

Punte MPS/MSL

Innovativa geometria della scanalatura e tagliente ondulato. Punte multiuso per lavorazioni precise ed efficienti.

NEW

Disponibile L/D=40

MPS

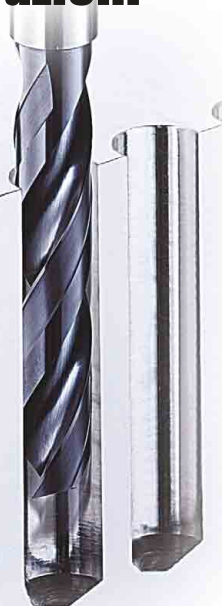
Nuovo tipo per foratura a elevate prestazioni.

Scanalatura a margine doppio per un'alta precisione di lavorazione.

MSL

Esclusivo tagliente ondulato e speciale geometria della scanalatura per un'agevole evacuazione del truciolo.

Foratura ad avanzamento continuo di fori profondi da L/D = 20 - 30.



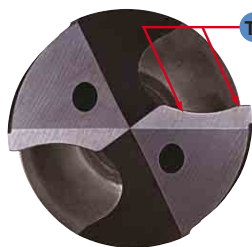
Punta in metallo duro integrale

Punte **MPS/MSL**

Caratteristiche

- Tagliente ondulato per prestazioni di taglio superiori
- Scanalatura a doppio margine per fori di maggiore precisione (tipo MPS)
- VP15TF rivestito MIRACLE per una maggiore durata dell'utensile

Forma del tagliente

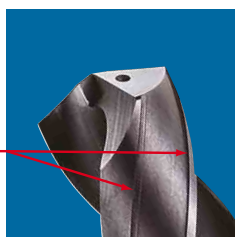


Tagliente dentellato

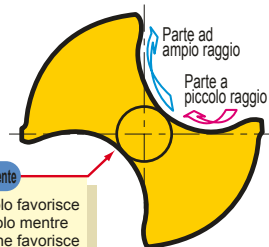
Grazie alla particolare geometria del tagliente è possibile coniugare taglienza e robustezza.

Versione a doppio bordo

Il particolare design a doppio bordo conferisce al foro una maggiore precisione e migliora la finitura superficiale, rispetto ad una punta convenzionale.



Sezione trasversale del vano di scarico

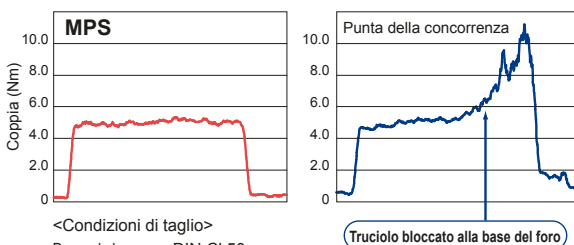


Scanalature alla sommità del tagliente

La parte a raggio piccolo favorisce la formazione del truciolo mentre quella a raggio ampio ne favorisce l'evacuazione.

Eccellente scarico del truciolo

La speciale geometria alla sommità della scanalatura consente un controllo del truciolo superiore.



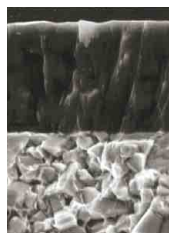
<Condizioni di taglio>

Pezzo da lavorare : DIN Ck50
 Diametro punta : ø8mm
 Profondità foro : 64mm (foro passante)
 Velocità di taglio : 120m/min
 Avanzamento : 0.25mm/giro
 Raffreddamento : WSO

Truciolo bloccato alla base del foro

Tecnologia dei materiali

- Lunga durata dell'utensile grazie al VP15TF rivestito MIRACLE®



VP15TF

Rivestimento
MIRACLE®
 (Al,Ti)N

Rivestimento
MIRACLE®

Caratteristiche del VP15TF

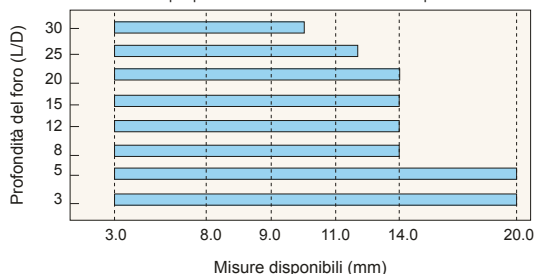
Il grado VP15TF con rivestimento MIRACLE è ideale per la foratura grazie alla sua elevata resistenza all'incollamento del truciolo. Adatto per la lavorazione di una vasta gamma di materiali, dall'acciaio dolce e legato all'acciaio inossidabile e alla ghisa.

Metallo duro
 micrograno
 TF15

Ampia scelta di punta

La gamma include punte per profondità del foro da L/D = 3 - 40.

- *MPS per profondità del foro fino a L/D = 40 disponibili come standard.
- *MSL per profondità del foro fino a L/D = 30 disponibili come standard.

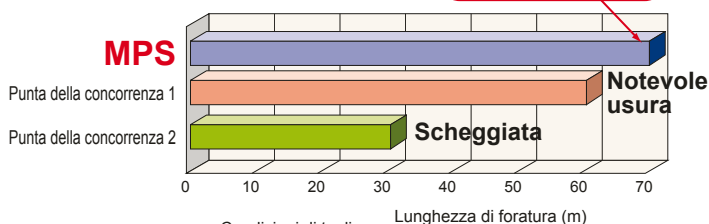


*Solo diametri selezionati, per i dettagli fare riferimento alle tabelle relative all'inventario. Altri diametri prodotti su ordinazione.

Lunga durata dell'utensile

La speciale geometria del tagliente e l'avanzata tecnologia del materiale garantiscono una lunga durata.

Possibilità di foratura continua



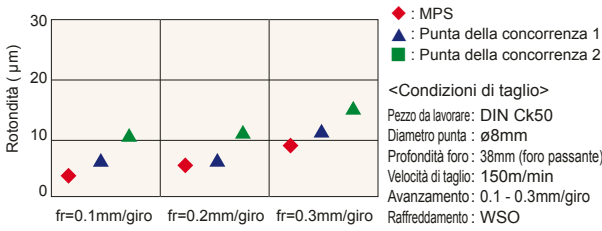
<Condizioni di taglio>

Pezzo da lavorare : DIN Ck50
 Diametro punta : ø8mm
 Profondità foro : 38mm (foro passante)
 Velocità di taglio : 140m/min
 Avanzamento : 0.3mm/giro
 Raffreddamento : WSO

Prestazioni di taglio

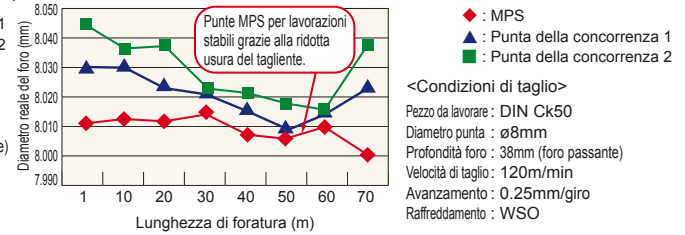
Elevata precisione (Rotondità)

Punte MPS MSL: precisione nella rotondità del foro.



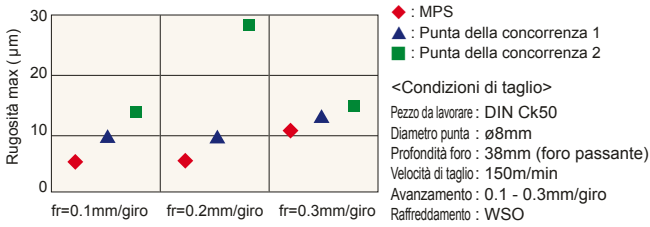
Elevata precisione (Diametro reale del foro)

La speciale geometria del tagliente e la tecnologia del materiale garantiscono precise dimensioni dei fori.



Elevata precisione (Rugosità superficiale)

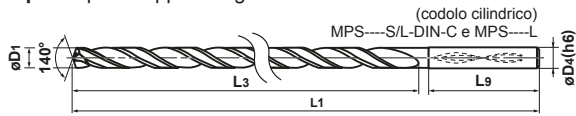
Punte MPS/MSL: finitura superiore per la superficie del foro.



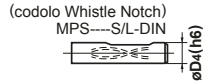
MPS/MSL



● Tipo A tipo a doppio margine



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 a margine standard



MSL (l/d 20-30)

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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	
	NEW 40	●	MPS0300-L40C	174	131	36	6	A	
20	●	MSL0300-L20C	110	70	36	6	B		
25	●	MSL0300-L25C	125	85	36	6	B		
30	●	MSL0300-L30C	140	100	36	6	B		
3.05	3	●	MPS0305S-DIN	62	20	36	6	A	
	3	●	MPS0305S-DIN-C	62	20	36	6	A	
	5	●	MPS0305L-DIN	66	28	36	6	A	
	5	●	MPS0305L-DIN-C	66	28	36	6	A	
	5	●	MPS0305L-DIN	66	28	36	6	A	
3.1	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	
	NEW 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	●	MSL0320-L20C	122	82	36	6	B	
	25	●	MSL0320-L25C	139	99	36	6	B	
3.3	20	□	MPS0320-L20C	122	82	36	6	A	
	25	□	MPS0320-L25C	139	99	36	6	A	
	30	□	MPS0320-L30C	157	117	36	6	A	
	NEW 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	
	3.4	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	
NEW 40		□	MPS0340-L40C	191	141	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		

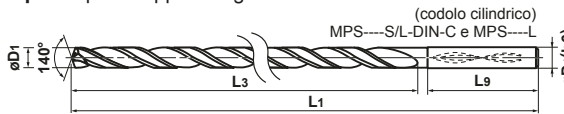
Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (mm)				Tipo
				L1	L3	L9	D4	
3.2	20	□	MPS0320-L20C	122	82	36	6	A
	25	□	MPS0320-L25C	139	99	36	6	A
	30	□	MPS0320-L30C	157	117	36	6	A
	NEW 40	□	MPS0320-L40C	191	141	36	6	A
	20	●	MSL0320-L20C	122	82	36	6	B
	25	●	MSL0320-L25C	139	99	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
	NEW 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
	NEW 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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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	
3.9	3	●		MPS0390S-DIN	66	24	36	6	A	
	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	
4.1	3	●		MPS0410S-DIN	66	24	36	6	A	
	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		



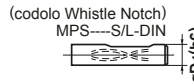
● Tipo A tipo a doppio margine



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 a margine standard



MSL (l/d 20-30)

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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

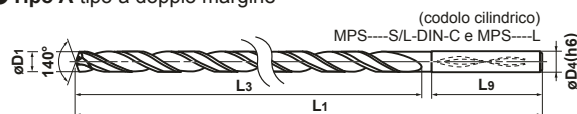
Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (mm)				Tipo
				L1	L3	L9	D4	
4.4	20	●	MSL0440-L20C	145	105	36	6	B
	25	●	MSL0440-L25C	167	127	36	6	B
	30	●	MSL0440-L30C	190	150	36	6	B
4.5	3	●	MPS0450S-DIN	66	24	36	6	A
	3	●	MPS0450S-DIN-C	66	24	36	6	A
	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

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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
	5.05	3	●		MPS0505S-DIN	66	28	36	6
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
	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



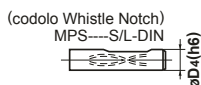
● Tipo A tipo a doppio margine



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 a margine standard



MSL (l/d 20-30)

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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

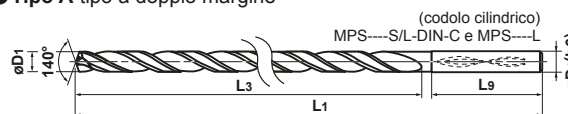
● : Disponibile. □ : Non disponibile, prodotto solo su ordinazione.

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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



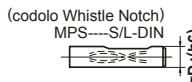
● Tipo A tipo a doppio margine



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 a margine standard



MSL (l/d 20-30)

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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

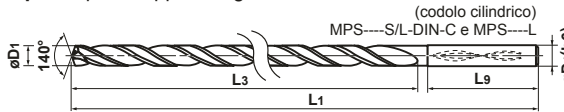
Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (mm)				Tipo
				L1	L3	L9	D4	
6.9	10	<input type="checkbox"/>	MPS0690-L10C	132	92	36	8	A
	12	●	MPS0690-L12C	146	106	36	8	A
	15	●	MPS0690-L15C	167	127	36	8	A
	20	<input type="checkbox"/>	MPS0690-L20C	202	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	●	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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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

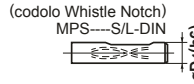
Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
7.5	30	□		MPS0750-L30C	289	249	36	8	A
	NEW 40	●		MPS0750-L40C	360	321	36	8	A
	20	●		MSL0750-L20C	214	174	36	8	B
	25	●		MSL0750-L25C	251	211	36	8	B
	30	●		MSL0750-L30C	289	249	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



● Tipo A tipo a doppio margine



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 a margine standard



MSL (l/d 20-30)

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (mm)				Tipo
				L1	L3	L9	D4	
7.9	10	<input type="checkbox"/>	MPS0790-L10C	145	105	36	8	A
	12	<input checked="" type="checkbox"/>	MPS0790-L12C	161	121	36	8	A
	15	<input checked="" type="checkbox"/>	MPS0790-L15C	185	145	36	8	A
	20	<input type="checkbox"/>	MPS0790-L20C	225	185	36	8	A
	25	<input type="checkbox"/>	MPS0790-L25C	265	225	36	8	A
	30	<input type="checkbox"/>	MPS0790-L30C	305	265	36	8	A
	40	<input type="checkbox"/>	MPS0790-L40C	379	341	36	8	A
	20	<input checked="" type="checkbox"/>	MSL0790-L20C	225	185	36	8	B
	25	<input checked="" type="checkbox"/>	MSL0790-L25C	265	225	36	8	B
30	<input checked="" type="checkbox"/>	MSL0790-L30C	305	265	36	8	B	
8.0	3	<input checked="" type="checkbox"/>	MPS0800S-DIN	79	41	36	8	A
	3	<input checked="" type="checkbox"/>	MPS0800S-DIN-C	79	41	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0800L-DIN	91	53	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0800L-DIN-C	91	53	36	8	A
	8	<input checked="" type="checkbox"/>	MPS0800-L8C	129	89	36	8	A
	10	<input type="checkbox"/>	MPS0800-L10C	145	105	36	8	A
	12	<input checked="" type="checkbox"/>	MPS0800-L12C	161	121	36	8	A
	15	<input checked="" type="checkbox"/>	MPS0800-L15C	185	145	36	8	A
	20	<input type="checkbox"/>	MPS0800-L20C	225	185	36	8	A
	25	<input type="checkbox"/>	MPS0800-L25C	265	225	36	8	A
	30	<input type="checkbox"/>	MPS0800-L30C	305	265	36	8	A
	40	<input checked="" type="checkbox"/>	MPS0800-L40C	379	341	36	8	A
20	<input checked="" type="checkbox"/>	MSL0800-L20C	225	185	36	8	B	
25	<input checked="" type="checkbox"/>	MSL0800-L25C	265	225	36	8	B	
30	<input checked="" type="checkbox"/>	MSL0800-L30C	305	265	36	8	B	
8.05	3	<input checked="" type="checkbox"/>	MPS0805S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0805S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0805L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0805L-DIN-C	102	60	40	10	A
8.1	3	<input checked="" type="checkbox"/>	MPS0810S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0810S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0810L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0810L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0810-L8C	139	95	40	10	A
	10	<input type="checkbox"/>	MPS0810-L10C	156	112	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0810-L12C	173	129	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0810-L15C	198	154	40	10	A
	20	<input type="checkbox"/>	MPS0810-L20C	241	197	40	10	A
	25	<input type="checkbox"/>	MPS0810-L25C	283	239	40	10	A
	30	<input type="checkbox"/>	MPS0810-L30C	326	282	40	10	A
	40	<input type="checkbox"/>	MPS0810-L40C	411	366	36	10	A
20	<input checked="" type="checkbox"/>	MSL0810-L20C	241	197	40	10	B	

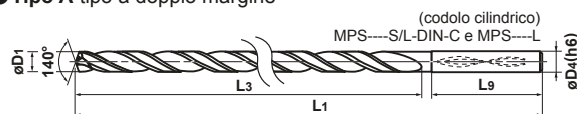
Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (mm)				Tipo
				L1	L3	L9	D4	
8.1	25	<input checked="" type="checkbox"/>	MSL0810-L25C	283	239	40	10	B
	30	<input type="checkbox"/>	MSL0810-L30C	326	282	40	10	B
8.2	3	<input checked="" type="checkbox"/>	MPS0820S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0820S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0820L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0820L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0820-L8C	139	95	40	10	A
	10	<input type="checkbox"/>	MPS0820-L10C	156	112	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0820-L12C	173	129	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0820-L15C	198	154	40	10	A
	20	<input type="checkbox"/>	MPS0820-L20C	241	197	40	10	A
	25	<input type="checkbox"/>	MPS0820-L25C	283	239	40	10	A
	30	<input type="checkbox"/>	MPS0820-L30C	326	282	40	10	A
	40	<input type="checkbox"/>	MPS0820-L40C	411	366	40	10	A
20	<input checked="" type="checkbox"/>	MSL0820-L20C	241	197	40	10	B	
25	<input checked="" type="checkbox"/>	MSL0820-L25C	283	239	40	10	B	
30	<input type="checkbox"/>	MSL0820-L30C	326	282	40	10	B	
8.3	3	<input checked="" type="checkbox"/>	MPS0830S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0830S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0830L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0830L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0830-L8C	139	95	40	10	A
	10	<input type="checkbox"/>	MPS0830-L10C	156	112	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0830-L12C	173	129	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0830-L15C	198	154	40	10	A
	20	<input type="checkbox"/>	MPS0830-L20C	241	197	40	10	A
	25	<input type="checkbox"/>	MPS0830-L25C	283	239	40	10	A
	30	<input type="checkbox"/>	MPS0830-L30C	326	282	40	10	A
	40	<input type="checkbox"/>	MPS0830-L40C	412	367	40	10	A
20	<input checked="" type="checkbox"/>	MSL0830-L20C	241	197	40	10	B	
25	<input checked="" type="checkbox"/>	MSL0830-L25C	283	239	40	10	B	
30	<input type="checkbox"/>	MSL0830-L30C	326	282	40	10	B	
8.4	3	<input checked="" type="checkbox"/>	MPS0840S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0840S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0840L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0840L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0840-L8C	139	95	40	10	A
	10	<input type="checkbox"/>	MPS0840-L10C	156	112	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0840-L12C	173	129	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0840-L15C	198	154	40	10	A
	20	<input type="checkbox"/>	MPS0840-L20C	241	197	40	10	A
	25	<input type="checkbox"/>	MPS0840-L25C	283	239	40	10	A

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (mm)				Tipo
				L1	L3	L9	D4	
8.4	30	<input type="checkbox"/>	MPS0840-L30C	326	282	40	10	A
	40	<input type="checkbox"/>	MPS0840-L40C	412	367	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0840-L20C	241	197	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0840-L25C	283	239	40	10	B
	30	<input type="checkbox"/>	MSL0840-L30C	326	282	40	10	B
8.5	3	<input checked="" type="checkbox"/>	MPS0850S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0850S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0850L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0850L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0850-L8C	139	95	40	10	A
	10	<input type="checkbox"/>	MPS0850-L10C	156	112	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0850-L12C	173	129	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0850-L15C	198	154	40	10	A
	20	<input type="checkbox"/>	MPS0850-L20C	241	197	40	10	A
	25	<input type="checkbox"/>	MPS0850-L25C	283	239	40	10	A
	30	<input type="checkbox"/>	MPS0850-L30C	326	282	40	10	A
	40	<input checked="" type="checkbox"/>	MPS0850-L40C	412	367	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0850-L20C	241	197	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0850-L25C	283	239	40	10	B
30	<input checked="" type="checkbox"/>	MSL0850-L30C	326	282	40	10	B	
8.6	3	<input checked="" type="checkbox"/>	MPS0860S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0860S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0860L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0860L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0860-L8C	144	100	40	10	A
	10	<input type="checkbox"/>	MPS0860-L10C	162	118	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0860-L12C	180	136	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0860-L15C	207	163	40	10	A
	20	<input type="checkbox"/>	MPS0860-L20C	252	208	40	10	A
	25	<input type="checkbox"/>	MPS0860-L25C	297	253	40	10	A
	30	<input type="checkbox"/>	MPS0860-L30C	342	298	40	10	A
	40	<input type="checkbox"/>	MPS0860-L40C	436	392	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0860-L20C	252	208	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0860-L25C	297	253	40	10	B
30	<input type="checkbox"/>	MSL0860-L30C	342	298	40	10	B	
8.7	3	<input checked="" type="checkbox"/>	MPS0870S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0870S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0870L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0870L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0870-L8C	144	100	40	10	A
	10	<input type="checkbox"/>	MPS0870-L10C	162	118	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0870-L12C	180	136	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0870-L15C	207	163	40	10	A
	20	<input type="checkbox"/>	MPS0870-L20C	252	208	40	10	A
	25	<input type="checkbox"/>	MPS0870-L25C	297	253	40	10	A
	30	<input type="checkbox"/>	MPS0870-L30C	342	298	40	10	A
	40	<input type="checkbox"/>	MPS0870-L40C	436	392	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0870-L20C	252	208	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0870-L25C	297	253	40	10	B
30	<input type="checkbox"/>	MSL0870-L30C	342	298	40	10	B	
8.8	3	<input checked="" type="checkbox"/>	MPS0880S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0880S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0880L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0880L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0880-L8C	144	100	40	10	A
	10	<input type="checkbox"/>	MPS0880-L10C	162	118	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0880-L12C	180	136	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0880-L15C	207	163	40	10	A
	20	<input checked="" type="checkbox"/>	MPS0880-L20C	252	208	40	10	A
	25	<input type="checkbox"/>	MPS0880-L25C	297	253	40	10	A
	30	<input type="checkbox"/>	MPS0880-L30C	342	298	40	10	A
	40	<input type="checkbox"/>	MPS0880-L40C	436	392	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0880-L20C	252	208	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0880-L25C	297	253	40	10	B
30	<input type="checkbox"/>	MSL0880-L30C	342	298	40	10	B	
40	<input type="checkbox"/>	MPS0880-L40C	436	392	40	10	A	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (mm)				Tipo
				L1	L3	L9	D4	
8.8	20	<input checked="" type="checkbox"/>	MSL0880-L20C	252	208	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0880-L25C	297	253	40	10	B
	30	<input checked="" type="checkbox"/>	MSL0880-L30C	342	298	40	10	B
8.9	3	<input checked="" type="checkbox"/>	MPS0890S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0890S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0890L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0890L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0890-L8C	144	100	40	10	A
	10	<input type="checkbox"/>	MPS0890-L10C	162	118	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0890-L12C	180	136	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0890-L15C	207	163	40	10	A
	20	<input type="checkbox"/>	MPS0890-L20C	252	208	40	10	A
	25	<input type="checkbox"/>	MPS0890-L25C	297	253	40	10	A
	30	<input type="checkbox"/>	MPS0890-L30C	342	298	40	10	A
	40	<input type="checkbox"/>	MPS0890-L40C	436	392	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0890-L20C	252	208	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0890-L25C	297	253	40	10	B
30	<input type="checkbox"/>	MSL0890-L30C	342	298	40	10	B	
9.0	3	<input checked="" type="checkbox"/>	MPS0900S-DIN	88	46	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0900S-DIN-C	88	46	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0900L-DIN	102	60	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0900L-DIN-C	102	60	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0900-L8C	144	100	40	10	A
	10	<input type="checkbox"/>	MPS0900-L10C	162	118	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0900-L12C	180	136	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0900-L15C	207	163	40	10	A
	20	<input type="checkbox"/>	MPS0900-L20C	252	208	40	10	A
	25	<input type="checkbox"/>	MPS0900-L25C	297	253	40	10	A
	30	<input type="checkbox"/>	MPS0900-L30C	342	298	40	10	A
	40	<input checked="" type="checkbox"/>	MPS0900-L40C	436	392	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0900-L20C	252	208	40	10	B
	25	<input checked="" type="checkbox"/>	MSL0900-L25C	297	253	40	10	B
30	<input checked="" type="checkbox"/>	MSL0900-L30C	342	298	40	10	B	
9.1	3	<input checked="" type="checkbox"/>	MPS0910S-DIN	89	47	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0910S-DIN-C	89	47	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0910L-DIN	103	62	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0910L-DIN-C	103	62	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0910-L8C	151	107	40	10	A
	10	<input type="checkbox"/>	MPS0910-L10C	170	126	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0910-L12C	189	145	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0910-L15C	217	173	40	10	A
	20	<input type="checkbox"/>	MPS0910-L20C	265	221	40	10	A
	25	<input type="checkbox"/>	MPS0910-L25C	312	268	40	10	A
30	<input type="checkbox"/>	MPS0910-L30C	360	316	40	10	A	
20	<input checked="" type="checkbox"/>	MSL0910-L20C	265	221	40	10	B	
25	<input type="checkbox"/>	MSL0910-L25C	312	268	40	10	B	
30	<input type="checkbox"/>	MSL0910-L30C	360	316	40	10	B	
9.2	3	<input checked="" type="checkbox"/>	MPS0920S-DIN	89	47	40	10	A
	3	<input checked="" type="checkbox"/>	MPS0920S-DIN-C	89	47	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0920L-DIN	103	62	40	10	A
	5	<input checked="" type="checkbox"/>	MPS0920L-DIN-C	103	62	40	10	A
	8	<input checked="" type="checkbox"/>	MPS0920-L8C	151	107	40	10	A
	10	<input type="checkbox"/>	MPS0920-L10C	170	126	40	10	A
	12	<input checked="" type="checkbox"/>	MPS0920-L12C	189	145	40	10	A
	15	<input checked="" type="checkbox"/>	MPS0920-L15C	217	173	40	10	A
	20	<input type="checkbox"/>	MPS0920-L20C	265	221	40	10	A
	25	<input type="checkbox"/>	MPS0920-L25C	312	268	40	10	A
	30	<input type="checkbox"/>	MPS0920-L30C	360	316	40	10	A
	20	<input checked="" type="checkbox"/>	MSL0920-L20C	265	221	40	10	B
25	<input type="checkbox"/>	MSL0920-L25C	312	268	40	10	B	
30	<input type="checkbox"/>	MSL0920-L30C	360	316	40	10	B	



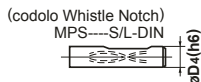
● Tipo A tipo a doppio margine



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 a margine standard



MSL (l/d 20-30)

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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	

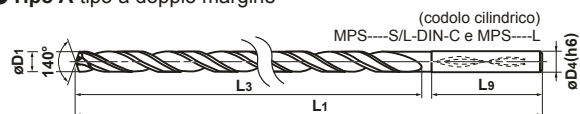
● : Disponibile. □ : Non disponibile, prodotto solo su ordinazione.

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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	



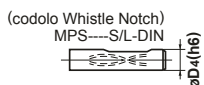
● Tipo A tipo a doppio margine



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 a margine standard

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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	
	10.9	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
20		□	MPS1080-L20C	304	255	45	12	A	
25		□	MPS1080-L25C	359	310	45	12	A	
11.0	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	
	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		
11.0	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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità VP15TF	Codice di ordinazione	Dimensioni (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
20	□	MPS1120-L20C	316	267	45	12	A	
25	□	MPS1120-L25C	373	324	45	12	A	
11.3	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	
11.3	20	□	MSL1130-L20C	316	267	45	12	B
	25	□	MSL1130-L25C	373	324	45	12	B

● : Disponibile. □ : Non disponibile, prodotto solo su ordinazione.

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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

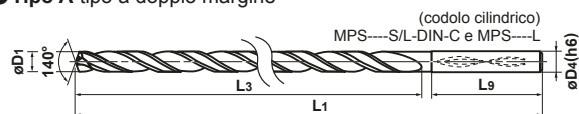
Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo	
		VP15TF			L1	L3	L9	D4		
11.8	20	□		MPS1180-L20C	327	278	45	12	A	
	25	□		MPS1180-L25C	387	338	45	12	A	
	20	□		MSL1180-L20C	327	278	45	12	B	
	25	□		MSL1180-L25C	387	338	45	12	B	
	11.9	3	●		MPS1190S-DIN	102	55	45	12	A
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	A
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	A
		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	



Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

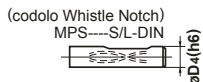
● Tipo A tipo a doppio margine



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 a margine standard

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo
		VP15TF			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	

Dia. foratura D1 (mm)	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo
		VP15TF			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	

● : Disponibile. □ : Non disponibile, prodotto solo su ordinazione.

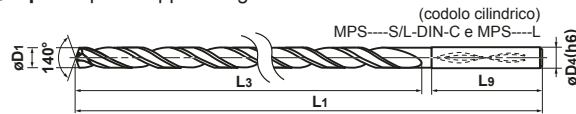
Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
13.1	3	●		MPS1310S-DIN	107	60	45	14	A
	3	●		MPS1310S-DIN-C	107	60	45	14	A
	5	●		MPS1310L-DIN	124	77	45	14	A
	5	●		MPS1310L-DIN-C	124	77	45	14	A
	8	●		MPS1310-L8C	200	151	45	14	A
	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

Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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

Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

● Tipo A tipo a doppio margine



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

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

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



Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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

Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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

● : Disponibile. □ : Non disponibile, prodotto solo su ordinazione.

Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (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

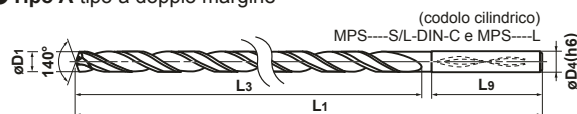
Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
17.8	3	<input type="checkbox"/>		MPS1780S-DIN	123	73	48	18	A
	3	<input type="checkbox"/>		MPS1780S-DIN-C	123	73	48	18	A
	5	<input type="checkbox"/>		MPS1780L-DIN	143	93	48	18	A
	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



Tolleranza 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
Altri	0 -0.012	0 -0.015	0 -0.018	0 -0.021

* Tipo MPS-DIN: vedere tabella sopra. Altre punte MPS/MSL: tolleranza h7

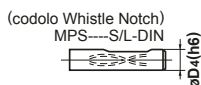
● Tipo A tipo a doppio margine



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

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

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



Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
19.2	3	<input type="checkbox"/>		MPS1920S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1920S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1920L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1920L-DIN-C	153	101	50	20	A
19.3	3	<input type="checkbox"/>		MPS1930S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1930S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1930L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1930L-DIN-C	153	101	50	20	A
19.4	3	<input type="checkbox"/>		MPS1940S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1940S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1940L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1940L-DIN-C	153	101	50	20	A
19.5	3	<input checked="" type="checkbox"/>		MPS1950S-DIN	131	79	50	20	A
	3	<input checked="" type="checkbox"/>		MPS1950S-DIN-C	131	79	50	20	A
	5	<input checked="" type="checkbox"/>		MPS1950L-DIN	153	101	50	20	A
	5	<input checked="" type="checkbox"/>		MPS1950L-DIN-C	153	101	50	20	A
19.6	3	<input type="checkbox"/>		MPS1960S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1960S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1960L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1960L-DIN-C	153	101	50	20	A

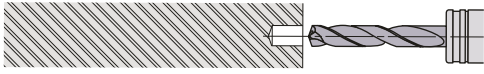
Dia. foratura D1	Profondità foro (l/d)	Disponibilità		Codice di ordinazione	Dimensioni (mm)				Tipo
		VP15TF			L1	L3	L9	D4	
19.7	3	<input type="checkbox"/>		MPS1970S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1970S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1970L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1970L-DIN-C	153	101	50	20	A
19.8	3	<input type="checkbox"/>		MPS1980S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1980S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1980L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1980L-DIN-C	153	101	50	20	A
19.9	3	<input type="checkbox"/>		MPS1990S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1990S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1990L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		MPS1990L-DIN-C	153	101	50	20	A
20.0	3	<input checked="" type="checkbox"/>		MPS2000S-DIN	131	79	50	20	A
	3	<input checked="" type="checkbox"/>		MPS2000S-DIN-C	131	79	50	20	A
	5	<input checked="" type="checkbox"/>		MPS2000L-DIN	153	101	50	20	A
	5	<input checked="" type="checkbox"/>		MPS2000L-DIN-C	153	101	50	20	A

Guida all'uso

● Guida per la realizzazione del foro pilota e di fori passanti su superfici irregolari e angolate.

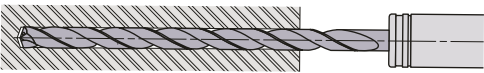
Utilizzo Realizzazione di un foro cieco

1. Realizzare un foro pilota



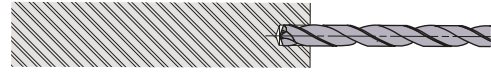
- ① Utilizzare una punta con un angolo più grande (più piatto) rispetto al tipo superlungo. Si consigliano Mitsubishi MZE, MZS o MS.
- ② Utilizzare una punta con lo stesso diametro della punta per fori profondi.
- ③ Profondità di foratura: circa $2-3 \times D$ o superiore.
- ④ Fraticare un foro pilota molto preciso.

3. Realizzare il foro profondo



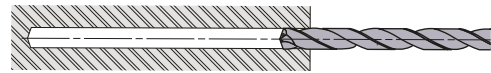
- ① Iniziare alla velocità consigliata e avanzare in modo continuo (senza interrompere l'avanzamento).

2. Taglio iniziale con la punta di tipo lungo.



- ① Penetrare nel foro di guida a bassi giri (velocità di taglio 20m-30 m/min, avanzamento 0.2mm-0.3 mm/giro).
- ② Fermare la punta di tipo lungo a circa 1-3 mm dal fondo del foro pilota.

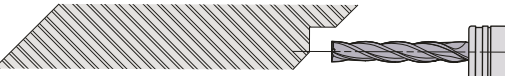
4. Arretramento della punta



- ① A 1-2 mm dalla fine del foro ridurre la velocità di taglio a 20-30 m/min. Ritirare la punta fino al punto iniziale del foro pilota con una velocità di avanzamento di 3000 mm/min.
- ② Completare il foro con una velocità di taglio di 20-30 m/min e un avanzamento di 0.2-0.3 mm/giro.

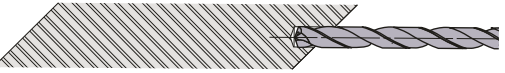
Utilizzo Realizzazione di un foro passante (su superficie irregolare o inclinata)

1. Lamatura



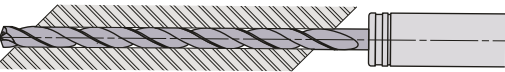
- ① Realizzare una superficie piana, utilizzando una fresa frontale o una punta in grado di effettuare lamature. Il diametro di lamatura deve avere le stesse dimensioni del diametro del foro profondo.

3. Taglio iniziale con la punta di tipo lungo



- ① Penetrare nel foro di guida a bassi giri (velocità di taglio 20m-30 m/min, avanzamento 0.2mm-0.3 mm/giro).
- ② Fermare la punta di tipo lungo a circa 1-3 mm dal fondo del foro pilota.

5. Sfondamento



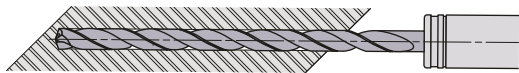
- ① Durante lo sfondamento, il tagliente può danneggiarsi.
- ② Si consiglia un avanzamento di 0,05-0,1 mm/giro.

2. Realizzare un foro pilota



- ① Utilizzare una punta con un angolo più grande (più piatto) rispetto al tipo superlungo. Si consigliano Mitsubishi MZE, MZS o MS.
- ② Utilizzare una punta con lo stesso diametro della punta per fori profondi.
- ③ Profondità di foratura: circa $2-3 \times D$ o superiore.
- ④ Praticare un foro pilota molto preciso.

4. Realizzare il foro profondo



- ① Iniziare alla velocità consigliata e avanzare in modo continuo (senza interrompere l'avanzamento).

6. Arretramento della punta



- ① Estrarre la punta con una velocità di avanzamento di 3000mm/min.
- ② Estrarre infine la punta dal foro a bassa velocità ($n=300$), e con una velocità di avanzamento pari a $Vf=3000$

Punta in metallo duro integrale

Parametri di taglio consigliati

● PUNTA MPS/MSL (l/d=3–12)

Materiale da lavorare	Diametro punta Condizioni Durezza	φ3.0–φ6.0		φ6.0–φ10.0		φ10.0–φ14.0		φ14.0–φ20.0	
		Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)
		P Acciaio dolce	≤ 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)
Acciaio al carbonio Acciaio legato	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 Acciaio inossidabile	≤ 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 Ghisa	Resistenza alla trazione ≤ 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)
	Resistenza alla trazione ≤ 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 Lega resistente al calore	–	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)

● PUNTA MPS/MSL (l/d=15–30)

Materiale da lavorare	Diametro punta Condizioni Durezza	φ3.0–φ6.0		φ6.0–φ10.0		φ10.0–φ14.0	
		Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)
		P Acciaio dolce	≤ 180HB	85 (35–100)	0.20 (0.15–0.25)	85 (45–120)	0.25 (0.15–0.35)
Acciaio al carbonio Acciaio legato	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 Acciaio inossidabile	≤ 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 Ghisa	Resistenza alla trazione ≤ 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)
	Resistenza alla trazione ≤ 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 Lega resistente al calore	–	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)

● PUNTA MPS (l/d=40)

Materiale da lavorare	Diametro punta Condizioni Durezza	φ3.0–φ4.0		φ5.0–φ6.0		φ6.0–φ9.0	
		Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)
		P Acciaio dolce	≤ 180HB	60 (50–70)	0.18 (0.13–0.20)	70 (55–80)	0.20 (0.15–0.23)
Acciaio al carbonio Acciaio legato	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 Acciaio inossidabile	≤ 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 Ghisa	Resistenza alla trazione ≤ 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)
	Resistenza alla trazione ≤ 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 Lega resistente al calore	–	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)

Le condizioni di lavorazione possono variare notevolmente; servirsi delle tabelle sopra riportate solo come riferimento e regolare i valori in funzione delle condizioni esistenti. Per punte di lunghezza superiore a l/d=10 è consigliabile praticare un foro pilota.



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