

HMD-S / HMD-M Type

HMD-S Type



HMD-M Type



Short Type / Regular Type

Carbon Steel, Alloy Steel Up to 0.28% Ni From 0.28% Ni	Tempered Steel	Hardened Steel Up to 45HRC From 49HRC	Stainless Steel	Ti Alloy	Heat-resistant Steels	Cast Iron	Ductile Cast Iron	Aluminum Alloy	Copper Alloy	Composite CFRP	PVD Coat	3D	5D
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Fig1 : Stepped Shank

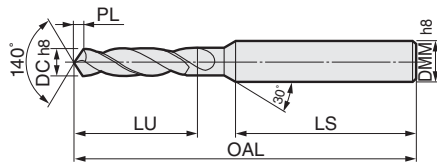


Fig2 : Straight Shank

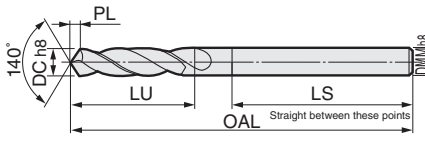
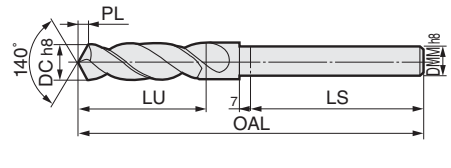


Fig3 : Relief Shank



Body Diameter ø1.0 to 4.2mm

Diameter DC (mm)	Drilling Depth (L/D)	Stock	Cat. No.	Dimensions (mm)				Shank DMM (mm)	Fig
				Effective Length LU	Total Length OAL	Tip PL	Shank LS		
1.0	3	●	HMD 010S	6.7	38	0.2	28.0	3.0	1
1.1	3	●	011S	7.2	39	0.2	28.0	3.0	
1.2	3	●	012S	7.6	40	0.2	28.0	3.0	
1.3	3	●	013S	8.1	40	0.2	28.0	3.0	
1.4	3	●	014S	8.6	41	0.3	28.0	3.0	
1.5	3	●	015S	9.1	41	0.3	28.0	3.0	
1.6	3	●	016S	9.5	42	0.3	28.0	3.0	
1.7	3	●	017S	10.0	42	0.3	28.0	3.0	
1.8	3	●	018S	10.4	43	0.3	28.0	3.0	
1.9	3	●	019S	10.9	43	0.3	28.0	3.0	
2.0	3	●	HMD 020S	11.4	44	0.4	28.0	3.0	
	5	●	020M	15.4	56	0.4	28.0	3.0	
2.1	3	●	HMD 021S	11.9	44	0.4	28.0	3.0	
	5	●	021M	16.1	56	0.4	28.0	3.0	
2.2	3	●	HMD 022S	12.3	45	0.4	28.0	3.0	
	5	●	022M	16.7	56	0.4	28.0	3.0	
2.3	3	●	HMD 023S	12.8	45	0.4	28.0	3.0	
	5	●	023M	17.4	56	0.4	28.0	3.0	
2.4	3	●	HMD 024S	13.2	46	0.4	28.0	3.0	
	5	●	024M	18.0	61	0.4	28.0	3.0	
2.5	3	●	HMD 025S	13.8	46	0.5	28.0	3.0	
	5	●	025M	18.8	61	0.5	28.0	3.0	
2.6	3	●	HMD 026S	14.2	46	0.5	28.0	3.0	
	5	●	026M	19.4	61	0.5	28.0	3.0	
2.7	3	●	HMD 027S	14.7	48	0.5	28.0	3.0	
	5	●	027M	20.1	64	0.5	28.0	3.0	
2.8	3	●	HMD 028S	15.1	48	0.5	28.0	3.0	
	5	●	028M	20.7	64	0.5	28.0	3.0	
2.9	3	●	HMD 029S	15.6	48	0.5	28.0	3.0	
	5	●	029M	21.4	64	0.5	28.0	3.0	
3.0	3	●	HMD 030S	16.0	48	0.5	28.0	3.0	
	5	●	030M	22.0	64	0.5	28.0	3.0	
3.1	3	●	HMD 031S	16.6	50	0.6	30.0	4.0	
	5	●	031M	22.8	68	0.6	30.0	4.0	
3.2	3	●	HMD 032S	17.0	50	0.6	30.0	4.0	
	5	●	032M	23.4	68	0.6	30.0	4.0	
3.3	3	●	HMD 033S	17.5	50	0.6	30.0	4.0	
	5	●	033M	24.1	68	0.6	30.0	4.0	
3.4	3	●	HMD 034S	17.9	52	0.6	30.0	4.0	
	5	●	034M	24.7	71	0.6	30.0	4.0	
3.5	3	●	HMD 035S	18.4	52	0.6	30.0	4.0	
	5	●	035M	25.4	71	0.6	30.0	4.0	
3.6	3	●	HMD 036S	18.9	52	0.7	30.0	4.0	
	5	●	036M	26.1	71	0.7	30.0	4.0	
3.7	3	●	HMD 037S	19.4	52	0.7	30.0	4.0	
	5	●	037M	26.8	71	0.7	30.0	4.0	
3.8	3	●	HMD 038S	19.8	54	0.7	30.0	4.0	
	5	●	038M	27.4	75	0.7	30.0	4.0	
3.9	3	●	HMD 039S	20.3	54	0.7	30.0	4.0	
	5	●	039M	28.1	75	0.7	30.0	4.0	
4.0	3	●	HMD 040S	20.7	54	0.7	30.0	4.0	
	5	●	040M	28.7	75	0.7	30.0	4.0	
4.1	3	●	HMD 041S	21.2	66	0.7	38.0	6.0	
	5	●	041M	29.4	85	0.7	38.0	6.0	
4.2	3	●	HMD 042S	21.7	66	0.8	38.0	6.0	
	5	●	042M	30.1	85	0.8	38.0	6.0	

Body Diameter ø4.3 to 7.0mm

Diameter DC (mm)	Drilling Depth (L/D)	Stock	Cat. No.	Dimensions (mm)				Shank DMM (mm)	Fig
				Effective Length LU	Total Length OAL	Tip PL	Shank LS		
4.3	3	●	HMD 043S	22.2	68	0.8	38.0	6.0	1
	5	●	043M	30.8	89	0.8	38.0	6.0	
4.4	3	●	HMD 044S	22.6	68	0.8	38.0	6.0	
	5	●	044M	31.4	89	0.8	38.0	6.0	
4.5	3	●	HMD 045S	23.1	68	0.8	38.0	6.0	
	5	●	045M	32.1	89	0.8	38.0	6.0	
4.6	3	●	HMD 046S	23.5	68	0.8	38.0	6.0	
	5	●	046M	32.7	89	0.8	38.0	6.0	
4.7	3	●	HMD 047S	24.1	68	0.9	38.0	6.0	
	5	●	047M	33.5	89	0.9	38.0	6.0	
4.8	3	●	HMD 048S	24.5	70	0.9	38.0	6.0	
	5	●	048M	34.1	94	0.9	38.0	6.0	
4.9	3	●	HMD 049S	25.0	70	0.9	38.0	6.0	
	5	●	049M	34.8	94	0.9	38.0	6.0	
5.0	3	●	HMD 050S	25.4	70	0.9	38.0	6.0	
	5	●	050M	35.4	94	0.9	38.0	6.0	
5.1	3	●	HMD 051S	25.9	70	0.9	38.0	6.0	
	5	●	051M	36.1	94	0.9	38.0	6.0	
5.2	3	●	HMD 052S	26.3	70	0.9	38.0	6.0	
	5	●	052M	36.7	94	0.9	38.0	6.0	
5.3	3	●	HMD 053S	26.9	70	1.0	38.0	6.0	
	5	●	053M	37.5	94	1.0	38.0	6.0	
5.4	3	●	HMD 054S	27.3	72	1.0	38.0	6.0	
	5	●	054M	38.1	99	1.0	38.0	6.0	
5.5	3	●	HMD 055S	27.8	72	1.0	38.0	6.0	
	5	●	055M	38.8	99	1.0	38.0	6.0	
5.6	3	●	HMD 056S	28.2	72	1.0	38.0	6.0	
	5	●	056M	39.4	99	1.0	38.0	6.0	
5.7	3	●	HMD 057S	28.7	72	1.0	38.0	6.0	
	5	●	057M	40.1	99	1.0	38.0	6.0	
5.8	3	●	HMD 058S	29.2	72	1.1	38.0	6.0	
	5	●	058M	40.8	99	1.1	38.0	6.0	
5.9	3	●	HMD 059S	29.7	72	1.1	38.0	6.0	
	5	●	059M	41.5	99	1.1	38.0	6.0	
6.0	3	●	HMD 060S	30.1	72	1.1	38.0	6.0	
	5	●	060M	42.1	99	1.1	38.0	6.0	
6.1	3	●	HMD 061S	30.6	75	1.1	38.0	8.0	
	5	●	061M	42.8	107	1.1	38.0	8.0	
6.2	3	●	HMD 062S	31.0	75	1.1	38.0	8.0	
	5	●	062M	43.4	107	1.1	38.0	8.0	
6.3	3	●	HMD 063S	31.5	75	1.1	38.0	8.0	
	5	●	063M	44.1	107	1.1	38.0	8.0	
6.4	3	●	HMD 064S	32.0	75	1.2	38.0	8.0	
	5	●	064M	44.8	107	1.2	38.0	8.0	
6.5	3	●	HMD 065S	32.5	75	1.2	38.0	8.0	
	5	●	065M	45.5	107	1.2	38.0	8.0	
6.6	3	●	HMD 066S	32.9	75	1.2	38.0	8.0	
	5	●	066M	46.1	107	1.2	38.0	8.0	
6.7	3	●	HMD 067S	33.4	75	1.2	38.0	8.0	
	5	●	067M	46.8	107	1.2	38.0	8.0	
6.8	3	●	HMD 068S	33.8	78	1.2	38.0	8.0	
	5	●	068M	47.4	113	1.2	38.0	8.0	
6.9	3	●	HMD 069S	34.4	78	1.3	38.0	8.0	
	5	●	069M	48.2	113	1.3	38.0	8.0	
7.0	3	●	HMD 070S	34.8	78	1.3	38.0	8.0	
	5	●	070M	48.8	113	1.3	38.0	8.0	

Drilling

Solid

Special

Indexable

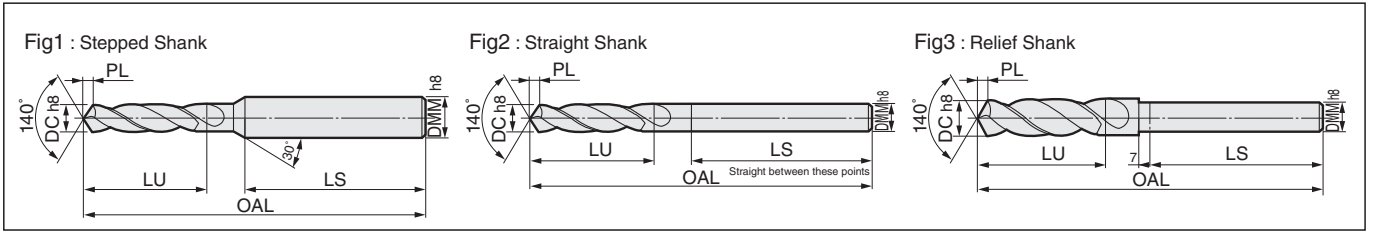
Reamer

Brazed

Others

Short Type / Regular Type

Carbon Steel, Alloy Steel Up to 0.28% From 0.29%	Tempered Steel	Hardened Steel Up to 45HRC From 46HRC	Stainless Steel	Ti Alloy	Heat-resistant Steels	Cast Iron	Ductile Cast Iron	Aluminum Alloy	Copper Alloy	Composite CFRP	PVD Coat	3D	5D
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Body Diameter $\varnothing 7.1$ to 9.8mm

Diameter DC (mm)	Drilling Depth (L/D)	Stock	Cat. No.	Dimensions (mm)				Shank DMM (mm)	Fig
				Effective Length LU	Total Length OAL	Tip PL	Shank LS		
7.1	3	●	HMD 071S	35.3	78	1.3	38.0	8.0	1
	5	●	071M	49.5	113	1.3	38.0		
7.2	3	●	HMD 072S	35.7	78	1.3	38.0	8.0	
	5	●	072M	50.1	113	1.3	38.0		
7.3	3	●	HMD 073S	36.2	78	1.3	38.0	8.0	
	5	●	073M	50.8	113	1.3	38.0		
7.4	3	●	HMD 074S	36.6	78	1.3	38.0	8.0	
	5	●	074M	51.4	113	1.3	38.0		
7.5	3	●	HMD 075S	37.2	78	1.4	38.0	8.0	
	5	●	075M	52.2	113	1.4	38.0		
7.6	3	●	HMD 076S	37.6	81	1.4	38.0	8.0	
	5	●	076M	52.8	119	1.4	38.0		
7.7	3	●	HMD 077S	38.1	81	1.4	38.0	8.0	
	5	●	077M	53.5	119	1.4	38.0		
7.8	3	●	HMD 078S	38.5	81	1.4	38.0	8.0	
	5	●	078M	54.1	119	1.4	38.0		
7.9	3	●	HMD 079S	39.0	81	1.4	38.0	8.0	
	5	●	079M	54.8	119	1.4	38.0		
8.0	3	●	HMD 080S	39.5	81	1.5	38.0	8.0	2
	5	●	080M	55.5	119	1.5	38.0		
8.1	3	●	HMD 081S	40.0	87	1.5	43.5	10.0	1
	5	●	081M	56.2	125	1.5	43.5		
8.2	3	●	HMD 082S	40.4	87	1.5	43.5	10.0	
	5	●	082M	56.8	125	1.5	43.5		
8.3	3	●	HMD 083S	40.9	87	1.5	43.5	10.0	
	5	●	083M	57.5	125	1.5	43.5		
8.4	3	●	HMD 084S	41.3	87	1.5	43.5	10.0	
	5	●	084M	58.1	125	1.5	43.5		
8.5	3	●	HMD 085S	41.8	87	1.5	43.5	10.0	
	5	●	085M	58.8	125	1.5	43.5		
8.6	3	●	HMD 086S	42.3	90	1.6	43.5	10.0	
	5	●	086M	59.5	131	1.6	43.5		
8.7	3	●	HMD 087S	42.8	90	1.6	43.5	10.0	
	5	●	087M	60.2	131	1.6	43.5		
8.8	3	●	HMD 088S	43.2	90	1.6	43.5	10.0	
	5	●	088M	60.8	131	1.6	43.5		
8.9	3	●	HMD 089S	43.7	90	1.6	43.5	10.0	
	5	●	089M	61.5	131	1.6	43.5		
9.0	3	●	HMD 090S	44.1	90	1.6	43.5	10.0	
	5	●	090M	62.1	131	1.6	43.5		
9.1	3	●	HMD 091S	44.7	90	1.7	43.5	10.0	
	5	●	091M	62.9	131	1.7	43.5		
9.2	3	●	HMD 092S	45.1	90	1.7	43.5	10.0	
	5	●	092M	63.5	131	1.7	43.5		
9.3	3	●	HMD 093S	45.6	90	1.7	43.5	10.0	
	5	●	093M	64.2	131	1.7	43.5		
9.4	3	●	HMD 094S	46.0	90	1.7	43.5	10.0	
	5	●	094M	64.8	131	1.7	43.5		
9.5	3	●	HMD 095S	46.5	90	1.7	43.5	10.0	
	5	●	095M	65.5	131	1.7	43.5		
9.6	3	●	HMD 096S	46.9	93	1.7	43.5	10.0	
	5	●	096M	66.1	137	1.7	43.5		
9.7	3	●	HMD 097S	47.5	93	1.8	43.5	10.0	
	5	●	097M	66.9	137	1.8	43.5		
9.8	3	●	HMD 098S	47.9	93	1.8	43.5	10.0	
	5	●	098M	67.5	137	1.8	43.5		

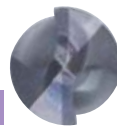
Body Diameter $\varnothing 9.9$ to 12.6mm

Diameter DC (mm)	Drilling Depth (L/D)	Stock	Cat. No.	Dimensions (mm)				Shank DMM (mm)	Fig
				Effective Length LU	Total Length OAL	Tip PL	Shank LS		
9.9	3	●	HMD 099S	48.4	93	1.8	43.5	10.0	1
	5	●	099M	68.2	137	1.8	43.5		
10.0	3	●	HMD 100S	48.8	93	1.8	43.5	10.0	2
	5	●	100M	68.8	137	1.8	43.5		
10.1	3	●	HMD 101S	49.3	100	1.8	46.0	12.0	1
	5	●	101M	69.5	144	1.8	46.0		
10.2	3	●	HMD 102S	49.8	100	1.9	46.0	12.0	
	5	●	102M	70.2	144	1.9	46.0		
10.3	3	●	HMD 103S	50.3	100	1.9	46.0	12.0	
	5	●	103M	70.9	144	1.9	46.0		
10.4	3	●	HMD 104S	50.7	100	1.9	46.0	12.0	
	5	●	104M	71.5	144	1.9	46.0		
10.5	3	●	HMD 105S	51.2	100	1.9	46.0	12.0	
	5	●	105M	72.2	144	1.9	46.0		
10.6	3	●	HMD 106S	51.6	100	1.9	46.0	12.0	
	5	●	106M	72.8	144	1.9	46.0		
10.7	3	●	HMD 107S	52.1	104	1.9	46.0	12.0	
	5	●	107M	73.5	151	1.9	46.0		
10.8	3	●	HMD 108S	52.6	104	2.0	46.0	12.0	
	5	●	108M	74.2	151	2.0	46.0		
10.9	3	●	HMD 109S	53.1	104	2.0	46.0	12.0	
	5	●	109M	74.9	151	2.0	46.0		
11.0	3	●	HMD 110S	53.5	104	2.0	46.0	12.0	1
	5	●	110M	75.5	151	2.0	46.0		
11.1	3	●	HMD 111S	54.0	104	2.0	46.0	12.0	
	5	●	111M	76.2	151	2.0	46.0		
11.2	3	●	HMD 112S	54.4	104	2.0	46.0	12.0	
	5	●	112M	76.8	151	2.0	46.0		
11.3	3	●	HMD 113S	55.0	104	2.1	46.0	12.0	
	5	●	113M	77.6	151	2.1	46.0		
11.4	3	●	HMD 114S	55.4	104	2.1	46.0	12.0	
	5	●	114M	78.2	151	2.1	46.0		
11.5	3	●	HMD 115S	55.9	104	2.1	46.0	12.0	
	5	●	115M	78.9	151	2.1	46.0		
11.6	3	●	HMD 116S	56.3	104	2.1	46.0	12.0	
	5	●	116M	79.5	151	2.1	46.0		
11.7	3	●	HMD 117S	56.8	104	2.1	46.0	12.0	
	5	●	117M	80.2	151	2.1	46.0		
11.8	3	●	HMD 118S	57.2	104	2.1	46.0	12.0	
	5	●	118M	80.8	151	2.1	46.0		
11.9	3	●	HMD 119S	57.8	108	2.2	46.0	12.0	
	5	●	119M	81.6	158	2.2	46.0		
12.0	3	●	HMD 120S	58.2	108	2.2	46.0	12.0	2
	5	●	120M	82.2	158	2.2	46.0		
12.1	3	●	HMD 121S	58.7	108	2.2	46.0	12.0	3
	5	●	121M	82.9	158	2.2	46.0		
12.2	3	●	HMD 122S	59.1	108	2.2	46.0	12.0	
	5	●	122M	83.5	158	2.2	46.0		
12.3	3	●	HMD 123S	59.6	108	2.2	46.0	12.0	
	5	●	123M	84.2	158	2.2	46.0		
12.4	3	●	HMD 124S	60.1	108	2.3	46.0	12.0	
	5	●	124M	84.9	158	2.3	46.0		
12.5	3	●	HMD 125S	60.6	108	2.3	46.0	12.0	
	5	●	125M	85.6	158	2.3	46.0		
12.6	3	●	HMD 126S	61.0	108	2.3	46.0	12.0	
	5	●	126M	86.2	158	2.3	46.0		

Drilling
Solid
Special
Indexable
Reamer
Brazed
Others

H's (High Speed Steel) MultiDrill HMD-S / HMD-M Type

HMD-S Type

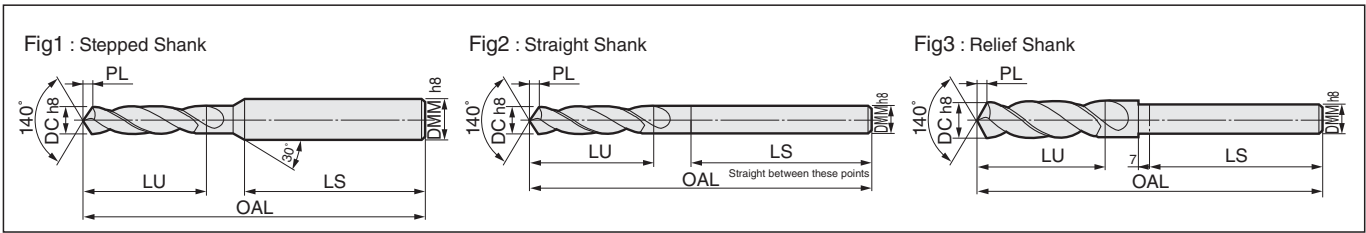


HMD-M Type



Short Type / Regular Type

Carbon Steel	Alloy Steel	Tempered Steel	Hardened Steel	Stainless Steel	Ti Alloy	Heat-resistant Steels	Cast Iron	Ductile Cast Iron	Aluminum Alloy	Copper Alloy	Composite CFRP	PVD Coat	3D	5D
Up to 0.28%	From 0.28%		Up to 45HRC	From 40HRC										



Body Diameter ϕ 12.7 to 15.5mm

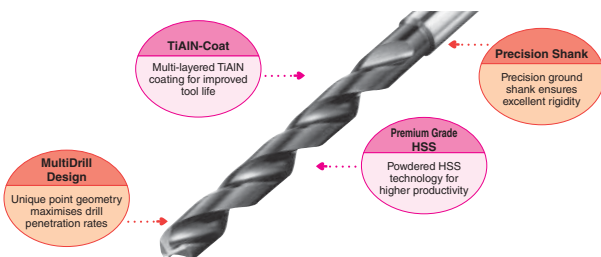
Diameter DC (mm)	Drilling Depth (L/D)	Stock	Cat. No.	Dimensions (mm)				Shank DMM (mm)	Fig
				Effective Length LU	Total Length OAL	Tip PL	Shank LS		
12.7	3	●	HMD 127S	61.5	108	2.3	46.0	12.0	3
	5	●	127M	86.9	158	2.3	46.0		
12.8	3	●	HMD 128S	61.9	108	2.3	46.0	12.0	
	5	●	128M	87.5	158	2.3	46.0		
12.9	3	●	HMD 129S	62.4	108	2.3	46.0	12.0	
	5	●	129M	88.2	158	2.3	46.0		
13.0	3	●	HMD 130S	62.9	108	2.4	46.0	12.0	
	5	●	130M	88.9	158	2.4	46.0		
13.5	3	●	HMD 135S	65.3	132	2.5	50.0	16.0	1
	5	●	135M	92.3	168	2.5	50.0		
14.0	3	●	HMD 140S	67.5	132	2.5	50.0	16.0	
	5	●	140M	95.5	168	2.5	50.0		
14.5	3	●	HMD 145S	69.9	136	2.6	50.0	16.0	
	5	●	145M	98.9	173	2.6	50.0		
15.0	3	●	HMD 150S	72.2	142	2.7	52.0	20.0	
	5	●	150M	102.2	180	2.7	52.0		
15.5	3	●	HMD 155S	74.6	146	2.8	52.0	20.0	
	5	●	155M	105.6	185	2.8	52.0		

Body Diameter ϕ 16.0 to 20.0mm

Diameter DC (mm)	Drilling Depth (L/D)	Stock	Cat. No.	Dimensions (mm)				Shank DMM (mm)	Fig
				Effective Length LU	Total Length OAL	Tip PL	Shank LS		
16.0	3	●	HMD 160S	76.9	146	2.9	52.0	20.0	1
	5	●	160M	108.9	185	2.9	52.0		
16.5	3	●	HMD 165S	79.3	150	3.0	52.0	20.0	
	5	●	165M	112.3	189	3.0	52.0		
17.0	3	●	HMD 170S	81.6	150	3.1	52.0	20.0	
	5	●	170M	115.6	189	3.1	52.0		
17.5	3	●	HMD 175S	84.0	153	3.2	52.0	20.0	
	5	●	175M	119.0	194	3.2	52.0		
18.0	3	●	HMD 180S	86.3	153	3.3	52.0	20.0	
	5	●	180M	122.3	194	3.3	52.0		
18.5	3	●	HMD 185S	88.7	156	3.4	52.0	20.0	
	5	●	185M	125.7	198	3.4	52.0		
19.0	3	●	HMD 190S	91.0	164	3.5	60.0	25.0	
	5	●	190M	129.0	206	3.5	60.0		
19.5	3	●	HMD 195S	93.3	168	3.5	60.0	25.0	
	5	●	195M	132.3	210	3.5	60.0		
20.0	3	●	HMD 200S	95.6	168	3.6	60.0	25.0	
	5	●	200M	135.6	210	3.6	60.0		

Recommended Cutting Conditions

Type	Work Material Tool Diameter DC (mm)	Structural Steels (SS) Carbon Steel (SC)		Alloy Steel (SCM) Pre-hardened Steel (NAK)		Die Steel (SKD) Stainless Steel Tempered Steel (35 to 45HRC)		Gray Cast Iron (FC)		Aluminum Alloy Non-Ferrous Metal	
		Rotation Speed (min ⁻¹)	Feed Rate (mm/min)	Rotation Speed (min ⁻¹)	Feed Rate (mm/min)	Rotation Speed (min ⁻¹)	Feed Rate (mm/min)	Rotation Speed (min ⁻¹)	Feed Rate (mm/min)	Rotation Speed (min ⁻¹)	Feed Rate (mm/min)
Regular	ϕ 2.0	5,700	300	4,600	200	3,400	130	6,300	410	9,700	630
	ϕ 3.0	4,200	380	3,400	260	2,500	170	4,700	530	7,200	820
	ϕ 5.0	2,500	360	2,000	240	1,500	160	2,800	500	4,300	770
	ϕ 8.0	1,600	310	1,300	210	960	140	1,800	440	2,700	660
	ϕ 10.0	1,300	280	1,000	190	760	130	1,400	390	2,200	610
	ϕ 12.0	1,100	260	850	180	640	120	1,200	360	1,800	560
	ϕ 16.0	800	240	640	160	480	110	880	330	1,400	500
ϕ 20.0	640	220	510	150	380	96	700	300	1,100	460	



Drilling

Solid

Special

Indexable

Reamer

Brazed

Others