	A
	3	●	MPS0580S-DIN-C	66	28	36	6	A
	5	●	MPS0580L-DIN	82	44	36	6	A
	5	●	MPS0580L-DIN-C	82	44	36	6	A
	8	●	MPS0580-L8C	107	67	36	6	A
	10	□	MPS0580-L10C	119	79	36	6	A
	12	●	MPS0580-L12C	131	91	36	6	A
	15	●	MPS0580-L15C	149	109	36	6	A
	20	□	MPS0580-L20C	179	139	36	6	A
	25	□	MPS0580-L25C	209	169	36	6	A
	30	□	MPS0580-L30C	239	199	36	6	A
	NEW 40	□	MPS0580-L40C	299	261	36	6	A
20	●	MSL0580-L20C	179	139	36	6	A	
25	●	MSL0580-L25C	209	169	36	6	B	
30	●	MSL0580-L30C	239	199	36	6	B	
5.9	3	●	MPS0590S-DIN	66	28	36	6	A
	3	●	MPS0590S-DIN-C	66	28	36	6	A
	5	●	MPS0590L-DIN	82	44	36	6	A
	5	●	MPS0590L-DIN-C	82	44	36	6	A
8	●	MPS0590-L8C	107	67	36	6	A	

● : Existencia en Europa. □ : A fabricar según demanda.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
5.9	10	□		MPS0590-L10C	119	79	36	6	A
	12	●		MPS0590-L12C	131	91	36	6	A
	15	●		MPS0590-L15C	149	109	36	6	A
	20	□		MPS0590-L20C	179	139	36	6	A
	25	□		MPS0590-L25C	209	169	36	6	A
	30	□		MPS0590-L30C	239	199	36	6	A
	NEW 40	□		MPS0590-L40C	299	261	36	6	A
	20	●		MSL0590-L20C	179	139	36	6	B
	25	●		MSL0590-L25C	209	169	36	6	B
	30	●		MSL0590-L30C	239	199	36	6	B
6.0	3	●		MPS0600S-DIN	66	28	36	6	A
	3	●		MPS0600S-DIN-C	66	28	36	6	A
	5	●		MPS0600L-DIN	82	44	36	6	A
	5	●		MPS0600L-DIN-C	82	44	36	6	A
	8	●		MPS0600-L8C	107	67	36	6	A
	10	□		MPS0600-L10C	119	79	36	6	A
	12	●		MPS0600-L12C	131	91	36	6	A
	15	●		MPS0600-L15C	149	109	36	6	A
	20	□		MPS0600-L20C	179	139	36	6	A
	25	□		MPS0600-L25C	209	169	36	6	A
30	□		MPS0600-L30C	239	199	36	6	A	
NEW 40	●		MPS0600-L40C	299	261	36	6	A	
20	●		MSL0600-L20C	179	139	36	6	B	
25	●		MSL0600-L25C	209	169	36	6	B	
30	●		MSL0600-L30C	239	199	36	6	B	
6.05	3	●		MPS0605S-DIN	79	34	36	8	A
	3	●		MPS0605S-DIN-C	79	34	36	8	A
	5	●		MPS0605L-DIN	91	53	36	8	A
	5	●		MPS0605L-DIN-C	91	53	36	8	A
6.1	3	●		MPS0610S-DIN	79	34	36	8	A
	3	●		MPS0610S-DIN-C	79	34	36	8	A
	5	●		MPS0610L-DIN	91	53	36	8	A
	5	●		MPS0610L-DIN-C	91	53	36	8	A
	8	●		MPS0610-L8C	113	73	36	8	A
	10	□		MPS0610-L10C	126	86	36	8	A
	12	●		MPS0610-L12C	139	99	36	8	A
	15	●		MPS0610-L15C	158	118	36	8	A
	20	□		MPS0610-L20C	191	151	36	8	A
	25	□		MPS0610-L25C	223	183	36	8	A
30	□		MPS0610-L30C	256	216	36	8	A	
NEW 40	□		MPS0610-L40C	321	271	36	8	A	
20	●		MSL0610-L20C	191	151	36	8	B	
25	●		MSL0610-L25C	223	183	36	8	B	
30	●		MSL0610-L30C	256	216	36	8	B	
6.2	3	●		MPS0620S-DIN	79	34	36	8	A
	3	●		MPS0620S-DIN-C	79	34	36	8	A
	5	●		MPS0620L-DIN	91	53	36	8	A
	5	●		MPS0620L-DIN-C	91	53	36	8	A
	8	●		MPS0620-L8C	113	76	36	8	A
	10	□		MPS0620-L10C	126	86	36	8	A
	12	●		MPS0620-L12C	139	99	36	8	A
	15	●		MPS0620-L15C	158	118	36	8	A
	20	□		MPS0620-L20C	191	151	36	8	A
	25	□		MPS0620-L25C	223	183	36	8	A
30	□		MPS0620-L30C	256	216	36	8	A	
NEW 40	□		MPS0620-L40C	321	271	36	8	A	

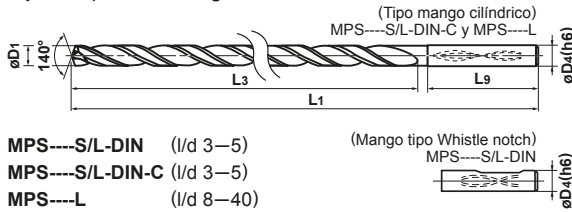
Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
6.2	20	●		MSL0620-L20C	191	151	36	8	B
	25	●		MSL0620-L25C	223	183	36	8	B
	30	●		MSL0620-L30C	256	216	36	8	B
6.3	3	●		MPS0630S-DIN	79	34	36	8	A
	3	●		MPS0630S-DIN-C	79	34	36	8	A
	5	●		MPS0630L-DIN	91	53	36	8	A
	5	●		MPS0630L-DIN-C	91	53	36	8	A
	8	●		MPS0630-L8C	113	73	36	8	A
	10	□		MPS0630-L10C	126	86	36	8	A
	12	●		MPS0630-L12C	139	99	36	8	A
	15	●		MPS0630-L15C	158	118	36	8	A
	20	□		MPS0630-L20C	191	151	36	8	A
	25	□		MPS0630-L25C	223	183	36	8	A
30	□		MPS0630-L30C	256	216	36	8	A	
NEW 40	□		MPS0630-L40C	321	281	36	8	A	
20	●		MSL0630-L20C	191	151	36	8	B	
25	●		MSL0630-L25C	223	183	36	8	B	
30	●		MSL0630-L30C	256	216	36	8	B	
6.4	3	●		MPS0640S-DIN	79	34	36	8	A
	3	●		MPS0640S-DIN-C	79	34	36	8	A
	5	●		MPS0640L-DIN	91	53	36	8	A
	5	●		MPS0640L-DIN-C	91	53	36	8	A
	8	●		MPS0640-L8C	113	73	36	8	A
	10	□		MPS0640-L10C	126	86	36	8	A
	12	●		MPS0640-L12C	139	99	36	8	A
	15	●		MPS0640-L15C	158	118	36	8	A
	20	□		MPS0640-L20C	191	151	36	8	A
	25	□		MPS0640-L25C	223	183	36	8	A
30	□		MPS0640-L30C	256	216	36	8	A	
NEW 40	□		MPS0640-L40C	321	281	36	8	A	
20	●		MSL0640-L20C	191	151	36	8	B	
25	●		MSL0640-L25C	223	183	36	8	B	
30	●		MSL0640-L30C	256	216	36	8	B	
6.5	3	●		MPS0650S-DIN	79	34	36	8	A
	3	●		MPS0650S-DIN-C	79	34	36	8	A
	5	●		MPS0650L-DIN	91	53	36	8	A
	5	●		MPS0650L-DIN-C	91	53	36	8	A
	8	●		MPS0650-L8C	113	73	36	8	A
	10	□		MPS0650-L10C	126	86	36	8	A
	12	●		MPS0650-L12C	139	99	36	8	A
	15	●		MPS0650-L15C	158	118	36	8	A
	20	□		MPS0650-L20C	191	151	36	8	A
	25	□		MPS0650-L25C	223	183	36	8	A
30	□		MPS0650-L30C	256	216	36	8	A	
NEW 40	●		MPS0650-L40C	321	281	36	8	A	
20	●		MSL0650-L20C	191	151	36	8	B	
25	●		MSL0650-L25C	223	183	36	8	B	
30	●		MSL0650-L30C	256	216	36	8	B	
6.6	3	●		MPS0660S-DIN	79	34	36	8	A
	3	●		MPS0660S-DIN-C	79	34	36	8	A
	5	●		MPS0660L-DIN	91	53	36	8	A
	5	●		MPS0660L-DIN-C	91	53	36	8	A
	8	●		MPS0660-L8C	118	78	36	8	A
	10	□		MPS0660-L10C	132	92	36	8	A
	12	●		MPS0660-L12C	146	106	36	8	A
15	●		MPS0660-L15C	167	127	36	8	A	

TALADRADO (INTEGRAL METAL DURO)

MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)

MPS---S/L-DIN-C (l/d 3-5)

MPS---L (l/d 8-40)

● Tipo B Tipo margen estandar



MSL (l/d 20-30)

Tolerancia d1	3.0$\leq D_1 \leq 6.0$	6.0<math>< D_1 \leq 10.0</math>	10.0<math>< D_1 \leq 18.0</math>	18.0<math>< D_1 \leq 20.0</math>
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
6.6	20	<input type="checkbox"/>	MPS0660-L20C	202	162	36	8	A
	25	<input type="checkbox"/>	MPS0660-L25C	237	197	36	8	A
	30	<input type="checkbox"/>	MPS0660-L30C	272	232	36	8	A
	40	<input type="checkbox"/>	MPS0660-L40C	341	301	36	8	A
	20	●	MSL0660-L20C	202	162	36	8	B
	25	●	MSL0660-L25C	237	197	36	8	B
30	●	MSL0660-L30C	272	232	36	8	B	
6.7	3	●	MPS0670S-DIN	79	34	36	8	A
	3	●	MPS0670S-DIN-C	79	34	36	8	A
	5	●	MPS0670L-DIN	91	53	36	8	A
	5	●	MPS0670L-DIN-C	91	53	36	8	A
	8	●	MPS0670-L8C	118	78	36	8	A
	10	<input type="checkbox"/>	MPS0670-L10C	132	92	36	8	A
	12	●	MPS0670-L12C	146	106	36	8	A
	15	●	MPS0670-L15C	167	127	36	8	A
	20	<input type="checkbox"/>	MPS0670-L20C	202	162	36	8	A
	25	<input type="checkbox"/>	MPS0670-L25C	237	197	36	8	A
	30	<input type="checkbox"/>	MPS0670-L30C	272	232	36	8	A
	40	<input type="checkbox"/>	MPS0670-L40C	341	301	36	8	A
	20	●	MSL0670-L20C	202	162	36	8	B
	25	●	MSL0670-L25C	237	197	36	8	B
30	●	MSL0670-L30C	272	232	36	8	B	
6.8	3	●	MPS0680S-DIN	79	34	36	8	A
	3	●	MPS0680S-DIN-C	79	34	36	8	A
	5	●	MPS0680L-DIN	91	53	36	8	A
	5	●	MPS0680L-DIN-C	91	53	36	8	A
	8	●	MPS0680-L8C	118	78	36	8	A
	10	<input type="checkbox"/>	MPS0680-L10C	132	92	36	8	A
	12	●	MPS0680-L12C	146	106	36	8	A
	15	●	MPS0680-L15C	167	127	36	8	A
	20	<input type="checkbox"/>	MPS0680-L20C	202	162	36	8	A
	25	<input type="checkbox"/>	MPS0680-L25C	237	197	36	8	A
	30	<input type="checkbox"/>	MPS0680-L30C	272	232	36	8	A
	40	<input type="checkbox"/>	MPS0680-L40C	341	301	36	8	A
	20	●	MSL0680-L20C	202	162	36	8	B
	25	●	MSL0680-L25C	237	197	36	8	B
30	●	MSL0680-L30C	272	232	36	8	B	
6.9	3	●	MPS0690S-DIN	79	34	36	8	A
	3	●	MPS0690S-DIN-C	79	34	36	8	A
	5	●	MPS0690L-DIN	91	53	36	8	A
	5	●	MPS0690L-DIN-C	91	53	36	8	A
	8	●	MPS0690-L8C	118	78	36	8	A

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
6.9	10	<input type="checkbox"/>	MPS0690-L10C	132	92	36	8	A
	12	●	MPS0690-L12C	146	106	36	8	A
	15	●	MPS0690-L15C	167	127	36	8	A
	20	<input type="checkbox"/>	MPS0690-L20C	202	162	36	8	A
	25	<input type="checkbox"/>	MPS0690-L25C	237	197	36	8	A
	30	<input type="checkbox"/>	MPS0690-L30C	272	232	36	8	A
	40	<input type="checkbox"/>	MPS0690-L40C	341	301	36	8	A
	20	●	MSL0690-L20C	202	162	36	8	B
	25	●	MSL0690-L25C	237	197	36	8	B
	30	●	MSL0690-L30C	272	232	36	8	B
7.0	3	●	MPS0700S-DIN	79	34	36	8	A
	3	●	MPS0700S-DIN-C	79	34	36	8	A
	5	●	MPS0700L-DIN	91	53	36	8	A
	5	●	MPS0700L-DIN-C	91	53	36	8	A
	8	●	MPS0700-L8C	118	78	36	8	A
	10	<input type="checkbox"/>	MPS0700-L10C	132	92	36	8	A
	12	●	MPS0700-L12C	146	106	36	8	A
	15	●	MPS0700-L15C	167	127	36	8	A
	20	<input type="checkbox"/>	MPS0700-L20C	202	162	36	8	A
	25	<input type="checkbox"/>	MPS0700-L25C	237	197	36	8	A
30	<input type="checkbox"/>	MPS0700-L30C	272	232	36	8	A	
40	<input type="checkbox"/>	MPS0700-L40C	341	301	36	8	A	
20	●	MSL0700-L20C	202	162	36	8	B	
25	●	MSL0700-L25C	237	197	36	8	B	
30	●	MSL0700-L30C	272	232	36	8	B	
7.1	3	●	MPS0710S-DIN	79	41	36	8	A
	3	●	MPS0710S-DIN-C	79	41	36	8	A
	5	●	MPS0710L-DIN	91	53	36	8	A
	5	●	MPS0710L-DIN-C	91	53	36	8	A
	8	●	MPS0710-L8C	124	84	36	8	A
	10	<input type="checkbox"/>	MPS0710-L10C	139	99	36	8	A
	12	●	MPS0710-L12C	154	114	36	8	A
	15	●	MPS0710-L15C	176	136	36	8	A
	20	<input type="checkbox"/>	MPS0710-L20C	214	174	36	8	A
	25	<input type="checkbox"/>	MPS0710-L25C	251	211	36	8	A
30	<input type="checkbox"/>	MPS0710-L30C	289	249	36	8	A	
40	<input type="checkbox"/>	MPS0710-L40C	341	301	36	8	A	
20	●	MSL0710-L20C	214	174	36	8	B	
25	●	MSL0710-L25C	251	211	36	8	B	
30	●	MSL0710-L30C	289	249	36	8	B	

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
7.2	3	●		MPS0720S-DIN	79	41	36	8	A
	3	●		MPS0720S-DIN-C	79	41	36	8	A
	5	●		MPS0720L-DIN	91	53	36	8	A
	5	●		MPS0720L-DIN-C	91	53	36	8	A
	8	●		MPS0720-L8C	124	84	36	8	A
	10	□		MPS0720-L10C	139	99	36	8	A
	12	●		MPS0720-L12C	154	114	36	8	A
	15	●		MPS0720-L15C	176	136	36	8	A
	20	□		MPS0720-L20C	214	174	36	8	A
	25	□		MPS0720-L25C	251	211	36	8	A
	30	□		MPS0720-L30C	289	249	36	8	A
	NEW 40	□		MPS0720-L40C	360	321	36	8	A
	20	●		MSL0720-L20C	214	174	36	8	B
25	●		MSL0720-L25C	251	211	36	8	B	
30	●		MSL0720-L30C	289	249	36	8	B	
7.3	3	●		MPS0730S-DIN	79	41	36	8	A
	3	●		MPS0730S-DIN-C	79	41	36	8	A
	5	●		MPS0730L-DIN	91	53	36	8	A
	5	●		MPS0730L-DIN-C	91	53	36	8	A
	8	●		MPS0730-L8C	124	84	36	8	A
	10	□		MPS0730-L10C	139	99	36	8	A
	12	●		MPS0730-L12C	154	114	36	8	A
	15	●		MPS0730-L15C	176	136	36	8	A
	20	□		MPS0730-L20C	214	174	36	8	A
	25	□		MPS0730-L25C	251	211	36	8	A
	30	□		MPS0730-L30C	289	249	36	8	A
	NEW 40	□		MPS0730-L40C	360	321	36	8	A
	20	●		MSL0730-L20C	214	174	36	8	B
25	●		MSL0730-L25C	251	211	36	8	B	
30	●		MSL0730-L30C	289	249	36	8	B	
7.4	3	●		MPS0740S-DIN	79	41	36	8	A
	3	●		MPS0740S-DIN-C	79	41	36	8	A
	5	●		MPS0740L-DIN	91	53	36	8	A
	5	●		MPS0740L-DIN-C	91	53	36	8	A
	8	●		MPS0740-L8C	124	84	36	8	A
	10	□		MPS0740-L10C	139	99	36	8	A
	12	●		MPS0740-L12C	154	114	36	8	A
	15	●		MPS0740-L15C	176	136	36	8	A
	20	□		MPS0740-L20C	214	174	36	8	A
	25	□		MPS0740-L25C	251	211	36	8	A
	30	□		MPS0740-L30C	289	249	36	8	A
	NEW 40	□		MPS0740-L40C	360	321	36	8	A
	20	●		MSL0740-L20C	214	174	36	8	B
25	●		MSL0740-L25C	251	211	36	8	B	
30	●		MSL0740-L30C	289	249	36	8	B	
7.5	3	●		MPS0750S-DIN	79	41	36	8	A
	3	●		MPS0750S-DIN-C	79	41	36	8	A
	5	●		MPS0750L-DIN	91	53	36	8	A
	5	●		MPS0750L-DIN-C	91	53	36	8	A
	8	●		MPS0750-L8C	124	84	36	8	A
	10	□		MPS0750-L10C	139	99	36	8	A
	12	●		MPS0750-L12C	154	114	36	8	A
	15	●		MPS0750-L15C	176	136	36	8	A
	20	□		MPS0750-L20C	214	174	36	8	A
	25	□		MPS0750-L25C	251	211	36	8	A

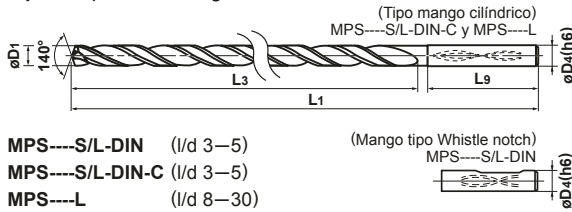
Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
7.5	30	□		MPS0750-L30C	289	249	36	8	A
	NEW 40	●		MPS0750-L40C	360	321	36	8	A
	20	●		MSL0750-L20C	214	174	36	8	B
	25	●		MSL0750-L25C	251	211	36	8	B
	30	●		MSL0750-L30C	289	249	36	8	B
	7.6	3	●		MPS0760S-DIN	79	41	36	8
3		●		MPS0760S-DIN-C	79	41	36	8	A
5		●		MPS0760L-DIN	91	53	36	8	A
5		●		MPS0760L-DIN-C	91	53	36	8	A
8		●		MPS0760-L8C	129	89	36	8	A
10		□		MPS0760-L10C	145	105	36	8	A
12		●		MPS0760-L12C	161	121	36	8	A
15		●		MPS0760-L15C	185	145	36	8	A
20		□		MPS0760-L20C	225	185	36	8	A
25		□		MPS0760-L25C	265	225	36	8	A
30		□		MPS0760-L30C	305	265	36	8	A
NEW 40		□		MPS0760-L40C	379	341	36	8	A
20		●		MSL0760-L20C	225	185	36	8	B
25	●		MSL0760-L25C	265	225	36	8	B	
30	●		MSL0760-L30C	305	265	36	8	B	
7.7	3	●		MPS0770S-DIN	79	41	36	8	A
	3	●		MPS0770S-DIN-C	79	41	36	8	A
	5	●		MPS0770L-DIN	91	53	36	8	A
	5	●		MPS0770L-DIN-C	91	53	36	8	A
	8	●		MPS0770-L8C	129	89	36	8	A
	10	□		MPS0770-L10C	145	105	36	8	A
	12	●		MPS0770-L12C	161	121	36	8	A
	15	●		MPS0770-L15C	185	145	36	8	A
	20	□		MPS0770-L20C	225	185	36	8	A
	25	□		MPS0770-L25C	265	225	36	8	A
	30	□		MPS0770-L30C	305	265	36	8	A
	NEW 40	□		MPS0770-L40C	379	341	36	8	A
	20	●		MSL0770-L20C	225	185	36	8	B
25	●		MSL0770-L25C	265	225	36	8	B	
30	●		MSL0770-L30C	305	265	36	8	B	
7.8	3	●		MPS0780S-DIN	79	41	36	8	A
	3	●		MPS0780S-DIN-C	79	41	36	8	A
	5	●		MPS0780L-DIN	91	53	36	8	A
	5	●		MPS0780L-DIN-C	91	53	36	8	A
	8	●		MPS0780-L8C	129	89	36	8	A
	10	□		MPS0780-L10C	145	105	36	8	A
	12	●		MPS0780-L12C	161	121	36	8	A
	15	●		MPS0780-L15C	185	145	36	8	A
	20	□		MPS0780-L20C	225	185	36	8	A
	25	□		MPS0780-L25C	265	225	36	8	A
	30	□		MPS0780-L30C	305	265	36	8	A
	NEW 40	□		MPS0780-L40C	379	341	36	8	A
	20	●		MSL0780-L20C	225	185	36	8	B
25	●		MSL0780-L25C	265	225	36	8	B	
30	●		MSL0780-L30C	305	265	36	8	B	
7.9	3	●		MPS0790S-DIN	79	41	36	8	A
	3	●		MPS0790S-DIN-C	79	41	36	8	A
	5	●		MPS0790L-DIN	91	53	36	8	A
	5	●		MPS0790L-DIN-C	91	53	36	8	A
	8	●		MPS0790-L8C	129	89	36	8	A

TALADRADO (INTEGRAL METAL DURO)

MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)

MPS---S/L-DIN-C (l/d 3-5)

MPS---L (l/d 8-30)

● Tipo B Tipo margen estandar



MSL (l/d 20-30)

Tolerancia d1	3.0≤D1≤6.0	6.0<D1≤10.0	10.0<D1≤18.0	18.0<D1≤20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
7.9	10	□		MPS0790-L10C	145	105	36	8	A
	12	●		MPS0790-L12C	161	121	36	8	A
	15	●		MPS0790-L15C	185	145	36	8	A
	20	□		MPS0790-L20C	225	185	36	8	A
	25	□		MPS0790-L25C	265	225	36	8	A
	30	□		MPS0790-L30C	305	265	36	8	A
	40	□		MPS0790-L40C	379	341	36	8	A
	20	●		MSL0790-L20C	225	185	36	8	B
	25	●		MSL0790-L25C	265	225	36	8	B
30	●		MSL0790-L30C	305	265	36	8	B	
8.0	3	●		MPS0800S-DIN	79	41	36	8	A
	3	●		MPS0800S-DIN-C	79	41	36	8	A
	5	●		MPS0800L-DIN	91	53	36	8	A
	5	●		MPS0800L-DIN-C	91	53	36	8	A
	8	●		MPS0800-L8C	129	89	36	8	A
	10	□		MPS0800-L10C	145	105	36	8	A
	12	●		MPS0800-L12C	161	121	36	8	A
	15	●		MPS0800-L15C	185	145	36	8	A
	20	□		MPS0800-L20C	225	185	36	8	A
	25	□		MPS0800-L25C	265	225	36	8	A
	30	□		MPS0800-L30C	305	265	36	8	A
	40	●		MPS0800-L40C	379	341	36	8	A
20	●		MSL0800-L20C	225	185	36	8	B	
25	●		MSL0800-L25C	265	225	36	8	B	
30	●		MSL0800-L30C	305	265	36	8	B	
8.05	3	●		MPS0805S-DIN	88	46	40	10	A
	3	●		MPS0805S-DIN-C	88	46	40	10	A
	5	●		MPS0805L-DIN	102	60	40	10	A
	5	●		MPS0805L-DIN-C	102	60	40	10	A
8.1	3	●		MPS0810S-DIN	88	46	40	10	A
	3	●		MPS0810S-DIN-C	88	46	40	10	A
	5	●		MPS0810L-DIN	102	60	40	10	A
	5	●		MPS0810L-DIN-C	102	60	40	10	A
	8	●		MPS0810-L8C	139	95	40	10	A
	10	□		MPS0810-L10C	156	112	40	10	A
	12	●		MPS0810-L12C	173	129	40	10	A
	15	●		MPS0810-L15C	198	154	40	10	A
	20	□		MPS0810-L20C	241	197	40	10	A
	25	□		MPS0810-L25C	283	239	40	10	A
	30	□		MPS0810-L30C	326	282	40	10	A
	40	□		MPS0810-L40C	411	366	36	10	A
20	●		MSL0810-L20C	241	197	40	10	B	

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
8.1	25	●		MSL0810-L25C	283	239	40	10	B
	30	□		MSL0810-L30C	326	282	40	10	B
8.2	3	●		MPS0820S-DIN	88	46	40	10	A
	3	●		MPS0820S-DIN-C	88	46	40	10	A
	5	●		MPS0820L-DIN	102	60	40	10	A
	5	●		MPS0820L-DIN-C	102	60	40	10	A
	8	●		MPS0820-L8C	139	95	40	10	A
	10	□		MPS0820-L10C	156	112	40	10	A
	12	●		MPS0820-L12C	173	129	40	10	A
	15	●		MPS0820-L15C	198	154	40	10	A
	20	□		MPS0820-L20C	241	197	40	10	A
	25	□		MPS0820-L25C	283	239	40	10	A
	30	□		MPS0820-L30C	326	282	40	10	A
	40	□		MPS0820-L40C	411	366	40	10	A
20	●		MSL0820-L20C	241	197	40	10	B	
25	●		MSL0820-L25C	283	239	40	10	B	
30	□		MSL0820-L30C	326	282	40	10	B	
8.3	3	●		MPS0830S-DIN	88	46	40	10	A
	3	●		MPS0830S-DIN-C	88	46	40	10	A
	5	●		MPS0830L-DIN	102	60	40	10	A
	5	●		MPS0830L-DIN-C	102	60	40	10	A
	8	●		MPS0830-L8C	139	95	40	10	A
	10	□		MPS0830-L10C	156	112	40	10	A
	12	●		MPS0830-L12C	173	129	40	10	A
	15	●		MPS0830-L15C	198	154	40	10	A
	20	□		MPS0830-L20C	241	197	40	10	A
	25	□		MPS0830-L25C	283	239	40	10	A
	30	□		MPS0830-L30C	326	282	40	10	A
	40	□		MPS0830-L40C	412	367	40	10	A
20	●		MSL0830-L20C	241	197	40	10	B	
25	●		MSL0830-L25C	283	239	40	10	B	
30	□		MSL0830-L30C	326	282	40	10	B	
8.4	3	●		MPS0840S-DIN	88	46	40	10	A
	3	●		MPS0840S-DIN-C	88	46	40	10	A
	5	●		MPS0840L-DIN	102	60	40	10	A
	5	●		MPS0840L-DIN-C	102	60	40	10	A
	8	●		MPS0840-L8C	139	95	40	10	A
	10	□		MPS0840-L10C	156	112	40	10	A
	12	●		MPS0840-L12C	173	129	40	10	A
	15	●		MPS0840-L15C	198	154	40	10	A
	20	□		MPS0840-L20C	241	197	40	10	A
	25	□		MPS0840-L25C	283	239	40	10	A

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
8.4	30	☐	MPS0840-L30C	326	282	40	10	A
	40	☐	MPS0840-L40C	412	367	40	10	A
	20	●	MSL0840-L20C	241	197	40	10	B
	25	●	MSL0840-L25C	283	239	40	10	B
	30	☐	MSL0840-L30C	326	282	40	10	B
8.5	3	●	MPS0850S-DIN	88	46	40	10	A
	3	●	MPS0850S-DIN-C	88	46	40	10	A
	5	●	MPS0850L-DIN	102	60	40	10	A
	5	●	MPS0850L-DIN-C	102	60	40	10	A
	8	●	MPS0850-L8C	139	95	40	10	A
	10	☐	MPS0850-L10C	156	112	40	10	A
	12	●	MPS0850-L12C	173	129	40	10	A
	15	●	MPS0850-L15C	198	154	40	10	A
	20	☐	MPS0850-L20C	241	197	40	10	A
	25	☐	MPS0850-L25C	283	239	40	10	A
	30	☐	MPS0850-L30C	326	282	40	10	A
	40	●	MPS0850-L40C	412	367	40	10	A
	20	●	MSL0850-L20C	241	197	40	10	B
	25	●	MSL0850-L25C	283	239	40	10	B
	30	●	MSL0850-L30C	326	282	40	10	B
8.6	3	●	MPS0860S-DIN	88	46	40	10	A
	3	●	MPS0860S-DIN-C	88	46	40	10	A
	5	●	MPS0860L-DIN	102	60	40	10	A
	5	●	MPS0860L-DIN-C	102	60	40	10	A
	8	●	MPS0860-L8C	144	100	40	10	A
	10	☐	MPS0860-L10C	162	118	40	10	A
	12	●	MPS0860-L12C	180	136	40	10	A
	15	●	MPS0860-L15C	207	163	40	10	A
	20	☐	MPS0860-L20C	252	208	40	10	A
	25	☐	MPS0860-L25C	297	253	40	10	A
	30	☐	MPS0860-L30C	342	298	40	10	A
	40	☐	MPS0860-L40C	436	392	40	10	A
	20	●	MSL0860-L20C	252	208	40	10	B
	25	●	MSL0860-L25C	297	253	40	10	B
	30	☐	MSL0860-L30C	342	298	40	10	B
8.7	3	●	MPS0870S-DIN	88	46	40	10	A
	3	●	MPS0870S-DIN-C	88	46	40	10	A
	5	●	MPS0870L-DIN	102	60	40	10	A
	5	●	MPS0870L-DIN-C	102	60	40	10	A
	8	●	MPS0870-L8C	144	100	40	10	A
	10	☐	MPS0870-L10C	162	118	40	10	A
	12	●	MPS0870-L12C	180	136	40	10	A
	15	●	MPS0870-L15C	207	163	40	10	A
	20	☐	MPS0870-L20C	252	208	40	10	A
	25	☐	MPS0870-L25C	297	253	40	10	A
	30	☐	MPS0870-L30C	342	298	40	10	A
	40	☐	MPS0870-L40C	436	392	40	10	A
	20	●	MSL0870-L20C	252	208	40	10	B
	25	●	MSL0870-L25C	297	253	40	10	B
	30	☐	MSL0870-L30C	342	298	40	10	B
8.8	3	●	MPS0880S-DIN	88	46	40	10	A
	3	●	MPS0880S-DIN-C	88	46	40	10	A
	5	●	MPS0880L-DIN	102	60	40	10	A
	5	●	MPS0880L-DIN-C	102	60	40	10	A
	8	●	MPS0880-L8C	144	100	40	10	A
	10	☐	MPS0880-L10C	162	118	40	10	A
	12	●	MPS0880-L12C	180	136	40	10	A
	15	●	MPS0880-L15C	207	163	40	10	A
	20	☐	MPS0880-L20C	252	208	40	10	A
	25	☐	MPS0880-L25C	297	253	40	10	A
	30	☐	MPS0880-L30C	342	298	40	10	A
	40	☐	MPS0880-L40C	436	392	40	10	A
	20	●	MSL0880-L20C	252	208	40	10	B
	25	●	MSL0880-L25C	297	253	40	10	B
	30	☐	MSL0880-L30C	342	298	40	10	B

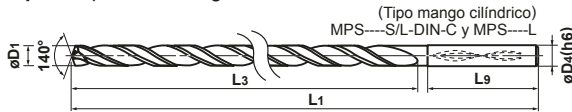
Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
8.8	20	●	MSL0880-L20C	252	208	40	10	B
	25	●	MSL0880-L25C	297	253	40	10	B
	30	●	MSL0880-L30C	342	298	40	10	B
8.9	3	●	MPS0890S-DIN	88	46	40	10	A
	3	●	MPS0890S-DIN-C	88	46	40	10	A
	5	●	MPS0890L-DIN	102	60	40	10	A
	5	●	MPS0890L-DIN-C	102	60	40	10	A
	8	●	MPS0890-L8C	144	100	40	10	A
	10	☐	MPS0890-L10C	162	118	40	10	A
	12	●	MPS0890-L12C	180	136	40	10	A
	15	●	MPS0890-L15C	207	163	40	10	A
	20	☐	MPS0890-L20C	252	208	40	10	A
	25	☐	MPS0890-L25C	297	253	40	10	A
	30	☐	MPS0890-L30C	342	298	40	10	A
	40	☐	MPS0890-L40C	436	392	40	10	A
	20	●	MSL0890-L20C	252	208	40	10	B
	25	●	MSL0890-L25C	297	253	40	10	B
	30	☐	MSL0890-L30C	342	298	40	10	B
9.0	3	●	MPS0900S-DIN	88	46	40	10	A
	3	●	MPS0900S-DIN-C	88	46	40	10	A
	5	●	MPS0900L-DIN	102	60	40	10	A
	5	●	MPS0900L-DIN-C	102	60	40	10	A
	8	●	MPS0900-L8C	144	100	40	10	A
	10	☐	MPS0900-L10C	162	118	40	10	A
	12	●	MPS0900-L12C	180	136	40	10	A
	15	●	MPS0900-L15C	207	163	40	10	A
	20	☐	MPS0900-L20C	252	208	40	10	A
	25	☐	MPS0900-L25C	297	253	40	10	A
	30	☐	MPS0900-L30C	342	298	40	10	A
	40	●	MPS0900-L40C	436	392	40	10	A
	20	●	MSL0900-L20C	252	208	40	10	B
	25	●	MSL0900-L25C	297	253	40	10	B
	30	●	MSL0900-L30C	342	298	40	10	B
9.1	3	●	MPS0910S-DIN	89	47	40	10	A
	3	●	MPS0910S-DIN-C	89	47	40	10	A
	5	●	MPS0910L-DIN	103	62	40	10	A
	5	●	MPS0910L-DIN-C	103	62	40	10	A
	8	●	MPS0910-L8C	151	107	40	10	A
	10	☐	MPS0910-L10C	170	126	40	10	A
	12	●	MPS0910-L12C	189	145	40	10	A
	15	●	MPS0910-L15C	217	173	40	10	A
	20	☐	MPS0910-L20C	265	221	40	10	A
	25	☐	MPS0910-L25C	312	268	40	10	A
	30	☐	MPS0910-L30C	360	316	40	10	A
	20	●	MSL0910-L20C	265	221	40	10	B
	25	☐	MSL0910-L25C	312	268	40	10	B
	30	☐	MSL0910-L30C	360	316	40	10	B
	9.2	3	●	MPS0920S-DIN	89	47	40	10
3		●	MPS0920S-DIN-C	89	47	40	10	A
5		●	MPS0920L-DIN	103	62	40	10	A
5		●	MPS0920L-DIN-C	103	62	40	10	A
8		●	MPS0920-L8C	151	107	40	10	A
10		☐	MPS0920-L10C	170	126	40	10	A
12		●	MPS0920-L12C	189	145	40	10	A
15		●	MPS0920-L15C	217	173	40	10	A
20		☐	MPS0920-L20C	265	221	40	10	A
25		☐	MPS0920-L25C	312	268	40	10	A
30		☐	MPS0920-L30C	360	316	40	10	A
20		●	MSL0920-L20C	265	221	40	10	B
25		☐	MSL0920-L25C	312	268	40	10	B
30		☐	MSL0920-L30C	360	316	40	10	B

TALADRADO (INTEGRAL METAL DURO)

MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)
 MPS---S/L-DIN-C (l/d 3-5)
 MPS---L (l/d 8-30)



● Tipo B Tipo margen estandar



MSL (l/d 20-30)

Tolerancia d1	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
9.3	3	●	MPS0930S-DIN	89	47	40	10	A
	3	●	MPS0930S-DIN-C	89	47	40	10	A
	5	●	MPS0930L-DIN	103	62	40	10	A
	5	●	MPS0930L-DIN-C	103	62	40	10	A
	8	●	MPS0930-L8C	151	107	40	10	A
	10	□	MPS0930-L10C	170	126	40	10	A
	12	●	MPS0930-L12C	189	145	40	10	A
	15	●	MPS0930-L15C	217	173	40	10	A
	20	□	MPS0930-L20C	265	221	40	10	A
	25	□	MPS0930-L25C	312	268	40	10	A
	30	□	MPS0930-L30C	360	316	40	10	A
	20	●	MSL0930-L20C	265	221	40	10	B
25	□	MSL0930-L25C	312	268	40	10	B	
30	□	MSL0930-L30C	360	316	40	10	B	
9.4	3	●	MPS0940S-DIN	89	47	40	10	A
	3	●	MPS0940S-DIN-C	89	47	40	10	A
	5	●	MPS0940L-DIN	103	62	40	10	A
	5	●	MPS0940L-DIN-C	103	62	40	10	A
	8	●	MPS0940-L8C	151	107	40	10	A
	10	□	MPS0940-L10C	170	126	40	10	A
	12	●	MPS0940-L12C	189	145	40	10	A
	15	●	MPS0940-L15C	217	173	40	10	A
	20	□	MPS0940-L20C	265	221	40	10	A
	25	□	MPS0940-L25C	312	268	40	10	A
	30	□	MPS0940-L30C	360	316	40	10	A
	20	●	MSL0940-L20C	265	221	40	10	B
25	□	MSL0940-L25C	312	268	40	10	B	
30	□	MSL0940-L30C	360	316	40	10	B	
9.5	3	●	MPS0950S-DIN	89	47	40	10	A
	3	●	MPS0950S-DIN-C	89	47	40	10	A
	5	●	MPS0950L-DIN	103	62	40	10	A
	5	●	MPS0950L-DIN-C	103	62	40	10	A
	8	●	MPS0950-L8C	151	107	40	10	A
	10	□	MPS0950-L10C	170	126	40	10	A
	12	●	MPS0950-L12C	189	145	40	10	A
	15	●	MPS0950-L15C	217	173	40	10	A
	20	□	MPS0950-L20C	265	221	40	10	A
	25	□	MPS0950-L25C	312	268	40	10	A
	30	□	MPS0950-L30C	360	316	40	10	A
	20	●	MSL0950-L20C	265	221	40	10	B
25	●	MSL0950-L25C	312	268	40	10	B	
30	●	MSL0950-L30C	360	316	40	10	B	

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
9.6	3	●	MPS0960S-DIN	89	47	40	10	A
	3	●	MPS0960S-DIN-C	89	47	40	10	A
	5	●	MPS0960L-DIN	103	62	40	10	A
	5	●	MPS0960L-DIN-C	103	62	40	10	A
	8	●	MPS0960-L8C	156	112	40	10	A
	10	□	MPS0960-L10C	176	132	40	10	A
	12	●	MPS0960-L12C	196	152	40	10	A
	15	●	MPS0960-L15C	226	182	40	10	A
	20	□	MPS0960-L20C	276	232	40	10	A
	25	□	MPS0960-L25C	326	282	40	10	A
	30	□	MPS0960-L30C	376	332	40	10	A
	20	●	MSL0960-L20C	276	232	40	10	B
25	□	MSL0960-L25C	326	282	40	10	B	
30	□	MSL0960-L30C	376	332	40	10	B	
9.7	3	●	MPS0970S-DIN	89	47	40	10	A
	3	●	MPS0970S-DIN-C	89	47	40	10	A
	5	●	MPS0970L-DIN	103	62	40	10	A
	5	●	MPS0970L-DIN-C	103	62	40	10	A
	8	●	MPS0970-L8C	156	112	40	10	A
	10	□	MPS0970-L10C	176	132	40	10	A
	12	●	MPS0970-L12C	196	152	40	10	A
	15	●	MPS0970-L15C	226	182	40	10	A
	20	□	MPS0970-L20C	276	232	40	10	A
	25	□	MPS0970-L25C	326	282	40	10	A
	30	□	MPS0970-L30C	376	332	40	10	A
	20	●	MSL0970-L20C	276	232	40	10	B
25	□	MSL0970-L25C	326	282	40	10	B	
30	□	MSL0970-L30C	376	332	40	10	B	
9.8	3	●	MPS0980S-DIN	89	47	40	10	A
	3	●	MPS0980S-DIN-C	89	47	40	10	A
	5	●	MPS0980L-DIN	103	62	40	10	A
	5	●	MPS0980L-DIN-C	103	62	40	10	A
	8	●	MPS0980-L8C	156	112	40	10	A
	10	□	MPS0980-L10C	176	132	40	10	A
	12	●	MPS0980-L12C	196	152	40	10	A
	15	●	MPS0980-L15C	226	182	40	10	A
	20	□	MPS0980-L20C	276	232	40	10	A
	25	□	MPS0980-L25C	326	282	40	10	A
	30	□	MPS0980-L30C	376	332	40	10	A
	20	●	MSL0980-L20C	276	232	40	10	B
25	□	MSL0980-L25C	326	282	40	10	B	
30	□	MSL0980-L30C	376	332	40	10	B	

● : Existencia en Europa. □ : A fabricar según demanda.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo	
		VP15TF			L1	L3	L9	D4		
9.9	3	●		MPS0990S-DIN	89	47	40	10	A	
	3	●		MPS0990S-DIN-C	89	47	40	10	A	
	5	●		MPS0990L-DIN	103	62	40	10	A	
	5	●		MPS0990L-DIN-C	103	62	40	10	A	
	8	●		MPS0990-L8C	156	112	40	10	A	
	10	□		MPS0990-L10C	176	132	40	10	A	
	12	●		MPS0990-L12C	196	152	40	10	A	
	15	●		MPS0990-L15C	226	182	40	10	A	
	20	□		MPS0990-L20C	276	232	40	10	A	
	25	□		MPS0990-L25C	326	282	40	10	A	
	30	□		MPS0990-L30C	376	332	40	10	A	
	20	●		MSL0990-L20C	276	232	40	10	B	
	25	□		MSL0990-L25C	326	282	40	10	B	
	30	□		MSL0990-L30C	376	332	40	10	B	
10.0	3	●		MPS1000S-DIN	89	47	40	10	A	
	3	●		MPS1000S-DIN-C	89	47	40	10	A	
	5	●		MPS1000L-DIN	103	62	40	10	A	
	5	●		MPS1000L-DIN-C	103	62	40	10	A	
	8	●		MPS1000-L8C	156	112	40	10	A	
	10	□		MPS1000-L10C	176	132	40	10	A	
	12	●		MPS1000-L12C	196	152	40	10	A	
	15	●		MPS1000-L15C	226	182	40	10	A	
	20	□		MPS1000-L20C	276	232	40	10	A	
	25	□		MPS1000-L25C	326	282	40	10	A	
	30	□		MPS1000-L30C	376	332	40	10	A	
	20	●		MSL1000-L20C	276	232	40	10	B	
	25	●		MSL1000-L25C	326	282	40	10	B	
	30	●		MSL1000-L30C	376	332	40	10	B	
10.05	3	●		MPS1005S-DIN	102	55	45	12	A	
	3	●		MPS1005S-DIN-C	102	55	45	12	A	
	5	●		MPS1005L-DIN	118	71	45	12	A	
	5	●		MPS1005L-DIN-C	118	71	45	12	A	
10.1	3	●		MPS1010S-DIN	102	55	45	12	A	
	3	●		MPS1010S-DIN-C	102	55	45	12	A	
	5	●		MPS1010L-DIN	118	71	45	12	A	
	5	●		MPS1010L-DIN-C	118	71	45	12	A	
	8	●		MPS1010-L8C	167	118	45	12	A	
	10	□		MPS1010-L10C	188	139	45	12	A	
	12	●		MPS1010-L12C	209	160	45	12	A	
	15	●		MPS1010-L15C	240	191	45	12	A	
	20	□		MPS1010-L20C	293	244	45	12	A	
	25	□		MPS1010-L25C	345	296	45	12	A	
	20	●		MSL1010-L20C	293	244	45	12	B	
	25	□		MSL1010-L25C	345	296	45	12	B	
	10.2	3	●		MPS1020S-DIN	102	55	45	12	A
		3	●		MPS1020S-DIN-C	102	55	45	12	A
5		●		MPS1020L-DIN	118	71	45	12	A	
5		●		MPS1020L-DIN-C	118	71	45	12	A	
8		●		MPS1020-L8C	167	118	45	12	A	
10		□		MPS1020-L10C	188	139	45	12	A	
12		●		MPS1020-L12C	209	160	45	12	A	
15		●		MPS1020-L15C	240	191	45	12	A	
20		□		MPS1020-L20C	293	244	45	12	A	
25		□		MPS1020-L25C	345	296	45	12	A	
20		●		MSL1020-L20C	293	244	45	12	B	
25		□		MSL1020-L25C	345	296	45	12	B	

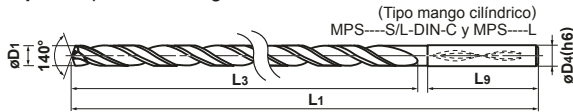
Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo	
		VP15TF			L1	L3	L9	D4		
10.3	3	●		MPS1030S-DIN	102	55	45	12	A	
	3	●		MPS1030S-DIN-C	102	55	45	12	A	
	5	●		MPS1030L-DIN	118	71	45	12	A	
	5	●		MPS1030L-DIN-C	118	71	45	12	A	
	8	●		MPS1030-L8C	167	118	45	12	A	
	10	□		MPS1030-L10C	188	139	45	12	A	
	12	●		MPS1030-L12C	209	160	45	12	A	
	15	●		MPS1030-L15C	240	191	45	12	A	
	20	□		MPS1030-L20C	293	244	45	12	A	
	25	□		MPS1030-L25C	345	296	45	12	A	
	20	●		MSL1030-L20C	293	244	45	12	B	
	25	□		MSL1030-L25C	345	296	45	12	B	
	10.4	3	●		MPS1040S-DIN	102	55	45	12	A
		3	●		MPS1040S-DIN-C	102	55	45	12	A
5		●		MPS1040L-DIN	118	71	45	12	A	
5		●		MPS1040L-DIN-C	118	71	45	12	A	
8		●		MPS1040-L8C	167	118	45	12	A	
10		□		MPS1040-L10C	188	139	45	12	A	
12		●		MPS1040-L12C	209	160	45	12	A	
15		●		MPS1040-L15C	240	191	45	12	A	
20		□		MPS1040-L20C	293	244	45	12	A	
25		□		MPS1040-L25C	345	296	45	12	A	
20		●		MSL1040-L20C	293	244	45	12	B	
25		□		MSL1040-L25C	345	296	45	12	B	
10.5		3	●		MPS1050S-DIN	102	55	45	12	A
		3	●		MPS1050S-DIN-C	102	55	45	12	A
	5	●		MPS1050L-DIN	118	71	45	12	A	
	5	●		MPS1050L-DIN-C	118	71	45	12	A	
	8	●		MPS1050-L8C	167	118	45	12	A	
	10	□		MPS1050-L10C	188	139	45	12	A	
	12	●		MPS1050-L12C	209	160	45	12	A	
	15	●		MPS1050-L15C	240	191	45	12	A	
	20	□		MPS1050-L20C	293	244	45	12	A	
	25	□		MPS1050-L25C	345	296	45	12	A	
	20	●		MSL1050-L20C	293	244	45	12	B	
	25	●		MSL1050-L25C	345	296	45	12	B	
	10.6	3	●		MPS1060S-DIN	102	55	45	12	A
		3	●		MPS1060S-DIN-C	102	55	45	12	A
5		●		MPS1060L-DIN	118	71	45	12	A	
5		●		MPS1060L-DIN-C	118	71	45	12	A	
8		●		MPS1060-L8C	172	123	45	12	A	
10		□		MPS1060-L10C	194	145	45	12	A	
12		●		MPS1060-L12C	216	167	45	12	A	
15		●		MPS1060-L15C	249	200	45	12	A	
20		□		MPS1060-L20C	304	255	45	12	A	
25		□		MPS1060-L25C	359	310	45	12	A	
20		●		MSL1060-L20C	304	255	45	12	B	
25		□		MSL1060-L25C	359	310	45	12	B	

TALADRADO (INTEGRAL METAL DURO)

MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)
 MPS---S/L-DIN-C (l/d 3-5)
 MPS---L (l/d 8-30)



● Tipo B Tipo margen estandar

Tolerancia d1	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1 (mm)	Profundidad agujero VP15TF (l/d)	Stock	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
10.7	3	●	MPS1070S-DIN	102	55	45	12	A
	3	●	MPS1070S-DIN-C	102	55	45	12	A
	5	●	MPS1070L-DIN	118	71	45	12	A
	5	●	MPS1070L-DIN-C	118	71	45	12	A
	8	●	MPS1070-L8C	172	123	45	12	A
	10	□	MPS1070-L10C	194	145	45	12	A
	12	●	MPS1070-L12C	216	167	45	12	A
	15	●	MPS1070-L15C	249	200	45	12	A
	20	□	MPS1070-L20C	304	255	45	12	A
	25	□	MPS1070-L25C	359	310	45	12	A
10.8	20	●	MSL1070-L20C	304	255	45	12	B
	25	□	MSL1070-L25C	359	310	45	12	B
	3	●	MPS1080S-DIN	102	55	45	12	A
	3	●	MPS1080S-DIN-C	102	55	45	12	A
	5	●	MPS1080L-DIN	118	71	45	12	A
	5	●	MPS1080L-DIN-C	118	71	45	12	A
	8	●	MPS1080-L8C	172	123	45	12	A
	10	□	MPS1080-L10C	194	145	45	12	A
	12	●	MPS1080-L12C	216	167	45	12	A
	15	●	MPS1080-L15C	249	200	45	12	A
10.9	20	□	MPS1080-L20C	304	255	45	12	A
	25	□	MPS1080-L25C	359	310	45	12	A
	20	●	MSL1080-L20C	304	255	45	12	B
	25	□	MSL1080-L25C	359	310	45	12	B
	3	●	MPS1090S-DIN	102	55	45	12	A
	3	●	MPS1090S-DIN-C	102	55	45	12	A
	5	●	MPS1090L-DIN	118	71	45	12	A
	5	●	MPS1090L-DIN-C	118	71	45	12	A
	8	●	MPS1090-L8C	172	123	45	12	A
	10	□	MPS1090-L10C	194	145	45	12	A
11.0	12	●	MPS1090-L12C	216	167	45	12	A
	15	●	MPS1090-L15C	249	200	45	12	A
	20	□	MPS1090-L20C	304	255	45	12	A
	25	□	MPS1090-L25C	359	310	45	12	A
	20	●	MSL1090-L20C	304	255	45	12	B
	25	□	MSL1090-L25C	359	310	45	12	B
	3	●	MPS1100S-DIN	102	55	45	12	A
	3	●	MPS1100S-DIN-C	102	55	45	12	A
	5	●	MPS1100L-DIN	118	71	45	12	A
	5	●	MPS1100L-DIN-C	118	71	45	12	A
8	●	MPS1100-L8C	172	123	45	12	A	
10	□	MPS1100-L10C	194	145	45	12	A	

Diám. Broca D1 (mm)	Profundidad agujero VP15TF (l/d)	Stock	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
11.0	12	●	MPS1100-L12C	216	167	45	12	A
	15	●	MPS1100-L15C	249	200	45	12	A
	20	□	MPS1100-L20C	304	255	45	12	A
	25	□	MPS1100-L25C	359	310	45	12	A
	20	●	MSL1100-L20C	304	255	45	12	B
	25	●	MSL1100-L25C	359	310	45	12	B
11.1	3	●	MPS1110S-DIN	102	55	45	12	A
	3	●	MPS1110S-DIN-C	102	55	45	12	A
	5	●	MPS1110L-DIN	118	71	45	12	A
	5	●	MPS1110L-DIN-C	118	71	45	12	A
	8	●	MPS1110-L8C	178	129	45	12	A
	10	□	MPS1110-L10C	201	152	45	12	A
	12	●	MPS1110-L12C	224	175	45	12	A
	15	●	MPS1110-L15C	258	209	45	12	A
	20	□	MPS1110-L20C	316	267	45	12	A
	25	□	MPS1110-L25C	373	324	45	12	A
11.2	20	□	MSL1110-L20C	316	267	45	12	B
	25	□	MSL1110-L25C	373	324	45	12	B
	3	●	MPS1120S-DIN	102	55	45	12	A
	3	●	MPS1120S-DIN-C	102	55	45	12	A
	5	●	MPS1120L-DIN	118	71	45	12	A
	5	●	MPS1120L-DIN-C	118	71	45	12	A
	8	●	MPS1120-L8C	178	129	45	12	A
	10	□	MPS1120-L10C	201	152	45	12	A
	12	●	MPS1120-L12C	224	175	45	12	A
	15	●	MPS1120-L15C	258	209	45	12	A
11.3	20	□	MPS1120-L20C	316	267	45	12	A
	25	□	MPS1120-L25C	373	324	45	12	A
	20	□	MSL1120-L20C	316	267	45	12	B
	25	□	MSL1120-L25C	373	324	45	12	B
	3	●	MPS1130S-DIN	102	55	45	12	A
	3	●	MPS1130S-DIN-C	102	55	45	12	A
	5	●	MPS1130L-DIN	118	71	45	12	A
	5	●	MPS1130L-DIN-C	118	71	45	12	A
	8	●	MPS1130-L8C	178	129	45	12	A
	10	□	MPS1130-L10C	201	152	45	12	A
12	●	MPS1130-L12C	224	175	45	12	A	
15	●	MPS1130-L15C	258	209	45	12	A	
20	□	MPS1130-L20C	316	267	45	12	A	
25	□	MPS1130-L25C	373	324	45	12	A	
20	□	MSL1130-L20C	316	267	45	12	B	
25	□	MSL1130-L25C	373	324	45	12	B	

● : Existencia en Europa. □ : A fabricar según demanda.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
11.4	3	●		MPS1140S-DIN	102	55	45	12	A
	3	●		MPS1140S-DIN-C	102	55	45	12	A
	5	●		MPS1140L-DIN	118	71	45	12	A
	5	●		MPS1140L-DIN-C	118	71	45	12	A
	8	●		MPS1140-L8C	178	129	45	12	A
	10	□		MPS1140-L10C	201	152	45	12	A
	12	●		MPS1140-L12C	224	175	45	12	A
	15	●		MPS1140-L15C	258	209	45	12	A
	20	□		MPS1140-L20C	316	267	45	12	A
	25	□		MPS1140-L25C	373	324	45	12	A
	20	□		MSL1140-L20C	316	267	45	12	B
25	□		MSL1140-L25C	373	324	45	12	B	
11.5	3	●		MPS1150S-DIN	102	55	45	12	A
	3	●		MPS1150S-DIN-C	102	55	45	12	A
	5	●		MPS1150L-DIN	118	71	45	12	A
	5	●		MPS1150L-DIN-C	118	71	45	12	A
	8	●		MPS1150-L8C	178	129	45	12	A
	10	□		MPS1150-L10C	201	152	45	12	A
	12	●		MPS1150-L12C	224	175	45	12	A
	15	●		MPS1150-L15C	258	209	45	12	A
	20	□		MPS1150-L20C	316	267	45	12	A
	25	□		MPS1150-L25C	373	324	45	12	A
	20	●		MSL1150-L20C	316	267	45	12	B
25	●		MSL1150-L25C	373	324	45	12	B	
11.6	3	●		MPS1160S-DIN	102	55	45	12	A
	3	●		MPS1160S-DIN-C	102	55	45	12	A
	5	●		MPS1160L-DIN	118	71	45	12	A
	5	●		MPS1160L-DIN-C	118	71	45	12	A
	8	●		MPS1160-L8C	183	134	45	12	A
	10	□		MPS1160-L10C	207	158	45	12	A
	12	●		MPS1160-L12C	231	182	45	12	A
	15	●		MPS1160-L15C	267	218	45	12	A
	20	□		MPS1160-L20C	327	278	45	12	A
	25	□		MPS1160-L25C	387	338	45	12	A
	20	□		MSL1160-L20C	327	278	45	12	B
25	□		MSL1160-L25C	387	338	45	12	B	
11.7	3	●		MPS1170S-DIN	102	55	45	12	A
	3	●		MPS1170S-DIN-C	102	55	45	12	A
	5	●		MPS1170L-DIN	118	71	45	12	A
	5	●		MPS1170L-DIN-C	118	71	45	12	A
	8	●		MPS1170-L8C	183	134	45	12	A
	10	□		MPS1170-L10C	207	158	45	12	A
	12	●		MPS1170-L12C	231	182	45	12	A
	15	●		MPS1170-L15C	267	218	45	12	A
	20	□		MPS1170-L20C	327	278	45	12	A
	25	□		MPS1170-L25C	387	338	45	12	A
	20	□		MSL1170-L20C	327	278	45	12	B
25	□		MSL1170-L25C	387	338	45	12	B	
11.8	3	●		MPS1180S-DIN	102	55	45	12	A
	3	●		MPS1180S-DIN-C	102	55	45	12	A
	5	●		MPS1180L-DIN	118	71	45	12	A
	5	●		MPS1180L-DIN-C	118	71	45	12	A
	8	●		MPS1180-L8C	183	134	45	12	A
	10	□		MPS1180-L10C	207	158	45	12	A
	12	●		MPS1180-L12C	231	182	45	12	A
15	●		MPS1180-L15C	267	218	45	12	A	

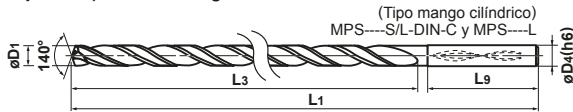
Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
11.8	20	□		MPS1180-L20C	327	278	45	12	A
	25	□		MPS1180-L25C	387	338	45	12	A
	20	□		MSL1180-L20C	327	278	45	12	B
	25	□		MSL1180-L25C	387	338	45	12	B
	11.9	3	●		MPS1190S-DIN	102	55	45	12
3		●		MPS1190S-DIN-C	102	55	45	12	A
5		●		MPS1190L-DIN	118	71	45	12	A
5		●		MPS1190L-DIN-C	118	71	45	12	A
8		●		MPS1190-L8C	183	134	45	12	A
10		□		MPS1190-L10C	207	158	45	12	A
12		●		MPS1190-L12C	231	182	45	12	A
15		●		MPS1190-L15C	267	218	45	12	A
20		□		MPS1190-L20C	327	278	45	12	A
25		□		MPS1190-L25C	387	338	45	12	A
20		□		MSL1190-L20C	327	278	45	12	B
25	□		MSL1190-L25C	387	338	45	12	B	
12.0	3	●		MPS1200S-DIN	102	55	45	12	A
	3	●		MPS1200S-DIN-C	102	55	45	12	A
	5	●		MPS1200L-DIN	118	71	45	12	A
	5	●		MPS1200L-DIN-C	118	71	45	12	A
	8	●		MPS1200-L8C	183	134	45	12	A
	10	□		MPS1200-L10C	207	158	45	12	A
	12	●		MPS1200-L12C	231	182	45	12	A
	15	●		MPS1200-L15C	267	218	45	12	A
	20	□		MPS1200-L20C	327	278	45	12	A
	25	□		MPS1200-L25C	387	338	45	12	A
	20	●		MSL1200-L20C	327	278	45	12	B
25	●		MSL1200-L25C	387	338	45	12	B	
12.05	3	●		MPS1205S-DIN	107	60	45	14	A
	3	●		MPS1205S-DIN-C	107	60	45	14	A
	5	●		MPS1205L-DIN	124	77	45	14	A
	5	●		MPS1205L-DIN-C	124	77	45	14	A
	12.1	3	●		MPS1210S-DIN	107	60	45	14
3		●		MPS1210S-DIN-C	107	60	45	14	A
5		●		MPS1210L-DIN	124	77	45	14	A
5		●		MPS1210L-DIN-C	124	77	45	14	A
8		●		MPS1210-L8C	189	140	45	14	A
10		□		MPS1210-L10C	214	165	45	14	A
12		●		MPS1210-L12C	239	190	45	14	A
15		●		MPS1210-L15C	276	227	45	14	A
20		□		MPS1210-L20C	339	290	45	14	A
20		□		MSL1210-L20C	339	290	45	14	B
12.2		3	●		MPS1220S-DIN	107	60	45	14
	3	●		MPS1220S-DIN-C	107	60	45	14	A
	5	●		MPS1220L-DIN	124	77	45	14	A
	5	●		MPS1220L-DIN-C	124	77	45	14	A
	8	●		MPS1220-L8C	189	140	45	14	A
	10	□		MPS1220-L10C	214	165	45	14	A
	12	●		MPS1220-L12C	239	190	45	14	A
	15	●		MPS1220-L15C	276	227	45	14	A
20	□		MPS1220-L20C	339	290	45	14	A	
20	□		MSL1220-L20C	339	290	45	14	B	

TALADRADO (INTEGRAL METAL DURO)

MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)
 MPS---S/L-DIN-C (l/d 3-5)
 MPS---L (l/d 8-30)



● Tipo B Tipo margen estandar

Tolerancia d1	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
12.3	3	●	MPS1230S-DIN	107	60	45	14	A
	3	●	MPS1230S-DIN-C	107	60	45	14	A
	5	●	MPS1230L-DIN	124	77	45	14	A
	5	●	MPS1230L-DIN-C	124	77	45	14	A
	8	●	MPS1230-L8C	189	140	45	14	A
	10	□	MPS1230-L10C	214	165	45	14	A
	12	●	MPS1230-L12C	239	190	45	14	A
	15	●	MPS1230-L15C	276	227	45	14	A
	20	□	MPS1230-L20C	339	290	45	14	A
20	□	MSL1230-L20C	339	290	45	14	B	
12.4	3	●	MPS1240S-DIN	107	60	45	14	A
	3	●	MPS1240S-DIN-C	107	60	45	14	A
	5	●	MPS1240L-DIN	124	77	45	14	A
	5	●	MPS1240L-DIN-C	124	77	45	14	A
	8	●	MPS1240-L8C	189	140	45	14	A
	10	□	MPS1240-L10C	214	165	45	14	A
	12	●	MPS1240-L12C	239	190	45	14	A
	15	●	MPS1240-L15C	276	227	45	14	A
	20	□	MPS1240-L20C	339	290	45	14	A
20	□	MSL1240-L20C	339	290	45	14	B	
12.5	3	●	MPS1250S-DIN	107	60	45	14	A
	3	●	MPS1250S-DIN-C	107	60	45	14	A
	5	●	MPS1250L-DIN	124	77	45	14	A
	5	●	MPS1250L-DIN-C	124	77	45	14	A
	8	●	MPS1250-L8C	189	140	45	14	A
	10	□	MPS1250-L10C	214	165	45	14	A
	12	●	MPS1250-L12C	239	190	45	14	A
	15	●	MPS1250-L15C	276	227	45	14	A
	20	●	MPS1250-L20C	339	290	45	14	A
20	●	MSL1250-L20C	339	290	45	14	B	
12.6	3	●	MPS1260S-DIN	107	60	45	14	A
	3	●	MPS1260S-DIN-C	107	60	45	14	A
	5	●	MPS1260L-DIN	124	77	45	14	A
	5	●	MPS1260L-DIN-C	124	77	45	14	A
	8	●	MPS1260-L8C	194	145	45	14	A
	10	□	MPS1260-L10C	220	171	45	14	A
	12	●	MPS1260-L12C	246	197	45	14	A
	15	●	MPS1260-L15C	285	236	45	14	A
	20	□	MPS1260-L20C	350	301	45	14	A
20	□	MSL1260-L20C	350	301	45	14	B	

Diám. Broca D1 (mm)	Profundidad agujero (l/d)	Stock VP15TF	Referencia	Dimensiones (mm)				Tipo
				L1	L3	L9	D4	
12.7	3	●	MPS1270S-DIN	107	60	45	14	A
	3	●	MPS1270S-DIN-C	107	60	45	14	A
	5	●	MPS1270L-DIN	124	77	45	14	A
	5	●	MPS1270L-DIN-C	124	77	45	14	A
	8	●	MPS1270-L8C	194	145	45	14	A
	10	□	MPS1270-L10C	220	171	45	14	A
	12	●	MPS1270-L12C	246	197	45	14	A
	15	●	MPS1270-L15C	285	236	45	14	A
	20	□	MPS1270-L20C	350	301	45	14	A
20	□	MSL1270-L20C	350	301	45	14	B	
12.8	3	●	MPS1280S-DIN	107	60	45	14	A
	3	●	MPS1280S-DIN-C	107	60	45	14	A
	5	●	MPS1280L-DIN	124	77	45	14	A
	5	●	MPS1280L-DIN-C	124	77	45	14	A
	8	●	MPS1280-L8C	194	145	45	14	A
	10	□	MPS1280-L10C	220	171	45	14	A
	12	●	MPS1280-L12C	246	197	45	14	A
	15	●	MPS1280-L15C	285	236	45	14	A
	20	□	MPS1280-L20C	350	301	45	14	A
20	□	MSL1280-L20C	350	301	45	14	B	
12.9	3	●	MPS1290S-DIN	107	60	45	14	A
	3	●	MPS1290S-DIN-C	107	60	45	14	A
	5	●	MPS1290L-DIN	124	77	45	14	A
	5	●	MPS1290L-DIN-C	124	77	45	14	A
	8	●	MPS1290-L8C	194	145	45	14	A
	10	□	MPS1290-L10C	220	171	45	14	A
	12	●	MPS1290-L12C	246	197	45	14	A
	15	●	MPS1290-L15C	285	236	45	14	A
	20	□	MPS1290-L20C	350	301	45	14	A
20	□	MSL1290-L20C	350	301	45	14	B	
13.0	3	●	MPS1300S-DIN	107	60	45	14	A
	3	●	MPS1300S-DIN-C	107	60	45	14	A
	5	●	MPS1300L-DIN	124	77	45	14	A
	5	●	MPS1300L-DIN-C	124	77	45	14	A
	8	●	MPS1300-L8C	194	145	45	14	A
	10	□	MPS1300-L10C	220	171	45	14	A
	12	●	MPS1300-L12C	246	197	45	14	A
	15	●	MPS1300-L15C	285	236	45	14	A
	20	□	MPS1300-L20C	350	301	45	14	A
20	●	MSL1300-L20C	350	301	45	14	B	

● : Existencia en Europa. □ : A fabricar según demanda.

Diám. Broca D1	Profundidad agujero (L/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
13.1	3	●		MPS1310S-DIN	107	60	45	14	A
	3	●		MPS1310S-DIN-C	107	60	45	14	A
	5	●		MPS1310L-DIN	124	77	45	14	A
	5	●		MPS1310L-DIN-C	124	77	45	14	A
	8	●		MPS1310-L8C	200	151	45	14	A
	10	□		MPS1310-L10C	227	178	45	14	A
	12	●		MPS1310-L12C	254	205	45	14	A
	15	●		MPS1310-L15C	294	245	45	14	A
	20	□		MPS1310-L20C	362	313	45	14	A
	20	□		MSL1310-L20C	362	313	45	14	B
13.2	3	●		MPS1320S-DIN	107	60	45	14	A
	3	●		MPS1320S-DIN-C	107	60	45	14	A
	5	●		MPS1320L-DIN	124	77	45	14	A
	5	●		MPS1320L-DIN-C	124	77	45	14	A
	8	●		MPS1320-L8C	200	151	45	14	A
	10	□		MPS1320-L10C	227	178	45	14	A
	12	●		MPS1320-L12C	254	205	45	14	A
	15	●		MPS1320-L15C	294	245	45	14	A
	20	□		MPS1320-L20C	362	313	45	14	A
	20	□		MSL1320-L20C	362	313	45	14	B
13.3	3	●		MPS1330S-DIN	107	60	45	14	A
	3	●		MPS1330S-DIN-C	107	60	45	14	A
	5	●		MPS1330L-DIN	124	77	45	14	A
	5	●		MPS1330L-DIN-C	124	77	45	14	A
	8	●		MPS1330-L8C	200	151	45	14	A
	10	□		MPS1330-L10C	227	178	45	14	A
	12	●		MPS1330-L12C	254	205	45	14	A
	15	●		MPS1330-L15C	294	245	45	14	A
	20	□		MPS1330-L20C	362	313	45	14	A
	20	□		MSL1330-L20C	362	313	45	14	B
13.4	3	●		MPS1340S-DIN	107	60	45	14	A
	3	●		MPS1340S-DIN-C	107	60	45	14	A
	5	●		MPS1340L-DIN	124	77	45	14	A
	5	●		MPS1340L-DIN-C	124	77	45	14	A
	8	●		MPS1340-L8C	200	151	45	14	A
	10	□		MPS1340-L10C	227	178	45	14	A
	12	●		MPS1340-L12C	254	205	45	14	A
	15	●		MPS1340-L15C	294	245	45	14	A
	20	□		MPS1340-L20C	362	313	45	14	A
	20	□		MSL1340-L20C	362	313	45	14	B
13.5	3	●		MPS1350S-DIN	107	60	45	14	A
	3	●		MPS1350S-DIN-C	107	60	45	14	A
	5	●		MPS1350L-DIN	124	77	45	14	A
	5	●		MPS1350L-DIN-C	124	77	45	14	A
	8	●		MPS1350-L8C	200	151	45	14	A
	10	□		MPS1350-L10C	227	178	45	14	A
	12	●		MPS1350-L12C	254	205	45	14	A
	15	●		MPS1350-L15C	294	245	45	14	A
	20	●		MPS1350-L20C	362	313	45	14	A
	20	●		MSL1350-L20C	362	313	45	14	B
13.6	3	●		MPS1360S-DIN	107	60	45	14	A
	3	●		MPS1360S-DIN-C	107	60	45	14	A
	5	●		MPS1360L-DIN	124	77	45	14	A
	5	●		MPS1360L-DIN-C	124	77	45	14	A
	10	□		MPS1360-L10C	233	184	45	14	A

Diám. Broca D1	Profundidad agujero (L/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
13.6	12	●		MPS1360-L12C	261	212	45	14	A
	15	●		MPS1360-L15C	303	254	45	14	A
	20	□		MPS1360-L20C	373	324	45	14	A
	20	□		MSL1360-L20C	373	324	45	14	B
	13.7	3	●		MPS1370S-DIN	107	60	45	14
3		●		MPS1370S-DIN-C	107	60	45	14	A
5		●		MPS1370L-DIN	124	77	45	14	A
5		●		MPS1370L-DIN-C	124	77	45	14	A
8		●		MPS1370-L8C	205	156	45	14	A
10		□		MPS1370-L10C	233	184	45	14	A
12		●		MPS1370-L12C	261	212	45	14	A
15		●		MPS1370-L15C	303	254	45	14	A
20		□		MPS1370-L20C	373	324	45	14	A
20		□		MSL1370-L20C	373	324	45	14	B
13.8	3	●		MPS1380S-DIN	107	60	45	14	A
	3	●		MPS1380S-DIN-C	107	60	45	14	A
	5	●		MPS1380L-DIN	124	77	45	14	A
	5	●		MPS1380L-DIN-C	124	77	45	14	A
	8	●		MPS1380-L8C	205	156	45	14	A
	10	□		MPS1380-L10C	233	184	45	14	A
	12	●		MPS1380-L12C	261	212	45	14	A
	15	●		MPS1380-L15C	303	254	45	14	A
	20	□		MPS1380-L20C	373	324	45	14	A
	20	□		MSL1380-L20C	373	324	45	14	B
13.9	3	●		MPS1390S-DIN	107	60	45	14	A
	3	●		MPS1390S-DIN-C	107	60	45	14	A
	5	●		MPS1390L-DIN	124	77	45	14	A
	5	●		MPS1390L-DIN-C	124	77	45	14	A
	8	●		MPS1390-L8C	205	156	45	14	A
	10	□		MPS1390-L10C	233	184	45	14	A
	12	●		MPS1390-L12C	261	212	45	14	A
	15	●		MPS1390-L15C	303	254	45	14	A
	20	□		MPS1390-L20C	373	324	45	14	A
	20	□		MSL1390-L20C	373	324	45	14	B
14.0	3	●		MPS1400S-DIN	107	60	45	14	A
	3	●		MPS1400S-DIN-C	107	60	45	14	A
	5	●		MPS1400L-DIN	124	77	45	14	A
	5	●		MPS1400L-DIN-C	124	77	45	14	A
	8	●		MPS1400-L8C	205	156	45	14	A
	10	□		MPS1400-L10C	233	184	45	14	A
	12	●		MPS1400-L12C	261	212	45	14	A
	15	●		MPS1400-L15C	303	254	45	14	A
	20	●		MPS1400-L20C	373	324	45	14	A
	20	●		MSL1400-L20C	373	324	45	14	B
14.1	3	□		MPS1410S-DIN	114	64	48	16	A
	3	□		MPS1410S-DIN-C	114	64	48	16	A
	5	□		MPS1410L-DIN	132	82	48	16	A
	5	□		MPS1410L-DIN-C	132	82	48	16	A
	14.2	3	●		MPS1420S-DIN	114	64	48	16
3		●		MPS1420S-DIN-C	114	64	48	16	A
5		●		MPS1420L-DIN	132	82	48	16	A
5		●		MPS1420L-DIN-C	132	82	48	16	A
14.3		3	□		MPS1430S-DIN	114	64	48	16
	3	□		MPS1430S-DIN-C	114	64	48	16	A
	5	□		MPS1430L-DIN	132	82	48	16	A
	5	□		MPS1430L-DIN-C	132	82	48	16	A

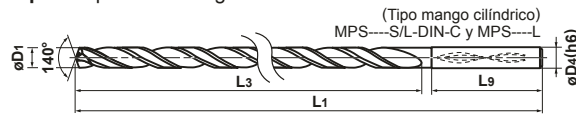
TALADRADO (INTEGRAL METAL DURO)

MPS/MSL

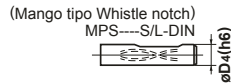
Tolerancia d1	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)
MPS---S/L-DIN-C (l/d 3-5)
MPS---L (l/d 8-30)



Diám. Broca D1	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
14.4	3	<input type="checkbox"/>		MPS1440S-DIN	114	64	48	16	A
	3	<input type="checkbox"/>		MPS1440S-DIN-C	114	64	48	16	A
	5	<input type="checkbox"/>		MPS1440L-DIN	132	82	48	16	A
	5	<input type="checkbox"/>		MPS1440L-DIN-C	132	82	48	16	A
14.5	3	<input checked="" type="checkbox"/>		MPS1450S-DIN	114	64	48	16	A
	3	<input checked="" type="checkbox"/>		MPS1450S-DIN-C	114	64	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1450L-DIN	132	82	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1450L-DIN-C	132	82	48	16	A
14.6	3	<input type="checkbox"/>		MPS1460S-DIN	114	64	48	16	A
	3	<input type="checkbox"/>		MPS1460S-DIN-C	114	64	48	16	A
	5	<input type="checkbox"/>		MPS1460L-DIN	132	82	48	16	A
	5	<input type="checkbox"/>		MPS1460L-DIN-C	132	82	48	16	A
14.7	3	<input type="checkbox"/>		MPS1470S-DIN	114	64	48	16	A
	3	<input type="checkbox"/>		MPS1470S-DIN-C	114	64	48	16	A
	5	<input type="checkbox"/>		MPS1470L-DIN	132	82	48	16	A
	5	<input type="checkbox"/>		MPS1470L-DIN-C	132	82	48	16	A
14.8	3	<input type="checkbox"/>		MPS1480S-DIN	114	64	48	16	A
	3	<input type="checkbox"/>		MPS1480S-DIN-C	114	64	48	16	A
	5	<input type="checkbox"/>		MPS1480L-DIN	132	82	48	16	A
	5	<input type="checkbox"/>		MPS1480L-DIN-C	132	82	48	16	A
14.9	3	<input type="checkbox"/>		MPS1490S-DIN	114	64	48	16	A
	3	<input type="checkbox"/>		MPS1490S-DIN-C	114	64	48	16	A
	5	<input type="checkbox"/>		MPS1490L-DIN	132	82	48	16	A
	5	<input type="checkbox"/>		MPS1490L-DIN-C	132	82	48	16	A
15.0	3	<input checked="" type="checkbox"/>		MPS1500S-DIN	114	64	48	16	A
	3	<input checked="" type="checkbox"/>		MPS1500S-DIN-C	114	64	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1500L-DIN	132	82	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1500L-DIN-C	132	82	48	16	A
15.1	3	<input type="checkbox"/>		MPS1510S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1510S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1510L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1510L-DIN-C	133	83	48	16	A
15.2	3	<input type="checkbox"/>		MPS1520S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1520S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1520L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1520L-DIN-C	133	83	48	16	A
15.3	3	<input type="checkbox"/>		MPS1530S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1530S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1530L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1530L-DIN-C	133	83	48	16	A

Diám. Broca D1	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
15.4	3	<input type="checkbox"/>		MPS1540S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1540S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1540L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1540L-DIN-C	133	83	48	16	A
15.5	3	<input checked="" type="checkbox"/>		MPS1550S-DIN	115	65	48	16	A
	3	<input checked="" type="checkbox"/>		MPS1550S-DIN-C	115	65	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1550L-DIN	133	83	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1550L-DIN-C	133	83	48	16	A
15.6	3	<input type="checkbox"/>		MPS1560S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1560S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1560L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1560L-DIN-C	133	83	48	16	A
15.7	3	<input type="checkbox"/>		MPS1570S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1570S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1570L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1570L-DIN-C	133	83	48	16	A
15.8	3	<input type="checkbox"/>		MPS1580S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1580S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1580L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1580L-DIN-C	133	83	48	16	A
15.9	3	<input type="checkbox"/>		MPS1590S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1590S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1590L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		MPS1590L-DIN-C	133	83	48	16	A
16.0	3	<input checked="" type="checkbox"/>		MPS1600S-DIN	115	65	48	16	A
	3	<input checked="" type="checkbox"/>		MPS1600S-DIN-C	115	65	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1600L-DIN	133	83	48	16	A
	5	<input checked="" type="checkbox"/>		MPS1600L-DIN-C	133	83	48	16	A
16.1	3	<input type="checkbox"/>		MPS1610S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1610S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1610L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1610L-DIN-C	143	93	48	18	A
16.2	3	<input type="checkbox"/>		MPS1620S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1620S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1620L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1620L-DIN-C	143	93	48	18	A
16.3	3	<input type="checkbox"/>		MPS1630S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1630S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1630L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1630L-DIN-C	143	93	48	18	A

● : Existencia en Europa. □ : A fabricar según demanda.

Diám. Broca D1	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
16.4	3	<input type="checkbox"/>		MPS1640S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1640S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1640L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1640L-DIN-C	143	93	48	18	A
16.5	3	<input checked="" type="checkbox"/>		MPS1650S-DIN	123	73	48	18	A
	3	<input checked="" type="checkbox"/>		MPS1650S-DIN-C	123	73	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1650L-DIN	143	93	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1650L-DIN-C	143	93	48	18	A
16.6	3	<input type="checkbox"/>		MPS1660S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1660S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1660L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1660L-DIN-C	143	93	48	18	A
16.7	3	<input type="checkbox"/>		MPS1670S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1670S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1670L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1670L-DIN-C	143	93	48	18	A
16.8	3	<input type="checkbox"/>		MPS1680S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1680S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1680L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1680L-DIN-C	143	93	48	18	A
16.9	3	<input type="checkbox"/>		MPS1690S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1690S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1690L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1690L-DIN-C	143	93	48	18	A
17.0	3	<input checked="" type="checkbox"/>		MPS1700S-DIN	123	73	48	18	A
	3	<input checked="" type="checkbox"/>		MPS1700S-DIN-C	123	73	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1700L-DIN	143	93	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1700L-DIN-C	143	93	48	18	A
17.1	3	<input type="checkbox"/>		MPS1710S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1710S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1710L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1710L-DIN-C	143	93	48	18	A
17.2	3	<input type="checkbox"/>		MPS1720S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1720S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1720L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1720L-DIN-C	143	93	48	18	A
17.3	3	<input type="checkbox"/>		MPS1730S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1730S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1730L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1730L-DIN-C	143	93	48	18	A
17.4	3	<input type="checkbox"/>		MPS1740S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1740S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1740L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1740L-DIN-C	143	93	48	18	A
17.5	3	<input checked="" type="checkbox"/>		MPS1750S-DIN	123	73	48	18	A
	3	<input checked="" type="checkbox"/>		MPS1750S-DIN-C	123	73	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1750L-DIN	143	93	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1750L-DIN-C	143	93	48	18	A
17.6	3	<input type="checkbox"/>		MPS1760S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1760S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1760L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1760L-DIN-C	143	93	48	18	A
17.7	3	<input type="checkbox"/>		MPS1770S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1770S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1770L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1770L-DIN-C	143	93	48	18	A

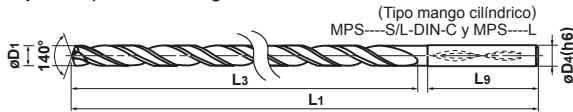
Diám. Broca D1	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
17.8	3	<input type="checkbox"/>		MPS1780S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1780S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1780L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1780L-DIN-C	143	93	48	18	A
17.9	3	<input type="checkbox"/>		MPS1790S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1790S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1790L-DIN	143	93	48	18	A
	5	<input type="checkbox"/>		MPS1790L-DIN-C	143	93	48	18	A
18.0	3	<input checked="" type="checkbox"/>		MPS1800S-DIN	123	73	48	18	A
	3	<input checked="" type="checkbox"/>		MPS1800S-DIN-C	123	73	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1800L-DIN	143	93	48	18	A
	5	<input checked="" type="checkbox"/>		MPS1800L-DIN-C	143	93	48	18	A
18.1	3	<input type="checkbox"/>		MPS1810S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1810S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1810L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1810L-DIN-C	153	101	50	20	A
18.2	3	<input type="checkbox"/>		MPS1820S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1820S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1820L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1820L-DIN-C	153	101	50	20	A
18.3	3	<input type="checkbox"/>		MPS1830S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1830S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1830L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1830L-DIN-C	153	101	50	20	A
18.4	3	<input type="checkbox"/>		MPS1840S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1840S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1840L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1840L-DIN-C	153	101	50	20	A
18.5	3	<input checked="" type="checkbox"/>		MPS1850S-DIN	131	79	50	20	A
	3	<input checked="" type="checkbox"/>		MPS1850S-DIN-C	131	79	50	20	A
	5	<input checked="" type="checkbox"/>		MPS1850L-DIN	153	101	50	20	A
	5	<input checked="" type="checkbox"/>		MPS1850L-DIN-C	153	101	50	20	A
18.6	3	<input type="checkbox"/>		MPS1860S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1860S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1860L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1860L-DIN-C	153	101	50	20	A
18.7	3	<input type="checkbox"/>		MPS1870S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1870S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1870L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1870L-DIN-C	153	101	50	20	A
18.8	3	<input type="checkbox"/>		MPS1880S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1880S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1880L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1880L-DIN-C	153	101	50	20	A
18.9	3	<input type="checkbox"/>		MPS1890S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1890S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1890L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1890L-DIN-C	153	101	50	20	A
19.0	3	<input checked="" type="checkbox"/>		MPS1900S-DIN	131	79	50	20	A
	3	<input checked="" type="checkbox"/>		MPS1900S-DIN-C	131	79	50	20	A
	5	<input checked="" type="checkbox"/>		MPS1900L-DIN	153	101	50	20	A
	5	<input checked="" type="checkbox"/>		MPS1900L-DIN-C	153	101	50	20	A
19.1	3	<input type="checkbox"/>		MPS1910S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1910S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1910L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1910L-DIN-C	153	101	50	20	A

TALADRADO (INTEGRAL METAL DURO)

MPS/MSL



● Tipo A Tipo doble margen



MPS---S/L-DIN (l/d 3-5)
 MPS---S/L-DIN-C (l/d 3-5)
 MPS---L (l/d 8-30)



Tolerancia d1	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
Tipo DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Otros	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN ver tabla de arriba. Otros brocas MPS/MSL tolerancias h7.

Diám. Broca D1	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
19.2	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1920S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1920S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1920L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1920L-DIN-C	153	101	50	20	A
19.3	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1930S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1930S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1930L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1930L-DIN-C	153	101	50	20	A
19.4	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1940S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1940S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1940L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1940L-DIN-C	153	101	50	20	A
19.5	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS1950S-DIN	131	79	50	20	A
	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS1950S-DIN-C	131	79	50	20	A
	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS1950L-DIN	153	101	50	20	A
	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS1950L-DIN-C	153	101	50	20	A
19.6	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1960S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1960S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1960L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1960L-DIN-C	153	101	50	20	A

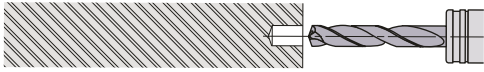
Diám. Broca D1	Profundidad agujero (l/d)	Stock		Referencia	Dimensiones (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
19.7	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1970S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1970S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1970L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1970L-DIN-C	153	101	50	20	A
19.8	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1980S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1980S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1980L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1980L-DIN-C	153	101	50	20	A
19.9	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1990S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>	<input type="checkbox"/>	MPS1990S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1990L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>	<input type="checkbox"/>	MPS1990L-DIN-C	153	101	50	20	A
20.0	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS2000S-DIN	131	79	50	20	A
	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS2000S-DIN-C	131	79	50	20	A
	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS2000L-DIN	153	101	50	20	A
	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MPS2000L-DIN-C	153	101	50	20	A

Guía operacional

● Guía para taladrar agujeros profundos a través de superficies irregulares ó angulares.

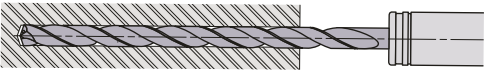
Uso Taladrar un agujero ciego

1. Taladrado de un agujero previo.



- ① Utilice una broca con un ángulo de punta mayor (más plano) que el tipo de broca extralarga. Se recomiendan los tipos MZE, MZS o MS de Mitsubishi.
- ② Utilice una broca con el mismo diámetro que la broca para taladrado de agujeros profundos.
- ③ Profundidad de la broca: aprox. 2-3D o más profunda.
- ④ Asegúrese de que el agujero guía taladrado sea muy preciso.

3. Taladrado del agujero profundo



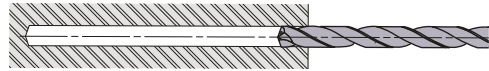
- ① Inicie el corte a la velocidad y avance recomendados mediante un taladrado de avance continuo.

2. Corte inicial con la broca larga.



- ① Penetre el agujero guía a una revolución baja. (Velocidad de corte 20 m-30 m/min, avance 0,2 mm-0,3 mm/rev)
- ② Detenga la broca larga a 1-3 mm del final del agujero guía.

4. Retracción de la broca



- ① Cuando esté a 1-2 mm del fondo del agujero profundo, reduzca la velocidad de corte a 20 m-30 m/min. Retire la broca hasta el punto de inicio de profundidad del agujero piloto a un avance de 3.000 mm/min.
- ② Finalmente, despeje el agujero a una velocidad de corte de 20 m-30 m/min y un avance de 0,2 mm-0,3 mm/rev.

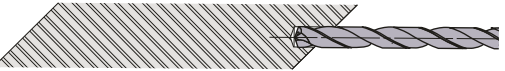
Uso Taladrado y penetración en caras o ángulos irregulares

1. Refrentado



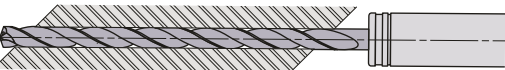
- ① Mecanice una cara plana o la cara irregular utilizando una fresa de metal duro o broca ranurada apta para refrentado. Haga que el diámetro de refrentado sea del mismo tamaño que el diámetro exigido para el agujero profundo o hasta 0,1 mm superior.

3. Corte inicial con la broca larga



- ① Penetre el agujero guía a una revolución baja. (Velocidad de corte 20 m-30 m/min, avance 0,2 mm-0,3 mm/rev)
- ② Detenga la broca larga a 1-3 mm del final del agujero guía.

5. Penetración



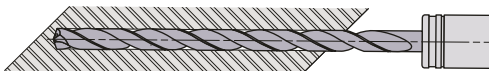
- ① Durante la penetración, el filo de corte puede resultar dañado.
- ② Se recomienda un avance de 0,05 mm-0,1 mm/rev.

2. Taladrado de un agujero previo.



- ① Utilice una broca con un ángulo de punta mayor (más plano) que el tipo de broca extralarga. Se recomiendan los tipos MZE, MZS o MS de Mitsubishi.
- ② Utilice una broca con el mismo diámetro que la broca para taladrado de agujeros profundos.
- ③ Profundidad de la broca: aprox. 2-3D o más profunda.
- ④ Asegúrese de que el agujero guía taladrado sea muy preciso.

4. Taladrado del agujero profundo



- ① Inicie el corte a la velocidad y avance recomendados mediante un taladrado de avance continuo.

6. Retracción de la broca



- ① Retire la broca hasta el punto de inicio de profundidad del agujero piloto a un avance de 3.000 mm/min.
- ② Finalmente, despeje el agujero a una velocidad de corte de 20 m-30 m/min y un avance de 0,2 mm-0,3 mm/rev.

TALADRADO (INTEGRAL METAL DURO)

CONDICIONES DE CORTE RECOMENDADAS

● BROCA MPS/MSL (I/d=3 – 12)

Material	Diámetro Broca Condición Dureza	φ3.0–φ6.0		φ6.0–φ10.0		φ10.0–φ14.0		φ14.0–φ20.0		
		Velocidad de corte (m/min)	Avance (mm/rev.)	Velocidad de corte (m/min)	Avance (mm/rev.)	Velocidad de corte (m/min)	Avance (mm/rev.)	Velocidad de corte (m/min)	Avance (mm/rev.)	
P Acero dulce	≤ 180HB	110 (50–120)	0.20 (0.15–0.25)	130 (80–140)	0.25 (0.20–0.35)	150 (90–170)	0.30 (0.20–0.40)	160 (100–180)	0.35 (0.20–0.40)	
	Acero al carbono Acero aleado	180–280HB	90 (50–100)	0.20 (0.15–0.25)	110 (70–120)	0.25 (0.20–0.35)	130 (80–140)	0.25 (0.20–0.40)	140 (100–150)	0.30 (0.20–0.40)
		280–350HB	80 (40–90)	0.20 (0.15–0.30)	90 (60–110)	0.25 (0.15–0.30)	110 (70–130)	0.25 (0.15–0.40)	120 (90–140)	0.30 (0.20–0.40)
M Acero inoxidable	≤ 200HB	50 (20–100)	0.10 (0.05–0.15)	60 (40–120)	0.20 (0.10–0.25)	70 (50–120)	0.25 (0.15–0.30)	80 (60–120)	0.25 (0.15–0.30)	
K Fundición	Resistencia a la tracción ≤ 350N/mm ²	100 (70–120)	0.25 (0.15–0.30)	130 (100–140)	0.30 (0.20–0.35)	150 (110–160)	0.35 (0.25–0.40)	160 (120–170)	0.35 (0.25–0.40)	
	Resistencia a la tracción ≤ 450N/mm ²	60 (30–80)	0.20 (0.15–0.25)	70 (40–90)	0.20 (0.15–0.30)	90 (50–110)	0.25 (0.20–0.40)	100 (60–110)	0.3 (0.20–0.40)	
S Aleaciones termo resistentes	–	20 (10–25)	0.10 (0.05–0.15)	25 (15–30)	0.12 (0.05–0.15)	25 (15–30)	0.15 (0.10–0.20)	30 (25–35)	0.15 (0.10–0.20)	

● BROCA MPS/MSL (I/d=15 – 30)

Material	Diámetro Broca Condición Dureza	φ3.0–φ6.0		φ6.0–φ10.0		φ10.0–φ14.0		
		Velocidad de corte (m/min)	Avance (mm/rev.)	Velocidad de corte (m/min)	Avance (mm/rev.)	Velocidad de corte (m/min)	Avance (mm/rev.)	
P Acero dulce	≤ 180HB	85 (35–100)	0.20 (0.15–0.25)	85 (45–120)	0.25 (0.15–0.35)	90 (55–120)	0.30 (0.20–0.35)	
	Acero al carbono Acero aleado	180–280HB	80 (40–95)	0.20 (0.15–0.25)	90 (50–120)	0.25 (0.20–0.35)	90 (60–130)	0.30 (0.15–0.35)
		280–350HB	75 (35–80)	0.15 (0.15–0.20)	80 (45–115)	0.20 (0.15–0.25)	85 (55–115)	0.25 (0.15–0.30)
M Acero inoxidable	≤ 200HB	50 (20–80)	0.10 (0.05–0.15)	60 (20–90)	0.12 (0.05–0.15)	70 (20–90)	0.15 (0.10–0.20)	
K Fundición	Resistencia a la tracción ≤ 350N/mm ²	70 (40–85)	0.25 (0.15–0.30)	75 (50–90)	0.30 (0.20–0.35)	80 (50–95)	0.35 (0.20–0.40)	
	Resistencia a la tracción ≤ 450N/mm ²	65 (35–80)	0.20 (0.15–0.25)	70 (45–85)	0.25 (0.15–0.30)	75 (45–90)	0.30 (0.20–0.35)	
S Aleaciones termo resistentes	–	20 (10–25)	0.10 (0.05–0.15)	25 (15–30)	0.12 (0.05–0.15)	25 (15–30)	0.15 (0.10–0.20)	

● BROCA MPS (I/d=40)

Material	Diámetro Broca Condición Dureza	φ3.0–φ4.0		φ5.0–φ6.0		φ6.0–φ9.0		
		Velocidad de corte (m/min)	Avance (mm/rev.)	Velocidad de corte (m/min)	Avance (mm/rev.)	Velocidad de corte (m/min)	Avance (mm/rev.)	
P Acero dulce	≤ 180HB	60 (50–70)	0.18 (0.13–0.20)	70 (55–80)	0.20 (0.15–0.23)	75 (60–85)	0.25 (0.18–0.28)	
	Acero al carbono Acero aleado	180–280HB	55 (40–65)	0.15 (0.10–0.18)	65 (45–75)	0.18 (0.13–0.22)	70 (55–80)	0.23 (0.15–0.25)
		280–350HB	50 (40–60)	0.12 (0.08–0.15)	55 (40–65)	0.17 (0.13–0.20)	60 (40–75)	0.20 (0.15–0.23)
M Acero inoxidable	≤ 200HB	35 (30–45)	0.10 (0.07–0.15)	40 (30–50)	0.12 (0.08–0.15)	45 (30–60)	0.15 (0.13–0.20)	
K Fundición	Resistencia a la tracción ≤ 350N/mm ²	55 (35–70)	0.15 (0.10–0.20)	60 (40–65)	0.20 (0.15–0.23)	60 (45–70)	0.23 (0.18–0.28)	
	Resistencia a la tracción ≤ 450N/mm ²	45 (30–60)	0.12 (0.08–0.15)	50 (40–60)	0.17 (0.13–0.20)	55 (40–65)	0.20 (0.15–0.23)	
S Aleaciones termo resistentes	–	15 (10–25)	0.07 (0.05–0.10)	20 (10–25)	0.07 (0.05–0.10)	20 (10–25)	0.10 (0.06–0.12)	

Las condiciones de mecanizado pueden variar bastante, por favor ver la tabla de arriba como referencia de punto de partida y ajustar los valores según las condiciones.



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