Voith Turbo

VOITH

Electrohydraulic Press Drive

The electrohydraulic press drive is an optimised linear drive for applications with high demands for flexibility, dynamics and accuracy.

The electronic control circuit converts the input parameters like speed, position and tool movement profile into signals wich drive a low-power stepper motor. This movement is amplified highly dynamically by the hydromecanical closed loop of hydraulic amplifier.

The hydromechanical closed loop operates without measuring systems or additional electronic control devices. This straightforward design concept results in the ruggedness and reliability of this compact drive unit.

Additional modules compliant to safety regulations according to DIN EN 693 are avalaible.

H+L hydraulic

Features

- programmable speed, positions and tool feed profiles
- high precision repeatibility of BDC position
- hydromechanical closed loop, highly dynamic drive characteristics
- smooth rod movement
- quick and controlled movement and positioning of big masses

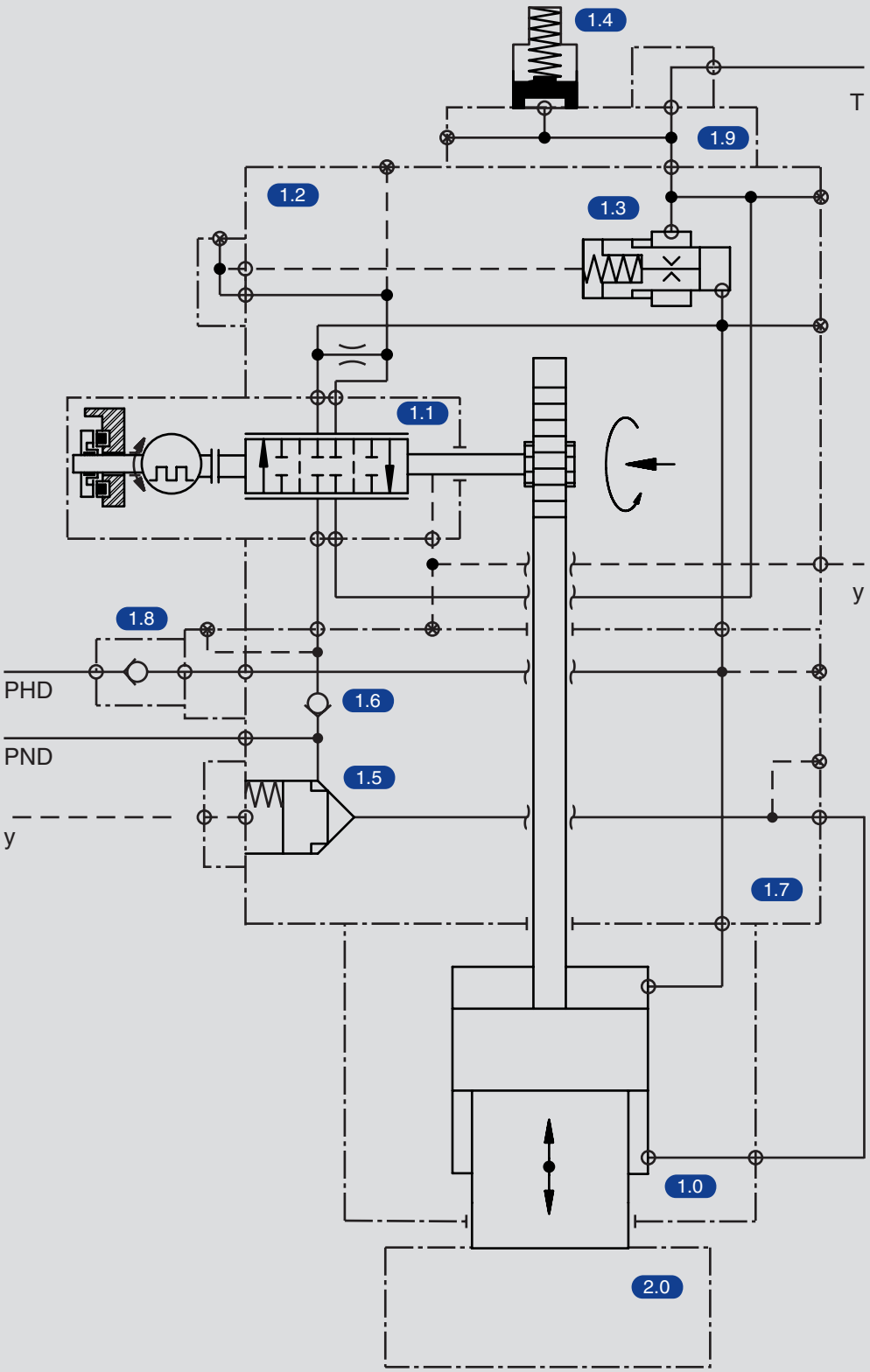
Application

- 5 to 800 to
- presses, deep drawing presses, progressive presses, toggle lever presses, try out presses
- punching, shearing, bending

Options

- safety modules according to DIN EN 693
- direction-sensing overload sensor
- process monitoring and optimising with passiv measuring system
- magnetic holding brake on command motor
- electronic control PCU for easy start up, diagnostics and optimized process cycles
- BDC/TDC sensor for process monitoring and overload indication

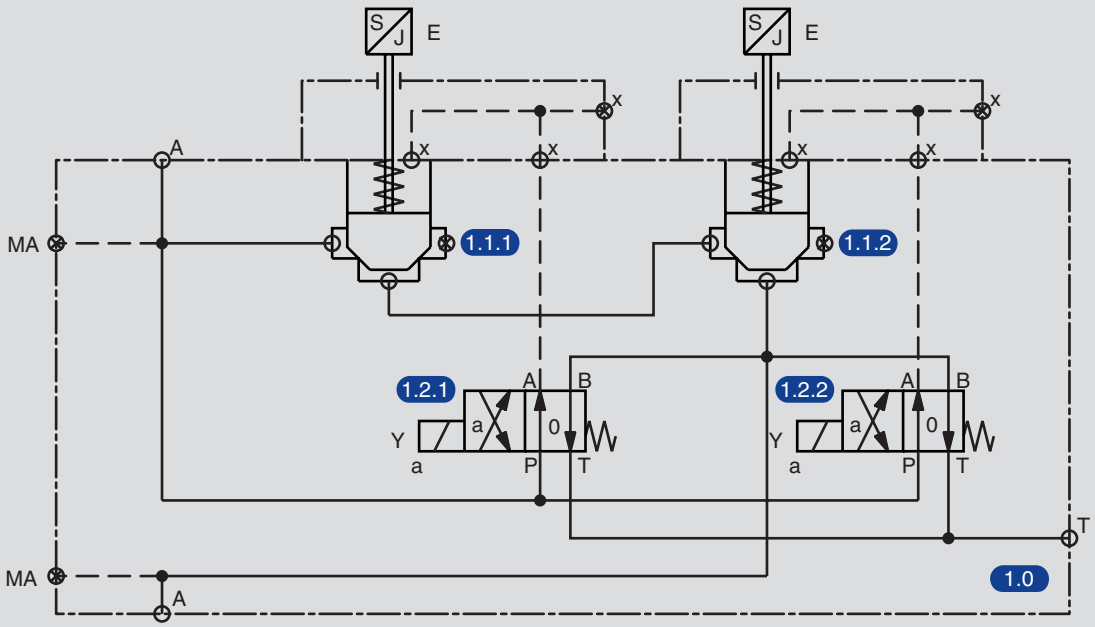
Functional Diagram



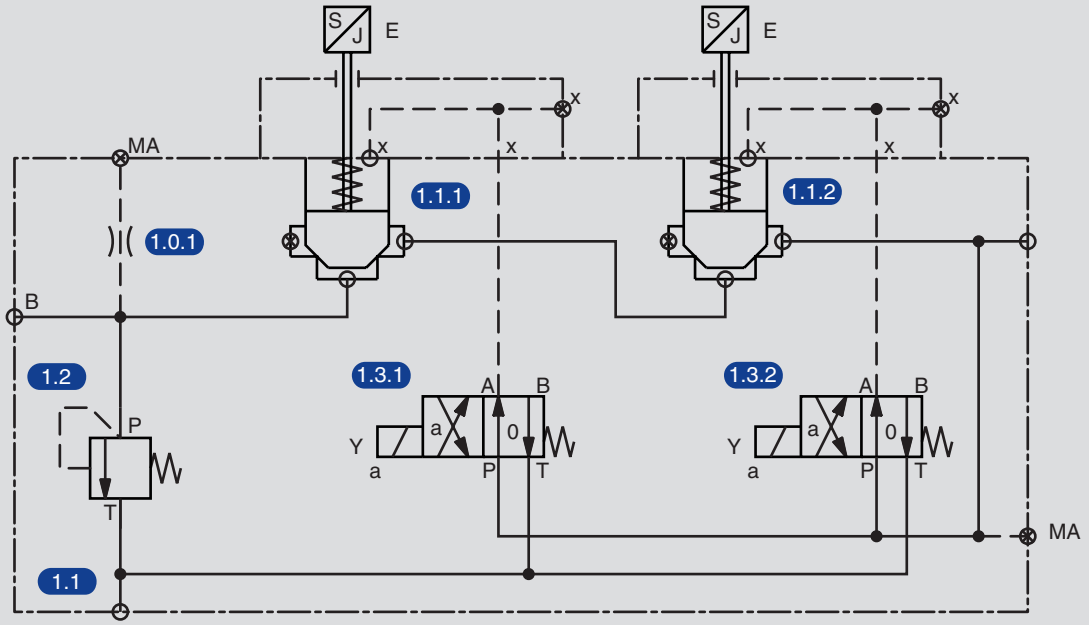
1.0			cylinder	1.4			tank damper
1.1			electrohydraulic amplifier	1.5			retaining valve
1.2	1.7	1.9	mounting plate	1.6	1.8		check valve
1.3			cartridge valve	2.0			plunger

Safety Control for Presses according to DIN EN 693

Module Rod Upper Side



Module Rod Down Side



1.0	1.1	mounting plate	1.1.1	1.1.2 monitored 2/2 directional control valve
1.2		pressure valve	1.2.1	1.2.2 4/2 pilot valve
1.0.1		measuring orifice	1.3.1	1.3.2 4/2 pilot valve

Electronic Control

An optimal control for the proposed drive is the device PCU 20/30.
The main features at a glance:

- simple start up and diagnostics
- production process can be optimized very simple by changing parameters
- easy to use PC software PunchMaster
- software update in FLASH memory of PCU.

Please see further informationen in PCU control data sheet 913.

Alternatively, the drive may be controlled directly by means of an existing PLC/CNC machine control. In this case, the TR20 step motor amplifier is the interface of choice. Using the TR20, the drive may be controlled by ±10V speed command or digital pulses for step/direction.

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