Swivel units for sophisticated applications

More swivelling operations due to increased complexity

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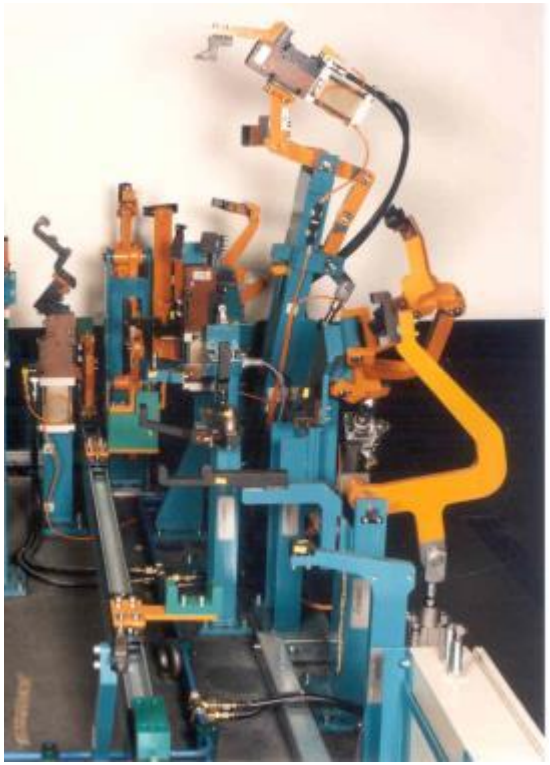
Increased complexity and a mixture of variants (models) in the application result in an increasing need for feeding operations for clamps, contours, welding and clinching units and complete modules that must be equipped with linear or swivelling systems.



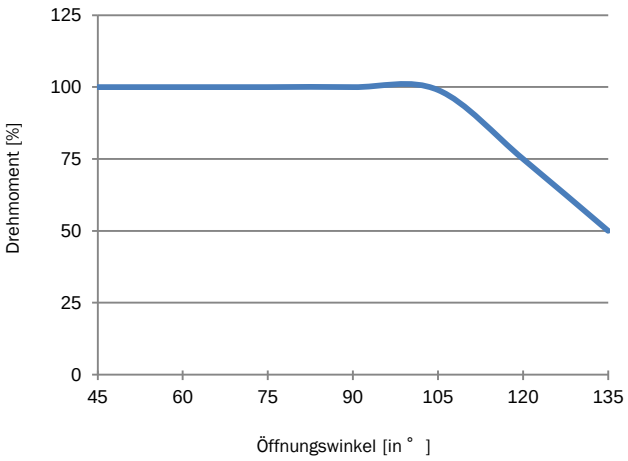
- Benefit:
  - Low-cost industry standard

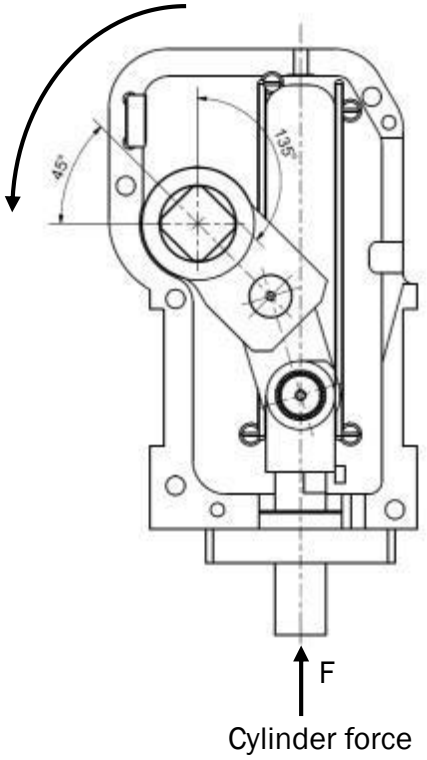
- Disadvantage:
  - Individual design of the entire swivel unit
  - Long downtimes in case of damage, as special parts like arm/boom cannot be stored.
  - Additional toggle mechanism or end position lock required.
  - Moving interferences of the drive cylinder
  - Open design of piston rod, mechanism prone to dirt and premature wear and tear

- Features:
  - Complete system incl. toggle lock, sensor, end position damper
  - Fully enclosed with aluminum case
  - All axes/shafts with needle bearing
  - Swivel angle max. 135, optional 180°
  - Standard series KS 80, 100, 125, 160, 200 with torques of 180 to 1,300 Nm

Similar to the pneumatic clamp, the arm of the swivel unit is driven by a toggle mechanism.

Torque for swivel arm



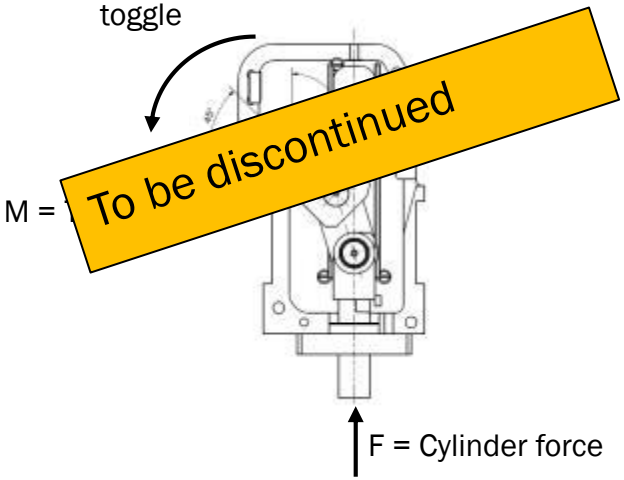


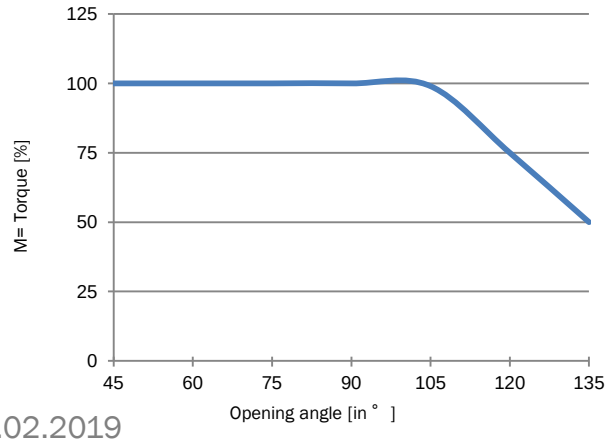
In the open arm position, the toggle joint is in an almost stretched position.

In the end position, the torque exerted on the pivot pin and thus on the arm drops to about 50% (see curve).

Standard series

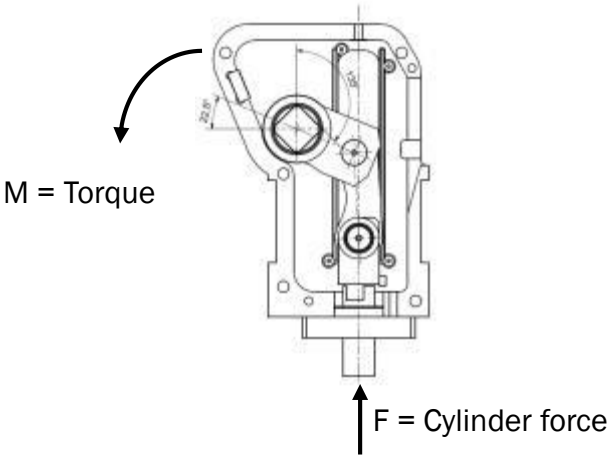
- Standard toggle
- Force reduction in the opening angle between 105 and 135° due to almost stretched position of the toggle

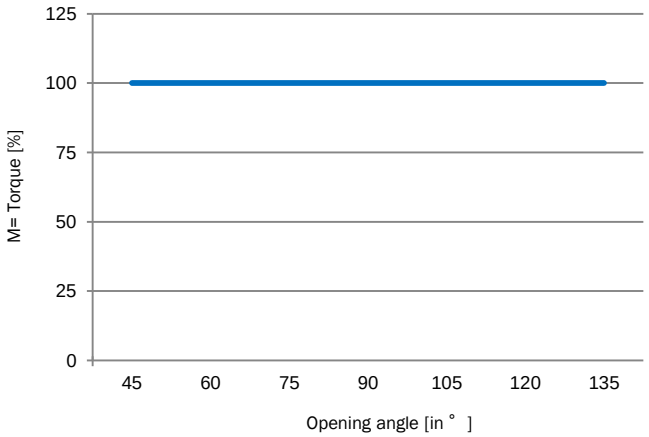




New KS series

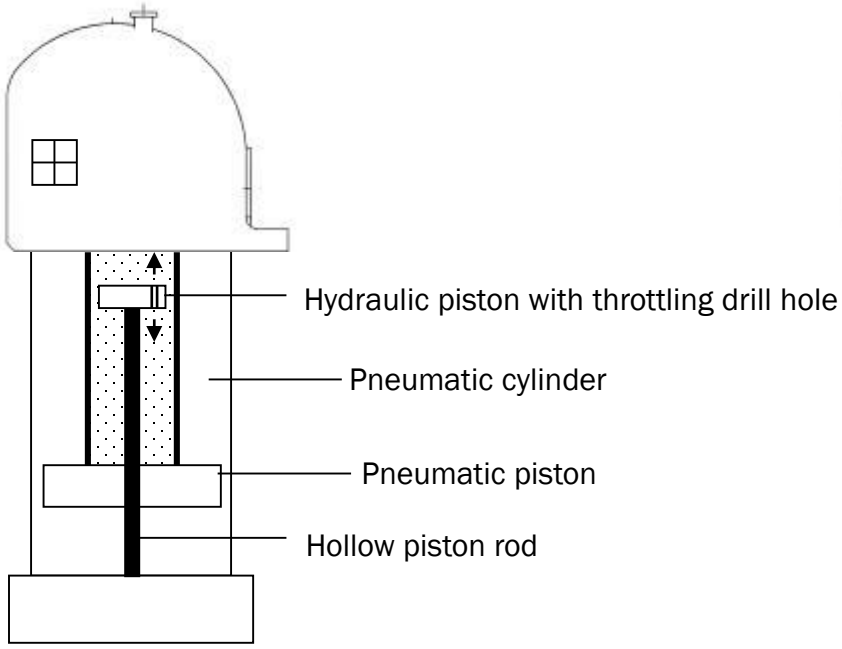
- Torque turned by 22.5 in the angles between 105 and 135; constant force





- Pneumatic swivel unit with hydraulic damper system which allows for a controlled, even movement across the entire swivelling range
- End position lock and emergency stop function in any positon with hydraulic stop valves

Functional principle of hydraulic damper



KSF in flat design

KSD with swivel angle 180°

Contact

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