

HPM1  
equivalent  
SKD61


# ECOLOGY SPRUE BUSHINGS

—SHOULDER TYPE—

Ⓜ Non JIS material definition is listed on P.1359 - 1360

Sprue Bushings  
Locating Rings

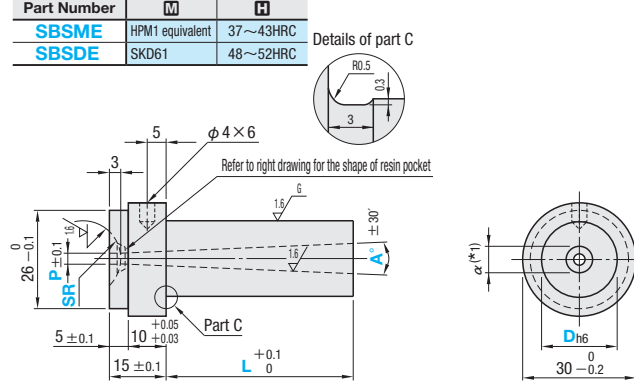
—Straight type—



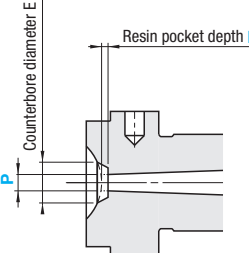
**RoHS**

Part Number	M	H
SBSME	HPM1 equivalent	37~43HRC
SBSDE	SKD61	48~52HRC

Details of part C




■Details for the resin pocket



Counterbore diameter E  
Resin pocket depth F

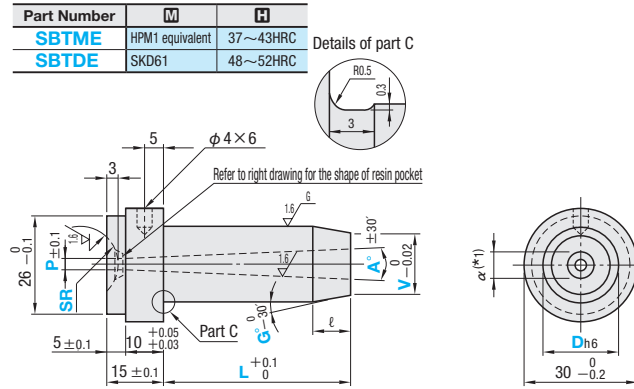
—Tapered type—



**RoHS**

Part Number	M	H
SBTME	HPM1 equivalent	37~43HRC
SBTDE	SKD61	48~52HRC

Details of part C



Sprue diameter P	Counterbore diameter E
2	6.5
2.5	7
3	7

For the details of resin pocket depth F, refer to P.746 of the selection of resin pocket depth F.

Dh6	Part Number Type	D	(*2)L		SR	P	A°	F	V	G°
			0.1mm increments	1° increments						
8	—Straight type— (HPM1 equivalent) SKD61	8 <sup>(*)4</sup>	0~80.0	10.5	2	0.5~3	0.3	D>V≥α+2	1~10	
10		10	0~120.0							
12		12	0~150.0							
13	—Tapered type— (HPM1 equivalent) SKD61	13	0~150.0	11	2.5	0.5~4	1.2	Available for tapered type only	Available for tapered type only	
16		16	0~200.0							
20		20	0~200.0							
25		25	0~200.0				1.8			
							2			

(\*1) The value of α is set in accordance with L dimension.  
 (\*2) L dimension is restricted by P, V and A. Similarly, G is restricted by L dimension.  
 (\*3) L dimension limits

P	2	2.5	3
A	0.5 1 1.5~4.0	0.5 1 1.5~4.0	0.5 1~1.5
L dimension limit	30 50 85	45 50 85	60 85

(\*4) Available only for SBSME • SBSDE.

Working limits  
 • Straight type  
 $D - \alpha \geq 2$  (Calculation of α value)  $\alpha = P + 2(L + (U) + 12) \tan \frac{A}{2}$  U: with ZC alteration  
 • Tapered type  
 $V - \alpha \geq 2$   
 $L - \ell \geq 3$  (Calculation of ℓ value)  $\ell = \frac{D - V}{2 \tan(G - 0.25)}$  ※0.25 is a value that takes G tolerance into account.

Conversion Chart of Trigonometric Functions P.1345

Order **Part Number** — L — SR — P — A — F — V — G

SBSDE20 — 80.0 — SR11 — P3 — A2 — F1  
 SBTME20 — 45.5 — SR11 — P3 — A4 — F1 — V15.0 — G5

Days to Ship (HPM1 equivalent) **3** Days Express A P.46  
 (SKD61) SBSDE SBTME **3** Days Express A P.46  
 Delivery days depend on subsidiary P.45

**P** Price **Quantity discount rate** P.45

Quantity	1~4	5~9	10~14	15~20
Rate	—	5%	10%	15%

To be quoted on price & lead time above Max. Q'ty.

Alterations **Part Number** — L — SR — P — A — F — V — G — (AIW • AXW...etc.)  
 SBSME20 — 45.5 — SR11 — P3 — A4 — F1 — V — G — (AIW • AXW...etc.)  
 — AXW10—GC10—KC

**3** Days

Alterations	Code	AIW	AHW	AXW	ATW	AJW	AKW	AEW	ALW	APW	AUW	ACW	Spec.
Shape A (Trapezoid)	Spec.												• W dimension and GC° selection W t GC° 3 2.5 7° 4 3 10° 5 3.5 6 4 8 5.5 10 7
	1Code	Quotation											
	Designation method	• Dowel hole position not available. • Combination with ZC not available. • ATW, AJW, AKW, AEW, ALW, APW, AUW and ACW have working limits as follows. When D ≤ 10, (α - 0.6) ≥ W When D ≥ 12, (α - 0.4) ≥ W • Combination with RC not available. • Designation method) AHW4—GC7 Specify in the sequence "(shape) (W dimension)—GC°". If you do not make a specification, (AHW4, for example) will be 10°.											
Alterations	Code	BIR	BHR	BXR	BTR	BJR	BKR	BER	BLR	BPR	BUR	BCR	Spec.
Shape B (Semicircle)	Spec.												• R dimension selection 1 1.25 1.5 1.75 2 2.25 2.5 3 3.5 4
	1Code	Quotation											
	Designation method	• Dowel hole position not available. • Combination with ZC not available. • BTR, BJR, BKR, BER, BLR, BPR, BUR and BCR have working limits as follows. when D ≤ 10, (α - 0.6) ≥ 2 × R when D ≥ 12, (α - 0.4) ≥ 2 × R											
Alterations	Code	CIQ	CHQ	CXQ	CTQ	CJQ	CKQ	CEQ	CLQ	CPQ	CUQ	CCQ	Spec.
Shape C (Arc+Tangent)	Spec.												• Q dimension selection 2 2.5 3 3.5 4 5 6 8
	1Code	Quotation											
	Designation method	• Dowel hole position not available. • Combination with ZC not available. • CTQ, CJQ, CKQ, CEQ, CLQ, CPQ, CUQ and CCQ have working limits as follows. when D ≤ 10, (α - 0.6) ≥ Q × 1.09 when D ≥ 12, (α - 0.4) ≥ Q × 1.09											

Alterations	Code	Spec.	1Code	Alterations	Code	Spec.	1Code
	KC	13 <sub>-0.1</sub> Adds a key flat on the head.	Quotation		GKC	Changes the G tolerance. G <sub>0-30°</sub> → G <sub>0-15°</sub> • Available for tapered type when ℓ ≤ 15 and (L - ℓ) ≥ 10 • Combination with ZC not available.	Quotation
	WKC	26 <sub>-0.1</sub> Adds two parallel flats on the head.			LKC	Changes L dimension tolerance L <sub>+0.1</sub> → L <sub>0-0.02</sub> • L dimension: 0.01mm increments when LKC is used. • Combination with ZC not available.	
	ZC	Undercut machining S, T, U = 0.1mm increments • S ≥ α + 2 • α + 2 ≤ T ≤ D(V - 2U)tanG • 1.5 ≤ U ≤ 5 • L max ≥ L + U [Designation method] ZC—S3.5—T4.0—U2.0 • Not available for D8			RC	The step R is processed in the tip bore to prevent the connection between the sprue and the runner from breaking when releasing from the mold. Dimension selection of step R 1 2 • The step R is cut with an inner R cutter. Surface roughness and position precision are not provided. • Available for α ≥ 5 • Straight type D - α - (2 × RC) > 2 • Tapered type V - α - (2 × RC) > 2 • Combination with shapes A, B and C not available. • Combination with ZC not available.	