

## **Forets MPS/MSL**

**Innovation de la géométrie des goujures et arête de coupe en vague.  
Forets multi-usages pour un usinage précis et rapide.**

**NEW**

L/D=40 disponible

**MPS**

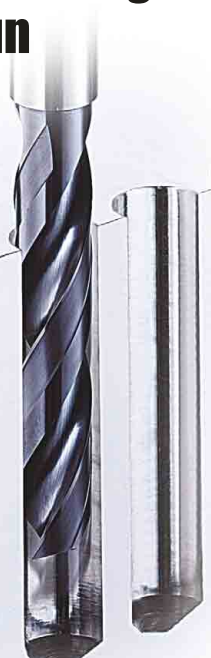
Nouvelle gamme pour de hautes performances de perçage.

**Goujures à double listels pour un usinage de haute précision.**

**MSL**

Arête de coupe unique en vague, et géométrie spéciale des goujures pour une évacuation en douceur des copeaux.

**Avance continue du perçage de trous profonds de L/D = 20 à 30**



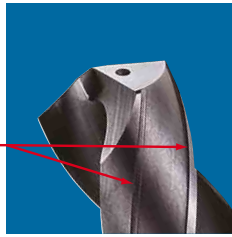
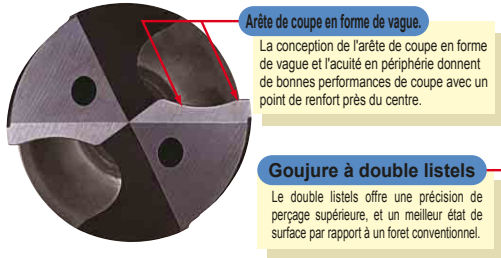
# Foret carbure monobloc

# Forets **MPS/MSL**

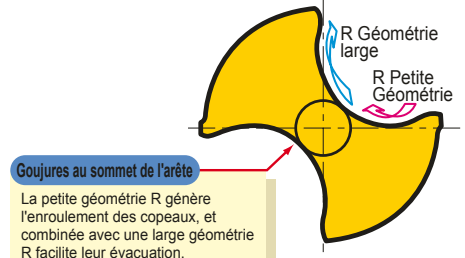
## Caractéristiques

- Arête de coupe en forme de vague pour des performances supérieures de perçages.
- Goujures à double listels pour une meilleure précision des trous (type MPS)
- Revêtement MIRACLE VP15TF pour une plus longue durée de vie des outils

Forme des arêtes de coupe

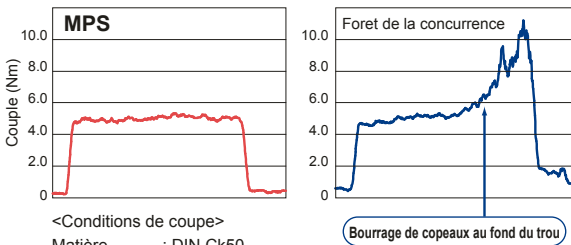


Section de la forme de l'hélice



## Excellente évacuation des copeaux

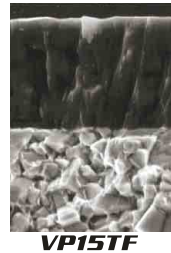
Une géométrie spéciale au sommet de la goujure permettant un contrôle supérieur des copeaux.



<Conditions de coupe>  
Matière : DIN Ck50  
Diamètre du foret: ø8mm  
Profondeur de trou: 64mm (trou débouchant)  
Vitesse de coupe: 120m/min  
Avance : 0.25mm/tour  
Arrosage : WSO

## Matériel technologique

- Revêtement MIRACLE® pour une longue durée de vie des outils **VP15TF**



**Revêtement MIRACLE®**  
(Al,Ti)N

**Caractéristiques du VP15TF**

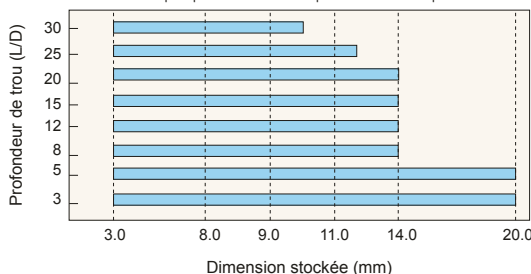
Le revêtement MIRACLE du VP15TF est idéal pour le perçage grâce à son extrême résistance au collage. Apprroprié pour un éventail de matières, de l'acier doux et aciers alliés, en passant par les aciers inox et fontes.

Carbure métallique micro-grain TF15

## Grand choix de forets

La gamme comprend des forets pour des profondeurs de trou allant de L/D = 3 à 40.

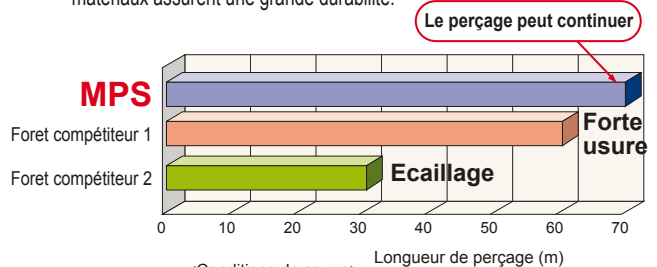
- ★MPS pour profondeur de trous jusqu'à L/D = 40 disponible en standard.
- ★MSL pour profondeur de trous à partir de L/D = 30 disponible en standard.



\*Sélection du diamètre uniquement, voir le tableau des stocks pour le détail.  
Autres diamètres fabriqués sur commande.

## Longue durée de vie des outils

La géométrie spéciale de l'arête de coupe et la technologie de pointe des matériaux assurent une grande durabilité.

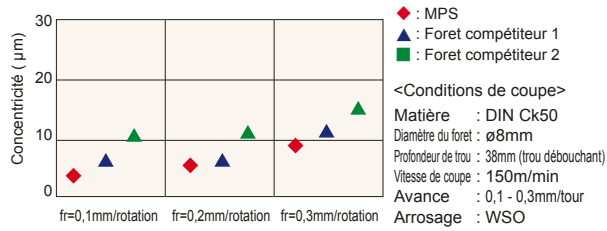


<Conditions de coupe>  
Matière : DIN Ck50  
Diamètre du foret: ø8mm  
Profondeur de trou: 38mm (trou débouchant)  
Vitesse de coupe: 140m/min  
Avance : 0.3mm/tour  
Arrosage : WSO

# Performances de coupe

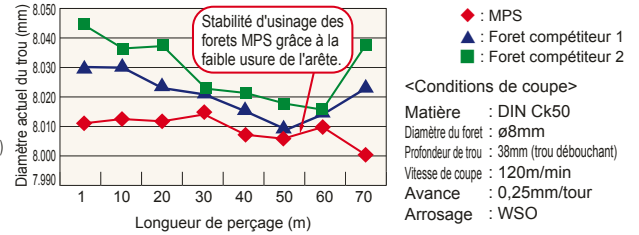
## ● Haute précision (concentricité)

Forets MPS MSL pour une grande précision de concentricité.



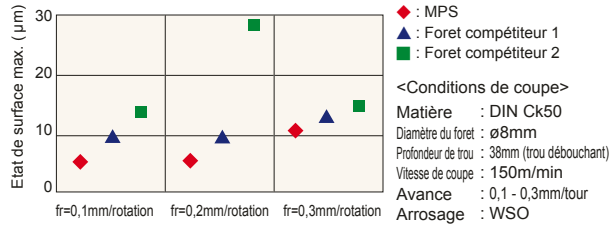
## ● Haute précision (Diamètre actuel du trou)

La géométrie spéciale de l'arête de coupe, et la technologie de la matière assurent la tolérance du trou.



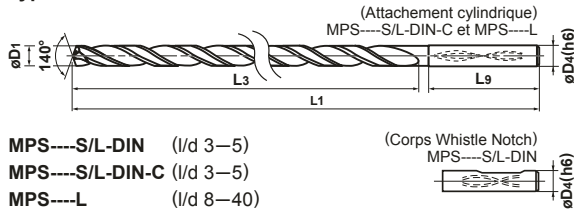
## ● Haute précision (état de surface)

Forets MPS/MSL pour une finition remarquable.





### ● Type A Double listels



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

### ● Type B Listel standard



MSL (l/d 20-30)

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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

Dia. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				L1	L3	L9	D4	
3.0	3	●	MPS0300S-DIN	62	20	36	6	A
	3	●	MPS0300S-DIN-C	62	20	36	6	A
	5	●	MPS0300L-DIN	66	28	36	6	A
	5	●	MPS0300L-DIN-C	66	28	36	6	A
	8	●	MPS0300-L8C	74	34	36	6	A
	10	□	MPS0300-L10C	80	40	36	6	A
	12	●	MPS0300-L12C	86	46	36	6	A
	15	●	MPS0300-L15C	95	55	36	6	A
	20	□	MPS0300-L20C	110	70	36	6	A
	25	□	MPS0300-L25C	125	85	36	6	A
	30	□	MPS0300-L30C	140	100	36	6	A
	40	●	MPS0300-L40C	174	131	36	6	A
	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-C	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
	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
	30	●	MSL0320-L30C	157	117	36	6	B

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

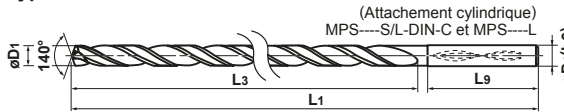
Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type	
		VP15TF			L1	L3	L9	D4		
3.5	3	●		MPS0350S-DIN	62	20	36	6	A	
	3	●		MPS0350S-DIN-C	62	20	36	6	A	
	5	●		MPS0350L-DIN	66	28	36	6	A	
	5	●		MPS0350L-DIN-C	66	28	36	6	A	
	8	●		MPS0350-L8C	80	40	36	6	A	
	10	□		MPS0350-L10C	87	47	36	6	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. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type	
		VP15TF			L1	L3	L9	D4		
NEW	40	□		MPS0380-L40C	213	173	36	6	A	
3.8	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	
	NEW	40	●		MPS0405S-DIN	66	24	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		

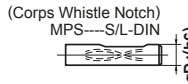




### ● Type A Double listels



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



### ● Type B Listel standard



MSL (l/d 20-30)

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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

Dia. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				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

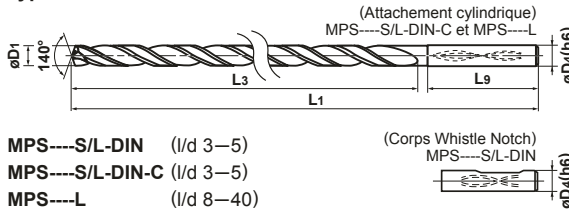
Dia. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				L1	L3	L9	D4	
4.4	20	●	MSL0440-L20C	145	105	36	6	B
	25	●	MSL0440-L25C	167	127	36	6	B
	30	●	MSL0440-L30C	190	150	36	6	B
4.5	3	●	MPS0450S-DIN	66	24	36	6	A
	3	●	MPS0450S-DIN-C	66	24	36	6	A
	5	●	MPS0450L-DIN	74	36	36	6	A
	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. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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	A
	3	●		MPS0505S-DIN-C	66	28	36	6	A
	5	●		MPS0505L-DIN	82	44	36	6	A
	5	●		MPS0505L-DIN-C	82	44	36	6	A
5.1	3	●		MPS0510S-DIN	66	28	36	6	A
	3	●		MPS0510S-DIN-C	66	28	36	6	A
	5	●		MPS0510L-DIN	82	44	36	6	A
	5	●		MPS0510L-DIN-C	82	44	36	6	A
	8	●		MPS0510-L8C	102	62	36	6	A
	10	□		MPS0510-L10C	113	73	36	6	A
	12	●		MPS0510-L12C	124	84	36	6	A
	15	●		MPS0510-L15C	140	100	36	6	A
	20	□		MPS0510-L20C	168	128	36	6	A
	25	□		MPS0510-L25C	195	155	36	6	A
	30	□		MPS0510-L30C	223	183	36	6	A
	40	□		MPS0510-L40C	279	231	36	6	A
20	●		MSL0510-L20C	168	128	36	6	B	
25	●		MSL0510-L25C	195	155	36	6	B	
30	●		MSL0510-L30C	223	183	36	6	B	
5.2	3	●		MPS0520S-DIN	66	28	36	6	A
	3	●		MPS0520S-DIN-C	66	28	36	6	A
	5	●		MPS0520L-DIN	82	44	36	6	A
	5	●		MPS0520L-DIN-C	82	44	36	6	A
	8	●		MPS0520-L8C	102	62	36	6	A
	10	□		MPS0520-L10C	113	73	36	6	A
	12	●		MPS0520-L12C	124	84	36	6	A
	15	●		MPS0520-L15C	140	100	36	6	A
	20	□		MPS0520-L20C	168	128	36	6	A
	25	□		MPS0520-L25C	195	155	36	6	A
	30	□		MPS0520-L30C	223	183	36	6	A
	40	□		MPS0520-L40C	279	231	36	6	A
20	●		MSL0520-L20C	168	128	36	6	B	
25	●		MSL0520-L25C	195	155	36	6	B	
30	●		MSL0520-L30C	223	183	36	6	B	
5.3	3	●		MPS0530S-DIN	66	28	36	6	A
	3	●		MPS0530S-DIN-C	66	28	36	6	A
	5	●		MPS0530L-DIN	82	44	36	6	A
	5	●		MPS0530L-DIN-C	82	44	36	6	A
	8	●		MPS0530-L8C	102	62	36	6	A
	10	□		MPS0530-L10C	113	73	36	6	A
	12	●		MPS0530-L12C	124	84	36	6	A
	15	●		MPS0530-L15C	140	100	36	6	A
	20	□		MPS0530-L20C	168	128	36	6	A
	25	□		MPS0530-L25C	195	155	36	6	A
	30	□		MPS0530-L30C	223	183	36	6	A
	40	□		MPS0530-L40C	279	241	36	6	A
	20	●		MSL0530-L20C	168	128	36	6	B
	25	●		MSL0530-L25C	195	155	36	6	B
	30	●		MSL0530-L30C	223	183	36	6	B



### ● Type A Double listels



### ● Type B Listel standard



MSL (l/d 20-30)

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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

Dia. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				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. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				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

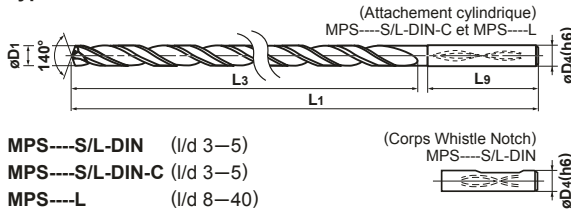


Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
5.9	10	□		MPS0590-L10C	119	79	36	6	A
	12	●		MPS0590-L12C	131	91	36	6	A
	15	●		MPS0590-L15C	149	109	36	6	A
	20	□		MPS0590-L20C	179	139	36	6	A
	25	□		MPS0590-L25C	209	169	36	6	A
	30	□		MPS0590-L30C	239	199	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. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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



### ● Type A Double listels



### ● Type B Listel standard



MSL (l/d 20-30)

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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

Dia. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				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	<input checked="" type="checkbox"/>	MSL0660-L20C	202	162	36	8	B
	25	<input checked="" type="checkbox"/>	MSL0660-L25C	237	197	36	8	B
30	<input checked="" type="checkbox"/>	MSL0660-L30C	272	232	36	8	B	
6.7	3	<input checked="" type="checkbox"/>	MPS0670S-DIN	79	34	36	8	A
	3	<input checked="" type="checkbox"/>	MPS0670S-DIN-C	79	34	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0670L-DIN	91	53	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0670L-DIN-C	91	53	36	8	A
	8	<input checked="" type="checkbox"/>	MPS0670-L8C	118	78	36	8	A
	10	<input type="checkbox"/>	MPS0670-L10C	132	92	36	8	A
	12	<input checked="" type="checkbox"/>	MPS0670-L12C	146	106	36	8	A
	15	<input checked="" type="checkbox"/>	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	<input checked="" type="checkbox"/>	MSL0670-L20C	202	162	36	8	B
	25	<input checked="" type="checkbox"/>	MSL0670-L25C	237	197	36	8	B
30	<input checked="" type="checkbox"/>	MSL0670-L30C	272	232	36	8	B	
6.8	3	<input checked="" type="checkbox"/>	MPS0680S-DIN	79	34	36	8	A
	3	<input checked="" type="checkbox"/>	MPS0680S-DIN-C	79	34	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0680L-DIN	91	53	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0680L-DIN-C	91	53	36	8	A
	8	<input checked="" type="checkbox"/>	MPS0680-L8C	118	78	36	8	A
	10	<input type="checkbox"/>	MPS0680-L10C	132	92	36	8	A
	12	<input checked="" type="checkbox"/>	MPS0680-L12C	146	106	36	8	A
	15	<input checked="" type="checkbox"/>	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	<input checked="" type="checkbox"/>	MSL0680-L20C	202	162	36	8	B
	25	<input checked="" type="checkbox"/>	MSL0680-L25C	237	197	36	8	B
30	<input checked="" type="checkbox"/>	MSL0680-L30C	272	232	36	8	B	
6.9	3	<input checked="" type="checkbox"/>	MPS0690S-DIN	79	34	36	8	A
	3	<input checked="" type="checkbox"/>	MPS0690S-DIN-C	79	34	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0690L-DIN	91	53	36	8	A
	5	<input checked="" type="checkbox"/>	MPS0690L-DIN-C	91	53	36	8	A
	8	<input checked="" type="checkbox"/>	MPS0690-L8C	118	78	36	8	A

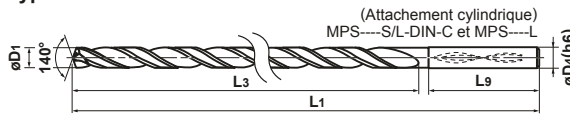
Dia. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				L1	L3	L9	D4	
6.9	10	<input type="checkbox"/>	MPS0690-L10C	132	92	36	8	A
	12	<input checked="" type="checkbox"/>	MPS0690-L12C	146	106	36	8	A
	15	<input checked="" type="checkbox"/>	MPS0690-L15C	167	127	36	8	A
	20	<input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

Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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



### ● Type A Double listels



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



### ● Type B Listel standard



MSL (l/d 20-30)

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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

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

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

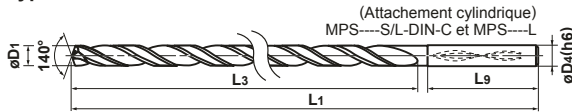
Dia. Foret D1 (mm)	Report (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
8.4	30	<input type="checkbox"/>		MPS0840-L30C	326	282	40	10	A
	40	<input type="checkbox"/>		MPS0840-L40C	412	367	40	10	A
	20	<input checked="" type="checkbox"/>		MSL0840-L20C	241	197	40	10	B
	25	<input checked="" 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 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

Dia. Foret D1 (mm)	Report (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			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
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





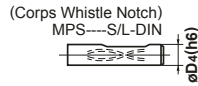
### ● Type A Double listels



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

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

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



### ● Type B Listel standard



MSL (l/d 20-30)

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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

Dia. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				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. Foret D1 (mm)	Rapport (l/d)	Stock VP15TF	Référence	Dimensions (mm)				Type
				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	

Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type	
		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	

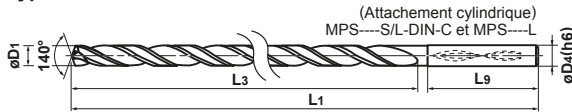
Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
10.3	3	●		MPS1030S-DIN	102	55	45	12	A
	3	●		MPS1030S-DIN-C	102	55	45	12	A
	5	●		MPS1030L-DIN	118	71	45	12	A
	5	●		MPS1030L-DIN-C	118	71	45	12	A
	8	●		MPS1030-L8C	167	118	45	12	A
	10	□		MPS1030-L10C	188	139	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	



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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

### ● Type A Double listels



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



Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
10.7	3	●		MPS1070S-DIN	102	55	45	12	A
	3	●		MPS1070S-DIN-C	102	55	45	12	A
	5	●		MPS1070L-DIN	118	71	45	12	A
	5	●		MPS1070L-DIN-C	118	71	45	12	A
	8	●		MPS1070-L8C	172	123	45	12	A
	10	□		MPS1070-L10C	194	145	45	12	A
	12	●		MPS1070-L12C	216	167	45	12	A
	15	●		MPS1070-L15C	249	200	45	12	A
	20	□		MPS1070-L20C	304	255	45	12	A
	25	□		MPS1070-L25C	359	310	45	12	A
10.8	20	●		MSL1070-L20C	304	255	45	12	B
	25	□		MSL1070-L25C	359	310	45	12	B
	3	●		MPS1080S-DIN	102	55	45	12	A
	3	●		MPS1080S-DIN-C	102	55	45	12	A
	5	●		MPS1080L-DIN	118	71	45	12	A
	5	●		MPS1080L-DIN-C	118	71	45	12	A
	8	●		MPS1080-L8C	172	123	45	12	A
	10	□		MPS1080-L10C	194	145	45	12	A
	12	●		MPS1080-L12C	216	167	45	12	A
	15	●		MPS1080-L15C	249	200	45	12	A
10.9	20	□		MPS1080-L20C	304	255	45	12	A
	25	□		MPS1080-L25C	359	310	45	12	A
	20	●		MSL1080-L20C	304	255	45	12	B
	25	□		MSL1080-L25C	359	310	45	12	B
	3	●		MPS1090S-DIN	102	55	45	12	A
	3	●		MPS1090S-DIN-C	102	55	45	12	A
	5	●		MPS1090L-DIN	118	71	45	12	A
	5	●		MPS1090L-DIN-C	118	71	45	12	A
	8	●		MPS1090-L8C	172	123	45	12	A
	10	□		MPS1090-L10C	194	145	45	12	A
11.0	12	●		MPS1090-L12C	216	167	45	12	A
	15	●		MPS1090-L15C	249	200	45	12	A
	20	□		MPS1090-L20C	304	255	45	12	A
	25	□		MPS1090-L25C	359	310	45	12	A
	20	●		MSL1090-L20C	304	255	45	12	B
	25	□		MSL1090-L25C	359	310	45	12	B
	3	●		MPS1100S-DIN	102	55	45	12	A
	3	●		MPS1100S-DIN-C	102	55	45	12	A
	5	●		MPS1100L-DIN	118	71	45	12	A
	5	●		MPS1100L-DIN-C	118	71	45	12	A
11.1	8	●		MPS1100-L8C	172	123	45	12	A
	10	□		MPS1100-L10C	194	145	45	12	A
	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
	3	●		MPS1110S-DIN	102	55	45	12	A
	3	●		MPS1110S-DIN-C	102	55	45	12	A
11.2	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
	20	□		MSL1110-L20C	316	267	45	12	B
	25	□		MSL1110-L25C	373	324	45	12	B
11.3	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
11.0	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
11.0	20	□		MPS1130-L20C	316	267	45	12	A
	25	□		MPS1130-L25C	373	324	45	12	A
	20	□		MSL1130-L20C	316	267	45	12	B
	25	□		MSL1130-L25C	373	324	45	12	B

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

● : Article stocké. □ : Article non standard - nous consulter.

Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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

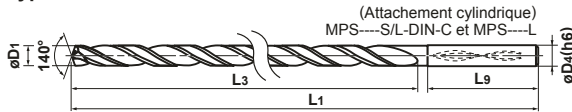
Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
11.8	20	□		MPS1180-L20C	327	278	45	12	A
	25	□		MPS1180-L25C	387	338	45	12	A
	20	□		MSL1180-L20C	327	278	45	12	B
	25	□		MSL1180-L25C	387	338	45	12	B
11.9	3	●		MPS1190S-DIN	102	55	45	12	A
	3	●		MPS1190S-DIN-C	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
	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	



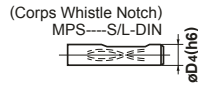
d1 Tolérance	3.0 ≤ D1 ≤ 6.0	6.0 < D1 ≤ 10.0	10.0 < D1 ≤ 18.0	18.0 < D1 ≤ 20.0
DIN	0.010 -0.002	0.010 -0.005	0.005 -0.013	0.005 -0.016
Autres	0 -0.012	0 -0.015	0 -0.018	0 -0.021

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

## ● Type A Double listels



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



Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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	



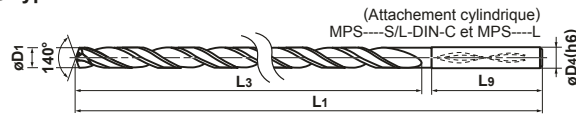
Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
13.1	3	●		MPS1310S-DIN	107	60	45	14	A
	3	●		MPS1310S-DIN-C	107	60	45	14	A
	5	●		MPS1310L-DIN	124	77	45	14	A
	5	●		MPS1310L-DIN-C	124	77	45	14	A
	8	●		MPS1310-L8C	200	151	45	14	A
	10	□		MPS1310-L10C	227	178	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
	8	●		MPS1360-L8C	205	156	45	14	A
10	□		MPS1360-L10C	233	184	45	14	A	

Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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

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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

## ● Type A Double listels



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



Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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

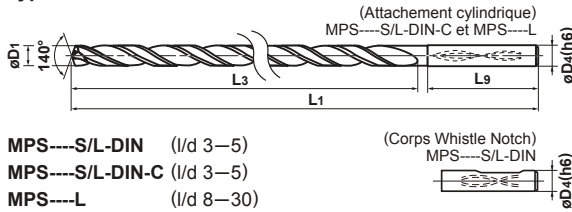
Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
15.4	3	<input type="checkbox"/>		MPS1540S-DIN	115	65	48	16	A
	3	<input type="checkbox"/>		MPS1540S-DIN-C	115	65	48	16	A
	5	<input type="checkbox"/>		MPS1540L-DIN	133	83	48	16	A
	5	<input type="checkbox"/>		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

Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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



### ● Type A Double listels



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

\*Voir le tableau ci-dessus pour les MPS-DIN. Les autres forets MPS/MSL sont en tolérance h7.

Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		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

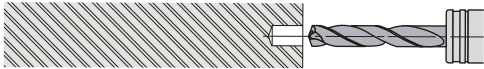
Dia. Foret D1 (mm)	Rapport (l/d)	Stock		Référence	Dimensions (mm)				Type
		VP15TF			L1	L3	L9	D4	
19.7	3	<input type="checkbox"/>		MPS1970S-DIN	131	79	50	20	A
	3	<input type="checkbox"/>		MPS1970S-DIN-C	131	79	50	20	A
	5	<input type="checkbox"/>		MPS1970L-DIN	153	101	50	20	A
	5	<input type="checkbox"/>		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

## Marche à suivre

### ● Procédure pour le perçage d'un avant-trou et la pénétration de surfaces irrégulières et anguleuses.

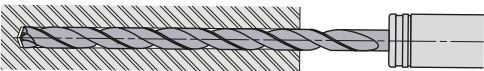
#### Utiliser pour percer un trou borgne

##### 1. Perçage d'un trou pilote



- ① Utilisation d'un foret avec un angle de pointe plus large (plus obtu) comme la gamme Super Long. Les forets Mitsubishi MZE, MZS ou MS sont recommandés.
- ② Utilisation d'un foret avec le même diamètre que le fond du perçage.
- ③ Profondeur de perçage : environ 2-3D ou plus.
- ④ Assurer une précision élevée du trou est permise par le guide.

##### 3. Percer des trous profonds



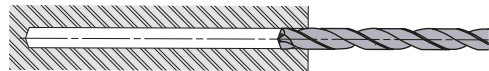
- ① Démarrer le perçage aux vitesses et avances recommandées sans cycle de débouillage (avance continue).

##### 2. Coupe initiale avec le foret de type Long.



- ① Pénétrer dans le centrage à faible vitesse. (Vitesse de coupe 20m-30m/min, avance 0,2mm-0,3mm/tour)
- ② Stopper le foret de type Long 1mm-3mm avant le fond du trou de centrage.

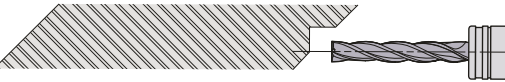
##### 4. Retrait du foret



- ① 1mm-2mm avant la sortie du foret du trou, réduire la vitesse de coupe à 20m-30m/min. Retrait du foret à partir du point de départ du centrage à une avance de 3000mm/min.
- ② Sortie du foret à une vitesse de coupe de 20m-30m/min et à une avance de 0,2mm-0,3mm/tour.

#### Perçer sur des surfaces inclinées et irrégulières

##### 1. Faire un méplat



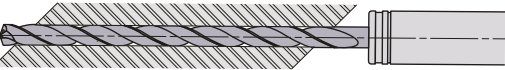
- ① Usiner une surface plane ou irrégulière en utilisant une fraise deux tailles ou une fraise à rainurer avec coupe au centre. Faire le méplat du même diamètre que le foret long.

##### 3. Coupe initiale avec un foret de type long.



- ① Pénétrer dans le trou de centrage à faible vitesse. (Vitesse de coupe 20m-30m/min, avance 0,2mm-0,3mm/tour)
- ② Stopper le foret de type Long 1mm-3mm avant le fond du trou de centrage.

##### 5. Trous débouchants



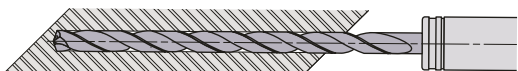
- ① Quand on perce des trous débouchants, l'arête de coupe peut-être endommagée.
- ② Une avance de 0,05mm-0,1mm/tour est recommandée.

##### 2. Perçer un trou pilote



- ① Utilisation d'un foret avec un angle de pointe plus large (plus obtu) comme la gamme Super Long. Les forets Mitsubishi MZE, MZS ou MS sont recommandés.
- ② Utiliser un foret du même diamètre que le fond du trou.
- ③ Profondeur de perçage : environ 2-3D ou plus.
- ④ Assurer une précision élevée du trou est permise par le guide.

##### 4. Perçer des trous profonds



- ① Démarrer le perçage aux vitesses et avances recommandées sans cycle de débouillage (avance continue).

##### 6. Retrait du foret



- ① Retrait du foret à partir du fond du trou de centrage à une avance de 3000mm/min.
- ② Sortie du foret à une vitesse de coupe de 20m-30m/min et à une avance de 0,2mm-0,3mm/tour.



# Foret carbure monobloc

## CONDITIONS DE COUPE RECOMMANDÉES

### ● FORETS MPS/MSL (l/d=3 – 12)

Matière	Diamètre foret Conditions Dureté	φ3.0–φ6.0		φ6.0–φ10.0		φ10.0–φ14.0		φ14.0–φ20.0	
		Vitesse de coupe (m/min)	Avance (mm/tour)	Vitesse de coupe (m/min)	Avance (mm/tour)	Vitesse de coupe (m/min)	Avance (mm/tour)	Vitesse de coupe (m/min)	Avance (mm/tour)
P Acier doux	≤ 180HB	110 (50–120)	0.20 (0.15–0.25)	130 (80–140)	0.25 (0.20–0.35)	150 (90–170)	0.30 (0.20–0.40)	160 (100–180)	0.35 (0.20–0.40)
	Acier carbone Alliage acier	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)
		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)
M Acier inox	≤ 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 Fonte grise	Résistance à la traction ≤ 350N/mm <sup>2</sup>	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)
	Résistance à la traction ≤ 450N/mm <sup>2</sup>	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 Alliage réfractaire	–	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)

### ● FORETS MPS/MSL (l/d=15 – 30)

Matière	Diamètre foret Conditions Dureté	φ3.0–φ6.0		φ6.0–φ10.0		φ10.0–φ14.0	
		Vitesse de coupe (m/min)	Avance (mm/tour)	Vitesse de coupe (m/min)	Avance (mm/tour)	Vitesse de coupe (m/min)	Avance (mm/tour)
P Acier doux	≤ 180HB	85 (35–100)	0.20 (0.15–0.25)	85 (45–120)	0.25 (0.15–0.35)	90 (55–120)	0.30 (0.20–0.35)
	Acier carbone Alliage acier	180–280HB	80 (40–95)	0.20 (0.15–0.25)	90 (50–120)	0.25 (0.20–0.35)	90 (60–130)
		280–350HB	75 (35–80)	0.15 (0.15–0.20)	80 (45–115)	0.20 (0.15–0.25)	85 (55–115)
M Acier inox	≤ 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 Fonte grise	Résistance à la traction ≤ 350N/mm <sup>2</sup>	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)
	Résistance à la traction ≤ 450N/mm <sup>2</sup>	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 Alliage réfractaire	–	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)

### ● FORETS MPS (l/d=40)

Matière	Diamètre foret Conditions Dureté	φ3.0–φ4.0		φ5.0–φ6.0		φ6.0–φ9.0	
		Vitesse de coupe (m/min)	Avance (mm/tour)	Vitesse de coupe (m/min)	Avance (mm/tour)	Vitesse de coupe (m/min)	Avance (mm/tour)
P Acier doux	≤ 180HB	60 (50–70)	0.18 (0.13–0.20)	70 (55–80)	0.20 (0.15–0.23)	75 (60–85)	0.25 (0.18–0.28)
	Acier carbone Alliage acier	180–280HB	55 (40–65)	0.15 (0.10–0.18)	65 (45–75)	0.18 (0.13–0.22)	70 (55–80)
		280–350HB	50 (40–60)	0.12 (0.08–0.15)	55 (40–65)	0.17 (0.13–0.20)	60 (40–75)
M Acier inox	≤ 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 Fonte grise	Résistance à la traction ≤ 350N/mm <sup>2</sup>	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)
	Résistance à la traction ≤ 450N/mm <sup>2</sup>	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 Alliage réfractaire	–	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)

Les conditions d'usinages peuvent varier considérablement, employer les données ci-dessus comme point de référence et ajuster les valeurs selon les conditions. Pour des longueurs supérieures à l/d=10, il est recommandé de faire un centrage.



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