

■フィニッシュ・ハードリーマの特長 Features of Finish-Hard Reamer

1.高精度・高硬度材加工用リーマ (60HRC対応)

・高硬度材の穴仕上げ加工に最適な刃先諸元を採用

1. For high hardened steel up to 60HRC.

2.新PVD被膜「DHコート<JC6102>」採用

2. Adopted new PVD coated grade DH COATING "JC6102" suitable for high hardened material machining.

3.高精度な真円度を実現

3. Achieved high accurate roundness.



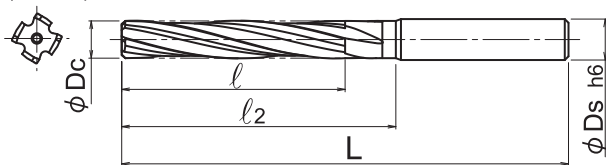
■直径寸法許容差 (mm)
Tolerance of reamer diameter

直径 ϕD_c Reamer diameter	許容差 Tolerance
3.1 未満 3.1 under	+0.007 +0.002
3.1 以上 6.1 未満 from 3.1 to 6.1	+0.009 +0.003
6.1 以上 10.1 未満 from 6.1 to 10.1	+0.011 +0.004
10.1 以上 10.1 over	+0.013 +0.006

- 右ねじれ15°、高硬度材用 (60HRC対応)
有効加工深さ $5 \times \phi D_c$
- Helix angle: 15 degrees, Drilling depth $5 \times \phi D_c$



$\phi D_c < \phi D_s$ の場合



$\phi D_c \geq \phi D_s$ の場合



形番 Cat. No.	在庫 Stock	寸法 (mm) Dimensions (mm)				
		ϕD_c	l_2	l	L	ϕD_s
DH-FHR0300	◎	3	28.6	20	70	4
DH-FHR0301	□	3.01	28.6	20	70	4
DH-FHR0302	□	3.02	28.6	20	70	4
DH-FHR0310	□	3.1	33.7	27	75	4
DH-FHR0320	□	3.2	33.9	27	75	4
DH-FHR0330	□	3.3	34	27	75	4
DH-FHR0340	□	3.4	34.1	27	75	4
DH-FHR0350	□	3.5	34.3	27	75	4
DH-FHR0360	□	3.6	34.4	27	75	4
DH-FHR0370	□	3.7	34.5	27	75	4
DH-FHR0380	□	3.8	34.7	27	75	4
DH-FHR0390	□	3.9	34.8	27	75	4
DH-FHR0400	◎	4	—	27	75	4
DH-FHR0401	□	4.01	—	27	75	4
DH-FHR0402	□	4.02	—	27	75	4
DH-FHR0410	□	4.1	42.3	35	85	6
DH-FHR0420	□	4.2	42.5	35	85	6
DH-FHR0430	□	4.3	42.6	35	85	6
DH-FHR0440	□	4.4	42.8	35	85	6
DH-FHR0450	□	4.5	42.9	35	85	6
DH-FHR0460	□	4.6	43	35	85	6
DH-FHR0470	□	4.7	43.2	35	85	6
DH-FHR0480	□	4.8	43.3	35	85	6
DH-FHR0490	□	4.9	43.4	35	85	6
DH-FHR0500	◎	5	43.6	35	85	6
DH-FHR0501	□	5.01	43.6	35	85	6
DH-FHR0502	□	5.02	43.6	35	85	6
DH-FHR0510	□	5.1	48.7	42	90	6
DH-FHR0520	□	5.2	48.9	42	90	6
DH-FHR0530	□	5.3	49	42	90	6
DH-FHR0540	□	5.4	49.1	42	90	6
DH-FHR0550	□	5.5	49.3	42	90	6
DH-FHR0560	□	5.6	49.4	42	90	6
DH-FHR0570	□	5.7	49.5	42	90	6
DH-FHR0580	□	5.8	49.7	42	90	6
DH-FHR0590	□	5.9	49.8	42	90	6
DH-FHR0600	●	6	—	42	90	6
DH-FHR0601	□	6.01	—	42	90	6

形番 Cat. No.	在庫 Stock	寸法 (mm) Dimensions (mm)				
		ϕD_c	l_2	l	L	ϕD_s
DH-FHR0602	□	6.02	—	42	90	6
DH-FHR0610	□	6.1	57.3	47	100	8
DH-FHR0620	□	6.2	57.5	47	100	8
DH-FHR0630	□	6.3	57.6	47	100	8
DH-FHR0640	□	6.4	57.8	47	100	8
DH-FHR0650	□	6.5	57.9	47	100	8
DH-FHR0660	□	6.6	58	47	100	8
DH-FHR0670	□	6.7	58.2	47	100	8
DH-FHR0680	□	6.8	58.3	47	100	8
DH-FHR0690	□	6.9	58.4	47	100	8
DH-FHR0700	●	7	58.6	47	100	8
DH-FHR0701	□	7.01	58.6	47	100	8
DH-FHR0702	□	7.02	58.6	47	100	8
DH-FHR0710	□	7.1	60	50	100	8
DH-FHR0720	□	7.2	60	50	100	8
DH-FHR0730	□	7.3	60	50	100	8
DH-FHR0740	□	7.4	60	50	100	8
DH-FHR0750	□	7.5	60	50	100	8
DH-FHR0760	□	7.6	60	50	100	8
DH-FHR0770	□	7.7	60	50	100	8
DH-FHR0780	□	7.8	60	50	100	8
DH-FHR0790	□	7.9	60	50	100	8
DH-FHR0800	●	8	—	50	100	8
DH-FHR0801	□	8.01	—	50	100	8
DH-FHR0802	□	8.02	—	50	100	8
DH-FHR0810	□	8.1	72.3	60	120	10
DH-FHR0820	□	8.2	72.5	60	120	10
DH-FHR0830	□	8.3	72.6	60	120	10
DH-FHR0840	□	8.4	72.8	60	120	10
DH-FHR0850	□	8.5	72.9	60	120	10
DH-FHR0860	□	8.6	73	60	120	10
DH-FHR0870	□	8.7	73.2	60	120	10
DH-FHR0880	□	8.8	73.3	60	120	10
DH-FHR0890	□	8.9	73.4	60	120	10
DH-FHR0900	●	9	73.6	60	120	10
DH-FHR0901	□	9.01	73.6	60	120	10
DH-FHR0902	□	9.02	73.6	60	120	10
DH-FHR0910	□	9.1	75	60	120	10

形番 Cat. No.	在庫 Stock	寸法 (mm) Dimensions (mm)				
		ϕD_c	l_2	l	L	ϕD_s
DH-FHR0920	□	9.2	75	60	120	10
DH-FHR0930	□	9.3	75	60	120	10
DH-FHR0940	□	9.4	75	60	120	10
DH-FHR0950	□	9.5	75	60	120	10
DH-FHR0960	□	9.6	75	60	120	10
DH-FHR0970	□	9.7	75	60	120	10
DH-FHR0980	□	9.8	75	60	120	10
DH-FHR0990	□	9.9	75	60	120	10
DH-FHR1000	●	10	—	60	120	10
DH-FHR1001	□	10.01	—	60	120	10
DH-FHR1002	□	10.02	—	60	120	10
DH-FHR1010	□	10.1	87.3	70	140	12
DH-FHR1020	□	10.2	87.5	70	140	12
DH-FHR1030	□	10.3	87.6	70	140	12
DH-FHR1040	□	10.4	87.8	70	140	12
DH-FHR1050	□	10.5	87.9	70	140	12
DH-FHR1060	□	10.6	88	70	140	12
DH-FHR1070	□	10.7	88.2	70	140	12
DH-FHR1080	□	10.8	88.3	70	140	12
DH-FHR1090	□	10.9	88.4	70	140	12
DH-FHR1100	●	11	88.6	70	140	12
DH-FHR1101	□	11.01	88.6	70	140	12
DH-FHR1102	□	11.02	88.6	70	140	12
DH-FHR1110	□	11.1	90	70	140	12
DH-FHR1120	□	11.2	90	70	140	12
DH-FHR1130	□	11.3	90	70	140	12
DH-FHR1140	□	11.4	90	70	140	12
DH-FHR1150	□	11.5	90	70	140	12
DH-FHR1160	□	11.6	90	70	140	12
DH-FHR1170	□	11.7	90	70	140	12
DH-FHR1180	□	11.8	90	70	140	12
DH-FHR1190	□	11.9	90	70	140	12
DH-FHR1200	●	12	—	70	140	12
DH-FHR1201	□	12.01	—	70	140	12
DH-FHR1202	□	12.02	—	70	140	12
DH-FHR1210	□	12.1	90	70	140	12

FINISH-HARD REAMER For precise reaming on high hardened material

■ フィニッシュ・ハードリーマDH-FHR形 標準切削条件 Recommended cutting conditions for DH-FHR type

被削材 Material	工具鋼(SKT, SKD61) (48~56HRC) Die steel (1.2344)		工具鋼(SKD11, SKH) (57~62HRC) Die steel (1.2379)		リーマ代 (mm) Stock amount
	回転速度 n (min ⁻¹)	送り速度 Vf (mm/min)	回転速度 n (min ⁻¹)	送り速度 Vf (mm/min)	
	リーマ直径 φDc(mm) Reamer dia.	切削速度 Vc (m/min)	送り量 f (mm/rev)	切削速度 Vc (m/min)	
3	2,120	105	1,380	69	0.1~0.2
	15~25	0.03~0.07	10~15	0.03~0.07	
4	1,590	80	1,040	52	0.1~0.2
	15~25	0.03~0.07	10~15	0.03~0.07	
5	1,270	64	830	40	0.1~0.2
	15~25	0.03~0.07	10~15	0.03~0.07	
6	1,060	64	690	40	0.1~0.2
	15~25	0.04~0.08	10~15	0.04~0.08	
7	910	55	590	34	0.1~0.2
	15~25	0.04~0.08	10~15	0.04~0.08	
8	795	48	520	30	0.1~0.2
	15~25	0.04~0.08	10~15	0.04~0.08	
9	710	48	460	30	0.1~0.2
	15~25	0.04~0.10	10~15	0.04~0.10	
10	640	45	415	28	0.1~0.2
	15~25	0.04~0.10	10~15	0.04~0.10	
11	580	40	375	25	0.1~0.2
	15~25	0.04~0.10	10~15	0.04~0.10	
12	530	37	345	23	0.1~0.2
	15~25	0.04~0.10	10~15	0.04~0.10	