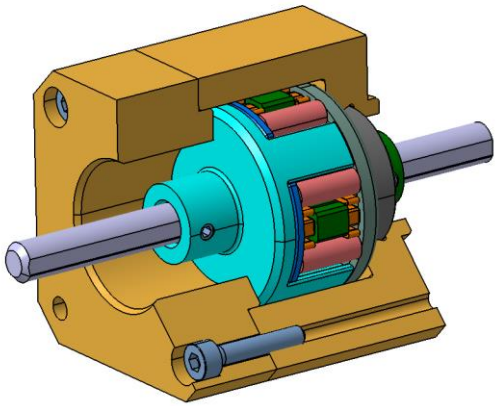
Torque Gate Clutch ™

NSK

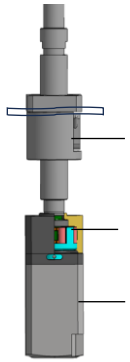
Mechanical clutch. No power, No control needed.

New Products

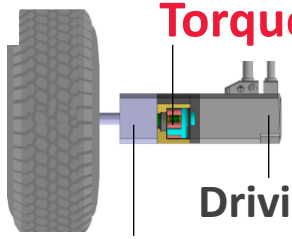
Early Prototype



Application ① :
Lifting device



Application ② :
Brake for AGV



Simplified holding mechanism

Key features

- ✓Mechanical clutch. Simple, High capacity
- ✓No control needed
- ✓Electric power-free
- ✓Small backlash engagement

Torque capacity ：0.5～10Nm
Size ：Square 42～60mm

Why NSK ?

Decades proven engineering excellence of One-Way Clutch , Now for Robotics.

Change & Go Beyond

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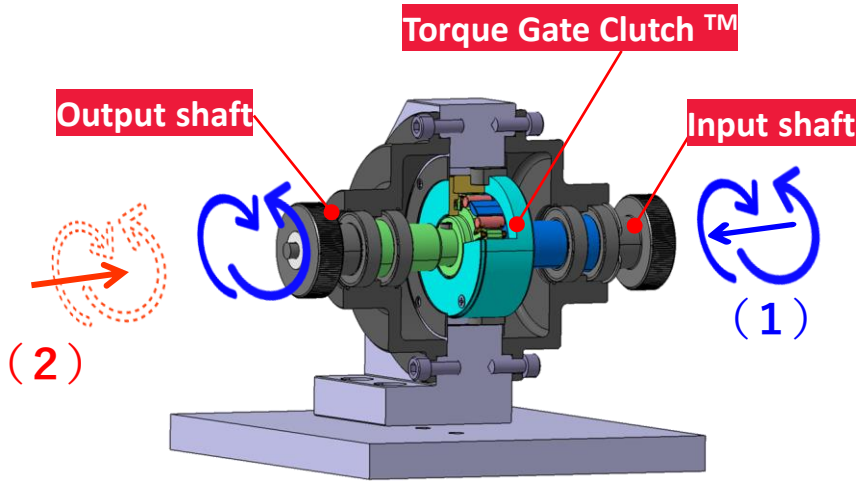
◆ Features

Function of Torque Gage Clutch：

Transmit torque from Input shaft to Output shaft. Input torque from the output side is absorbed by the Torque-Gate Clutch, keeping the shaft stationary.

①High positional accuracy	Small backlash engagement provides high positional accuracy of the shaft when reverse torque is applied.
②Easily unlockable	Proprietary mechanism enables lock release via input shaft even under torque load on the output shaft."

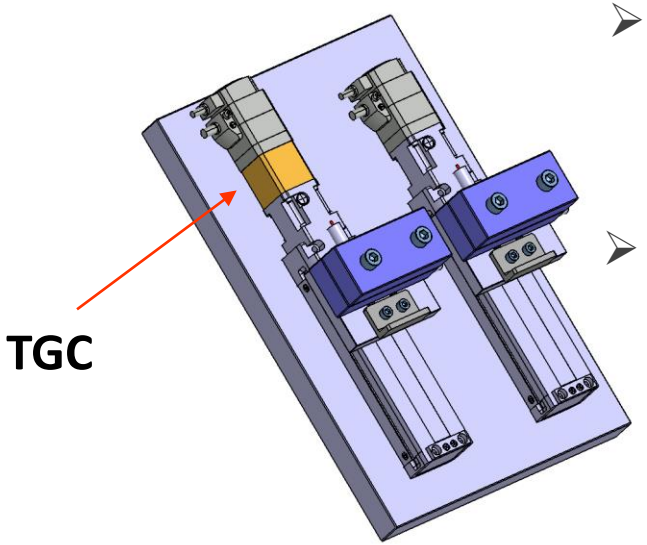
◆ Demo-1



（1） Torque flow ＜input⇒output：Rotate both side>

（2） Torque flow ＜output⇒input：lock both side＞

◆ Demo-2



- **Without TGC：**
  Without a braking mechanism, the slider is prone to sudden drop.
- **With TGC：**
  TGC retains slider position without power or external control.

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