

# Keyless High Torque Timing Pulleys - S3M

Compatible with S3M type from Mitsubishi Belting Ltd. as well as Bando Chemical Industries Ltd.

For High Torque Timing Belts, see **P.1465**. For Open End Belts, see **P.1476**.

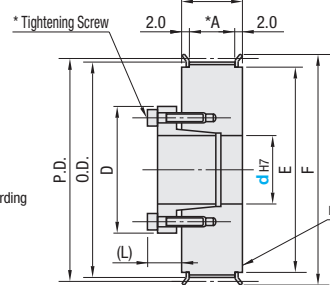


Type	Part Number		Material <sup>1</sup>			Surface Treatment		
	Belt Width: 10mm/Belt Width: 15mm		Pulley	Flange	Bushing	Pulley	Flange	Bushing
	A:11 W:15	A:17 W:21						
HTLA	●	●	A7075	A5052	S45C	Clear Anodize	-	-
HTLK	●	●				Hard Clear Anodize <sup>2</sup>	-	-
HTLN	●	●				Electroless Nickel Plating	-	-
HTPL	●	●	S45C Equivalent	SPCC	S45C	Black Oxide	-	-
HTLG	●	●				Electroless Nickel Plating	-	-

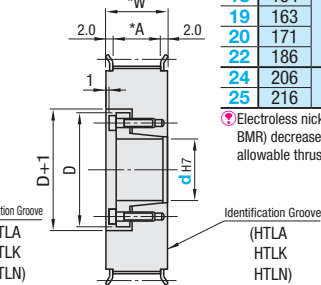
<sup>1</sup> The above material and accessory might be changed to the ones equivalent to the originals.  
<sup>2</sup> Hard Clear Anodize: Film Hardness 300HV --

### Pulley Shape

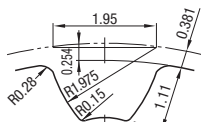
#### E Shape



#### F Shape



### Standard Tooth Profile



Tooth groove dimensions slightly vary according to the number of teeth.  
 (Pitch:3.0mm)

Number of Teeth	34	36	40	44	48	50	60	72
P.D.	32.47	34.38	38.20	42.02	45.84	47.75	57.30	68.75
O.D.	31.71	33.62	37.44	41.25	45.07	46.98	56.53	67.99
F	40	40	44	48	50	52	61	74
E	28	28	32	36	38	40	46	58

\* For quantity and size of tightening screws with flange installed, see **P.1425**.

Surface treatment may not be applied to shaft bores.

Two types of bushings are available: Standard Type (ST Bushings) and Short Type (SH Bushings). See **P.1425**.

Table 1: Select Shaft Bore Dia.

dh7	Max. Allowable Torque N · m				D (L)
	ST Bushing	SH Bushing	ST Bushing	SH Bushing	
6	-	5.6	-	22.5	-
8	16	8.5	25.5	24.5	8.5
10	39	18	30	29	10.5
11	43	20	31	30	
12	48	23	32	31	12
14	73	-	35	-	
15	78	-	36	-	13
16	83	-	37	-	
17	88	-	38	-	14
18	154	-	43	-	
19	163	-	45	-	14
20	171	-	46	-	
22	186	-	48	-	14
24	206	-	50	-	
25	216	-	52	-	

Electroless nickel plated bushing (Alterations BMC, BMR) decreases maximum allowable torque and allowable thrust load by 20 - 30%.

Type	Number of Teeth	Type, Nominal Width	Pulley Shape	dh7 Range (, ): Select the former or latter, (-): Specify in 1mm Increment								Unit Price									
				Shape E				Shape F				HTLA (x1.0)		HTLK (x1.1)		HTLN (x1.2)		HTPL (x1.0)		HTLG (x1.1)	
				S3M100	S3M150	S3M100	S3M150	S3M100	S3M150	S3M100	S3M150	S3M100	S3M150	S3M100	S3M150	S3M100	S3M150	S3M100	S3M150		
HTLA	34	S3M100	E	8	8	6	6														
HTLK	36			8	8	6	6														
HTLN	40	S3M150	F	8, 10, 11	8, 10, 11	8	8														
HTPL	44			8, 10-12, 14	8, 10-12, 14	8	8, 10-12														
HTLG	48			8, 10-12, 14-16	8	8, 10-12															
	50			8, 10-12, 14-17	8	8, 10-12															
	60			8, 10-12, 14-19	8	8, 10-12															
	72			8, 10-12, 14-20, 22, 24, 25	8	8, 10-12															



Ordering Example: Part Number - Pulley Shape - Shaft Bore Dia.  
 HTPL 60S3M100 - E - 18



Alterations: Part Number - Pulley Shape - Shaft Bore Dia. - (FC, NFC, LFC, RFC, BMC, BMR)  
 HTLA 60S3M100 - E - 18 - FC59

Alterations Code	Flange Cut	Flange Not Swaged	Flange Swaged on One Side	Surface Treatment
FC	<b>FC</b>	<b>NFC</b>	<b>LFC, RFC</b>	<b>BMC, BMR</b>
Spec.	Lowers flange by cutting. FC: 0.5mm increment No surface treatment is applied on flange circumference.  FC ≥ (O.D.) + 1 FC ≤ F - 2 (Ordering Code) FC35	Flange is not installed. (Flange Included) 	Flange is installed on either the bushing side (LFC) or the opposite side (RFC) prior to shipping. (Flange 1 pc. Included) 	Applies electroless nickel plating on a bushing. (Antrusting treatment is applied to screws.) Electroless nickel plated bushing decreases allowable torque by 20 ~ 30%. BMC: Not RoHS Compliant (Screw: SCM435 Dacrotized Treatment) BMR: RoHS Compliant (Screw: SCM435 GeoMet Coating)