Suzhou Yongpu Precision Technology Co., Ltd.

Solid Round Tools | One-stop Machining Solution

YPP IM®

CTS

Interchangeable Modular Milling Cutter



Product line	YPP IM® – interchangeable modular tools
Components	CTS / CTS-R exchangeable milling heads; CMS-ST10 / CMS-ST20 modular milling tool holders

English translation of the Chinese-language brochure published by Suzhou Yongpu Precision Technology Co., Ltd. Product names, model codes, trademarks, numbers and units are reproduced exactly as printed in the original.

Solid Round Tools | One-stop Machining Solution

One-stop service | Non-standard customization | Backed by more than a century of technical expertise

Technical Features



- Unequal flute spacing with equal helix
- Carbide substrate
- Modular interface design

Applications

Interchangeable modular milling cutter | Economical and flexible | Suitable for many machining applications

- Milling of steel, stainless steel, cast iron and other materials
- Supports shoulder milling, high-feed milling, slotting, profiling and other machining methods
- Exchangeable-head design for fast changeover and greater production flexibility
- Short, long and other flute-length options to handle different applications flexibly

Ordering Code

CTS interchangeable modular milling cutter – head

C	M	M	30U	06	N	0800	S4	0600
1	2	3	4	5	6	7	8	9

Pos.	Code	Meaning
1	C	CTS series
2	M	Modular
3	M	Mill (milling cutter)
4	30U	Series number; denotes the universal series
5	06	Thread size
6	N	N = internal coolant; W = external coolant
7	0800	Cutting diameter D8; 1600 denotes cutting diameter D16
8	S4	Number of flutes
9	0600	Flute length; 1900 denotes flute length 19

CTS interchangeable modular milling cutter – holder (shank)

C	M	S	12	N	032	A16	ST	10
1	2	3	4	5	6	7	8	9

Pos.	Code	Meaning
1	C	CTS series
2	M	Mill (milling cutter)
3	S	Holder (shank)
4	12	Thread size
5	N	N = internal coolant; W = external coolant
6	032	Front overhang of the holder

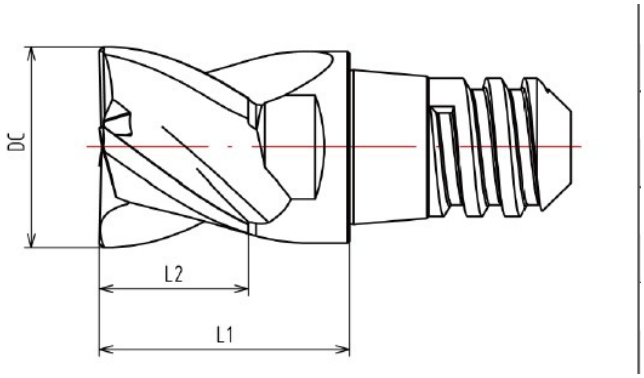
Pos.	Code	Meaning
7	A16	A = cylindrical shank to DIN 6535
8	ST	ST = steel; HM = carbide
9	10	10 = cylindrical design; 20 = tapered design

Product Range

CTS – Interchangeable Modular Milling Cutter

Key data: ECU (universal-series tool) | h10 | .06

Material suitability (ISO): P ● M ● K ● N – S – H – C – (● first choice ○ suitable □ limited suitability; – = not recommended)

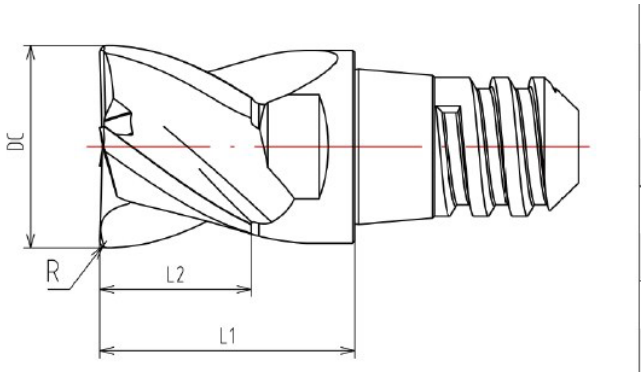


Ordering code	Dimension (mm)					
	DC	CMS	L2	L1	Z	Wrench flat width
CMM30U-06N-0800S4-0600	8	6	6	11	4	6
CMM30U-06N-0800S4-1000	8	6	10	15	4	6
CMM30U-08N-1000S4-0750	10	8	7.5	13	4	8
CMM30U-08N-1000S4-1250	10	8	12.5	18	4	8
CMM30U-10N-1200S4-0900	12	10	9	16	4	10
CMM30U-10N-1200S4-1500	12	10	15	22	4	10
CMM30U-12N-1600S4-1200	16	12	12	20	4	13
CMM30U-12N-1600S4-2000	16	12	20	28	4	13
CMM30U-16N-2000S4-1500	20	16	15	25	4	16
CMM30U-16N-2000S4-2500	20	16	25	35	4	16
CMM30U-20N-2500S4-1900	25	20	19	32	4	21
CMM30U-20N-2500S4-3200	25	20	32	45	4	21

CTS-R – Interchangeable Modular Milling Cutter (corner radius)

Key data: ECU (universal-series tool) | h10 | R (corner radius)

Material suitability (ISO): P ● M ● K ● N – S – H – C – (● first choice ○ suitable □ limited suitability; – = not recommended)

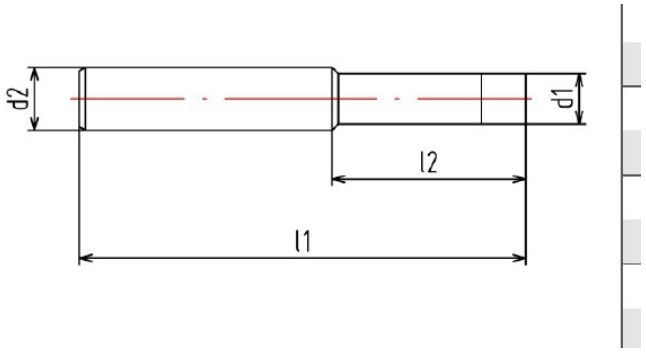


Ordering code	Dimension (mm)						
	DC	CMS	R	L2	L1	Z	Wrench flat width
CMM30U-06N-0800S4-0600	8	6	0.40	6	11	4	6
CMM30U-06N-0800S4-0600	8	6	0.50	6	11	4	6
CMM30U-06N-0800S4-1000	8	6	0.40	10	15	4	6
CMM30U-06N-0800S4-1000	8	6	0.50	10	15	4	6
CMM30U-08N-1000S4-0750	10	8	0.50	7.5	13	4	8
CMM30U-08N-1000S4-1250	10	8	0.50	12.5	18	4	8
CMM30U-10N-1200S4-0900	12	10	0.60	9	16	4	10
CMM30U-10N-1200S4-1500	12	10	0.60	15	22	4	10
CMM30U-12N-1600S4-1200	16	12	0.80	12	20	4	13
CMM30U-12N-1600S4-2000	16	12	0.80	20	28	4	13

Ordering code	Dimension (mm)						
	DC	CMS	R	L2	L1	Z	Wrench flat width
CMM30U-16N-2000S4-1500	20	16	1.00	15	25	4	16
CMM30U-16N-2000S4-2500	20	16	1.00	25	35	4	16
CMM30U-20N-2500S4-1900	25	20	1.25	19	32	4	21
CMM30U-20N-2500S4-3200	25	20	1.25	32	45	4	21

CMS-ST10 – Modular Milling Tool Holder

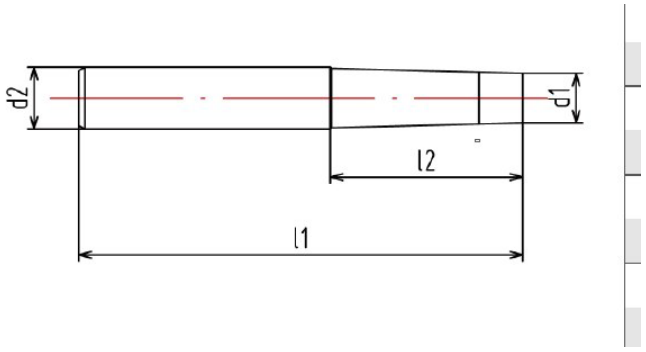
Key data: DIN 6535HA



Ordering code	Dimension (mm)				
	d1	CMS	d2	l2	l1
CMS-06N-020-A10-ST10	7.8	6	10	20	60
CMS-06N-045-A10-ST10	7.8	6	10	45	85
CMS-08N-025-A12-ST10	9.8	8	12	25	70
CMS-08N-045-A12-ST10	9.8	8	12	45	90
CMS-10N-022-A16-ST10	11.8	10	16	22	70
CMS-10N-042-A16-ST10	11.8	10	16	42	90
CMS-12N-032-A16-ST10	15.8	12	16	32	80
CMS-12N-057-A16-ST10	15.8	12	16	57	105
CMS-16N-034-A25-ST10	19.8	16	25	34	90
CMS-16N-064-A25-ST10	19.8	16	25	64	120
CMS-20N-034-A25-ST10	24.8	20	25	34	90
CMS-20N-064-A25-ST10	24.8	20	25	64	120

CMS-ST20 – Modular Milling Tool Holder

Key data: DIN 6535HA



Ordering code	Dimension (mm)				
	d1	CMS	d2	l2	l1
CMS-06N-020-A10-ST20	7.8	6	10	20	60
CMS-06N-045-A10-ST20	7.8	6	10	45	85
CMS-08N-030-A16-ST20	9.8	8	16	30	70
CMS-08N-040-A16-ST20	9.8	8	16	40	90
CMS-10N-030-A16-ST20	11.8	10	16	30	70
CMS-10N-042-A16-ST20	11.8	10	16	42	90
CMS-12N-030-A20-ST20	15.8	12	20	30	80
CMS-12N-055-A20-ST20	15.8	12	20	55	105
CMS-16N-040-A25-ST20	19.8	16	25	40	06
CMS-16N-064-A25-ST20	19.8	16	25	64	120
CMS-20N-030-A32-ST20	24.8	20	32	30	90
CMS-20N-060-A32-ST20	24.8	20	32	60	120

Notes

Notes: ① For requirements outside the catalogue range (special diameters, length-to-diameter ratios, etc.), non-standard custom tools are available.

② For cutting data, refer to the last page of this section of the catalogue.

③ ECU: universal-series tool

Cutting Data

Material group			Material	Strength / hardness [N/mm²] [HRC]	Cutting data			Feed fr [mm/rev] by cutter diameter (mm)					
					Depth of cut ap (mm)	Width of cut ae (mm)	Cutting speed Vc (m/min)	8	10	12	16	20	25
P	P1	P1.1	Non-alloy structural steel, free-cutting structural steel, case-hardening steel and quenched & tempered steel	< 700	0.6xDc	0.25xDc	60-140	0.035	0.045	0.058	0.032	0.08	0.075
		P1.2	Non-alloy structural steel, free-cutting structural steel, case-hardening steel and quenched & tempered steel	< 1200	0.6xDc	0.25xDc	60-140	0.032	0.042	0.056	0.06	0.078	0.072
	P2	P2.1	Alloy nitriding steel, case-hardening steel and quenched & tempered steel	< 900	0.6xDc	0.25xDc	60-140	0.035	0.045	0.058	0.062	0.08	0.075
		P2.2	Alloy nitriding steel, case-hardening steel and quenched & tempered steel	< 1400	0.6xDc	0.25xDc	60-140	0.03	0.04	0.054	0.058	0.076	0.07
	P3	P3.1	Tool steel, bearing steel, spring steel and high-speed steel	< 900	0.6xDc	0.25xDc	60-140	0.034	0.044	0.056	0.062	0.078	0.074
		P3.2	Tool steel, bearing steel, spring steel and high-speed steel	< 1500	0.6xDc	0.25xDc	60-140	0.033	0.043	0.055	0.059	0.077	0.072
	P4	P4.1	Ferritic and martensitic stainless steel		0.6xDc	0.25xDc	60-140	0.028	0.037	0.048	0.049	0.067	0.06
	P5	P5.1	Cast steel		0.6xDc	0.25xDc	60-140	0.034	0.044	0.057	0.06	0.078	0.074
	P6	P6.1	Ferritic and martensitic stainless steel		0.6xDc	0.25xDc	60-140	0.025	0.032	0.042	0.042	0.06	0.052
M	M1	M1.1	Austenitic stainless steel	< 700	0.6xDc	0.25xDc	30-40	0.04	0.05	0.056	0.07	0.085	0.094
		M1.2	Ferritic/austenitic (duplex) stainless steel	< 1000	0.6xDc	0.25xDc	30-40	0.038	0.046	0.054	0.066	0.078	0.086
	M2	M2.1	Austenitic stainless steel	< 700	0.6xDc	0.25xDc	30-40	0.043	0.052	0.06	0.076	0.088	0.097
	M3	M3.1	Ferritic/austenitic (duplex) stainless steel	< 1000	0.6xDc	0.25xDc	30-40	0.036	0.043	0.05	0.063	0.073	0.08
K	K1	K1.1	Lamellar graphite cast iron (grey cast iron), GJL	< 300	0.6xDc	0.25xDc	60-140	0.04	0.05	0.06	0.08	0.097	0.1
	K2	K2.1	Spheroidal graphite (ductile) cast iron, GJS	< 500	0.6xDc	0.25xDc	60-140	0.04	0.05	0.056	0.072	0.083	0.09
		K2.2	Spheroidal graphite (ductile) cast iron, GJS	500-800	0.6xDc	0.25xDc	60-140	0.03	0.046	0.056	0.062	0.076	0.078
		K2.3	Spheroidal graphite (ductile) cast iron, GJS	>800	0.6xDc	0.25xDc	60-140	0.013	0.015	0.018	0.022	0.026	0.029
	K3	K3.1	Vermicular graphite (compacted graphite) cast iron, GJV; malleable cast iron, GJM	< 500	0.6xDc	0.25xDc	60-140	0.02	0.03	0.04	0.05	0.06	0.07
		K3.2	Vermicular graphite (compacted graphite) cast iron, GJV; malleable cast iron, GJM	> 500	0.6xDc	0.25xDc	60-140	0.013	0.016	0.022	0.024	0.038	0.032

- When machining with external coolant, reduce the feed per revolution if necessary to ensure smooth chip evacuation

Various non-standard solutions available

Scope of non-standard customization

- All intermediate milling-cutter diameters
- Customized solutions for different workpiece materials
- Custom number of flutes, coatings and other requirements
- Optimization of tool-tip geometry, cutting-edge preparation, etc.

Contact us for customized tooling (“Custom”).

Contact

Suzhou Yongpu Precision Technology Co., Ltd.

Solid Round Tools | One-stop Machining Solution

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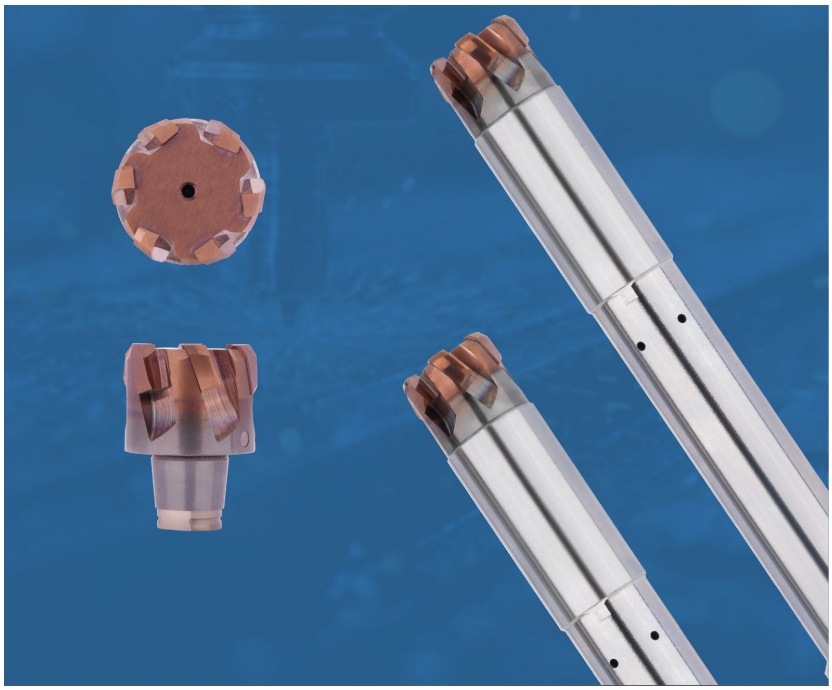
Suzhou Yongpu Precision Technology Co., Ltd.

Solid Round Tools | One-stop Machining Solution

YPP IM®

JTS

Interchangeable Modular Reamer



Product line	YPP IM® – interchangeable modular tools
Components	JMR reamer heads (JTS interface) and JMS modular reamer shanks
Reaming diameter	D16 mm – D50 mm
Edition	YP-JTS-202601
Source file	yp-tec.com/upload/image/20260709/20260709160332893289.pdf

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One-stop service | Non-standard customization | Backed by more than a century of technical expertise

Technical Features



- Steel body
- Carbide blades
- Modular interface design

Applications

Interchangeable modular reamer | Cost-effective finishing of large diameters

- Fine reaming of steel, cast iron, stainless steel and non-ferrous metals
- Reaming diameter: D16 mm – D50 mm
- Internal and external coolant solutions available (suitable for minimum-quantity lubrication [MMS])
- Straight-flute and left-hand helix versions available
- Repeatability ≤ 5 μm
- Achievable hole tolerance: IT7

Ordering Code

JTS interchangeable modular reamer – head

J	M	R	300U	10	N	1600	H7
1	2	3	4	5	6	7	8

Pos.	Code	Meaning
1	J	JTS reamer
2	M	Modular
3	R	Reamer
4	300U	Series number: 300U / 310U
5	10	JTS interface size
6	N	N = internal coolant; W = external coolant
7	1600	Cutting diameter
8	H7	Tolerance grade

Series	Material	Design type	Machining type	Workpiece materials	Coating
300U	Steel body + carbide blades	Straight flute	Through hole	P, K	Coated
310U	Steel body + carbide blades	Left-hand helix	Through hole	P, K	Coated

JMS interchangeable modular reamer – shank

J	M	S	10	N	0490	A20	ST10
1	2	3	4	5	6	7	8

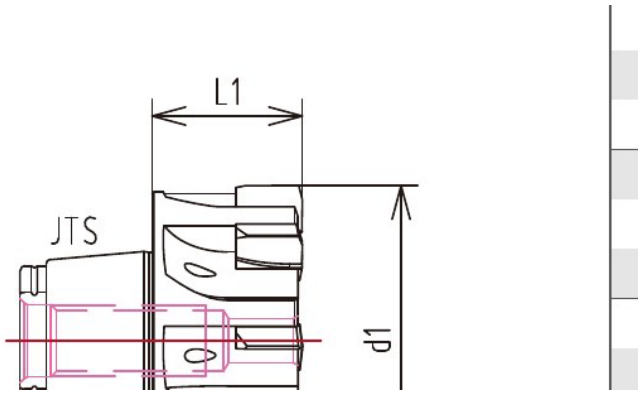
Pos.	Code	Meaning
1	J	JTS reamer
2	M	Modular
3	S	Shank (tool holder)
4	10	JTS interface size
5	N	N = internal coolant; W = external coolant
6	0490	Front overhang 49
7	A20	Cylindrical shank, shank diameter 20
8	ST10	Steel shank

Product Range

JMR300U – Interchangeable Modular Reamer

Key data: HD (high-performance tool) | Ra>2 | H7 | HM (carbide) blades

Material suitability (ISO): P ● M □ K ● N – S – H – C – (● first choice ○ suitable □ limited suitability; – = not recommended)

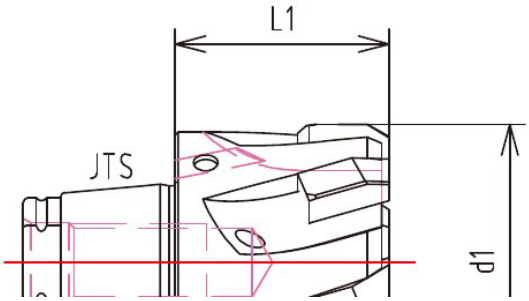


Ordering code	Dimension (mm)			
	d1	JTS	Front overhang L1	Number of flutes
JMR300U-10N-1600H7	16	10	14	6
JMR300U-10N-1700H7	17	10	14	6
JMR300U-10N-1800H7	18	10	14	6
JMR300U-12N-1900H7	19	12	14.5	6
JMR300U-12N-2000H7	20	12	14.5	6
JMR300U-12N-2100H7	21	12	14.5	6
JMR300U-14N-2200H7	22	14	15.5	6
JMR300U-14N-2300H7	23	14	15.5	6
JMR300U-16N-2400H7	24	16	16	6
JMR300U-16N-2500H7	25	16	16	6
JMR300U-16N-2600H7	26	16	16	6
JMR300U-16N-2700H7	27	16	16	6
JMR300U-16N-2800H7	28	16	16	6
JMR300U-16N-2900H7	29	16	16	6
JMR300U-20N-3000H7	30	20	17	8
JMR300U-20N-3100H7	31	20	17	8
JMR300U-20N-3200H7	32	20	17	8
JMR300U-20N-3300H7	33	20	17	8
JMR300U-20N-3400H7	34	20	17	8
JMR300U-20N-3500H7	35	20	17	8
JMR300U-20N-3600H7	36	20	17	8
JMR300U-20N-3700H7	37	20	17	8
JMR300U-20N-3800H7	38	20	17	8
JMR300U-20N-3900H7	39	20	17	8
JMR300U-24N-4000H7	40	24	19	8
JMR300U-24N-4100H7	41	24	19	8
JMR300U-24N-4200H7	42	24	19	8
JMR300U-24N-4300H7	43	24	19	8
JMR300U-24N-4400H7	44	24	19	8
JMR300U-24N-4500H7	45	24	19	8
JMR300U-24N-4600H7	46	24	19	8
JMR300U-24N-4700H7	47	24	19	8
JMR300U-24N-4800H7	48	24	19	8
JMR300U-24N-4900H7	49	24	19	8
JMR300U-24N-5000H7	50	24	19	8

JMR310U – Interchangeable Modular Reamer

Key data: HD (high-performance tool) | Ra>2 | H7 | HM (carbide) blades

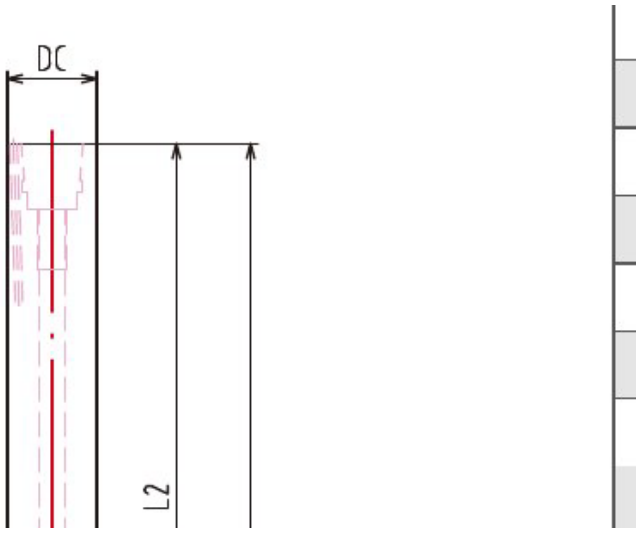
Material suitability (ISO): P ● M □ K ● N – S – H – C – (● first choice ○ suitable □ limited suitability; – = not recommended)



Ordering code	Dimension (mm)			
	d1	JTS	Front overhang L1	Number of flutes
JMR310U-10N-1600H7	16	6	14	6
JMR310U-10N-1700H7	17	10	14	6
JMR310U-10N-1800H7	18	10	14	6
JMR310U-12N-1900H7	19	12	14.5	6
JMR310U-12N-2000H7	20	12	14.5	6
JMR310U-12N-2100H7	21	12	14.5	6
JMR310U-14N-2200H7	22	14	15.5	6
JMR310U-14N-2300H7	23	14	15.5	6
JMR310U-16N-2400H7	24	16	16	6
JMR310U-16N-2500H7	25	16	16	6
JMR310U-16N-2600H7	26	16	16	6
JMR310U-16N-2700H7	27	16	16	6
JMR310U-16N-2800H7	28	16	16	6
JMR310U-16N-2900H7	29	16	16	6
JMR310U-20N-3000H7	30	20	17	8
JMR310U-20N-3100H7	31	20	17	8
JMR310U-20N-3200H7	32	20	17	8
JMR310U-20N-3300H7	33	20	17	8
JMR310U-20N-3400H7	34	20	17	8
JMR310U-20N-3500H7	35	20	17	8
JMR310U-20N-3600H7	36	20	17	8
JMR310U-20N-3700H7	37	20	17	8
JMR310U-20N-3800H7	38	20	17	8
JMR310U-20N-3900H7	39	20	17	8
JMR310U-24N-4000H7	40	24	19	8
JMR310U-24N-4100H7	41	24	19	8
JMR310U-24N-4200H7	42	24	19	8
JMR310U-24N-4300H7	43	24	19	8
JMR310U-24N-4400H7	44	24	19	8
JMR310U-24N-4500H7	45	24	19	8
JMR310U-24N-4600H7	46	24	19	8
JMR310U-24N-4700H7	47	24	19	8
JMR310U-24N-4800H7	48	24	19	8
JMR310U-24N-4900H7	49	24	19	8
JMR310U-24N-5000H7	50	24	19	8

JMS – Modular Reamer Shank

Key data: DIN 6535HA



Ordering code	Dimension (mm)				
	DC	JTS	SD	L2	OAL
JMS-10N-0490-A20-ST10	15.6-18.59	10	20	49	99
JMS-12N-0685-A20-ST10	18.6-21.29	12	20	68.5	118.5
JMS-14N-0695-A20-ST10	21.30-23.99	14	20	69.5	119.5
JMS-16N-0900-A25-ST10	24.00-29.99	16	25	90	150
JMS-20N-0890-A25-ST10	30.00-39.99	20	25	89	149
JMS-24N-1070-A32-ST10	40.00-50.70	24	32	107	167

Notes

Notes: ① For requirements outside the catalogue range (special diameters, length-to-diameter ratios, etc.), non-standard custom tools are available.

② For cutting data, refer to the last page of this section of the catalogue.

③ HD: high-performance tool

Translator's note: for JMR310U-10N-1600H7 the original table prints JTS interface size "6", whereas the ordering code indicates 10; the value is reproduced as printed.

Cutting Data

Material group			Material	Strength / hardness [N/mm²] [HRC]	Cutting speed Vc (m/min)	Feed per revolution fr [mm/rev] by diameter (mm)				Machining allowance (on diameter)
						16-25	26-35	36-45	45-50	
P	P1	P1.1	Non-alloy structural steel, free-cutting structural steel, case-hardening steel and quenched & tempered steel	< 700	72	0.66	0.66	0.88	0.88	0.3
		P1.2	Non-alloy structural steel, free-cutting structural steel, case-hardening steel and quenched & tempered steel	< 1200	72	0.66	0.66	0.88	0.88	0.3
	P2	P2.1	Alloy nitriding steel, case-hardening steel and quenched & tempered steel	< 900	72	0.66	0.66	0.88	0.88	0.3
		P2.2	Alloy nitriding steel, case-hardening steel and quenched & tempered steel	< 1400	72	0.66	0.66	0.88	0.88	0.3
	P3	P3.1	Tool steel, bearing steel, spring steel and high-speed steel	< 900	72	0.66	0.66	0.88	0.88	0.3
		P3.2	Tool steel, bearing steel, spring steel and high-speed steel	< 1500	72	0.66	0.66	0.88	0.88	0.3
	P4	P4.1	Ferritic and martensitic stainless steel		33	0.45	0.45	0.6	0.6	0.3
	P5	P5.1	Cast steel		33	0.45	0.45	0.6	0.6	0.3
	P6	P6.1	Ferritic and martensitic stainless steel							
M	M1	M1.1	Austenitic stainless steel	< 700	24	0.45	0.45	0.6	0.6	0.3
		M1.2	Ferritic/austenitic (duplex) stainless steel	< 1000	33	0.45	0.45	0.6	0.6	0.3
	M2	M2.1	Austenitic stainless steel	< 700	33	0.45	0.45	0.6	0.6	0.3
	M3	M3.1	Ferritic/austenitic (duplex) stainless steel	< 1000	33	0.45	0.45	0.6	0.6	0.3
K	K1	K1.1	Lamellar graphite cast iron (grey cast iron), GJL	< 300	96	0.7	0.7	0.9	0.9	0.3
	K2	K2.1	Spheroidal graphite (ductile) cast iron, GJS	< 500	96	0.7	0.7	0.9	0.9	0.3
		K2.2	Spheroidal graphite (ductile) cast iron, GJS	500-800	80	0.6	0.6	0.8	0.8	0.3
		K2.3	Spheroidal graphite (ductile) cast iron, GJS	>800	80	0.6	0.6	0.8	0.8	0.3
	K3	K3.1	Vermicular graphite (compacted graphite) cast iron, GJV; malleable cast iron, GJM	< 500	80	0.6	0.6	0.8	0.8	0.3
		K3.2	Vermicular graphite (compacted graphite) cast iron, GJV; malleable cast iron, GJM	> 500	80	0.6	0.6	0.8	0.8	0.3

- When machining with external coolant, reduce the feed per revolution if necessary to ensure smooth chip evacuation

Various non-standard solutions available

Scope of non-standard customization

- Non-standard customization of other diameters and tolerances

Contact us for customized tooling (“Custom”).

Contact

Suzhou Yongpu Precision Technology Co., Ltd.

Solid Round Tools | One-stop Machining Solution

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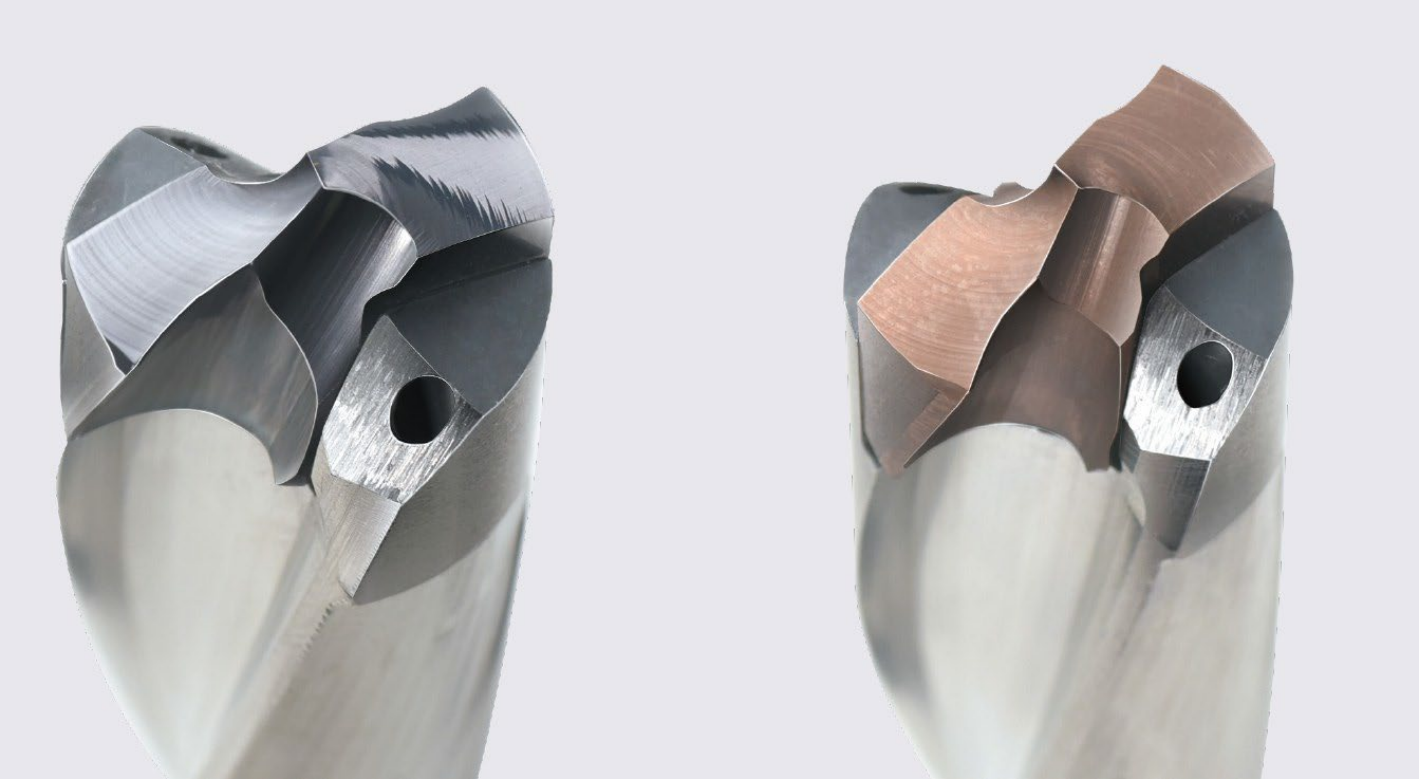
Suzhou Yongpu Precision Technology Co., Ltd.

Solid Round Tools | One-stop Machining Solution

YPP IM® / YPP Drill®

MS Series

Modular Exchangeable-Tip Drill (crown drill)



Product line	MS / MD series modular exchangeable-tip drills (crown drills)
Components	MS and MD drill tips (inserts); MS drill bodies 1.5×D, 3×D, 5×D, 7×D, 8.5×D, 10×D, 12×D
Diameter range	Ø12.50 – Ø52.00 mm

English translation of the Chinese-language brochure published by Suzhou Yongpu Precision Technology Co., Ltd. Product names, model codes, trademarks, numbers and units are reproduced exactly as printed in the original.

Solid Round Tools | One-stop General Service Provider

One-stop service | Non-standard customization | Backed by more than a century of technical expertise

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Company Introduction – About Yongpu

Suzhou Yongpu Precision Technology Co., Ltd. was established in 2013 and is a high-tech enterprise specializing in the research, development, production and sales of high-precision solid carbide round tools. It provides one-stop services for the entire industry chain of round-tool blanks, high-precision cutting tools and coatings. There are two production units, in Wujiang, Suzhou and in Chuzhou, Anhui, with professional technical teams, advanced production equipment and a comprehensive quality-control system. With Sandvik's technical support and a complete industrial chain, we aim to be a trustworthy one-stop general service provider of solid carbide round tools for our customers.

(English text as printed bilingually in the original brochure.)

Round Tools – One-stop General Service Provider | One-stop service | Non-standard customization | Backed by more than a century of technical expertise (100+)

Product Introduction



5 highlights that empower product quality

The MS and MD series modular exchangeable-tip drills are the first product series developed in-house by Yongpu after it joined Sandvik Coromant. They have been developed specifically for special application scenarios.

- Longer holder overhang to meet the requirements of deeper holes
- Steel drill body combined with a carbide tip for lower tooling cost
- Robust insert-seat design for higher accuracy, safety and stability in drilling applications
- Dedicated insert geometries and grade combinations ensure good chip control and excellent hole quality
- Drill-point design maintains hole-position accuracy even with long overhangs

Product Code (Ordering Code)

MS modular exchangeable-tip drill – drill body

MS	1600/1649	R3	B	20
1	2	3	4	5

Pos.	Code	Meaning
1	MS	MS series modular crown drill
2	1600/1649	Drill-tip diameter range (mm) – D: 16–16.49
3	R3	Effective drilling depth (mm) – L2: R3 = 3×Dc
4	B	Shank interface: DIN 6535 HB cylindrical shank with clamping flat
5	20	Shank diameter (mm) – Ds

MS modular exchangeable-tip drill – drill tip (insert)

MS	100	P	1600	A40	H
1	2	3	4	5	6

Pos.	Code	Meaning
1	MS	MS series modular exchangeable-tip drill

Pos.	Code	Meaning
2	100	Product series
3	P	Workpiece material: ISO P
4	1600	Drill diameter (mm) – D
5	A40	Drill-tip grade
6	H	Coating: DH

MD modular exchangeable-tip drill – drill tip (insert)

MD	A	2	10	P	1250	A46	H
1	2	3	4	5	6	7	8

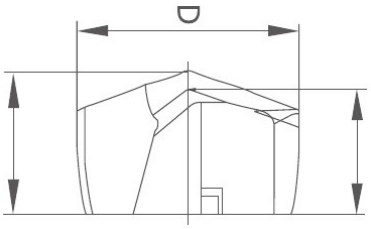
Pos.	Code	Meaning
1	MD	MD series modular exchangeable-tip drill
2	A	Cutting-edge type: A, R or S
3	2	2 cutting edges
4	10	10 = single margin; 20 = double margin
5	P	Workpiece material: ISO P
6	1250	Drill diameter (mm) – D
7	A46	Drill-tip grade
8	H	Coating: DH

Selection Guide

Modular exchangeable-tip drill	Series	P	M	K	N	S	H	Hole tolerance	Standard range			Internal coolant	Coating		Pilot hole	Blind hole	Through hole	Stacked plates	Exit on inclined surface	Entry on inclined surface	Cross holes
									D min (mm)	D max (mm)	Drilling depth L/D		DH	DP							
Drill tips	MS100P	●	○	●			○	IT9–IT11	12.50	52.00	–		●		○	●	●	○		○	
	MS366P	●	○	●			○				–		●		○	●	●	○		○	
	MS366M		●			○					–			●	○	●	●	○		○	
	MDR210P	●	○	●			○				–		●		○	●	●	○		○	
	MDS210P	●	○	●			○				–		●		○	●	●	○		○	
	MDA210K	○		●							–		●		○	●	●	○		○	
	MDR210M		●			○					–			●	○	●	●	○		○	
	MDR210S		○			●					–			●	○	●	●	○		○	
	MDA220N				●						–				○	●	●	○		○	
Drill bodies											1.5×D	●									
											3×D	●									
											5×D	●									
											7×D	●									
											8.5×D	●									
											10×D	●									
											12×D	●									

General drilling series. ● = preferred / suitable; ○ = alternative / fair.

MS Modular Exchangeable-Tip Drill – Drill Tips (Inserts), metric



D = drill diameter; left dimension = L new value, right dimension = L minimum value (tip length)

D (mm)		L (mm)		Seat size
Min.	Max.	New value	Minimum value	
12.50	13.50	9.6	8.4	C
13.51	14.50	10.1	8.8	B
14.51	15.99	10.6	9.3	A
16.00	18.00	11.6	10.2	1
18.01	19.99	12.6	11.1	2
20.00	22.00	13.6	12.0	3
22.01	24.00	14.6	13.0	4
24.01	26.00	15.6	13.8	5
26.01	28.00	16.6	14.7	6
28.01	30.00	17.6	15.6	7
30.01	32.00	18.6	16.5	8
32.01	36.00	20.6	18.3	9
36.01	40.00	22.6	20.1	10
40.01	45.00	26.2	23.2	11
45.01	52.00	26.5	23.5	12

m7 cutting-diameter tolerance table

Diameter range (mm)	m7 tolerance (mm)
12.5–18	+0.007/+0.025
18.01–30	+0.008/+0.029
30.01–50	+0.009/+0.034
50.01–52	+0.011/+0.041

Series	Ordering code	Margin	Point angle	P	M	K	N	S	H	D (mm)	Tolerance
MS100P series – □□□□ = D (diameter)	MS100P.□□□□-A46H	Single margin	140°	●	○	●			○	12.50–52.00	+0.005/-0.015
MS366P series – □□□□ = D (diameter)	MS366P.□□□□-A46H	Single margin	140°	●	○	●			○	12.50–52.00	+0.005/-0.015
MS366M series – □□□□ = D (diameter)	MS366M.□□□□-A46P	Single margin	140°		●			○		12.50–52.00	+0.005/-0.015
MDR210P series – □□□□ = D (diameter)	MDR210P.□□□□-A46H	Single margin	135°	●	○	●			○	12.50–52.00	m7
MDS210P series – □□□□ = D (diameter)	MDS210P.□□□□-A46H	Single margin	135°	●	○	●			○	12.50–52.00	m7
MDA210K series – □□□□ = D (diameter)	MDA210K.□□□□-A46H	Single margin	135°	○		●				12.50–52.00	m7
MDR210M series – □□□□ = D (diameter)	MDR210M.□□□□-A46P	Single margin	135°		●			○		12.50–52.00	m7
MDR210S series – □□□□ = D (diameter)	MDR210S.□□□□-A46P	Single margin	135°		○			●		12.50–52.00	m7
MDA220N series – □□□□ = D (diameter)	MDA220N.□□□□-A46	Double margin	135°				●			12.50–52.00	m7

● = first choice; ○ = suitable (ISO material groups as marked on each insert panel). □□□□ = four-digit drill diameter code.

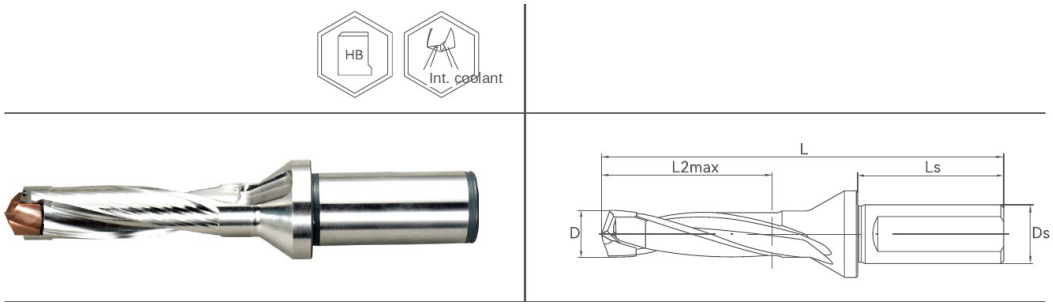
Ordering example (left page): MS366P insert with D = 19.3 mm → ordering code MS366P.1930-A46H.

Ordering example (right page): MS366S insert with D = 19.3 mm → ordering code MS366S.1930-A46P.

Translator's note: "MS366S" in the second ordering example does not appear in the insert range (MS366M is listed); reproduced as printed. In this 2026-01 edition the MDR210M panel heading is printed "MDR120M series"; translated as MDR210M (the ordering code on the same panel reads MDR210M).

1.5×D Drill Body – MS Modular Exchangeable-Tip Drill (metric)

Key data: HB shank (DIN 6535 HB, cylindrical with clamping flat) | Internal coolant



D = drill diameter; L = overall length; L2max = maximum drilling depth; Ls = shank length; Ds = shank diameter

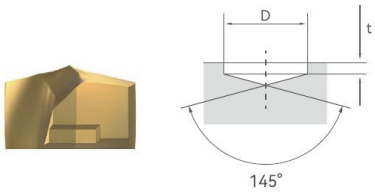
Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS1250/1350-R1.5-B20	12.50-13.50	108.5	21	50	20	C	M3.0/M2.5*14	T6*156
MS1351/1450-R1.5-B20	13.51-14.50	112.5	22	50	20	B	M3.0/M2.5*14	T6*156
MS1451/1599-R1.5-B20	14.51-15.99	114.5	24	50	20	A	M3.0/M2.5*14	T6*156
MS1600/1800-R1.5-B20	16.00-18.00	119.0	27	50	20	1	M3.5/M2.5*16	1.5*185
MS1801/1999-R1.5-B25	18.01-19.99	132.0	30	56	25	2	M4.0/M2.5*19	2.0*210
MS1801/1999-R1.5-B25-M3	18.01-19.99	132.0	30	56	25	2	M4.0/M3.0*19	2.0*210
MS2000/2200-R1.5-B25	20.00-22.00	138.0	33	56	25	3	M4.0/M3.0*19	2.0*210
MS2201/2400-R1.5-B25	22.01-24.00	144.0	36	56	25	4	M4.0/M3.0*19	2.0*210
MS2401/2600-R1.5-B32	24.01-26.00	160.0	39	60	32	5	M5.0/M4.0*23	2.5*240
MS2601/2800-R1.5-B32	26.01-28.00	165.0	42	60	32	6	M5.0/M4.0*23	2.5*240
MS2801/3000-R1.5-B32	28.01-30.00	171.0	45	60	32	7	M6.0/M5.0*28	3.0*265
MS3001/3200-R1.5-B32	30.01-32.00	175.0	48	60	32	8	M6.0/M5.0*28	3.0*265
MS3201/3600-R1.5-B40	32.01-36.00	190.0	54	70	40	9	M6.0/M6.0*32	3.0*265
MS3601/4000-R1.5-B40	36.01-40.00	196.0	60	70	40	10	M6.0/M6.0*32	3.0*265
MS4001/4500-R1.5-B40	40.01-45.00	213.0	68	70	40	11	M6.0/M6.0*32	3.0*265
MS4501/5200-R1.5-B40	45.01-52.00	220.0	78	70	50	12	M6.0/M6.0*32	3.0*265

Pilot-hole drill tip – application data

For uneven workpiece surfaces, or for hole depths over 7D, pre-machining a pilot hole is recommended.

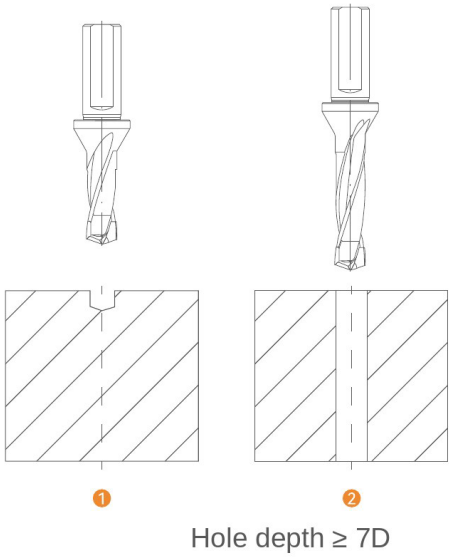
Pilot-hole recommendation

Drill diameter (mm)	Pilot-hole depth (t)
12.50–52.00	0.5×D



Pilot-hole tip: point angle 145°, pilot-hole depth t

Pilot-drilling strategy



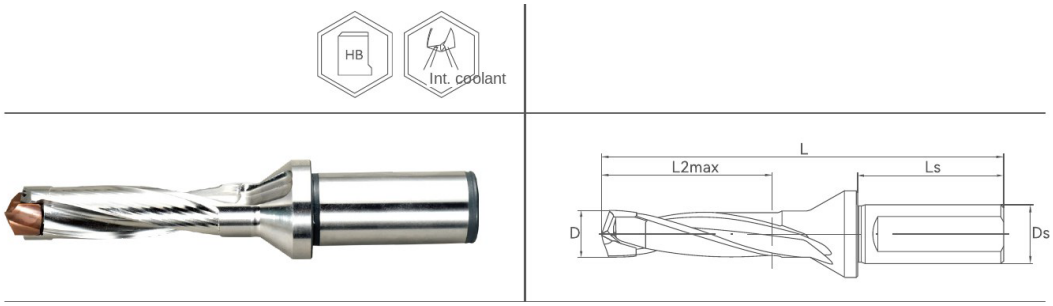
① pilot hole ② through drilling; hole depth ≥ 7D

Machining features

- Drill the pilot hole with the 1.5×D drill body
- Then drill through with a drill body of 7×D or longer
- Make sure the point angle matches that of the pilot insert (145°)

3×D Drill Body – MS Modular Exchangeable-Tip Drill (metric)

Key data: HB shank (DIN 6535 HB, cylindrical with clamping flat) | Internal coolant



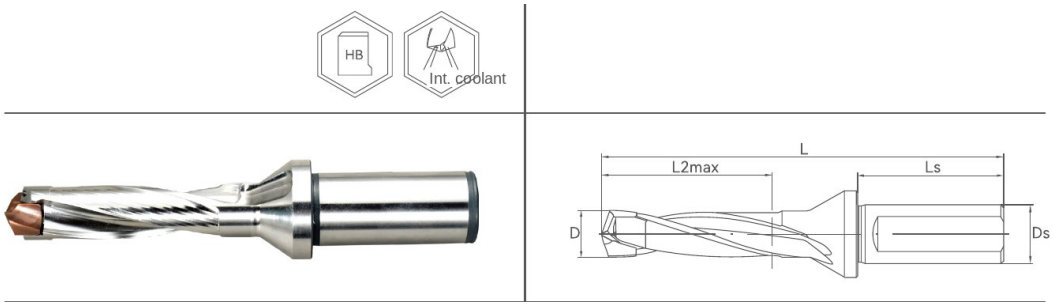
D = drill diameter; L = overall length; L2max = maximum drilling depth; Ls = shank length; Ds = shank diameter

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS1250/1300-R3-B20	12.50-13.00	127.5	39	50	20	C	M3.0/M2.5*14	T6*156
MS1301/1350-R3-B20	13.01-13.50	130	41	50	20	C	M3.0/M2.5*14	T6*156
MS1351/1400-R3-B20	13.51-14.00	132.5	42	50	20	B	M3.0/M2.5*14	T6*156
MS1401/1450-R3-B20	14.01-14.50	135	44	50	20	B	M3.0/M2.5*14	T6*156
MS1451/1499-R3-B20	14.51-14.99	136.5	45	50	20	A	M3.0/M2.5*14	T6*156
MS1500/1549-R3-B20	15.00-15.49	139	47	50	20	A	M3.0/M2.5*14	T6*156
MS1550/1599-R3-B20	15.50-15.99	141.5	48	50	20	A	M3.0/M2.5*14	T6*156
MS1600/1649-R3-B20	16.00-16.49	143	50	50	20	1	M3.5/M2.5*16	1.5*185
MS1650/1699-R3-B20	16.50-16.99	145.5	51	50	20	1	M3.5/M2.5*16	1.5*185
MS1700/1749-R3-B20	17.00-17.49	148	53	50	20	1	M3.5/M2.5*16	1.5*185
MS1750/1800-R3-B20	17.50-18.00	150	54	50	20	1	M3.5/M2.5*16	1.5*185
MS1801/1849-R3-B25	18.01-18.49	159	56	56	25	2	M4.0/M2.5*19	2.0*210
MS1801/1849-R3-B25-M3	18.01-18.49	159	56	56	25	2	M4.0/M3.0*19	2.0*210
MS1850/1899-R3-B25	18.50-18.99	161.5	57	56	25	2	M4.0/M2.5*19	2.0*210
MS1850/1899-R3-B25-M3	18.50-18.99	161.5	57	56	25	2	M4.0/M3.0*19	2.0*210
MS1900/1949-R3-B25	19.00-19.49	164	59	56	25	2	M4.0/M2.5*19	2.0*210
MS1900/1949-R3-B25-M3	19.00-19.49	164	59	56	25	2	M4.0/M3.0*19	2.0*210
MS1950/1999-R3-B25	19.50-19.99	165.5	60	56	25	2	M4.0/M2.5*19	2.0*210
MS1950/1999-R3-B25-M3	19.50-19.99	165.5	60	56	25	2	M4.0/M3.0*19	2.0*210
MS2000/2049-R3-B25	20.00-20.49	168	62	56	25	3	M4.0/M3.0*19	2.0*210
MS2050/2099-R3-B25	20.50-20.99	170.5	63	56	25	3	M4.0/M3.0*19	2.0*210
MS2100/2149-R3-B25	21.00-21.49	172	65	56	25	3	M4.0/M3.0*19	2.0*210
MS2150/2200-R3-B25	21.50-22.00	174.5	66	56	25	3	M4.0/M3.0*19	2.0*210
MS2201/2249-R3-B25	22.01-22.49	177	68	56	25	4	M4.0/M3.0*19	2.0*210
MS2250/2299-R3-B25	22.50-22.99	179	69	56	25	4	M4.0/M3.0*19	2.0*210
MS2300/2349-R3-B25	23.00-23.49	181	71	56	25	4	M4.0/M3.0*19	2.0*210
MS2350/2400-R3-B25	23.50-24.00	183.5	72	56	25	4	M4.0/M3.0*19	2.0*210
MS2401/2449-R3-B32	24.01-24.49	196	74	60	32	5	M5.0/M4.0*23	2.5*240
MS2450/2499-R3-B32	24.50-24.99	197.5	75	60	32	5	M5.0/M4.0*23	2.5*240
MS2500/2549-R3-B32	25.00-25.49	200	77	60	32	5	M5.0/M4.0*23	2.5*240
MS2550/2600-R3-B32	25.50-26.00	202.5	78	60	32	5	M5.0/M4.0*23	2.5*240
MS2601/2649-R3-B32	26.01-26.49	204	80	60	32	6	M5.0/M4.0*23	2.5*240
MS2650/2699-R3-B32	26.50-26.99	206.5	81	60	32	6	M5.0/M4.0*23	2.5*240
MS2700/2749-R3-B32	27.00-27.49	209	83	60	32	6	M5.0/M4.0*23	2.5*240
MS2750/2800-R3-B32	27.50-28.00	211	84	60	32	6	M5.0/M4.0*23	2.5*240
MS2801/2849-R3-B32	28.01-28.49	213	86	60	32	7	M6.0/M5.0*28	3.0*265
MS2850/2899-R3-B32	28.50-28.99	215.5	87	60	32	7	M6.0/M5.0*28	3.0*265
MS2900/2949-R3-B32	29.00-29.49	218	89	60	32	7	M6.0/M5.0*28	3.0*265
MS2950/3000-R3-B32	29.50-30.00	219.5	90	60	32	7	M6.0/M5.0*28	3.0*265
MS3001/3049-R3-B32	30.01-30.49	220	92	60	32	8	M6.0/M5.0*28	3.0*265
MS3050/3099-R3-B32	30.50-30.99	221.5	93	60	32	8	M6.0/M5.0*28	3.0*265
MS3100/3149-R3-B32	31.00-31.49	223	95	60	32	8	M6.0/M5.0*28	3.0*265
MS3150/3200-R3-B32	31.50-32.00	224.5	96	60	32	8	M6.0/M5.0*28	3.0*265
MS3201/3299-R3-B40	32.01-32.99	238	99	70	40	9	M6.0/M6.0*32	3.0*265
MS3300/3399-R3-B40	33.00-33.99	241	102	70	40	9	M6.0/M6.0*32	3.0*265
MS3400/3499-R3-B40	34.00-34.99	244	105	70	40	9	M6.0/M6.0*32	3.0*265
MS3500/3600-R3-B40	35.00-36.00	247	108	70	40	9	M6.0/M6.0*32	3.0*265
MS3601/3699-R3-B40	36.01-36.99	250	111	70	40	10	M6.0/M6.0*32	3.0*265
MS3700/3799-R3-B40	37.00-37.99	253	114	70	40	10	M6.0/M6.0*32	3.0*265
MS3800/3899-R3-B40	38.00-38.99	256	117	70	40	10	M6.0/M6.0*32	3.0*265
MS3900/4000-R3-B40	39.00-40.00	259	120	70	40	10	M6.0/M6.0*32	3.0*265
MS4001/4099-R3-B40	40.01-40.99	273	123	70	40	11	M6.0/M6.0*32	3.0*330
MS4100/4199-R3-B40	41.00-41.99	276	126	70	40	11	M6.0/M6.0*32	3.0*330
MS4200/4299-R3-B40	42.00-42.99	279	129	70	40	11	M6.0/M6.0*32	3.0*330
MS4300/4399-R3-B40	43.00-43.99	282	132	70	40	11	M6.0/M6.0*32	3.0*330
MS4400/4500-R3-B40	44.00-45.00	285	135	70	40	11	M6.0/M6.0*32	3.0*330
MS4501/4599-R3-B50	45.01-45.99	288	138	70	50	12	M6.0/M6.0*32	3.0*330
MS4600/4699-R3-B50	46.00-46.99	291	141	70	50	12	M6.0/M6.0*32	3.0*330

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS4700/4799-R3-B50	47.00-47.99	294	144	70	50	12	M6.0/M6.0*32	3.0*330
MS4800/4899-R3-B50	48.00-48.99	297	147	70	50	12	M6.0/M6.0*32	3.0*330
MS4900/4999-R3-B50	49.00-49.99	300	150	70	50	12	M6.0/M6.0*32	3.0*330
MS5000/5099-R3-B50	50.00-50.99	303	153	70	50	12	M6.0/M6.0*32	3.0*330
MS5100/5200-R3-B50	51.00-52.00	306	156	70	50	12	M6.0/M6.0*32	3.0*330

5×D Drill Body – MS Modular Exchangeable-Tip Drill (metric)

Key data: HB shank (DIN 6535 HB, cylindrical with clamping flat) | Internal coolant



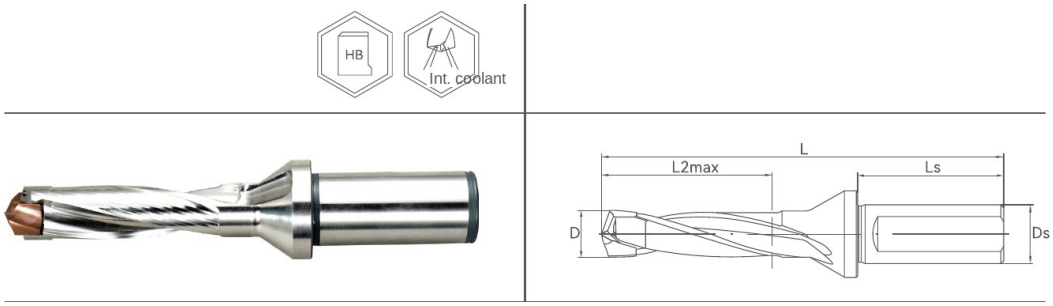
D = drill diameter; L = overall length; L2max = maximum drilling depth; Ls = shank length; Ds = shank diameter

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS1250/1300-R5-B20	12.50-13.00	152.5	65	50	20	C	M3.0/M2.5*14	T6*156
MS1301/1350-R5-B20	13.01-13.50	156	68	50	20	C	M3.0/M2.5*14	T6*156
MS1351/1400-R5-B20	13.51-14.00	159.5	70	50	20	B	M3.0/M2.5*14	T6*188
MS1401/1450-R5-B20	14.01-14.50	163	73	50	20	B	M3.0/M2.5*14	T6*188
MS1451/1499-R5-B20	14.51-14.99	165.5	75	50	20	A	M3.0/M2.5*14	T6*188
MS1500/1549-R5-B20	15.00-15.49	169	78	50	20	A	M3.0/M2.5*14	T6*188
MS1550/1599-R5-B20	15.50-15.99	172.5	80	50	20	A	M3.0/M2.5*14	T6*188
MS1600/1649-R5-B20	16.00-16.49	175	83	50	20	1	M3.5/M2.5*16	1.5*185
MS1650/1699-R5-B20	16.50-16.99	178.5	85	50	20	1	M3.5/M2.5*16	1.5*185
MS1700/1749-R5-B20	17.00-17.49	182	88	50	20	1	M3.5/M2.5*16	1.5*185
MS1750/1800-R5-B20	17.50-18.00	185	90	50	20	1	M3.5/M2.5*16	1.5*185
MS1801/1849-R5-B25	18.01-18.49	195	93	56	25	2	M4.0/M2.5*19	2.0*210
MS1801/1849-R5-B25-M3	18.01-18.49	195	93	56	25	2	M4.0/M3.0*19	2.0*210
MS1850/1899-R5-B25	18.50-18.99	198.5	95	56	25	2	M4.0/M2.5*19	2.0*210
MS1850/1899-R5-B25-M3	18.50-18.99	198.5	95	56	25	2	M4.0/M3.0*19	2.0*210
MS1900/1949-R5-B25	19.00-19.49	202	98	56	25	2	M4.0/M2.5*19	2.0*210
MS1900/1949-R5-B25-M3	19.00-19.49	202	98	56	25	2	M4.0/M3.0*19	2.0*210
MS1950/1999-R5-B25	19.50-19.99	204.5	100	56	25	2	M4.0/M2.5*19	2.0*210
MS1950/1999-R5-B25-M3	19.50-19.99	204.5	100	56	25	2	M4.0/M3.0*19	2.0*210
MS2000/2049-R5-B25	20.00-20.49	208	103	56	25	3	M4.0/M3.0*19	2.0*260
MS2050/2099-R5-B25	20.50-20.99	211.5	105	56	25	3	M4.0/M3.0*19	2.0*260
MS2100/2149-R5-B25	21.00-21.49	214	108	56	25	3	M4.0/M3.0*19	2.0*260
MS2150/2200-R5-B25	21.50-22.00	217.5	110	56	25	3	M4.0/M3.0*19	2.0*260
MS2201/2249-R5-B25	22.01-22.49	221	113	56	25	4	M4.0/M3.0*19	2.0*260
MS2250/2299-R5-B25	22.50-22.99	224	115	56	25	4	M4.0/M3.0*19	2.0*260
MS2300/2349-R5-B25	23.00-23.49	227	118	56	25	4	M4.0/M3.0*19	2.0*260
MS2350/2400-R5-B25	23.50-24.00	230.5	120	56	25	4	M4.0/M3.0*19	2.0*260
MS2401/2449-R5-B32	24.01-24.49	244	123	60	32	5	M5.0/M4.0*23	2.5*295
MS2450/2499-R5-B32	24.50-24.99	246.5	125	60	32	5	M5.0/M4.0*23	2.5*295
MS2500/2549-R5-B32	25.00-25.49	250	128	60	32	5	M5.0/M4.0*23	2.5*295
MS2550/2600-R5-B32	25.50-26.00	253.5	130	60	32	5	M5.0/M4.0*23	2.5*295
MS2601/2649-R5-B32	26.01-26.49	256	133	60	32	6	M5.0/M4.0*23	2.5*295
MS2650/2699-R5-B32	26.50-26.99	259.5	135	60	32	6	M5.0/M4.0*23	2.5*295
MS2700/2749-R5-B32	27.00-27.49	263	138	60	32	6	M5.0/M4.0*23	2.5*295
MS2750/2800-R5-B32	27.50-28.00	266	140	60	32	6	M5.0/M4.0*23	2.5*295
MS2801/2849-R5-B32	28.01-28.49	269	143	60	32	7	M6.0/M5.0*28	3.0*330
MS2850/2899-R5-B32	28.50-28.99	272.5	145	60	32	7	M6.0/M5.0*28	3.0*330
MS2900/2949-R5-B32	29.00-29.49	276	148	60	32	7	M6.0/M5.0*28	3.0*330
MS2950/3000-R5-B32	29.50-30.00	278.5	150	60	32	7	M6.0/M5.0*28	3.0*330
MS3001/3049-R5-B32	30.01-30.49	280	153	60	32	8	M6.0/M5.0*28	3.0*330
MS3050/3099-R5-B32	30.50-30.99	282.5	155	60	32	8	M6.0/M5.0*28	3.0*330
MS3100/3149-R5-B32	31.00-31.49	285	158	60	32	8	M6.0/M5.0*28	3.0*330
MS3150/3200-R5-B32	31.50-32.00	287.5	160	60	32	8	M6.0/M5.0*28	3.0*330
MS3201/3299-R5-B40	32.01-32.99	302	165	70	40	9	M6.0/M6.0*32	3.0*330
MS3300/3399-R5-B40	33.00-33.99	307	170	70	40	9	M6.0/M6.0*32	3.0*330
MS3400/3499-R5-B40	34.00-34.99	312	175	70	40	9	M6.0/M6.0*32	3.0*330
MS3500/3600-R5-B40	35.00-36.00	317	180	70	40	9	M6.0/M6.0*32	3.0*330
MS3601/3699-R5-B40	36.01-36.99	322	185	70	40	10	M6.0/M6.0*32	3.0*330
MS3700/3799-R5-B40	37.00-37.99	327	190	70	40	10	M6.0/M6.0*32	3.0*330
MS3800/3899-R5-B40	38.00-38.99	332	195	70	40	10	M6.0/M6.0*32	3.0*330
MS3900/4000-R5-B40	39.00-40.00	337	200	70	40	10	M6.0/M6.0*32	3.0*330
MS4001/4099-R5-B40	40.01-40.99	353	205	70	40	11	M6.0/M6.0*32	3.0*439
MS4100/4199-R5-B40	41.00-41.99	358	210	70	40	11	M6.0/M6.0*32	3.0*439
MS4200/4299-R5-B40	42.00-42.99	363	215	70	40	11	M6.0/M6.0*32	3.0*439
MS4300/4399-R5-B40	43.00-43.99	368	220	70	40	11	M6.0/M6.0*32	3.0*439
MS4400/4500-R5-B40	44.00-45.00	373	225	70	40	11	M6.0/M6.0*32	3.0*439
MS4501/4599-R5-B50	45.01-45.99	378	230	70	50	12	M6.0/M6.0*32	3.0*439
MS4600/4699-R5-B50	46.00-46.99	383	235	70	50	12	M6.0/M6.0*32	3.0*439

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS4700/4799-R5-B50	47.00-47.99	388	240	70	50	12	M6.0/M6.0*32	3.0*439
MS4800/4899-R5-B50	48.00-48.99	393	245	70	50	12	M6.0/M6.0*32	3.0*439
MS4900/4999-R5-B50	49.00-49.99	398	250	70	50	12	M6.0/M6.0*32	3.0*439
MS5000/5099-R5-B50	50.00-50.99	403	255	70	50	12	M6.0/M6.0*32	3.0*439
MS5100/5200-R5-B50	51.00-52.00	408	260	70	50	12	M6.0/M6.0*32	3.0*439

7×D Drill Body – MS Modular Exchangeable-Tip Drill (metric)

Key data: HB shank (DIN 6535 HB, cylindrical with clamping flat) | Internal coolant



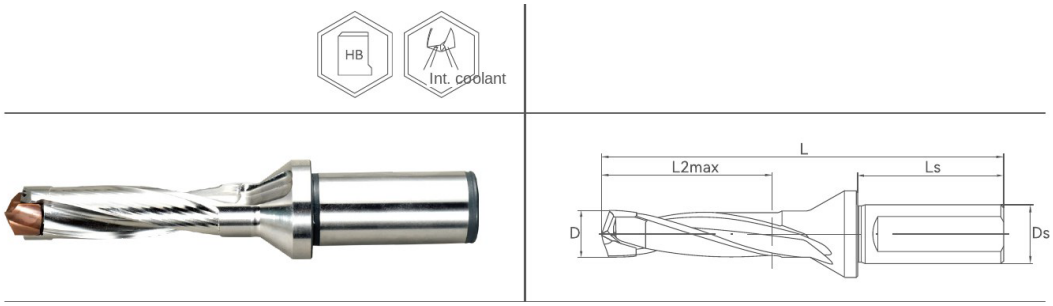
D = drill diameter; L = overall length; L2max = maximum drilling depth; Ls = shank length; Ds = shank diameter

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS1250/1300-R7-B20	12.50-13.00	177.5	91	50	20	C	M3.0/M2.5*14	T6*188
MS1301/1350-R7-B20	13.01-13.50	182	95	50	20	C	M3.0/M2.5*14	T6*188
MS1351/1400-R7-B20	13.51-14.00	186.5	98	50	20	B	M3.0/M2.5*14	T6*230
MS1401/1450-R7-B20	14.01-14.50	191	102	50	20	B	M3.0/M2.5*14	T6*230
MS1451/1499-R7-B20	14.51-14.99	194.5	105	50	20	A	M3.0/M2.5*14	T6*230
MS1500/1549-R7-B20	15.00-15.49	199	109	50	20	A	M3.0/M2.5*14	T6*230
MS1550/1599-R7-B20	15.50-15.99	203.5	112	50	20	A	M3.0/M2.5*14	T6*230
MS1600/1649-R7-B20	16.00-16.49	207	116	50	20	1	M3.5/M2.5*16	1.5*225
MS1650/1699-R7-B20	16.50-16.99	211.5	119	50	20	1	M3.5/M2.5*16	1.5*225
MS1700/1749-R7-B20	17.00-17.49	216	123	50	20	1	M3.5/M2.5*16	1.5*225
MS1750/1800-R7-B20	17.50-18.00	220	126	50	20	1	M3.5/M2.5*16	1.5*225
MS1801/1849-R7-B25	18.01-18.49	231	130	56	25	2	M4.0/M2.5*19	2.0*260
MS1801/1849-R7-B25-M3	18.01-18.49	231	130	56	25	2	M4.0/M3.0*19	2.0*260
MS1850/1899-R7-B25	18.50-18.99	235.5	133	56	25	2	M4.0/M2.5*19	2.0*260
MS1850/1899-R7-B25-M3	18.50-18.99	235.5	133	56	25	2	M4.0/M3.0*19	2.0*260
MS1900/1949-R7-B25	19.00-19.49	240	137	56	25	2	M4.0/M2.5*19	2.0*260
MS1900/1949-R7-B25-M3	19.00-19.49	240	137	56	25	2	M4.0/M3.0*19	2.0*260
MS1950/1999-R7-B25	19.50-19.99	243.5	140	56	25	2	M4.0/M2.5*19	2.0*260
MS1950/1999-R7-B25-M3	19.50-19.99	243.5	140	56	25	2	M4.0/M3.0*19	2.0*260
MS2000/2049-R7-B25	20.00-20.49	248	144	56	25	3	M4.0/M3.0*19	2.0*260
MS2050/2099-R7-B25	20.50-20.99	252.5	147	56	25	3	M4.0/M3.0*19	2.0*260
MS2100/2149-R7-B25	21.00-21.49	256	151	56	25	3	M4.0/M3.0*19	2.0*260
MS2150/2200-R7-B25	21.50-22.00	260.5	154	56	25	3	M4.0/M3.0*19	2.0*260
MS2201/2249-R7-B25	22.01-22.49	265	158	56	25	4	M4.0/M3.0*19	2.0*343
MS2250/2299-R7-B25	22.50-22.99	269	161	56	25	4	M4.0/M3.0*19	2.0*343
MS2300/2349-R7-B25	23.00-23.49	273	165	56	25	4	M4.0/M3.0*19	2.0*343
MS2350/2400-R7-B25	23.50-24.00	277.5	168	56	25	4	M4.0/M3.0*19	2.0*343
MS2401/2449-R7-B32	24.01-24.49	292	172	60	32	5	M5.0/M4.0*23	2.5*393
MS2450/2499-R7-B32	24.50-24.99	295.5	175	60	32	5	M5.0/M4.0*23	2.5*393
MS2500/2549-R7-B32	25.00-25.49	300	179	60	32	5	M5.0/M4.0*23	2.5*393
MS2550/2600-R7-B32	25.50-26.00	304.5	182	60	32	5	M5.0/M4.0*23	2.5*393
MS2601/2649-R7-B32	26.01-26.49	308	186	60	32	6	M5.0/M4.0*23	2.5*393
MS2650/2699-R7-B32	26.50-26.99	312.5	189	60	32	6	M5.0/M4.0*23	2.5*393
MS2700/2749-R7-B32	27.00-27.49	317	193	60	32	6	M5.0/M4.0*23	2.5*393
MS2750/2800-R7-B32	27.50-28.00	321	196	60	32	6	M5.0/M4.0*23	2.5*393
MS2801/2849-R7-B32	28.01-28.49	325	200	60	32	7	M6.0/M5.0*28	3.0*439
MS2850/2899-R7-B32	28.50-28.99	329.5	203	60	32	7	M6.0/M5.0*28	3.0*439
MS2900/2949-R7-B32	29.00-29.49	334	207	60	32	7	M6.0/M5.0*28	3.0*439
MS2950/3000-R7-B32	29.50-30.00	337.5	210	60	32	7	M6.0/M5.0*28	3.0*439
MS3001/3049-R7-B32	30.01-30.49	340	214	60	32	8	M6.0/M5.0*28	3.0*439
MS3050/3099-R7-B32	30.50-30.99	343.5	217	60	32	8	M6.0/M5.0*28	3.0*439
MS3100/3149-R7-B32	31.00-31.49	347	221	60	32	8	M6.0/M5.0*28	3.0*439
MS3150/3200-R7-B32	31.50-32.00	350.5	224	60	32	8	M6.0/M5.0*28	3.0*439
MS3201/3299-R7-B40	32.01-32.99	366	231	70	40	9	M6.0/M6.0*32	3.0*439
MS3300/3399-R7-B40	33.00-33.99	373	238	70	40	9	M6.0/M6.0*32	3.0*439
MS3400/3499-R7-B40	34.00-34.99	380	245	70	40	9	M6.0/M6.0*32	3.0*439
MS3500/3600-R7-B40	35.00-36.00	387	252	70	40	9	M6.0/M6.0*32	3.0*439
MS3601/3699-R7-B40	36.01-36.99	394	259	70	40	10	M6.0/M6.0*32	3.0*439
MS3700/3799-R7-B40	37.00-37.99	401	266	70	40	10	M6.0/M6.0*32	3.0*439
MS3800/3899-R7-B40	38.00-38.99	408	273	70	40	10	M6.0/M6.0*32	3.0*439
MS3900/4000-R7-B40	39.00-40.00	415	280	70	40	10	M6.0/M6.0*32	3.0*439
MS4001/4099-R7-B40	40.01-40.99	433	287	70	40	11	M6.0/M6.0*32	3.0*530
MS4100/4199-R7-B40	41.00-41.99	440	294	70	40	11	M6.0/M6.0*32	3.0*530
MS4200/4299-R7-B40	42.00-42.99	447	301	70	40	11	M6.0/M6.0*32	3.0*530
MS4300/4399-R7-B40	43.00-43.99	454	308	70	40	11	M6.0/M6.0*32	3.0*530
MS4400/4500-R7-B40	44.00-45.00	461	315	70	40	11	M6.0/M6.0*32	3.0*530
MS4501/4599-R7-B50	45.01-45.99	468	322	70	50	12	M6.0/M6.0*32	3.0*530
MS4600/4699-R7-B50	46.00-46.99	475	329	70	50	12	M6.0/M6.0*32	3.0*530

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS4700/4799-R7-B50	47.00-47.99	482	336	70	50	12	M6.0/M6.0*32	3.0*530
MS4800/4899-R7-B50	48.00-48.99	489	343	70	50	12	M6.0/M6.0*32	3.0*530
MS4900/4999-R7-B50	49.00-49.99	496	350	70	50	12	M6.0/M6.0*32	3.0*530
MS5000/5099-R7-B50	50.00-50.99	503	357	70	50	12	M6.0/M6.0*32	3.0*530
MS5100/5200-R7-B50	51.00-52.00	510	364	70	50	12	M6.0/M6.0*32	3.0*530

8.5×D Drill Body – MS Modular Exchangeable-Tip Drill (metric)

Key data: HB shank (DIN 6535 HB, cylindrical with clamping flat) | Internal coolant



D = drill diameter; L = overall length; L2max = maximum drilling depth; Ls = shank length; Ds = shank diameter

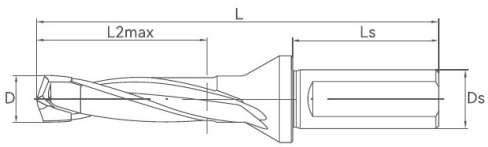
Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS1250/1300-R8.5-B20	12.50-13.00	196	111	50	20	C	M3.0/M2.5*14	T6*230
MS1301/1350-R8.5-B20	13.01-13.50	201.5	115	50	20	C	M3.0/M2.5*14	T6*230
MS1351/1400-R8.5-B20	13.51-14.00	207	119	50	20	B	M3.0/M2.5*14	T6*230
MS1401/1450-R8.5-B20	14.01-14.50	212	124	50	20	B	M3.0/M2.5*14	T6*230
MS1451/1499-R8.5-B20	14.51-14.99	216	128	50	20	A	M3.0/M2.5*14	T6*230
MS1500/1549-R8.5-B20	15.00-15.49	221.5	132	50	20	A	M3.0/M2.5*14	T6*230
MS1550/1599-R8.5-B20	15.50-15.99	227	136	50	20	A	M3.0/M2.5*14	T6*230
MS1600/1649-R8.5-B20	16.00-16.49	231	141	50	20	1	M3.5/M2.5*16	1.5*297
MS1650/1699-R8.5-B20	16.50-16.99	236	145	50	20	1	M3.5/M2.5*16	1.5*297
MS1700/1749-R8.5-B20	17.00-17.49	241.5	149	50	20	1	M3.5/M2.5*16	1.5*297
MS1750/1800-R8.5-B20	17.50-18.00	246.5	153	50	20	1	M3.5/M2.5*16	1.5*297
MS1801/1849-R8.5-B25	18.01-18.49	258	158	56	25	2	M4.0/M2.5*19	2.0*343
MS1801/1849-R8.5-B25-M3	18.01-18.49	258	158	56	25	2	M4.0/M3.0*19	2.0*343
MS1850/1899-R8.5-B25	18.50-18.99	263	162	56	25	2	M4.0/M2.5*19	2.0*343
MS1850/1899-R8.5-B25-M3	18.50-18.99	263	162	56	25	2	M4.0/M3.0*19	2.0*343
MS1900/1949-R8.5-B25	19.00-19.49	268.5	166	56	25	2	M4.0/M2.5*19	2.0*343
MS1900/1949-R8.5-B25-M3	19.00-19.49	268.5	166	56	25	2	M4.0/M3.0*19	2.0*343
MS1950/1999-R8.5-B25	19.50-19.99	273	170	56	25	2	M4.0/M2.5*19	2.0*343
MS1950/1999-R8.5-B25-M3	19.50-19.99	273	170	56	25	2	M4.0/M3.0*19	2.0*343
MS2000/2049-R8.5-B25	20.00-20.49	278	175	56	25	3	M4.0/M3.0*19	2.0*343
MS2050/2099-R8.5-B25	20.50-20.99	283	179	56	25	3	M4.0/M3.0*19	2.0*343
MS2100/2149-R8.5-B25	21.00-21.49	287.5	183	56	25	3	M4.0/M3.0*19	2.0*343
MS2150/2200-R8.5-B25	21.50-22.00	293	187	56	25	3	M4.0/M3.0*19	2.0*343
MS2201/2249-R8.5-B25	22.01-22.49	298	192	56	25	4	M4.0/M3.0*19	2.0*343
MS2250/2299-R8.5-B25	22.50-22.99	302.5	196	56	25	4	M4.0/M3.0*19	2.0*343
MS2300/2349-R8.5-B25	23.00-23.49	307.5	200	56	25	4	M4.0/M3.0*19	2.0*343
MS2350/2400-R8.5-B25	23.50-24.00	313	204	56	25	4	M4.0/M3.0*19	2.0*343
MS2401/2449-R8.5-B32	24.01-24.49	328	209	60	32	5	M5.0/M4.0*23	2.5*393
MS2450/2499-R8.5-B32	24.50-24.99	332	213	60	32	5	M5.0/M4.0*23	2.5*393
MS2500/2549-R8.5-B32	25.00-25.49	337.5	217	60	32	5	M5.0/M4.0*23	2.5*393
MS2550/2600-R8.5-B32	25.50-26.00	343	221	60	32	5	M5.0/M4.0*23	2.5*393
MS2601/2649-R8.5-B32	26.01-26.49	347	226	60	32	6	M5.0/M4.0*23	2.5*393
MS2650/2699-R8.5-B32	26.50-26.99	352	230	60	32	6	M5.0/M4.0*23	2.5*393
MS2700/2749-R8.5-B32	27.00-27.49	357.5	234	60	32	6	M5.0/M4.0*23	2.5*393
MS2750/2800-R8.5-B32	27.50-28.00	362	238	60	32	6	M5.0/M4.0*23	2.5*393
MS2801/2849-R8.5-B32	28.01-28.49	367	243	60	32	7	M6.0/M5.0*28	3.0*439
MS2850/2899-R8.5-B32	28.50-28.99	372	247	60	32	7	M6.0/M5.0*28	3.0*439
MS2900/2949-R8.5-B32	29.00-29.49	377.5	251	60	32	7	M6.0/M5.0*28	3.0*439
MS2950/3000-R8.5-B32	29.50-30.00	382	255	60	32	7	M6.0/M5.0*28	3.0*439
MS3001/3049-R8.5-B32	30.01-30.49	385	260	60	32	8	M6.0/M5.0*28	3.0*439
MS3050/3099-R8.5-B32	30.50-30.99	389	264	60	32	8	M6.0/M5.0*28	3.0*439
MS3100/3149-R8.5-B32	31.00-31.49	393.5	268	60	32	8	M6.0/M5.0*28	3.0*439
MS3150/3200-R8.5-B32	31.50-32.00	398	272	60	32	8	M6.0/M5.0*28	3.0*439
MS3201/3299-R8.5-B40	32.01-32.99	414	281	70	40	9	M6.0/M6.0*32	3.0*439
MS3300/3399-R8.5-B40	33.00-33.99	422.5	289	70	40	9	M6.0/M6.0*32	3.0*439
MS3400/3499-R8.5-B40	34.00-34.99	431	298	70	40	9	M6.0/M6.0*32	3.0*439
MS3500/3600-R8.5-B40	35.00-36.00	439.5	306	70	40	9	M6.0/M6.0*32	3.0*439
MS3601/3699-R8.5-B40	36.01-36.99	448	315	70	40	10	M6.0/M6.0*32	3.0*530
MS3700/3799-R8.5-B40	37.00-37.99	456.5	323	70	40	10	M6.0/M6.0*32	3.0*530
MS3800/3899-R8.5-B40	38.00-38.99	465	332	70	40	10	M6.0/M6.0*32	3.0*530
MS3900/4000-R8.5-B40	39.00-40.00	473.5	340	70	40	10	M6.0/M6.0*32	3.0*530
MS4001/4099-R8.5-B40	40.01-40.99	493	349	70	40	11	M6.0/M6.0*32	3.0*600
MS4100/4199-R8.5-B40	41.00-41.99	501.5	357	70	40	11	M6.0/M6.0*32	3.0*600
MS4200/4299-R8.5-B40	42.00-42.99	510	366	70	40	11	M6.0/M6.0*32	3.0*600
MS4300/4399-R8.5-B40	43.00-43.99	518.5	374	70	40	11	M6.0/M6.0*32	3.0*600
MS4400/4500-R8.5-B40	44.00-45.00	527	383	70	40	11	M6.0/M6.0*32	3.0*600
MS4501/4599-R8.5-B50	45.01-45.99	535.5	391	70	50	12	M6.0/M6.0*32	3.0*600
MS4600/4699-R8.5-B50	46.00-46.99	544	400	70	50	12	M6.0/M6.0*32	3.0*600

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS4700/4799-R8.5-B50	47.00-47.99	552.5	408	70	50	12	M6.0/M6.0*32	3.0*600
MS4800/4899-R8.5-B50	48.00-48.99	561	417	70	50	12	M6.0/M6.0*32	3.0*600
MS4900/4999-R8.5-B50	49.00-49.99	569.5	425	70	50	12	M6.0/M6.0*32	3.0*600
MS5000/5099-R8.5-B50	50.00-50.99	578	434	70	50	12	M6.0/M6.0*32	3.0*600
MS5100/5200-R8.5-B50	51.00-52.00	586.5	442	70	50	12	M6.0/M6.0*32	3.0*600

10×D Drill Body – MS Modular Exchangeable-Tip Drill (metric)

Key data: HB shank (DIN 6535 HB, cylindrical with clamping flat) | Internal coolant





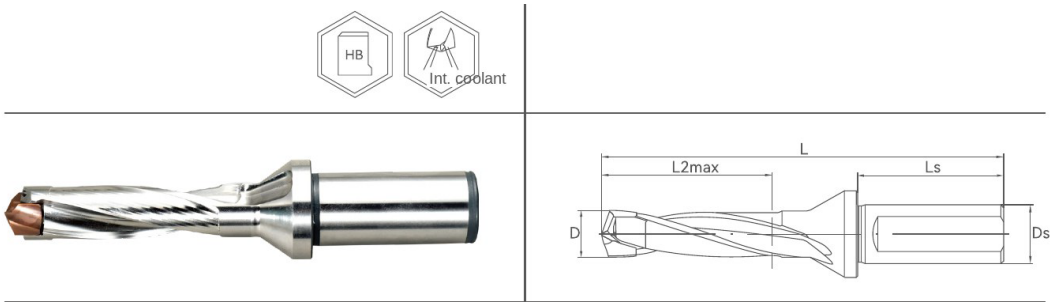
D = drill diameter; L = overall length; L2max = maximum drilling depth; Ls = shank length; Ds = shank diameter

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS1250/1300-R10-B20	12.50-13.00	215	130	50	20	C	M3.0/M2.5*14	T6*230
MS1301/1350-R10-B20	13.01-13.50	221	135	50	20	C	M3.0/M2.5*14	T6*230
MS1351/1400-R10-B20	13.51-14.00	227	140	50	20	B	M3.0/M2.5*14	T6*230
MS1401/1450-R10-B20	14.01-14.50	233	145	50	20	B	M3.0/M2.5*14	T6*230
MS1451/1499-R10-B20	14.51-14.99	238	150	50	20	A	M3.0/M2.5*14	T6*291
MS1500/1549-R10-B20	15.00-15.49	244	155	50	20	A	M3.0/M2.5*14	T6*291
MS1550/1599-R10-B20	15.50-15.99	250	160	50	20	A	M3.0/M2.5*14	T6*291
MS1600/1649-R10-B20	16.00-16.49	255	165	50	20	1	M3.5/M2.5*16	1.5*297
MS1650/1699-R10-B20	16.50-16.99	261	170	50	20	1	M3.5/M2.5*16	1.5*297
MS1700/1749-R10-B20	17.00-17.49	267	175	50	20	1	M3.5/M2.5*16	1.5*297
MS1750/1800-R10-B20	17.50-18.00	272.5	180	50	20	1	M3.5/M2.5*16	1.5*297
MS1801/1849-R10-B25	18.01-18.49	285	185	56	25	2	M4.0/M2.5*19	2.0*343
MS1801/1849-R10-B25-M3	18.01-18.49	285	185	56	25	2	M4.0/M3.0*19	2.0*343
MS1850/1899-R10-B25	18.50-18.99	291	190	56	25	2	M4.0/M2.5*19	2.0*343
MS1850/1899-R10-B25-M3	18.50-18.99	291	190	56	25	2	M4.0/M3.0*19	2.0*343
MS1900/1949-R10-B25	19.00-19.49	297	195	56	25	2	M4.0/M2.5*19	2.0*343
MS1900/1949-R10-B25-M3	19.00-19.49	297	195	56	25	2	M4.0/M3.0*19	2.0*343
MS1950/1999-R10-B25	19.50-19.99	302	200	56	25	2	M4.0/M2.5*19	2.0*343
MS1950/1999-R10-B25-M3	19.50-19.99	302	200	56	25	2	M4.0/M3.0*19	2.0*343
MS2000/2049-R10-B25	20.00-20.49	308	205	56	25	3	M4.0/M3.0*19	2.0*343
MS2050/2099-R10-B25	20.50-20.99	314	210	56	25	3	M4.0/M3.0*19	2.0*343
MS2100/2149-R10-B25	21.00-21.49	319	215	56	25	3	M4.0/M3.0*19	2.0*343
MS2150/2200-R10-B25	21.50-22.00	325	220	56	25	3	M4.0/M3.0*19	2.0*343
MS2201/2249-R10-B25	22.01-22.49	331	225	56	25	4	M4.0/M3.0*19	2.0*343
MS2250/2299-R10-B25	22.50-22.99	336.5	230	56	25	4	M4.0/M3.0*19	2.0*343
MS2300/2349-R10-B25	23.00-23.49	342	235	56	25	4	M4.0/M3.0*19	2.0*343
MS2350/2400-R10-B25	23.50-24.00	348	240	56	25	4	M4.0/M3.0*19	2.0*343
MS2401/2449-R10-B32	24.01-24.49	364	245	60	32	5	M5.0/M4.0*23	2.5*393
MS2450/2499-R10-B32	24.50-24.99	369	250	60	32	5	M5.0/M4.0*23	2.5*393
MS2500/2549-R10-B32	25.00-25.49	375	255	60	32	5	M5.0/M4.0*23	2.5*393
MS2550/2600-R10-B32	25.50-26.00	381	260	60	32	5	M5.0/M4.0*23	2.5*393
MS2601/2649-R10-B32	26.01-26.49	386	265	60	32	6	M5.0/M4.0*23	2.5*393
MS2650/2699-R10-B32	26.50-26.99	392	270	60	32	6	M5.0/M4.0*23	2.5*393
MS2700/2749-R10-B32	27.00-27.49	398	275	60	32	6	M5.0/M4.0*23	2.5*393
MS2750/2800-R10-B32	27.50-28.00	403.5	280	60	32	6	M5.0/M4.0*23	2.5*393
MS2801/2849-R10-B32	28.01-28.49	409	285	60	32	7	M6.0/M5.0*28	3.0*439
MS2850/2899-R10-B32	28.50-28.99	415	290	60	32	7	M6.0/M5.0*28	3.0*439
MS2900/2949-R10-B32	29.00-29.49	421	295	60	32	7	M6.0/M5.0*28	3.0*439
MS2950/3000-R10-B32	29.50-30.00	426	300	60	32	7	M6.0/M5.0*28	3.0*439
MS3001/3049-R10-B32	30.01-30.49	430	305	60	32	8	M6.0/M5.0*28	3.0*439
MS3050/3099-R10-B32	30.50-30.99	435	310	60	32	8	M6.0/M5.0*28	3.0*439
MS3100/3149-R10-B32	31.00-31.49	440	315	60	32	8	M6.0/M5.0*28	3.0*439
MS3150/3200-R10-B32	31.50-32.00	445	320	60	32	8	M6.0/M5.0*28	3.0*439
MS3201/3299-R10-B40	32.01-32.99	462	330	70	40	9	M6.0/M6.0*32	3.0*530
MS3300/3399-R10-B40	33.00-33.99	472	340	70	40	9	M6.0/M6.0*32	3.0*530
MS3400/3499-R10-B40	34.00-34.99	482	350	70	40	9	M6.0/M6.0*32	3.0*530
MS3500/3600-R10-B40	35.00-36.00	492	360	70	40	9	M6.0/M6.0*32	3.0*530
MS3601/3699-R10-B40	36.01-36.99	502	370	70	40	10	M6.0/M6.0*32	3.0*530
MS3700/3799-R10-B40	37.00-37.99	512	380	70	40	10	M6.0/M6.0*32	3.0*530
MS3800/3899-R10-B40	38.00-38.99	522	390	70	40	10	M6.0/M6.0*32	3.0*530
MS3900/4000-R10-B40	39.00-40.00	532	400	70	40	10	M6.0/M6.0*32	3.0*530
MS4001/4099-R10-B40	40.01-40.99	553	410	70	40	11	M6.0/M6.0*32	3.0*680
MS4100/4199-R10-B40	41.00-41.99	563	420	70	40	11	M6.0/M6.0*32	3.0*680
MS4200/4299-R10-B40	42.00-42.99	573	430	70	40	11	M6.0/M6.0*32	3.0*680
MS4300/4399-R10-B40	43.00-43.99	583	440	70	40	11	M6.0/M6.0*32	3.0*680
MS4400/4500-R10-B40	44.00-45.00	593	450	70	40	11	M6.0/M6.0*32	3.0*680
MS4501/4599-R10-B50	45.01-45.99	603	460	70	50	12	M6.0/M6.0*32	3.0*680
MS4600/4699-R10-B50	46.00-46.99	613	470	70	50	12	M6.0/M6.0*32	3.0*680

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS4700/4799-R10-B50	47.00-47.99	623	480	70	50	12	M6.0/M6.0*32	3.0*680
MS4800/4899-R10-B50	48.00-48.99	633	490	70	50	12	M6.0/M6.0*32	3.0*680
MS4900/4999-R10-B50	49.00-49.99	643	500	70	50	12	M6.0/M6.0*32	3.0*680
MS5000/5099-R10-B50	50.00-50.99	653	510	70	50	12	M6.0/M6.0*32	3.0*680
MS5100/5200-R10-B50	51.00-52.00	663	520	70	50	12	M6.0/M6.0*32	3.0*680

12×D Drill Body – MS Modular Exchangeable-Tip Drill (metric)

Key data: HB shank (DIN 6535 HB, cylindrical with clamping flat) | Internal coolant



D = drill diameter; L = overall length; L2max = maximum drilling depth; Ls = shank length; Ds = shank diameter

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS1250/1300-R12-B20	12.50-13.00	240.0	156	50	20	C	M3.0/M2.5*14	T6*291
MS1301/1350-R12-B20	13.01-13.50	247.0	162	50	20	C	M3.0/M2.5*14	T6*291
MS1351/1400-R12-B20	13.51-14.00	254.0	168	50	20	B	M3.0/M2.5*14	T6*291
MS1401/1450-R12-B20	14.01-14.50	261.0	174	50	20	B	M3.0/M2.5*14	T6*291
MS1451/1499-R12-B20	14.51-14.99	267.0	180	50	20	A	M3.0/M2.5*14	T6*291
MS1500/1549-R12-B20	15.00-15.49	274.0	186	50	20	A	M3.0/M2.5*14	T6*291
MS1550/1599-R12-B20	15.50-15.99	281.0	192	50	20	A	M3.0/M2.5*14	T6*291
MS1600/1649-R12-B20	16.00-16.49	287.0	198	50	20	1	M3.5/M2.5*16	1.5*350
MS1650/1699-R12-B20	16.50-16.99	294.0	204	50	20	1	M3.5/M2.5*16	1.5*350
MS1700/1749-R12-B20	17.00-17.49	301.0	210	50	20	1	M3.5/M2.5*16	1.5*350
MS1750/1800-R12-B20	17.50-18.00	307.5	216	50	20	1	M3.5/M2.5*16	1.5*350
MS1801/1849-R12-B25	18.01-18.49	321.0	222	56	25	2	M4.0/M2.5*19	2.0*410
MS1801/1849-R12-B25-M3	18.01-18.49	321.0	222	56	25	2	M4.0/M3.0*19	2.0*410
MS1850/1899-R12-B25	18.50-18.99	328.0	228	56	25	2	M4.0/M2.5*19	2.0*410
MS1850/1899-R12-B25-M3	18.50-18.99	328.0	228	56	25	2	M4.0/M3.0*19	2.0*410
MS1900/1949-R12-B25	19.00-19.49	335.0	234	56	25	2	M4.0/M2.5*19	2.0*410
MS1900/1949-R12-B25-M3	19.00-19.49	335.0	234	56	25	2	M4.0/M3.0*19	2.0*410
MS1950/1999-R12-B25	19.50-19.99	341.0	240	56	25	2	M4.0/M2.5*19	2.0*410
MS1950/1999-R12-B25-M3	19.50-19.99	341.0	240	56	25	2	M4.0/M3.0*19	2.0*410
MS2000/2049-R12-B25	20.00-20.49	348.0	246	56	25	3	M4.0/M3.0*19	2.0*410
MS2050/2099-R12-B25	20.50-20.99	355.0	252	56	25	3	M4.0/M3.0*19	2.0*410
MS2100/2149-R12-B25	21.00-21.49	361.0	258	56	25	3	M4.0/M3.0*19	2.0*410
MS2150/2200-R12-B25	21.50-22.00	368.0	264	56	25	3	M4.0/M3.0*19	2.0*410
MS2201/2249-R12-B25	22.01-22.49	375.0	270	56	25	4	M4.0/M3.0*19	2.0*410
MS2250/2299-R12-B25	22.50-22.99	381.5	276	56	25	4	M4.0/M3.0*19	2.0*410
MS2300/2349-R12-B25	23.00-23.49	388.0	282	56	25	4	M4.0/M3.0*19	2.0*410
MS2350/2400-R12-B25	23.50-24.00	395.0	288	56	25	4	M4.0/M3.0*19	2.0*410
MS2401/2449-R12-B32	24.01-24.49	412.0	294	60	32	5	M5.0/M4.0*23	2.5*460
MS2450/2499-R12-B32	24.50-24.99	418.0	300	60	32	5	M5.0/M4.0*23	2.5*460
MS2500/2549-R12-B32	25.00-25.49	425.0	306	60	32	5	M5.0/M4.0*23	2.5*460
MS2550/2600-R12-B32	25.50-26.00	432.0	312	60	32	5	M5.0/M4.0*23	2.5*460
MS2601/2649-R12-B32	26.01-26.49	438.0	318	60	32	6	M5.0/M4.0*23	2.5*460
MS2650/2699-R12-B32	26.50-26.99	445.0	324	60	32	6	M5.0/M4.0*23	2.5*460
MS2700/2749-R12-B32	27.00-27.49	452.0	330	60	32	6	M5.0/M4.0*23	2.5*460
MS2750/2800-R12-B32	27.50-28.00	458.5	336	60	32	6	M5.0/M4.0*23	2.5*460
MS2801/2849-R12-B32	28.01-28.49	465.0	342	60	32	7	M6.0/M5.0*28	3.0*530
MS2850/2899-R12-B32	28.50-28.99	472.0	348	60	32	7	M6.0/M5.0*28	3.0*530
MS2900/2949-R12-B32	29.00-29.49	479.0	354	60	32	7	M6.0/M5.0*28	3.0*530
MS2950/3000-R12-B32	29.50-30.00	485.0	360	60	32	7	M6.0/M5.0*28	3.0*530
MS3001/3049-R12-B32	30.01-30.49	490.0	366	60	32	8	M6.0/M5.0*28	3.0*530
MS3050/3099-R12-B32	30.50-30.99	496.0	372	60	32	8	M6.0/M5.0*28	3.0*530
MS3100/3149-R12-B32	31.00-31.49	502.0	378	60	32	8	M6.0/M5.0*28	3.0*530
MS3150/3200-R12-B32	31.50-32.00	508.0	384	60	32	8	M6.0/M5.0*28	3.0*530
MS3201/3299-R12-B40	32.01-32.99	526.0	396	70	40	9	M6.0/M6.0*32	3.0*600
MS3300/3399-R12-B40	33.00-33.99	538.0	408	70	40	9	M6.0/M6.0*32	3.0*600
MS3400/3499-R12-B40	34.00-34.99	550.0	420	70	40	9	M6.0/M6.0*32	3.0*600
MS3500/3600-R12-B40	35.00-36.00	562.0	432	70	40	9	M6.0/M6.0*32	3.0*600
MS3601/3699-R12-B40	36.01-36.99	574.0	444	70	40	10	M6.0/M6.0*32	3.0*600
MS3700/3799-R12-B40	37.00-37.99	586.0	456	70	40	10	M6.0/M6.0*32	3.0*600
MS3800/3899-R12-B40	38.00-38.99	598.0	468	70	40	10	M6.0/M6.0*32	3.0*600
MS3900/4000-R12-B40	39.00-40.00	610.0	480	70	40	10	M6.0/M6.0*32	3.0*600
MS4001/4099-R12-B40	40.01-40.99	633.0	492	70	40	11	M6.0/M6.0*32	3.0*770
MS4100/4199-R12-B40	41.00-41.99	645.0	504	70	40	11	M6.0/M6.0*32	3.0*770
MS4200/4299-R12-B40	42.00-42.99	657.0	516	70	40	11	M6.0/M6.0*32	3.0*770
MS4300/4399-R12-B40	43.00-43.99	669.0	528	70	40	11	M6.0/M6.0*32	3.0*770
MS4400/4500-R12-B40	44.00-45.00	681.0	540	70	40	11	M6.0/M6.0*32	3.0*770
MS4501/4599-R12-B50	45.01-45.99	693.0	552	70	50	12	M6.0/M6.0*32	3.0*770
MS4600/4699-R12-B50	46.00-46.99	705.0	564	70	50	12	M6.0/M6.0*32	3.0*770

Ordering code	Dimension (mm)					Seat size	Centre locking screw	Wrench
	D (mm)	L (mm)	L2 (mm)	Ls (mm)	Ds (mm)			
MS4700/4799-R12-B50	47.00-47.99	717.0	576	70	50	12	M6.0/M6.0*32	3.0*770
MS4800/4899-R12-B50	48.00-48.99	729.0	588	70	50	12	M6.0/M6.0*32	3.0*770
MS4900/4999-R12-B50	49.00-49.99	741.0	600	70	50	12	M6.0/M6.0*32	3.0*770
MS5000/5099-R12-B50	50.00-50.99	753.0	612	70	50	12	M6.0/M6.0*32	3.0*770
MS5100/5200-R12-B50	51.00-52.00	765.0	624	70	50	12	M6.0/M6.0*32	3.0*770

Cutting Data – Modular Exchangeable-Tip Drill (metric)

Material group		Workpiece material	Cutting speed Vc – range (m/min)			Recommended feed fn (mm/rev) by diameter (mm)					
			Min.	Start value	Max.	12.5-16	16-20	20-25.4	25.4-32	32-36	36-40
P	1	Non-alloy steel	80	100	120	0.15-0.31	0.17-0.36	0.19-0.41	0.25-0.53	0.29-0.6	0.33-0.69
	2	Low-alloy steel	80	90	100	0.15-0.31	0.17-0.36	0.19-0.41	0.25-0.53	0.29-0.6	0.33-0.69
	3	High-alloy steel	60	70	80	0.15-0.26	0.17-0.31	0.19-0.36	0.25-0.46	0.23-0.53	0.33-0.6
	4	Ferritic and martensitic stainless steel	60	70	80	0.12-0.26	0.14-0.31	0.16-0.36	0.2-0.46	0.23-0.53	0.3-0.6
K	1	Malleable cast iron	100	110	120	0.17-0.33	0.21-0.42	0.25-0.48	0.31-0.59	0.37-0.7	0.43-0.81
	2	Grey cast iron	90	100	110	0.17-0.33	0.21-0.41	0.25-0.48	0.31-0.59	0.37-0.7	0.43-0.81
	3	Spheroidal graphite (ductile) cast iron	80	90	100	0.18-0.36	0.20-0.41	0.21-0.44	0.23-0.48	0.25-0.53	0.27-0.57
M	1	Austenitic stainless steel	50	60	70	0.09-0.14	0.11-0.17	0.13-0.20	0.16-0.25	0.18-0.28	0.21-0.31
	2	Super-austenitic stainless steel (Ni ≥ 20%)	20	40	60	0.09-0.14	0.11-0.17	0.13-0.20	0.16-0.25	0.18-0.28	0.21-0.31
	3	Duplex (austenitic/ferritic) stainless steel	40	55	70	0.09-0.14	0.11-0.17	0.13-0.20	0.16-0.25	0.18-0.28	0.21-0.31
S		Heat-resistant superalloys	20	40	60	0.09-0.14	0.11-0.17	0.13-0.20	0.16-0.25	0.18-0.28	0.21-0.31
N		Aluminium alloys, copper alloys	100	140	180	0.17-0.33	0.21-0.41	0.25-0.48	0.31-0.59	0.37-0.7	0.43-0.81

Recommended coolant pressure

Drilling depth	Coolant pressure
3×D	8 bar
4×D	10 bar
5×D	12 bar
7×D	20 bar
8×D	25 bar
10×D	30 bar
12×D	35 bar

Set-up (Installation)

① Installing the centre locking screw

- For inserts below Φ32 mm, the locking screw sits flush with the drill-body surface
- For inserts above Φ32 mm, the locking screw sits 2 mm below the drill-body surface



② Installing the insert

- Tighten the insert with the wrench so that it seats fully against the drill body
- To change the insert, turn the wrench anticlockwise until the insert comes off the drill body



Recommendation: replace the locking screw every time 5 drill tips have been changed.

Contact

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