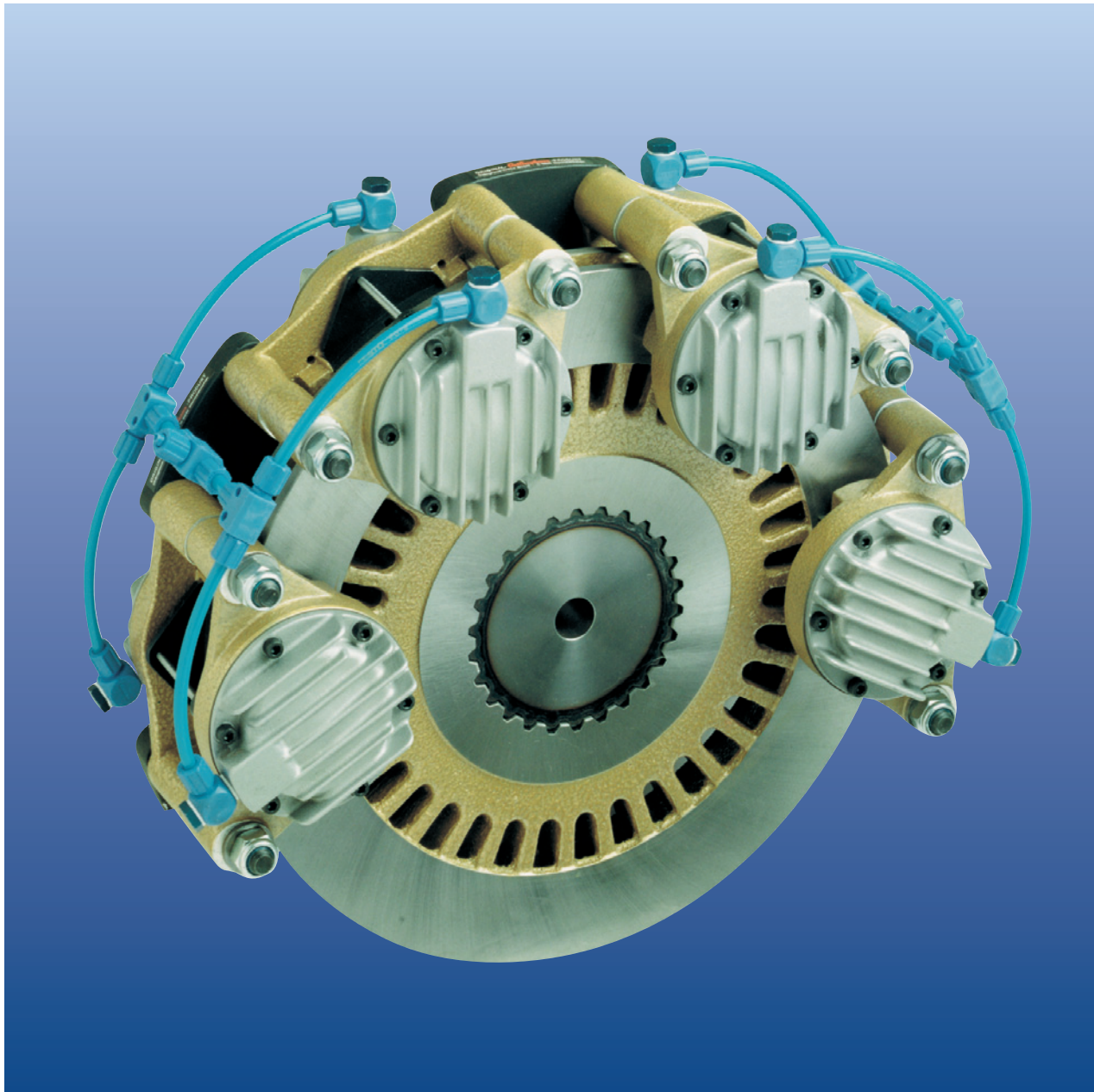
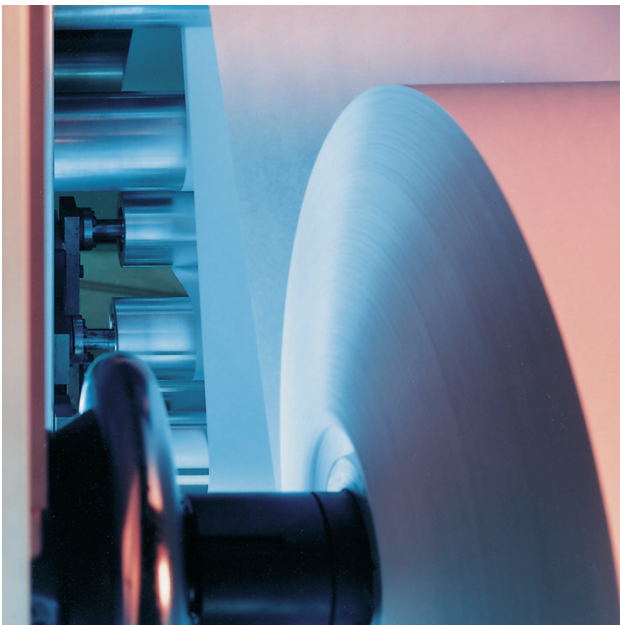


■ Winding technology,  
pneumatically actuated tension brakes  
web tension



# ■ Winding technology - pneumatically actuated tension brakes, web tension open-loop



In the winding technology group you will find pneumatic tension brakes in various performance classes as well as elements for web tension control. With the tension brakes shown here, both relatively simple controls (with the use of Tensionor) and very complex web tension controls are possible.

Web tension controls have an especially broad area of application for web-type wound paper and plastic products as well as metal foils.

The goal, in the case of unwinding processes with varying operational parameters, is to maintain the web tension, i.e. the tensioning force on the wound material, within constant limits.

In the process, completely different demands are placed on the web speed and web tension operating parameters.

The tension brakes shown here are suitable both for operation with "simple" controls and for operation in complex control circuits.

Use with roll changes on the fly is also possible. Therefore, the very modularly constructed brake

system enables precisely adapted, reliable and cost-effective solutions for any type of unwinding processes.

## **Electronic-pneumatic web tension open-loop and feedback control systems for unwinding devices with pneumatically actuated tension brakes**

**1**

**Series 0-087**

### **ORTLINGHAUS-TENSIONOR**

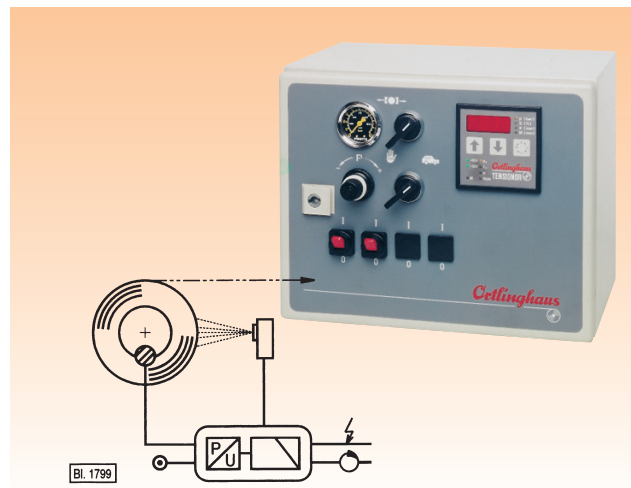
Electronic web tension open-loop control with ultrasonic sensor consisting of the following components:

- Control device with ultrasonic sensor
- Operating console,
- Pneumatically actuated tension brake.

This system holds the unwinding tension at a pre-selected constant level.

**Operation:** The ultrasonic sensor senses the roll diameter. The control device processes the sensor's signal and outputs a signal to adjust the air pressure for the brake in accordance with the decreasing roll diameter and the preset command value for the line tension.

The control device is offered in the versions with the basic functions, namely setting of the command value, releasing of the brake and display components.



The control unit is offered in this design with the basic functions setpoint setting, brake bleeding and display unit.

**Pneumatically actuated, dry-running tension brakes with internally air cooled brake disc**

**2** **Series 0-454**

These brakes are particularly well suited for regulated process control in which braking has to be carried out continuously, for example, in unwinding processes.

This is achieved due to the following characteristics:

- Low actuation friction and low hysteresis leading to sensitive torque control,
- Modular design with up to six brake calipers; this enables the torque range to be selected and individual calipers to be switched in or out,
- High thermal capability due to the excellent heat disipation from the internally air cooled brake disc,
- Actuation on both sides of brake disc balancing the load on the centre hub,
- Increased thermal load with the aid of additional air cooling.

**Area of application:** 5 kW thermal output at nominal braking torques of 9 to 1,800 Nm.

**Pneumatically actuated, wet-running high performance brakes (patent applied for)**

**3** **Series 0-444**

A fully enclosed multiplate brake with a two piston system in which the plates are immersed in circulating cooling oil; the brake contains components which have been in use for many years; these include for example the friction combination steel/high performance lining.

Together with an effective cooling oil system, these brakes offer the user the following advantages:

- Compact design
- High thermal capacity,
- Almost unlimited service life of the friction linings,
- No contamination from lining dust,
- No lining noise.

Thanks to the two piston system, three torque ranges are available on each brake.

The following versions can be supplied: Brakes in housings, push on brakes, internal hubs with keys or locking assemblies.

**4** **Accessories**

- Fans for additional air cooling of dry running brakes,
- Cooling oil system for wet-running tension brakes

**Many different factors and variations must be taken into account when designing a line tension control system. For this reason we suggest that you make use of our many years of experience in this field and consult our engineers.**

