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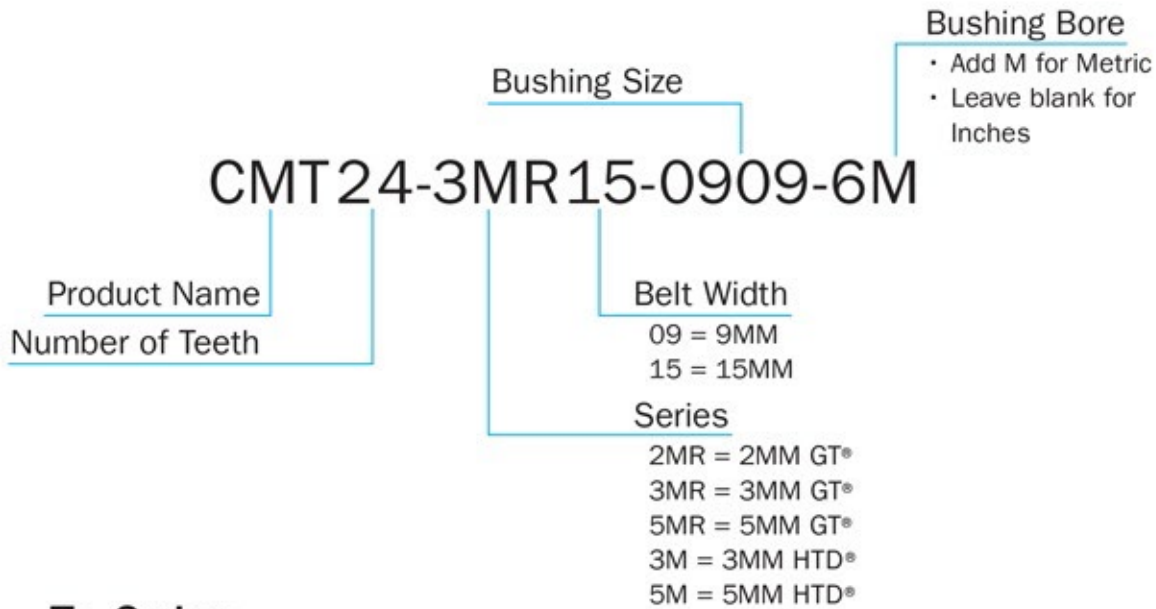
Synchronous Timing Pulleys
Featuring
Concentric Maxi Torque
Bushing System

Stock Product Catalog
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Ordering Information

Part Number Example



To Order:

1. Select part number from stock charts
2. Add desired bore size based on bushing size in part number.

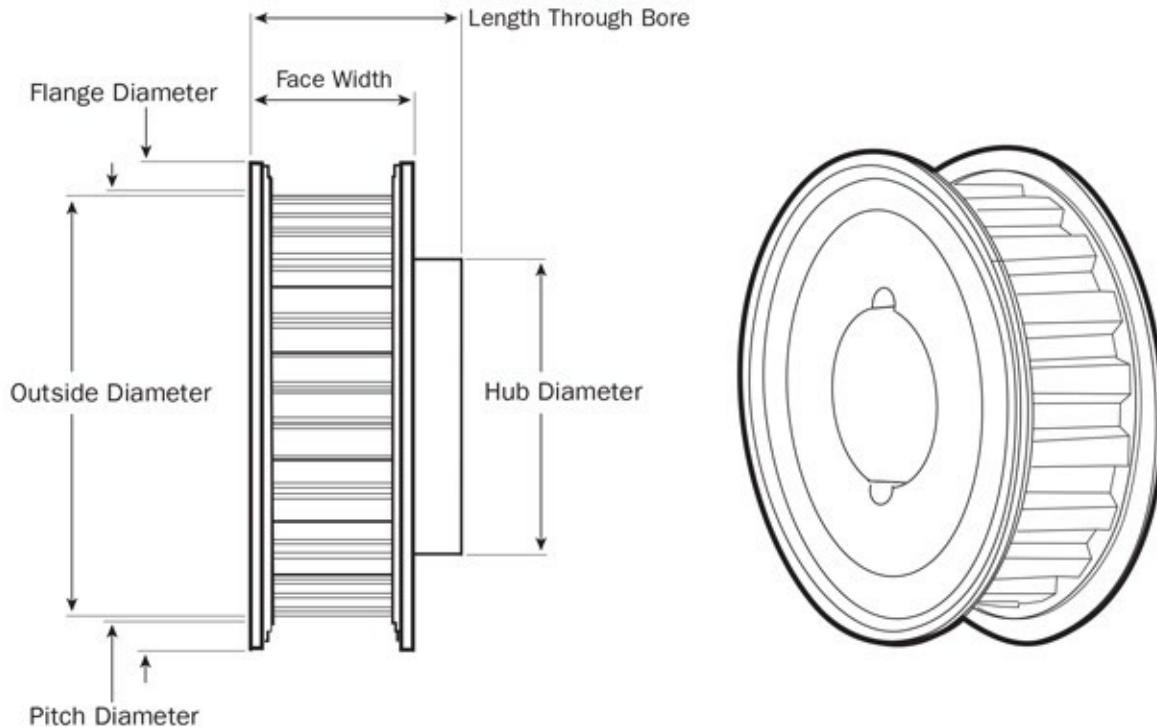
Refer to chart below for bushing bores available

*Metric bores available in whole millimeters. Inch bores available in .0625 increments to .750, .125 increments from .750 to 1.000



CMT Bushing Part Number	Bushing Bore* mm/in
0606	3-6/.125-.250
0609	3-6/.125-.250
0909	4-9/.1875-.375
0912	5-9/.1875-.375
1212	6-12/.250-.500
1216	6-12/.250-.500
1616	8-16/.3125-.625
1620	8-16/.3125-.625
2020	10-20/.4375-.750
2025	10-20/.4375-.750
2530	12-25/.500-1.000

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Style Codes:

- 3F Flanges both sides, no hub
- 3 No flanges, no hub
- 6F Flanges both sides with hub (as shown)
- 6 No flanges with hub

Concentric Maxi Torque Stock Synchronous Pulley Charts

2MM GT® 2 Synchronous Pulleys

9mm (.354 in) Wide Belts (2MR-09) - .530 Face Width

CMT Part Number	No. of Grooves	Style	Nominal Dimensions				
			Pitch Diameter	Outside Diameter	Flange O.D.	Length thru Bore	Hub Diameter
CMT26-2MR09-0606	26	3F	0.652	0.632	0.840	0.530	
CMT28-2MR09-0609	28	3F	0.702	0.682	0.895	0.530	
CMT30-2MR09-0609	30	3F	0.752	0.732	0.945	0.530	
CMT32-2MR09-0609	32	3F	0.802	0.782	1.000	0.530	
CMT36-2MR09-0909	36	3F	0.902	0.882	1.105	0.530	
CMT40-2MR09-0912	40	3F	1.003	0.983	1.210	0.530	
CMT45-2MR09-1212	45	3F	1.128	1.108	1.340	0.530	
CMT50-2MR09-1212	50	3F	1.253	1.233	1.470	0.530	
CMT56-2MR09-1616	56	6	1.404	1.384		0.655	1.10
CMT62-2MR09-1616	62	6	1.554	1.534		0.655	1.10
CMT68-2MR09-1616	68	6	1.704	1.684		0.655	1.10
CMT74-2MR09-1616	74	6	1.855	1.835		0.655	1.10
CMT80-2MR09-1616	80	6	2.005	1.985		0.655	1.10

3MM GT® 2 Synchronous Pulleys**15mm (.591 in) Wide Belts (3MR-15) - .780 Face Width**

CMT Part Number	No. of Grooves	Style	Nominal Dimensions				
			Pitch Diameter	Outside Diameter	Flange O.D.	Length thru Bore	Hub Diameter
CMT19-3MR15-0606	19	3F	0.714	0.684	0.827	0.780	
CMT20-3MR15-0609	20	3F	0.752	0.722	0.895	0.780	
CMT21-3MR15-0609	21	3F	0.790	0.760	0.895	0.780	
CMT22-3MR15-0609	22	3F	0.827	0.797	0.945	0.780	
CMT24-3MR15-0909	24	3F	0.902	0.872	1.025	0.780	
CMT26-3MR15-0912	26	3F	0.977	0.947	1.105	0.780	
CMT28-3MR15-0912	28	3F	1.053	1.023	1.173	0.780	
CMT30-3MR15-0912	30	3F	1.128	1.098	1.250	0.780	
CMT32-3MR15-0912	32	3F	1.203	1.173	1.323	0.780	
CMT34-3MR15-0912	34	3F	1.278	1.248	1.398	0.780	
CMT36-3MR15-0912	36	3F	1.353	1.323	1.478	0.780	
CMT38-3MR15-0912	38	3F	1.429	1.399	1.549	0.780	
CMT40-3MR15-1616	40	3F	1.504	1.474	1.625	0.780	
CMT45-3MR15-1616	45	3F	1.692	1.662	1.775	0.780	
CMT50-3MR15-1616	50	3	1.880	1.850		0.780	
CMT56-3MR15-1616	56	3	2.105	2.075		0.780	
CMT62-3MR15-2020	62	6	2.331	2.301		0.827	1.63
CMT68-3MR15-2020	68	6	2.557	2.527		0.827	1.63
CMT74-3MR15-2020	74	6	2.782	2.752		0.827	1.75
CMT80-3MR15-2020	80	6	3.008	2.978		0.827	2.00

5MM GT® 2 Synchronous Pulleys**15mm (.591 in) Wide Belts (5MR-15) - .83 Face Width**

CMT Part Number	No. of Grooves	Style	Nominal Dimensions				
			Pitch Diameter	Outside Diameter	Flange O.D.	Length thru Bore	Hub Diameter
CMT18-5MR15-1212	18	3F	1.128	1.083	1.250	0.83	
CMT19-5MR15-1216	19	3F	1.191	1.146	1.315	0.83	
CMT20-5MR15-1216	20	3F	1.253	1.208	1.437	0.83	
CMT21-5MR15-1216	21	3F	1.316	1.271	1.437	0.83	
CMT22-5MR15-1216	22	3F	1.379	1.334	1.500	0.83	
CMT23-5MR15-1216	23	3F	1.441	1.396	1.562	0.83	
CMT24-5MR15-1620	24	3F	1.504	1.459	1.625	0.83	
CMT25-5MR15-1620	25	3F	1.566	1.521	1.687	0.83	
CMT26-5MR15-1620	26	3F	1.629	1.584	1.750	0.83	
CMT28-5MR15-1620	28	3F	1.754	1.709	1.875	0.83	
CMT30-5MR15-1620	30	3F	1.880	1.835	2.000	0.83	
CMT32-5MR15-1620	32	3F	2.005	1.960	2.125	0.83	
CMT34-5MR15-1620	34	3F	2.130	2.085	2.250	0.83	
CMT36-5MR15-2020	36	3	2.256	2.211		0.83	
CMT38-5MR15-2020	38	3	2.381	2.336		0.83	
CMT40-5MR15-2020	40	3	2.506	2.461		0.83	
CMT45-5MR15-2020	45	3	2.820	2.775		0.83	
CMT50-5MR15-2020	50	3	3.133	3.088*		0.83	
CMT56-5MR15-2020	56	3	3.509	3.464*		0.83	
CMT62-5MR15-2020	62	3	3.885	3.840*		0.83	
CMT68-5MR15-2020	68	3	4.261	4.216*		0.83	
CMT74-5MR15-2530	74	6	4.637	4.592*		1.24	3.63
CMT80-5MR15-2530	80	6	5.013	4.968*		1.24	4.00
CMT90-5MR15-2530	90	6	5.639	5.594*		1.24	4.50
CMT112-5MR15-2530	112	6	7.018	6.973*		1.24	6.00

3MM Pitch HTD® Synchronous Pulleys

9mm (.354 in) Wide Belts (3M-09) - .550 Face Width

CMT Part Number	No. of Grooves	Style	Nominal Dimensions				
			Pitch Diameter	Outside Diameter	Flange O.D.	Length thru Bore	Hub Diameter
CMT18-3M09-0606	18	3F	0.677	0.647	0.790	0.550	
CMT19-3M09-0609	19	3F	0.714	0.684	0.827	0.550	
CMT20-3M09-0609	20	3F	0.752	0.722	0.895	0.550	
CMT22-3M09-0609	22	3F	0.827	0.797	0.945	0.550	
CMT24-3M09-0909	24	3F	0.902	0.872	1.025	0.550	
CMT26-3M09-0909	26	3F	0.977	0.947	1.105	0.550	
CMT28-3M09-0909	28	3F	1.053	1.023	1.173	0.550	
CMT30-3M09-1212	30	3F	1.128	1.098	1.250	0.550	
CMT32-3M09-1212	32	3F	1.203	1.173	1.323	0.550	
CMT34-3M09-1212	34	3F	1.278	1.248	1.398	0.550	
CMT36-3M09-1212	36	3F	1.353	1.324	1.470	0.550	
CMT38-3M09-1212	38	3F	1.429	1.399	1.549	0.550	
CMT40-3M09-1212	40	3F	1.504	1.474	1.625	0.550	
CMT44-3M09-1212	44	3F	1.654	1.624	1.775	0.550	
CMT50-3M09-1616	50	6	1.880	1.850		0.700	1.25
CMT56-3M09-1616	56	6	2.105	2.075		0.700	1.25
CMT62-3M09-1616	62	6	2.331	2.301		0.700	1.25
CMT72-3M09-1616	72	6	2.707	2.677		0.700	1.63

5MM HTD® Synchronous Pulleys

15mm (.591 in) Wide Belts (5M-15) - .78 Face Width

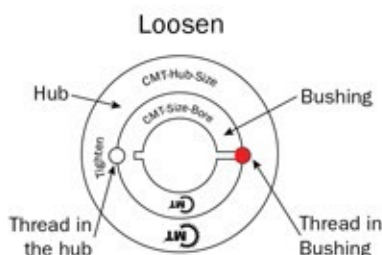
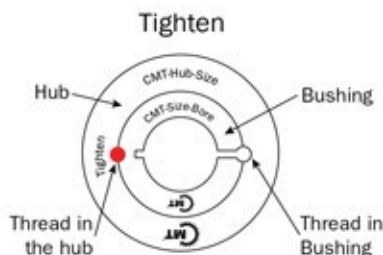
CMT Part Number	No. of Grooves	Style	Nominal Dimensions				
			Pitch Diameter	Outside Diameter	Flange O.D.	Length thru Bore	Hub Diameter
CMT14-5M15-0909	14	3F	0.877	0.832	1.000	0.78	
CMT15-5M15-0912	15	3F	0.940	0.895	1.063	0.78	
CMT16-5M15-0912	16	3F	1.003	0.958	1.080	0.78	
CMT17-5M15-0912	17	3F	1.065	1.020	1.187	0.78	
CMT18-5M15-0912	18	3F	1.128	1.083	1.250	0.78	
CMT19-5M15-1212	19	3F	1.191	1.146	1.312	0.78	
CMT20-5M15-1216	20	3F	1.253	1.208	1.437	0.78	
CMT22-5M15-1216	22	3F	1.379	1.334	1.500	0.78	
CMT24-5M15-1216	24	3F	1.504	1.459	1.625	0.78	
CMT26-5M15-1216	26	3F	1.629	1.584	1.750	0.78	
CMT28-5M15-1620	28	6F	1.754	1.709	1.875	0.82	1.25
CMT30-5M15-1620	30	6F	1.880	1.835	2.000	0.82	1.32
CMT32-5M15-1620	32	6F	2.005	1.960	2.125	0.82	1.45
CMT34-5M15-2025	34	6F	2.130	2.085	2.250	1.05	1.58
CMT36-5M15-2025	36	6	2.256	2.211		1.05	1.58
CMT38-5M15-2025	38	6	2.381	2.336		1.05	1.58
CMT40-5M15-2025	40	6	2.506	2.461		1.05	1.58
CMT44-5M15-2025	44	6	2.757	2.712		1.05	1.75
CMT50-5M15-2025	50	6	3.133	3.088*		1.05	2.25
CMT56-5M15-2025	56	6	3.509	3.464*		1.05	2.50
CMT62-5M15-2025	62	6	3.885	3.840*		1.05	2.75
CMT72-5M15-2025	72	6	4.511	4.466*		1.05	3.37

Pulleys are clear anodized

*Pulleys larger than 3 inches are not clear anodized

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Assembly Instructions



TO TIGHTEN: insert bushing in hub as shown with half threaded hole in hub aligned with half plain hole in bushing. Insert set screw and torque to recommended value.

TO LOOSEN: insert set screw in hole opposite tightening position and torque until bushing breaks free from hub.

WARNING: Before working on any machinery be sure proper lockout and tag out procedures have been followed. Failure to follow these procedures may result in serious bodily injury.

TO INSTALL

Clean shaft, bore of bushing, outside of bushing and hub bore of all oil, paint and dirt. Make sure there are no sharp edges and remove all burrs.

CAUTION: Do not lubricate any of the components during assembly. Doing so may result in less than desirable results and possible breakage of the components. All parts should slide together without lubrication.

Insert the bushing in the hub so that one half of a threaded hole lines up with one half of a non threaded hole in the mating part.

Insert the supplied set screw into the hole that has the threads on the hub component. This hole is opposite the half threaded bushing hole with the slit in it.

CAUTION: Only use the set screw that is supplied with the bushing. It has been specifically designed and machined to work in the bushing system. Failure to use the correct screw may prevent the components from being disassembled or achieving the proper holding torque.

Tighten the set screw loosely until the two components come together and then back the screw off two full turns. The bushing should be free to float in the hub but will not fall out.

Position the assembly on the shaft in its approximate final location. Tighten the set screw loosely until the bushing begins to grip the shaft. Move the component to its final axial and rotational position and finish tightening the set screw to the recommended tightening torque in the chart below to provide the drive torque.

CAUTION: The shaft must be of proper size and tolerance (h6), for the bushing bore (H7) being used. Failure to assure the proper size shaft is being used could result in component failure, reduction of holding torque, or the inability to assemble the components.

*Do not over tighten the set screw. Over tightening will not necessarily produce more torque, but it could deform the components, cause problems disassembling the components, and may cause component failure.

Recheck set screw torque after initial run in and periodically thereafter. Retighten if necessary.

TO REMOVE

Remove the set screw from the assembly hole and reinsert it in the hole opposite the assembly hole.

Continue turning the screw with a hex wrench until the bushing is pushed out of the hub thereby releasing it from the shaft. This may require torques greater than the installation torque.

WARNING: Because of the possible danger to person(s) or property from accidents which may result from the improper use of products it is important that the correct procedures be followed. Products must be used in accordance with their engineering information in the catalog. Proper installation, maintenance and operation procedures and instructions must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided. Such devices are neither provided by Custom Machine & Tool Co., Inc. nor are the responsibility of Custom Machine & Tool Co., Inc. This product must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and potential hazards involved.

Screw Size	in-lbs*	Nm*
M2.5	6.0	.68
M3	9.0	1.00
M4	19.0	2.10
M5	42.0	4.70
M6	68.0	7.70
M8	158.0	17.80

*Maximum torques

Concentric Maxi Torque - Maximum Transmission Torques (in-lbs)

S	Bushing Size	Shaft Diameter in Inches															
		.125	.188	.250	.313	.375	.438	.500	.563	.625	.688	.750	.813	.875	.938	1.000	
M2.5	0606	14	24	33													
M3	0609	16	28	37													
M3	0909		33	43	54	65											
M4	0912		68	79	98	117											
M4	1212			79	98	117	120	138									
M5	1216			138	173	207	242	345									
M5	1616				168	208	243	348	392	436							
M5	1620				389	468	530	698	752	875							
M6	2020						531	698	755	879	975	1100					
M6	2025						538	703	760	885	980	1120					
M8	2530							1115	1327	1416	1504	1593	1875	2053	2200	2347	

Note

S=Bushing set screw size.

- Refer to Assembly Instructions for screw assembly torque
- Chart torque is the maximum modeled torque before slippage under ideal conditions.
- Actual torque will vary based on operating conditions screw torque and shaft size.
- Appropriate service factors should be applied based on consideration of all operating conditions.

Service factors to be used with the above chart

- 1.0 Light starting and intermittent running
- 1.2 Light starting and steady running
- 1.5 Light starting and uneven running
- 2.0 Fairly heavy starting and steady or uneven running
- 2.5 Light or heavy starting and moderate shock running
- 3.0 Light or heavy starting and severe shock running, or reversing loads



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Synchronous Timing Pulleys Featuring
The **Concentric Maxi Torque Bushing System**
CMT's Patented Keyless Hub to Shaft Connection System

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CMT's product offering contains all popular timing pulley tooth designs including Trapezoidal inch and metric, AT metric, HTD® metric curvilinear, and Gates PowerGrip® GT, and Zero Backlash.



Concentric Maxi Torque

Keyless Hub-to-Shaft
Connection System



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Reliable.



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Guaranteed
When You Need It.*

The Concentric Maxi Torque Bushing System has always performed as engineered.

- ▶ Superior concentricity and flexible positioning
- ▶ Twelve sizes cover bores from .125 in. (2mm) to 1.1875 in. (30mm)
- ▶ Outperforms set screws, keyways, pins, clamp collars, etc.
- ▶ Perfect for timing pulleys, gears, sprockets, pinch rollers, couplings and more...

For over 50 years, CMT has been your innovative source for custom and unique timing pulleys.

- ▶ Inch/Metric pitch pulleys and belts
- ▶ Manufactured to the latest industry standards
- ▶ Flexible deliveries to meet your requirements
- ▶ Split deliveries, Kanban, JIT, etc.

CMT offers the best quality and service in the industry. Period.

- ▶ 72 hour guaranteed delivery on 5 pieces or less*
- ▶ Any pitch and number of teeth
- ▶ Matching flanges and belts also available
- ▶ Volume purchase price breaks



Manufacturers of Power Transmission
and Motion Control Components

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