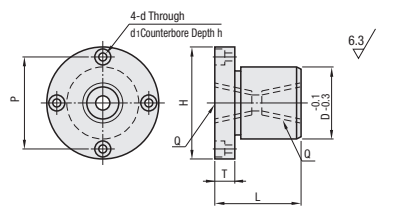


Piping Terminals

Flanged / Hexagon / Full Thread Type



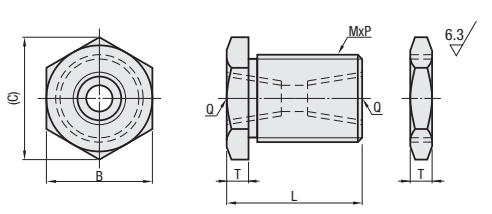
Type	Material	Surface Treatment	Accessories	Max. Operating Pressure
BTLF	1045 Carbon Steel or Equivalent	Trivalent Chromate	Hex Socket Head Cap Screw (Stainless Steel) 4 pcs.	20.6 MPa
BTLFA	5052 Aluminum Alloy	—		1 MPa
BTLFC	Free-Cutting Brass	—		20.6 MPa
BTLFS	304 Stainless Steel	—		20.6 MPa



Part Number Type	No.	Rc (PT)		H	D	T	L	P	d	d ₁	h	Included Screw (4 pcs.)
		Q	Q ₂									
BTLF BTLFA BTLFC BTLFS	1	1/8	—	35	15	7	20	25	4.5	8	4.4	SCB4-10
	2	1/4	—	50	25	8	30	38	5.5	9.5	5.4	SCB5-10
	3	3/8	—	65	35	10	45	50	6.6	11	6.5	SCB6-12
	4	1/2	—	—	—	—	—	—	—	—	—	—



Type	Material	Surface Treatment	Accessories	Max. Operating Pressure
BTLH	1045 Carbon Steel or Equivalent	Trivalent Chromate	Hex Nut 1 pc.	20.6 MPa ² or Less
BTLHA	5052 Aluminum Alloy	—		1 MPa
BTLHC	Free-Cutting Brass	—		20.6 MPa
BTLHS	304 Stainless Steel	—		20.6 MPa



*Mx. pressure of No. 5 / 5-S is less than 1MPa

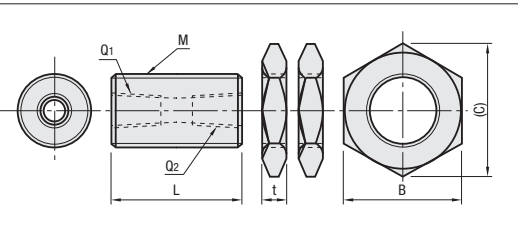
Part Number Type	No.	Rc (PT)		B	(C)	M x P	L	T	Included Nut t
		Q	Q ₂						
Standard BTLH BTLHA BTLHC BTLHS	1	1/8	—	24	26.8	16 x 2.0	30	5	8
	2	1/4	—	46	50.9	30 x 3.5	45	8	15
	3	3/8	—	46	50.9	30 x 3.5	45	8	15
	4	1/2	—	55	60.8	36 x 4	60	10	18
	5	M5	—	24	26.8	16 x 2.0	30	5	8

Part Number Type	No.	Rc (PT)		B	(C)	M x P	L	T	Included Nut t
		Q	Q ₂						
L Short BTLH BTLHC BTLHS	1-S	1/8	—	22	25.4	16 x 1.5	16	5	7
	2-S	1/4	—	27	31.2	20 x 1.5	22	5	7
	3-S	3/8	—	32	36.9	24 x 1.5	26	8	10
	4-S	1/2	—	36	41.6	30 x 1.5	31	8	10
	5-S	M5	—	19	21.9	12 x 1.5	15	5	7

⊖ BTLHA5 has been discontinued.



Type	Material	Surface Treatment	Accessories	Normal Pressure
BTLR	1045 Carbon Steel or Equivalent	Trivalent Chromate	Hex Nut 2 pcs.	20.6 MPa
BTLRA	5052 Aluminum Alloy	—		1 MPa
BTLRC	Free-Cutting Brass	—		20.6 MPa
BTLRS	304 Stainless Steel	—		20.6 MPa



*NPT
*Tips have steps for identification on NPT side.

Part Number Type	No.	Rc (PT)		M (Coarse)	L	Included Nut		
		Q ₁	Q ₂			t	B	(C)
BTLR BTLRA BTLRC BTLRS	1	1/8	—	16	30	8	24	26.8
	1-1N	1/8	NPT1/8					
	2	1/4	—	30	45	15	46	50.9
	3	3/8	—					
4	1/2	—	36	60	18	55	60.8	

⊖ BTLRA1-1N, BTLRC1-1N, BTLRA2, BTLRC2 have been discontinued.

Part Number Example: BTLF3, BTLH1-S

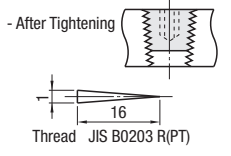
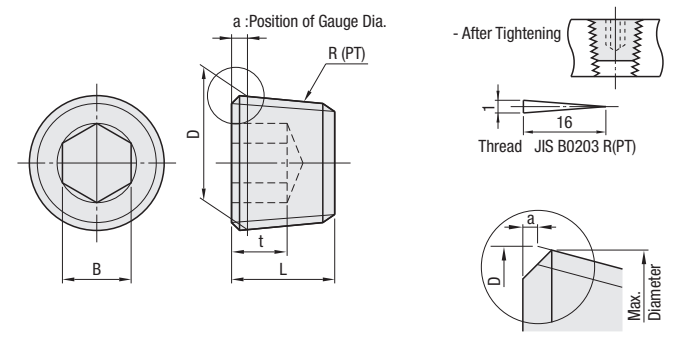
Application Example: Sheet Metal, BTLR. Can be positioned freely because it has no shoulder.

Screw Plugs

Tapered



Type	Material		Surface Treatment
	Without Thread Coating	Thread Coated Type	
MSWT	MSWTK	Alloy Steels for Machine Structure Carbon Steels for Cold Heading	Black Oxide
MSWTM	MSWTMK		Electroless Nickel Plating
MSWTS	MSWTSK	SUSXM7	—
MSWTP	—	PEEK	—



Gauge diameter at the position a is a theoretical value. For No. J / S / 1, actual maximum screw diameter may be smaller due to end chamfering.

⊖ Allowable temperature for With Seal Coating Type is 150°C

Part Number Type	No.	D	a	L	B	t	R (PT)	
								Available Types
MSWT MSWTM	*J	7.723	0.45	6	4	3.0	1/16	
	*S	7.779	0.47	6.4	4 ^{+0.03} _{-0.032}	3.1		
Without Thread Coating MSWT MSWTM MSWTS MSWTP	Thread Coated Type MSWTK MSWTMK MSWTSK	1	9.728	0.45 (1.5)	7 (8)	5	3.5 (5)	1/8
		2	13.157	0.7 (1.8)	8.9 (11)	6	4.5 (7.6)	1/4
		3	16.662	0.7 (2.0)	10 (12)	8	5 (8)	3/8
		4	20.955	0.9	12	10	6	1/2
		6	26.441	—	14	14	7	3/4
		8	33.249	1.1	16.5	17	9	1

*S of MSWT is an ANSI standard screw. For installation, use hex key wrench 5/32 inch. J of MSWT is a JIS standard screw. ⊖ Dimensions in () are for MSWTP.

No.	Available Types								
	MSWT		MSWTM		MSWTS		MSWTP		
	1-14 pc(s).	15-99 pcs.	100-	1-99 pc(s).	100-	1-99 pc(s).	100-	1-49 pc(s).	50-
*J	•	•	•	•	•	•	•	•	•
*S	•	•	•	•	•	•	•	•	•
1	•	•	•	•	•	•	•	•	•
2	•	•	•	•	•	•	•	•	•
3	•	•	•	•	•	•	•	•	•
4	•	•	•	•	•	•	•	•	•
6	•	•	•	•	•	•	•	•	•
8	•	•	•	•	•	•	•	•	•

Part Number Example: MSWTJ, MSWTSK2