



VC100540

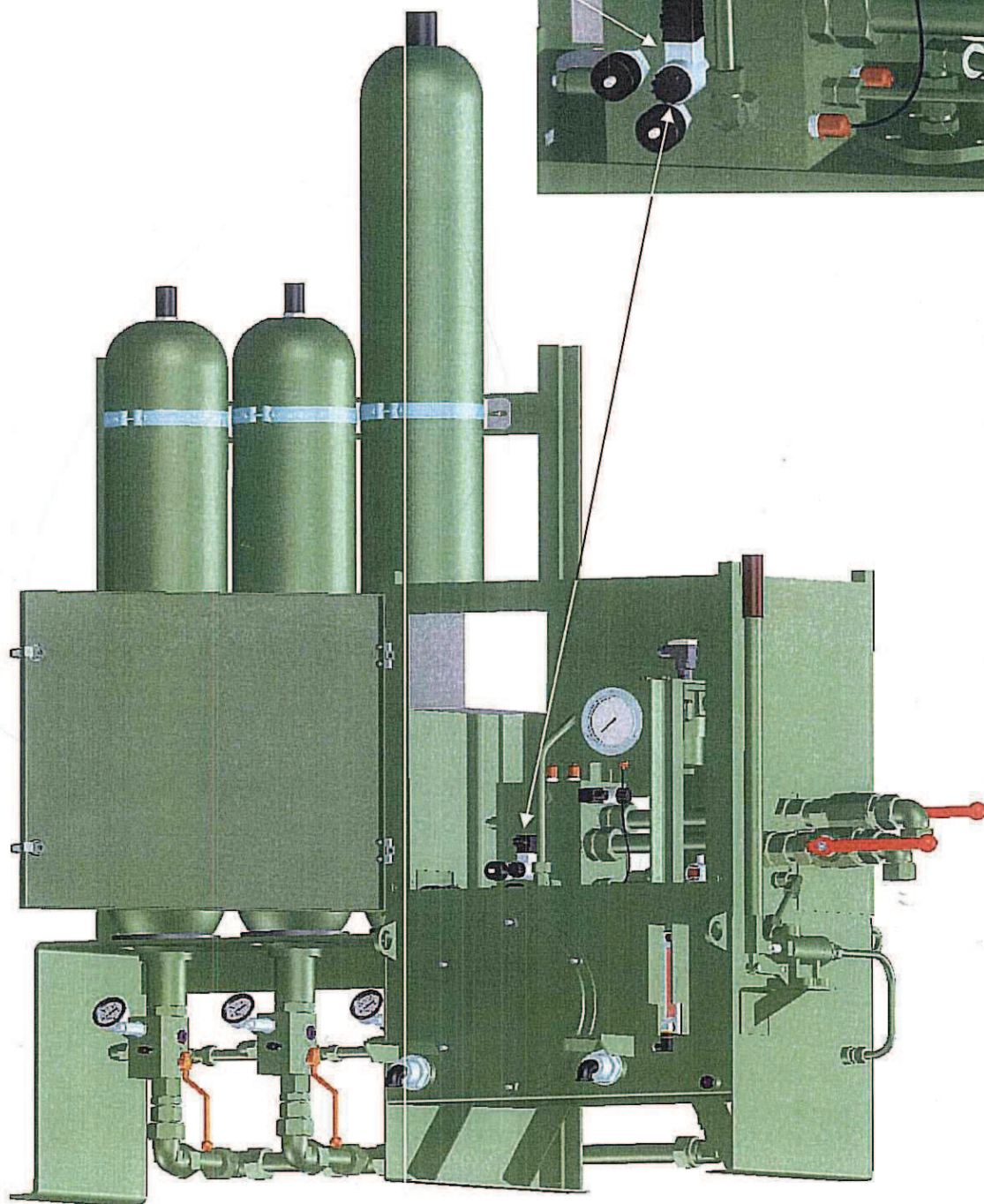
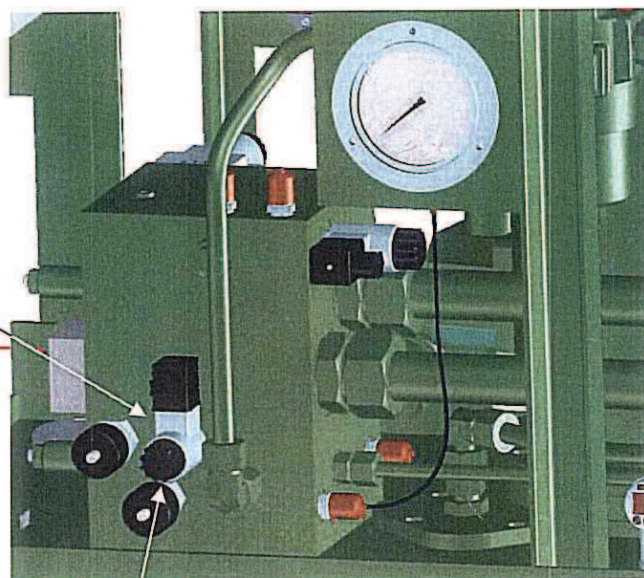
Th. Jansen –
Armaturen GmbH

Описание

28.08.2013

Рис. 4

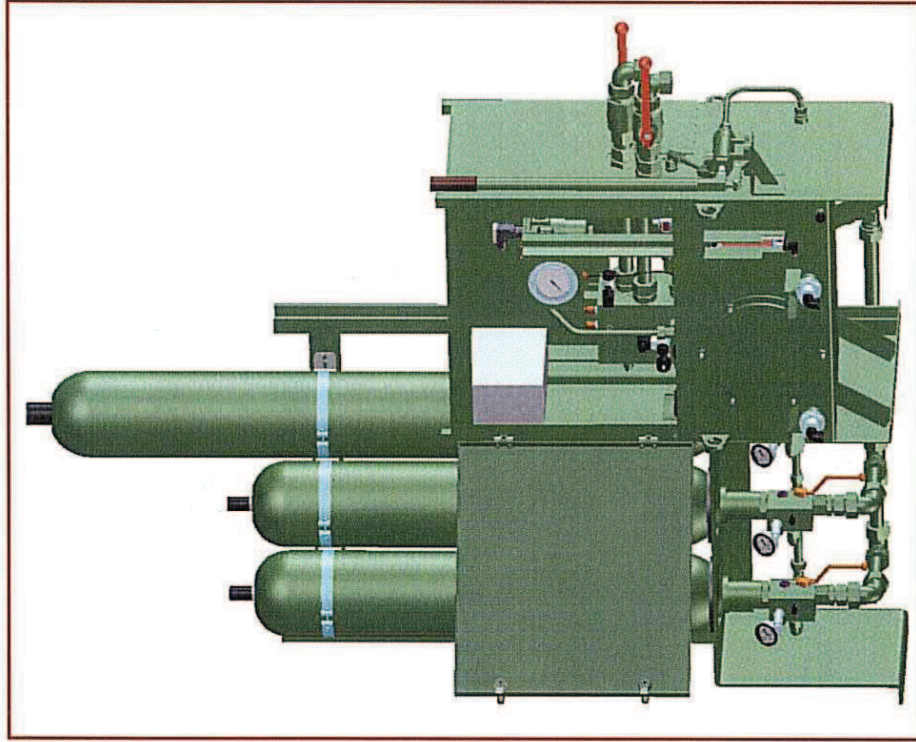
Клапан 170



Hydac hydraulic unit, with emergency function – cylinder retraction via bladder accumulator and extension via emergency hand pump.

Technical data of the actuator:

Electric voltage supply :	400V/AC	+/- 5%
Frequency:	50 Hz	+/- 0.5Hz
Control voltage :	24V DC	+/- 1%
Ambient temperature:	-20°C---+40°C	
Humidity:	40---80%	
Protection class:	IP55	
Oil filling:	ARCTIC 32 SHELL TELLUS	
Running times:		
Extension of piston:	approx. 25 sec. adjustable	
Retraction of piston:	approx. 10 sec. adjustable	
Place of installation:	Indoor.	





2.2.2 SEALING SYSTEM

See Fig. 2.2.2.1

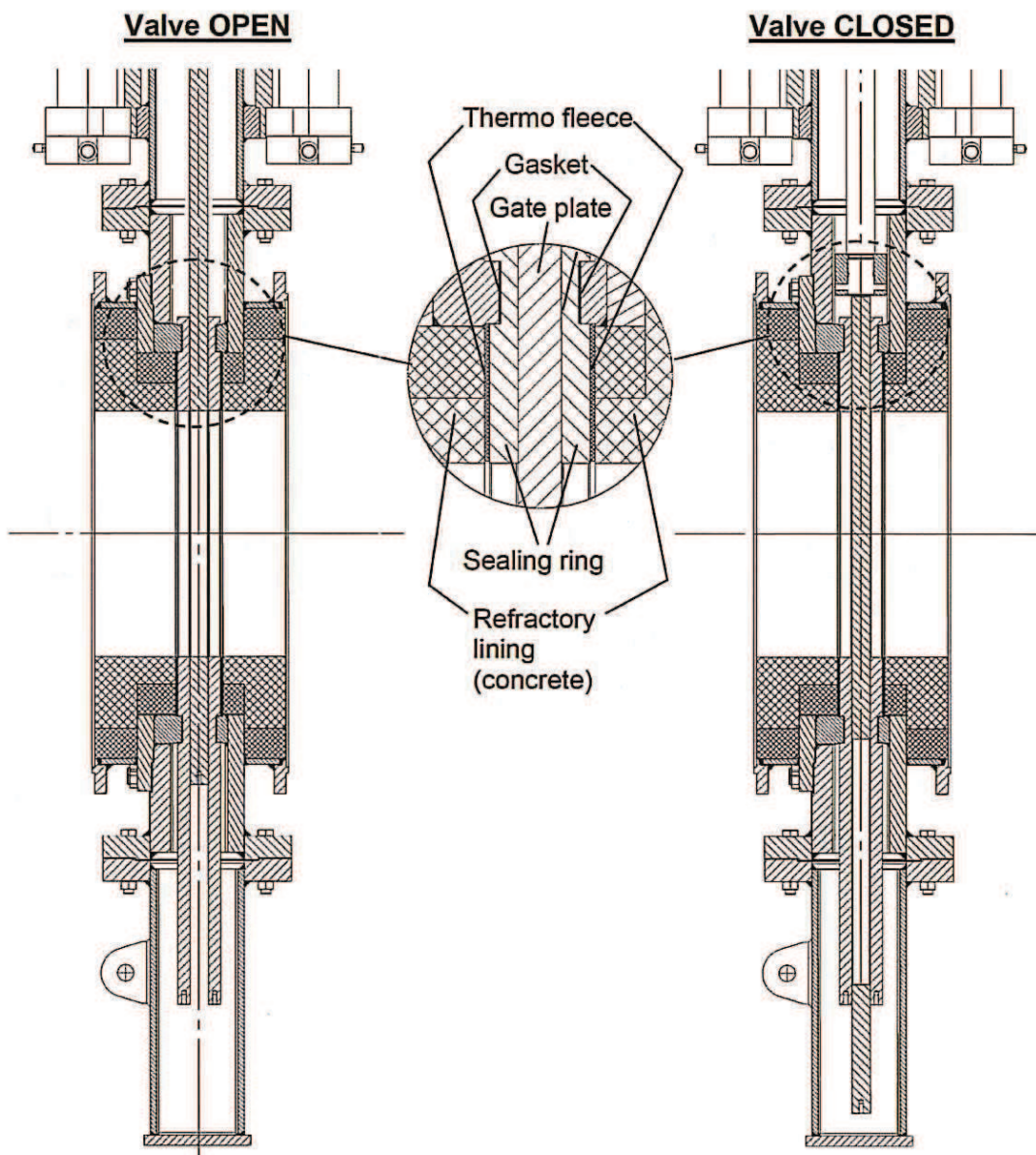
The sealing system consists of the gate with special surface – treatment (boron-treated) and two sealing rings (also with boron-treated surface). The sealing rings are sealed against the body / socket by Thermo-fleece and gaskets (RF28).

The gate plate is connected to the spindle via spindle nut and is driven by the hydraulic cylinders between the endpositions OPEN / CLOSED.

In both end positions the metallic sealing rings are covered by the gate plate so that no particle deposits at the sealing surfaces may arise. When sliding the gate plate, the metallic sealing rings scrape the contamination deposits from the isolating part of the gate plate.

For details about the material of these parts, please refer to Part 1- "Technical Data", section 1.1 and to the part lists in Part 8, section 8.2.

Fig. 2.2.2.1 – Sealing system of the Slide Gate Valve





2.2.3 STUFFING BOX DESIGN

see Fig. 2.2.3.1

The exit of the stuffing box at the upper bonnet is sealed by a stuffing box with a special packing ring set type GARLOCK QUICKSET 9001-M which is certified with RW TÜV accord. to "TA-LUFT" - section 3.1.8.4 (German Clean Air Act).

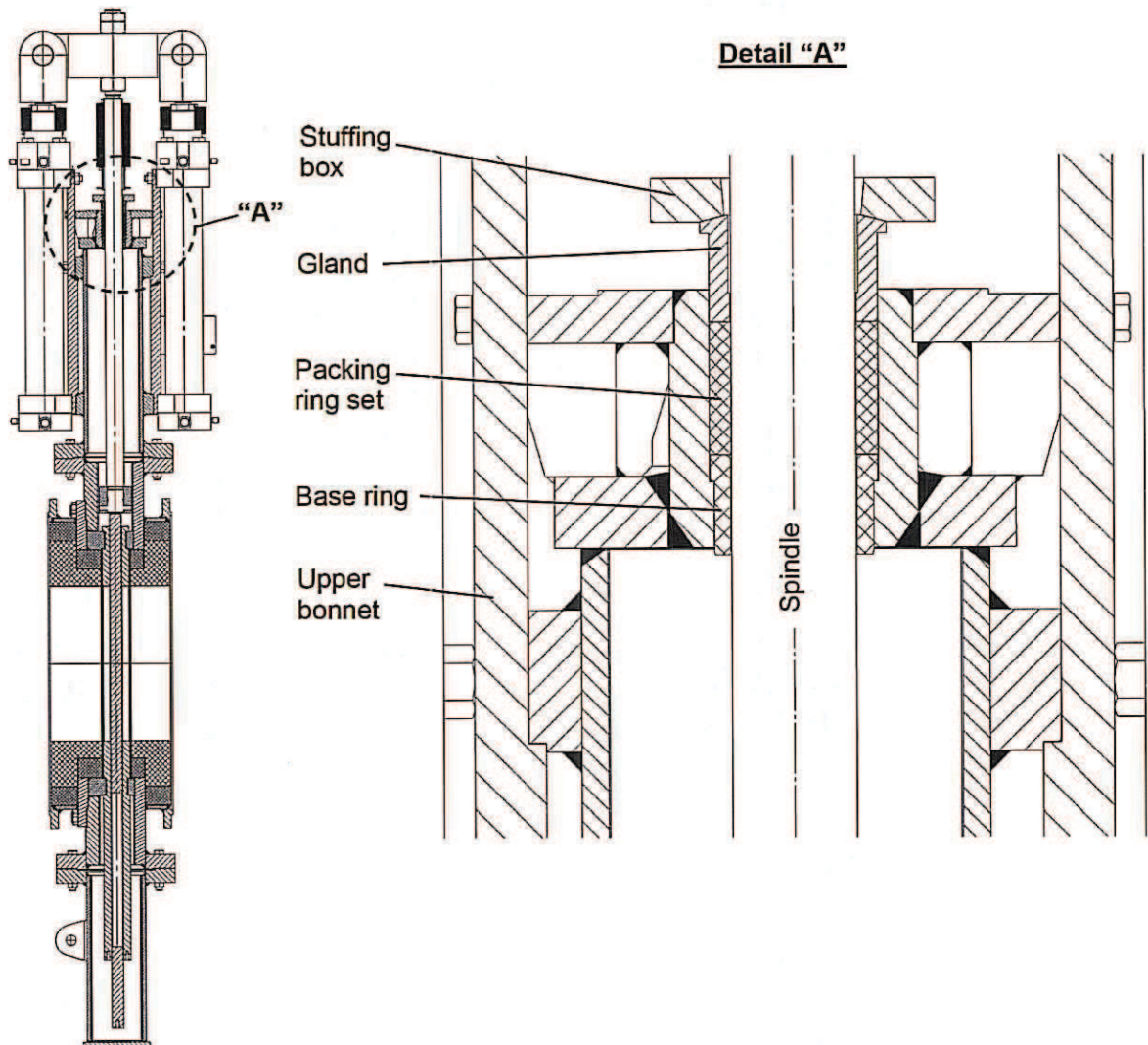
The required tightness with $1.0 \cdot 10^4 \text{ mbar} \times \text{l} / (\text{s} \times \text{m})$ was achieved by the manufacturer of the packing set on a representative test specimen with 25 bar internal pressure and 400°C valve temperature after more than 1000 cycles.

The max. measured leakage performed $2.1 \cdot 10^5 \text{ mbar} \times \text{l} / (\text{s} \times \text{m})$.

The Quickset 9001 - M is flexible constructed and is not necessary to become retorqued to fulfill a constant leakage.

In conjunction with an individual valve design and for long term operation it was approved that the Quickset 9001 - M performs equivalent comparing with a valve stem sealing with bellow seal and additional safety stuffing box unit.

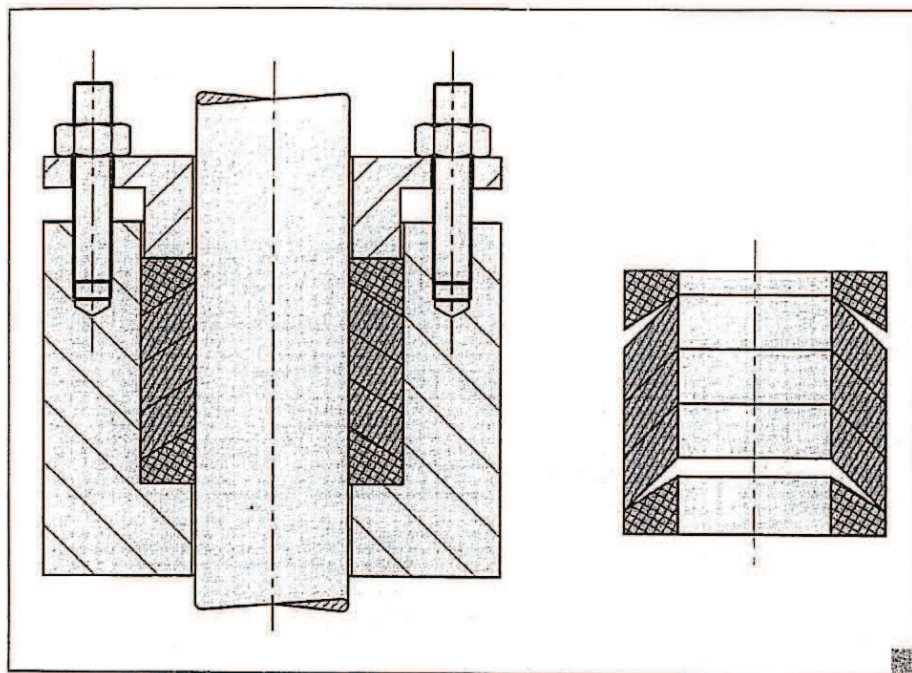
Fig. 2.2.3.1 – Stuffing box of the Slide Gate Valve





Garlock
Sealing Technologies

QuickSet 9001



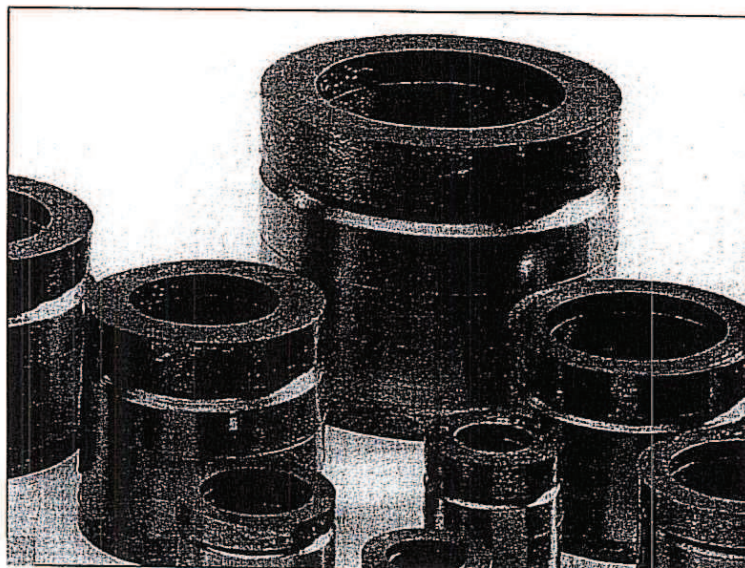
QuickSet 9001 combines the advantages of 9000 EVSP in a more compact design. A typical application would be a control valve that requires an easy installation and minimised contact friction.

The QuickSet 9001 combines the Garlock 1303 FEP packing material with the 9000 EVSP set, two products that are emission proven. The set exists of 5 rings only. 2 die formed adapter rings of the Garlock Packing Style 1303 FEP cover 3 pure graphite rings. All rings provide a similar conical shape like the 9000 EVSP. The varying densities permit a selective component compression and controlled radial flow the results in an effective sealing on both ID and OD. Comparing towards the 9000 EVSP each QuickSet ring performs as a sealing ring.

Sealing System	Installation	Emission Performance	Friction	Possible Retorque	Total Sealing Rings
5-Ring Flat Rings	One Step	Good	Good	Once	3
QuickSet	One Step	Best	Best	Several Times	5

Advantages of QuickSet 9001

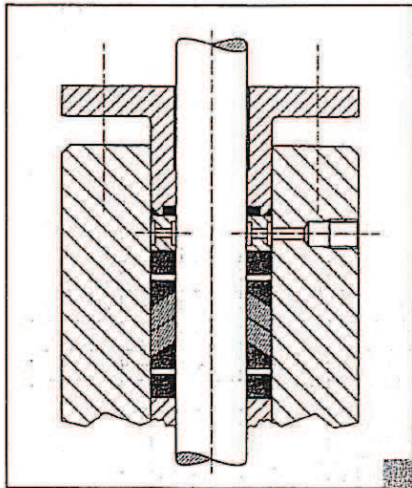
- Low emissions performance
- One step installation
- Lowest friction
- Maximum number of retorques
- Fire safe





Garlock
Sealing Technologies

Valve stem packing for the highest performance requirements



On the basis of 9000 EVSP and QuickSet 9001 Garlock can provide any individual design.

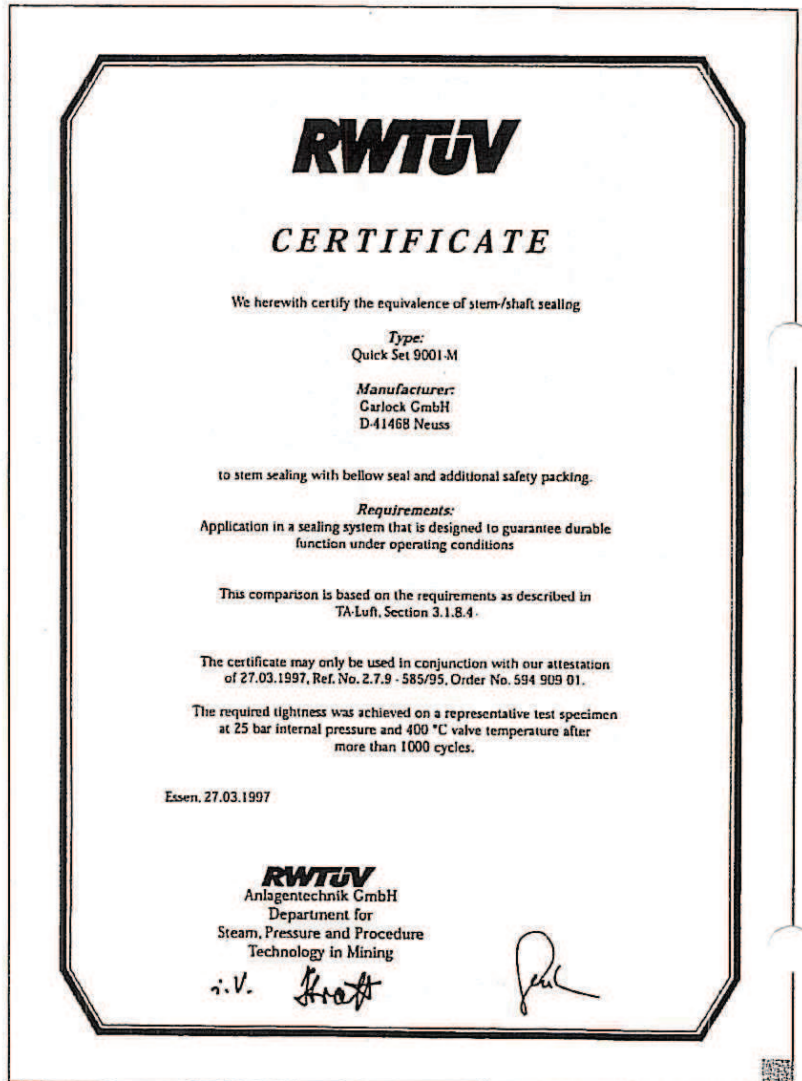
For example:

QuickSet 9001-M, certified with RWTÜV according to the TA Luft, Section 3.1.8.4
[German Clean Air Act].

The required tightness with $1,0 \cdot 10^{-4}$ mbar · l/l.s · ml was achieved on a representative test specimen with 25 bar internal pressure and 400°C valve temperature after more than 1.000 cycles.

The maximum measured leakage performed $2,1 \cdot 10^{-5}$ mbar · l/l.s · ml. The QuickSet 9001-M is flexible constructed and it is not necessary to become retorqued to fulfil a constant leakage.

In conjunction with an individual valve design and for long term operation it was approved that the QuickSet 9001-M performs equivalent comparing with a valve stem sealing with bellow seal and additional safety stuffing box unit.





2.2.4 DRIVE SYSTEM

See Fig. 2.2.4.1

The Slide Gate Valve is driven by two hydraulic cylinders, mounted on a support which is arranged at the upper bonnet.

The fork head of each cylinder is connected to a brace which is connected to the spindle.

The spindle itself is connected to the gate plate via spindle nut.

The cylinders are double acting with end dampers acc. to ISO 6022 and drive the gate plate in the endpositions OPEN / CLOSED.

Two inductive proximity switches for signaling the endposition OPEN / CLOSE of the valve are integrated in the cylinders, wired on a junction box.

The free spindle end is protected by a bellows.

The hydraulic pressure supply for the cylinders is provided by a separate hydraulic unit, equipped with hydraulic pump, bladder accumulators for pressure holding and all required electrical and hydraulic control devices.

Fail-Safe function :

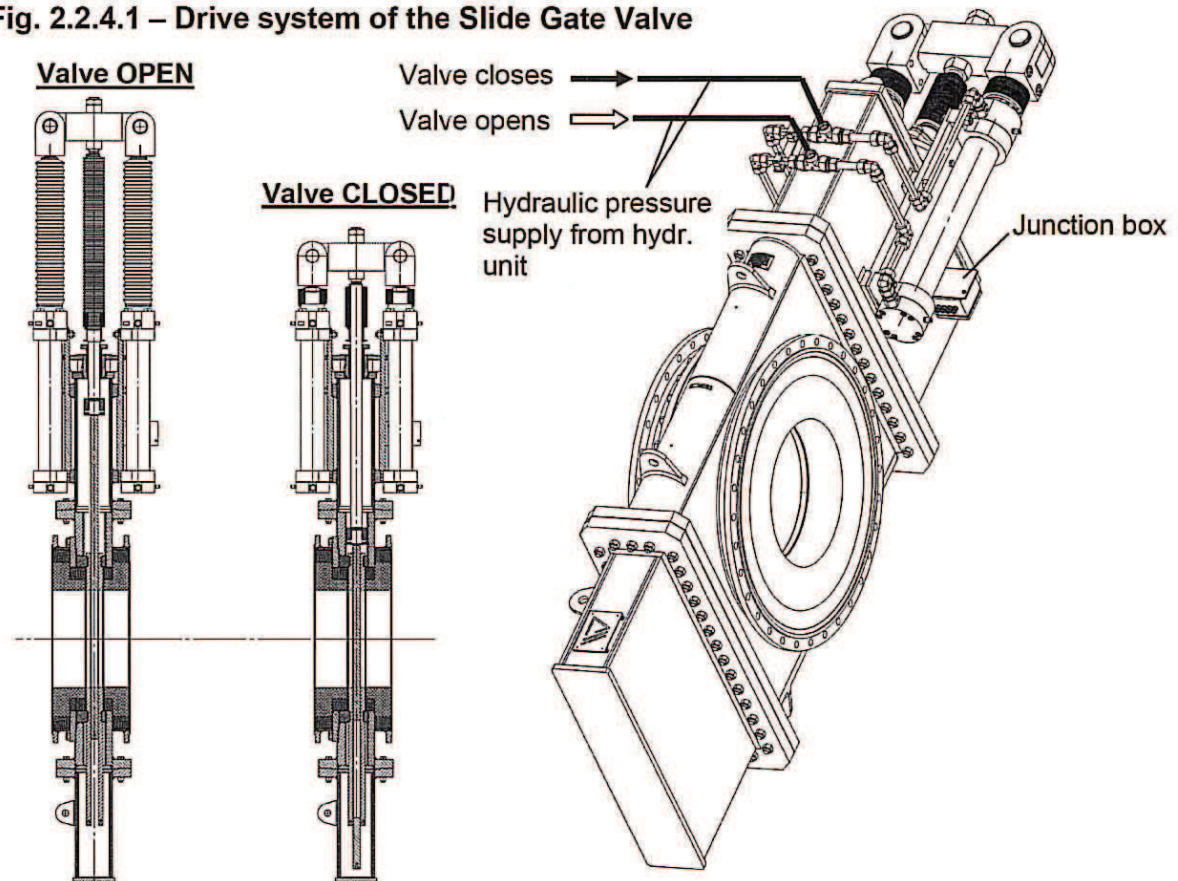
In case of a voltage drop or blackout (complete voltage loss) the valve will be closed **automatically** by the internal pressure stored in the bladder accumulator of the hydraulic unit.

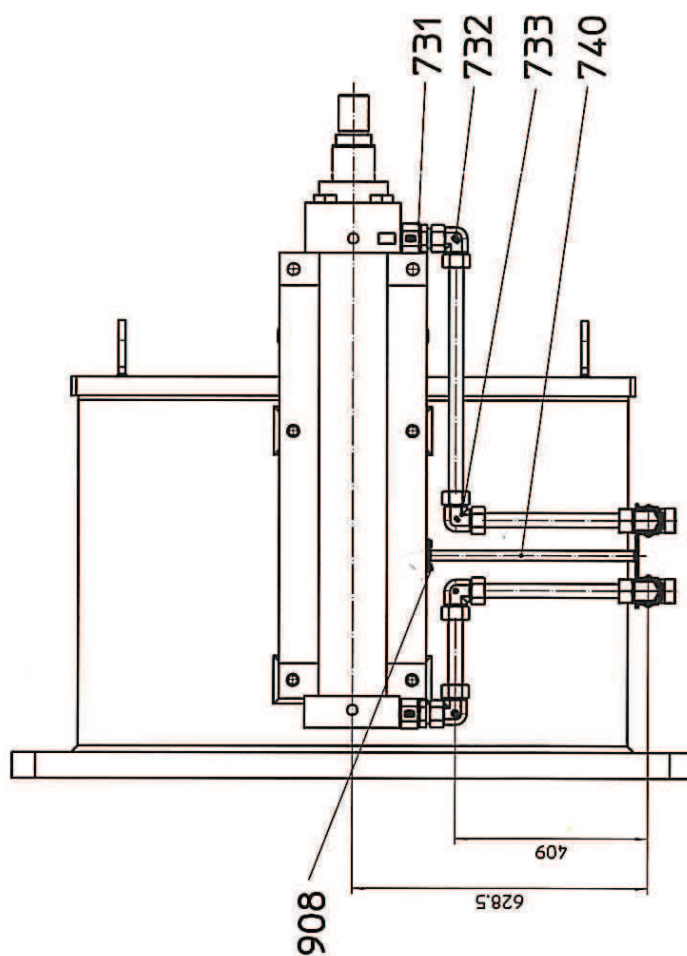
In this case an intervention from the outside is not possible !

Nevertheless the valve can be opened by a manual emergency pump, arranged in the hydraulic unit.

For a detailed Functional Description, PID's and full details about the hydraulic cylinder and hydraulic unit, please refer to Part 5 and Part 8.

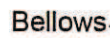
Fig. 2.2.4.1 – Drive system of the Slide Gate Valve







* = spare part





Spare Parts

Valve Pos.	01	02	03	04
DN	1100 / 600	610 / 540	1150 / 650	900
TAG-No.	KW01-QM002	GB01-QM001	KX01-QM001	CP01-QM001
Spare Part				
Pos. 119	Distance sheet	Distance sheet	Distance sheet	Distance sheet
Art.No.	2842749	2842794	2842776	2842795
Pos. 190	Gate plate	Gate plate	Gate plate	Gate plate
Art.No.	3328081	3328089	3328091	3328093
Pos.192	Sealing plate	Sealing plate	Sealing plate	Sealing plate
Art.No.	3328083	3328090	3328092	3328094
Pos.201	Spindle	Spindle	Spindle	Spindle
Art.No.	3329159	3329246	3329198	3329249
Pos.207	Spindle nut	Spindle nut	Spindle nut	Spindle nut
Art.No.	3329160	3329247	3329160	3329160
Pos. 400	Gasket RF28	Gasket RF28	Gasket RF28	Gasket RF28
Art.No.	2842750	2842786	2842777	2842796
Pos. 401	Gasket RF28	Gasket RF28	Gasket RF28	Gasket RF28
Art.No.	2842751	2842785	2842779	2842751
Pos. 402	Gasket RF28	Gasket RF28	Gasket RF28	Gasket RF28
Art.No.	2842752	2842787	2842780	2842797
Pos. 403*	Gasket RF28	Gasket RF28	Gasket RF28	Gasket RF28
Art.No.	2842753 only if required	2842788 only if required	2842781 only if required	2842798 only if required
Pos. 461	Packing set GARLOCK Quickset 9001	Packing set GARLOCK Quickset 9001	Packing set GARLOCK Quickset 9001	Packing set GARLOCK Quickset 9001
Art.No.	2002694	2320210	2002694	2002694
Pos. 809**	Hydr. cylinder	Hydr. cylinder	Hydr. cylinder	Hydr. cylinder
Art.No.	2842512	2842535	2842534	2842536

Pos.403* - Gasket RF28, thickness 0.5 mm - non imperative, only required if thickness of gasket pos.402 is insufficient for reaching correct tightness. In this case gasket pos.403 is arranged behind gasket pos.402.

Pos.809** - Hydraulic cylinder - for part list, please refer to Part 8, section 8.3.

