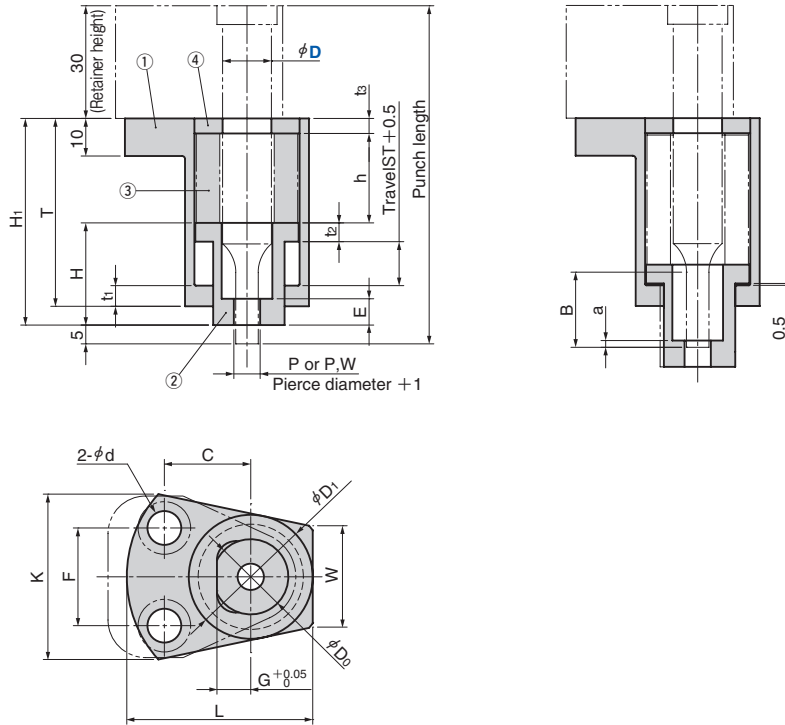


Punch Stripper Unit

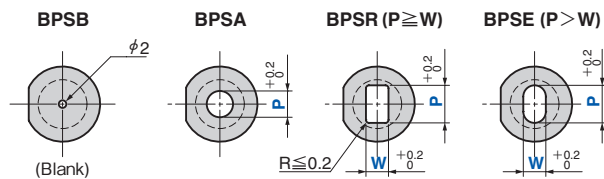
Coil Spring Type

Pierce Components

- BPSB** (Bushing blank type)
- BPSA** (Round hole)
- BPSR** (Square hole with radius)
- BPSE** (Oblong hole)



- Hole of Steel Bushing
Determine the hole size with the pierce diameter + 1 mm.



D	Punch Length	T	t ₁	H	t ₂	H ₁	E	h	t ₃	C	F	G	D ₀	D ₁	K	L	W	d	B	a
10	80	44	4.5	23	5.0	45	9	18	4	21	20	9	20	33	44	49.5	27	9	13	1.5
	90	50	5.5	27.2		55	8	23.8		1.3										
13	80	44	4.5	23	5.0	45	9	18	4	23	26	9	20	33	44	49.5	27	9	13	1.5
	90	50	5.5	27.2		55	8	23.8		1.3										
16	90	53	5.0	28	4.5	55	13	24	3	26	24	13.5	30	41	50	60.5	36	11	19	1.5

Catalog No.	D	Punch Length	0.1 mm increments				
			BPSA	BPSR		BPSE	
			P	P	W	P	W
BPSB	10	80	3.0~11.0	3.0~ 8.0	3.0~ 8.0	3.1~11.0	3.0~10.8
BPSA		90					
BPSR	13	80	3.0~14.0	3.0~10.1	3.0~10.1	3.1~14.0	3.0~13.8
BPSE		90					
	16	90	3.0~17.0	3.0~12.3	3.0~12.3	3.1~17.0	3.0~16.8



Catalog No.	D	Punch Length	P	W	Option
BPSB	10	80			
BPSA	10	80	P8.2		
BPSR	13	90	P8.0	W6.0	
BPSR	13	80	P8.0	W6.0	RA30
BPSA	10	80	P8.2		PN



Option Code	Specification
RA	Lock position of the irregular shape (square or oblong hole) bushing is changed (at increments of 1°).
PN	Dowel hole is machined. 2-φ 6H7

Refer to page 240 for option details.

Guideline for Use

- Use BPSB with the pierce guide hole.
- Set the entry of the pierce to 5 mm or less.

Punch Stripper Unit [Overview]

Coil Spring Type BPS Series

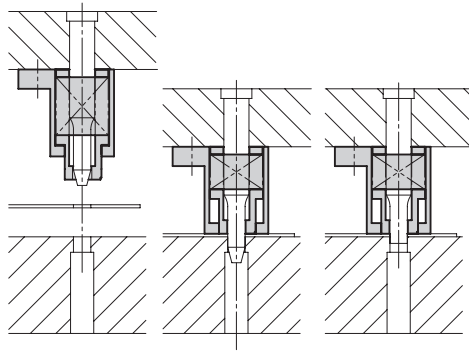
Pierce Components

- It is a punch stripper unit for commercially available retainer.
- It is compatible with 5 sizes of $\phi 10$, 13 (overall length 80, 90) and $\phi 16$ (overall length 90).
- The entry size is specified to max. 5 mm.
- The bushing end can be machined to a shape.

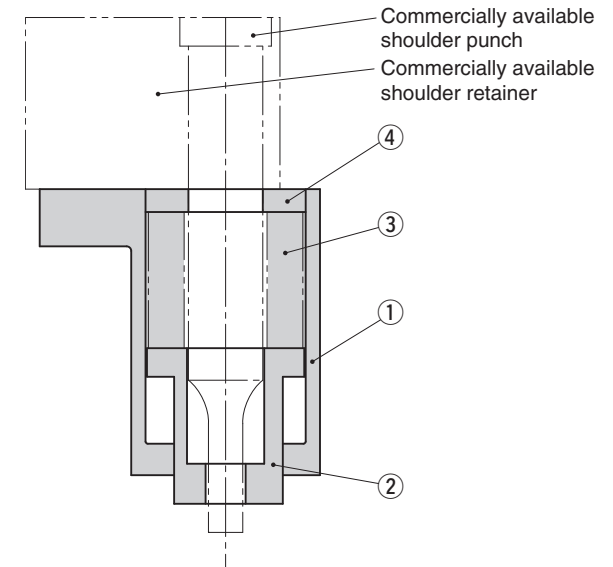
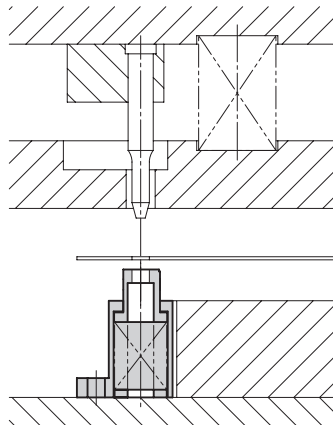


Other examples of punch stripper unit

It can be used as the stripper for pilot punch.



It can be used as the lifter with pilot relief hole.



No.	Description	Qty	Remark
1	Holder	1	—
2	Steel bushing	1	—
3	Coil Spring	1	Refer to the Spring Specification.
4	Spacer	1	—
5	Hexagon Socket Head Bolt (Accessory)	2	D=10:M8x60, D=13:M8x60, D=16:M10x16

Punch Stripper Unit [Overview]

Coil Spring Type BPS Series

Pierce Components

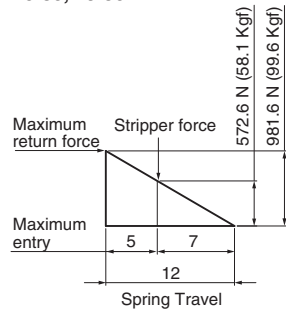
Spring Specification

Catalog No.	D	Punch Length	Travel S	Initial Load N (kgf)	Stripper Force N (kgf) *1	Maximum Return Force N (kgf)	Spring Constant N/mm (kgf/mm)	Spring Model
BPSB BPSA BPSR BPSE	10	80	12		572.6 (58.1)	981.6 (99.6)	81.8 (8.3)	TL27-30
		90	11.2		790.5 (80.6)	1427.8 (145.6)	127.5 (13.0)	TM27-35
	13	80	12	0.0	572.6 (58.1)	981.6 (99.6)	81.8 (8.3)	TL27-30
		90	11.2		790.5 (80.6)	1427.8 (145.6)	127.5 (13.0)	TM27-35
	16	90	11.2		1116.5 (114.4)	1624.0 (166.4)	101.5 (10.4)	TL35-40

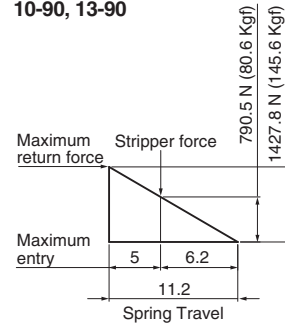
*1 Pierce entry is set at 5 mm.

Spring Diagram

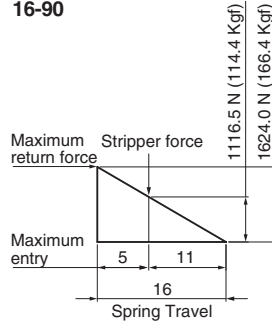
10-80, 13-80



10-90, 13-90

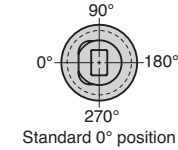


16-90

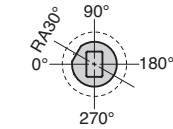


Option

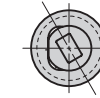
—RA Lock position of the irregular shape bushing can be changed.



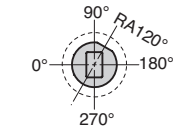
Standard 0° position



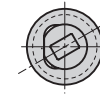
RA30° position



For RA30°



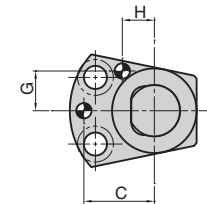
RA120° position



For RA120°

—PN Dowel hole is machined. (2-φ6H7)

When the unit is used as the stripper for pilot punch or the lifter with pilot relief hole, dowel holes should be drilled.



D	C	G	H
10 • 13	27.5	15.5	12.5
16	32	18.5	15

D is punch shank diameter.