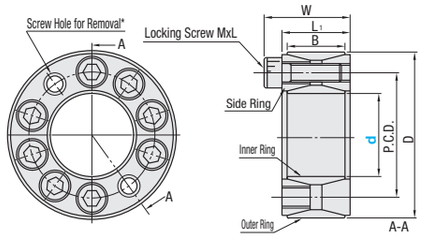
MechaLock
Straight

Features: Has larger maximum allowable torque than Standard Type, and locks the shaft and hub firmly. Has any part not shouldered to work the Centering function but makes applications based on several pieces easier than ever.

RoHS10

MLA
MLAP (Electroless Nickel Plating)

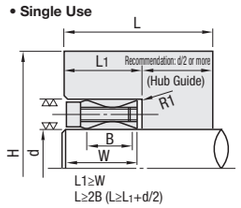


* Thread diameter of screw hole for removal is the same as that of locking screw.
Lock screw of MLA and MLAP is colored red due to coating agent.
When installation, press down side rings strongly and tighten with screws.

Type	Main Body	
	M Material	S Surface Treatment
MLA	S45C	-
MLAP		Electroless Nickel Plating

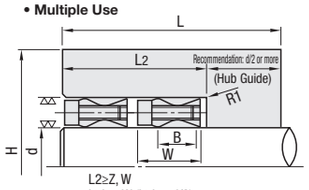
Part Number Type	d	D	W	P.C.D.	L1	B	Locking Screw MxL	Locking Screw Qty.	Hex Wrench Nominal	Tightening Torque (N·m)	Screw Hole for Removal	Mass (g)	Unit Price MLA	Unit Price MLAP
MLA MLAP	20	47	26	34.5	20	18	M6x18	8	5	12.7	2	240		
	22			34.5								230		
	24	50		37.5								250		
	25											240		
	28	55		42.5				10				290		
	30											280		
	32	60		47.5				12				340		
	35											310		
	38	65		52.5				14				370		
	40											350		
	42	75	32	60	24	21	M8x22	12	6	29.4		600		
	45											570		
	48	80		65								630		
	50											610		
	55	85		70				14				660		
	60	90		75								700		
	65	95		80								710		

• **Single Use**



L1≥W
L≥2B (L≥L1+d/2)

• **Multiple Use**



L2≥Z, W
L≥L2+W (L≥L2+d/2)
Z: Qty.

Check MechaLock for allowable load applied
For Calculation Steps, see ☞ **1489**.

d	Max. Allowable Torque (N·m)	Allowable Thrust Load (kN)
20	300	29.5
22	330	29.5
24	410	33.8
25	430	33.8
28	530	37.8
30	570	37.8
32	730	45.4
35	800	45.4
38	1010	52.9
40	1060	52.9
42	1560	74.1
45	1670	74.1
48	1780	74.1
50	1860	74.1
55	2530	91.8
60	2760	91.8
65	2990	91.8

kgf=Nx0.101972

Check Shaft/Hub for Rigidity For Design Steps, see ☞ **P1489**.

d	Shaft Side Surface Pressure MPa	Side Surface Pressure of Hub MPa	Single Use H Hub Minimum O.D. Yield Point Stress of Hub Material (MPa) 147 FC250	206 FC350 SS400	294 FCD450 S35C	392 FCD600 S55C	Hub Machining Depth L1	2 Hubs H Hub Minimum O.D. Yield Point Stress of Hub Material (MPa) 147 FC250	206 FC350 SS400	294 FCD450 S35C	392 FCD600 S55C	Hub Machining Depth L2
20	217	93	70	62	57	55	28	87	72	63	58	55
22	198	93	70	62	57	55		83	69	62		
24	207	100	77	68	62	59		85	72	65	61	
25	199	100	77	68	62	59						
28	199	101	86	75	68	65		98	82	72	67	
30	186	101	86	75	68	65						
32	209	111	98	84	76	72		115	93	81	75	
35	191	111	98	84	76	72		109	90	79	74	
38	205	120	112	94	84	79		126	101	88	81	
40	195	120	112	94	84	79						
42	223	125	132	110	98	91	34	159	123	105	96	67
45	208	125	132	110	98	91		171	128	107	98	
48	195	117	135	115	103	96		170	131	112	102	
50	187	117	135	115	103	96		159	127	109	101	
55	211	136	160	130	114	106		200	147	123	111	
60	193	129	162	134	118	110		214	156	130	118	
65	178	122	165	138	123	115		211	159	134	123	

kgf/mm²=MPax0.101972

Ordering Example — Part Number: **MLA30**

Recommended Tolerance of Shaft and Hub / Roughness of Surface

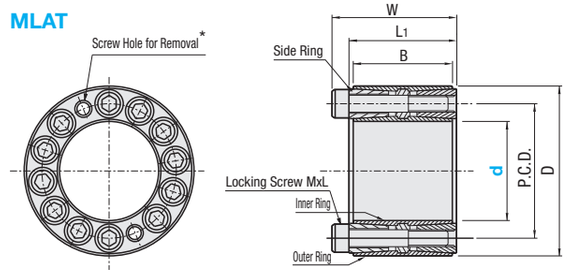
Mounting Surface	Tolerance	Roughness of Surface
Shaft Outer Dia.	h7(g6)	Ra1.6 or less
Hub I.D.	H7	Ra3.2 or less

MechaLock
Straight for High Torque

Features: In order to withstand higher load, is made longer in axial direction than conventional Straight Type.

RoHS10

MLAT



* The thread diameter of the screw hole for removal is the same as those of the lock screw.
Weight of side ring itself may shrink or enlarge the inner or outer rings. When installation, loosen side rings on both sides and insert a shaft into the hub.

Type	Main Body	
	M Material	S Surface Treatment
MLAT	S45C	-

Part Number Type	d	D	W	P.C.D.	L1	B	Locking Screw MxL	Locking Screw Qty.	Tightening Torque (N·m)	Screw Hole for Removal	Mass (g)	Unit Price
MLAT	30	55	44	42.5	38	35	M6x35	10	15.7	2	490	
	35	60		47.5				12			560	
	40	65		52.5				14			620	
	45	75	58	60	50	45	M8x45	12	37.3		1090	
	50	80		65						3	1170	
	55	85		70						4	1250	
	60	90		75							1340	
	65	95		80				14			1430	

Check MechaLock for allowable load applied
For Calculation Steps, see ☞ **P.1489**.

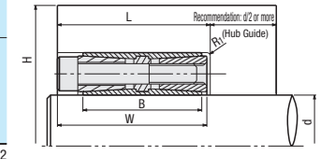
d	Max. Allowable Torque (N·m)	Allowable Thrust Load (kN)
30	1110	74
35	1550	88.8
40	2070	103
45	3800	168
50	4220	
55	4640	
60	5060	
65	6400	197

kgf=Nx0.101972

Check Shaft / Hub for Rigidity.
For Design Steps, see ☞ **P.1489**.

d	Shaft Side Surface Pressure MPa	Side Surface Pressure of Hub MPa	H Hub Minimum O.D. Yield Point Stress of Hub Material (MPa) 206 FC350 SS400 S10C	294 FCD450 S35C	392 FCD600 S55C	Hub Machining Depth L
30	250	136	122	91	80	44
35	257	150	151	106	90	
40	262	161	187	121	101	
45	277	166	229	143	118	59
50	249	156	215	145	122	
55	226	147	207	147	126	
60	208	138	204	151	131	
65	224	153	247	170	144	

kgf/mm²=MPax0.101972



Ordering Example — Part Number: **MLAT35**

Recommended Tolerance of Shaft and Hub / Roughness of Surface

Mounting Surface	Tolerance	Roughness of Surface
Shaft Outer Dia.	h7(g6)	Ra1.6 or less
Hub I.D.	H7	Ra3.2 or less