

Keyless Timing Pulleys

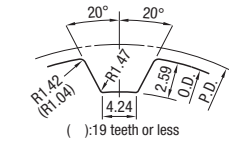
H Type – Keyless Bushing with Centering Function

Feature: MechaLock Standard Type (P.1456) Incorporated Timing Pulleys. It tolerates an average of 1.2 times and 2.5 times greater torque compared to the conventional ST bushing and SH bushing respectively.

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Tooth Profile (ISO Standard Rack Dimensions)



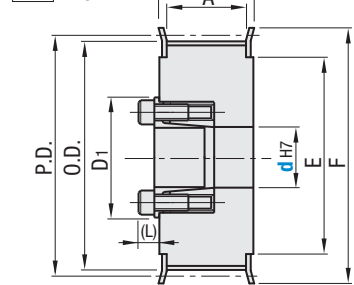
Tooth groove dimensions slightly change according to No. of teeth. (Pitch: 12.7 mm)

- The shaft bore may not have surface treatment.
- Cut Flange for 40–50 toothed pulleys.

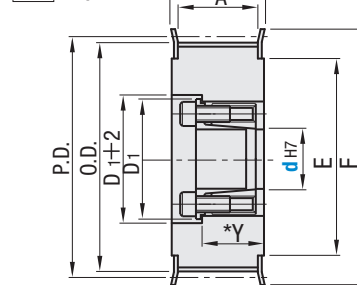
Part Number				Material			Surface Treatment		
Belt Width 19.1 mm (3/4")	Belt Width 25.4 mm (1")	Belt Width 38.1 mm (1.5")	Belt Width 50.8 mm (2")	Pulley	Flange	Bushing	Pulley	Flange	Bushing
A: 21 W: 26 Y: 18	A: 27 W: 32 Y: 22 (23.5)	A: 40 W: 45 Y: 28 (32)	A: 54 W: 59 Y: 35 (39)	Ultra Duralumin-Based Aluminum Alloy	Aluminum Alloy	1045 Carbon Steel or Equivalent	Clear Anodize	—	—
HPLA_L075	HPLA_H100	HPLA_H150	HPLA_H200	1045 Carbon Steel or Equivalent	Low Carbon Steel	1045 Carbon Steel or Equivalent	—	Black Oxide	—
HPLT_H075	HPLT_H100	HPLT_H150	HPLT_H200	—	—	—	—	Electroless Nickel Plating	—
HPLM_H075	HPLM_H100	HPLM_H150	HPLM_H200	—	—	—	—	—	—
HPLP_H075	HPLP_H100	HPLP_H150	HPLP_H200	—	—	—	—	—	—

Pulley Shape

E Shape



F Shape



- Flange attached
- For installation, refer to P.1452, for details of keyless bushing, refer to P.1456.
- Y dimensions in () are for H100 with shaft bore diameter of 24 or above, and for H150 and 200 with shaft bore diameter of 35 or above.

Type	Teeth	Type, Nom. Width	Pulley Shape	d _{H7} Range (Select Shaft Bore Dia. from Table 1)								P.D.	O.D.	F	E
				E Shape				F Shape							
				H075	H100	H150	H200	H075	H100	H150	H200				
HPLA HPLT HPLM HPLP	14	*A: 21 *W: 26 *Y: 18 *A: 27 *W: 32 *Y: 22 *A: 40 *W: 45 *Y: 28 *A: 54 *W: 59 *Y: 39	E	12 14-16	12 14-16	12 14-16	12 14-16	12 14-16	12 14-16	12 14-16	12 14-16	56.60	55.22	61	45
	15			14-19	14-19	14-19	14-19	14-19	14-19	14-19	60.64	59.27	67	50	
	16			14-20	14-20	14-20	14-20	14-19	14-20	14-20	64.68	63.31	70	56	
	17			14-20 22	14-20 22	14-20 22	14-20 22	14-19	14-20 22	14-20 22	68.72	67.35	80	60	
	18			14-20 22	14-20 22	14-20 22	14-20 22	14-19	14-20 22	14-20 22	72.77	71.39	87	67	
	19			14-20 22 24	14-20 22 24	14-20 22 24	14-20 22 24	14-19	14-20 22 24	14-20 22 24	76.81	75.44	87	67	
	20			14-20 22 24 25 28 30 32	14-20 22 24 25 28 30 32	14-20 22 24 25 28 30 32	14-20 22 24 25 28 30 32	14-19	14-20 22 24 25 28 30 32	14-20 22 24 25 28 30 32	80.85	79.48	87	67	
	21			14-20 22 24 25 28 30 32	14-20 22 24 25 28 30 32	14-20 22 24 25 28 30 32	14-20 22 24 25 28 30 32	19	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	84.89	83.52	95	75	
	22			19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	—	20 22 24 25 28 30 32	20 22 24 25 28 30 32	88.94	87.56	104	84	
	24			19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35 40	20 22 24 25 28 30 32 35 40	97.02	95.65	104	84	
25	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	19 20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35 40 45	20 22 24 25 28 30 32 35 40 45	101.06	99.69	111	90				
26	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35	105.11	103.73	123	102				
28	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35 40	20 22 24 25 28 30 32 35 40	113.19	111.82	123	102				
30	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35 40 45	20 22 24 25 28 30 32 35 40 45	121.28	119.90	127	105				
32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35	129.36	127.99	135	115				
34	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35	137.45	136.07	144	125				
36	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	20 22 24 25 28 30 32	—	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35	145.53	144.16	152	130				
38	—	—	—	—	—	—	—	153.62	152.24	165	140				
40	—	—	—	—	—	—	—	161.70	160.33	170	150				
42	—	—	—	—	—	—	—	169.79	168.41	180	155				
44	—	—	—	—	—	—	—	177.87	176.50	190	170				
48	—	—	—	—	—	—	—	194.04	192.67	205	180				
50	—	—	—	—	—	—	—	202.13	200.76	210	185				

Part Number Example: HPLA30H200 - F - 40

Table 1: Select Shaft Bore Diameter

d _{H7}	Max. Allowable Torque (Nm)		D ₁	(L)
	HPLA HPLT / HPLM	HPLP		
12	50	36.2	28.5	6.5
14	65	50.9	30.5	
15	70	54.8	31.5	
16	75	58.8	33.0	
17	110	76.4	33.5	
18	115	80.3	34.5	
19	120	85.2	35.5	8
20	220	183.0	42.0	
22	290	201.0	44.0	
24	320	252.0	46.0	
25	350	264.0	47.0	
28	380	295.0	50.0	
30	410	396.0	52.0	8.5
32	440	423.0	54.0	
35	720	548.0	62.0	
40	810	779.0	67.0	
45	1200	882.0	72.0	
50	1500	1362.0	77.0	

Keyless Timing Pulleys

H Type – Keyless Bushing with Centering Function, *continued*

Teeth	Available Types							
	HPLA				HPLT (x1.0) HPLM (x1.05) HPLP (x1.5)			
	H075	H100	H150	H200	H075	H100	H150	H200
14	•	•	•	•	•	•	•	•
15	•	•	•	•	•	•	•	•
16	•	•	•	•	•	•	•	•
17	•	•	•	•	•	•	•	•
18	•	•	•	•	•	•	•	•
19	•	•	•	•	•	•	•	•
20	•	•	•	•	•	•	•	•
21	•	•	•	•	•	•	•	•
22	•	•	•	•	•	•	•	•
24	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•
26	•	•	•	•	•	•	•	•
28	•	•	•	•	•	•	•	•
30	•	•	•	•	•	•	•	•
32	•	•	•	•	•	•	•	•
34	•	•	•	•	•	•	•	•
36	•	•	•	•	•	•	•	•
38	•	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•	•
42	•	•	•	•	•	•	•	•
44	•	•	•	•	•	•	•	•
48	•	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•	•

Part Number Alterations: HPLA30H100 - E - 35 - BMC

Alterations	Flange Cut	Flange Not Swaged	Flange Swaged on One Side	Surface Treatment
	FC	NFC	RFC / LFC	BMC / BMR
Code	FC	NFC	RFC / LFC	BMC / BMR
Spec.	<p>Lowers flange by cutting. FC: 0.5 mm increment</p> <p>No surface treatment applied on flange circumference.</p> <p>FC=(O.D.)+2 FC=F-2 Ordering Code: FC35</p>	<p>Flange is not installed. (Flange included)</p>	<p>Flange installed on the hub side (LFC) or the opposite side (RFC) only prior to shipping.</p>	<p>Applies electroless nickel plating on a bushing. (Anti-rusting treatment applied to screws).</p> <p>Electroless nickel plated bushing decreases allowable torque by 20–30%.</p> <p>BMC: Non-RoHS-compliant (Screw: Dacrotized treatment applied 4137 Alloy Steel)</p> <p>BMR: RoHS-compliant (Screw: GeoMet coating applied 4137 Alloy Steel)</p>