High Torque Timing Pulleys - S8M

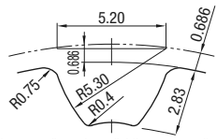
Compatible with S8M type from Mitsuboshi Belting Ltd. as well as Bando Chemical Industries Ltd.

■For Non-Backlash Pulley, see P.1407.
■For Super High Torque Timing Belts, see P.1469. For High Torque Timing Belts, see P.1465. For Keyless High Torque Timing Pulleys, see P.1435. For Idlers with Teeth, see P.1451.

Type	Belt Width 15mm S8M150	25mm S8M250	30mm S8M300	40mm S8M400	M Material *1 Pulley	Flange	S Surface Treatment	A Accessory *1 Set Screws
HTPA	●	●	●	●	Extra Super Duralumin Aluminum Alloy	Aluminum Alloy	Clear Anodize	EN 1.4301 Equiv.
HTPB	●	●	●	●			Black Anodize	
HTPK	●	●	●	●			Hard Clear Anodize *2	
HTPN	●	●	●	●			Electroless Nickel Plating	
HTPT	●	●	●	●	EN 1.1191 Equiv.	EN 1.0330 Equiv.	-	EN 1.7220 Equiv. (Black Oxide)
HTPM	●	●	●	●			Black Oxide	
HTPP	●	●	●	●			Electroless Nickel Plating	

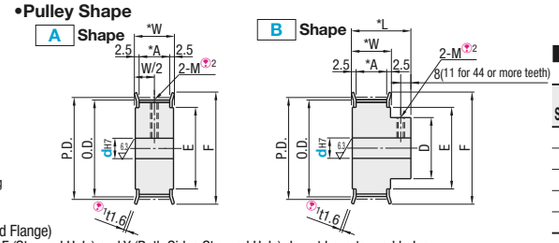
Flange is installed, and set screws are included with Shaft Bores P, N and C. *1. The above material and accessory might be changed to the ones equivalent to the originals.
*2. Hard Clear Anodize: Film Hardness 300HV ~

Standard Tooth Profile



Tooth groove dimensions slightly vary according to the number of teeth.
(Pitch:8.0mm)

•Pulley Shape



1 t=2.0 for 72 toothed pulleys. (Machined Flange)
2 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
12	M4	M4x3
13~17	M5	M5x4
18~30	M6	M6x5
31~45	M8	M8x6
46~65	M10	M10x8

■Number of Teeth / Dimension

mm	Number of Teeth 18	19	20	21	22	24	25	26	28	30	32	34	36	38	40	44	48	50	60	72
P.D.	45.84	48.38	50.93	53.48	56.02	61.12	63.66	66.21	71.30	76.39	81.49	86.58	91.67	96.77	101.86	112.05	122.23	127.32	152.79	183.35
O.D.	44.46	47.01	49.56	52.10	54.65	59.74	62.29	64.84	69.93	75.02	80.12	85.21	90.30	95.39	100.49	110.67	120.86	125.95	151.42	181.97
D	32	35	36	40	41	46	48	51	55	60	63	70	75	80	85	90	100	100	100	100
F	52	55	58	61	61	67	70	74	80	87	87	95	99	104	111	119	127	135	160	190
E	36	40	40	45	45	50	56	58	60	67	67	75	80	84	90	100	105	115	140	170

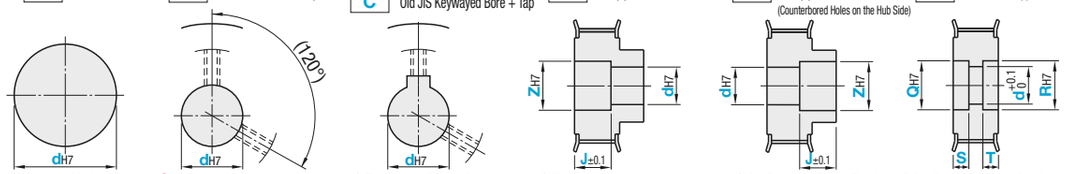
■Belt Nominal Width / Dimension

mm	Nominal S8M150	S8M250	S8M300	S8M400
A	17	28	33	44
W	22	33	38	49
L Number of Teeth 18~40	37	48	53	64
L Number of Teeth 44~72	42	53	58	69

•Shaft Bore Specs.

Surface treatment may not be applied to shaft bores.

H Round Hole — P Round Hole + Tap — N New JIS Keywayed Bore + Tap — C Old JIS Keywayed Bore + Tap — V Stepped Hole — F Stepped Hole (Counterbored Holes on the Hub Side) — Y Both Ends Stepped Hole



No tapped holes or set screws.
For A-Shape pulley, the screw holes are set at around 120° to keep away from peaks.
For Keyway Dimension Details, see P.1377.
No tapped holes or set screws.
Applicable to Shape B only.
No tapped holes or set screws.
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: H Round Hole	P Round Hole + Tap	N, C Keyway + Tap	V Stepped Hole V	Z Z-d≥2	J (0.1mm Increment)	Y Both Ends Stepped Y	Q, R Q(R)-d≥2	S, T	Pulley Shape B: H Round Hole	P Round Hole + Tap	N, C Keyway + Tap	V, F Stepped Hole V, F	Z Z-d≥2	J (0.1mm Increment)
				Shaft Bore Specifications (–): Specify in 1mm Increment, (,): Select the former or latter									Shaft Bore Specifications (–): Specify in 1mm Increment, (,): Select the former or latter					
Aluminum HTPA HTPB HTPK HTPN Steel HTPT HTPM HTPP	18	S8M150 S8M250 S8M300 S8M400	A B	12~28	12~26	12~26	12~26	14~28	3.0≤J≤W-3.0	12~26	14~28	3~23 S+T≤W-3	12~28	12~22	12~20	12~26	14~28	3.0≤J≤L-3.0
	19			12~32	12~28	12~28	12~30	14~32		12~30	14~32		12~31	12~25	12~20	12~29	14~31	
	20			12~32	12~30	12~30	12~30	14~32		12~30	14~32		12~32	12~26	12~22	12~30	14~32	
	21			12~37	12~32	12~32	12~35	14~37		12~35	14~37		12~36	12~30	12~24	12~34	14~36	
	22			12~37	12~34	12~34	12~35	14~37		12~35	14~37		12~37	12~30	12~25	12~35	14~37	
	24			12~42	12~40	12~40	12~40	14~42		12~40	14~42		12~42	12~34	12~28	12~40	14~42	
	25			12~48	12~40	12~40	12~46	14~48		12~46	14~48		12~44	12~36	12~28	12~42	14~44	
	26			14~50	14~45	14~45	14~48	16~50		14~48	16~50		14~47	14~39	14~31	14~45	16~47	
	28			14~52	14~48	14~48	14~50	16~52		14~50	16~52		14~47	14~43	14~35	14~49	16~51	
	30			14~59	14~50	14~50	14~57	16~59		14~57	16~59		14~56	14~46	14~38	14~54	16~56	
	32			14~59	14~55	14~50	14~57	16~59		14~57	16~59		14~59	14~49	14~45	14~57	16~59	
	34			16~67	16~60	16~50	16~65	18~67		16~65	18~67		16~66	16~56	16~48	16~64	18~66	
	36			16~72	16~65	16~50	16~70	18~72		16~70	18~72		16~71	16~61	16~50	16~69	18~71	
	38			16~76	16~65	16~50	16~74	18~76		16~74	18~76		16~76	16~65	16~50	16~74	18~76	
	40			20~80	20~65	20~50	20~80	22~82		20~75	22~82		20~80	20~65	20~50	20~79	22~81	
	44			20~80	20~65	20~50	20~80	22~92		20~75	22~92		20~80	20~65	20~50	20~80	22~86	
	48			20~80	20~65	20~50	20~80	22~95		20~75	22~95		20~80	20~65	20~50	20~80	22~95	
	50			20~80	20~65	20~50	20~80	22~95		20~75	22~95		20~80	20~65	20~50	20~80	22~95	
	60			20~80	20~65	20~50	20~80	22~95		20~75	22~95		20~80	20~65	20~50	20~80	22~95	
	72			20~80	20~65	20~50	20~80	22~95		20~75	22~95		20~80	20~65	20~50	20~80	22~95	

Shaft Bore Dia. 13, 14, 17 or 21~50 are not available for Shaft Bore Specs. 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)	HTPA36S8M250	A	H65						
(Shaft Bore Specs.: V, F)	HTPA30S8M300	B	V20	Z38	J23.0				
(Shaft Bore Specs: Y)	HTPA40S8M250	A	Y30			Q62	R47	S16	T9

Number of Teeth	Body Price HTPA (x1.0) S8M150 Shape A	Shape B	S8M250 Shape A	Shape B	HTPB, HTPK (x1.1) S8M300 Shape A	Shape B	HTPN (x1.2) S8M400 Shape A	Shape B	HTPT (x1.0) S8M150 Shape A	Shape B	HTPM (x1.05) S8M250 Shape A	Shape B	HTPP (x1.15) S8M300 Shape A	Shape B	S8M400 Shape A	Shape B	Shaft Bore Machining Charge (Body Price +) P Hole	N, C, V, F Hole	Y Hole
18																			
19																			
20																			
21																			
22																			
24																			
25																			
26																			
28																			
30																			
32																			
34																			
36																			
38																			
40																			
44																			
48																			
50																			
60																			
72																			

Alterations

Part Number	Pulley Shape	Shaft Bore Specs., I.D.	Z	J	Q	R	S	T	(KC90···etc.)
HTPA60S8M250	A	H65							KSC80 - K8

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. (90°)	(Flange 2 pcs. Included) Ordering Code NFC	(Flange 1 pc. Included) Ordering Code RFC RFC LFC	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. FC F

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 BTC15-TL4. Application Notes: Applicable to Shape A only. Applicable to Shaft Bore Specs. H and P only. TL<L-W. TL, dH7, BTC, D	Cuts the hub length in 0.5mm increment. Ordering Code EN CC491K Equiv.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. BC/2, BC	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
M4	M5
M5	M4, M6
M6	M5, M8
M8	M6, M10
M10	M8

Set Screws	SLH
M4x3	5, 8
M5x4	6, 10
M6x5	10
M8x6	10, 12
M10x8	12, 15

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. Through Hole KTC Tapped Hole QTC (3 places) 3–K Through 3-M	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. Through Hole KFC Tapped Hole QFC (4 places) 4–K Through 4-M	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. Through Hole KSC Tapped Hole QSC (6 places) 6–K Through 6-M

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