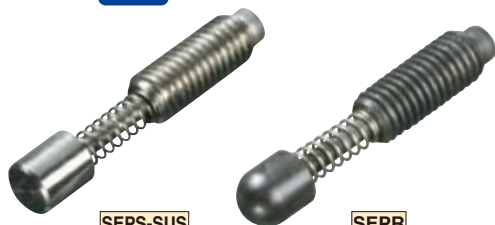


# SEPS / SEPR

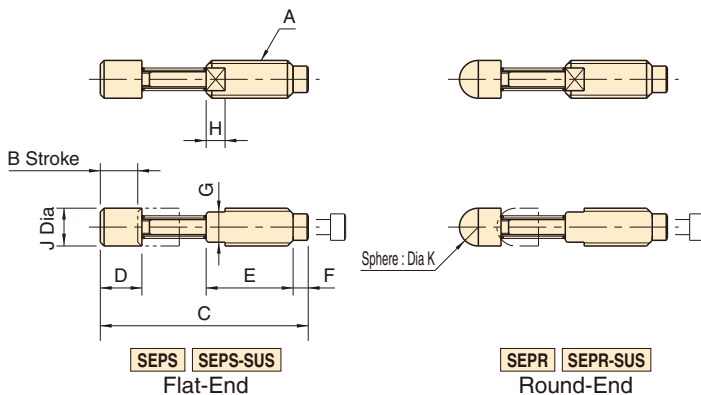
# SPRING EJECTOR PINS



**SEPS-SUS**  
Flat-End, Stainless Steel

**SEPR**  
Round-End, Steel

- [Body (Steel)]  
Material : SCM435 steel  
Heat treat : Quenched and tempered  
(Rc 33 - 39)  
Finish : Black oxide
- [Body (Stainless Steel)]  
Material : SUS304 stainless steel
- [Pin (Steel)]  
Material : S45C steel  
Heat treat : Quenched and tempered  
(Rc 33 - 39)  
Finish : Black oxide
- [Pin (Stainless Steel)]  
Material : SUS304 stainless steel
- [Spring]  
Material : SUS304WPA stainless steel



**SEPS | SEPS-SUS**  
Flat-End

**SEPR | SEPR-SUS**  
Round-End

Type / Size	A	B	C	D	E	F	G	H	J	K	Spring Force (N)	Weight (g)
<b>SEPS   SEPR</b> 08-08	M 8x1.25	7.6	44	9	19	3	7	4	8	8	1.5 - 7.4	10
<b>SEPS-SUS</b> 10-10	M10x1.5	9.9	55	11	23	4	8	5	10	10	2.5 - 10.7	20
<b>SEPR-SUS</b> 12-12	M12x1.75	12.3	67	13	28	5	10	6	12	12	3.6 - 14.5	35

<b>SEPS   SEPS-SUS</b> Flat-End	
Steel	Stainless Steel
Part Number	Part Number
<b>SEPS08-08</b>	<b>SEPS08-08-SUS</b>
<b>SEPS10-10</b>	<b>SEPS10-10-SUS</b>
<b>SEPS12-12</b>	<b>SEPS12-12-SUS</b>

<b>SEPR   SEPR-SUS</b> Round-End	
Steel	Stainless Steel
Part Number	Part Number
<b>SEPR08-08</b>	<b>SEPR08-08-SUS</b>
<b>SEPR10-10</b>	<b>SEPR10-10-SUS</b>
<b>SEPR12-12</b>	<b>SEPR12-12-SUS</b>

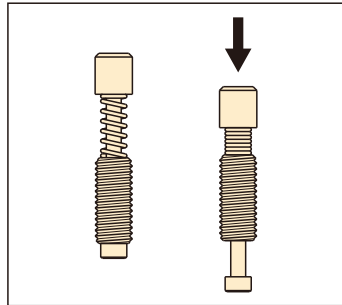
## How To Use

To lock, use a lock nut or adhesive agent.

## SPRING EJECTOR PINS

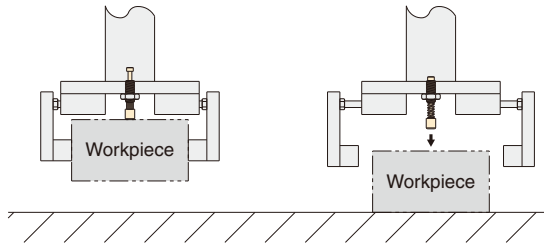
### Features:

Can be used as a handy shock absorber as well as a workpiece ejecting tool.  
Available in flat-end and round-end designs.  
Available in steel and stainless steel.

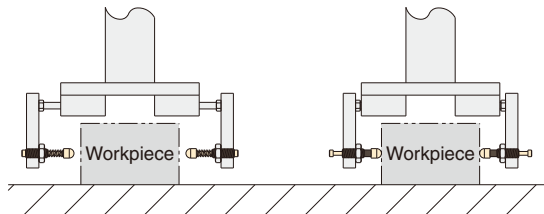


### Application Examples

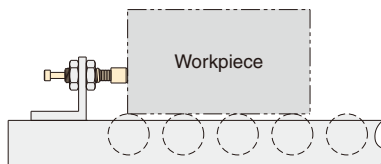
Ejecting a workpiece on the material handling equipment



Locating a workpiece or dampening shock delivered to it on the material handling equipment



Dampening shock delivered to a workpiece on the conveyor.



## BJ730

## SWIVEL CONTACT BOLTS

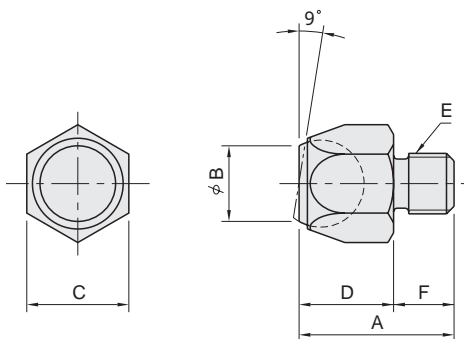


## [Body]

Material:S45C steel  
Heat treated(M6&M8 sizes)  
Black oxide finish

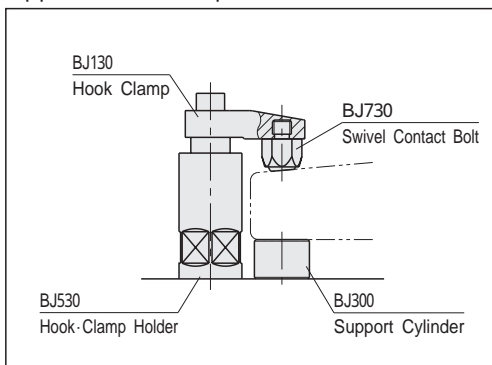
## [Ball]

Material:SUJ2  
Heat treated


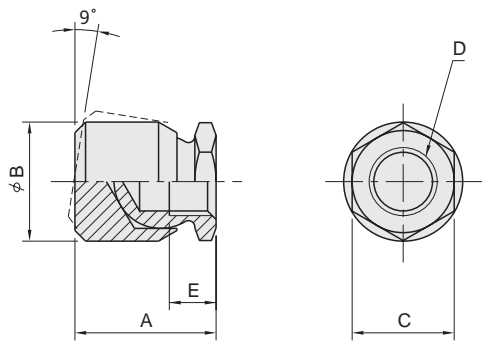


Part Number	A	B	C	D	E	F	Load Capacity (N)	Weight (g)
<b>BJ730-06009</b>	16	7.4	10	9	M 6 x 1	7	13,700	12
<b>BJ730-08012</b>	21	10.5	13	12	M 8 x 1.25	9	25,600	15
<b>BJ730-10016</b>	27	12.7	17	16	M10 x 1.5	11	40,000	45
<b>BJ730-12020</b>	32	15	22	20	M12 x 1.75	12	59,400	50
<b>BJ730-16025</b>	41	20	27	25	M16 x 2	16	96,400	115

## Application Example

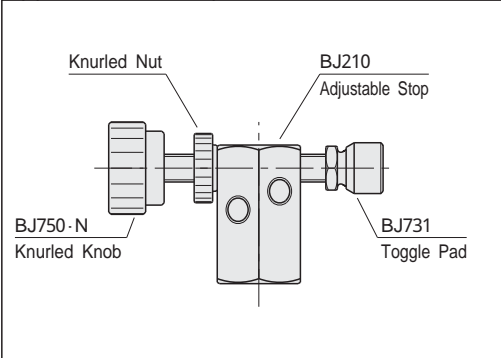


- Use to clamp from above and/or below a workpiece .
- Ball swivel is not limited .

<b>BJ731</b>	<b>TOGGLE PADS</b>
 <p style="margin-top: 10px;">Material: S45C steel Heat treated(contact surface) Black oxide finish</p>	

Part Number	A	B	C	D	E	Load Capacity(N)		Weight (g)
						Static	Repeated	
<b>BJ731-08017</b>	17	15	13	M 8 x 1.25	6	8,000	5,300	18
<b>BJ731-12025</b>	25	22	19	M12 x 1.75	8	15,900	10,600	60
<b>BJ731-16033</b>	33	28	24	M16 x 2	10	26,700	17,800	130

**Application Example**

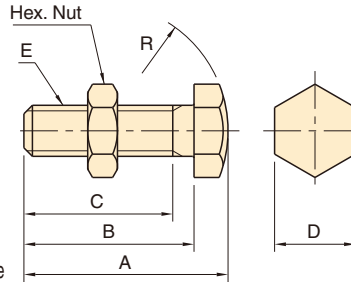


Use to distribute clamping pressure to irregular workpiece surfaces .

Modular Fixture Bases  
 Blank Fixture Bases  
 Quick-Change Fixture Bases  
 Standard Fixture Parts  
 Modular Fixture Parts  
 One-Touch Clamps

# BJ732

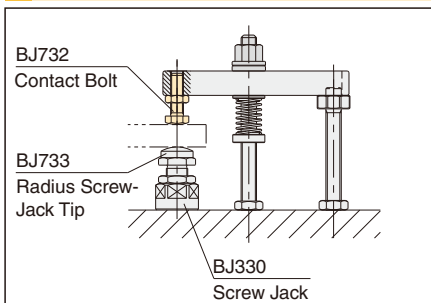
# CONTACT BOLTS



Material : SCM435 steel  
 Heat Treat : Quenched and tempered  
 Induction hardened on contact surface  
 Finish : Black oxide

Part Number	A	B	C	D	E	R	Weight (g)
BJ732-06025	30	25	22	10	M 6x1	R15	7
BJ732-06035	40	35	32				9
BJ732-06045	50	45	42				11
BJ732-08030	36	30	27	13	M 8x1.25	R17.5	16
BJ732-08040	46	40	37				19
BJ732-08050	56	50	47				22
BJ732-10040	48	40	37	17	M10x1.5	R20	33
BJ732-10050	58	50	47				38
BJ732-10060	68	60	57				42
BJ732-12050	50	40	35	19	M12x1.75	R30	60
BJ732-12060	70	60	55				65
BJ732-12070	80	70	65				70
BJ732-16055	55	45	40	24	M16x2	R35	110
BJ732-16065	75	65	60				125
BJ732-16075	85	75	70				135
BJ732-20060	75	60	50	30	M20x2.5	R40	205
BJ732-20075	90	75	65				235
BJ732-20090	105	90	80				265
BJ732-24060	78	60	50	36	M24x3	R45	325
BJ732-24080	98	80	70				380
BJ732-24100	118	100	90				430

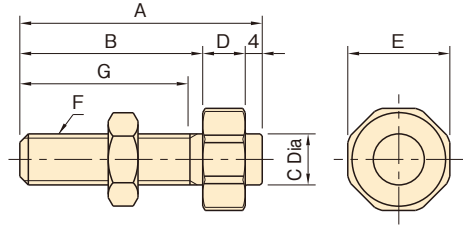
## Application Example



Use to distribute clamping pressure to irregular workpiece surfaces.

# BJ734

# CLAMP RESTS



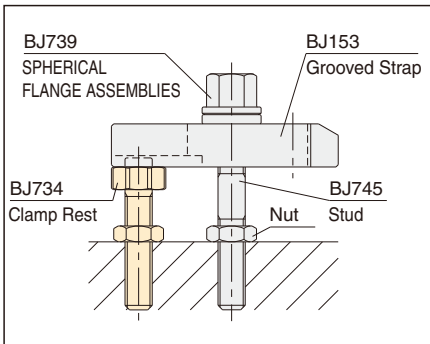
Material : S45C steel

Heat Treat : Quenched and tempered

Finish : Black oxide

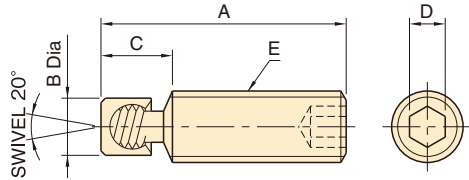
Part Number	A	B	C	D	E	F	G	Weight (g)
<b>BJ734-08001</b>	41	30	8	7	17	M 8×1.25	28	32
<b>BJ734-08002</b>	51	40					38	35
<b>BJ734-10001</b>	44	32	10	8	19	M10×1.5	30	45
<b>BJ734-10002</b>	59	47					45	55
<b>BJ734-12001</b>	57	43	12	10	24	M12×1.75	40	72
<b>BJ734-12002</b>	72	58					55	85
<b>BJ734-16001</b>	57	43	16	10	30	M16×2	40	150
<b>BJ734-16002</b>	72	58					55	170
<b>BJ734-20001</b>	94	75	20	15	36	M20×2.5	65	310

## How To Use



# BJ736-A

# SWIVEL SCREW CLAMPS, Type A



[Body]

Material : SUM24L steel

Heat Treat : Carburized-hardened

Finish : Black oxide

[Foot]

Material : SUM24L steel

Finish : Black oxide

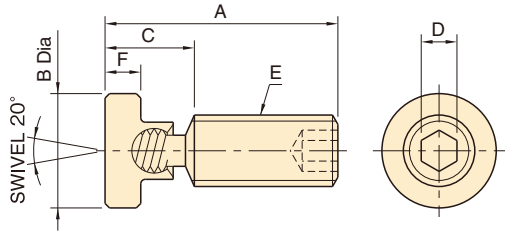
Part Number	A	B	C	D	E	Allowable Screw Torque T (N·m)	Clamping Force $F=T/0.2d$ (N)	Weight (g)
BJ736-06015A	15	4.8	7	3	M 6x1	2.5	2,100	4
BJ736-06020A	20							5
BJ736-06025A	25							6
BJ736-06040A	40							10
BJ736-08020A	20	6.4	9	4	M 8x1.25	6.5	4,100	8
BJ736-08025A	25							10
BJ736-08040A	40							15
BJ736-08050A	50							20
BJ736-10020A	20	7.6	10	5	M10x1.5	13	6,500	13
BJ736-10025A	25							15
BJ736-10040A	40							25
BJ736-10050A	50							30
BJ736-10075A	75	9.9	12	6	M12x1.75	15.4	6,400	45
BJ736-12040A	40							35
BJ736-12050A	50							45
BJ736-12075A	75							65
BJ736-12100A	100	12.7	16	8	M16x2	50	15,600	90
BJ736-16050A	50							75
BJ736-16075A	75							110
BJ736-16100A	100							150
BJ736-16125A	125							190

## Note:

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ736-B

# SWIVEL SCREW CLAMPS, Type B



[Body]

Material : SUM24L steel

Heat Treat : Carburized-hardened

Finish : Black oxide

[Foot]

Material : SUM24L steel

Heat Treat : Carburized-hardened

Finish : Black oxide

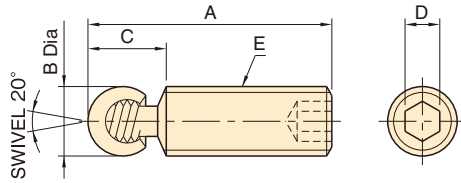
Part Number	A	B	C	D	E	F	Allowable Screw Torque T (N·m)	Clamping Force $F=T/0.2d$ (N)	Weight (g)
BJ736-06015B	18	10	10	3	M 6x1	3	2.5	2,100	6
BJ736-06020B	23								7
BJ736-06025B	28								8
BJ736-06040B	43								12
BJ736-08020B	22	13	11	4	M 8x1.25	4	6.5	4,100	10
BJ736-08025B	27								12
BJ736-08040B	42								17
BJ736-08050B	52								22
BJ736-10020B	23	14	13	5	M10x1.5	5	13	6,500	19
BJ736-10025B	28								21
BJ736-10040B	43								31
BJ736-10050B	53								35
BJ736-10075B	78	19	14	6	M12x1.75	5	15.4	6,400	51
BJ736-12040B	42								44
BJ736-12050B	52								54
BJ736-12075B	77								74
BJ736-12100B	102	24	17	8	M16x2	6	50	15,600	99
BJ736-16050B	51								100
BJ736-16075B	76								125
BJ736-16100B	101								165
BJ736-16125B	126								205

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ736-C

# SWIVEL SCREW CLAMPS, Type C



[Body]

Material : SUM24L steel

Heat Treat : Carburized-hardened

Finish : Black oxide

[Foot]

Material : SUM24L steel

Finish : Black oxide

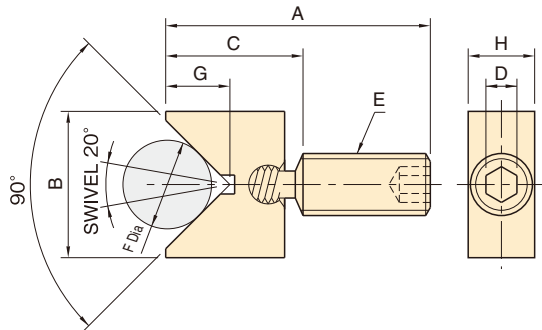
Part Number	A	B	C	D	E	Allowable Screw Torque T (N·m)	Clamping Force $F=T/0.2d$ (N)	Weight (g)
BJ736-06015C	15	6	7	3	M 6x1	2.5	2,100	4
BJ736-06020C	20							5
BJ736-06025C	25							6
BJ736-06040C	40							10
BJ736-08020C	21	8	9	4	M 8x1.25	6.5	4,100	9
BJ736-08025C	26							11
BJ736-08040C	41							16
BJ736-08050C	51							21
BJ736-10020C	20	10	10	5	M10x1.5	13	6,500	14
BJ736-10025C	25							16
BJ736-10040C	40							26
BJ736-10050C	50							30
BJ736-10075C	75							46
BJ736-12040C	42	13	14	6	M12x1.75	15.4	6,400	38
BJ736-12050C	52							48
BJ736-12075C	77							68
BJ736-12100C	102							93
BJ736-16050C	51	16	17	8	M16x2	50	15,600	78
BJ736-16075C	76							113
BJ736-16100C	101							153
BJ736-16125C	126							193

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ736-D

# SWIVEL SCREW CLAMPS, Type D



[Body]

Material : SUM24L steel  
Heat Treat : Carburized-hardened  
Finish : Black oxide

[Foot]

Material : SUM24L steel  
Finish : Black oxide

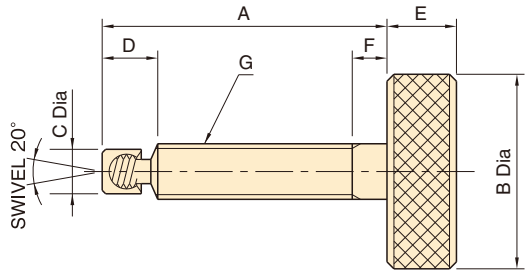
Part Number	A	B	C	D	E	F		G	H	Allowable Screw Torque T (N·m)	Clamping Force F=T/0.2d (N)	Weight (g)
						Min.	Max.					
BJ736-06015D	32	25	24	3	M 6x1	5	25	9.5	8	2.5	2,100	29
BJ736-06020D	37											30
BJ736-06025D	42											31
BJ736-06040D	57											35
BJ736-08020D	37	25	26	4	M 8x1.25	5	25	9.5	9.5	6.5	4,100	41
BJ736-08025D	42											43
BJ736-08040D	57											48
BJ736-08050D	67											53
BJ736-10020D	37	25	27	5	M10x1.5	5	25	9.5	11	13	6,500	53
BJ736-10025D	42											55
BJ736-10040D	57											65
BJ736-10050D	67											69
BJ736-10075D	92											85
BJ736-12040D	69	51	41	6	M12x1.75	5	55	20.6	13	15.4	6,400	145
BJ736-12050D	79											155
BJ736-12075D	104											175
BJ736-12100D	129											200
BJ736-16050D	79	51	45	8	M16x2	5	60	22.3	16	50	15,600	214
BJ736-16075D	104											249
BJ736-16100D	129											289
BJ736-16125D	154											329

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ737-A

# SWIVEL HEAD SCREWS, Type A



[Body]

Material : SUM24L steel  
Heat Treat : Carburized-hardened  
Finish : Black oxide

[Foot]

Material : SUM24L steel  
Finish : Black oxide

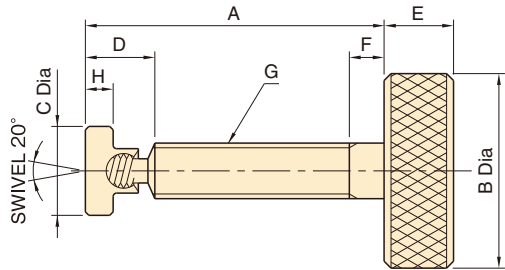
Part Number	A	B	C	D	E	F	G	Weight (g)
BJ737-06025A	25	25	4.8	7	8	3	M 6x1	40
BJ737-06050A	50							45
BJ737-06075A	75							50
BJ737-08025A	25	29	6.4	9	10	5	M 8x1.25	60
BJ737-08050A	50							70
BJ737-08075A	75							80
BJ737-10050A	50	32	7.6	10	11	5	M10x1.5	100
BJ737-10075A	75							115
BJ737-10100A	100							130
BJ737-12050A	50	32	9.9	12	13	5	M12x1.75	125
BJ737-12075A	75							145
BJ737-12100A	100							170
BJ737-16050A	50	32	12.7	16	13	5	M16x2	155
BJ737-16075A	75							195
BJ737-16100A	100							235
BJ737-16125A	125							275

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ737-B

# SWIVEL HEAD SCREWS, Type B



[Body]

Material : SUM24L steel

Heat Treat : Carburized-hardened

Finish : Black oxide

[Foot]

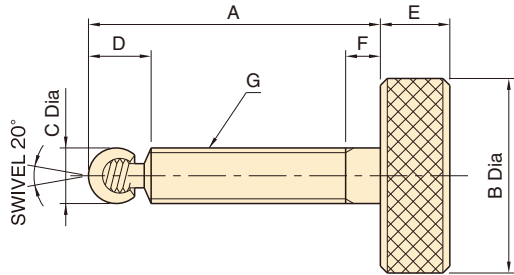
Material : SUM24L steel

Finish : Black oxide

Part Number	A	B	C	D	E	F	G	H	Weight (g)
<b>BJ737-06025B</b>	27	25	10	10	8	3	M 6x1	3	42
<b>BJ737-06050B</b>	52								47
<b>BJ737-06075B</b>	77								52
<b>BJ737-08025B</b>	27	29	13	11	10	5	M 8x1.25	4	62
<b>BJ737-08050B</b>	52								73
<b>BJ737-08075B</b>	77								82
<b>BJ737-10050B</b>	53	32	14	13	11	5	M10x1.5	5	107
<b>BJ737-10075B</b>	78								121
<b>BJ737-10100B</b>	103								136
<b>BJ737-12050B</b>	52	32	19	14	13	5	M12x1.75	5	134
<b>BJ737-12075B</b>	77								154
<b>BJ737-12100B</b>	102								179
<b>BJ737-16050B</b>	51	32	24	17	13	5	M16x2	6	170
<b>BJ737-16075B</b>	76								210
<b>BJ737-16100B</b>	101								250
<b>BJ737-16125B</b>	126								290

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

**BJ737-C****SWIVEL HEAD SCREWS, Type C**

[Body]

Material : SUM24L steel

Heat Treat : Carburized-hardened

Finish : Black oxide

[Foot]

Material : SUM24L steel

Finish : Black oxide

Part Number	A	B	C	D	E	F	G	Weight (g)
<b>BJ737-06025C</b>	25	25	6	7	8	3	M 6x1	40
<b>BJ737-06050C</b>	50							45
<b>BJ737-06075C</b>	75							50
<b>BJ737-08025C</b>	26	29	8	9	10	5	M 8x1.25	61
<b>BJ737-08050C</b>	51							72
<b>BJ737-08075C</b>	76							81
<b>BJ737-10050C</b>	50	32	10	10	11	5	M10x1.5	102
<b>BJ737-10075C</b>	75							116
<b>BJ737-10100C</b>	100							131
<b>BJ737-12050C</b>	52	32	13	14	13	5	M12x1.75	128
<b>BJ737-12075C</b>	77							148
<b>BJ737-12100C</b>	102							173
<b>BJ737-16050C</b>	51	32	16	17	13	5	M16x2	158
<b>BJ737-16075C</b>	76							198
<b>BJ737-16100C</b>	101							238
<b>BJ737-16125C</b>	126							278

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ737-D

# SWIVEL HEAD SCREWS, Type D



[Body]

Material : SUM24L steel

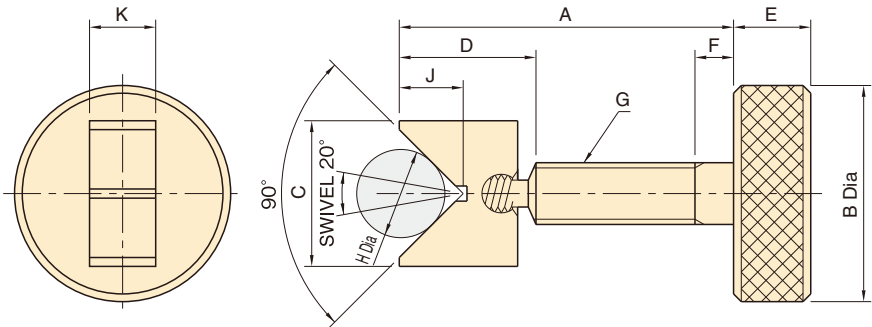
Heat Treat : Carburized-hardened

Finish : Black oxide

[Foot]

Material : SUM24L steel

Finish : Black oxide



Part Number	A	B	C	D	E	F	G	H		J	K	Weight (g)
								Min.	Max.			
BJ737-06025D	42											65
BJ737-06050D	67	25	25	24	8	3	M 6x1	5	25	9.5	8	70
BJ737-06075D	92											75
BJ737-08025D	42											93
BJ737-08050D	67	29	25	26	10	5	M 8x1.25	5	25	9.5	9.5	104
BJ737-08075D	92											113
BJ737-10050D	68											141
BJ737-10075D	93	32	25	27	11	5	M10x1.5	5	25	9.5	11	155
BJ737-10100D	118											170
BJ737-12050D	79											235
BJ737-12075D	104	32	51	41	13	5	M12x1.75	5	55	20.6	13	255
BJ737-12100D	129											280
BJ737-16050D	79											294
BJ737-16075D	104	32	51	45	13	5	M16x2	5	60	22.3	16	334
BJ737-16100D	129											374
BJ737-16125D	154											414

## Note:

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

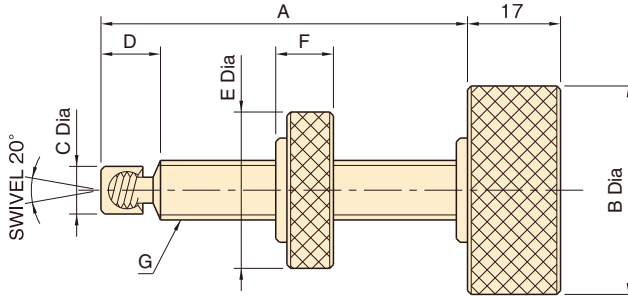
# BJ738-A

# ADJUSTABLE-TORQUE THUMB SCREWS, Type A



[Screw]  
 Material : SUM24L steel  
 Heat Treat : Carburized-hardened  
 Finish : Black oxide

[Knob / Nut / Foot]  
 Material : SUM24L steel  
 Finish : Black oxide



Part Number	A	B	C	D	E	F	G	Adjustment Range	
								Torque (N·m)	End Force (N)
<b>BJ738-06065A</b>	65	24	4.8	7	19	6	M 6x1	0.35 - 0.7	45 - 600
<b>BJ738-08070A</b>	70		6.4	9			M 8x1.25		
<b>BJ738-10075A</b>	75	7.6	10	25	10	M10x1.5			
<b>BJ738-12075A</b>		9.9	12			M12x1.75			
<b>BJ738-16075A</b>		12.7	16			M16x2			

Part Number	Weight (g)
<b>BJ738-06065A</b>	70
<b>BJ738-08070A</b>	80
<b>BJ738-10075A</b>	145
<b>BJ738-12075A</b>	170
<b>BJ738-16075A</b>	225

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

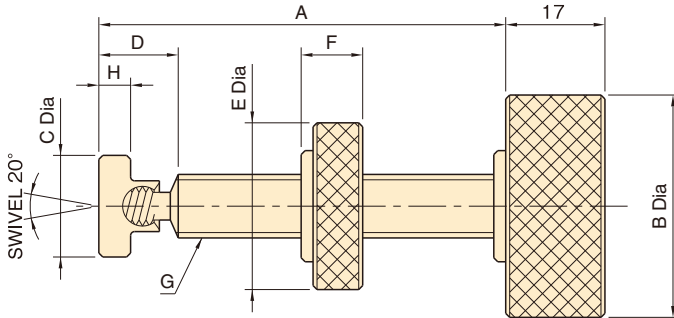
# BJ738-B

# ADJUSTABLE-TORQUE THUMB SCREWS, Type B



[Screw]  
 Material : SUM24L steel  
 Heat Treat : Carburized-hardened  
 Finish : Black oxide

[Knob / Nut / Foot]  
 Material : SUM24L steel  
 Finish : Black oxide



Part Number	A	B	C	D	E	F	G	H	Adjustment Range	
									Torque (N·m)	End Force (N)
<b>BJ738-06065B</b>	68	24	10	10	19	6	M 6x1	3	0.35 - 0.7	45 - 600
<b>BJ738-08070B</b>	72		13	11		8	M 8x1.25	4		
<b>BJ738-10075B</b>	78	30	14	13	10	M10x1.5	5			
<b>BJ738-12075B</b>	76		19			25		M12x1.75		
<b>BJ738-16075B</b>			24	17		M16x2	6			

Part Number	Weight (g)
<b>BJ738-06065B</b>	72
<b>BJ738-08070B</b>	82
<b>BJ738-10075B</b>	151
<b>BJ738-12075B</b>	179
<b>BJ738-16075B</b>	240

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

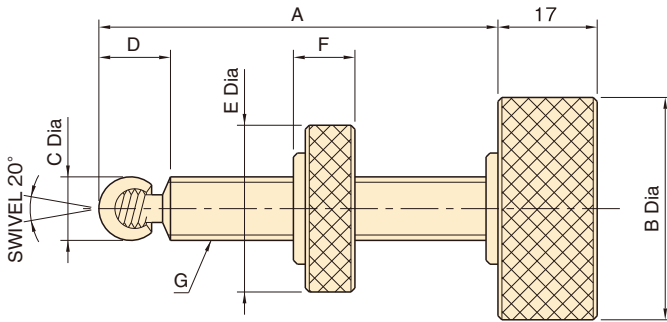
# BJ738-C

# ADJUSTABLE-TORQUE THUMB SCREWS, Type C



[Screw]  
 Material : SUM24L steel  
 Heat Treat : Carburized-hardened  
 Finish : Black oxide

[Knob / Nut / Foot]  
 Material : SUM24L steel  
 Finish : Black oxide



Part Number	A	B	C	D	E	F	G	Adjustment Range	
								Torque (N·m)	End Force (N)
<b>BJ738-06065C</b>	65	24	6	7	19	6	M 6x1	0.35 - 0.7	45 - 600
<b>BJ738-08070C</b>	71		8	9		8	M 8x1.25		
<b>BJ738-10075C</b>	75	30	10	10	25	10	M10x1.5		
<b>BJ738-12075C</b>	77		13	14			M12x1.75		
<b>BJ738-16075C</b>			16	17			M16x2		

Part Number	Weight (g)
<b>BJ738-06065C</b>	70
<b>BJ738-08070C</b>	81
<b>BJ738-10075C</b>	146
<b>BJ738-12075C</b>	173
<b>BJ738-16075C</b>	228

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ738-D

# ADJUSTABLE-TORQUE THUMB SCREWS, Type D



[Screw]

Material : SUM24L steel

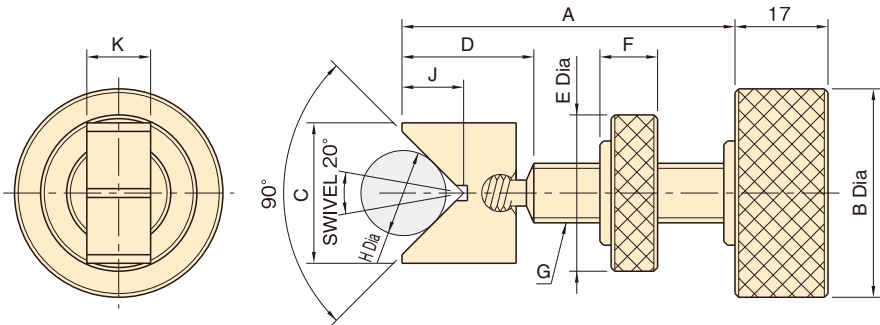
Heat Treat : Carburized-hardened

Finish : Black oxide

[Knob / Nut / Foot]

Material : SUM24L steel

Finish : Black oxide



Part Number	A	B	C	D	E	F	G	H		
								Min.	Max.	
<b>BJ738-06065D</b>	82	24	25	24	19	6	M 6x1	5	25	
<b>BJ738-08070D</b>	87			26		8	M 8x1.25			
<b>BJ738-10075D</b>	93	27		M10x1.5						
<b>BJ738-12075D</b>	104	30	51	41	25	10	M12x1.75			55
<b>BJ738-16075D</b>	105		46	M16x2	60					

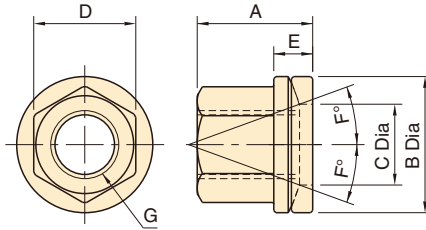
Part Number	J	K	Adjustment Range		Weight (g)
			Torque (N·m)	End Force (N)	
<b>BJ738-06065D</b>	9.5	8	0.35 - 0.7	45 - 600	95
<b>BJ738-08070D</b>		9.5			113
<b>BJ738-10075D</b>		11			185
<b>BJ738-12075D</b>	20.6	13			280
<b>BJ738-16075D</b>	22.3	16			364

**Note:**

Feet have lefthand threads to positively prevent backout when turning the screw counterclockwise.

# BJ739

# SPHERICAL FLANGE ASSEMBLIES

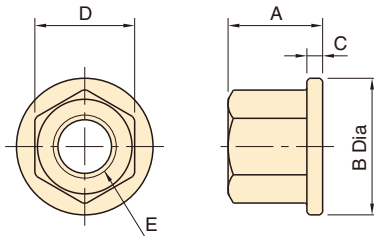


Material : S45C steel  
 Heat Treat : Quenched and tempered  
 Finish : Black oxide

Part Number	A	B	C	D	E	F	G	Weight (g)
BJ739-06001	10.7	13	7	10	4.3	2	M 6x1	8
BJ739-08001	13.5	18	9.5	13	5.2		M 8x1.25	13
BJ739-10001	17	22	12	17	6	2.5	M10x1.5	27
BJ739-12001	20.5	26	15	19	7.5	3	M12x1.75	31
BJ739-16001	27	32	19	24	9	2.5	M16x2	79
BJ739-20001	34.5	40	23	30	12		M20x2.5	149

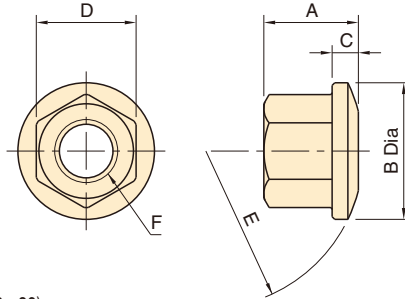
# BJ740

# FLANGE NUTS



Material : S45C steel  
 Heat Treat : Quenched and tempered (Rc33 - 39)  
 Finish : Black oxide

Part Number	A	B	C	D	E	Weight (g)
BJ740-06001	9	13	2	10	M 6x1	6
BJ740-08001	12	18	2.5	13	M 8x1.25	11
BJ740-10001	15	22	3	17	M10x1.5	24
BJ740-12001	18	26		19	M12x1.75	34
BJ740-16001	24	32	4	24	M16x2	67
BJ740-20001	30	40		30	M20x2.5	126

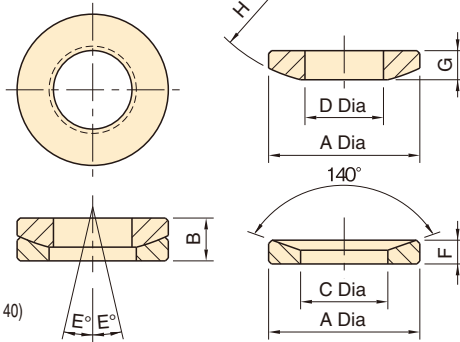
**BJ741****SPHERICAL FLANGE NUTS**

Material : S45C steel

Heat Treat : Quenched and tempered (Rc33 - 39)

Finish : Black oxide

Part Number	A	B	C	D	E	F	Weight (g)
<b>BJ741-06011</b>	9	13	2.5	10	R15	M 6x1	6
<b>BJ741-08011</b>	12	18	3.5	13	R20	M 8x1.25	11
<b>BJ741-10011</b>	15	22	4	17	R25	M10x1.5	24
<b>BJ741-12011</b>	18	26	5	19	R30	M12x1.75	34
<b>BJ741-16011</b>	24	32	6	24	R35	M16x2	67
<b>BJ741-20011</b>	30	40	7.5	30	R40	M20x2.5	126

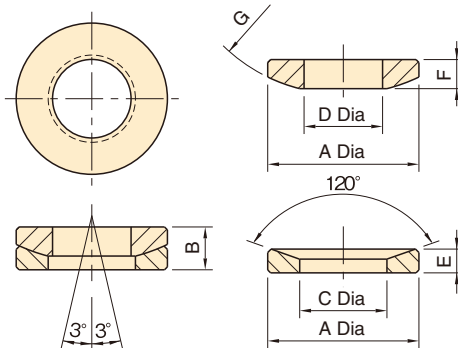
**BJ742****SPHERICAL WASHERS**

Material : S45C steel  
 Heat Treat : Quenched and tempered (Rc35 - 40)  
 Finish : Black oxide

Part Number	A	B	C	D	E	F	G	H	Weight (g)
<b>BJ742-06001</b>	13	4.3	7	6.4	2.5	2.5	2.5	R15	4
<b>BJ742-08001</b>	18	5.2	9.5	8.7		3	3.5	R20	6
<b>BJ742-10001</b>	22	6	12	10.5	3	3.5	4	R25	7
<b>BJ742-12001</b>	26	7.5	15	13.5	4	4	5	R30	16
<b>BJ742-16001</b>	32	9.1	19	17	3	5	6	R35	27
<b>BJ742-20001</b>	40	12	23	21		7	7.5	R40	50

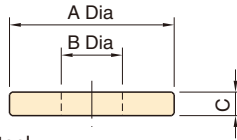
# BJ742-SUS

# SPHERICAL WASHERS



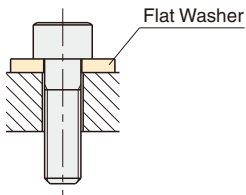
Material : SUS303 stainless steel

Part Number	A	B	C	D	E	F	G	Weight (g)
<b>BJ742-06201-SUS</b>	12	4	7.1	6.4	2.8	2.3	R 9	2.2
<b>BJ742-08201-SUS</b>	17	5	9.6	8.4	3.5	3.2	R12	6
<b>BJ742-10201-SUS</b>	21	6.3	12	10.5	4.2	4	R15	11.7
<b>BJ742-12201-SUS</b>	24	8	14.2	13	5	4.6	R17	17.3
<b>BJ742-16201-SUS</b>	30	9.3	19	17	6.2	5.3	R22	30.7

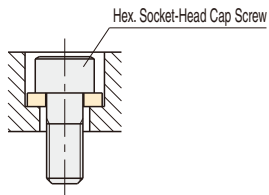
**BJ743****FLAT WASHERS**

Material : S45C steel  
 Heat Treat : Quenched and tempered  
 Finish : Black oxide

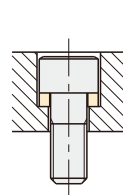
Part Number	A	B	C	Weight (g)
<b>BJ743-06001</b>	19	6.4	3	5.5
<b>BJ743-06002</b>	13			2.5
<b>BJ743-06003</b>	10			1.5
<b>BJ743-08001</b>	23	8.4	4	10
<b>BJ743-08002</b>	16.3			3.5
<b>BJ743-08003</b>	13			2
<b>BJ743-10001</b>	28	10.5	4	16
<b>BJ743-10002</b>	19			4.5
<b>BJ743-10003</b>	16.3			3
<b>BJ743-12001</b>	35	13	5	35
<b>BJ743-12002</b>	25			11
<b>BJ743-12003</b>	19			4.5
<b>BJ743-16001</b>	45	17	6	60
<b>BJ743-16002</b>	31			21
<b>BJ743-16003</b>	25			6
<b>BJ743-20001</b>	50	21	6	77
<b>BJ743-20002</b>	38			29
<b>BJ743-20003</b>	31			14.5

**How To Use**

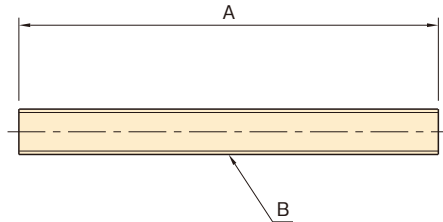
Use to protect a plate surface.



Use as a spacer for a cap screw of smaller thread size.



Use to protect the bottom of a counterbore.

**BJ830****FULLY-THREADED BARS**

Material : SNB7 steel  
Heat Treat : Quenched and tempered  
Finish : Black oxide

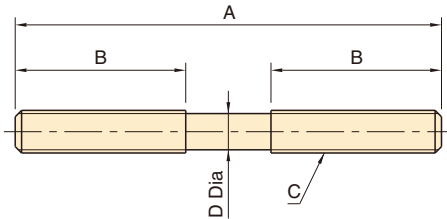
Part Number	A	B	Weight (g)
<b>BJ830-10320</b>	320	M10x1.5	145
<b>BJ830-10490</b>	490		225
<b>BJ830-10990</b>	990		450
<b>BJ830-12320</b>	320	M12x1.75	210
<b>BJ830-12490</b>	490		320
<b>BJ830-12990</b>	990		660
<b>BJ830-16320</b>	320	M16x2	390
<b>BJ830-16490</b>	490		600
<b>BJ830-16990</b>	990		1,220
<b>BJ830-20320</b>	320	M20x2.5	620
<b>BJ830-20490</b>	490		940
<b>BJ830-20990</b>	990		1,900

**Note:**

Both ends are not black oxide finished.

**Technical Information**

Tensile strength : 860N mm<sup>2</sup>

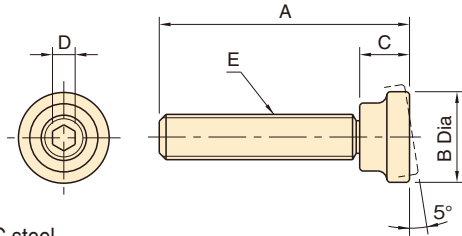
**BJ745****STUDS**

Material : SCM435 steel

Heat Treat : Quenched and tempered (Rc33 - 39)

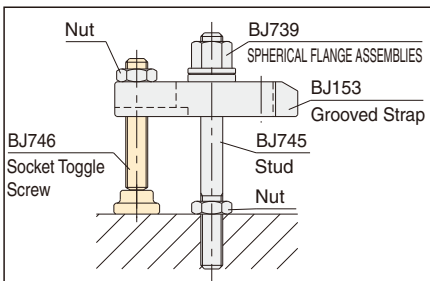
Finish : Black oxide

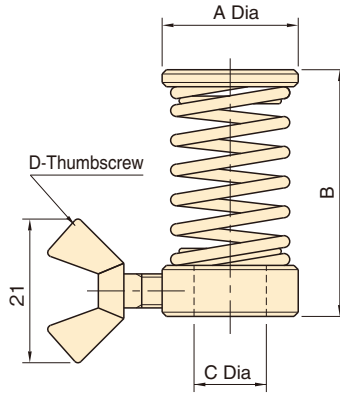
Part Number	A	B	C	D	Weight (g)
BJ745-08050	50	20	M 8x1.25	7.1	20
BJ745-08063	63	25			25
BJ745-08080	80	32			35
BJ745-08100	100				40
BJ745-08125	125				45
BJ745-08160	160				55
BJ745-10050	50	20	M10x1.5	8.9	30
BJ745-10063	63	25			40
BJ745-10080	80	32			45
BJ745-10100	100	40			55
BJ745-10125	125				70
BJ745-10160	160				90
BJ745-10200	200		110		
BJ745-12050	50	20	M12x1.75	10.7	40
BJ745-12063	63	25			50
BJ745-12080	80	32			65
BJ745-12100	100	40			80
BJ745-12125	125				100
BJ745-12160	160				125
BJ745-12200	200		160		
BJ745-16063	63	25	M16x2	14.5	90
BJ745-16080	80	32			125
BJ745-16100	100	40			145
BJ745-16125	125				180
BJ745-16160	160	50			230
BJ745-16200	200				290
BJ745-16250	250	63	360		
BJ745-16315	315		450		
BJ745-16400	400		570		
BJ745-16500	500		710		
BJ745-20080	80	32	M20x2.5	18.3	180
BJ745-20100	100	40			230
BJ745-20125	125				280
BJ745-20160	160	50			360
BJ745-20200	200				460
BJ745-20250	250	63			550
BJ745-20315	315		690		
BJ745-20400	400		880		
BJ745-20500	500		1,100		

**BJ746****SOCKET TOGGLE SCREWS**

Material : S45C steel  
 Heat Treat : Quenched and tempered  
 Finish : Black oxide

Part Number	A	B	C	D	E	Weight (g)
<b>BJ746-06001</b>	27	12	7	3	M 6x1	9
<b>BJ746-06002</b>	42					13
<b>BJ746-08001</b>	43	16	9	4	M 8x1.25	28
<b>BJ746-08002</b>	63					37
<b>BJ746-08003</b>	83					46
<b>BJ746-10001</b>	64	20	11	5	M10x1.5	50
<b>BJ746-10002</b>	84					60
<b>BJ746-10003</b>	104					70
<b>BJ746-12001</b>	65	25	13	6	M12x1.75	75
<b>BJ746-12002</b>	85					95
<b>BJ746-12003</b>	105					110
<b>BJ746-12004</b>	130					130
<b>BJ746-16001</b>	85	32	15	8	M16x2	170
<b>BJ746-16002</b>	105					190
<b>BJ746-16003</b>	130					230
<b>BJ746-16004</b>	155					265
<b>BJ746-20001</b>	105	40	16	10	M20x2.5	310
<b>BJ746-20002</b>	130					360
<b>BJ746-20003</b>	155					410

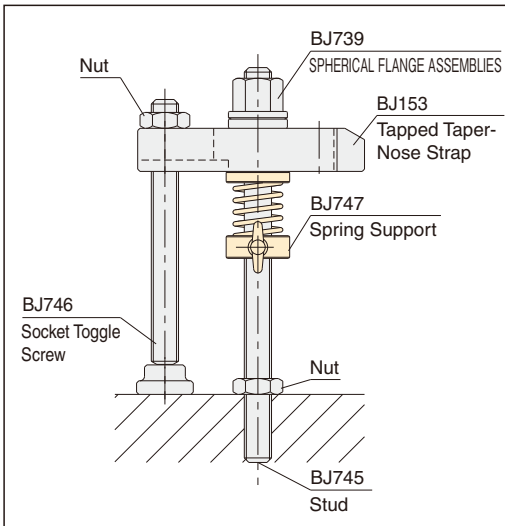
**How To Use**

**BJ747****SPRING SUPPORTS**

Part Number	A	B	C	D	Weight (g)
<b>BJ747-06001</b>	14	18 - 26	6.5	M4x0.7	10
<b>BJ747-08001</b>	16	19 - 29	8.5		15
<b>BJ747-10001</b>	20	25 - 40	10.5		30
<b>BJ747-12001</b>	25	30 - 46	13		43
<b>BJ747-16001</b>	28	35 - 50	16.5	M5x0.8	53
<b>BJ747-20001</b>	32	40 - 63	20.5		75
<b>BJ747-24001</b>	40	51 - 71	24.5		150

[Pad]  
Material : S45C steel  
Finish : Black oxide

[Spring]  
Material : SWPA steel  
Heat Treat : Quenched and tempered  
Finish : Black oxide

**How To Use**

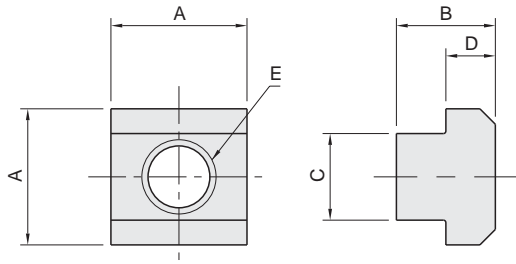


## BJ749

## T-SLOT NUTS



Material:S45C steel  
Black oxide finish



Part Number	A	B	C ( $\begin{smallmatrix} -0.2 \\ -0.5 \end{smallmatrix}$ )	D	E	Weight (g)
<b>BJ749-08010</b>	15	12	10	6	M 8 × 1.25	15
<b>BJ749-10012</b>	18	14	12	7	M10 × 1.5	20
<b>BJ749-12014</b>	22	16	14	8	M12 × 1.75	35
<b>BJ749-16018</b>	28	20	18	10	M16 × 2	70
<b>BJ749-20022</b>	34	28	22	14	M20 × 2.5	155

Modular  
Fixture Bases

Blank  
Fixture Bases

Quick-Change  
Fixture Bases

Standard  
Fixture Parts

Modular  
Fixture Parts

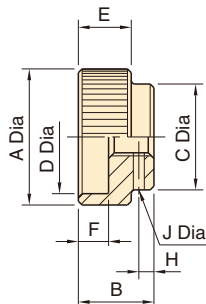
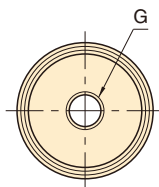
One-Touch  
Clamps

# BJ750-N

# KNURLED KNOBS



**BJ750** -\*\*001N  
Black Oxide



**BJ750** -\*\*101N  
Chrome Plated



**BJ750** -\*\*201N  
Stainless Steel

Material : S45C steel for BJ750-\*\*001N & BJ750-\*\*101N

SUS 303 stainless steel for BJ750-\*\*201N

Finish : Black oxide for 750-\*\*001N

Chrome plated for BJ750-\*\*101N

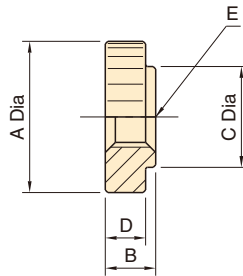
Thread Size	A	B	C	D	E	F	G	H	J	Weight (g)
BJ750-N	05	20	12	14	15	8	M 5x0.8	2.5	1.4	20
	06	24	14	16	18	10	M 6x1			30
	08	30	17	20	24	12	M 8x1.25	3	1.9	50
	10	36	20	28	30	14	M10x1.5	4	2.9	90
	12	40	24	32	34	16	M12x1.75			3.9

Black Oxide	Chrome Plated	Stainless Steel
Part Number	Part Number	Part Number
BJ750-05001N	BJ750-05101N	BJ750-05201N
BJ750-06001N	BJ750-06101N	BJ750-06201N
BJ750-08001N	BJ750-08101N	BJ750-08201N
BJ750-10001N	BJ750-10101N	BJ750-10201N
BJ750-12001N	BJ750-12101N	BJ750-12201N

### Notes:

BJ750 knobs are now available only with roll-pin hole.

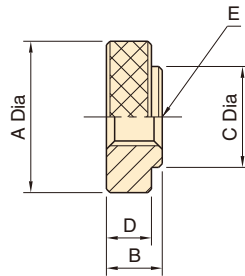
Part numbers for BJ751 knobs with roll-pin hole are obsolete.

**BJ753****KNURLED NUTS**

Material : S45C steel

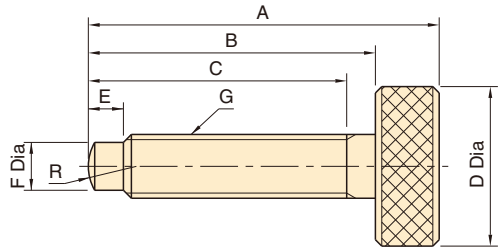
Finish : Black oxide

Part Number	A	B	C	D	E	Weight (g)
<b>BJ753-04001</b>	16	4	8	3.5	M 4x0.7	5
<b>BJ753-05001</b>	20	5	10	4	M 5x0.8	9
<b>BJ753-06001</b>	24	6	12	5	M 6x1	17
<b>BJ753-08001</b>	30	8	16	6	M 8x1.25	30
<b>BJ753-10001</b>	36	10	20	8	M10x1.5	59
<b>BJ753-12001</b>	40	12	22	10	M12x1.75	90

**BJ754****KNURLED NUTS**

Material : SUM24L steel  
Finish : Black oxide

Part Number	A	B	C	D	E	Weight (g)
<b>BJ754-06001</b>	19	6	13	5	M 6x1	11
<b>BJ754-08001</b>		8		7	M 8x1.25	13
<b>BJ754-10001</b>					M10x1.5	12
<b>BJ754-12001</b>	25	10	19	8	M12x1.75	26
<b>BJ754-16001</b>					M16x2	20

**BJ764****KNURLED HEAD SCREWS**

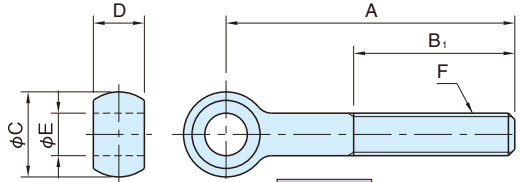
Material : S45C steel

Heat Treat : Quenched and tempered

Finish : Black oxide

Part Number	A	B	C	D	E	F	G	R	Weight (g)
<b>BJ764-05001</b>	31	25	23	16	3	4	M 5x0.8	R4	12
<b>BJ764-05002</b>	46	40	38						14
<b>BJ764-06001</b>	42	35	33	18	3.5	4.5	M 6x1	R5	19
<b>BJ764-06002</b>	57	50	48						21
<b>BJ764-08001</b>	53	45	42	20	5	6	M 8x1.25	R6	31
<b>BJ764-08002</b>	68	60	57						35
<b>BJ764-10001</b>	55	45	42	25	5.5	7.5	M10x1.5	R8	57
<b>BJ764-10002</b>	70	60	57						64

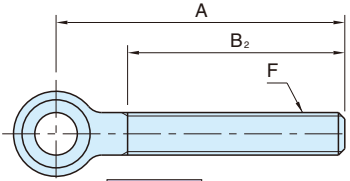
# BJ761-N / BJ761-A EYE BOLTS



**BJ761-N**



Material : S45C Steel  
Heat treat : Quenched and tempered  
Finish : Black oxide

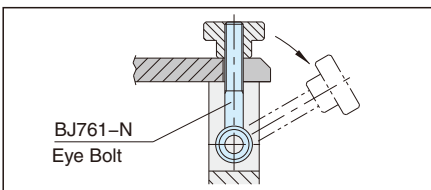


**BJ761-A**

**BJ761-N BJ761-A**

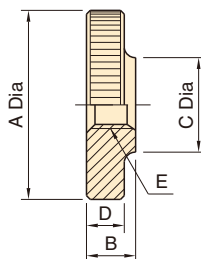
Short-Threaded		Long-Threaded			A	B <sub>1</sub>	C	D	E ( <sup>+0.2</sup> / <sub>0</sub> )	F
Part Number	Weight (g)	Part Number	B <sub>2</sub>	Weight (g)						
BJ761-06001N	13	-	-	-	35	20	14	7	6	M 6x1
BJ761-06002N	16	BJ761-06002A	40	16	50	25				
BJ761-08011N	25	-	-	-	35	20	18	9	8	M 8x1.25
BJ761-08001N	30	BJ761-08001A	37	30	50	30				
BJ761-08002N	40	BJ761-08002A	62	40	75	30				
BJ761-10011N	45	-	-	-	50	30	20	12	10	M10x1.5
BJ761-10001N	60	BJ761-10001A	60	60	75	45				
BJ761-10002N	80	BJ761-10002A	85	80	100	45				
BJ761-12011N	73	-	-	-	50	30	25	14	12	M12x1.75
BJ761-12001N	95	BJ761-12001A	57	95	75	50				
BJ761-12002N	120	-	-	-	100	50				
BJ761-12003N	125	BJ761-12003A	107	125	125	50	32	17	16	M16x2
BJ761-16011N	210	BJ761-16011A	80	210	100	50				
BJ761-16001N	250	-	-	-	125	60				
BJ761-16002N	300	BJ761-16002A	130	300	150	55	40	22	18	M20x2.5
BJ761-20011N	340	BJ761-20011A	75	340	100	55				
BJ761-20001N	400	-	-	-	125	65				
BJ761-20002N	485	BJ761-20002A	125	485	150	65				

## How To Use



# TKN-SL-SUS

# KNURLED FLAT THUMB KNOBS



Material : SUS303 stainless steel

Part Number	A	B	C	D	E	Weight (g)
<b>TKN 4SL-SUS</b>	16	4	8	3.5	M 4x0.7	6
<b>TKN 5SL-SUS</b>	20	5	10	4	M 5x0.8	10
<b>TKN 6SL-SUS</b>	24	6	12	5	M 6x1	18
<b>TKN 8SL-SUS</b>	30	8	16	6	M 8x1.25	33
<b>TKN10SL-SUS</b>	36	10	20	8	M10x1.5	58
<b>TKN12SL-SUS</b>					M12x1.75	

# ATLN / ATL

# ADJUSTABLE-TORQUE HANDLES

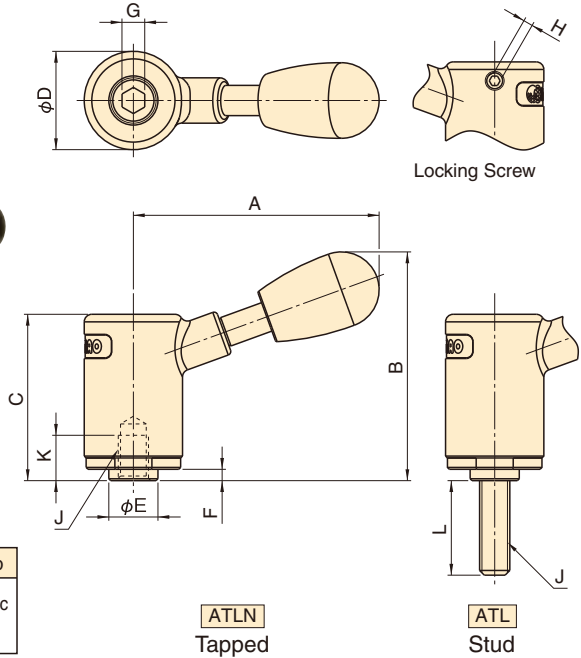


**ATLN**  
Tapped

**ATL**  
Stud

Body / Handle Arm  
S45C steel  
Black oxide finish

Ratchet	Handle Knob
SCM440 steel Quenched and tempered Black oxide finish	Phenolic plastic Black



Type / Size	A	B	C	D	E	F	G	H	J
<b>ATLN</b> 6	6	50	50	38	22	10	1.8	5	M 6x1
<b>ATLN</b> 8	8	65	60	44	26	13	3	2.5	M 8x1.25
<b>ATL</b> 10	10	80	70	48	32	16	3.2		M10x1.5

## **ATLN** Tapped

Part Number	K	Torque Range (N·m)	Weight (g)
<b>ATLN 6</b>	10	1.7 - 2.7	111
<b>ATLN 8</b>	12	3.3 - 5.4	187
<b>ATLN10</b>	15	5 - 8	318

## **ATL** Stud

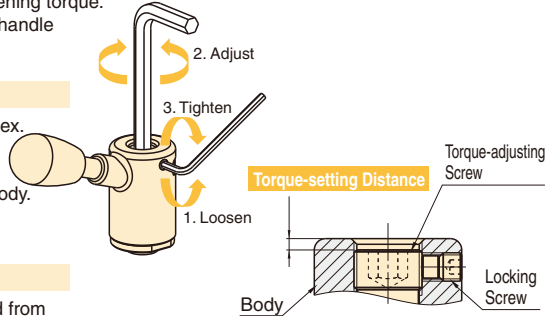
Part Number	L	Torque Range (N·m)	Weight (g)
<b>ATL 6x15</b>	15	1.7 - 2.7	117
<b>ATL 6x20</b>	20		118
<b>ATL 6x25</b>	25		119
<b>ATL 6x30</b>	30	3.3 - 5.4	120
<b>ATL 8x20</b>	20		197
<b>ATL 8x25</b>	25		199
<b>ATL 8x30</b>	30		201
<b>ATL 8x40</b>	40	5 - 8	205
<b>ATL10x20</b>	20		338
<b>ATL10x25</b>	25		341
<b>ATL10x30</b>	30		344
<b>ATL10x40</b>	40		350

## Features:

- Handle that allows setting a desired tightening torque.
- When the desired torque is reached, the handle clicks to indicate completed tightening.

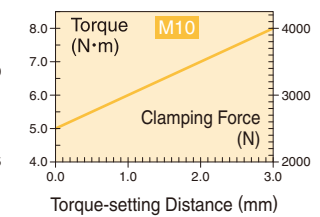
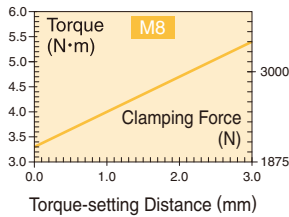
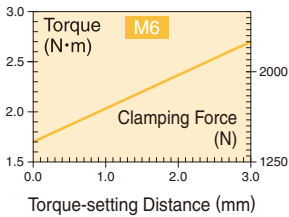
## How To Set Torque

1. Loosen the locking screw by inserting a hex wrench into the side of the body.
2. Adjust the torque by turning the torque-adjusting screw in the top of the body.
3. Tighten the locking screw.



## Torque Vs. Clamping Force

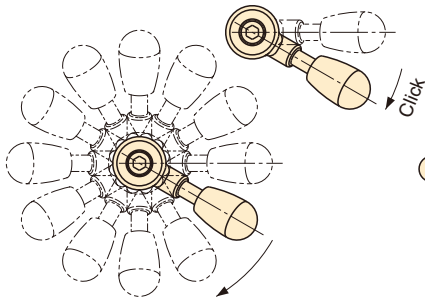
A desired torque can roughly be determined from the performance sheets shown below.



## How To Use

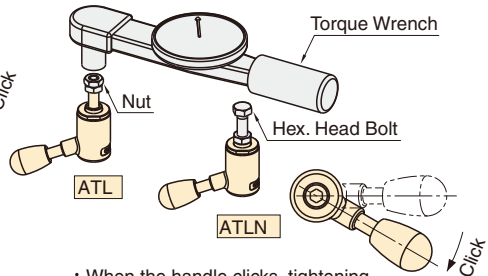
### Common Method

- Refer to the performance sheets shown above to set a desired torque.
- When the handle clicks, tightening at the set torque is completed.



### Method for Precise Torque Management

- Connect a torque wrench to the Adjustable-Torque Handle to apply a load in the tightening direction. Adjust the torque-setting distance to reach the desired torque when the handle clicks.



- When the handle clicks, tightening at the set torque is completed.

## Note:

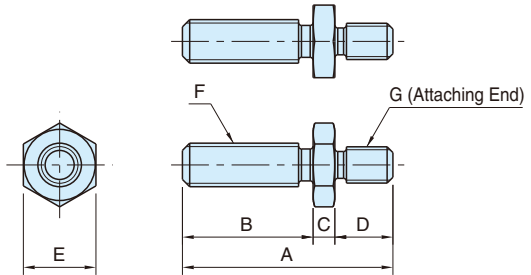
To change the handle position, turn the handle to desired position. In this case, the clamping force increases by approx. 20% after a 360° turn of the handle.

## Note:

If the handle is turned further in the tightening direction after it clicks, the torque gets greater than set.

**ABM****ADAPTOR STUDS****NEW** ROHS

Material : S45C steel  
 Finish : Zine plated trivalent chromate



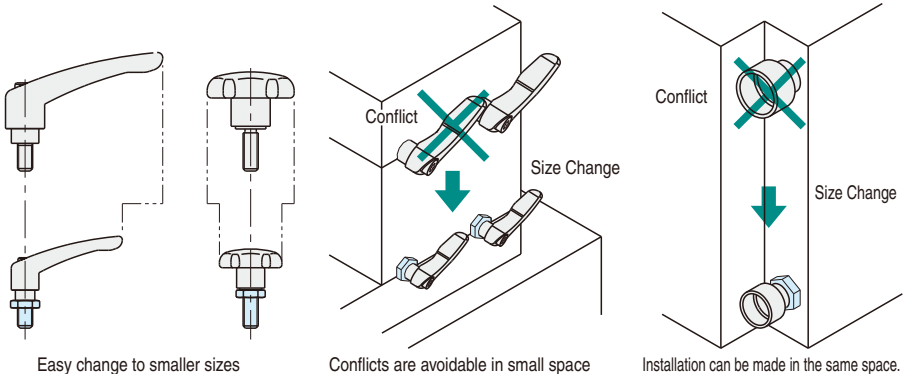
Part Number	A	B	C	D	E	F	G	Weight (g)
<b>ABM0405X08</b>	16.5	8	2.5	6	8	M 5x0.8	M4x0.7	2
<b>ABM0405X16</b>	24.5	16						3
<b>ABM0405X25</b>	33.5	25						4
<b>ABM0506X09</b>	20	9	3	8	10	M 6x1	M5x0.8	4
<b>ABM0506X18</b>	29	18						6
<b>ABM0506X30</b>	41	30						8
<b>ABM0608X12</b>	25	12	4	9	13	M 8x1.25	M6x1	9
<b>ABM0608X24</b>	37	24						13
<b>ABM0608X40</b>	53	40						18
<b>ABM0810X15</b>	32	15	5	12	17	M10x1.5	M8x1.25	20
<b>ABM0810X30</b>	47	30						27
<b>ABM0810X50</b>	67	50						37

**Feature:**

Stud that help install smaller handles or knobs without stud in applications where preferred handles or knobs with stud are so large as to cause conflicts.

**How To Use**

Apply thread-locking adhesive to the attaching end and then screw a handle or knob over the full length.



Easy change to smaller sizes

Conflicts are avoidable in small space

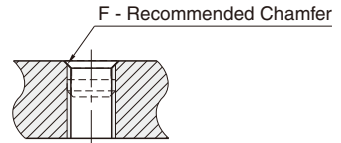
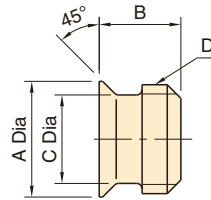
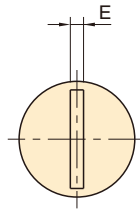
Installation can be made in the same space.

# THP

# PROTECTION PLUGS FOR TAPPED HOLES



Material : S45C steel  
Finish : Black oxide



Fixture Plate

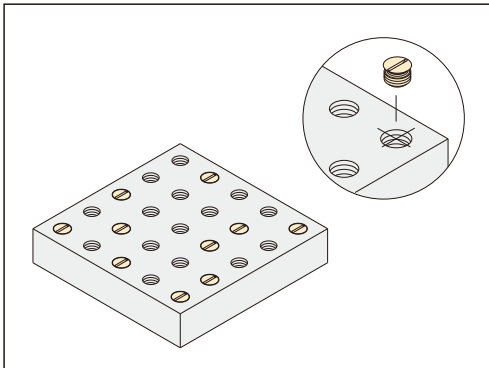
Part Number	A	B	C	D	E	F	Weight (g)
<b>THP 8</b>	8.5	6	6.5	M 8x1.25	1.2	1.2 or more	2
<b>THP10</b>	10.5	8	8	M10x1.5		1.5 or more	4
<b>THP12</b>	12.5	10	9.4	M12x1.75		2 or more	7
<b>THP16</b>	16.5	12	13	M16x2	1.8	2 or more	16
<b>THP20</b>	20.5	16	16.5	M20x2.5		2.5 or more	31

### Feature:

A small number of threads allows for quick installation and removal.

### How To Use

Use to keep dirt and chips out of holes that are not used.

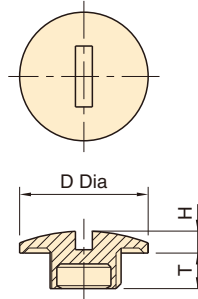


# ISK-1

## PROTECTION CAPS FOR SOCKET-HEAD CAP SCREWS



Material : Polyamide plastic  
Color :Black



Part Number	D	H	T	Socket-Head Cap Screws		Weight (g)	Qty. Supplied Per Bag
				Thread Size	Across 2 Flats		
<b>ISK 6-1-T 4/D13</b>	13	2	4	M 8	6	0.3	20
<b>ISK 8-1-T 5/D16</b>	16		5	M10	8	0.5	20
<b>ISK10-1-T 6/D18</b>	18	2.5	6	M12	10	0.8	20
<b>ISK12-1-T 7/D21</b>	21	3	7	M14	12	1.3	20
<b>ISK14-1-T 8/D24</b>	24		8	M16	14	2	20
<b>ISK17-1-T 10/D30</b>	30	4	10	M20	17	3.1	10
<b>ISK19-1-T 12/D36</b>	36	4.5	12	M24	19	5.5	10

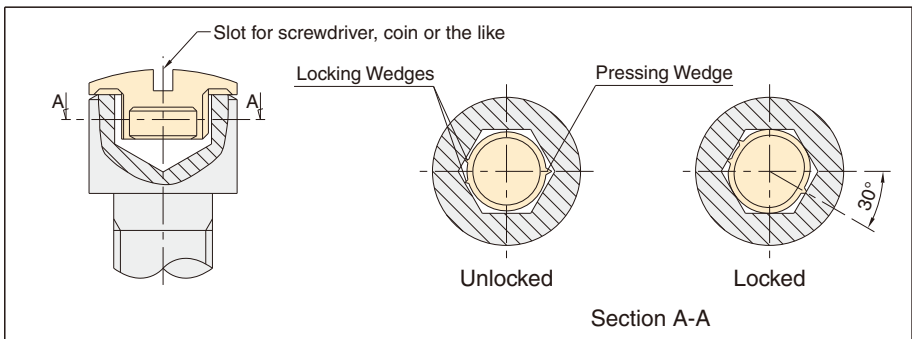
### Features:

Cap that keeps corrosion and dirt out of the hex socket of socket-head cap screws.  
Can be used repeatedly.  
Designed for installation and removal with a screwdriver or the like.

### Technical Information

Heat resistance : 160°C (long-term)  
220°C (short-term)

### How To Use



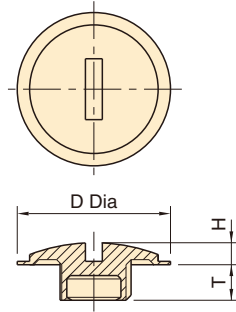
Once a cap is given a 30° turn by using a screwdriver or coin, the 3 wedges on the cylinder are pressed against two flats of the hex socket to generate a strong grip for positive locking. When turned in the opposite direction, the cap gets unlocked for removal.

# ISK-2

## PROTECTION CAPS FOR SOCKET-HEAD CAP SCREWS



Material : Polyamide plastic  
Color :Black



Part Number	D	H	T	Socket-Head Cap Screws		Counterbores		Weight (g)	Qty. Supplied Per Bag
				Thread Size	Across 2 Flats	Dia	Depth		
<b>ISK 6-2-T 4/D18</b>	18	2	4	M 8	6	15 Dia	9	0.4	20
<b>ISK 8-2-T 5/D20</b>	20		5	M10	8	18 Dia	11	0.6	20
<b>ISK10-2-T 6/D24</b>	24	2.5	6	M12	10	20 Dia	13	0.9	20
<b>ISK12-2-T 7/D26</b>	26	3	7	M14	12	24 Dia	15	1.4	20
<b>ISK14-2-T 8/D30</b>	30		8	M16	14	26 Dia	17.5	2.2	20
<b>ISK17-2-T10/D36</b>	36	4	10	M20	17	33 Dia	21.5	3.3	10
<b>ISK19-2-T12/D43</b>	43	4.5	12	M24	19	40 Dia	25.5	6.1	10

### Features:

Cap that keeps corrosion and dirt out of the hex socket of socket-head cap screws and counterbores for the socket head of cap screws.

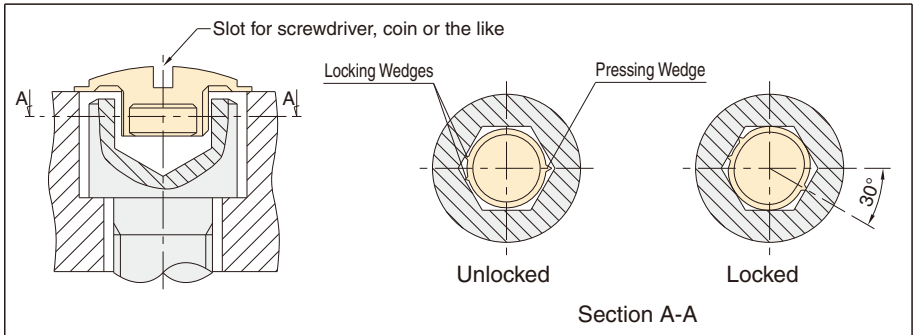
Can be used repeatedly.

Designed for installation and removal with a screwdriver or the like.

### Technical Information

Heat resistance : 160°C (long-term)  
220°C (short-term)

### How To Use



Once a cap is given a 30° turn by using a screwdriver or coin, the 3 wedges on the cylinder are pressed against two flats of the hex socket to generate a strong grip for positive locking. When turned in the opposite direction, the cap gets unlocked for removal.