


# PIN GATE EXTENSION BUSHINGS

ⓘ Non JIS material definition is listed on P.1351 - 1352

**RoHS**



**Head type**

Part Number	M	H
PGEH	SKH51	58~60HRC
PGEN	NAK80	37~43HRC

ⓘ Eccentricity between D and V is 0.05 or less.

**Head type · Reverse tapered type**

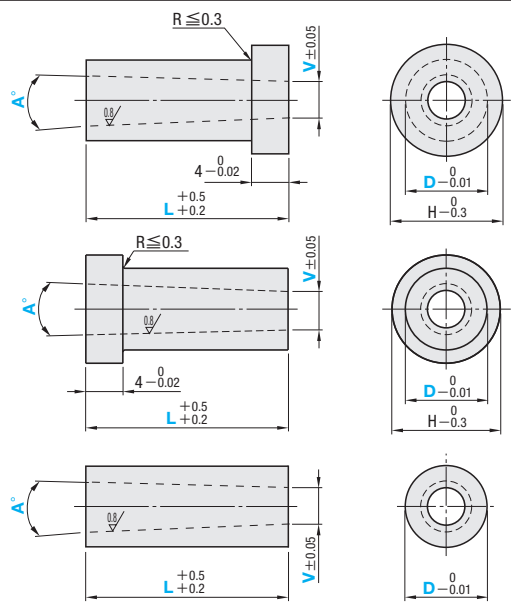
Part Number	M	H
PGEHR	SKH51	58~60HRC
PGENR	NAK80	37~43HRC

ⓘ Eccentricity between D and V is 0.05 or less.

**Headless type**

Part Number	M	H
PGEHS	SKH51	58~60HRC
PGENS	NAK80	37~43HRC

ⓘ Eccentricity between D and V is 0.05 or less.



H	Part Number	D	L	V	A°	U/Price
Type		0.1mm increments		Angled		1~4 pcs.
9	Head type PGEH (SKH51) PGEN (NAK80)	6	10.0~30.0 30.1~40.0	1.5 2.0 2.5	1 2	<b>Quotation</b>
11	Head type · Reverse tapered type PGEHR (SKH51) PGENR (NAK80)	8	10.0~30.0 30.1~40.0	2.0 2.5 3.0 3.5		
15	Headless type PGEHS (SKH51) PGENS (NAK80)	10	10.0~30.0 30.1~40.0	3.0 3.5 4.0 4.5 5.0	1 2 3	
18		13	10.0~30.0 30.1~40.0	4.5 5.0 5.5 6.0 6.5 7.0		

ⓘ To use this bushing together with a pin-point gate bushing, select the appropriate dimension referring to "How to Select V Dimension" on the next page.

**Order**







Part Number	L	V	A
PGEH 8	30.0	V2.5	A2
PGEHR8	30.0	V2.5	A2
PGEHS8	30.0	V2.5	A2

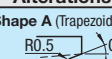
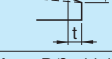

**Days to Ship** **Quotation**

**Price** **Quotation**

**Alterations**

Part Number	L	V(VC)	A	(AIW · AHW...etc.)
PGEH10	28.34	VC2.5	A3	AIW5 - GC7 - LKC

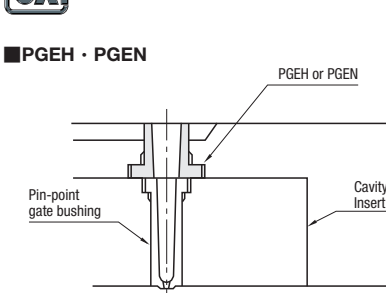
Alterations	Code	Spec.	1Code
	KC	Adds a single key flat on the head. ⓘ Available for head type ⓘ L < 16 not available	<b>Quotation</b>
	WKC	Adds two parallel key flats on the head. ⓘ Available for head type ⓘ L < 16 not available	
	LKC	Changes the L dimension tolerance $L \pm 0.5 \rightarrow L \pm 0.05$ ⓘ L < 16 not available When LKC is used, L dimension alteration in 0.01mm increments possible	
	VC	Changes V dimension. VC=0.1mm increments	
	HC	Head diameter change ⓘ Available for head type $D \geq HC < H$ 0.1mm increments	
	TC	Head diameter change ⓘ Available for head type $2.0 \leq TC < 4$ 0.1mm increments ⓘ L dimension remains unchanged even when TC is used. ⓘ $4 - TC \leq L_{max} - L$	

Alterations	Code	Spec.	1Code
	AIW	ⓘ Available only for PGEH · PGEN ⓘ AIW10 - GC7 ⓘ Key flat position when KC · WKC is combined. ⓘ $W \leq (\beta - 0.4), L \geq 20$	<b>Quotation</b>
	BIR	ⓘ Available only for PGEH · PGEN ⓘ BIR4 ⓘ Key flat position when KC · WKC is combined. ⓘ $R \leq (\beta - 0.4)/2, L \geq 20$	
	CIQ	ⓘ Available only for PGEH · PGEN ⓘ CIQ6 ⓘ Key flat position when KC · WKC is combined. ⓘ $Q \leq (\beta - 0.4)/1.09, L \geq 20$	
	CHQ		
		W dimension GC choices	
		W t GC	
		4 3	
		5 3.5 7	
		6 4	
		8 5.5 10	
		10 7	
		R dimension choices	
		R	
		2	
		2.25	
		2.5	
		3	
		3.5	
		4	
		Q dimension choices	
		Q	
		4	
		5	
		6	
		8	

ⓘ \*Previously the trapezoidal taper angle was fixed at 10°, but now it is possible to select a taper angle of either 10° or 7°. When you wish to use a taper angle of 7°, specify (Code)(W dimension)—GC7. If you do not specify the taper angle, an angle of 10° will be automatically selected.

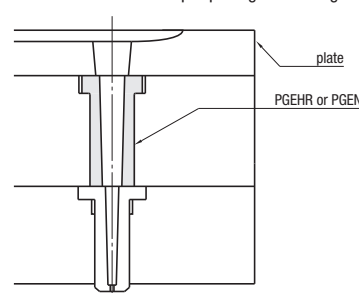
**Example**

**PGEH · PGEN**

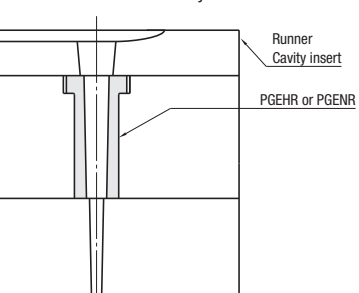


**PGEHR · PGENR**

· Extension method for pin-point gate bushings



**PGEHS · PGENS**



**Runner Cavity insert**

**plate**

**Pin-point gate bushing**

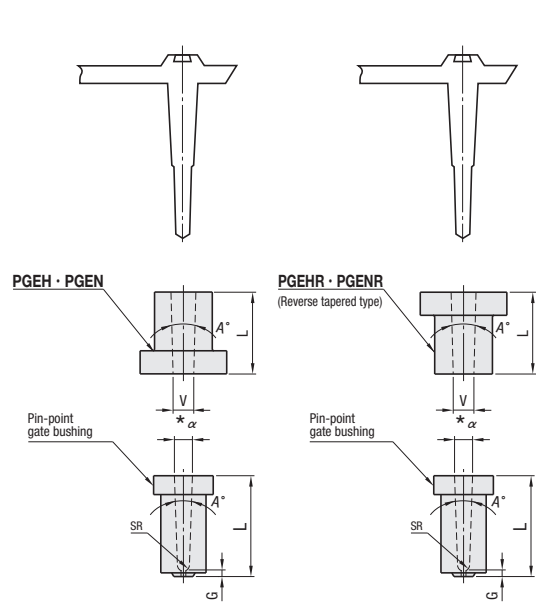
**Cavity Insert**

**Runner Cavity insert**

**plate**

**Runner Cavity insert**

## How to Select V Dimension



$V \geq \alpha + X$

ⓘ \*To use this pin gate extension bushing together with a select the appropriate  $\alpha$  dimension from the following formula and designate V dimension.

Calculation for the inlet diameter \*  $\alpha$  of Pin Gate Extension Bushings

$\alpha = 2SR + 2(L-G-SR)\tan\frac{A^\circ}{2}$  ⓘ SR the inside diameter ⓘ Tapered the inside diameter

$\alpha = 2(L-G)\tan\frac{A^\circ}{2} + G\tan\frac{K^\circ}{2} + P$

ⓘ \*The dimension acquired using the above calculation is the theoretical (reference) value.

**Applicable x dimensions**

M	Type	$\alpha$	Eccentricity between D and V	Pin Gate Extension Bushing	X
SKH51	PGHS PGHST PGHTBL PGHB□A PGHV□A PGHVT□A	PGH□A PGHD□A PGHT□A PGHF□A PGHB□A PGHV□A	±0.1	0.05 or less	0.3
Carbide	PGWB□A PGW□A				
Electro forming	PGES PGEST PGE□A PGE□A PGEV□A	PGE□A PGEK□A PGET□A PGE□A PGE□A	±0.05	0.05 or less	0.3
Electro forming (high hardness)	PGKS PGKST PGK□A PGK□A	PGK□A PGK□A PGK□A PGK□A			

ⓘ \*Please examine at the time of designing the mold that the relationship between V and  $\alpha$  will not be undercut when runner is pulled out.

## Calculation for the inlet diameter \* $\beta$ of Pin Gate Extension Bushings

