

Mechanical expansion chuck

Series 831

with individual expansion lugs

The Vorwald expansion chucks of the Series 831 are suitable for rewinding and unwinding machines in which the required clamping force is applied by axial displacement of the expansion chuck support. In this process the core presses against the core stop collar of the expansion chuck and makes the expansion lugs expand centrally. The fixed centering nose prevents premature expansion of the expansion chuck.

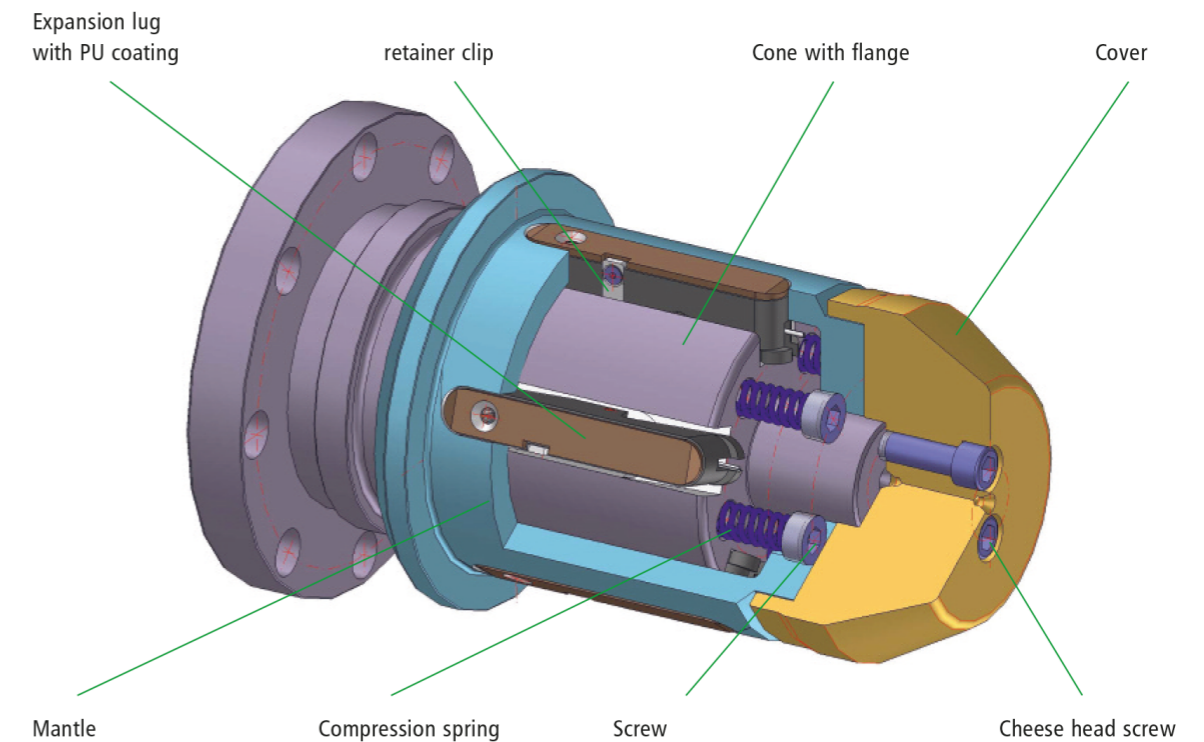
Two types of expansion lugs are available to cover all requirements: Lengthwise grooved expansion lugs made of steel and expansion lugs with smooth surface made of polyurethane. The number and positioning of the expansion lugs in the so called mantle are determined by the customer requirements.

The lengthwise grooved and hardened surface of the steel expansion lugs permits the greatest possible torque transmission with cardboard cores. The smooth surface of the polyurethane expansion lugs permits this force transmission with steel, aluminium and plastic cores. All expansion lugs are equipped with a leg spring to ensure slide back into the mantle. This makes push-on and push-off of the

material cores easy. Expansion chucks with expansion lugs are available for cores with internal diameter in the range from 50 to 500 mm.

The functional principle is based on the inclined plane. The axial force pulls the expansion lugs outwards on the cone like on a wedge. The cone and the expansion lugs have the same bevel. This produces a radial movement from an axial movement. This arrangement provides the expansion chuck with a very large clamping force. A further very important advantage of this arrangement is the absolutely concentric clamping of the cores, because all expansion lugs expand uniformly to the same extent. This makes very high winding speeds achievable.

The mantles can be made of numerous materials with numerous different wall thicknesses, depending on the application intended by the customer. Based on the Vorwald standard, the expansion chucks are customised according to the modular design principle.



Options

- Various different expansion lug surfaces to match the respective core material
- Flange or bearing shaft according to customer specification
- Quick adaptation to various core diameters with adapters; see Section 4.3
- Special dimensions are possible on inquiry

Advantages

- + High torque transmission
- + True running tolerance ± 0.1 mm
- + Quick clamping and unclamping
- + No additional medium such as compressed air required for expanding

Available expansion chuck diameters ranging from 50 to 500 mm

