




# Keyless Bushings

## Lightweight Aluminum Type

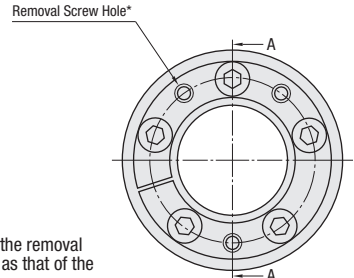
**Features:** With a low surface pressure due to the aluminum construction, it is ideal for fastening aluminum pulleys.

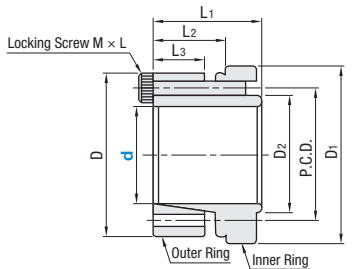


RoHS 10

**MLBA**

TYPE	Material		Surface Treatment	
	Main Body	Locking Screw	Main Body	Locking Screw
MLBA	Aluminum Alloy	4137 Alloy Steel	Anodize	Black oxide





\*The thread diameter of the removal screw hole is the same as that of the locking screw.

Part Number		D	D <sub>1</sub>	D <sub>2</sub>	P.C.D.	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Locking Screw			Mass (g)			
Type	d								M x L	Quantity	Tightening Torque (N·m)				
MLBA	4	15	17.5	6.5	10.1	13	9	6.5	M2.5 x 12	2	0.9	6			
	4.5	16	19	7.5	11.1							6			
	5	17	20	8.5	12.1							7			
	6	19	22	11	14.1							8			
	8	21	24	13	16.1							11			
	10	22	25	14	17.1	12	M2.5 x 14	4	0.9	14					
	11	24	27	15	19.2	17				17					
	12	26	29	17	21.2	18				12	9	19			
	14	28	31	18.5	22.2	20				13	9.5	24			
	15	29	32	19.5	23.2	21				14	10	M3 x 18	4	1.5	25
	16	30	33	20.5	24		28	14	10						28
	18	31	34	21.5	25		29	15	10						29
	19	32	35	22.5	26		30	16	12						30
	20	37	40	24	29.4		M4 x 20	4	3.5						7
	22	39	42	26	31.4	52									
	24	41	45	28	33.3	57									
	25	42	46	29	34.3	67									
	28	45	49	32	37.3	73									
	30	50	55	34.5	40.8	M4 x 22	5	7	7	101					
	32	53	58	36.5	43.3					112					
35	56	62	40	46.4	134										

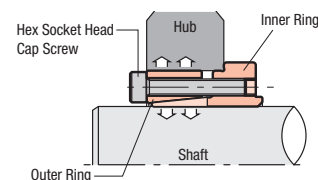
### Allowable Load Applied to MechaLock

d	Max. Allowable Torque (N·m)	Allowable Thrust Load (kN)
4	2	1
4.5	2.2	1
5	2.5	1
6	4	1.33
8	6	1.51
10	8	1.63
11	9	1.66
12	12	1.99
14	18	2.56
15	25	3.34
16	26	3.34
17	27	3.18
18	29	3.23
19	33	3.5
20	54	5.47
22	65	5.94
24	85	7.07
25	110	8.77
28	125	8.91
30	180	12.08
32	210	13.13
35	230	13.13

### Shaft/Hub Rigidity

d	Shaft Side Surface Pressure MPA	Hub Side Surface Pressure MPA	Min. Hub O.D. H	Hub Machining Depth HL
4	2	1	19	9
4.5	2.2		20	
5	2.5		20	
6	4		23	
8	6		26	
10	8	29	10	
11	9	30		
12	12	33		
14	18	38		
15	25	40		
16	26	41	13	
17	27	42		
18	29	46		
19	33	49		
20	54	54		
22	65	56	16	
24	85	59		
25	110	64		
28	125	72		
30	180	76		
32	210	81	20	
35	230	85		

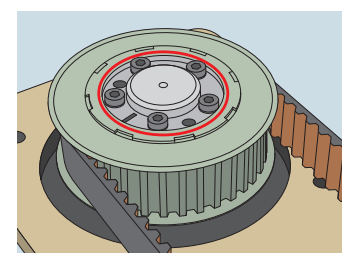
### Fastening Principle



### Recommended Tolerance and Surface Roughness of Shaft and Hub

Mounting Surface	Tolerance	Surface Roughness
Shaft Outer Dia.	h7 (g6)	Ra 1.6 or less
Hub I.D.	H7	Ra 3.2 or less

### Application Example





Part Number Example

MLBA20