

# High Torque Timing Pulleys

## S8M Type

For Non-Backlash Timing Pulleys, refer to P.1372, Super High Torque Timing Belts, refer to P.1440, High Torque Timing Belts, refer to P.1436, Keyless High Torque Timing Pulleys, refer to P.1402 Idlers with Teeth, refer to P.1422.

### High Torque Timing Pulleys – S8M Type

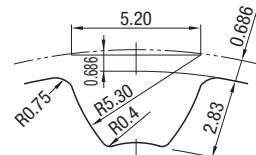


RoHS 10

Belt Width 15 mm				Belt Width 25 mm				Belt Width 30 mm				Belt Width 40 mm				Material		Surface Treatment								
A: 17		W: 22		L: 37(42)		A: 28		W: 33		L: 48(53)		A: 33		W: 38		L: 53(58)		A: 44		W: 49		L: 64(69)		Pulley	Flange	Surface Treatment
HTPA		S8M150		HTPA		S8M250		HTPA		S8M300		HTPA		S8M400		Ultra Duralumin-Based Aluminum Alloy		Aluminum Alloy		Clear Anodize						Clear Anodize
HTPB		S8M150		HTPB		S8M250		HTPB		S8M300		HTPB		S8M400						Black Anodize						Black Anodize
HTPK		S8M150		HTPK		S8M250		HTPK		S8M300		HTPK		S8M400						Hard Clear Anodize*						Hard Clear Anodize*
HTPN		S8M150		HTPN		S8M250		HTPN		S8M300		HTPN		S8M400						Electroless Nickel Plating						Electroless Nickel Plating
HTPT		S8M150		HTPT		S8M250		HTPT		S8M300		HTPT		S8M400						—						—
HTPM		S8M150		HTPM		S8M250		HTPM		S8M300		HTPM		S8M400		1045 Carbon Steel or Equivalent		Low Carbon Steel		Black Oxide						Black Oxide
HTPP		S8M150		HTPP		S8M250		HTPP		S8M300		HTPP		S8M400						Electroless Nickel Plating						Electroless Nickel Plating

\*Flanges are installed. Set screws are included with P, N & C bore hole specification.  
 \*L Dimensions in ( ) are for 44-72 toothed pulleys.  
 \*Hard Anodize Treatment: Film Hardness 300 HV min.

### Standard Tooth Profile



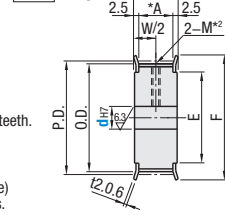
Tooth groove dimensions slightly change according to No. of teeth.  
 (Pitch: 8.0 mm)

\*1 t=2.0 for 72 toothed pulleys (Cut Flange).

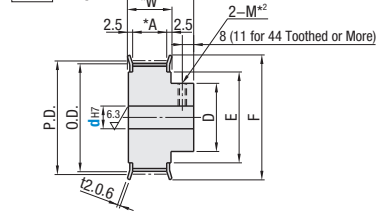
\*2 Shaft Bore Specifications H (Round Hole), V, F (Stepped Hole) and Y (Both Sides Stepped Hole), do not have tapped holes.

### Pulley Shape

#### A Shape



#### B Shape



### Tapped Hole Dimensions (Shaft Bore: P / N / C)

d <sub>H7</sub> Shaft Bore Inner Dia.	M (Coarse)	Accessories Set Screw
12	M4	M4 x 3
13-17	M5	M5 x 4
18-30	M6	M6 x 5
31-45	M8	M8 x 6
46-65	M10	M10 x 8

### Shaft Bore Specs. The shaft bore may not have surface treatment.

<b>H</b> Round Hole	<b>P</b> Round Hole + Tap	<b>N</b> New JIS Keywayed Bore + Tap	<b>V</b> Stepped Hole	<b>F</b> Stepped Hole (counterbored holes on the hub side)	<b>Y</b> Both Ends Stepped Hole	<b>WB</b> Two-Stepped Hole
<b>HU</b> Inch Round Hole	<b>PU</b> Inch Round Hole + Tap	<b>NU</b> Inch New JIS Key Groove Hole + Tap	<b>C</b> Old JIS Keywayed Bore + Tap			

Catalog No.	Type	Teeth	Type Nom. Width	Pulley Shape	Shaft Bore Spec. (1 mm Increment)																				P.D.	O.D.	D	F	E
					H										V/F														
					P										Y/WB														
7075 Aluminum Alloy	HTPA	18	S8M150	H	A Shape																				45.84	44.46	32	52	36
		19			B Shape																				48.38	47.01	35	55	40
		20			A Shape																				50.93	49.56	36	58	
		21			B Shape																				53.48	52.10	40	61	45
		22			A Shape																				56.02	54.65	41	61	45
		23			B Shape																				61.12	59.74	46	67	50
		24			A Shape																				63.66	62.29	48	70	56
		25			B Shape																				66.21	64.84	51	74	58
		26			A Shape																				71.30	69.93	55	80	60
		27			B Shape																				76.39	75.02	60	87	67
1045 Carbon Steel or Equivalent	HTPB	32	S8M300	H	A Shape																				81.49	80.12	63	99	84
		33			B Shape																				86.58	85.21	70	95	75
		34			A Shape																				91.67	90.30	75	99	80
		35			B Shape																				96.77	95.39	80	104	84
		36			A Shape																				101.86	100.49	85	111	90
		37			B Shape																				112.05	110.67	90	119	100
		38			A Shape																				122.23	120.86	95	127	105
		39			B Shape																				127.32	125.95	100	135	115
		40			A Shape																				152.79	151.42	100	135	115
		41			B Shape																				183.35	181.97	100	135	115

For inch hole dimensions detail information refer to next page. Shaft Bore Dia. 13-14, 17, 21-55 are not available for Shaft Bore specification C. Z-d=2 for shaft bore specification V and F. Q(R)-d=2 for shaft bore specification Y. L Dimensions in ( ) are for 44-72 toothed pulleys. For shaft hole specification N, shaft hole diameters 51 to 54 can not be manufactured.

# High Torque Timing Pulleys

## S8M Type, continued

Part Number Example: Shaft Bore: H / P / N / C HTPA36S8M250 - Pulley Shape: A - Shaft Bore Spec. / Inner Dia.: H65 - Z: Z38 - J: J23.0 - Q: Q62 - R: R47 - S: S16 - T: T9

### Inch Hole Specifications

No.	Nominal	Dimension (mm)
A	1/8	3.175
B	3/16	4.763
C	1/4	6.350
D	5/16	7.938
E	3/8	9.525
F	1/2	12.700
G	5/8	15.875
H	3/4	19.050
J	7/8	22.225

No.	Nominal	Dimension (mm)
K	1	25.400
L	1-1/4	31.750
M	1-3/8	34.925
N	1-1/2	38.100
P	1-5/8	41.275
Q	1-3/4	44.450
R	1-7/8	47.625
S	2	50.800

Part Number Alterations Example: HTPM60S8M250 - Pulley Shape: A - Shaft Bore Spec. / Inner Dia.: H65 - Z: Z38 - J: J23.0 - Q: Q62 - R: R47 - S: S16 - T: T9 - (KC90 / QSC / QFC / QTC / KSC / KFC / KTC / BC / NFC / RFC / LFC / FC / TPC / SLH) - KSC80 - K8

Alterations	Set Screw Angle	Side Tapped Hole	Side Counterbore Holes	Groove for Retainer Ring	Taper for Retaining Bearing
Code	KC90	QSC / QFC / QTC	ZTC-ZFC-ZSC	SRG	BTC
Spec.	Changes an angle of set screw to 90°. For A shape pulley, the set screw hole is set at around 90° to keep away from peaks.	Machines tapped hole on the side surface of hub side. Thickness required: minimum 2mm. A Shape: d+M+4≤QSC(QFC/QTC)≤E-(M+4). B Shape: d+M+4≤QSC(QFC/QTC)≤D-(M+4). Specify KC90 when selecting QFC for the Shaft Bore specifications P and N. d=Z when the Shaft Bore Specifications is V. The pilot hole for tapping may go through. Not applicable to Shaft Bore Specifications F or Y. QSC is not applicable to the Shaft Bore Specification P and N. M Selection: M3, M4, M5, M6, M8. Ordering Code: QFC28-M4.	Machines counterbore holes on the side surface of the hub side. Ordering Code: ZTC28-ZM4. Z/C Selection: Please specify the hole's manufacturing position (P.C.D.). ZM Selection: ZM3, ZM4, ZM5, ZM6, ZM8. Application Notes: Not applicable for 1.5GT. Minimum thickness is 2mm. Conditions vary depending on the shaft hole specifications.	Machines groove for retainer ring in line with the stepped hole of the shaft. SRG Specification: 2.5-36.5mm (0.5mm increments). Application Notes: Minimum thickness is 2mm. Applicable to shaft bore specifications V, F only. Use retainer ring groove standards for Z dimension. n ≤ J-SRG-m. Ordering Code: SRG7.	Add taper for retaining bearing inner ring. Ordering Code: BTC8-TL1.5. Application Notes: Applicable to Shape A only. Applicable to shaft bore specifications H, P only. TL < L-W.

Alterations	Hub Shortening	Flange Not Swaged	Flange Swaged on One Side	Flange Cut	Tapped Hole Dimensions	Set Screw Length	Side Through Holes
Code	BC	NFC	RFC / LFC	FC	TPC	SLH	KSC-KTC-KFC
Spec.	Cuts the hub length in 0.5mm increments. Ordering Code: BC6.5. Application Notes: Shaft bore specification H, V, F: 3≤BC≤L-W. Shaft bore specification P, N, C: M+3≤BC≤L-W. Not available for K, A shape.	Flange is not installed. (Flange included)	Flange installed on the hub side (RFC) or the opposite side (LFC) only. Same on A Shape.	Cuts the outer diameter of the flange in 0.5mm increments. Ordering Code: FC17. Application Notes: FC ≥ (O.D.) + 1. FC ≤ F - 2. No surface treatment applied on flange circumference.	Changes the tapped hole dimension. Applicable to Shaft Bore specification P, N, C only.	Changes the length of the included set screws. Applicable to Shaft Bore specification P, N, C only.	Machines through hole on the side surface of hub side. Ordering Code: KTC28-K4.5. K, C Selection: Please specify the hole's manufacturing position (P.C.D.). K Specification: K4.0-11.0 (0.5mm increments). Application Notes: Not available for K shape.