

Valve Remote Control Systems

centralized hydraulics for marine vessels
and offshore installations



PLEIGER MASCHINENBAU

- _Hydraulic Actuators STK**
- _Power Packs**
- _Solenoid Valve Cabinets and Process Controls**
- _Hydraulic Position Indication**

Hydraulic Rotary Actuators

... a perfect combination!

Pleiger rotary actuators are especially developed for the operation of butterfly and ball valves. Pleiger rack and pinion actuators type STK are available in double and single acting design.

The Pleiger STK actuators are designed to operate at any place, even submerged or in hazardous areas. In emergency cases all actuators can be operated by hand pump. Pleiger hydraulic actuators provide continuous output torque over the full quarter turn.

Product Characteristics:

- _Precise and reliable operation
- _Complete product range to cover all demands
- _Output torque from 150 Nm up to 50.000 Nm
- _Maximum working pressure 150 bar
- _Positive hydraulic open/close indication via bypass and flow switch
- _Intelligent continous position indication
- _Alternative electrical position indication available
- _Hydraulic locking device
- _Mechanical locking device available



RELIABILITY AT WORK



Hydraulic Linear Actuators

Hydraulic linear actuators are specially developed for the operation of globe valves. Pleiger actuators type PVK are available in double and single acting design (fail safe spring return). They are designed to operate anywhere.

- _Nominal diameters from DN32 up to DN500
- _All usual flange standards available
- _Various body materials available
- _Hydraulic override available
- _Positive hydraulic open/close indication via hydraulic limit and flow switch
- _Alternative electrical end position indication available



Solenoid Valve Cabinets

... and control consoles

PLEIGER cabinets and control consoles are featured by:

- _ Individual and compact design
- _ Block modules – less piping
- _ Well proved precision solenoid valves for various power supplies
- _ Easy to connect hydraulic lines
- _ Local control devices
- _ Serial connection via:
 - Bus Interface Module (BI),
 - Conti Control Module (CCM)
 - Relay Module (RK 16/8)
 - and I/O Module (I/O 8/8/4, TII)

PLEIGER consoles integrate the indication and/or control of:

- _ Valve positions
- _ Pump signals
- _ Tank levels
- _ Mechanical locking device
- _ Alarm indications



RELIABLE AND PROVEN



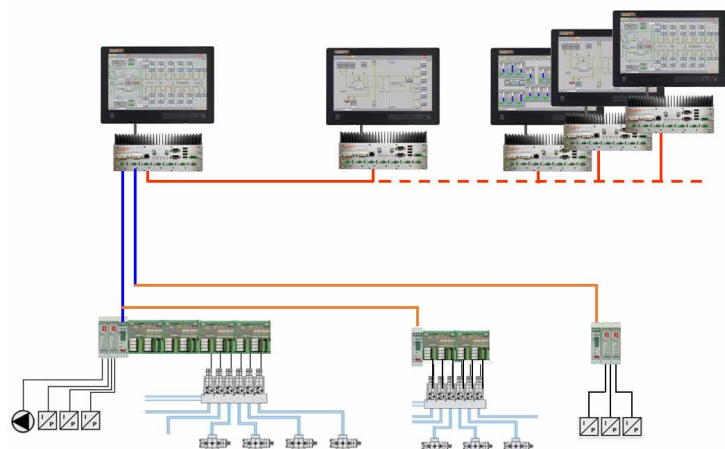
PLEIGER Control Modules (PCM)

... for actuators in centralized hydraulic systems

The PLEIGER Control Modules (PCM) are a system of different control and I/O modules. This module system controls and monitors hydraulic actuators, pumps, tank level sensors etc. The small sized modules are ideally suited for designing compact control cabinets.

BI, Bus Interface Module

- _BI bus interface connects all PCM modules to a supervisory control system
- _Profibus DP and Modbus RTU fieldbus compatible



RK 16/8, Relay Module for open/close operation of hydraulic actuators

- _Monitors end position indications and control solenoid valves
- _One module can control up to 8 actuators
- _LED status indication

CCM, Conti Control Module

- _Control module for continuous mode operation of hydraulic actuators
- _Self learning calibration
- _Back-Up function

Common features

- _Hat rail plug connectors for DC power supply and serial data link
- _Pluggable terminals are used for cabling of all modules
- _Detailed status information eases diagnostics and fault localisation



Continuous Position Control

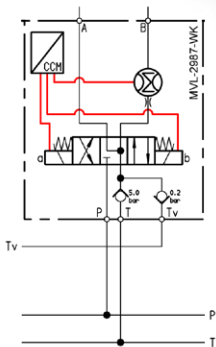
... simple and virtually multipurpose

The continuous position control system for valves sets new standards. Due to intelligent processing and evaluation in the Continuous Control Module (CCM), precise measurement can be reliably ensured with only a few and standardized components.



The new PLEIGER position control system for continuous operation is based on a standardized volume counter combined with the new PLEIGER CCM module.

- _A digital flow meter counts the passing oil volume in each direction. The generated signal is taken up by the CCM module.
- _A self adjusting function enables the CCM module to control any desired valve position regardless of its size, hydraulic pressure, pipe length or pipe diameter.
- _The correct functionality of the control system is also independent of dilatation, viscosity and temperatures.
- _Furthermore, the CCM module detects blocked valves and indicates the failure.
- _It realizes a comfortable backup operation via double push buttons and two digit position indication.
- _The CCM module can be directly connected to push buttons, LED and analogue position indication in mimic diagrams.



As part of the PLEIGER Control Module (PCM) system the CCM module can easily be connected to Profibus DP or Modbus RTU masters via the Bus Interface Module (BI).

RELIABILITY AT WORK

4
2
12M
8
6
4
2
11M
8
6
4
2
10M
8



OPEN/CLOSE Position Indicator

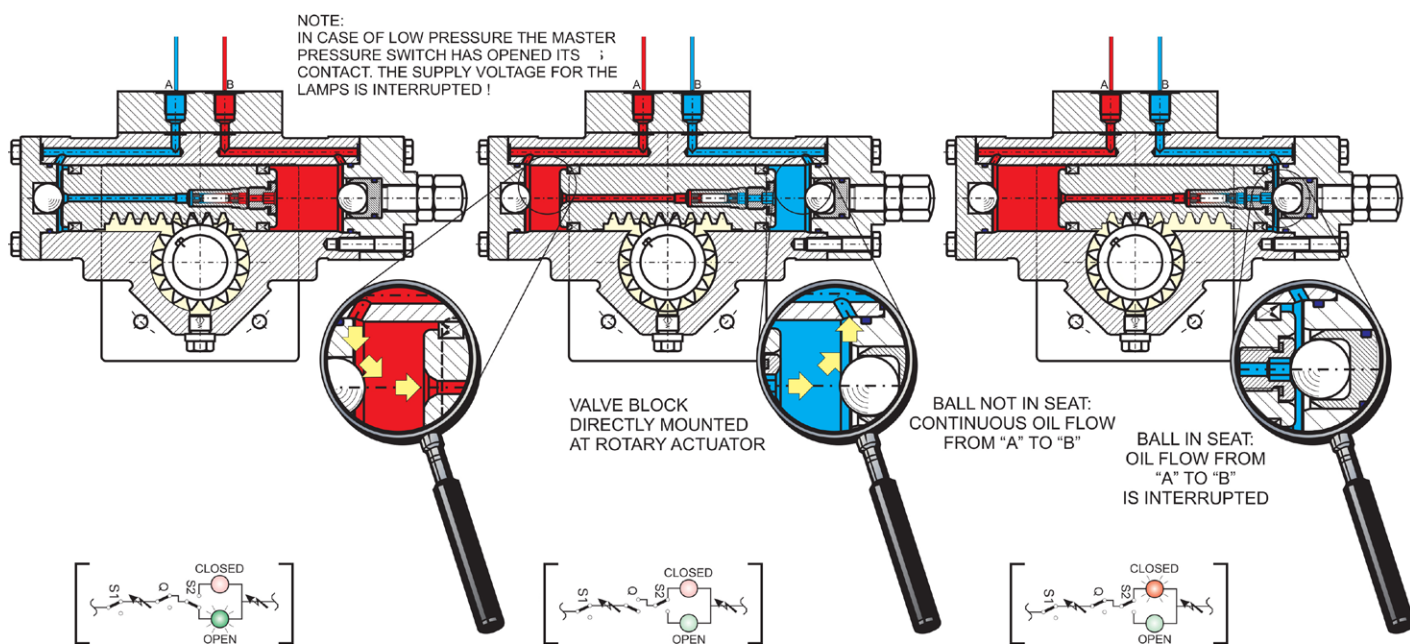
... with integrated valve failure detection

PLEIGER end position controls are independent of the actuator size, the pipe length and the pipe diameter, the viscosity, the dilatation and the compressibility. The OPEN/CLOSE indication is hydraulically detected directly inside the actuator and displays the real valve position.

The well proven PLEIGER end position control system – OPEN/CLOSE – is based on a specific flow in the bypass in combination with the working pressure.

_If the valve is blocked between the end positions, a small flow is maintained through a bypass inside the PLEIGER rotary actuator. Due to this, if the end position has not been reached, there is no closed contact in flow switch "Q".

_The bypass inside the actuator is hermetically sealed if the end position is completely reached. In this case the indication becomes active through the contacts in the flow switch "Q" and the corresponding pressure switches „S1" and "S2".



Tradition and Experience

More than 7,000 vessels equipped by Pleiger prove that Pleiger is the experienced and reliable partner that shipyards and ship owners can depend on, anytime and anywhere. Pleiger combines the innovative power of a German high-tech manufacturer with the down-to-earth character of a tradition-conscious family-owned company with long-term prospects and its own training and research centre. As a member of the Pleiger Group, with over 650 employees worldwide, Pleiger stands for stability and sustainable growth.



INNOVATION AND QUALITY – MADE BY PLEIGER!

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