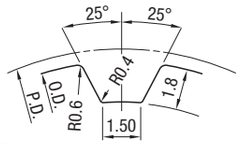
Timing Pulleys - T5

■For Timing Belts, see P.1470 and for Long Timing Belts, see P.1473. For Keyless Timing Pulleys, see P.1439. For Idlers with Teeth, see P.1455.

Type	Belt Width 10mm T5100	15mm T5150	20mm T5200	25mm T5250	M Material *1 Pulley	Flange	S Surface Treatment	A Accessory *1 Set Screws
TTPA	●	●	●	●	2000 Aluminum Alloy	Aluminum Alloy	Clear Anodize	EN 1.4301 Equiv.
TTPB	●	●	●	●			Black Anodize	
TTPK	●	●	●	●			Hard Clear Anodize *2	
TTPN	●	●	●	●			Electroless Nickel Plating	
TTPT	●	●	●	●	EN 1.1191 Equiv.	EN 1.0330 Equiv.	-	EN 1.7220 Equiv. (Black Oxide)
TTPM	●	●	●	●			Black Oxide	
TTPP	●	●	●	●			Electroless Nickel Plating	

Flange is installed, and set screws are included with Shaft Bores P, N and C. *1. The above material and accessory might be changed to the ones equivalent to the originals.
*2. Hard Clear Anodize: Film Hardness 300HV ~

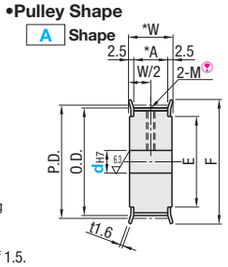
Standard Tooth Profile



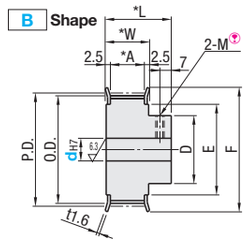
Tooth groove dimensions slightly vary according to the number of teeth.
(Pitch:5.0mm)

•Pulley Shape

A Shape



B Shape



Aluminum flanges will have a thickness of 1.5.
Shaft Bore Specs. H (Round hole), V or F (Stepped Hole) and Y (Both Sides Stepped Hole) do not have tapped holes.

■Tapped Hole Dimensions (Shaft Bore Specs.: P, N, C)

dH7 Shaft Bore I.D.	M (Coarse)	Accessory: Set Screw
5	M3	M3x3
6~12	M4	M4x3
13~17	M5	M5x4
18~30	M6	M6x5
31~45	M8	M8x6

■Number of Teeth / Dimension

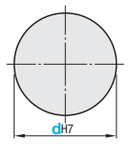
mm	Number of Teeth 12	14	15	16	18	20	22	24	25	26	28	30	32	34	36	40	44	48	50	60
P.D.	19.10	22.28	23.87	25.46	28.65	31.83	35.01	38.20	39.79	41.38	44.56	47.75	50.93	54.11	57.30	63.66	70.03	76.39	79.58	95.49
O.D.	18.25	21.45	23.05	24.60	27.80	31.00	34.25	37.40	39.00	40.60	43.75	46.95	50.10	53.25	56.45	62.85	69.20	75.55	78.75	94.65
D	-	14	15	17	19	19	24	27	27	31	32	33	37	40	40	47	50	60	63	75
F	24	26	28	32	33	36	40	45	45	48	48	52	55	61	61	67	74	83	87	99
E	12	16	18	20	22	24	27	30	30	35	35	36	40	45	45	50	58	63	67	80

■Belt Nominal Width / Dimension

mm	Nominal T5100	T5150	T5200	T5250
A	11	17	22	27
W	16	22	27	32
L	28	34	39	44

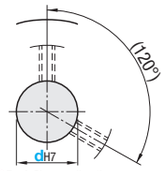
•Shaft Bore Specs. Surface treatment may not be applied to shaft bores.

H Round Hole



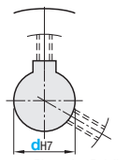
No tapped holes or set screws.

P Round Hole + Tap



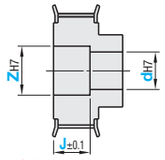
For A-Shape pulley, the screw holes are set at around 120° to keep away from peaks.

N New JIS Keywayed Bore + Tap
C Old JIS Keywayed Bore + Tap



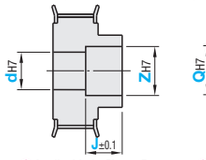
For Keyway Dimension Details, see **P1377**. When selecting the shaft bore dia. 10 and the keyway width 4.0mm (height 1.8mm) for New JIS Keywayed Bore, specify **NK10**.

V Stepped Hole



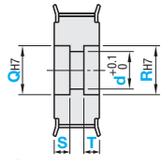
No tapped holes or set screws.

F Stepped Hole (Counterbored Holes on the Hub Side)



Applicable to Shape B only.
No tapped holes or set screws.

Y Both Ends Stepped Hole



Applicable to Shape A only.
Shaft Bore Dia. d is +0.1 / 0
No tapped holes or set screws.

Part Number Type	Number of Teeth	Type Nominal Width	Pulley Shape	Pulley Shape: A — Shaft Bore Specifications (~): Specify in 1mm Increment, (,): Select the former or latter — H Round Hole	P Round Hole + Tap	N, C Keyway + Tap	V Stepped Hole V	V Stepped Hole Z Z-d≥2	V Stepped Hole J (0.1mm Increment)	Y Both Ends Stepped Y	Y Both Ends Stepped Q, R Q(R)-d≥2	Y Both Ends Stepped S, T
Aluminum TTPA TTPB TTPK TTPN	12	T5100	A	5, 6, 6.35, 7, 8	5, 6, 6.35, 7, 8	8	-	-	-	-	-	-
	14	T5150	A	5, 6, 6.35, 7~10	5, 6, 6.35, 7~10	8, 10, NK10	5,6	7,8	2.0≤J≤W-2.0	5, 6	7, 8	3~14 S+T≤W-3
	15		A	5, 6, 6.35, 7~10	5, 6, 6.35, 7~10	8, 10, NK10	5~8	7~10		5~8	7~10	
	16		A	6, 6.35, 7~12	6, 6.35, 7~12	8, 10, NK10, 11, 12	6~10	8~12		6~10	8~12	
	18		A	6, 6.35, 7~14	6, 6.35, 7~12	8, 10, NK10, 11, 12	6~12	8~14		6~12	8~14	
	20		A	6, 6.35, 7~16	6, 6.35, 7~16	8, 10, NK10, 11~16	6~14	8~16		6~14	8~16	
Steel TTPT TTPM TTPP	22	T5100	A	7~19	7~18	8, 10, NK10, 11~18	7~17	9~19		7~17	9~19	
	24	T5150	A	7~22	7~20	8, 10, NK10, 11~20	7~20	9~23		7~20	9~22	
	25		A	7~22	7~20	8, 10, NK10, 11~20	7~20	9~23		7~20	9~22	
	26		A	8~27	8~22	8, 10, NK10, 11~22	8~25	10~27		8~25	10~27	
	28	T5200	A	8~27	8~24	8, 10, NK10, 11~24	8~25	10~27		8~25	10~27	
	30	T5250	B	10~28	10~26	8, 10, NK10, 11~26	10~26	12~28		10~26	12~28	
	32		B	10~32	10~28	8, 10, NK10, 11~28	10~30	12~32		10~30	12~32	
	34		B	10~37	10~30	10, NK10, 11~30	10~35	12~37		10~35	12~37	
	36		B	10~37	10~30	10, NK10, 11~30	10~35	12~37		10~35	12~37	
	40		B	10~42	10~38	10, NK10, 11~38	10~40	12~42		10~40	12~42	
	44		B	12~50	12~42	12~40	12~48	14~50		12~48	14~50	
	48		B	12~55	12~45	12~40	12~53	14~55		12~53	14~55	
	50		B	12~59	12~45	12~43	12~57	14~59		12~57	14~59	
	60		B	12~72	12~45	12~45	12~70	14~72		12~70	14~72	

Part Number Type	Number of Teeth	Type Nominal Width	Pulley Shape	Pulley Shape: B — Shaft Bore Specifications (~): Specify in 1mm Increment, (,): Select the former or latter — H Round Hole	P Round Hole + Tap	N, C Keyway + Tap	V, F Stepped Hole V, F	V, F Stepped Hole Z Z-d≥2	V, F Stepped Hole J (0.1mm Increment)
Aluminum TTPA TTPB TTPK TTPN	12	T5100	A	-	-	-	-	-	-
	14	T5150	A	5, 6, 6.35, 7~10	5, 6, 6.35, 7, 8	-	5, 6	7, 8	2.0≤J≤L-2.0
	15		A	5, 6, 6.35, 7~10	5, 6, 6.35, 7~8		5~8	7~10	
	16		A	6, 6.35, 7~12	6, 6.35, 7~10	8	6~10	8~12	
	18		A	6, 6.35, 7~14	6, 6.35, 7~11	8, 10, NK10	6~12	8~14	
	20		A	6, 6.35, 7~15	6, 6.35, 7~12	8, 10, NK10	6~13	8~15	
Steel TTPT TTPM TTPP	22	T5100	A	7~19	7~15	8, 10, NK10, 11, 12	7~17	9~19	
	24	T5150	A	7~22	7~17	8, 10, NK10, 11~13	7~20	9~23	
	25		A	7~22	7~18	8, 10, NK10, 11~15	7~20	9~23	
	26		A	8~27	8~21	8, 10, NK10, 11~17	8~25	10~27	
	28	T5200	A	8~27	8~22	8, 10, NK10, 11~18	8~25	10~27	
	30	T5250	B	10~28	10~23	10, NK10, 11~18	10~26	10~30	
	32		B	10~32	10~27	10, NK10, 11~22	10~30	12~35	
	34		B	10~36	10~30	10, NK10, 11~25	10~34	12~36	
	36		B	10~36	10~30	10, NK10, 11~25	10~34	12~36	
	40		B	10~42	10~37	10, NK10, 11~29	10~40	12~42	
	44		B	12~46	12~40	12~32	12~44	14~46	
	48		B	12~55	12~45	12~40	12~53	14~55	
	50		B	12~59	12~45	12~43	12~57	14~59	
	60		B	12~71	12~45	12~45	12~69	14~71	

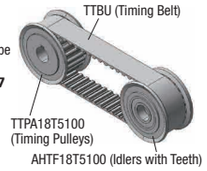
⊗Shaft Bore Dia. 8, 11, 13, 14, 17, 21~45 are not available for Shaft Bore Spec. C.

Ordering Example

	Part Number	-	Pulley Shape	-	Shaft Bore Specs., I.D.	-	Z	-	J	-	Q	-	R	-	S	-	T
(Shaft Bore Specs.: H, P, N, C)	TTPA18T5100	-	A	-	NK10												
(Shaft Bore Specs.: V, F)	TTPA30T5200	-	A	-	V10	-	Z23	-	J16.0								
(Shaft Bore Specs: Y)	TTPA48T5150	-	A	-	Y25					-	Q42	-	R37	-	S9	-	T7

Ex Example

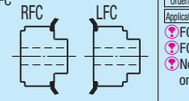
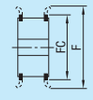
Combination of these app. examples can be selected on our website.
Details about Selection Procedure P.87

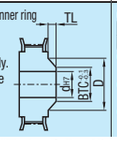
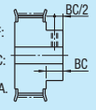
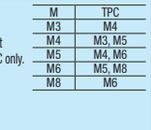
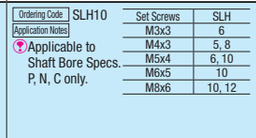


Number of Teeth	Body Price TTPA (x1.0) TTPB, TTPK (x1.1) TTPN (x1.2) T5100 Shape A	T5100 Shape B	T5150 Shape A	T5150 Shape B	T5200 Shape A	T5200 Shape B	T5250 Shape A	T5250 Shape B	TTPT (x1.0) TTPM (x1.05) TTPP (x1.15) T5100 Shape A	T5100 Shape B	T5150 Shape A	T5150 Shape B	T5200 Shape A	T5200 Shape B	T5250 Shape A	T5250 Shape B	Shaft Bore Machining Charge (Body Price +) P Hole	N, C, V, F Hole	Y Hole
12		-		-		-		-		-		-		-		-			-
14																			
15																			
16																			
18																			
20																			
22																			
24																			
25																			
26																			
28																			
30																			
32																			
34																			
36																			
40																			
44																			
48																			
50																			
60																			

Alterations

	Part Number	-	Pulley Shape	-	Shaft Bore Specs., I.D.	-	Z	-	J	-	Q	-	R	-	S	-	T	-	(KC90···etc.)
	TTPA25T5100	-	A	-	H10													-	QSC18 - M4

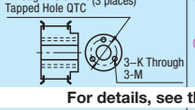
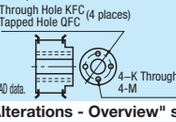
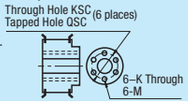
Alterations	Set Screw Angle	No Flange	Single Flange	Flange Cut
Code	KC90	NFC	RFC, LFC	FC
Spec.	Changes an angle of set screw to 90°. For A-Shape pulley, the screw holes are set at around 90° to keep away from peaks. 	(Flange 2 pcs. Included) Ordering Code NFC 	(Flange 1 pc. Included) Ordering Code RFC Application Notes 	Cut the flange O.D. in 0.5mm increment. Ordering Code FC17 Application Notes FC≥(O. D.)+1 FC≤F-2 No surface treatment is applied on flange circumference. 

Alterations	Adds taper for retaining bearing	Hub Shortening	Tapped Hole Dimensions	Changes the length of the included set screws.
Code	BTC	BC	TPC	SLH
Spec.	Add taper for retaining bearing inner ring Ordering Code BTC6-TL2.5 Application Notes Applicable to Shape A only. Available for Shaft Bore Specs. H, P only TL<L-W 	Cuts the hub length in 0.5mm increment. Ordering Code BC6.5 Application Notes Shaft Bore Specs. H, V, F: 3≤BC≤L-W Shaft Bore Specs. P, N, C: M+3≤BC≤L-W ⊗Not available for Shape A. 	Ordering Code TPC5 Application Notes Applicable to Shaft Bore Specs. P, N, C only. 	Ordering Code SLH10 Application Notes Applicable to Shaft Bore Specs. P, N, C only. 

M	TPC
M3	M4
M4	M3, M5
M5	M4, M6
M6	M5, M8
M8	M6

Set Screws	SLH
M3x3	6
M4x3	5, 8
M5x4	6, 10
M6x5	10
M8x6	10, 12

For details, see the "Timing Pulley Alterations - Overview" section P.1378.

Alterations	Side Through Hole / Side Tapped Hole, 3 places	Side Through Hole / Side Tapped Hole, 4 places	Side Through Hole / Side Tapped Hole, 6 places
Code	KTC, QTC	KFC, QFC	KSC, QSC
Spec.	Machine Through Hole / Tapped Hole on the side surface of hub side Ordering Code (Through Hole) KTC20-K5.0 Ordering Code (Tapped Hole) QTC28-M4 Selection (Through Hole) K Selection K4.0~K13.0 (0.5mm Increment) Selection (Tapped Hole) M Selection M3,M4,M5,M6,M8 Application Notes ⊗Not applicable to Shaft Bore Specs. F or Y. ⊗When KTC/QTC is selected for Shaft Bore Specs. P, N and C, KC90 is not available. 	Machine Through Hole / Tapped Hole on the side surface of hub side Ordering Code (Through Hole) KFC20-K5.0 Ordering Code (Tapped Hole) QFC28-M4 Selection (Through Hole) K Selection K4.0~K13.0 (0.5mm Increment) Selection (Tapped Hole) M Selection M3,M4,M5,M6,M8 Application Notes ⊗Not applicable to Shaft Bore Specs. F or Y. Specify KC90 when selecting KFC/QFC for Shaft Bore Specs. P, N and C. Side holes and tooth side tapped holes might interfere with each other. For details, see the relevant CAD data. 	Machine Through Hole / Tapped Hole on the side surface of hub side Ordering Code (Through Hole) KSC20-K5.0 Ordering Code (Tapped Hole) QSC28-M4 Selection (Through Hole) K Selection K4.0~K13.0 (0.5mm Increment) Selection (Tapped Hole) M Selection M3,M4,M5,M6,M8 Application Notes ⊗Not applicable to Shaft Bore Specs. F or Y. ⊗KSC/QSC is not applicable to the Shaft Bore Specs. P, N and C. 

For details, see the "Timing Pulley Alterations - Overview" section P.1378.