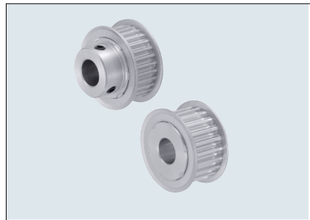
High Torque Timing Pulleys

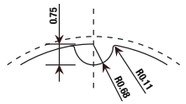
2 mm PowerGrip® Type



Type	Part Number 6 mm MR2060	Part Number 9 mm MR2090	Material ① Pulley	Material ① Flange	Surface Treatment	Attachment Set Screws ①
GPA	•	•	Aluminum Alloy	Aluminum Alloy	Clear Anodize	Stainless Steel
GPB	•	•			Black Anodize	
GPK	•	•			Hard Clear Anodize*	
GPT	•	•	1045 Carbon Steel or Equivalent	Low Carbon Steel	—	Steel (Black Oxide)
GPM	•	•			Black Oxide	
GPP	•	•			Electroless Nickel Plating	

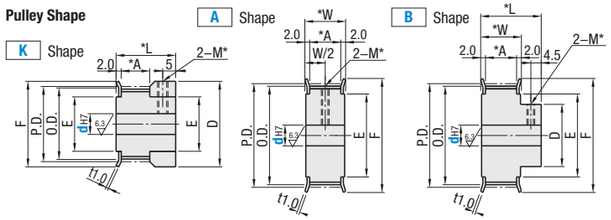
① GPP installed. Set screws are included with P, PU, N, NU & C bore hole specification.
*Hard Anodize Treatment: Film Hardness 300 HV min.

Standard Tooth Profile



Tooth groove dimensions slightly change according to No. of teeth.
(Pitch: 2.0 mm)

Pulley Shape



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

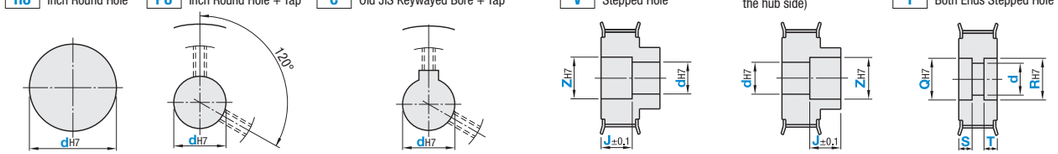
d_{H7} Shaft Bore Inner Dia.	M (Coarse)	Accessory Set Screw
3–5	M3	M3 x 3
6–24	M4	M4 x 3
25–30	M5	M5 x 4

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

Shaft Bore Specs.

① The shaft bore may not have surface treatment.

- H — Round Hole
- HU — Inch Round Hole
- P — Round Hole + Tap
- PU — Inch Round Hole + Tap
- N — New JIS Keywayed Bore + Tap
- NU — Inch New JIS Key Groove Hole + 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 and set screws.

*For A Shape pulley, the set screw hole is set at around 120° to keep away from peaks.

⊗ Not applicable to K Shape.
*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.

Part Number: Type	Teeth	Type Nominal Width	Pulley Shape	Shaft Bore Spec. (1mm Increment) H: A	H: B–K	P: A	P: B–K	N / C: A	N / C: B	HU: A	HU: B–K	PU: A	PU: B–K	NU: A	NU: B	V: d_{H7} A	V: Z_{H7} A	V: J (0.1mm Increment) A	V / F: d_{H7} B	V / F: Z_{H7} B	V / F: J (0.1mm Increment) B	Y: d A	Y: Q_{H7} / R_{H7} A	Y: S / T A	P.D.	O.D.	D	F	E
Al GPA GPB GPK	13	MR2060 *A :7.4 *W :11.4 *L :19.0	A K	3	3		3																		8.28	7.77	12	12	6
	14			3	3		3			—	—		—			—	—	—				—	—	—	8.91	8.40	12	12	6
	15			3	3		3																		9.55	9.04	12	12	6
	16			3–5	3–5		3–5			A, B	A, B		A, B			3	5	2.0≤J≤W−2.0				3	5	3–6 S+T≤W−3	10.19	9.68	14	14	8
	17			3–5	3–5		3–5			A, B	A, B		A, B			3	5					3	5		10.82	10.31	14	14	8
	18			3–5	3–5		3–5			A, B	A, B		A, B			3	5					3	5		11.46	10.95	14	14	8
	19			3–5	3–5		3–5			A, B	A, B		A, B			3	5					3	5		12.10	11.59	14	14	8
	20			3–6	3–6	—	3–6	—	—	A, B	A, B	—	A, B	—	—	3–4	5–6		—	—	—	3–4	5–6		12.73	12.22	16	16	10
	21			3–6	3–6		3–6			A, B	A, B		A, B			3–4	5–6					3–4	5–6		13.37	12.86	16	16	10
	22			3–7	3–6		3–6			A, B	A, B		A, B			3–5	5–7					3–5	5–7		14.01	13.50	18	18	11
	24			3–9	3–7		3–7			A–D	A–C		A–C			3–7	5–9					3–7	5–9		15.28	14.77	20	20	13
	25			3–9	3–7		3–7			A–D	A–C		A–C			3–7	5–9					3–7	5–9		15.92	15.41	20	20	13
	26			3–10	3–8		3–8			A–D	A–C		A–C			3–8	5–10					3–8	5–10		16.55	16.04	22	22	14
	28			3–10	3–8		3–8			A–D	A–C		A–C			3–8	5–10					3–8	5–10		17.83	17.32	22	22	14
	30			3–10	3–8		3–8			A–D	A–C		A–C			3–8	5–10					3–8	5–10		19.10	18.59	22	22	14
Fe GPT GPM GPP	32	MR2090 *A :10.4 *W :14.4 *L :23.0	A B	4–12	4–8	4–10	4–6	8		B–E	B–D	B–E	B–D	D		4–10	6–12		4–6	6–8	2.0≤J≤L−2.0	4–10	6–12		20.37	19.86	12	25	16
	34			4–12	4–10	4–10	4–8	8, 10, NK10	—	B–E	B–D	B–E	B–D	D–E		4–10	6–12		4–8	6–10		4–10	6–12		21.65	21.14	14	25	16
	36			4–14	4–10	4–10	4–8	8, 10, NK10		B–F	B–D	B–E	B–D	D–E		4–12	6–14		4–8	6–10		4–12	6–14		22.92	22.41	14	28	18
	40			4–16	4–14	4–12	4–10	8–12	8	B–G	B–E	B–E	B–E	D–E	D	4–14	6–16		4–12	6–14		4–14	6–16		25.46	24.96	18	30	20
	42			4–16	4–14	4–12	4–10	8–12	8	B–G	B–E	B–E	B–E	D–E	D	4–14	6–16		4–12	6–14		4–14	6–16		26.74	26.23	20	32	23
	44			5–19	5–16	5–15	5–12	8–13	8–11	C–G	C–G	C–F	C–E	D–F	D, E	5–17	7–19		5–14	7–16		5–17	7–19		28.01	27.50	20	32	23
	45			5–19	5–16	5–15	5–12	8–13	8–11	C–G	C–G	C–F	C–E	D–F	D, E	5–17	7–19		5–14	7–16		5–17	7–19		28.65	28.14	20	32	23
	48			5–21	5–16	5–17	5–12	8–16	8–11	C–H	C–G	C–G	C–E	D–G	D, E	5–19	7–21		5–14	7–16		5–19	7–21		30.56	30.05	20	35	25
	50			5–21	5–16	5–17	5–12	8–16	8–11	C–H	C–G	C–G	C–E	D–G	D, E	5–19	7–24		5–14	7–16		5–19	7–24		31.83	31.32	20	35	25
	56			5–21	5–16	5–17	5–12	8–16	8–11	C–H	C–G	C–G	C–E	D–G	D, E	5–19	7–24		5–14	7–16		5–19	7–24		35.65	35.14	30	44	32
	60			5–28	5–26	5–24	5–22	8–22	8–17	C–K	C–K	C–J	C–H	D–H	D–G	5–26	7–28		5–24	7–26		5–26	7–28		38.20	37.69	30	44	32
	62			5–28	5–26	5–24	5–22	8–22	8–17	C–K	C–K	C–J	C–H	D–H	D–G	5–26	7–28		5–24	7–26		5–26	7–28		39.47	38.96	30	44	32
	68			5–28	5–26	5–24	5–22	8–22	8–17	C–K	C–K	C–J	C–H	D–H	D–G	5–26	7–28		5–24	7–26		5–26	7–28		43.29	42.78	34	50	38
	72			5–34	5–30	5–30	5–26	8–26	8–20	C–L	C–K	C–K	C–K	D–J	D–H	5–32	7–34		5–28	7–30		5–32	7–34		45.84	45.33	34	50	38

① Shaft Bore Dia. 9 is not available for Shaft Bore specification N. ① Shaft Bore Dia. 4.5, 6.35 are selectable for Shaft Bore specifications H, P, V.
① Shaft Bore Dia. 8, 9, 11, 13, 14, 17, 21–26 are not available for Shaft Bore specification C. ▭ Shaft Bore Dia J-K are not available for MR2060

High Torque Timing Pulleys

2 mm PowerGrip® Type, *continued*

Part Number Example

	Part Number	-	Pulley Shape	-	Shaft Bore Spec. / Inner Dia.	-	Z	-	J	-	Q	-	R	-	S	-	T
Shaft Bore : H / HU / P / PU / N / NU / C	GPA20MR2060	-	A	-	H6												
Shaft Bore: V / F	GPA40MR2090	-	B	-	V6	-	Z10	-	J5								
Shaft Bore: Y	GPA60MR2090	-	B	-	Y8					-	Q12	-	R12	-	S3	-	T3

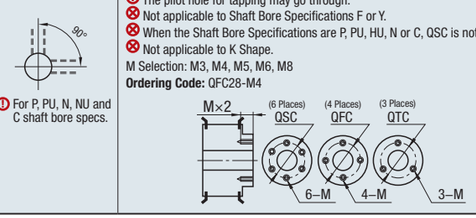
Conveying	•
Positioning	•
Power Transmision	•
High Speed	•

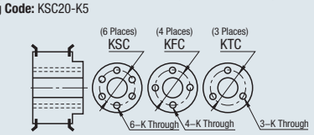
Inch Hole Specifications

No.	Nominal	Dimension (in)	No.	Nominal	Dimension (in)
A	1/8	0.125	KLA	1-1/16	1.063
B	3/16	0.188	KLB	1-1/8	1.125
C	1/4	0.250	KLC	1-3/16	1.188
D	5/16	0.313	L	1-1/4	1.250
E	3/8	0.375	LM	1-5/16	1.313
EF	7/16	0.438	M	1-3/8	1.375
F	1/2	0.500	MN	1-7/16	1.438
FG	9/16	0.563	N	1-1/2	1.500
G	5/8	0.625	P	1-5/8	1.625
GH	11/16	0.688	PQ	1-11/16	1.688
H	3/4	0.750	Q	1-3/4	1.750
HJ	13/16	0.813	QR	1-13/16	1.813
J	7/8	0.875	R	1-7/8	1.875
JK	15/16	0.938	RS	1-15/16	1.938
K	1	1.000	S	2	2.000

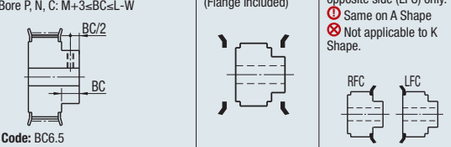
Part Number Alterations

Alterations	Set Screw Angle	Side Tapped Hole	Side Through Hole
Code	KC90	QSC / QFC / QTC	KSC / KFC / KTC
Spec.	Changes an angle of set screw to 90°. ① For A shape pulley, the set screw hole is set at around 90° to keep away from peaks. ① For P, PU, N, NU and C shaft bore specs.	Machines tapped hole on the side surface of hub side. (QSC, QFC, QTC: 0.5 mm Increment) ① Thickness required: minimum 2mm A Shape: d+M+4≤QSC(QFC / QTC)≤E-(M+4) B Shape: d+M+4≤QSC(QFC / QTC)≤D-(M+4) ① d=Z when the Shaft Bore Specifications is V. ① Specify KC90 when selecting QFC for Shaft Bore specifications P, PU, HU, N, and C. ① The pilot hole for tapping may go through. ⊗ Not applicable to Shaft Bore Specifications F or Y. ⊗ When the Shaft Bore Specifications are P, PU, HU, N or C, QSC is not applicable. ⊗ Not applicable to K Shape. M Selection: M3, M4, M5, M6, M8 **Ordering Code:** QFC28-M4	Machines through hole on the side surface of hub side. (KSC, KFC, KTC: 0.5 mm Increment) ① Thickness required: minimum 2mm A Shape: d+K+4≤KSC(KFC / KTC)≤E-(K+4) B Shape: d+K+4≤KSC(KFC / KTC)≤D-(K+4) ① d=Z when the Shaft Bore Specifications is V. ① Specify KC90 when selecting KFC for Shaft Bore Specifications P, PU, HU, N and C. ⊗ Not applicable to K Shape. ⊗ Not applicable to Shaft Bore Specifications F or Y. ⊗ When the Shaft Bore Specifications are P, PU, HU, N or C, KSC is not applicable. K (Through Hole Dia.) Selection: K4.0–K13.0 (0.5 mm Increment) **Ordering Code:** KSC20-K5





Alterations	Boss Cut	No Flange	Single Flange	Flange Cut	Tapped Hole Dimensions	Set Screw Length
Code	BC	NFC	RFC / LFC	FC	TPC	SLH
Spec.	Cuts the hub length in 0.5 mm increment. ① Shaft Bore specification: H, V, F: 3≤BC≤L-W ① Shaft Bore P, N, C: M+3≤BC≤L-W **Ordering Code:** BC6.5 ① Clear anodized products may not have surface treatment on the embossed plane. ⊗ Not available to K and A Shape.	Flange is not Installed. (Flange included)	Flange installed on the hub side (RFC) or the opposite side (LFC) only. ① Same on A Shape ⊗ Not applicable to K Shape.	Lowers flange by cutting. **FC:** 0.5 mm Increment ① No surface treatment applied on flange circumference. ① FC≥(O.D.)+2 ① FC≤F-2 **Ordering Code:** FC17	Changes the tapped hole dimension. ① Applicable to Shaft Bore specification P, N, C only. **Ordering Code:** TPC4	Changes the length of the included set screws. ① Applicable to Shaft Bore specification P, N, C only. **Ordering Code:** SLH8



M	TPC
M3	M4
M4	M3, M5
M5	M4

Set Screw	SLH
M3 x 3	6
M4 x 3	5, 8
M5 x 4	6, 10

① BC, TPC, and SLH alterations are not available for inch bores.