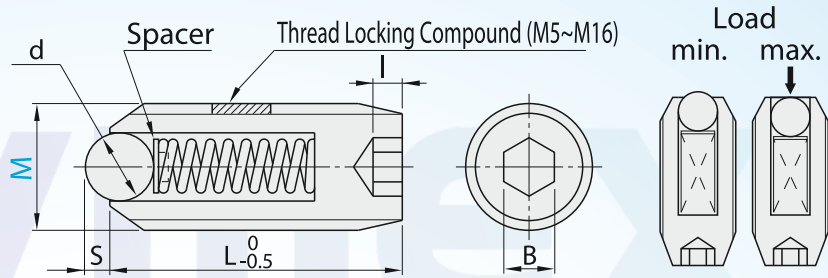


Ball Plungers-Standard Type

Standard



Thread Locking Treatment is not provided on M2, M3 and M4 of Standard Type

Thread Locking Treatment is where anaerobic thread locking compound in micro capsules is used to retain the threads. Once parts have been loosened, adhesion is lost. Use an anaerobic thread locking compound when reassembling.

The thread locking is most effective by leaving the parts for 72 hours or more in 25°C. It should be noted if the parts are left for short period of time and in low temperature, the thread locking compound will be less-effective.

Type				Body			Ball		Spring	Spacer	Operating Temperature
	Standard	No Thread Locking Compound		M Material	H Hardness	S Surface Treatment	M Material	H Hardness	M Material	H Hardness	
Metal Ball	Ultra Light Load	DBPY	DBPY-N	SCM435	29~35HRC	Black Oxide	SUJ2	55HRC~	SWP-B	SUS304	-30~80°C
	Light Load	DBPJF	DBPJ-N								
	Heavy Load	DBSJF	DBSJ-N	SUS304 Equivalent	—	—					
	Extra Heavy Load	DBPW	DBPW-N	SCM435	29~35HRC	Electroless Nickel Plating					
Plastic Ball	Ultra Light Load	DNBPS	—	S45C	29~35HRC	Black Oxide	Polyacetal	-	SWP-B	SUS304	-30~80°C
	Light Load	DNBPJ	—							SUS304	
	Heavy Load	DNBSJ	—							SUS304	
	Extra Heavy Load	DNBPW	—							SUS304	

M2, M3 and M4 have no slits for a wrench on the tip. Has no Slit for a wrench on the tip. It can be installed only by using a hex socket.

Part Number		Metal Ball		Plastic Ball		L	ℓ	B	Ultra Light Load		Light Load		Heavy Load		Extra Heavy Load		
Type	M (Coarse)	d	S	d	S				Load (N)		Load (N)		Load (N)		Load (N)		
									min.	max.	min.	max.	min.	max.	min.	max.	
(Metal Ball) DBPY (* only) DBPJF DBSJF DBPW (* only)	(Plastic Ball) DNBPS (*only) DNBPJ (*only) DNBSJ (*only) DNBPW (*only)	2	1	0.2	—	—	5	1	0.9			0.7	1.4	1.2	2		
	* 3	1.5	0.5	—	—	7	1	1.5	0.3	0.64	1	2	1.5	2.9	2.2	5	
	** 4	2.5	0.8	2.4	0.8	9	1.5	2	0.6	1.6	2	4.9	3.9	9.8	2.5	12.5	
	** 5	3		3.2		12	2	2.5	1	3.12	2.9	9.8	4.9	19.6	11.2	24.1	
	** 6	3		3.2		13	2.5	3	1.6	4.85	4.9	14.7	9.8	29.4	17.7	33.4	
	** 8	4	1	4	1.0	15	2.5	4	2.4	6.36	6.9	19.6	12.7	39.2	21.4	45.3	
	**10	5	1.2	4.8	1.2	16	3	5	3	8.1	8.8	24.5	18.6	49	23.5	58.7	
	**12	7.1	1.8	7.1	1.8	20	3	6	3.5	9.68	9.8	29.4	19.6	58.8	24.1	62.3	
	**16	9.5	2.5	9.5	2.5	25	3	8	5.7	15.8	15.7	49	29.4	98	43.6	116	

Part Number	M (Coarse)	d	S	L	ℓ	B	Ultra Light Load		Light Load		Heavy Load		Extra Heavy Load	
Type							Load (N)		Load (N)		Load (N)		Load (N)	
							min.	max.	min.	max.	min.	max.	min.	max.
(Metal Ball) DBPY-N DBPJ-N DBSJ-N DBPW-N	5	3	0.8	12	2	2.5	1	3.12	2.9	9.8	4.9	19.6	11.2	24.1
	6	3		13	2.5	3	1.6	1.6	4.9	14.7	9.8	29.4	17.7	33.4
	8	4	1	15	2.5	4	2.4	6.36	6.9	19.6	12.7	39.2	21.4	45.3
	10	5	1.2	16	3	5	3	8.1	8.8	24.5	18.6	49	23.5	58.7
	12	7	1.8	20	3	6	3.5	9.68	9.8	29.4	19.6	58.8	24.1	62.3
	16	9.5	2.5	25	8	8	5.7	15.7	15.7	49	29.4	98	43.6	116

Min. load is the initial load, and max. load is the one when the tip is fully compressed.

Basic Specifications

- Mounting Method : Screw (Hex)
- Initial Load (Range) (N) : 0.01~50

