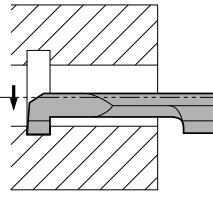


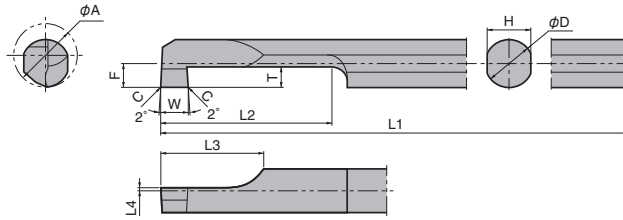
Tip-Bar for Micro Internal Grooving

PSG-S (Tip-Bar)

This insert will be switched to **HPG** type (2-Edge See Page  **G30**).



- Right-hand shown



Classification of usage ● : Continuous / 1st Choice ○ : Continuous / 2nd Choice	P	Carbon Steel / Alloy Steel				●				or Sleeve
	M	Stainless Steel				●				
	K	Cast Iron					●			
	N	Non-ferrous Metals					●			
	S	Titanium Alloy					●			
	H	Hard materials (under 40HRC)				●				
		Hard materials (over 40HRC)								

- Tip-Bar

Description		Min. Cutting Dia.	Dimension (mm)										Cermet	PVD Coated Carbide		Carbide		Ref. Page for
			ØA	W ^{±0.03}	C	ØD	H	L1	L2	L3	L4	F		T	TC60			
PSG ^{R/L}	0510-60S	5	1.0	0.05	3.8	3.6	60	15	8	0.1	1.86	1.5						G32
	0520-60S		2.0	0.1														
	0610-70S	6	1.0	0.05	4.8	4.4	70	20	0.3	2.36	2.0							
	0620-70S		2.0	0.1														
	0710-70S	7	1.0	0.05	5.8	5.2	70	20	10	2.86	2.0							
	0720-70S		2.0	0.1														
0810-80S	8	1.0	0.05	6.8	6.2	80	25	3.38										
0820-80S		2.0	0.1															

- Dimension T shows available grooving depth.

- Dimension L4 indicates the cutting edge is above the Tool's Center Position.

● Applicable Sleeve

This sleeve is for 1-Edge Tip-Bar. For 2-Edge Tip-Bar, See Page **G31**.

Shape	Description	(Previous Description)	Std.	Dimension (mm)								Spare Parts		Applicable Tip-Bar			
				øD1	øD2	ød1	ød2	H	L1	L2	Screw	Wrench					
																	
 (Tip-Bar installation side)	PH 0412-60	PH -0412		12	19	3.8	6	11	60	20	HS4X4	LW-2	PSG $\frac{1}{16}$ 00 - 00 S				
0512-60	-0512		4.8			PSG $\frac{1}{16}$ 00 - 00 S											
0612-60	-0612		5.8			8							PSG $\frac{1}{8}$ 00 - 00 S				
0712-60	-0712		6.8										*PSG $\frac{1}{8}$ 00 - 00 S				
	PH 0416-80	PH -0416		16	22	3.8	Rp $\frac{1}{4}$ (PS $\frac{1}{4}$)	15	80	20	HS4X4	LW-2	PSG $\frac{1}{16}$ 00 - 00 S				
	0516-80	-0516				4.8							PSG $\frac{1}{16}$ 00 - 00 S				
	0616-80	-0616				5.8							PSG $\frac{1}{8}$ 00 - 00 S				
	0716-80	-0716				6.8							*PSG $\frac{1}{8}$ 00 - 00 S				

- Besides the above Sleeves, Collet Chucks are also available in the market .

* PSFG[®]L08 ○○ 20S is available.

◆ Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)				PSG05	PSG06 PSG07 PSG08	Remarks
	Cermet	PVD Coated Carbide		Carbide			
	TC60		PR930	KW10			
	Feed Rate (mm/rev)						
Steel	☆ 60 ~ 120		★ 30 ~ 100		~ 0.03	~ 0.05	Coolant
Stainless Steel	☆ 50 ~ 100		★ 30 ~ 80		~ 0.02	~ 0.03	
Non-ferrous Metals			★ ~ 300		~ 0.05	~ 0.08	

★ : 1st Recommendation ☆ : 2nd Recommendation

Remarks on PSG-S type Tool

How to install

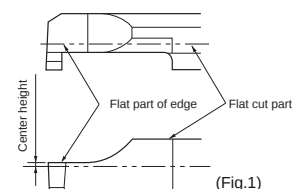
PSG-S should be installed accurately because errors from the cutting edge's height and angle affect the machining precision in the micro grooving application. When installing, set the cutting edge above the center position as shown in the Table 1. All PSG-S type tools are produced to have the cutting edge above the center position.

(See dimension L4)

- ① In case of using the exclusive sleeve (PH ○○ 12-60, PH ○○ 16-80), the cutting edge of PSG-S tool comes to the suitable position automatically.
- ② In case of using the collet chuck in the market, adjust the center height according to the Table 1.
It is easy to adjust the center height using the edge's flat part. (Fig.1)

(Table1)

Grooving Tip-bar	Center height (mm)
PSG05 type	0.1
PSG06 type	0.3
PSG07 type	
PSG08 type	



(Fig.1)

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

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