Keyless High Torque Timing Pulleys

S8M Type

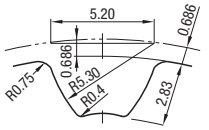
For High Torque Timing Belts, refer to **P.1436**, Open End Belts, refer to **P.1445**.

Keyless Timing Pulleys – S8M Type

Part Number				Material			Surface Treatment		
Belt Width 15mm	Belt Width 25mm	Belt Width 30mm	Belt Width 40mm	Pulley	Flange	Bushing	Pulley	Flange	Bushing
A: 17 W: 22	A: 28 W: 33	A: 33 W: 38	A: 44 W: 49						
HTLA__S8M150	HTLA__S8M250	HTLA__S8M300	HTLA__S8M400	Ultra Duralumin-Based Aluminum Alloy	Aluminum Alloy	1045 Carbon Steel or Equivalent	Clear Anodize		—
HTLK__S8M150	HTLK__S8M250	HTLK__S8M300	HTLK__S8M400				Hard Clear Anodize*		—
HTPL__S8M150	HTPL__S8M250	HTPL__S8M300	HTPL__S8M400	1045 Carbon Steel or Equivalent	Low Carbon Steel	1045 Carbon Steel or Equivalent	Black Oxide		
HTLG__S8M150	HTLG__S8M250	HTLG__S8M300	HTLG__S8M400				Electroless Nickel Plating		

*Hard Anodize Treatment: Film Hardness 300 HV min.

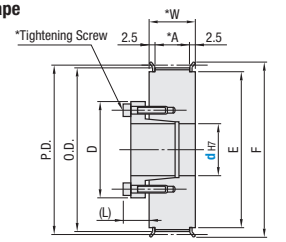
Standard Tooth Profile



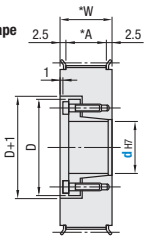
Tooth groove dimensions slightly change according to No. of teeth.
(Pitch: 8.0 mm)

Pulley Shape

E Shape



F Shape



*For quantity and size of tightening screws with Flange attached, refer to **P.1388**.

- The shaft bore may not have surface treatment.
- Two types of bushings are available: Standard Type (ST Bushings) and Short Type (SH Bushings). Refer to **P.1388**.
- Cut Flange for 72 toothed pulleys.

Part Number			Pulley Shape	d_{H7} Range (Select Shaft Bore Dia. from Table 1)								P.D.	O.D.	F	E
				E Shape				F Shape							
Type	Teeth	Type, Nom. Width		S8M150	S8M250	S8M300	S8M400	S8M150	S8M250	S8M300	S8M400				
				ST Bushing	ST Bushing	ST Bushing	ST Bushing	SH Bushing	ST Bushing 12–30 SH Bushing 32 35	ST Bushing15–32 SH Bushing 35	ST Bushing				
HTLA HTLK HTPL HTLG	18	S8M150 *A: 17 *W: 22	E	12	12	—	—	—	12	—	—	45.84	44.46	52	36
	19			12 14 15	12 14 15	15	—	12	12 14 15	15	—	48.38	47.01	55	40
	20			12 14–17	12 14–17	15–17	—	12	12 14 15	15	—	50.93	49.56	58	
	21			12 14–17	12 14–17	15–17	16 17	12	12 14–17	15–17	16 17	53.48	52.10	61	45
	22											56.02	54.65		
	24											61.12	59.74	67	50
	25			12 14–20 22 24 25		15–20 22 24 25	16–20 22 24 25	12	12 14–20 22 24 25	15–20 22 24 25	16–20 22 24 25	63.66	62.29	70	56
	26	S8M250 *A: 28 *W: 33		14–20 22 24 25	14–20 22 24 25	15–20 22 24 25	16–20 22 24 25	—	14–20 22 24 25	15–20 22 24 25	16–20 22 24 25	66.21	64.84	74	58
	28											71.30	69.93	80	60
	30			14–20 22 24 25 28 30 32	14–20 22 24 25 28 30 32	15–20 22 24 25 28 30 32	16–20 22 24 25 28 30 32	—	14–20 22 24 25 28 30 32	15–20 22 24 25 28 30 32	16–20 22 24 25 28 30 32	76.39	75.02	87	67
	32											81.49	80.12		
	34	S8M300 *A: 33 *W: 38	F	16–20 22 24 25 28 30 32 35				—	16–20 22 24 25 28 30 32 35	16–20 22 24 25 28 30 32 35	16–20 22 24 25 28 30 32 35	86.58	85.21	95	75
	36			16–20 22 24 25 28 30 32 35 38							16–20 22 24 25 28 30 32 35 38	91.67	90.30	99	80
	38			16–20 22 24 25 28 30 32 35 38 40 42							16–20 22 24 25 28 30 32 35 38 40 42	96.77	95.39	104	84
	40	S8M400 *A: 44 *W: 49		20 22 24 25 28 30 32 35 38 40 42				—	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35 38 40 42	101.86	100.49	111	90
	44											112.05	110.67	119	100
	48											122.23	120.86	127	105
	50			20 22 24 25 28 30 32 35 38 40 42 45 48 50				—	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35	20 22 24 25 28 30 32 35 38 40 42	127.32	125.95	135	115
	60											152.79	151.42	160	140
	72			20 22 24 25 28 30 32 35 38 40 42 45 48 50				—	20 22 24 25 28 30 32 35		20 212 24 25 28 30 32 35 38 40 42 45 48 5	183.35	181.97	190	170

- For "F" shape of S8M250, ST bushing is applicable to shaft bore diameter of 12–30 and SH bushing is applicable to 32 and 35.
- For "F" shape of S8M300, ST bushing is applicable to shaft bore diameter of 15–32 and SH bushing is applicable to 35.

Teeth	Available Types															
	HTLA (x1.0) HTLK (x1.1)								HTPL (x1.0) HTLG (x1.1)							
	S8M150		S8M250		S8M300		S8M400		S8M150		S8M250		S8M300		S8M400	
	E Shape	F Shape	E Shape	F Shape	E Shape	F Shape	E Shape	F Shape	E Shape	F Shape	E Shape	F Shape	E Shape	F Shape	E Shape	F Shape
18	•	—	•	•	—	—	—	—	•	—	•	•	—	—	—	—
19	•	•	•	•	•	•	—	—	•	•	•	•	•	•	—	—
20	•	•	•	•	•	•	—	—	•	•	•	•	•	•	—	—
21	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
22	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
24	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
26	•	—	•	•	•	•	•	•	•	—	•	•	•	•	•	•
28	•		•	•	•	•	•	•	•		•	•	•	•	•	•
30	•		•	•	•	•	•	•	•		•	•	•	•	•	•
32	•		•	•	•	•	•	•	•		•	•	•	•	•	•
34	•		•	•	•	•	•	•	•		•	•	•	•	•	•
36	•		•	•	•	•	•	•	•		•	•	•	•	•	•
38	•		•	•	•	•	•	•	•		•	•	•	•	•	•
40	•		•	•	•	•	•	•	•		•	•	•	•	•	•
44	•		•	•	•	•	•	•	•		•	•	•	•	•	•
48	•		•	•	•	•	•	•	•		•	•	•	•	•	•
50	•		•	•	•	•	•	•	•		•	•	•	•	•	•
60	•		•	•	•	•	•	•	•		•	•	•	•	•	•
72	•		•	•	•	•	•	•	•		•	•	•	•	•	•

Table 1: Select Shaft Bore Diameter

d_{H7}	Max. Allowable Torque Nm		D		(L)
	ST Bushing	SH Bushing	ST Bushing	SH Bushing	
12	48	23	32	31	10.5
14	73	—	35	—	12
15	78		36		
16	83		37		13
17	88		38		
18	154		43		14
19	163		45		
20	171		46		
22	186		48		
24	206		50		
25	216		52		
28	353		54		15.5
30	382		57		
32	412	163	59	58	16.5
35	451	173	63	61	
38	686	—	70	—	19
40	725		71		
42	757		74		20
45	1490		84		24.5
48	1600		87		
50	1660		89		

- Electroless nickel plated bushing decreases maximum allowable torque and allowable thrust load by 20–30%

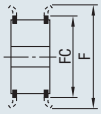
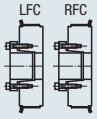
Part Number Example

Part Number	-	Pulley Shape	-	Shaft Bore Dia.
HTPL60S8M300	-	E	-	40

Part Number Alterations

Part Number	-	Pulley Shape	-	Shaft Bore Dia.	-	(BMC…etc.)
HTLA25S8M250	-	F	-	25	-	FC65

- If alterations for HTLA / HTPL ("E" shape) are specified, 5th Day Shipping will be applied for this product.

Alterations	Flange Cut	Flange Not Swaged	Flange Swaged on One Side	Surface Treatment
Code	FC	NFC	RFC / LFC	BMC / BMR
Spec.	Lowers flange by cutting. FC: 0.5 mm Increment No surface treatment applied on flange circumference.  FC≥(O.D.)+2 FC≤F-2 **Ordering Code:** FC35	Flange is not Installed. (Flange included) 	Flange installed on the hub side (LFC) or the opposite side (RFC) only prior to shipping. 	Applies electroless nickel plating on a bushing. (Anti-rusting treatment applied to screws). Electroless nickel plated bushing decreases allowable torque by 20–30%. BMC: Non-RoHS-compliant (Screw: Dacrotized treatment applied 4137 Alloy Steel) BMR: RoHS-compliant (Screw: GeoMet coating applied 4137 Alloy Steel)