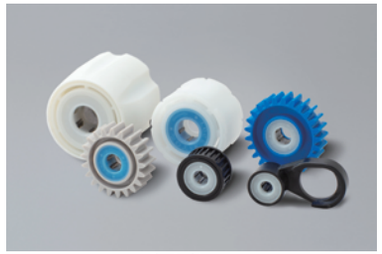
ONE-WAY CLUTCHES

TCM

RoHS compliant

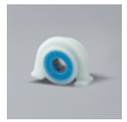
The TCM type clutches must be sold in combination with customized housings. (The clutch elements cannot be sold separately.)



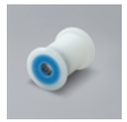
Product Image

Gear

Lever



Cam



Pulley

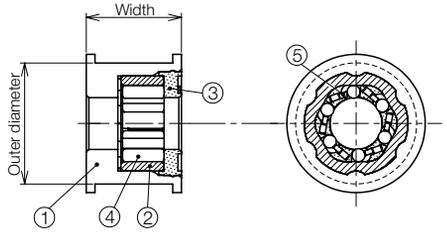
Features

- Various shapes of housings such as gears, pulleys, levers, cams, etc. can be manufactured.
- Shafts with wide tolerances can be used, which can be expected to reduce the cost of shafts.
- No clutch disengagement over time due to snap-fit fixation of housing and clutch.
- Locking direction can be identified by the color of the retainer.
- Maintenance-free products that do not require additional lubrication.
- Custom torque limiters with one-way clutches can also be manufactured.

Standard specifications

Application Shaft [mm]	Allowable Torque	Free Torque [N·m] (lbf·in)	Backlash [mN·m] (lbf·in)	Locking Direction [°] (Shaft fixed)	Model No.
Φ3 $^{0}_{-0.025}$	0.08 (0.71)	2.94≧ (0.026)≧	5.0≧	CCW	TCM-310-B
				CW	TCM-310-RB
Φ4 $^{0}_{-0.03}$	0.18 (1.59)	2.94≧ (0.026)≧	2.5≧	CCW	TCM-412-6-B
				CW	TCM-412-6-RB
Φ5 $^{0}_{-0.03}$	0.29 (2.57)	2.94≧ (0.026)≧		CCW	TCM-513-B
Φ6 $^{0}_{-0.03}$	0.34 (3.01)	3.92≧ (0.035)≧		CCW	TCM-613-B-No.14
				CW	TCM-613-RB-No.14
	0.49 (4.34)	2.94≧ (0.026)≧		CCW	TCM-614-AB
				CW	TCM-614-ARB
	0.59 (5.22)	2.94≧ (0.026)≧		CCW	TCM-616-AB
				CW	TCM-616-ARB
Φ6.35 $^{0}_{-0.03}$	0.59 (5.22)	2.94≧ (0.026)≧		CCW	TCM-6.35-B
				CW	TCM-6.35-RB
Φ8 $^{0}_{-0.036}$	0.64 (5.66)	2.94≧ (0.026)≧		CCW	TCM-816-AB
				CW	TCM-816-ARB
	0.78 (6.90)	2.94≧ (0.026)≧		CCW	TCM-818-AB
				CW	TCM-818-ARB
Φ10 $^{0}_{-0.036}$	0.98 (8.67)	2.94≧ (0.026)≧		CCW	TCM-1022-AB
				CW	TCM-1022-ARB

Components



Components and materials

①Housing	Plastic (POM) /recommendation
②Outer sleeve	Iron-based sintering
③Retainer	Plastic (POM)
④Needle	Bearing steel
⑤Spring	Stainless steel

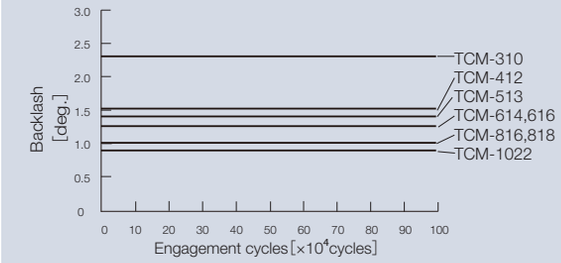
TOK, Inc.
1-17-12, Azusawa, Itabashi, Tokyo, 174-8501, Japan
Tel +81-3-3969-1584 Web tok-inc.com/en

Housing design

Inner Diameter [mm]	Outer Diameter [mm]	Width [mm]	Model No.
Φ3 $^{+0.08}_{+0.02}$	Φ10≦	8≦	TCM-310-B
			TCM-310-RB
Φ4 $^{+0.08}_{+0.02}$	Φ12≦	8.5≦	TCM-412-6-B
			TCM-412-6-RB
Φ5 $^{+0.08}_{+0.02}$	Φ13≦	8.5≦	TCM-513-B
Φ6 $^{+0.08}_{+0.02}$	Φ13≦	8≦	TCM-613-B-No.14
			TCM-613-RB-No.14
	Φ14≦	8.5≦	TCM-614-AB
			TCM-614-ARB
	Φ16≦	8.5≦	TCM-616-AB
			TCM-616-ARB
Φ6.35 $^{+0.08}_{+0.02}$	Φ15≦	10≦	TCM-6.35-B
			TCM-6.35-RB
Φ8 $^{+0.08}_{+0.02}$	Φ16≦	8.5≦	TCM-816-AB
			TCM-816-ARB
	Φ18≦	8.5≦	TCM-818-AB
			TCM-818-ARB
Φ10 $^{+0.08}_{+0.02}$	Φ22≦	8.5≦	TCM-1022-AB
			TCM-1022-ARB

Product specifications

Durability



Engagement cycles：240 times / min
Oscillation angle：30°
Radial load：9.8N (1kgf)
Shaft material：Carbon tool steel
Shaft tolerance ：Same as the application shaft
Surface hardness：700Hv $^{0.1}$ or more

Operation temperature

0 -60℃ (32-140℉)

Recommended shaft

Material	Bearing steel・stainless steel・carbon tool steel
Surface hardness	600～800Hv $^{0.1}$ Effective hardening layer 0.1㎜or more Plating deprecated
Shaft Diameter	Refer to the standard specifications

Recommended shaft specifications are published on the web.