



Size $\phi 2 \sim \phi 12$

CRS40HSP

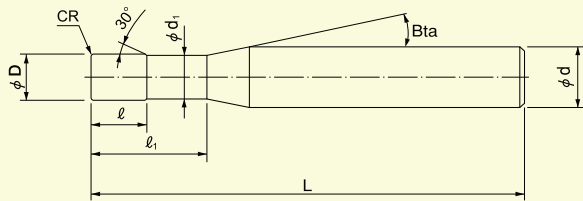


Material Applications (☆ Highly Recommended ○ Recommended ○ Suggested)

Work Material															
Carbon Steels S45C S55C	Alloy Steels SK / SCM SUS	Prehardened Steels NAK HPM	Hardened Steels			Cast Iron	Aluminum Alloys	Graphite	Copper	Plastics	Glass Filled Plastics	Titanium Alloys	Heat Resistant Alloys	Cemented Carbide	Hard Brittle (Non-Metallic) Materials
			~55HRC	~60HRC	~70HRC										
○	○	○	○	○		○				○					

Features

HARDMAX long neck radius with short flute length.
Helix angle 40°.
Broad application range from SUS up to Hardened Steels (60HRC).



The shank taper angle shown is not an exact value and to avoid contact with the work piece, we recommend the user controls the precise value of this angle. Shank taper angle should not make contact with the work piece.

Total 25 models

Unit (mm)

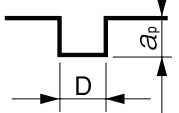
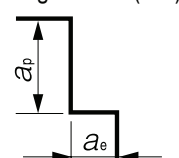
Model Number	Outside Diameter ϕD	Corner Radius CR	Effective Length l_1	Length of Cut l	Neck Diameter ϕd_1	Shank Taper Angle Bta	Overall Length L	Shank Diameter ϕd	Price ¥
CRS40HSP 3020-020-06	2	RO.2	6	3	1.93	16°	38	3	11,500
CRS40HSP 3020-020-10			10				60		12,000
CRS40HSP 3025-020-06	2.5	RO.2	6	4	2.43	16°	38	3	11,500
CRS40HSP 3030-010-07			7				38		11,500
CRS40HSP 3030-020-07	3	RO.2	14	4	2.84	—	38	3	11,500
CRS40HSP 3030-020-14			60				12,000		
CRS40HSP 3035-020-09	3.5	RO.2	9	5	3.24	16°	50	6	12,800
CRS40HSP 3040-020-09			9				50		12,800
CRS40HSP 3040-020-18	4	RO.2	18	5	3.74	16°	65	6	13,200
CRS40HSP 3040-030-09			9				50		12,800
CRS40HSP 3040-050-09			9				50		12,800
CRS40HSP 3050-020-11	5	RO.2	11	6	4.64	16°	50	6	13,200
CRS40HSP 3050-020-22			22				65		13,800
CRS40HSP 3060-020-14	6	RO.2	14	7	5.64	—	60	6	14,600
CRS40HSP 3060-030-14			14				60		14,600
CRS40HSP 3060-030-26			26				80		15,200
CRS40HSP 3060-050-14			14				60		14,600

Unit (mm)

Model Number	Outside Diameter ϕD	Corner Radius CR	Effective Length ℓ_1	Length of Cut ℓ	Neck Diameter ϕd_1	Shank Taper Angle β	Overall Length L	Shank Diameter ϕd	Price ¥
CRS40HSP 3080-020-18	8	RO.2	18	9	7.82	—	60	8	18,400
CRS40HSP 3080-050-18		RO.5					60	8	18,400
CRS40HSP 3080-050-36			36				90	8	19,200
CRS40HSP 3100-020-25	10	RO.2	25	12	9.82	—	70	10	24,000
CRS40HSP 3100-050-25		RO.5					70	10	24,000
CRS40HSP 3100-050-45			45				100	10	26,000
CRS40HSP 3120-050-30	12	RO.5	30	15	11.82	—	75	12	30,400
CRS40HSP 3120-050-54			54				120	12	32,000

Milling Conditions for CRS40HSP (3 Flutes)

WORK MATERIAL		CARBON STEELS / CAST IRON			PREHARDENED STEELS (30~48 HRC)			ALLOY STEELS		
Model Number	Outside Diameter ϕD	Spindle Speed (min ⁻¹)	Feed Rate (Slotting) (mm/min)	Feed Rate (Side milling) (mm/min)	Spindle Speed (min ⁻¹)	Feed Rate (Slotting) (mm/min)	Feed Rate (Side milling) (mm/min)	Spindle Speed (min ⁻¹)	Feed Rate (Slotting) (mm/min)	Feed Rate (Side milling) (mm/min)
3020	2	22,000	610	810	14,500	380	500	12,000	310	410
3025	2.5	19,000	640	860	12,100	410	550	10,100	340	460
3030	3	17,000	680	900	10,500	440	590	8,800	380	500
3035	3.5	15,500	980	1,300	9,600	610	810	8,000	490	650
3040	4	14,500	1,220	1,620	8,800	750	990	7,500	610	810
3050	5	12,000	1,290	1,710	7,200	780	1,040	6,000	650	860
3060	6	10,500	1,420	1,890	6,500	810	1,080	5,500	710	950
3080	8	8,000	1,520	2,030	4,800	810	1,080	4,000	750	990
3100	10	6,500	1,320	1,760	3,800	650	860	3,200	650	860
3120	12	5,500	1,120	1,490	3,200	540	720	2,500	510	680

Slotting Milling Amount (mm) 	Roughing	$a_p=0.095D$	$a_p=0.045D$	$a_p=0.04D$
	Finishing	$a_p=0.03D$	$a_p=0.02D$	$a_p=0.01D$
Side Milling Milling Amount (mm) 	Roughing	$a_p=1.0D$ $a_e=0.045D$	$a_p=0.8D$ $a_e=0.035D$	$a_p=0.8D$ $a_e=0.02D$
	Finishing	$a_p=0.85D$ $a_e=0.03D$	$a_p=0.65D$ $a_e=0.02D$	$a_p=0.55D$ $a_e=0.01D$
Note		Recommend air blow.	Recommend air blow.	Recommend air blow.

 a_p : Axial Depth (mm) a_e : Radial Depth (mm)

D : Diameter (mm)

3 Flutes

UDC Series

Square

Long Neck Square

Radius

Radius

Long Neck Radius

Taper Neck Radius

Ball / Long Shank Ball

Ball

Long Neck Ball

Taper Neck Ball

Taper

Taper

Spiral V Cutter

Drill

EURO Series

Technical Data