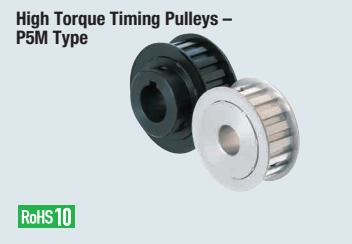


# High Torque Timing Pulleys

## P5M Type

For High Torque Timing Belts, refer to P.1438, Keyless High Torque Timing Pulleys, refer to P.1404 Idlers with Teeth, refer to P.1424.



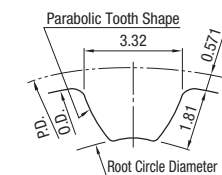
Belt Width 10 mm		Belt Width 15 mm		Material		Surface Treatment	Accessories
A: 11.6 W: 16 L: 28	A: 16.6 W: 21 L: 33	Pulley	Flange				
PTPA_P5M100	PTPA_P5M150	Ultra Duralumin-Based Aluminum Alloy	Aluminum Alloy	Clear Anodize	304 Stainless Steel		
PTPB_P5M100	PTPB_P5M150						
PTPK_P5M100	PTPK_P5M150						
PTPN_P5M100	PTPN_P5M150						
PTPM_P5M100	PTPM_P5M150	1045 Carbon Steel or Equivalent	Low Carbon Steel	Black Oxide	4137 Alloy Steel (Black Oxide)		
PTPP_P5M100	PTPP_P5M150			Electroless Nickel Plating			

Flanges are installed. Set screws are included with P, N & C bore hole specification.

\*Hard Anodize Treatment: Film Hardness 300 HV min.

### Standard Tooth Profile

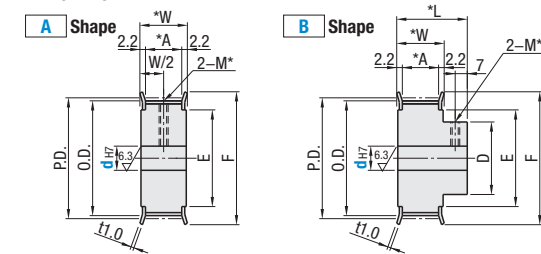
Tooth groove dimensions slightly change according to No. of teeth.



(Pitch: 5.0 mm)

\* Shaft bore Specifications H (Round hole), V F (Stepped hole) and Y (Both sides stepped hole) do not have tapped holes. It may have a relief in the tapped hole depending on the size.

### Pulley Shape

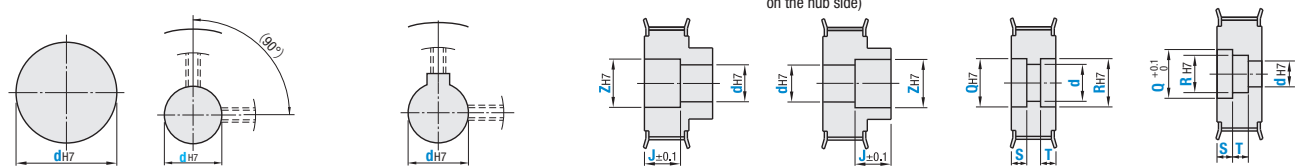


### Tapped Hole Dimensions (Shaft Bore: P / N / C)

d <sub>tr</sub> Shaft Bore Inner Dia.	M (Coarse)	Accessory Set Screw
5-12	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.

- H** Round Hole
- P** Round Hole + Tap
- N** New JIS Keywayed Bore + Tap
- V** Stepped Hole
- F** Stepped Hole (counterbored holes on the hub side)
- Y** Both Ends Stepped Hole
- WB** Two-Stepped Hole
- C** Old JIS Keywayed Bore + Tap



\* No tapped holes and set screws  
 \* For A Shape the set screws are placed at around 90° to keep away from the tooth peaks.  
 \* For Keyway Dimension Details, refer to P.1338.  
 \* For N, when selecting the shaft bore dia. 10 and the keyway width 4.0mm (height 1.8mm), specify NK10.  
 \* No tapped holes and set screws  
 \* As long as shaft hole diameter d is within the selection range, shaft hole diameter 6.35 can be selected.  
 \* Not applicable to PTPM, PTPP.  
 \* Applicable to B Shape only.  
 \* No tapped holes and set screws.  
 \* As long as shaft hole diameter d is within the selection range, shaft hole diameter 6.35 can be selected.  
 \* Not applicable to PTPM, PTPP.  
 \* Applicable to A Shape only.  
 \* No tapped holes and set screws.  
 \* Q (R) - Y ≥ 2  
 \* Applicable to Shape A only.  
 \* No tapped holes or set screws.  
 \* Q - R ≥ 2  
 \* R - WB ≥ 2

Part Number	Teeth	Type, Nominal Width	Pulley Shape																P.D.	O.D.	D	F		E	
			A								B K											Alum.	Steel	Alum.	Steel
			H(d) Round Hole	P(d) Round Hole + Tap	N(d) / C(D) JIS Keywayed Bore + Tap	V Stepped Hole	WB Double Stepped Hole	H(d) Round Hole	P(d) Round Hole + Tap	N(d) / C(D) JIS Keywayed Bore + Tap	V / F Stepped Hole														
2017 Aluminum Alloy PTPA PTPB PTPK PTPN	12	P5M100 *A:11.6 *W:16 *L:28	5-10	5-6	—	5-8	7-10	5-8	7-10	5-7	—	—	5	7	19.10	17.96	11	22	23	14	13				
	14		5-11	5-8	—	5-9	7-11	5-9	7-11	5-9	5	—	5-7	7-9	22.28	21.14	13	25	28	16	16				
	15		5-14	5-8	8	5-12	7-14	5-12	7-14	5-11	5-7	—	5-9	7-11	23.87	22.73	15	28	—	18	—				
	16		5-15	5-10	8	5-13	7-15	5-13	7-15	5-13	5-9	8	5-11	7-13	25.46	24.32	17	30	31	20	19				
	18		6-17	6-13	8-11	6-15	8-17	6-15	8-17	6-15	6-11	8-10	6-13	8-15	28.65	27.51	19	32	36	23	22.4				
	20		6-17	6-15	8-11	6-15	8-17	6-15	8-17	6-15	6-11	8-10	6-13	8-15	31.83	30.69	19	35	36	25	—				
	22		8-22	8-17	8-15	8-20	10-22	8-20	10-22	8-20	8-17	8-15	8-19	10-21	35.01	33.87	25	40	43	28	30				
	24		8-22	8-20	8-15	8-20	10-22	8-20	10-22	8-20	8-17	8-15	8-19	10-21	38.20	37.06	25	44	44	31	31				
	25		10-25	10-20	10-18	10-23	12-25	10-23	12-25	10-25	10-20	10-18	10-23	12-25	39.79	38.65	30	44	45	32	33.5				
	26		10-25	10-20	10-18	10-23	12-25	10-23	12-25	10-25	10-20	10-18	10-23	12-25	41.38	40.24	30	48	47	36	35.5				
	28		10-27	10-22	10-20	10-25	12-27	10-25	12-27	10-27	10-22	10-20	10-25	12-27	44.56	43.42	32	50	52	38	37.5				
	1035 Carbon Steel Equiv. PTPM PTPP		30	P5M150 *A:16.6 *W:21 *L:33	12-29	12-24	12-22	12-27	14-29	12-27	14-29	12-29	12-24	12-22	12-27	14-29	47.75	46.60	35	55	55	40	42.5		
			32		12-31	12-26	12-25	12-29	14-31	12-29	14-31	12-31	12-26	12-25	12-29	14-31	50.93	49.79	38	55	55	40	42.5		
			34		12-35	12-30	12-25	12-33	14-35	12-33	14-35	12-35	12-30	12-25	12-33	14-35	54.11	52.97	42	61	—	46	—		
			36		12-35	12-34	12-30	12-33	14-35	12-33	14-35	12-35	12-32	12-30	12-33	14-35	57.30	56.15	44	67	64	50	50		
			40		12-37	12-34	12-32	12-35	14-37	12-35	14-37	12-37	12-34	12-32	12-35	14-37	63.66	62.52	48	67	67	56	56		
			44		15-43	15-42	15-38	15-41	17-43	15-41	17-43	15-43	15-42	15-38	15-41	17-43	70.03	68.89	56	74	74	58	63		
			48		15-43	15-43	15-38	15-41	17-43	15-41	17-43	15-43	15-43	15-38	15-41	17-43	76.39	75.25	58	83	82	63	67		
			50		15-47	15-45	15-40	15-45	17-47	15-45	17-47	15-47	15-45	15-40	15-45	17-47	79.58	78.44	64	87	86	67	71		
			60		15-57	15-45	15-40	15-55	17-57	15-55	17-57	15-57	15-45	15-40	15-55	17-57	95.49	94.35	80	104	103	84	85		
72		15-85	15-70		15-50	15-85	17-91	15-85	17-91	15-84	15-70	15-50	15-82	17-86	114.59	113.45	90	119	—	100	—				

Shaft Bore Dia. 9 is not available for Shaft Bore Specification N. Shaft Bore Dia. 8, 11, 13, 14, 17, 21-50 are not available for Shaft Bore Specification C.  
 Shaft Bore Dia. 6.35 is selectable for shaft bore specifications H, P, V, and F only.  
 Select NK10 when New JIS Keywayed Bore + Tap with shaft bore diameter of 10 and keyway width 4.0 mm (height 1.8 mm) is requested. P.1338.

# High Torque Timing Pulleys

## P5M Type, continued

Part Number Example

Part Number - Pulley Shape - Shaft Bore Spec. / Inner Dia. - Z - J - Q - R - S - T

Shaft Bore: H / P / N / C PTPA20P5M150 - A - NK10  
 Shaft Bore: V / F PTPA60P5M100 - B - V20 - Z29 - J22  
 Shaft Bore: Y PTPA36P5M150 - A - Y17 - Q30 - R30 - S7 - T7

Part Number Alterations

Part Number - Pulley Shape - Shaft Bore Spec. / Inner Dia. - Z - J - Q - R - S - T - (KC120 / QSC / QFC / QTC / KSC / KFC / KTC / BC / NFC / RFC / LFC / FC / TPC / SLH)

PTPA60P5M150 - B - H40 - BC8.5

Alterations	Set Screw Angle	Side Tapped Hole	Side Counterbore Holes	Groove for Retainer Ring	Taper for Retaining Bearing
Code	KC120	QSC / QFC / QTC	ZTC-ZFC-ZSC	SRG	BTC
Spec.	Changes an angle of set screw to 120°. For A shape pulley, the set screw hole is set at around 120° to keep away from peaks. 	Machines tapped hole on the side surface of hub side. Thickness required: minimum 2 mm 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. 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. When QTC is selected for shaft bore specifications P, N, C, KC90 is not available. 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 QSC is not applicable to the shaft hole specifications 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-TL.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 as 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. <table border="1"> <thead> <tr> <th>M</th> <th>TPC</th> </tr> </thead> <tbody> <tr> <td>M4</td> <td>M5</td> </tr> <tr> <td>M5</td> <td>M4, M6</td> </tr> <tr> <td>M6</td> <td>M5, M8</td> </tr> <tr> <td>M8</td> <td>M6</td> </tr> <tr> <td>M10</td> <td>M8</td> </tr> </tbody> </table> Ordering Code: TPC5 	M	TPC	M4	M5	M5	M4, M6	M6	M5, M8	M8	M6	M10	M8	Changes the length of the included set screws. Applicable to Shaft Bore specification P, N, C only. <table border="1"> <thead> <tr> <th>Set Screw</th> <th>SLH</th> </tr> </thead> <tbody> <tr> <td>M4 x 3</td> <td>5, 8</td> </tr> <tr> <td>M5 x 4</td> <td>6, 10</td> </tr> <tr> <td>M6 x 5</td> <td>10</td> </tr> <tr> <td>M8 x 6</td> <td>10, 12</td> </tr> <tr> <td>M10 x 8</td> <td>12, 15</td> </tr> </tbody> </table> Ordering Code: SLH10 	Set Screw	SLH	M4 x 3	5, 8	M5 x 4	6, 10	M6 x 5	10	M8 x 6	10, 12	M10 x 8	12, 15	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 
M	TPC																														
M4	M5																														
M5	M4, M6																														
M6	M5, M8																														
M8	M6																														
M10	M8																														
Set Screw	SLH																														
M4 x 3	5, 8																														
M5 x 4	6, 10																														
M6 x 5	10																														
M8 x 6	10, 12																														
M10 x 8	12, 15																														