

HPM1  
equivalent  
SKD61

# SPRUE BUSHINGS

—PROPER BOLT TYPE—

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

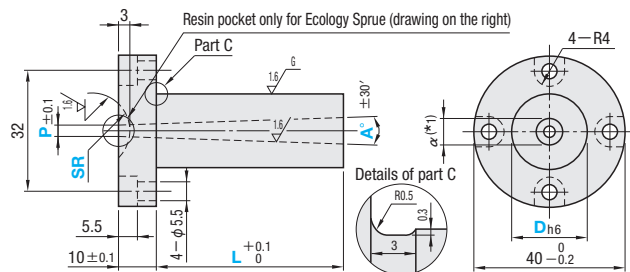
Details of string eliminator **P.747**

—Straight type—



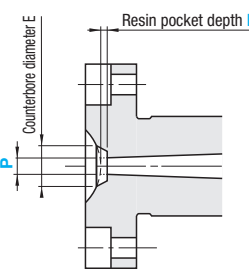
RoHS

Part Number			M	H
Normal	Ecology	String eliminator type		
SBBM	SBBME	SBBMH	HPM1 equivalent	37~43HRC
SBBD	SBBDE	SBBDH	SKD61	48~52HRC



Proper cap bolts SUB5—12 (4 pcs.)

Details for the resin pocket



Ecology Sprue is available for SR10.5 · 11, P2 · 2.5 · 3 only.

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

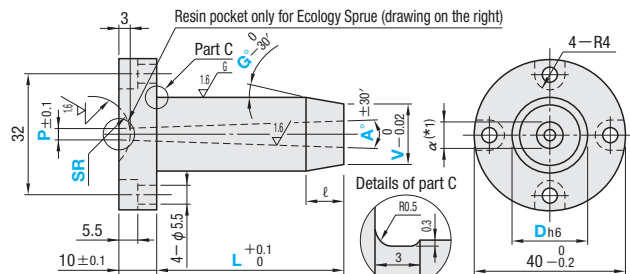
For the details of resin pocket depth F, refer to the "Selection of resin pocket depth F" P. 742

—Tapered type—



RoHS

Part Number			M	H
Normal	Ecology	String eliminator type		
SBGM	SBGME	SBGMH	HPM1 equivalent	37~43HRC
SBGD	SBGDE	SBGDH	SKD61	48~52HRC



Proper cap bolts SUB5—12 (4 pcs.)

Dh6	Part Number			L <sup>(*)2</sup> 0.1mm increments	SR	P	A° 0.5° increments	F	V 0.1mm increments	G° 1° increments
	Type									
10 0 -0.009	—Straight type—			10	0	2 <sup>(*)3,4</sup>	0.3	0.3	D > V ≥ α + 2	1~10
	Normal	Ecology <sup>(*)5</sup>	String eliminator type							
13 0 -0.011	(HPM1 equivalent)	SBBM	SBBME	13	10.5	2.5 <sup>(*)3</sup>	0.5	0.5	D > V ≥ α + 2	1~10
	(SKD61)	SBBD	SBBDE							
16	—Tapered type—			16	11	3 <sup>(*)3</sup>	0.8	0.8	D > V ≥ α + 2	1~10
	Normal	Ecology <sup>(*)5</sup>	String eliminator type							
20 0 -0.013	(HPM1 equivalent)	SBGM	SBGME	20	12	4	1.2	1.2	D > V ≥ α + 2	1~10
	(SKD61)	SBGD	SBGDE							
25	—Tapered type—			25	13	4.5	1.5	1.5	D > V ≥ α + 2	1~10
	Normal	Ecology <sup>(*)5</sup>	String eliminator type							
20	—Tapered type—			20	16	5.5	1.8	1.8	D > V ≥ α + 2	1~10
	Normal	Ecology <sup>(*)5</sup>	String eliminator type							
25	—Tapered type—			25	20 <sup>(*)4</sup>	6.5	2	2	D > V ≥ α + 2	1~10
	Normal	Ecology <sup>(*)5</sup>	String eliminator type							
25	—Tapered type—			25	21 <sup>(*)4</sup>	7	2	2	D > V ≥ α + 2	1~10
	Normal	Ecology <sup>(*)5</sup>	String eliminator type							
25	—Tapered type—			25	23 <sup>(*)4</sup>	8	2	2	D > V ≥ α + 2	1~10
	Normal	Ecology <sup>(*)5</sup>	String eliminator type							

(\*)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. (\*)4 Not available for products with string eliminator. (\*)5 Ecology Sprue is available for SR10.5 · 11, P2 · 2.5 · 3 only.

Working limits Conversion Chart of Trigonometric Functions **P.1337**

—Straight type—  
 $D - \alpha \geq 2$  (Calculation of α)  $\alpha = P + 2 \cdot (L + (U) + 7) \tan \frac{A}{2}$   
 U: with ZC alteration

—Tapered type—  
 $V - \alpha \geq 2$   
 $L - \ell \geq 2$  (Calculation of ℓ)  $\ell = \frac{D - V}{2 \tan(G - 0.25)}$  ※0.25 is a value that takes G tolerance into account.

Order **Part Number** — L — SR — P — A — F — V — G  
**SBBM 16** — 53.0 — SR11 — P3 — A3  
**SBGME25** — 85.0 — SR10.5 — P2 — A2 — F2 — V22.0 — G8

Days to Ship **Quotation**

Price **Quotation**

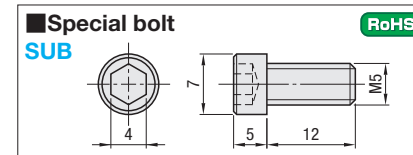
Alterations **Part Number** — L — SR — P — A — F — V — G — (AIW · AXW...etc.)  
**SBGMH25** — 83.25 — SR16 — P2.5 — A2 — V22.0 — G8 — CTQ5—LKC

Alterations	Code	AIW	AXW	ATW	ALW	Spec.
Shape A (Trapezoid)	Spec.					Designation method   AIW10—GC10 + Bolt hole position
	1Code	Quotation				<ul style="list-style-type: none"> <li>W dimension and GC° selection</li> <li>W t GC°</li> <li>3 2.5 7°</li> <li>4 3</li> <li>5 3.5</li> <li>6 4</li> <li>8 5.5 10°</li> <li>10 7</li> </ul>

Alterations	Code	BIR	BXR	BTR	BLR	Spec.
Shape B (Semicircle)	Spec.					Designation method   BXR2 + Bolt hole position
	1Code	Quotation				<ul style="list-style-type: none"> <li>R dimension selection</li> <li>1</li> <li>1.25</li> <li>1.5</li> <li>1.75</li> <li>2</li> <li>2.25</li> <li>2.5</li> <li>3</li> <li>3.5</li> <li>4</li> </ul>

Alterations	Code	CIQ	CXQ	CTQ	CLQ	Spec.
Shape C (Arc+Tangent)	Spec.					Designation method   CTQ5 + Bolt hole position
	1Code	Quotation				<ul style="list-style-type: none"> <li>Q dimension selection</li> <li>2</li> <li>2.5</li> <li>3</li> <li>3.5</li> <li>4</li> <li>5</li> <li>6</li> <li>8</li> </ul>

Alterations	Code	Spec.	1Code	Alterations	Code	Spec.	1Code
	ZC	Undercut machining S, T, U: 0.1mm increments α + 2 ≤ T ≤ D(V - 2UtanG) 1.5 ≤ U ≤ 5 Specification Lmax ≥ L + U Designation method   ZC—S3.5—T4.0—U2.0	Quotation		LKC	L dimension tolerance alteration L <sup>+0.1</sup> <sub>0</sub> ... L <sub>0.02</sub> When LKC is used, L dimension alteration in 0.01mm increments possible Combination with ZC not available	Quotation
	GK	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			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 Available for α ≥ 5 Straight type D - α - (2 × RC) > 2 Tapered type V - α - (2 × RC) > 2 Combination with shapes A · B · C not available Combination with ZC not available	Quotation



Special bolt **SUB** **RoHS**  
**Part Number** **SUB5—12**  
**U/Price** **Quotation**

The proper bolt type specially designed for sprue bushings (4 pieces are supplied with each sprue bushing). Do not use this bolt for other purpose than mounting these sprue bushings.

Order **Part Number** **SUB5—12**  
 Days to Ship **Quotation**

Sprue Bushings  
Locating Rings