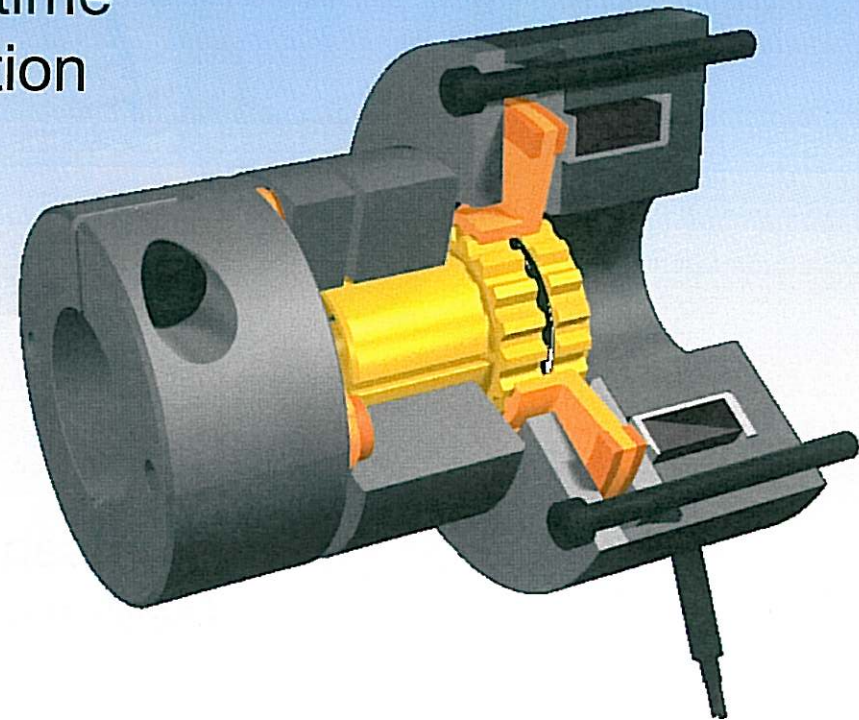
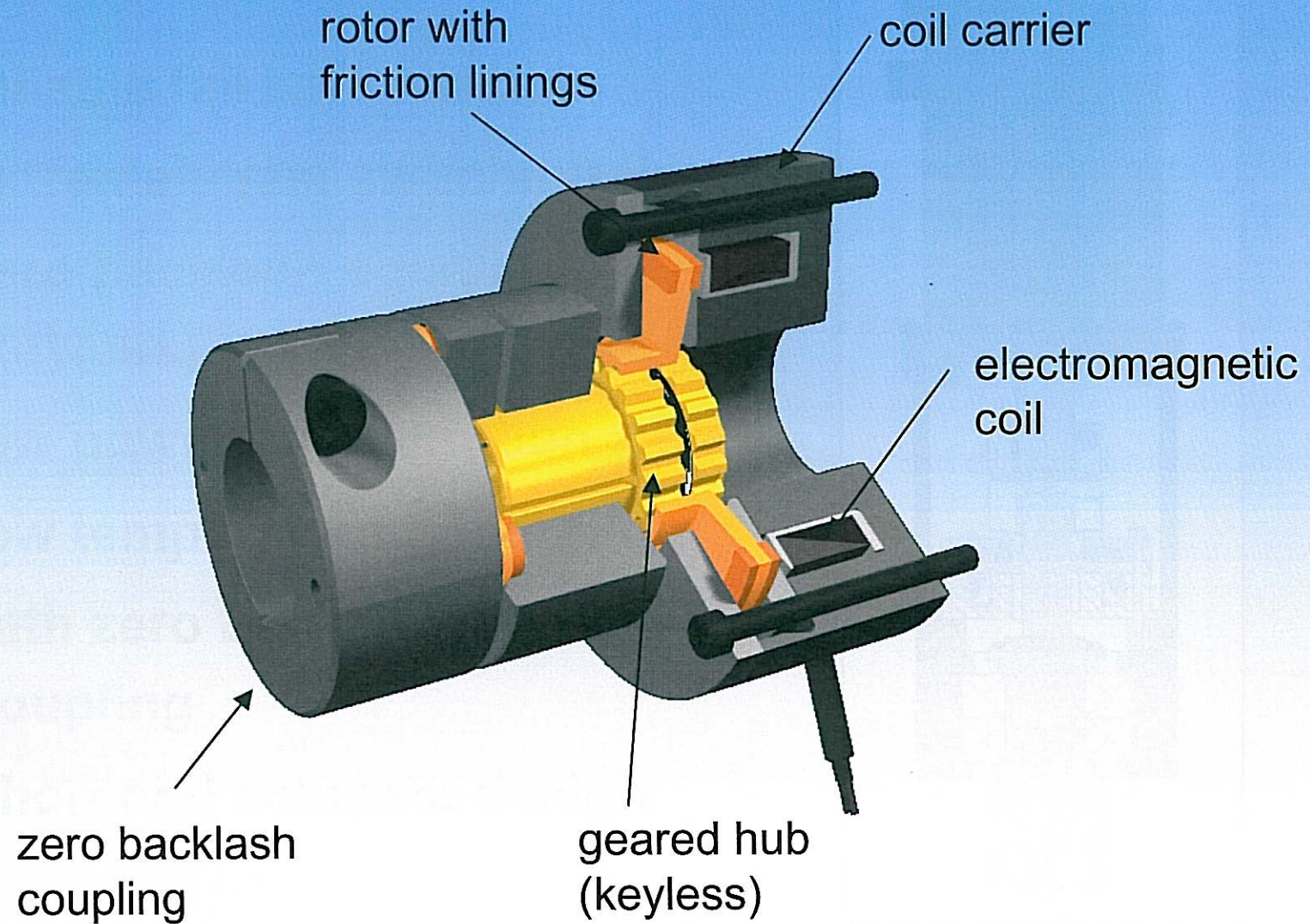


ROBA-stop Fast Acting Brake

New brake concept for
extremely fast switching time
and low power consumption

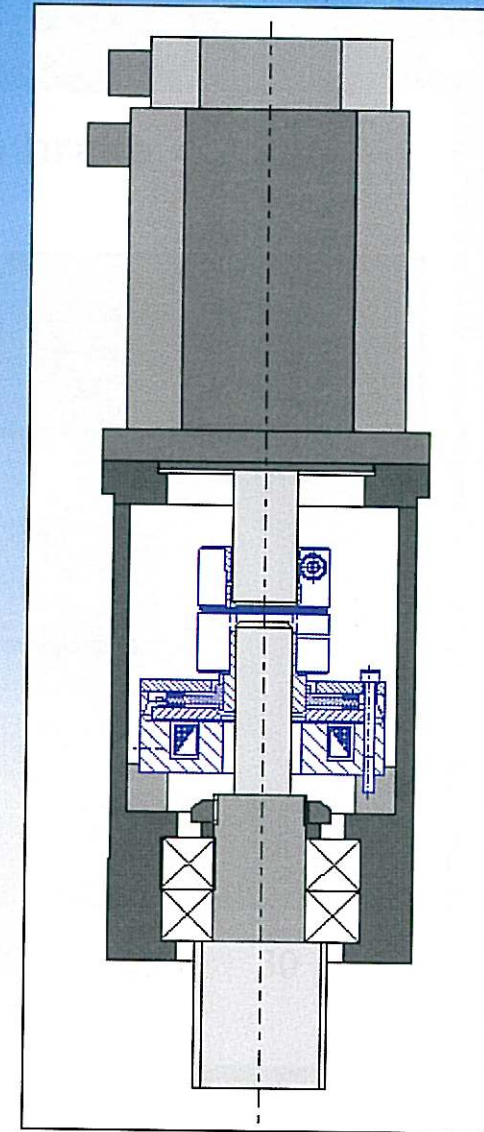


Design concept



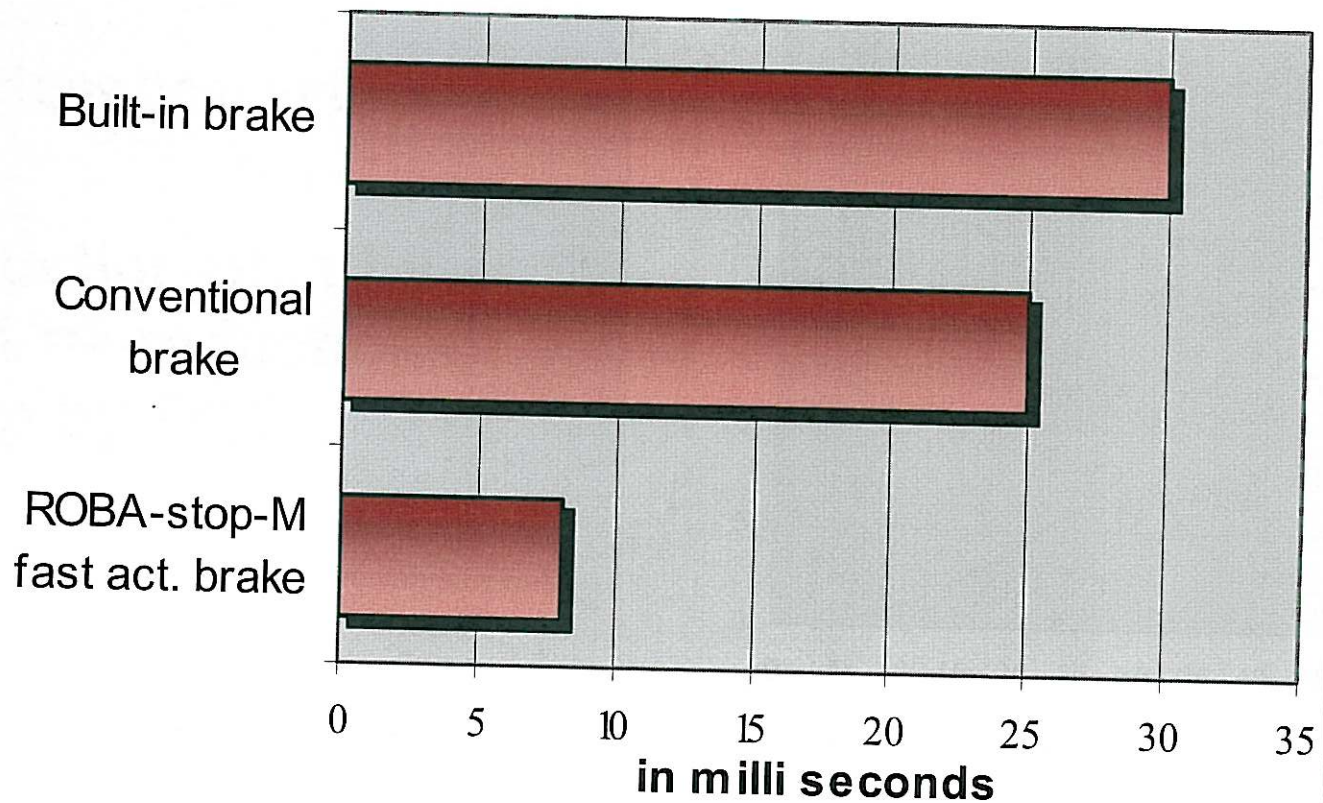
Features

- reliable fail safe function
- extremely fast switching time
- zero backlash shaft/hub (keyless)
- low power consumption
- low temperature generation
- with zero backlash servo coupling
- short and compact design



Fast switching time t1

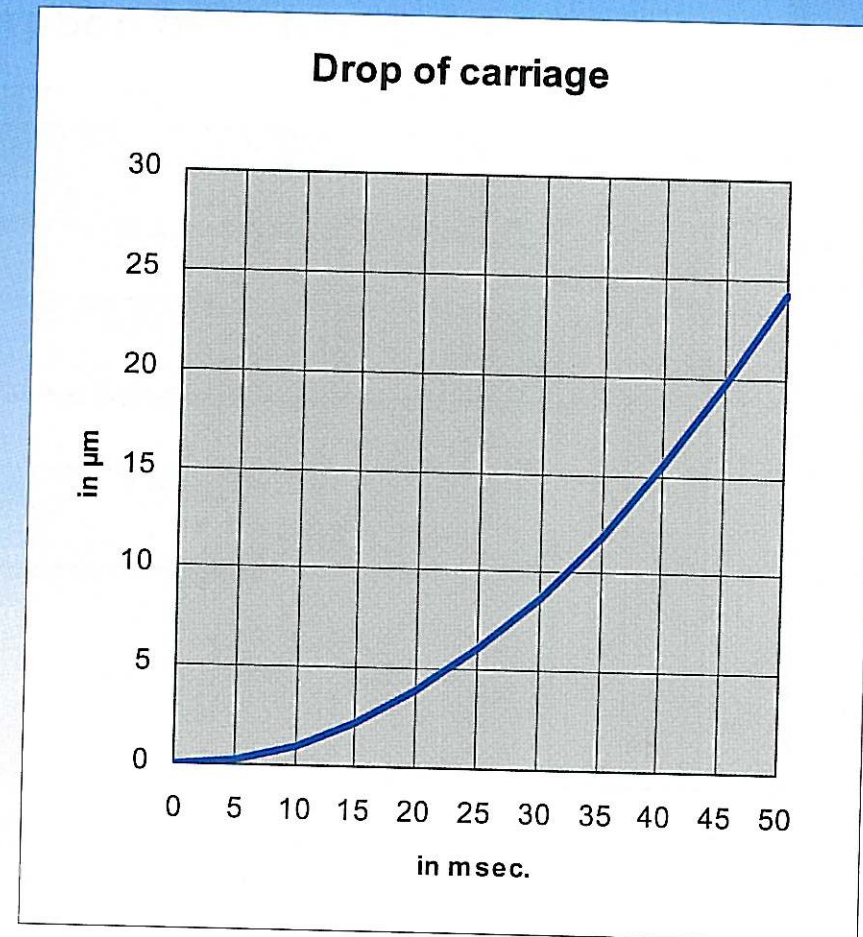
Switching time t1 for 12 Nm brake



Drop distance

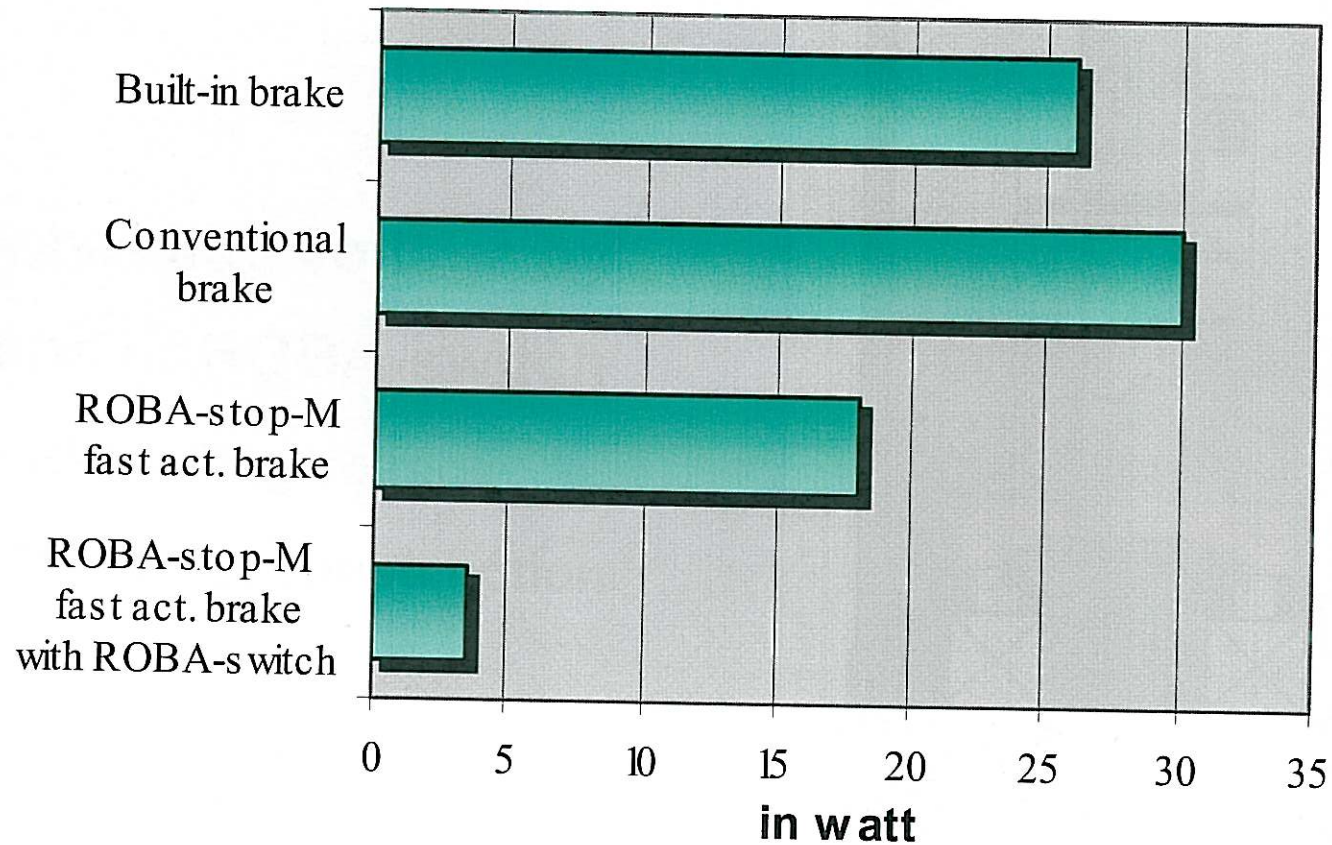
- $s \sim t_1^2$
 - s: drop dist.
 - t1: switching time
- reduction of t1 by 50% => reduction of drop by 75%

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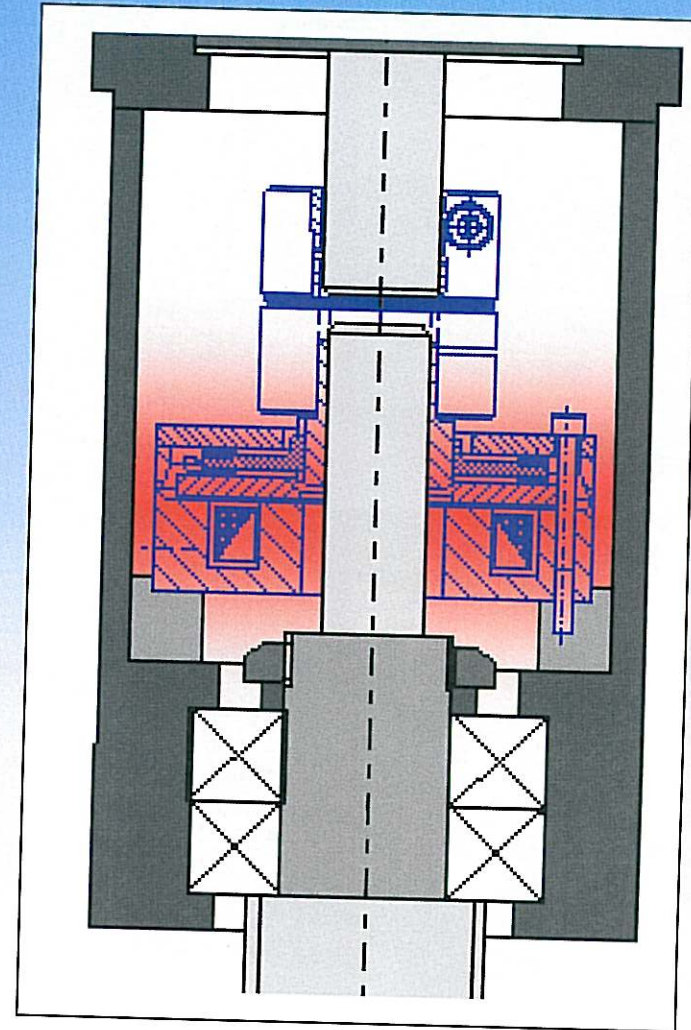
Low power consumption

Power Consumption of 12 Nm Brake



Low heat generation

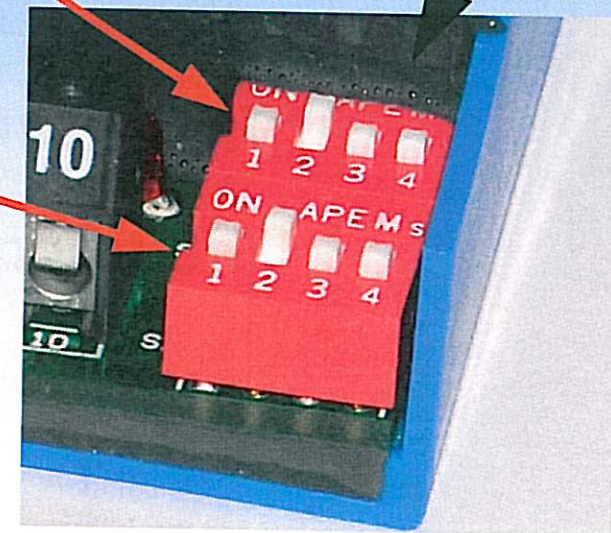
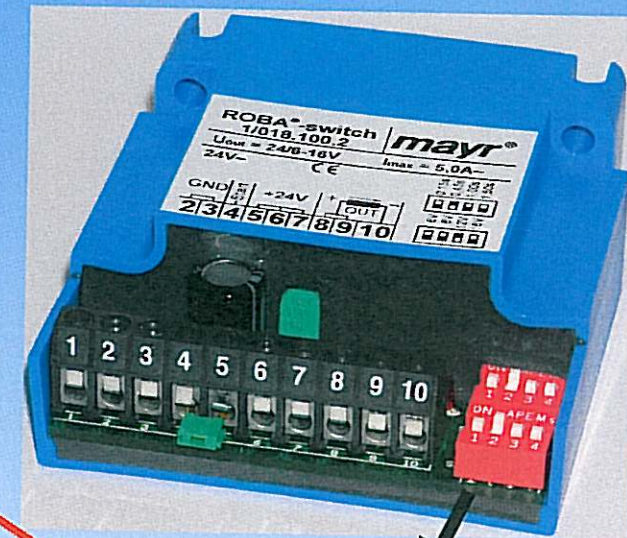
- Coil with low power consumption
- Low holding voltage by means of ROBA-switch
 - 50% holding voltage
 - 25% power consumption



ROBA-switch 24V

type 1/018.100.2

- for 24 VDC power supply
- provides 24 VDC for selected time (0,15s / 0,45s / 1,0s / 1,5s / 2,15s)
- low holding voltage, selected via DIP switch 6V / 8V / 12V / 16V
- Switchable via SPS input



ROBA-switch 24V

type 1/018.100.2

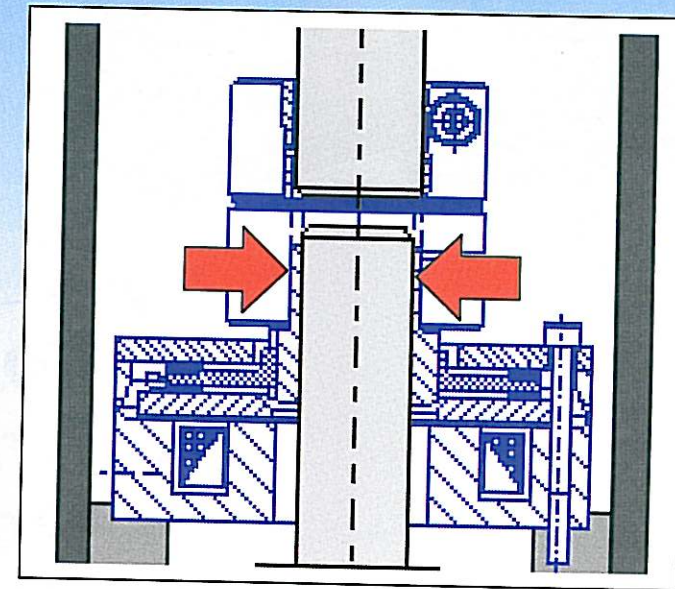
Benefits:

- Higher brake torque possible
- Less energy consumption
- Reduced brake temperature
- Reduced switching time t_1 (connection)
- Reduced switching time t_2 (separation)
- Cost- saving



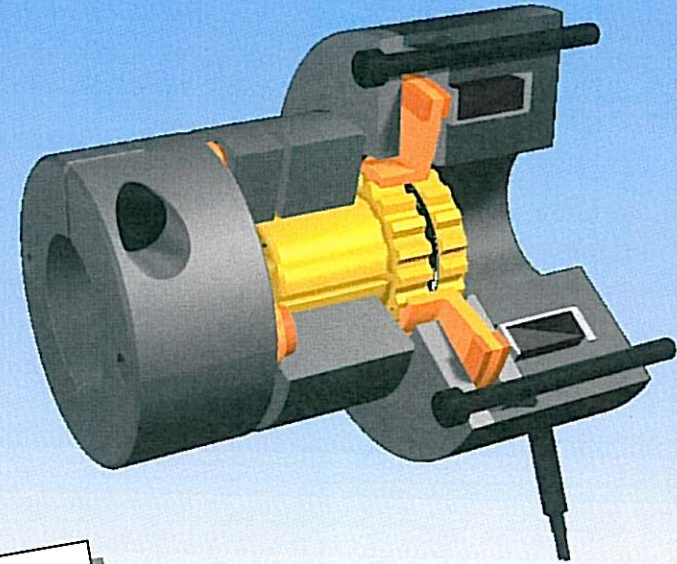
Zero backlash shaft/hub c.

- Frictionally locked via coupling hub
- No keyway required in ball screw
- Zero backlash connection
- Brake torque applies direct on ball screw shaft
 - without motor
 - with failed coupling



Conclusion

- drop distance reduced
- heat generation reduced
- higher safety integrated
- costs reduced



ROBA-stop
Always the
safest choice
for brakes