

High Torque Timing Pulleys

3GT Type

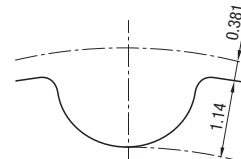
Feature: Circular Tooth Profile Pulleys with little backlash, suitable for positioning. For High Torque Timing Belts **P.1430**, for Idlers with Teeth **P.1424**.

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RoHS10

Standard Tooth Profile



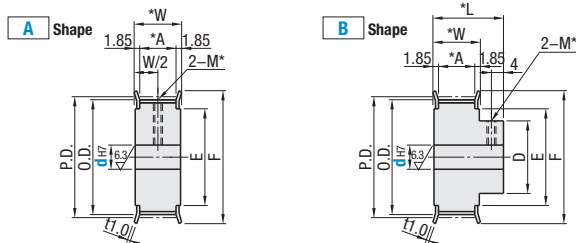
Tooth groove dimensions slightly change according to No. of teeth. (Pitch: 3.0 mm)

*For Shaft Bore Specifications H (Round Hole), V and F (Stepped Hole) and Y (Both Sides Stepped Hole), no tapped hole is machined.

Belt Width 6 mm	Belt Width 9 mm	Belt Width 15 mm	Material		Surface Treatment	Accessories Set Screws
A: 7.3 W: 11.0 L: 19.0	A: 10.3 W: 14.0 L: 22.0	A: 16.3 W: 20.0 L: 28.0	Pulley	Flange	Clear Anodize	304 Stainless Steel
GPA_GT3060	GPA_GT3090	GPA_GT3150	2000 Series Aluminum Alloy	Aluminum Alloy	—	—
GPT_GT3060	GPT_GT3090	GPT_GT3150	1045 Carbon Steel or Equivalent	Low Carbon Steel	Black Oxide	Chrome Molybdenum Steel (Black Oxide)
GPM_GT3060	GPM_GT3090	GPM_GT3150				

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

Pulley Shape



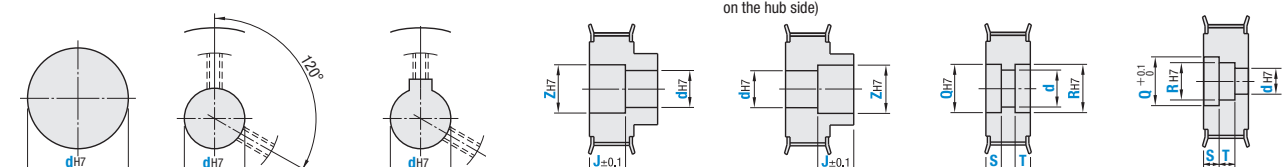
Tapped Hole Dimensions (Shaft Bore: P, N)

d _{H7} Shaft Bore Inner Dia.	M (Coarse)	Accessories Set Screw
5	M3	M3 x 3
6-17	M4	M4 x 3
18-38	M5	M5 x 4

Ⓢ Not selectable under 22 teeth for B Shape.

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



* No tapped holes and set screws
 * For A Shape pulley, the set screw hole is set at around 120° to keep away from peaks
 * For Keyway Dimension Details, refer to P.1338.
 * No tapped holes and set screws
 * Applicable to B Shape only
 * No tapped holes and set screws
 * Applicable to A Shape only
 * Shaft Bore Dia. D is general tolerance
 * No tapped holes and set screws
 * Applicable to Shape A only.
 * No tapped holes or set screws.
 * Formulas

Part Number	Type	Teeth	Type Nom. Width	Pulley Shape	Shaft Bore Specs	Shaft Bore Spec. (1 mm Increment)												P.D.	O.D.	D	F	E					
						H		P		N		V / F				Y / WB											
						A Shape	B Shape	A Shape	B Shape	A Shape	B Shape	A Shape	B Shape	A Shape	B Shape	A Shape	B Shape										
2017 Aluminum Alloy GPA	GT3060	16		A	H	4-7				4	4.5	5		6	7					15.28	14.52		19	11			
		18																				17.19	16.43		21	12	
		20																					19.10	18.34		23	14
		22																					21.01	20.25		24	16
		24																					22.92	22.16		26	18
1045 Carbon Steel or Equivalent GPT	GT3090	25		A	P	6-12	6-8	6	6.35	7				6-12	6-8	8-14	8-10				23.87	23.11		14	27		
		26																				24.83	24.07		15	28	
		28																				26.74	25.98		17	30	
		30																					28.65	27.89		19	32
		32																					30.56	29.80		20	34
1045 Carbon or Equivalent Steel+Black Oxide GPM	GT3150	34		A	V	8-23	8-20	8-16	8-12	8-13	8-10	8-21	8-18	10-23	10-20						32.47	31.71		22	36		
		36																				34.38	33.62		24	38	
		40																				38.20	37.44		28	42	
		44																				42.02	41.26		30	46	
		48																				45.84	45.08		32	49	

Ⓢ Z-d=2 for shaft bore specification V and F. Ⓢ Q(R)-d=2 for shaft bore specification Y. Ⓢ Shaft Bore Dia. 9 is not available for Shaft Bore specification N.
 Ⓢ Shaft Bore Dia. 6.35 is selectable for Shaft Bore specifications H, P, V and F.
 Ⓢ Specify 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.

Part Number Example

Part Number	-	Pulley Shape	-	Shaft Bore Spec. / Inner Dia.	-	Z	-	J	-	Q	-	R	-	S	-	T	
Shaft Bore: H / P / N	GPA30GT3060	-	A	-	H10												
Shaft Bore: V / F	GPA40GT3150	-	B	-	V12	-	Z14	-	J18.0								
Shaft Bore: Y	GPA36GT3090	-	A	-	Y15					-	Q18	-	R20	-	S3	-	T4

High Torque Timing Pulleys

3GT Type, continued

Part Number Alterations

Part Number	-	Pulley Shape	-	Shaft Bore Spec. / Inner Dia.	-	Z	-	J	-	Q	-	R	-	S	-	T	-	(KC90 / QSC / QFC / QTC / KSC / KFC / KTC / BC / NFC / RFC / LFC / FC)
GPA30GT3090	-	A	-	H10	-													FC30.0

Alterations	Set Screw Angle	Side Tapped Hole	Side Through Holes	Side Counterbore Holes
Code	KC90	QSC / QFC / QTC	KSC-KTC-KFC	ZTC-ZFC-ZSC
Spec.	<p>Changes an angle of set screw to 90°.</p> <p>Ⓢ For A shape pulley, the set screw hole is set at around 90° to keep away from peaks.</p>	<p>Machines tapped hole on the side surface of hub side. (QSC, QFC, QTC: 0.5 mm Increment)</p> <p>Ⓢ Thickness required: minimum 2mm</p> <p>A Shape: $d+M+4 \leq QSC(QFC / QTC) \leq E-(M+4)$</p> <p>B Shape: $d+M+4 \leq QSC(QFC / QTC) \leq D-(M+4)$</p> <p>Ⓢ d=Z when the Shaft Bore Specifications is V.</p> <p>Ⓢ Specify KC90 when selecting QFC for Shaft Bore specifications P, PU, HU, N, and C.</p> <p>Ⓢ The pilot hole for tapping may go through.</p> <p>Ⓢ Not applicable to Shaft Bore Specifications F or Y.</p> <p>Ⓢ When the Shaft Bore Specifications are P, PU, HU, N or C, QSC is not applicable.</p> <p>Ⓢ Not applicable to K Shape.</p> <p>M Selection: M3, M4, M5, M6, M8</p> <p>Ordering Code: QFC28-M4</p>	<p>Machines through hole on the side surface of hub side.</p> <p>Ordering Code: KTC28-K4.5</p> <p>K, C Selection: Please specify the hole's manufacturing position (P.C.D.)</p> <p>K Specification: K4.0-11.0 (0.5mm increments)</p> <p>Application Notes</p> <p>Ⓢ Not available for K shape</p>	<p>Machines counterbore holes on the side surface of the hub side.</p> <p>Ordering Code: ZTC28-ZM4</p> <p>Z/C Selection: Please specify the hole's manufacturing position (P.C.D.)</p> <p>ZM Selection: ZM3, ZM4, ZM5, ZM6, ZM8</p> <p>Application Notes</p> <p>Ⓢ Not applicable for 1.5GT</p> <p>Ⓢ Minimum thickness is 2mm</p> <p>Ⓢ Conditions vary depending on the shaft hole specifications</p>

Alterations	Hub Shortening	Flange Not Swaged	Flange Swaged on One Side	Flange Cut
Code	BC	NFC	RFC / LFC	FC
Spec.	<p>Cuts the hub length in 0.5mm increments</p> <p>Ordering Code: BC6.5</p> <p>Application Notes</p> <p>Ⓢ Shaft Bore specification H, V, F: $3 \leq BC \leq L-W$</p> <p>Ⓢ Shaft Bore specification P, N, C: $M+3 \leq BC \leq L-W$</p> <p>Ⓢ Not available for K, A shape</p>	<p>Flange is not installed. (Flange included)</p>	<p>Flange installed on the hub side (RFC) or the opposite side (LFC).</p> <p>Ⓢ Same on A Shape</p>	<p>Cuts the outer diameter of the flange in 0.5mm increments</p> <p>Ordering Code: FC17</p> <p>Application Notes</p> <p>Ⓢ $FC \geq (O.D.) + 1$</p> <p>Ⓢ $FC \leq F - 2$</p> <p>Ⓢ No surface treatment applied on flange circumference.</p>