Pneumatic expansion shaft

Series A

with individual expansion ledges

Vorwald expansion shafts of the Series A are the standard models with individual expansion ledges, that can be used in nearly all applications. The simple and well designed construction ensures a long service life.

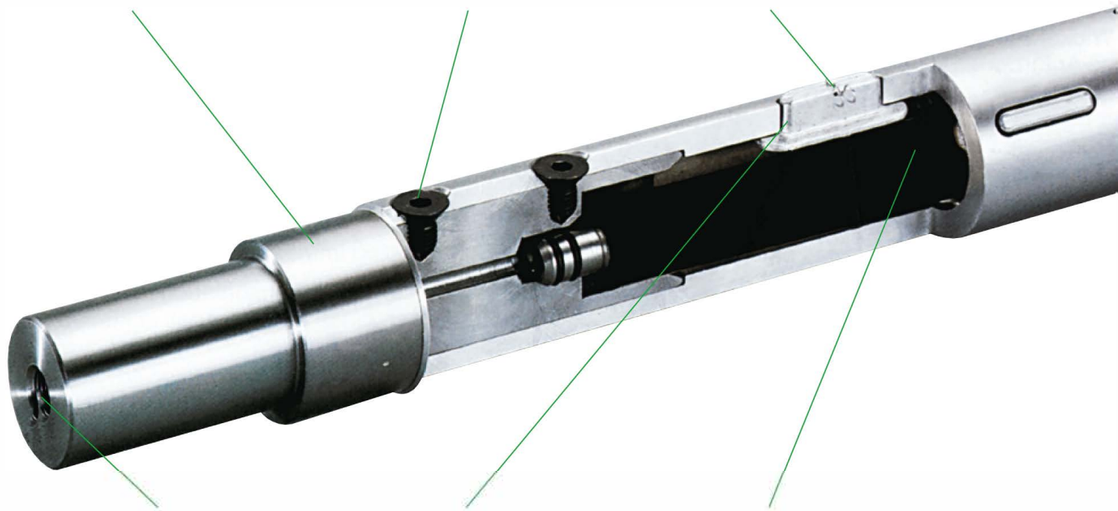
Three expansion ledge types are available for covering all requirements: Lengthwise grooved expansion ledges made of aluminium, expansion ledges made of steel or expansion ledges made of polyurethane. The number and positioning of the expansion ledges in the shaft body are determined by the customer requirements.

The lengthwise grooved surface of the steel and aluminium expansion ledges permits the greatest possible torque transmission for cardboard cores. The smooth surface of the polyurethane expansion ledges permits this force transmission for steel or plastic cores. All Vorwald expansion ledges are designed with a bevel, a "guiding angle", to permit easy push-on and push-off of the material cores. Expansion shafts with expansion ledges are available for cores with an internal diameter in the range from 12.5 to 300 mm.

A further very important advantage of the Vorwald expansion shafts is the design of the journals that are attached to the shaft body with screws. The tight dimensional tolerances of the journals provide a positive fit construction. Dismantling of a shaft designed this way is very much simpler than normally encountered with shafts where the journal is attached with set screws. The shaft journals with the same principal dimensions are exchangeable with other Vorwald shaft journals. Machining by the customer to ensure a good fit in the case of a replacement is not necessary.

The shaft bodies can be made of numerous materials with various wall thicknesses – depending on the application. Based on the Vorwald standard, the expansion shafts are customised according to the modular design principle. If the bladder starts to leak, as can happen from time to time with every expansion shaft, the unique internal constructional design makes a repair possible within a very short time. By keeping a complete inner assembly or "repair kit" in stock, a bladder defect can be remedied within minutes.

Sectional drawing with inner assembly of an expansion shaft, Series A



Precision shaft journals manufactured to tightest tolerances.

High strength screws connect the shaft journal to the shaft body. The number and positions of the screws are determined by the application and shaft diameter. The shoulder prevents shearing fracture of the screws in the case of improper handling.

Bore holes in the aluminium ledges. When repairing the internal construction, the ledges are held in position by a spring device or other holders.

The Vorwald standard inflation and deflation valve is positioned according to the customer specifications. Other valves can also be incorporated on request.

Freely moving expansion ledge without springs

The inner assembly of a Vorwald expansion shaft devised according to the modular design principle makes possible simple replacement of the bladder within a very short time. The replacement is possible after dismantling only one journal.

Options

- WR Extended expansion range for clamping varying core diameters
- OL Overlapping expansion ledges for narrow web winding
- CB Preliminary centering of the core over the shaft body
- CE Preliminary centering of the core with additional expansion ledges
- Special dimensions are possible on inquiry

Advantages

+ Simple construction according to the modular design principle
+ Dirt accumulation is minimised
+ High rotation speeds are possible
+ Very short repair times
+ Numerous variants

Available shaft diameters from 12.5 to 300 mm

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