

# Mechanical expansion shaft Series 745

with continuous expansion leaves

The Vorwald expansion shafts of the Series 745 are mechanical expansion shafts with continuous expansion leaves that are suitable for very narrow or thin-walled cores. The simple construction ensures a long service life. The surface of the outer leaf is available in lengthwise grooved or in polyurethane coated versions. The lengthwise grooved surface of the aluminium or steel leaves permits greatest possible torque transmission with paper cores. The smooth surface of the polyurethane leaves makes this force transmission possible with steel and plastic cores. All expansion leaves are bolted to expansion lugs underneath them. These expansion lugs in turn are equipped with a leg spring ensuring reliable contraction of the leaves. This makes simple push-on and push-off of the material cores possible. Further assistance is provided by the push-on and push-off ledges bolted onto the carrier tube.

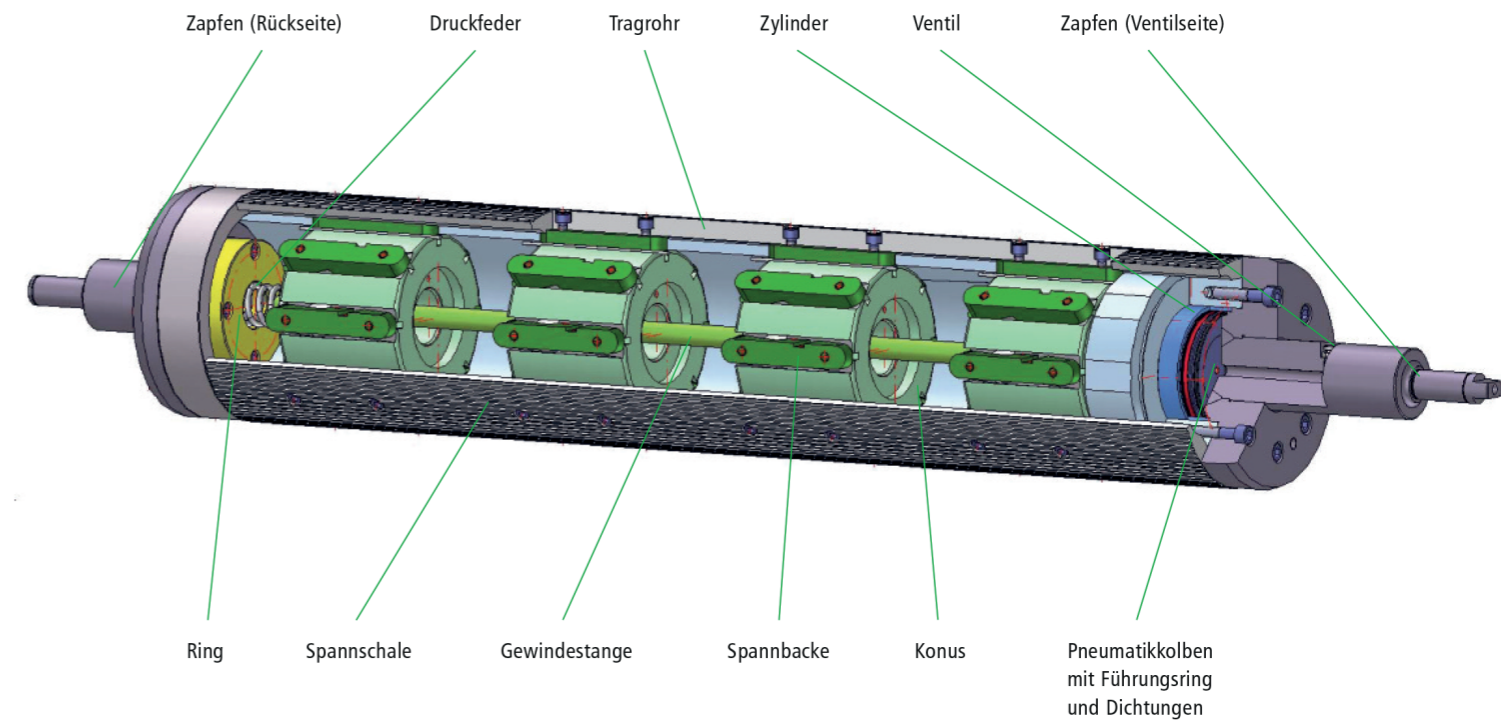
Expansion shafts with expansion leaves are available for cores with an internal diameter in the range from 68 to 600 mm.

The functional principle is based on the inclined plane. By feeding compressed air into the pneumatic chamber the cone is pushed via a threaded rod under the expansion lug like a wedge. The cone and the expansion lug have the same bevel. This produces a radial movement from an axial movement.

By this means the expansion shaft acquires a very large clamping force. A further very important advantage of this method is the absolutely concentric clamping of the cores, since all expansion leaves expand to the same extent. This makes very high winding speeds achievable.

The shaft bodies are made of numerous materials with numerous wall thicknesses – depending on the application by the customer. Based on the Vorwald standard, the expansion shafts are customised according to the modular design principle.

The clamping mechanism is actuated by a pneumatic piston that can be optionally equipped with a hydraulic booster for further increase of the clamping force.



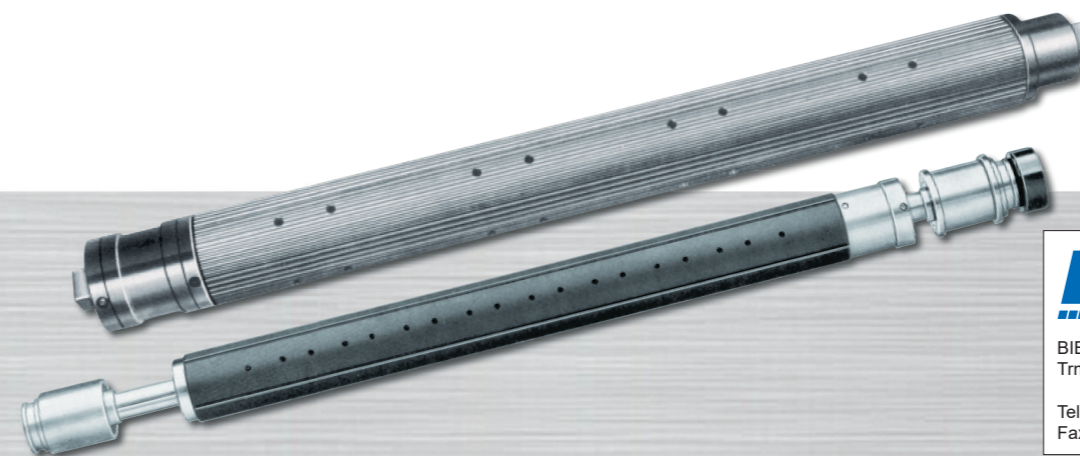
## Options

- Compressed air inflation axially, radially or as combination
- Expansion leaf available made of steel, aluminium and with PU-coated surface
- With and without hydraulic booster
- Also available as cantilevered version
- Special dimensions are possible on inquiry

## Advantages

- + Very high weight bearing capability for heavy reels
- + Absolutely concentric clamping, thus very high web speeds possible
- + Very high torque transmission
- + Journal design according to customer specification
- + Simple handling
- + Very little maintenance required

Available shaft diameters  
in the range from 68 to 600 mm



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