

Reamers

Endmills

Drills

Countersinks/
Counterbores

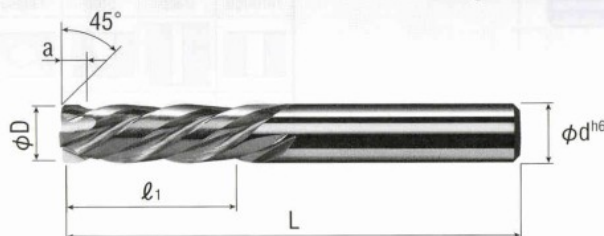
Metal
Slitting Saws

Cutters

CPRS CPRSM CPRSF CPRSFM

超硬ショートパワフルリーマ
Solid Carbide Short Powerful Reamers

- 0.1mmとび、0.01mmとび
0.1 steps and 0.01 steps
- コーティング品も標準化
The coating items is standardized.
- 粗刃、仕上刃2段仕上げ
Rough blade and finish blade two steps.



製品略号 Product code	ネジレ角 Helix Angle	刃径公差 Dia. Tolerance	表面処理 Surface Treatment	切削条件 Cutting Conditions
CPRS		m5		
CPRSM		+0.005 0		
CPRSF		m5		
CPRSFM		+0.005 0		

下穴の状態 Prepared Hole			
貫通穴 Through	深穴 Deep	止まり穴 Stop	楕円 Ellipse
○	×	×	○

(0.1mm 0.01mm とび 0.1steps and 0.01steps)

寸法 Size						ノンコート Non-Coat		OKタフコート OK-TOUGH Coat	
刃径 D	刃長 L1	全長 L	柄径 d	刃先長 a	刃数 NT	品番 Product No.	標準価格 Standard price ¥	品番 Product No.	標準価格 Standard price ¥
2.95~2.99	22	60	3	4	3	CPRSM0295~0299	3,800	CPRSFM0295~0299	4,600
3.0	22	60	3	4	3	CPRS-030	3,300	CPRSF030	4,000
3.00~3.05	22	60	3	4	3	CPRSM0300~0305	3,800	CPRSFM0300~0305	4,600
3.1~3.5	22	60	3.5	5	3	CPRS-031~035	4,000	—	—
3.6~3.9	22	60	4	5	3	CPRS-036~039	4,000	—	—
3.95~3.99	22	60	4	5	3	CPRSM0395~0399	4,000	CPRSFM0395~0399	4,800
4.0	22	60	4	5	3	CPRS-040	3,700	CPRSF040	4,500
4.00~4.05	22	60	4	5	3	CPRSM0400~0405	4,000	CPRSFM0400~0405	4,800
4.1~4.5	25	70	4.5	5	3	CPRS-041~045	4,900	—	—
4.6~4.9	25	70	5	5	3	CPRS-046~049	4,900	—	—
4.95~4.99	25	70	5	5	3	CPRSM0495~0499	4,900	CPRSFM0495~0499	5,900
5.0	25	70	5	5	3	CPRS-050	4,300	CPRSF050	5,200
5.00~5.05	25	70	5	5	3	CPRSM0500~0505	4,900	CPRSFM0500~0505	5,900
5.1~5.5	30	80	5.5	5.5	4	CPRS-051~055	5,700	—	—
5.6~5.9	30	80	6	5.5	4	CPRS-056~059	5,700	—	—
5.95~5.99	30	80	6	5.5	4	CPRSM0595~0599	5,700	CPRSFM0595~0599	6,900
6.0	30	80	6	5.5	4	CPRS-060	5,100	CPRSF060	6,200
6.00~6.05	30	80	6	5.5	4	CPRSM0600~0605	5,700	CPRSFM0600~0605	6,900
6.1~6.9	30	80	7	6	4	CPRS-061~069	7,100	—	—
6.95~6.99	30	80	7	6	4	CPRSM0695~0699	7,100	CPRSFM0695~0699	8,600
7.0	30	80	7	6	4	CPRS-070	6,400	CPRSF070	7,700
7.00~7.05	30	80	7	6	4	CPRSM0700~0705	7,100	CPRSFM0700~0705	8,600
7.1~7.9	30	80	8	6.5	4	CPRS-071~079	8,300	—	—
7.95~7.99	30	80	8	6.5	4	CPRSM0795~0799	8,300	CPRSFM0795~0799	10,000
8.0	30	80	8	6.5	4	CPRS-080	7,500	CPRSF080	9,000
8.00~8.05	30	80	8	6.5	4	CPRSM0800~0805	8,300	CPRSFM0800~0805	10,000
8.1~8.9	35	90	9	7	4	CPRS-081~089	11,700	—	—
8.95~8.99	35	90	9	7	4	CPRSM0895~0899	11,700	CPRSFM0895~0899	14,100
9.0	35	90	9	7	4	CPRS-090	10,600	CPRSF090	12,800
9.00~9.05	35	90	9	7	4	CPRSM0900~0905	11,700	CPRSFM0900~0905	14,100

パワフルリーマの加工例

The reaming process of CPR/CPRS



第一段階

First Step

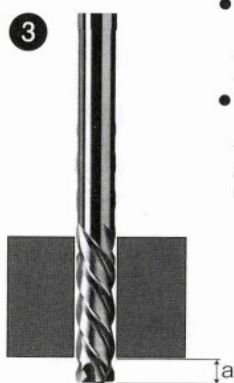
- 粗刃でバラツキのある下穴を粗仕上加工
In case of varying pre-hole diameter, it can process the semi-finish reaming by first teeth.



第二段階

Second Step

- 仕上刃により、安定した取り代を仕上げ加工
After first step, it can process the final finish reaming by secondary teeth.



第三段階

Third Step

- 仕上刃の食付長(a)が抜ける事で、穴仕上げ完了
After the chamfer cutting teeth (length = a) pass through the hole, it can finish the reaming process.

パワフルリーマの特長

The character of CPR/CPRS

- バラツキのある下穴でも、安定した穴精度・穴面粗度を実現します
In case of varying pre-hole diameter, it can make the stable hole diameter and hole surface.
- 従来の超硬リーマと比較して、2倍以上の取り代でも高精度穴加工が可能
Than a conventional carbide reamer, it can process the high precision reaming for the double removal amount hole.

寸 法 Size						ノンコート Non-Cote		OKタフコート OK-TOUGH Coat	
刃径 D	刃長 ℓ ₁	全長 L	柄径 d	刃先長 a	刃数 NT	品 番 Product No.	標準価格 Standard price ¥	品 番 Product No.	標準価格 Standard price ¥
9.1~9.9	35	90	10	7.5	4	CPRS-091~099	13,400	—	—
9.95~9.99	35	90	10	7.5	4	CPRSM0995~0999	13,400	CPRSFM0995~0999	16,100
10.0	35	90	10	7.5	4	CPRS-100	12,100	CPRSF100	14,600
10.00~10.05	35	90	10	7.5	4	CPRSM1000~1005	13,400	CPRSFM1000~1005	16,100
10.1~10.9	35	90	11	8	4	CPRS-101~109	16,100	—	—
10.95~10.99	35	90	11	8	4	CPRSM1095~1099	16,100	CPRSFM1095~1099	19,400
11.0	35	90	11	8	4	CPRS-110	14,600	CPRSF110	17,600
11.00~11.05	35	90	11	8	4	CPRSM1100~1105	16,100	CPRSFM1100~1105	19,400
11.1~11.9	35	90	12	8	4	CPRS-111~119	17,400	—	—
11.95~11.99	35	90	12	8	4	CPRSM1195~1199	17,400	CPRSFM1195~1199	20,900
12.0	35	90	12	8	4	CPRS-120	15,800	CPRSF120	19,000
12.00~12.05	35	90	12	8	4	CPRSM1200~1205	17,400	CPRSFM1200~1205	20,900
12.5	45	100	12	8	4	CPRS-125	18,700	—	—
13.0	45	100	12	8	4	CPRS-130	18,700	—	—
13.5	45	100	12	8	4	CPRS-135	19,800	—	—
14.0	45	100	12	8	4	CPRS-140	19,800	—	—
14.5	45	100	16	9	4	CPRS-145	22,000	—	—
15.0	45	100	16	9	4	CPRS-150	22,000	—	—
15.5	45	100	16	9	4	CPRS-155	20,900	—	—
16.0	45	100	16	9	4	CPRS-160	20,900	—	—
16.5	45	105	16	9	6	CPRS-165	33,000	—	—
17.0	45	105	16	9	6	CPRS-170	33,000	—	—
17.5	45	105	16	9	6	CPRS-175	33,000	—	—
18.0	45	105	16	9	6	CPRS-180	33,000	—	—
18.5	45	105	20	9	6	CPRS-185	35,200	—	—
19.0	45	105	20	9	6	CPRS-190	35,200	—	—
19.5	45	105	20	9	6	CPRS-195	35,200	—	—
20.0	45	105	20	9	6	CPRS-200	34,100	—	—

リーマ

エンドミル

ドリル

面取り/
座ぐり

メタルソー

カッター

ストレート刃

ヘリカル刃

パワフル
リーマ

エンド刃付

高硬度材用