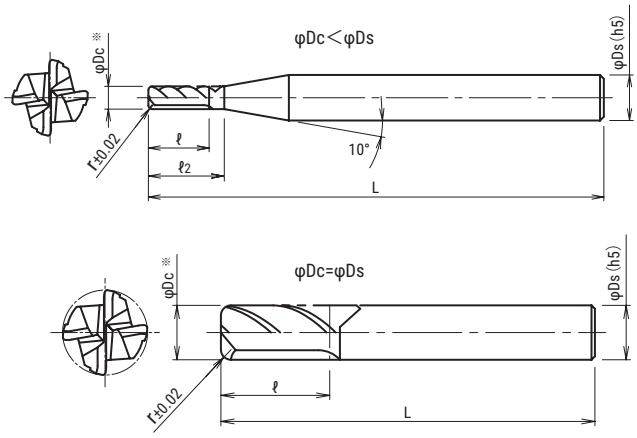
Solid Carbide Radius Endmill for Heat-Resistant Alloy DV-OCSAR Type

DV-OSCAR TYPE

For Heat resistant alloy, Titanium alloy

- 4 flutes
- Helix angle 42° - 45°



Cat.No.	Stock	Dimensions (mm)					
		r	φDc	ℓ	ℓ2	L	φDs
DV-OCSAR4030-05	●	0.5	3	8	10	60	6
DV-OCSAR4040-05	●		4	11	13		
DV-OCSAR4040-10	●	1					
DV-OCSAR4050-05	●	0.5	5	13	15		
DV-OCSAR4050-10	●	1					
DV-OCSAR4060-05	●	0.5	6		–		
DV-OCSAR4060-10	●	1					
DV-OCSAR4080-05	●	0.5	8	19		75	8
DV-OCSAR4080-10	●	1					
DV-OCSAR4080-20	●	2					
DV-OCSAR4100-05	●	0.5	10	22		80	10
DV-OCSAR4100-10	●	1					
DV-OCSAR4100-20	●	2					
DV-OCSAR4120-05	●	0.5	12	26		100	12
DV-OCSAR4120-10	●	1					
DV-OCSAR4120-20	●	2					
DV-OCSAR4120-30	●	3					

■ Tolerance (mm)

Tool dia. (φDc)	Tolerance (φDc)
≦ dia. 6	$^{0}_{-0.015}$
> dia. 6	$^{0}_{-0.02}$

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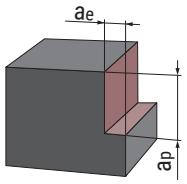
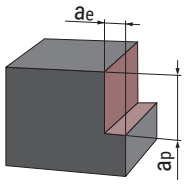
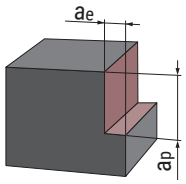
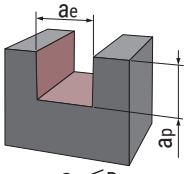
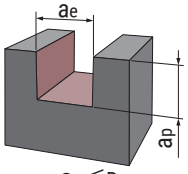
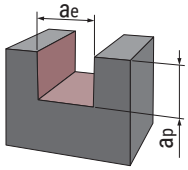
■ DV-OSCAR type Recommended cutting conditions

● Side milling

Material	Stainless steel (SUS304, 316, 317)17Cr		Titanium alloy (Ti-6Al-4V)		Heat resistant alloy (INCO718)	
Type of machining	 ap≦1.5Dc ae≦0.1Dc		 ap≦1.5Dc ae≦0.1Dc		 ap≦1.5Dc ae≦0.1Dc	
φDc (mm)	n (min-1)	Vf (mm/min)	n (min-1)	Vf (mm/min)	n (min-1)	Vf (mm/min)
3	11,000	1,200	11,000	1,200	4,200	320
4	8,000	1,200	8,000	1,200	3,200	320
5	6,400	1,200	6,400	1,200	2,500	320
6	5,400	1,200	5,400	1,200	2,100	320
8	4,000	1,200	4,000	1,200	1,600	320
10	3,200	1,300	3,200	1,300	1,300	320
12	2,700	1,300	2,700	1,300	1,100	280
16	2,000	960	2,000	960	800	200
20	1,600	770	1,600	770	640	160

Note
1. These cutting conditions are for general guidance.
2. The figures should be adjusted according to machining shape, purpose and rigidity of machine and work clamping.
3. Down cutting is recommended.
4. Wet cutting is recommended . For heat resistant alloy , use of cutting fluid is more effective.

● Slot milling

Material	Stainless steel (SUS304)		Titanium alloy (Ti-6Al-4V)		Heat resistant alloy (INCO718)	
Type of machining	 ap≦Dc		 ap≦Dc		 ap≦0.3Dc	
φDc (mm)	n (min-1)	Vf (mm/min)	n (min-1)	Vf (mm/min)	n (min-1)	Vf (mm/min)
3	8,500	540	8,500	540	3,200	160
4	6,400	580	6,400	580	2,400	170
5	5,100	600	5,100	600	1,900	175
6	4,200	600	4,200	600	1,600	180
8	3,200	640	3,200	640	1,200	190
10	2,500	630	2,500	630	950	190
12	2,100	630	2,100	630	800	160
16	1,600	480	1,600	480	600	120
20	1,300	390	1,300	390	480	100

Note
1. These cutting conditions are for general guidance.
2. The figures should be adjusted according to machining shape, purpose and rigidity of machine and work clamping.
3. Wet cutting is recommended . For heat resistant alloy , use of cutting fluid is more effective. .