

# Magnetic Clutches Advantages at a glance



## Precise torque limitation

- from 0,0 to 1000 Nm (synchronous clutch)
- Easy and fast adjustable torque infinitely adaptable to your requirements
  - Even for extreme high rotation speeds
  - Independent of age and operation

## Unlimited number of overload cycles

- Absolutely abrasion-free
- Rated torque level remains ever constant

## Superior hygiene requirements: no abrasion

- No working material means or external suppliances
- Also available in high-grade steel

## Superior transmission with application of hysteresis clutches

- Constant and soft slipping at torque limitation
- "Soft starts" - smooth starting moments
- The shafts to be connected can be operated with different rotation speed
- Contact-free power transmission

## High-tech torque transmission

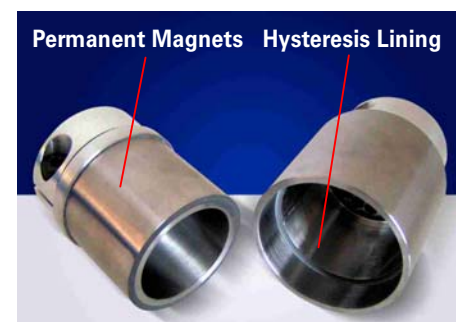
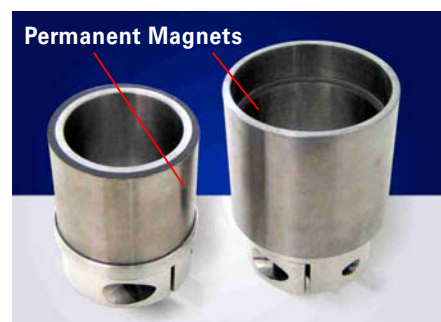
GERWAH-magnetic clutches do not transmit torques through mechanical connections like their mechanical counterparts but by using magnetic force. It has to be distinguished between synchronous- and hysteresis clutches according to the function principle in use.

## The synchronous clutch

Synchronous clutches transmit torques due to magnetic force, which is produced through periodically arranged, opposite lying permanent magnets. According to the size of the clutch torques up to 1000 Nm can be transmitted. When exceeding the rated torque level the magnetic force breaks off, the clutch slips through and now can only transmit a minor rest torque. The synchronous clutch owes its name to its nature, only able to transmit torque if a synchronous action of the connecting system is granted.

## The hysteresis clutch

At this type of clutch, one half of the clutch is coated with a hysteresis lining instead with a permanent magnet. This hysteresis material acts similar according to the permanent magnet but through the hysteresis lining poles can be changed with an extrem low power demand. In case the rated torque level of the clutch exceeds, the clutch begins to slip through. Thereby the hysteresis material takes up energy from the starting system, due to the permanent changing of poles caused by the passing by of the permanent magnets, and transforms this kinetic power into heat which is conducted away into the environment.



**Please do not hesitate to contact us if you wish further information concerning this new and trend-setting technology. We would be pleased to give you more detailed information!**

