Pioneers In Torque Control Machines

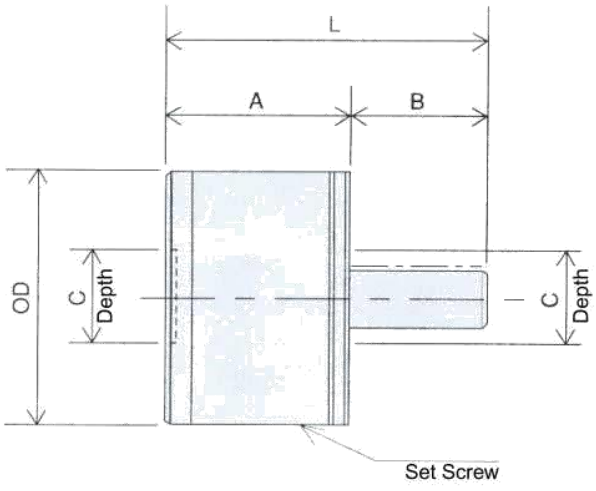
PERMA-TORK

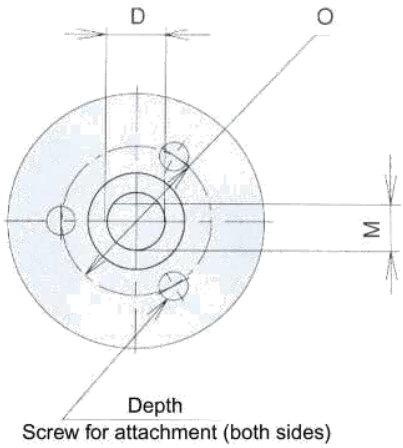
Characteristics of PERMA TORK

Non-Contact Structure	✓ Due to non presence of abrasive elements, perma tork enjoys long life ✓ Parts replacement is un-necessary. Resulting in low cost ✓ Replication performance is enhanced
No need for External Power:	✓ Safety is enhanced (explosion-protection) ✓ Plumbing / Wiring not required ✓ No running cost ✓ No effect of power or voltage fluctuation
Stable torque attainable at all the time:	✓ Reduction in hours to maintain or manage torque ✓ Irrespective of rotation slip, provides a stable torque (hysterias type) ✓ Provides a torque proportional to the rotation slip (eddy current type)
Easy to set the torque and repetitive excellence:	✓ Motor is not required ✓ Adjustments are incredibly easy to make ✓ Enhances productivity
Compact in size, making the installation very simple:	✓ Installation cost is cheap ✓ Saving of space ✓ Can be used irrespective of the rotation direction

PERMA-TORK

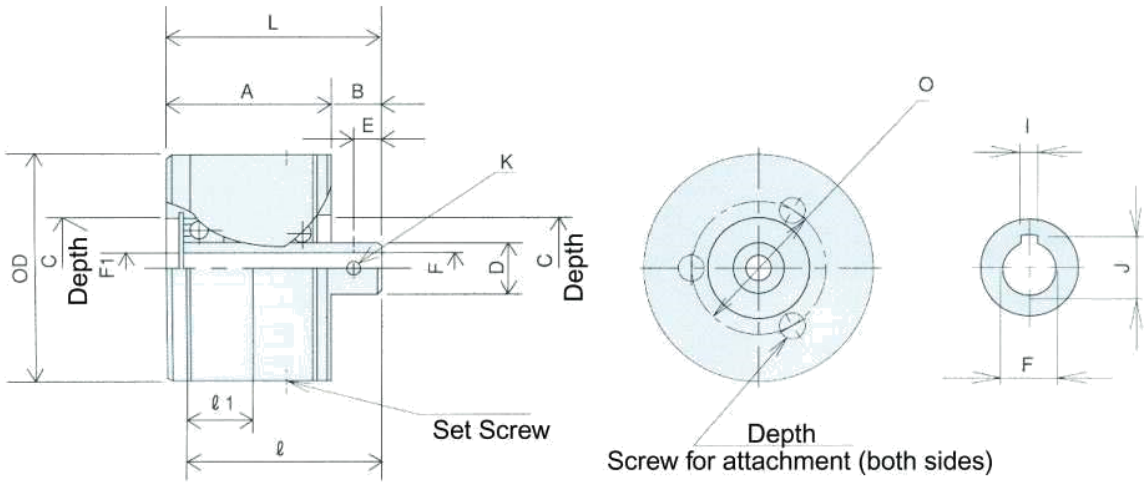
Dimension Diagram





Model Type		HC002-1	HC01-1	HC05-1
Torque Range	N.m (gf.cm)	0.0005~0.002 (5~20)	0.001~0.008 (10~80)	0.003~0.05 (30~500)
Max No of slip rotations rpm		3600	3600	(3600)
Direction of Length	A	21	21	25.5
	B	14	14	19.5
	L	35	35	45
Frame	D^{h7}	5	5	8
	M	4.5	4.5	7.7
OD		26	26	36
Attachment Part	C^{H7}	10	10	14
	S	1	1	2
	G	M3	M3	M3
	P	4.5	4.5	5.5
	O	15.5	15.5	24
T		M3	M3	M3
Inertia GD^2kgf.cm	Shaft	0.010	0.010	0.068
	Body	0.089	0.093	0.86
Weight	kg	0.06	0.06	0.15

Dimension Diagram



Model Type		HC2-25J	HC2-2J	HC3-3J	HC4-4J
Torque Range	N.m (gf.cm)	0.01 ~ 0.18 (0.1~1.8)	0.01 ~ 0.18 (0.1~1.8)	0.03 ~ 0.45 (0.3~4.5)	0.06 ~ 1.3 (0.6~13)
Max No of slip rotations rpm		(1800)	(1800)	(1800)	(1800)
Direction of Length	A	34.4	34.4	46	51.0
	B	6.3	8	8	6.2
	L	40.7	42.4	54	57.2
	E	2.8	4	4	3.5
Frame	D^{h7}	9.52	10	15	25
	$F^{H7}XI$	6.35 x 38.1	6 x 38.1	10 x 50	16 x 54
	F1 XI_1	6.9 x 12.7	---	---	---
	JXI	---	---	11.4 x 3	18.3 x 5
	K	ϕ2.5	M3	2-M3	2-M4
OD		47	47	70	82
Attachment Part	C^{H7}	22.225	22	32	47
	S	2	3	3	2.5
	G	M4	M4	M4	M5
	P	8	8	9	10
	O	31.75	32	48	60.33
T		M3	M3	M4	M4
Inertia GD^2kgf.cm	Shaft	0.22	0.22	1.7	4.3
	Body	2.6	2.6	24.3	47.7
Weight	kg	0.3	0.3	0.9	1.45

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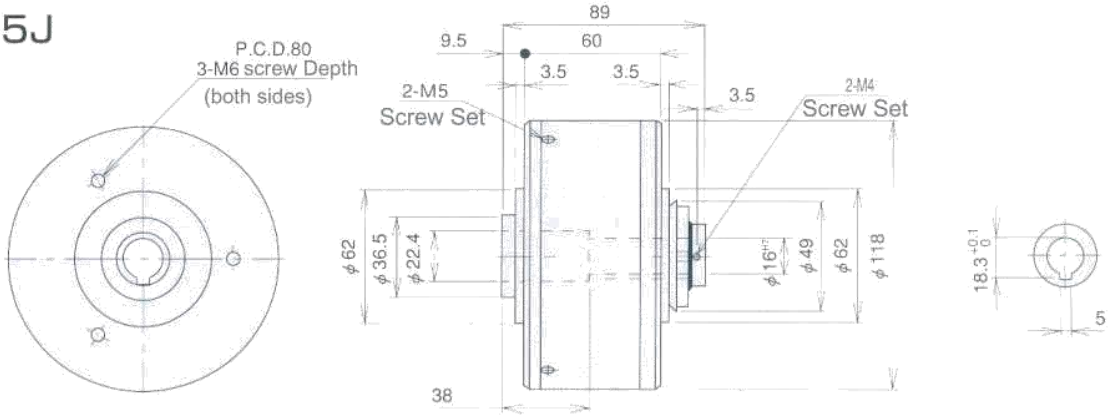
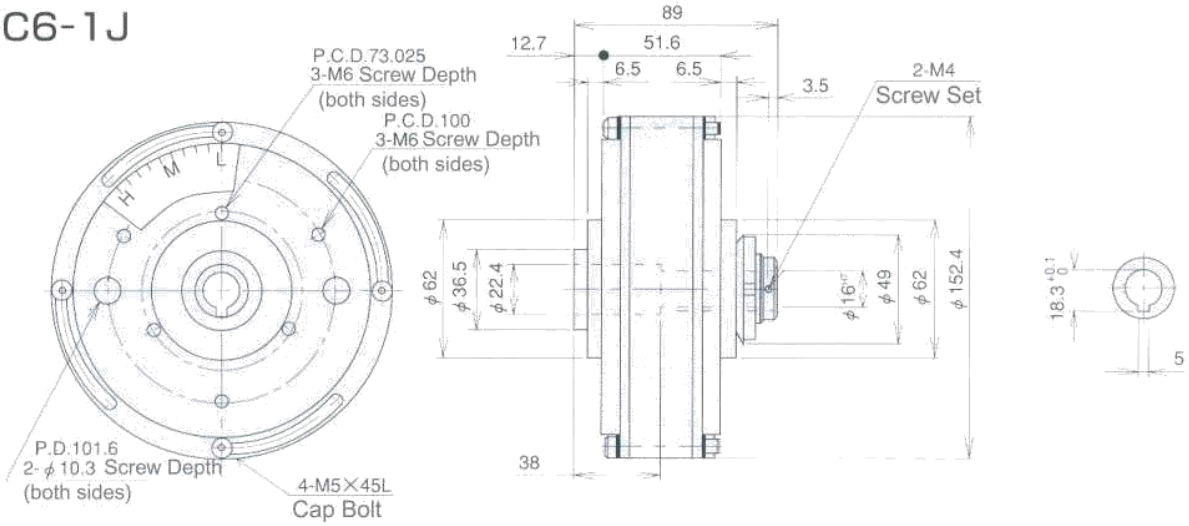
Dimension Diagram

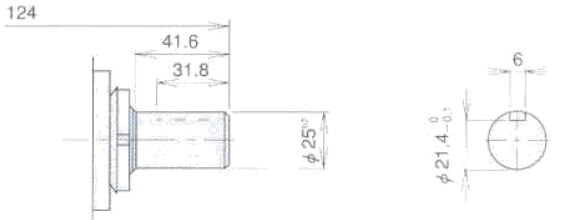
HC5-5J



HC6-1J



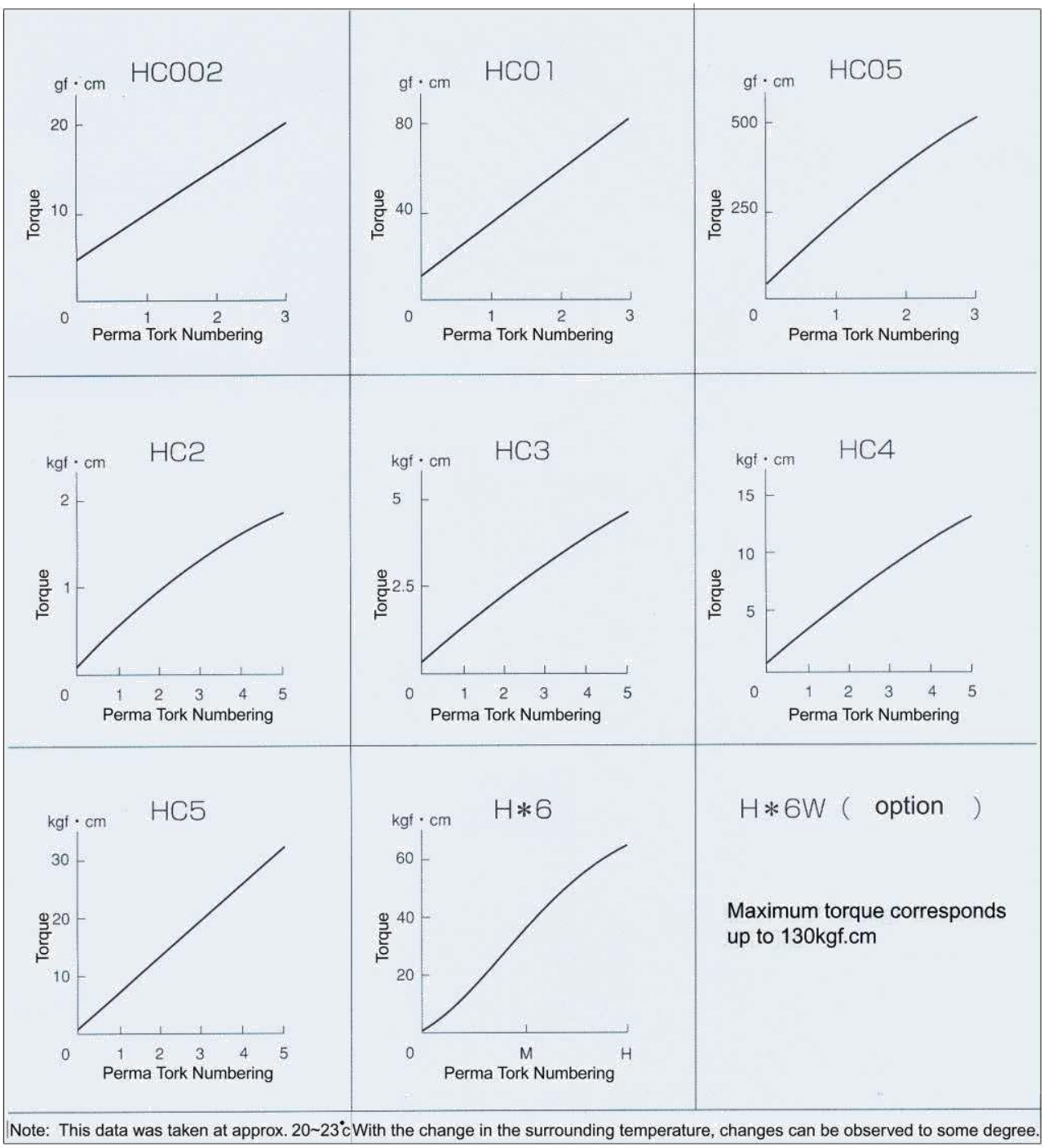
HB6-1J



Model Type		HC5-5J	HC6-1J	HB6-1J
Torque Range	N.m (gf.cm)	0.12 ~ 3.2 (1.2~32)	0.23 ~ 6.3 (2.3~63)	0.23 ~ 6.3 (2.3~63)
Max No of slip rotations rpm		(1800)	(1800)	(1800)
Inertia GD^2kgf.cm	Shaft	23	66	67
	Body	214	965	965
Weight	kg	3.6	5.9	5.9

PERMA-TORK

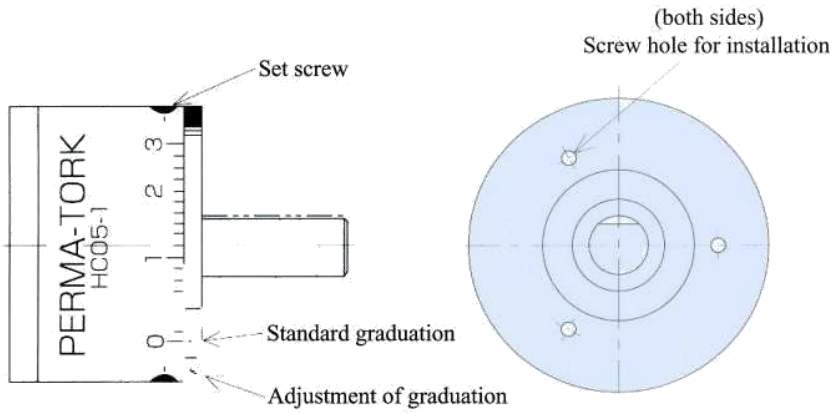
Characteristics of Graduated Torque



Note: This data was taken at approx. 20~23°c With the change in the surrounding temperature, changes can be observed to some degree.

When Using PERMA TORK

Installation & Adjustment:



< Torque Adjustment >

After bringing the graduation needle to the desired value of torque, shut close the 2 set screws. (H*6 is fixed with the help of 4 cap bolts)

< Installation >

- Don't use unnecessary force and avoid giving impact shocks
- Install by fastening the 3 screw holes on both sides. Make sure that the screw does not loosen due to vibrations.

< Handling >

- The disk and the magnet inside are fragile components. Do not drop on the floor or give shocks.
- A constant confined distance is maintained in the construction of this product. It may not work properly if unnecessary force is applied.

Cocking:

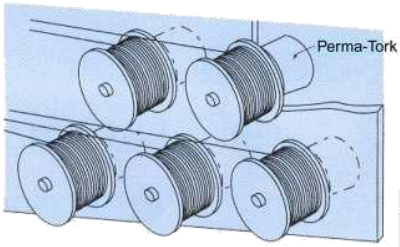
The disk receives a very strong magnetic force. So when the torque setting is changed from very high torque to very low torque, magnetic residuals on the disk result in uneven rotation. This phenomenon is known as COCKING. In order to avoid occurrence of this phenomenon, adjust the torque from high to low while rotating the output axis shaft very slowly.

PERMA-TORK

Applications (Brake)

Rear Drive-out Brake:

(Bobbin rotating type)

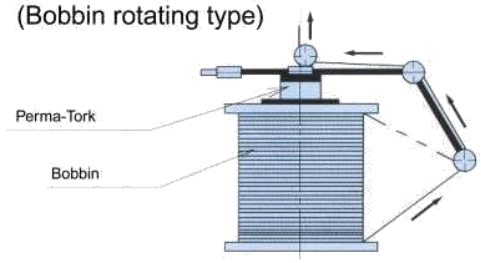


- Long Life
- Stable torque
- No monitor required
- No power required

Used as drive out brake for all kinds of wires (copper wire, steel wire, optic fiber, carbon fiber…..) and films.

Rear Drive-out Brake:

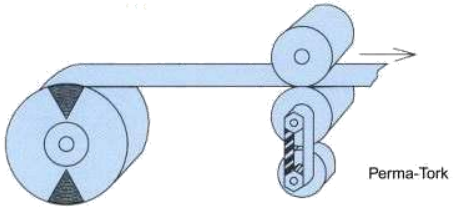
(Bobbin rotating type)



For a fixed single axis, it cannot as a brake on unwinding wire while dealing with wire

- Long Life
- Stable torque
- No monitor required
- No power required
- Simple installation

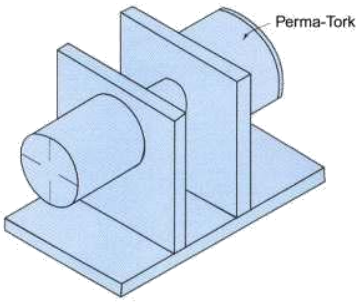
Tension Control:



Controls the tension of films and wires and is used on places other than drive out brakes.

- Long Life
- Stable tension
- Simple installation
- Less effect on the product

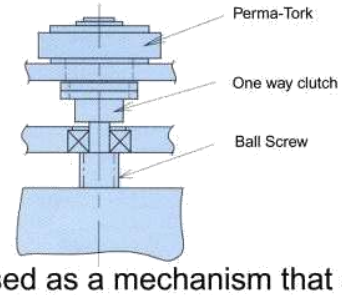
Load Test:



Perma-Tork may be used in applying a fix amount of load (torque) to the motor to test its performance and durability.

- Affordable Price
- Simple installation
- Stable torque
- Long life

Safety measures from falling off:



May be used as a mechanism that stops industrial robots from dropping off, in case there is a power failure

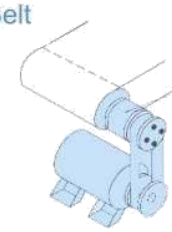
The one way clutch does idle running when ball screw drives in u per direction, and engages when driven in lower direction. At that time, braking is applied using Perma-Tork

- Affordable Price
- Simple installation
- Stable torque
- Long life

PERMA-TORK®

Applications (Clutch)

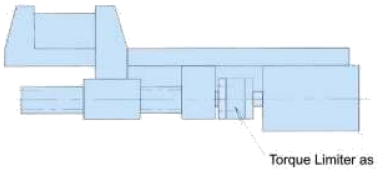
Conveyor Belt System:



- Stable torque
- Long life
- Simple installation

Torque limitor as Clutch and Brake Application

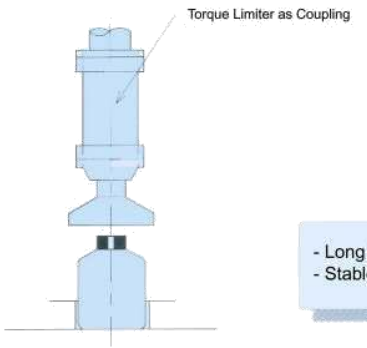
Coupling:



For holding of fragile and delicate materials like glass, copper etc. in the forma of force limitation at the coupling point.

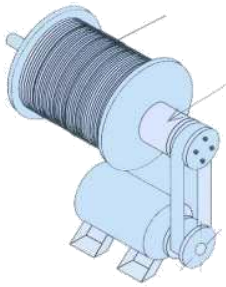
- Stable torque
- Long life
- Monitor not required

Bottling Cap Application:



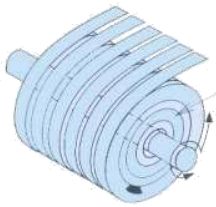
- Long Life
- Stable torque

Wire Winding:



- Stable torque
- No monitor Required
- Long Life

Line Cutter Machine:



- Long Life
- Stable torque
- No monitor required

Using Perma-Tork couplen to limit the cuttin torque power of respective line of tape, using constant Torque Limiter.

ALSTRON™

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