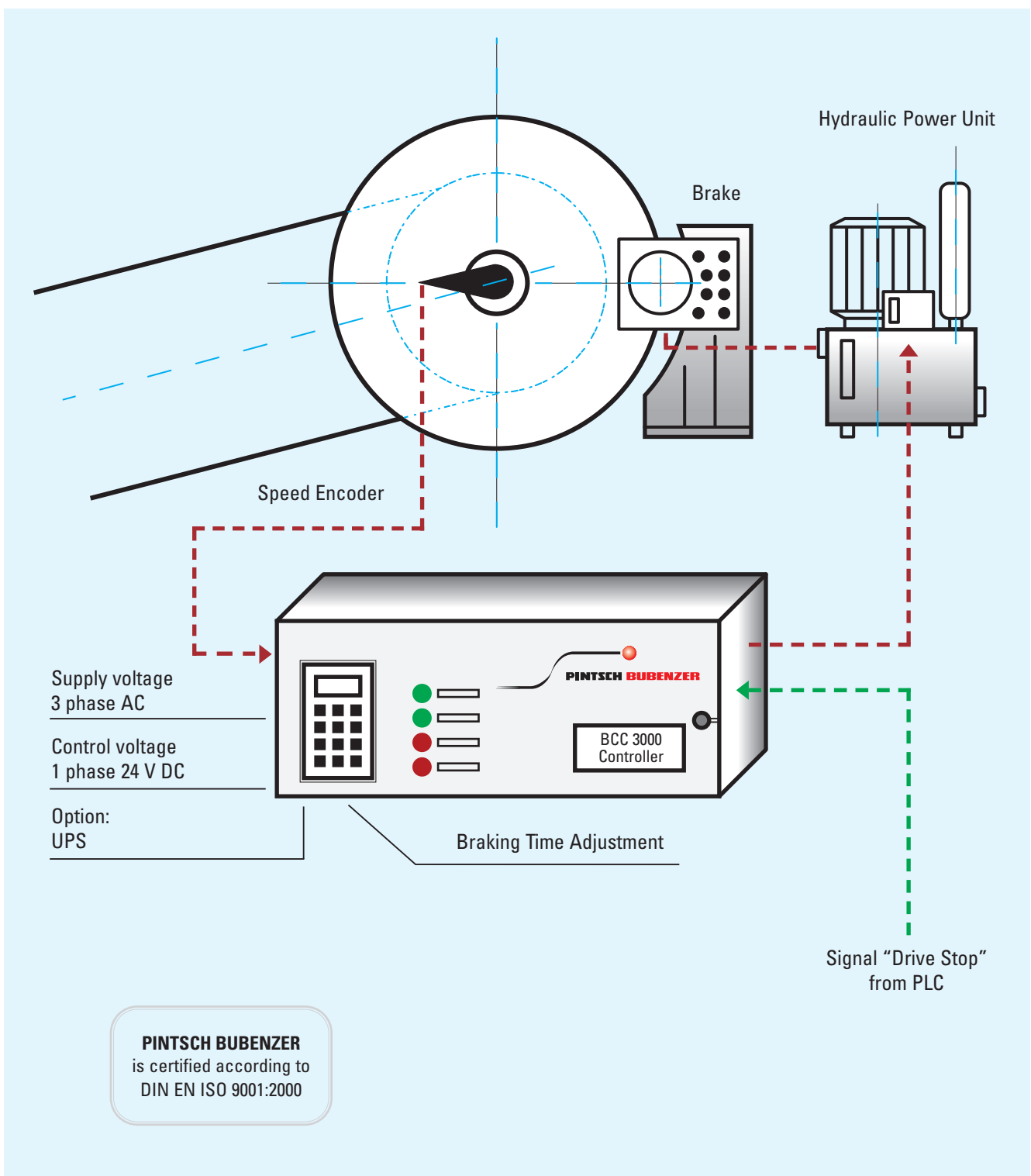






Brake Control System BCC 3000




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**Controlled,
smooth braking**
- 

**Braking time adjustable
independent of load**
- 

**Synchronous braking of
several conveyor belts**
- 

**Increased lifetime of
all drive components**
- 

**Brake remains
failsafe!**

Main Features

The BCC 3000 control system is the ideal solution for a controlled braking of drives, especially on conveyor belts. By the concept of a closed loop control, whereby rated speed and actual speed are in permanent comparison, a drive can be stopped linearly independent of load always in the same (pre-selected) time.

The system consists of four components:

A hydraulic power unit equipped with a proportional pressure valve for stepless variable operating pressure.

One or more hydraulic caliper brakes, operated by the hydraulic power unit.

A speed encoder, measuring the drive speed and submitting it to the controller.

The controller itself, equipped as an option with a UPS unit to ensure the closed loop control also in case of power cut-off.

Functional Description

The brakes are normally closed by the spring force. After activating the supply and control voltages and the signal "drive start" from the PLC, the hydraulic power unit opens the brakes. After switching off the drive by the "drive stop" signal from the PLC, the controller generates a time ramp for the rated speed. By comparison of rated speed with actual speed, the contact force of the brakes varies accordingly.

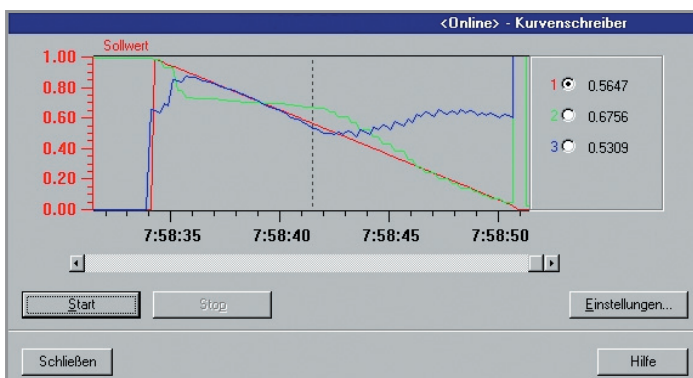
In case of decreased speed resulting from less load or inertia, the contact force of the brake is reduced. On overspeed, the system acts vice versa, i.e. the contact force is increased. At the end of the cycle, the hydraulic pressure goes to zero, and the drive is held with full brake torque.

Advantages

Less stress and increased lifetime for all drive components by the "smooth" braking.

Synchronous braking of several combined conveyor belts, avoids overfilling of belts on crossings due to different braking times.

Furthermore, within certain limits, variations of the friction coefficient between disc and lining are compensated by the continuous control of the brake contact force.



Example:
Pre-selected braking time: 17 seconds

Rated speed

Actual speed

Hydraulic pressure