



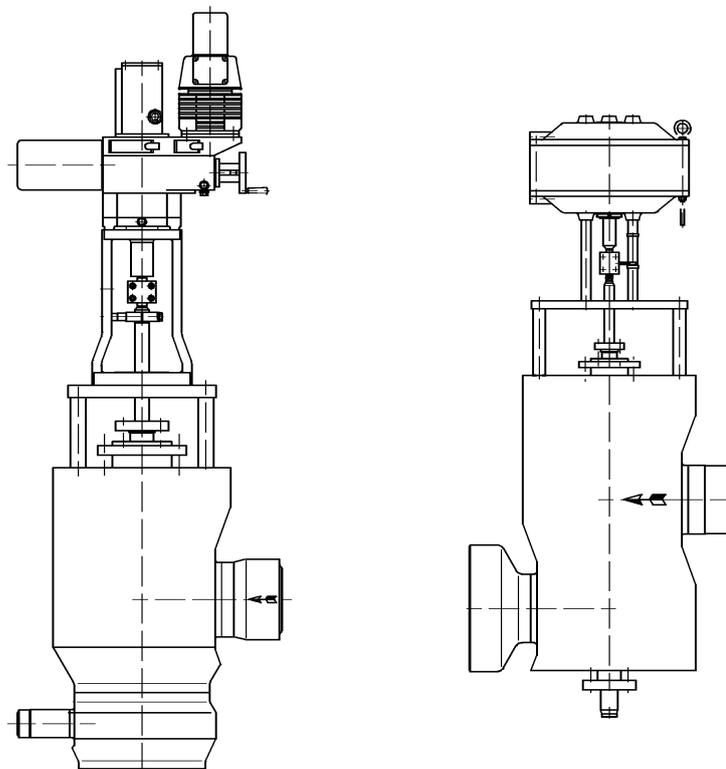
Operating Instructions

操作说明书

Series 400.11 / 400.39

Series 400.82 / 400.83

Series 400.84



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1 General Information 概述

1.1 Address of Manufacturer 制造厂商地址

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1.2 Right to alteration and copyright 修改与复制版权

Any regulations, guidelines, norms etc. stated in these operating instructions correspond to the state of information during preparation and are not subject to alteration services. It is the responsibility of the operator to ensure that the latest version is used at all times.

本说明书中所述任何规范、指导、标准以及准备工作要点等所述信息均不允许修改。操作者有责任始终确保其使用的操作说明书为最新版本。

The company reserves the right to carry out technical alterations and improvements in connection with any technical data, statements and images in these operating instructions at any time. Claims for alterations or improvements on already delivered valves will be excluded.

公司保留无论何时对本操作说明书中技术参数、叙述、图片进行有关技术改进和修改的权利。对于已交货的阀门的修改或改进不包括在本声明内。

Copyrights for these operating instructions as well as any rights referring to the possible grant of a patent, or utility-patented articles, shall remain the property of the manufacturer.

本操作说明书的复制权和其它任何权利依据专利许可证或应用专利产品，将归制造商所有。

1.3 Validity of operating instructions 说明书有效性

These operating instructions only apply to the valves Series 400.11, Series 400.39, Series 400.82, Series 400.83 and Series 400.84.

本操作说明书仅应用于 Series 400.11, Series 400.39, Series 400.82, Series 400.83 and Series 400.84.系列阀门的安装。

Please check that type designation and nameplate of valves match **before** any measures are taken, especially when ordering any accessories or spare parts!

请在采取任何措施**之前**，尤其是在订购阀门附属件及备件**之前**，首先检查其设计类型及阀门的铭牌。

The regulations, guidelines and notes referred to in these operating instructions apply to the European Union. Operators outside the EU are responsible for the observation of the rules as a practical basis for the handling of the fittings and have to adapt these to the regional / national regulations applicable for the installation site.

本说明书中的规范、指导及注释适用于欧盟范围。欧盟国家以外的操作者有责任对安装操作规范的可行性进行考察，确认其是否与施工现场应用的地区/国家规范相适应。

For any additional information, or if you should encounter any special problems which are not dealt with sufficiently in these operating instructions, please contact the supplier / manufacturer directly.

如您想获取更多信息或遇到任何特殊问题，本操作说明书未尽事项，请直接与供货商或制造商联系。

1.4 Safety instructions and regulations 安全指导与规范

1.4.1 Meaning of notes 注释的含义

-  **Hazard:** Signifies that there is a danger of death, severe bodily injury or considerable damage to property if adequate measures are not taken.
表示：如不采取充分的措施将有可能导致死亡、严重的人身伤害或设备财产损失等危险。
- Attention:** Signifies that there is a threat of damage to property or the environment through non-compliance. 表示：如不遵守操作规则将有可能导致设备财产的损坏或环境破坏。
-  **Note:** Signifies the hint of a possible advantage when recommendations are followed.
表示：采取如下建议将更有利于操作。

1.4.2 General safety instructions 安全总则

- It is the responsibility of the operator that current regulations for labour protection, the prevention of accidents and EU regulations are observed during the installation, operation and maintenance of any fittings (1.9 Accessories).
任何配件（1.9 附属件）在安装、操作和维护期间，操作者应承担现时劳动保护规范、避免事故规范和欧盟规范的监督遵守责任。
- Any persons put in charge of any measures described in these operating instructions must have read and comprehended these instructions.
任何人员在执行本操作说明书所描述的任何措施过程之前必须阅读并理解本操作说明书。
- Installation, service and maintenance personnel have to practise safe working techniques during any measures taken and have to avoid any working practices which endanger the safety of persons or valves or would damage other property in any way.
安装、服务和维护人员进行任何操作时必须具备安全实践操作技能，避免任何危及人身或阀门安全的操作行为，或避免以任何方式损坏设备财产。
- **Before** the start of any maintenance and / or repair work, any electric cables leading to any valve operating gear must be disconnected in accordance with EU regulations by competent personnel. Also ensure that the valves are free of pressure, cooled down and empty.
在开始任何维护/或修理工作之前，必须由具有良好技能的操作人员根据欧盟规范将所有与阀门操作齿轮有连接的所有电缆断开。同时，保证阀门为无压力、冷却和清空状态。

 **Hazard:**

The valves are pressurized and hot during operation. 阀门在操作期间被加压并且灼热。

Non-compliance with warning signs could result in death, severe injury or damage to property. 不遵守警告指示将会导致严重伤亡或设备损坏。

Only competent personnel (see 1.5.3) must be allowed to work on the valves.

These persons must have thorough knowledge of all warnings, the installation and the repair measures pointed out in these operating instructions.

The faultless and safe operation of the valves requires professional shipping, storage, installation and mounting as well as careful, safety-conscious operation and maintenance.

只有具备良好技能的人员（见 1.5.3）才允许进行阀门操作。

这些人员必须具备彻底掌握本操作说明书指出的一切警告、安全和修理操作的知识。

无差错安全地阀门操作工作要求专业的装运、存储、组装和安装以及仔细、具安全意识地操作和维护。

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The notes above and the warnings below do not take into consideration any additional regional, local or in-house regulations of companies and might have to be supplemented by the operator at his own responsibility. 以上注释及下面所述警告范围不包括任何其它地区、地方或公司内部的操作规范，操作者将承担补充责任。

1.4.3 Qualified personnel 人员资格

According to these operating instructions a person is qualified if he/she is familiar with the installation, mounting, commissioning and operation or maintenance of valves and possesses the recommended qualifications for the work. The necessary and stipulated qualifications include among other things:

根据本操作说明书，合格的操作人员应是，他/她熟知阀门的组装、安装、交验及操作或维护并具备操作所要求的其它必要和规定的技能:

Training / instruction or authorization to close and open circuits and devices / systems in accordance with EN 60204 (DIN VDE 0100 / 0113 - German Industrial Standards, Ass. of Electrical Engineers) and accordance the Standards of Safety Engineering.

根据 EN 60204 (DIN VDE 0100 / 0113 – German Industrial Standards, Ass. of Electrical Engineers) 和 the Standards of Safety Engineering，培训/指导或授权进行开关回路和装置/系统。

- Training or instruction in accordance with the Standards of Safety Engineering with respect to maintenance and use of adequate safety and the safety of labour equipment.
根据安全工程标准（the Standards of Safety Engineering）培训或指导有关劳保设备安全及维护使用安全操作。
- First aid training.
急救措施培训

1.5 Warranty 质量保证

For the extent and duration of any warranties please see "terms and conditions of delivery" supplied by the manufacturer. At any time the latest version at the date of delivery will apply.

No liabilities will be accepted for damages to valves which are the result of one or more of the following causes: 关于保修期的范围和期限请见制造商提供的交货条款 "terms and conditions of delivery"。无论何时都将采用交货日期的最新版本。

下述一个或以上原因导致的阀门损坏，将不承担保修义务:

- **Ignorance of or non-compliance with these operating instructions.**
忽视或未按本操作说明书规范进行操作。
- Insufficiently qualified installation, operating or maintenance personnel.
不满足条件的安装、操作或维护人员。
- Common wear and tear.
普通或磨损着装。
- Faulty or careless treatment of the valves.
不正确或粗心地对待阀门。
- Chemical, electrochemical and / or electrical influences.
化学、电化学和/或电气影响。

In addition to this the manufacturer will not accept any liability for:

另外，对于以下情况，制造商将不承担任何义务:

- Non-compliance with regulations for the safety of labour, prevention of accidents, EU and any other safety regulations. 未遵守劳动安全、事故避免、欧盟规范及任何其他安全规范。
- Improper changes or reconstructions of the valves without prior consent by the manufacturer.
未经制造商事先同意对阀门进行的不适当修改和重装。
- Faulty mounting, faulty commissioning or improper operation.
- 安装错误、交验错误或不当操作。

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- Unsuitable or improper application, any other use than the use intended as well as the use under other than the agreed application conditions.
- 超过认同的应用条件范围之外的任何不适合或不恰当的应用和使用。

Any violations against the restrictions above are, in the case of injury to persons or damage to property, entirely at the operator's risk.

任何违背上述条件并导致人身伤害或设备财产损坏的行为将全部由操作者承担风险。

1.6 Sectional drawings 剖面图

The sectional drawings below show examples of the basic construction of valves.

下图所示为阀门基本结构。

1.6.1 Sectional drawing example of Series 400.11 剖面图释

The Series 400.11 is mounted in a cast, corner type, 3 flange body. Series 400.11 is build in corner- and in Z-type. Two type from water injection are build: full cone nozzle (Image 1 a) and orifice tube (Image 1 b).

400.11 系列为铸件材料，角型，由三个法兰连接组成的阀体。400.11 系列为 Z 型阀，两路喷水调节，为全锥形喷嘴（图 1a）和管口（图 1b）。

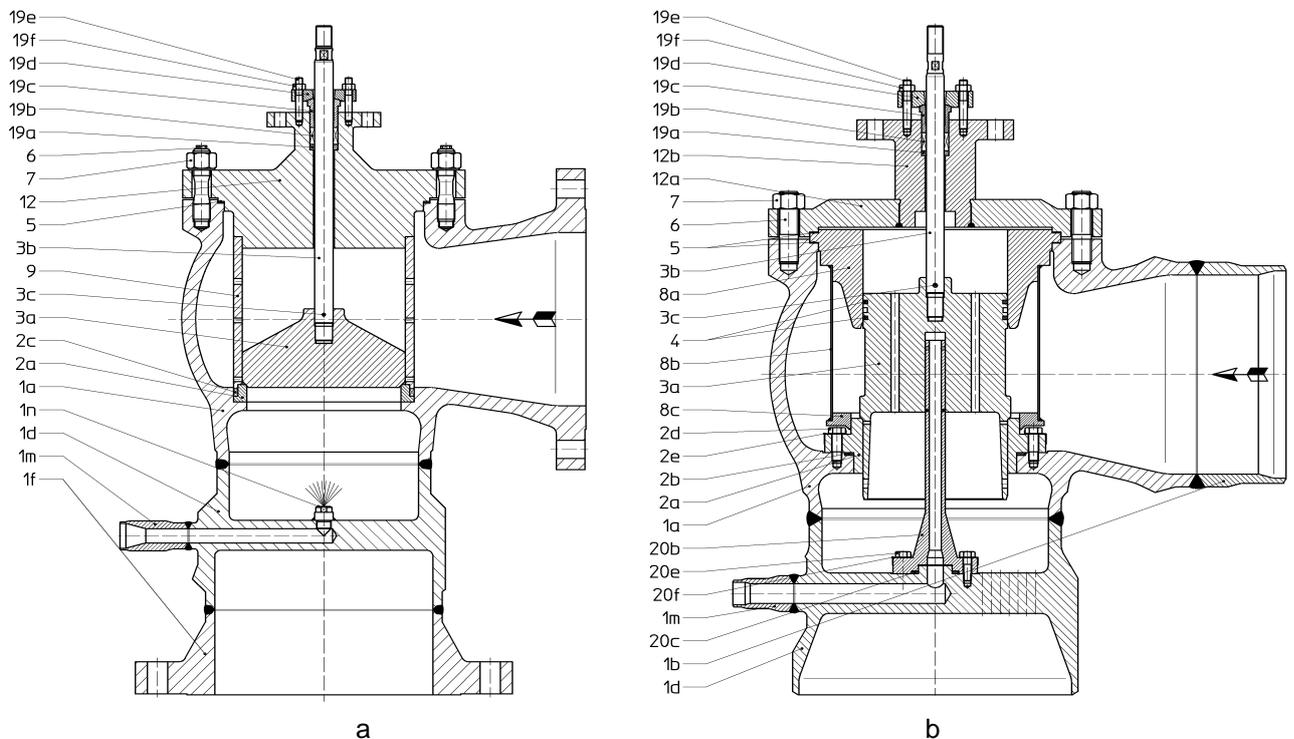


Image 1: Valve Series 400.11, model in corner type

Item 项号	Designation 名称	Item 项号	Designation 名称
1	Body consisting of: 阀体包括:	8	Guide bush consisting of: *导向套包括
1a	Body 阀体	8a	Guide bush 导向套
1b	Buttweld end 焊接段	8b	Strainer 滤网
1d	Perforated disk 穿孔阀片	8c	Ring 环形圈
1f	Welding neck flanges 焊接颈法兰	9	Perforated cage 穿孔笼
1m	Injection pipe 喷水管	12	Bonnet consisting of: 阀盖包括:
1n	Full cone nozzle 全锥形喷嘴	12a	Cover 封盖
2	Valve seat consisting of: *阀座包括:	12b	Nave 中心轴
2a	Valve seat 阀座	19	Stem packing consisting of: 阀杆填料
2b	Gasket 垫圈	19a	Bottom ring 底环

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2c	Gasket 垫圈	19b	Stem packing * 阀杆填料
2d	Hexagon head screw 六角螺纹	19c	Stuffing bush 填料衬套
2e	Ring 环形圈	19d	Stuffing bush flange 填料衬套法兰
3	Plug with stem consisting of: * 阀芯包括	19e	Stud bolt 螺栓
3a	Plug 阀芯	19f	Hexagon nut 六角螺母
3b	Valve stem	20	Orifice tube consisting of : 口管包括
3c	Cylindrical pin 圆柱销	20b	Orifice tube 口管
4	Piston sealing * 阀瓣密封	20c	Gasket * 垫圈
5	Gasket * 垫圈	20e	Hexagon head screw 六角螺纹
6	Stud bolt 螺栓	20f	Ring 环形圈
7	Hexagon nut 六角螺母		
* = spare parts 备件			

Table 1: Parts list for Image 1

1.6.2 Sectional drawing example of Series 400.39 剖面图释

Series 400.39 is mounted on a wrought iron, corner type body. Series 400.39 is build in corner- and in Z-type. 400.11 系列为铸件材料，角型，由三个法兰连接组成的阀体。400.11 系列为 Z 型阀。

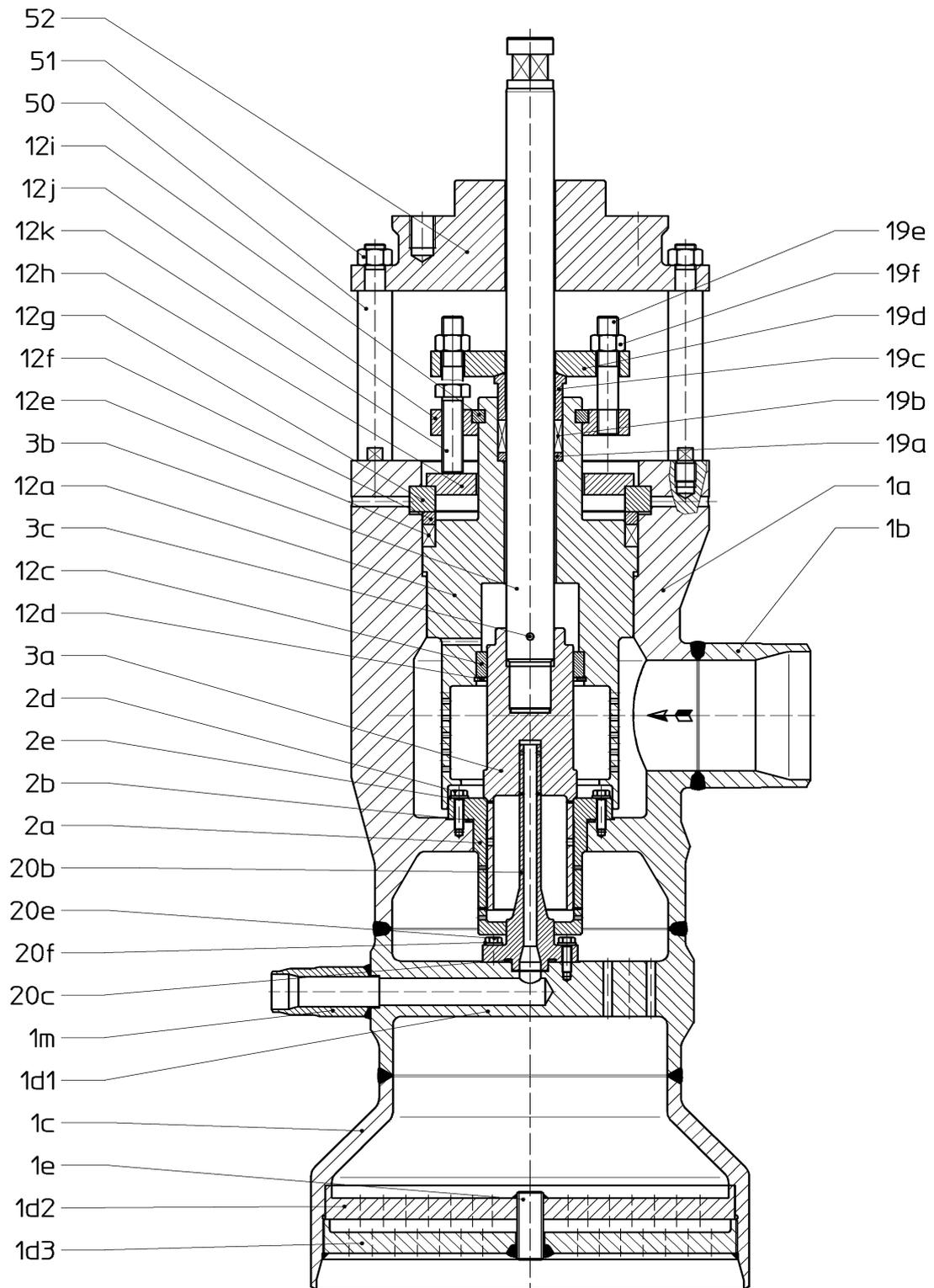


Image 2: Valve Series 400.39, model with orifice tube

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Item 项号	Designation 名称	Item 项号	Designation 名称
1	Body consisting of: 阀体包括	12e	Gasket * 垫圈
1a	Body 阀体	12f	Pressure ring 压力环
1b	Buttweld end 焊接段	12g	Split ring (4) 开口环(4)
1c	Funnel 漏斗	12h	Pressure plate 压力板
1d1	Perforated disk 1 穿孔阀片 1	12i	Split ring (2) 开口环 (2)
1d2	Perforated disk 2 穿孔阀片 2	12j	Plate 板
1d3	Perforated disk 3 穿孔阀片 3	12k	Hexagon head screw 六角螺纹
1e	Threaded bolt 螺栓	19	Stem packing consisting of: 阀杆填料包括
1m	Injection pipe 喷水管	19a	Bottom ring 底环
2	Valve seat consisting of: * 阀座包括	19b	Stem packing * 阀杆填料
2a	Valve seat 阀座	19c	Stuffing bush 填料衬套
2b	Gasket 垫圈	19d	Stuffing bush flange 填料法兰
2d	Hexagon head screw 六角螺纹	19e	Stud bolt 螺栓
2e	Ring 环形圈	19f	Hexagon head screw 六角螺纹
3	Plug with stem consisting of: * 阀芯包括	20	Orifice tube consisting of: 口管包括:
3a	Plug 阀芯	20b	Orifice tube 口管
3b	Valve stem 阀杆	20c	Gasket * 垫圈
3c	Cylindrical pin 圆柱销	20e	Hexagon head screw 六角螺纹
12	Bonnet consisting of: 阀盖包括	20f	Ring 环形圈
12a	Cover 封盖	50	Spacer plug 取电流装置阀芯
12c	Guide bush 导向衬套	51	Hexagon nut 六角螺母
12d	Retaining ring 保持环	52	Reception 接收器
* = spare parts 备件			

Table 2: Parts list for Image 2

1.6.3 Sectional drawing example of Series 400.82 (Series 400.83) 剖面图释

Series 400.82 and series 400.83 are mounted on a wrought iron body. Series 400.82 is build in corner-type and Series 400.83 is build in Z-type. The especially is the jammed seat. Cooling water injection through full cone nozzle (Image 1 a), orifice tube (Image 1 b) or integrated atomizer unit (Image 4).

400.83 和 4.00.82 系列为锻造铁阀体安装。400.82 系列是角型阀门，400.83 系列是 Z 型阀门。它的特别之处是嵌入式阀座，经全锥形喷嘴（图 1 a），口管（图 1b）或综合喷雾器（图 4）喷出冷却水。

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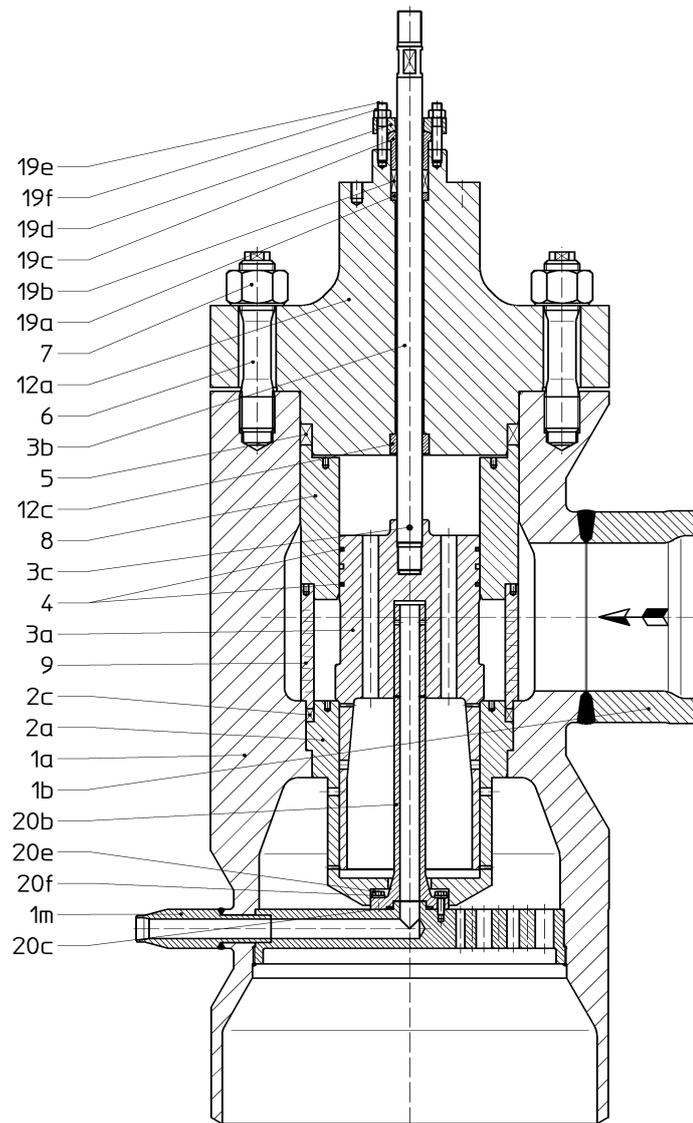


Image 3: Valve Series 400.82, model with a orifice tube

Item 项号	Designation 名称	Item 项号	Designation 名称
1	Body consisting of: 阀体包括	9	Perforated cage 穿孔笼
1a	Body 阀体	12	Bonnet consisting of: 阀盖包括
1b	Buttweld end 焊接段	12a	Cover 封盖
1m	Injection pipe 喷水管	12c	Guide bush 导向衬套
2	Valve seat consisting of: * 阀座包括	19	Stem packing consisting of: 阀杆包括
2a	Valve seat 阀座	19a	Bottom ring 底环
2c	Gasket 垫圈	19b	Stem packing * 阀杆填料
3	Plug with stem consisting of: * 阀芯包括	19c	Stuffing bush 填料衬套
3a	Plug 阀芯	19d	Stuffing bush flange 填料法兰
3b	Valve stem 阀杆	19e	Stud bolt 螺栓
3c	Cylindrical pin 圆柱销	19f	Hexagon nut 六角螺母
4	Piston sealing * 阀瓣密封	20	Orifice tube consisting of: 口管包括:
5	Gasket * 垫圈	20b	Orifice tube 口管
6	Stud bolt 螺栓	20c	Gasket * 垫圈
7	Hexagon nut 六角螺母	20e	Hexagon head screw 六角螺纹
8	Guide bush * 导向衬套	20f	Ring 环形圈

* = spare parts

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Table 3: Parts list for Image 3

1.6.4 Sectional drawing example of Series 400.84 剖面图释

The series 400.84 are mounted in the above explained types. These series is build with an integrated atomizer unit for the cooling water injection.

400.84 系列为上述阀门类型安装。这些系列带有综合喷雾器装置进行冷却水喷射。

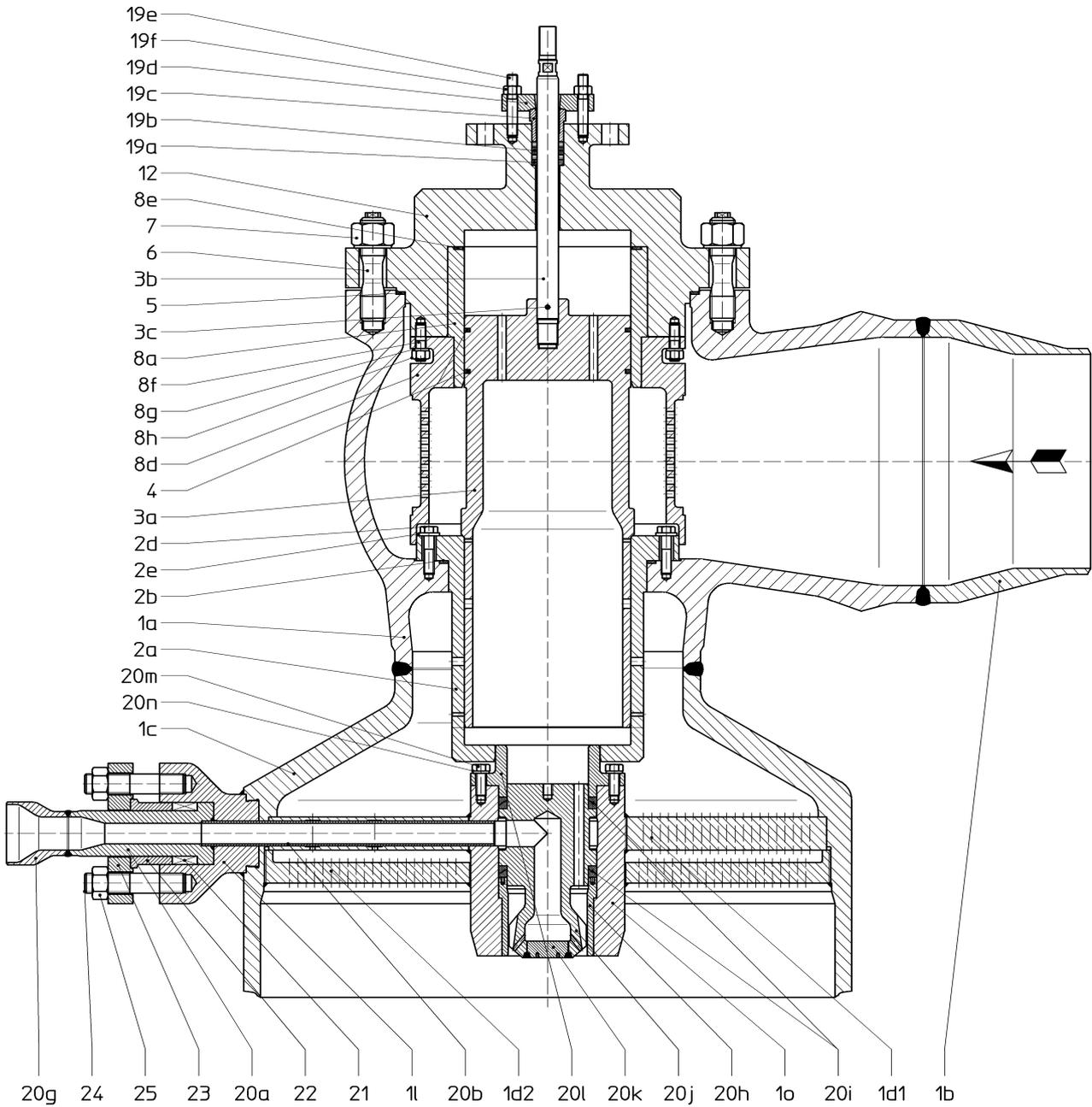


Image 4: Valve Series 400.84, model in corner, cast iron type (Series 400.11)

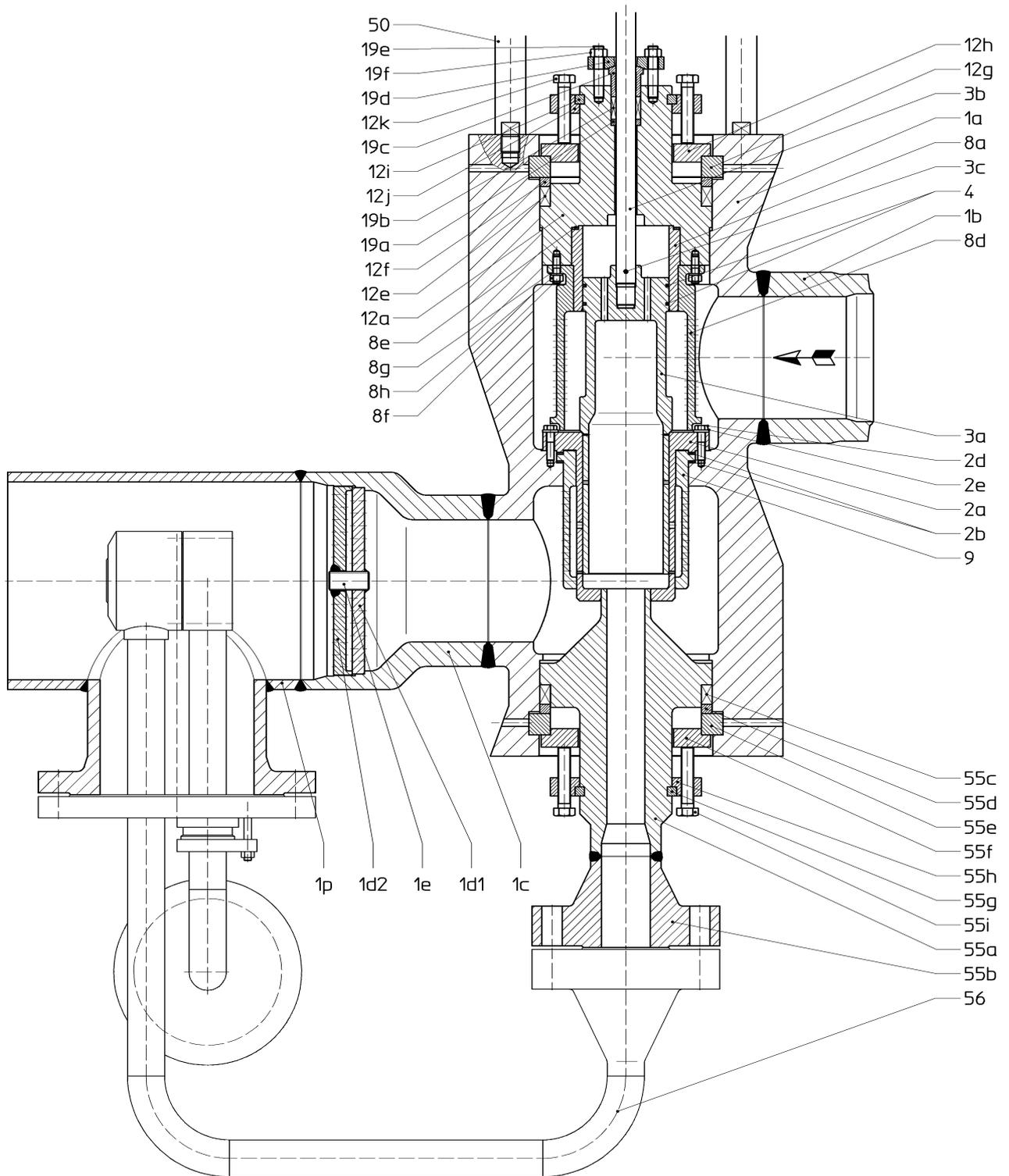


Image 5: Valve Series 400.84, model in Z- wrought iron type (BR 400.39)

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Item 项号	Designation 名称	Item 项号	Designation 名称
1	Body consisting of: 阀体包括:	12j	Plate 阀板
1a	Body 阀体	12k	Hexagon head screw 六角螺纹
1b	Buttweld end 焊接段	19	Stem packing consisting of: 阀杆填料
1c	Funnel 漏斗	19a	Bottom ring 底环
1d1	Perforated disk 1 穿孔阀片 1	19b	Stem packing * 阀杆填料
1d2	Perforated disk 2 穿孔阀片 2	19c	Stuffing bush 填料衬套
1e	Threaded bolt 螺栓	19d	Stuffing bush flange 填料衬套法兰
1l	Bonnet 阀盖	19e	Stud bolt 螺栓
1o	Operating steam body 蒸汽控制体	19f	Hexagon nut 六角螺母
1p	Pipe with connection 管子连接	20	Orifice tube consisting of: 口管包括:
2	Valve seat consisting of: * 阀座包括	20a	Injection pipe 喷水管
2a	Valve seat 阀座	20b	Orifice tube 口管
2b	Gasket 垫圈	20g	Buttweld end 焊接段
2d	Hexagon head screw 六角螺母	20h	Bushing outlet 衬套出口
2e	Ring 环形圈	20i	Gasket * 垫圈
3	Plug with stem consisting of: * 阀芯包括	20j	Nozzle 喷嘴
3a	Plug 阀芯	20k	Threaded ring 螺纹环
3b	Valve stem 阀杆	20l	Bushing inlett 衬套进口
3c	Cylindrical pin 圆柱销	20m	Hexagon head screw 六角螺纹
4	Piston sealing * 阀瓣密封	20n	Ring 环形圈
5	Gasket * 垫圈	21	Packing * 填料函
6	Stud bolt 螺栓	22	Stuffing bush 填料衬套
7	Hexagon nut 六角螺母	23	Stuffing bush flange 填料法兰
8	Guide bush consisting of: 导向衬套包括	24	Stud bolt 螺栓
8a	Guide bush * 导向衬套	25	Hexagon nut 六角螺母
8d	Perforated disk 穿孔阀片	50	Spacer plug 隔离阀芯
8e	Gasket * 垫圈	55	High pressure bonnet cons. of: 高压阀盖
8f	Stud bolt 螺栓	55a	High pressure cover 高压封盖
8g	Ring 环形圈	55b	Welding neck flanges 焊接颈法兰
8h	Hexagon nut 六角螺母	55c	Gasket * 垫圈
9	Perforated disk 穿孔阀片	55d	Pressure ring 压力环
12	Bonnet consisting of: 阀盖包括:	55e	Split ring (4) 开口环
12a	Cover 封盖	55f	Pressure plate 压力板
12e	Gasket * 垫圈	55g	Split ring (2) 开口环
12f	Pressure ring 压力环	55h	Plate 阀板
12g	Split ring (4) 开口环	55i	Hexagon head screw 六角螺纹
12h	Pressure plate 压力板	56	Steam assisted desuperheater 助减温蒸汽
12i	Split ring (2) 开口环		

* = spare parts 备件

Table 4: Parts list for Image 4 and Image 5

1.7 Identification of valves 阀门识别

On the body or upper part of the valves you will find the following identifications:

在阀体或上半部，您将会找到下列身份说明：

- nominal width 公称宽度
- PN / class identification with or without the permissible maximum temperature (TS) or permissible maximum temperature and permissible maximum pressure as a pair of variates
每一对种类中，PN / 身份等级带有（或无）最大允许温度（TS）范围或最大允许压力
- material of body 阀体材质
- name of manufacturer (HORA) 制造商名称 (HORA)
- cast number 铸造号码
- product name (Series and/or manufacturer-no.) 产品名称(系列和/或制造商号码)
- flow direction arrow, if required 流向箭头，如有要求
- ring joint number, if required 连接号码，如有要求
- CE identification (for valves from category I in accordance with 97/23/EU onwards only)
CE 标识(阀门种类，仅根据 97/23/EU)

The PN / Class identification in accordance with EN 1092 and EN 12516-1 sets the minimum and maximum pressure/temperature limits for the body material.

PN 公称压力根据 EN 1092 和 EN 12516-1 设定阀体的最低最高压力/温度。

If the valve has no definite PN or class identification the permissible maximum temperature (TS) and maximum pressure (PS) are stated as a pair of variates.

如果阀门上没有明确的 PN 等级表示,则会表示出可能的最高试验温度和可能的最高试验压力。

识别信息体现在阀门以下几个地方:

- 完整的信息表.(阀体或阀门上部)
- 在阀体凹槽处的铭牌
- 金属的标识牌上(流动方向, 安全注释等需要仔细检查), 这些都安装在阀门上,从某种程度上减少意外损失。

1.7.1 Notes on the nameplate 铭牌注释

The nameplates provided are made of CrNi steel. Image 6 shows the print (blue / RAL 5010) of the plates. The additional details are engraved in the nameplates:

铭牌是用 CrNi 钢做成. 图片 6 显示的是打印出来的(蓝色 / RAL 5010)的铭牌, 其他的详细资料刻在铭牌上。

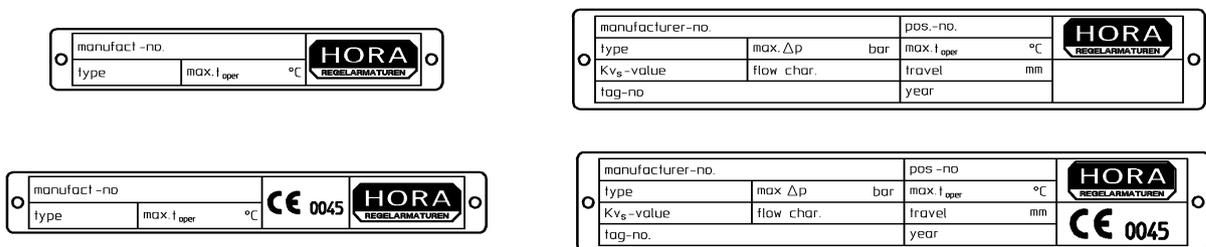


Image 6: Nameplates without and with CE identification

The terms have the following meaning: 名词解释如下:

1 General Information

- **manufacturer-no.:** Shows the allocation to a certain order. The engraved number consists of a number with at least 8 digits. The first two digits show the last two digits of the valves' year of manufacture. Example: 02210330 would be a valve from the year 2002 (as on control valve data sheet)
表示该阀门的订单号. 该数字组合有至少 8 位数字. 头两位数字表示阀门的制造日期中年份的最后两位, 举例:02210330 表示该阀门的制造年份是 2002 年(该数字同样出现在调节阀的参数表中)
- **type:** Shows the model of valve. (as on control valve data sheet)
表示阀门的型号(该数字同样出现在调节阀的参数表中)
- **max. t_{oper}:** Shows the maximum operating temperature. (as on control valve data sheet)
表示最高运行温度(该数字同样出现在调节阀的参数表中)
- **CE₀₀₄₅:** CE identification with code of the stated place 0045 (TÜV Hannover/Sachsen-Anhalt) CE 识别规定位置的代码.
- **pos.-no.:** Shows the item no. of the valve. (as on control valve data sheet)
表示阀门的位号(该数字同样出现在调节阀的参数表中)
- **max.Δp:** Maximum permissible pressure difference reduction in valve during operation. (as on control valve data sheet) 表示阀门运行时可能的最大压差(该数字同样出现在调节阀的参数表中)
- **Kv_S-value:** Kv_S value (as on control valve data sheet)
阀门的流通能力(该数字同样出现在调节阀的参数表中).
- **Flow char.:** Shows the steady state characteristic (as on control valve data sheet)
表示阀门中介质的流量特性(该数字同样出现在调节阀的参数表中).
- **travel:** Shows the nominal stroke (as on control valve data sheet)
表示阀门的行程(该数字同样出现在调节阀的参数表中).
- **tag-no.:** Shows the item number of the valve in the system (as on control valve data sheet)
表示阀门在系统中的序列号. (该数字同样出现在调节阀的参数表中)
- **year:** Shows the year of manufacture of the valve 表示阀门的制造年份

1.8 Test pressure 压力试验

For bodies made of cast iron or steel casting with flange connections the maximum permissible pressure is determined by the appropriate pressure level (EN 1092, EN 12516-1). The test pressure would therefore be the 1.5-fold of the permissible pressure at room temperature.

对于阀体材质为铸钢或铸铁并且是法兰连接其可能的最大压力是由适当阀门等级(EN 1092, EN 12516-1)决定的. 因此阀门的测试压力为常温下该阀门最大压力的 1.5 倍.

If in addition to this the customer has stated outlay values for pressure and temperature, or if no other values exist, the formula below would be relevant: 除此之外如果用户规定了阀门的压力和温度, 又或者没有其它阀门存在, 则可以应用以下公式进行计算:

$$PT = 1.5 * PS_t * R_{p0.2} / R_{p0.2t}$$

For this applies: 提供以下信息

- **PT** Test pressure 测试压力
- **PS_t** permissible maximum pressure (outlay pressure supplied by customer) 可能的最大压力(用户规定了压力)
- **R_{p0.2}** 0.2% expansion limit at 20°C 20°C 下 0.2%的冗余设计
- **R_{p0.2t}** 0.2% expansion limit at temperature TS in °C (outlay temperature supplied by customer)
测试温度下 0.2%的冗余设计(用户规定了温度)

If the generated test pressure deviates from the previously stated, the body will additionally show the generated test pressure (PT). 如果进行的测试压力偏离了先前规定的压力,则阀体上会标识出所进行的测试压力.

1.9 Accessories 附属件

Possible accessories might be: 提供附属件范围:

- Electrical linear actuator 电动线性执行器
- Pneumatic linear actuator 气动线性执行器
- Multiturn actuators with yoke fitting (threaded bush A or tip jack B1)
装有操纵柄的多转向执行器 (螺纹衬套 A 或 尖端夹具 B1)
- Manual adjustment 手动调节
- Positioner 定位器
- Positioner feedback 定位器反馈
- Limit switch 限位开关
- Filter regulator 过滤调节器
- 3/2-directional solinoid valve 3/2 向螺线管阀
- 3/2-directional pneumatic valve 3/2 向气动阀
- Interlock valve 嵌锁阀
- Booster 升压器

For instructions on installation and control please refer to the respective operating instructions of the accessory. 安装及控制说明，请参照各操作说明书的附属件一项。

2 Transport, Storage and Handling 运输、仓储及吊装

Please observe the following rules when transporting or storing the valves:

当运输或储存阀门时请遵守以下规则:

Store the valves in a dry place until installation. 在干燥的地方储存阀门直到安装.

- The transport and storage temperature should be kept between $-20\text{ }^{\circ}\text{C}$ und $+65\text{ }^{\circ}\text{C}$.
阀门运输和储存时温度必须保持在 $-20\text{ }^{\circ}\text{C}$ 到 $+65\text{ }^{\circ}\text{C}$ 之间.
- Protect the valves against force (impact, shock, vibrations etc.), especially around the valve spindle.
保护阀门免受外力(例如撞击, 震动, 摇动等), 特别的阀门周围的用来固定的锭子.
- Any damages to corrosion protection (paintwork, oiled surfaces etc.) are to be remedied immediately.
任何对防腐蚀(如涂油漆, 表面涂油等)地方的破坏必须立即修补.
- Do not store more than 6 months. 储存期不能超过 6 个月.
- The drain plugs fitted in the interior of the valves for the protection of the flanges must not be removed before reaching the installation site. 为防止阀门内部进水而在法兰连接处放置的塞子在抵达安装地点前不能卸下.

For valves over 25 kg make sure that mounting rings for chain hoists are fitted at an adequate height above the installation site. It would be even better if sliding rails or swivel arms with a hoist were available at the installation site. 对于阀门超过 25kg 必须确定用来固定吊阀门的铁链装配环在安装地点上方的适当的高度. 在阀门的安装地点最好油一个可滑行的铁轨或一个可吊重物的旋转装置.

Image 7 shows examples of handling methods during the fitting of valves.

图 7 所示为装配阀门的操控方法举例.

In image 7 a the straps have to be wound round the spacer plug. To keep the valves in the position shown and to prevent vertical tipping, the straps have to set every 120 ° . 如图 7a 所示, 链索必须缠绕在隔离阀芯的周围. 将阀门保持在如图所示位置, 为防止纵向倾斜, 每根链索必须成 120° .

In image 7 b the straps have to be wound round the body. Strap 3 is used to keep the valves horizontal. It is important that no strap is fastened to the stem. 如图 7b 所示, 链索必须绑扎在阀体上. 链索 3 是用来保持阀门横向平衡. 重要的是不要使链索过紧使阀杆受力.

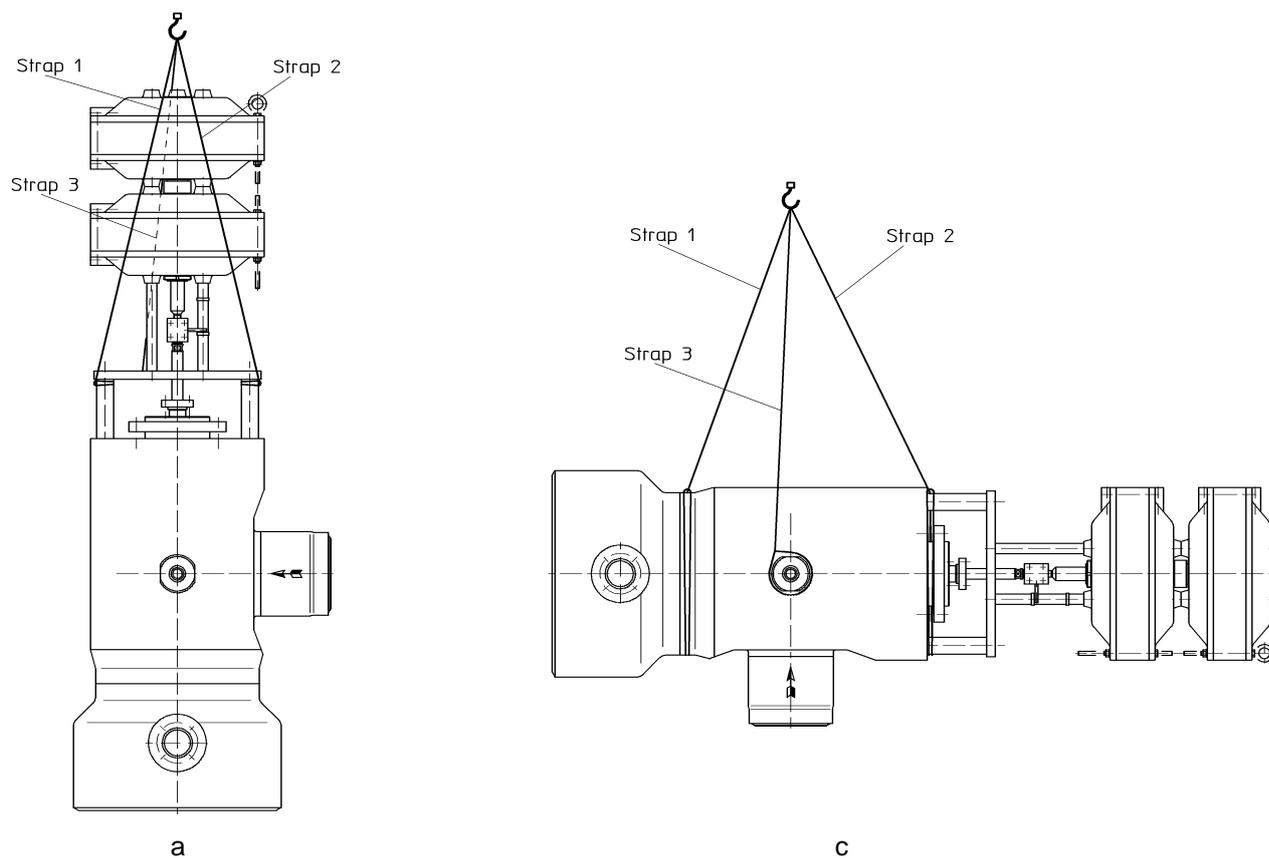


Image 7: Hoisting of valves for installation in pipeline

⚠ Hazard:

The eyes at the pneumatic activator attachment should only be used for lifting the activator off the valves. They must not be used as hoisting eyes for the entire valves. 注意气动执行器的附加装置应该只能用于吊起执行器离开阀门. 它们不能用于吊起整个阀门

3 Description, Technical Data 阀门描述及技术参数

3.1 Function and mode of working 功能及工作模式

The valves provide processes for the flow or shut it up.

The valves consist of the valve itself and the valve operating gear which changes the position of the flow restrictor (plug) to the seat in accordance with the control unit.

Possible means of actuation are pneumatic and electric linear activator attachments which cause an axial shift of the cone. Also suitable are multiturn actuators which transform the slewing motion into axial motion and manual adjustments.

阀门用于调节流量或关闭流量。

阀门包括阀门本体和阀门操作的传动装置, 传动装置用来改变作为调节装置的节流结构(阀芯)与阀座之间的位
大多用于传动装置的有气动和电动直行程执行器,它们能产生圆锥体轴向移动。同样也可用能将定向运动改变成
轴向运动的多转型电动执行器以及手动调节。

3.2 Intended use 特殊应用

Valves of the line of products described here are used for the regulation or controlling of substance currents consisting of steam. To reduce the temperature of the steam, water is injected. This is achieved in single stage or several stage models. These models can be unloaded or loaded.

The valves must only be used within the pre-stated pressure and temperature range (see also chapter 1.7).

Any other use than the intended use described above as well as the operation outside than the permissible pressure or temperature conditions, will be classified as different to the intended use. The risk for persons and devices as well as other property will be the sole responsibility of the operator.

The use intended also includes the compliance with regulations for the prevention of accidents and EU regulations as well as safety-conscious working practices during any measures described in these operating instructions while observing generally accepted rules of engineering.

The control valve data sheet is part of these operating instructions. If it is not enclosed please apply for it before commissioning and compare it with the system identifications. Deviations from the system and specification identification need to be clarified with the manufacturer before commissioning.

这里所描述的配件主要用于蒸汽流量的控制, 同时蒸汽被喷水冷却。控制方式可设计成一路或多路控制形式, 可为平衡式或非平衡式。

阀门只能用于在规定的压力和温度范围内进行调节(见章节 1.7)

以上提到的以外的其它用途在

实际使用同样也要按照防止事故的规则和欧洲规则, 同样也

调节阀的参数表也是这些操作手册的一部分。如果不含参数表请在试运行前向制造厂商索要并且要跟系统说明进行对照。如果与系统规格说明不符需要在试运行前要制造厂商澄清。

3.3 Limitations on use and constructional design of valves

阀门的使用范围及构造设计

 **Hazard**

These state-of-the-art valves will be operative for the use intended and for operation in accordance with the agreed, and the data stated on the nameplate. Operability might be impaired and result in hazards to persons and property if:

- installation, setting and / or commissioning is not professionally carried out in accordance with these operating instructions.
- the valve is operated at pressures and temperatures outside the values shown on the nameplate.
- the valve is operated under environmental conditions with higher or lower than usual values (atmospheric temperature, air humidity, dampness etc.).
- unsuitable or faulty accessories or spare parts are used.

Only use original accessories and spare parts!

这些状态下的阀门能够有效的用于实际应用以及在同意, 和在铭牌上规定好的参数下运行. 如果按照以下进行操作会造成阀门的工作能力下降和危机人员和财产的损失:

- 安装, 设置或试运行不能专业的按照操作手册执行.
- 阀门在铭牌上规定的压力和温度范围以外运行.
- 阀门运行的环境条件不同与阀门正常运行环境条件(例如大气温度, 空气湿度, 湿气等)
- 不配套或错误的使用阀门附件和备件.

只能使用原装配套的附件和备件.

4 Installing the valve in the system 将阀门安装到系统上

Hazard

Safe operation of the valve requires proper installation and commissioning by competent persons in accordance with the warnings of these operating instructions.

Special attention needs to be paid to general installation and safety regulations for heating, ventilation, air condition and pipe systems as well as the proper use of tools, welding devices and personal as well as other safety equipment.

Non-compliance might result in death, severe physical injury or substantial damage to property!

安全操作阀门要求具有良好技能的操作人员根据操作说明书的警告条款进行正确地安装和交验。

特别需注意安装总则、安全规范中对于加热、通风、空调及管系的注意事项以及工具、焊接装置、人员及其他安全设备的正确使用。

违规操作将可能导致死亡、严重人身伤害或财产设备的重大损坏!

4.1 Steps to take before installing the valve in the system! 安装前准备工作!

To remove scale, welding residue and other impurities, the system is usually rinsed and a caustic agent applied before running a service trial.

为了去除污垢, 焊接残渣和其它杂质, 通常都是在进行试验之前冲洗系统和腐蚀性介质冲刷。

Before taking these measures pay attention to the following points:

在进行这些方法之前需要注意以下几点:

- If possible, the valve should be replaced by a matching piece during rinsing and use of the caustic agent.
- If this is not possible, the customer / planner has to arrange for the valve material to be tested for resistance to caustic agents. If necessary we supply a sectional drawing with parts list and details on materials.
- The valve has to be kept in 100% off-position during cleaning; do not use it for control purposes of any kind.
Special inserts for control purposes are available for delivery after details of cleaning operation data have been supplied.
- Rinsing and operations using caustic agents might result in danger to the interior of the valve through foreign matter and excessive differential pressures. In addition to this, acidic residues in the packing between the guides and hollow spaces might lead to damage in the course of time.
Damages arising from rinsing and the use of caustic agents can lead to enforced idleness of the system and will prove very costly. For this reason take the following steps after completing the service trial (to ensure uninterrupted operation in the interest of the operator): all valves must be
 - a) opened and checked for damages. (see separate installation instruction)
 - b) repaired and parts renewed, as necessary. (see separate installation instructions)
- properly installed and the packing of valves treated with caustic agents, renewed. (see separate installation instructions)
- 如果可以, 阀门应该在进行腐蚀性冲刷之前用与之匹配的部件阀门内部件。
- 如果这不可能, 用户/策划者必须安排进行阀门材料的测试从而检查是否适用于腐蚀性介质冲刷。如果需要制造厂商还能提供阀门内部结构图及其备件列表和材料的具体数据。
- 在整个清洗过程中阀门必须保持 100%全关位置; 不能用于各种调节目的。
- 酸洗和高差压会导致内部损坏, 清洗残渣的滞留随着时间的加长也会导致结构的破坏。
如果损坏发生请检查
 - c) 打开阀门检查损坏程度

4 Installing the valve in the system

d) 更换或修理部件

e) 正确安装，如果阀门填料函已腐蚀，更换新的。

如需要实施调节目的制造厂商可以再提供冲洗操作的参数后可以提供特殊的插入件以达到此目的。

 **Hazard! Valves are pressurized! Improper dismantling of the valve operating gear or valve might result in a health hazard!**

4 Installing the valve in the system

In addition to this check the following before installing the valve:

- Do nominal and operating data shown on the nameplate match the operating data of the system?
The manufacturer will not be liable to the substantial damage to the valve that can result from differing data.
- Is there enough space for installation or disassembly (chain hoists for installation etc.) at the installation site?
- Has the pipeline been rinsed and cleaned before installation? If this is not the case the manufacturer will not be liable for any resulting damages.
- Does the distance between the pipe ends correspond to the valve construction length?
- If the optimal installation position of the valve, i.e. with vertically placed valve spindle, is not given, please contact the manufacturer to discuss possible measures to be taken with respect to actuation forces.
- Is the pipeline set up in a way that mechanical stresses (e. g. forces and torques from pipeline expansion during operation, vibrations etc.) during installation and operation will not affect the valve body? (possible availability of compensators).
- Does the piping allow the continuous draining of condensate to avoid water hammer.
- ☞ Note: A straight pipe or damping section with length approx. 10 x DN before and after the valve will warranty control performance.
- ☞ Note: To carry out installations during operation of the valve, fit leak proof fittings and a bypass at an appropriate distance before and after the valve. The valved-off section of pipe must be drained.

在安装阀门之前必须做如下检查

- 铭牌上运行参数是否与系统运行参数相匹配?
制造厂商不会对由于参数不匹配而造成的阀门实际损坏负责。
- 在安装地点是否有足够的空间进行阀门的安装或拆卸?
- 安装之前管道是否进行冲刷和清洗?如果没有进行制造厂商将不会对任何产生的损坏负责。
- 管道末端是否与阀门结构长度相匹配?
- 如果最佳的阀门安装位置也就是阀门垂直放置没有提供的话,请联系制造厂商讨论可行的解决办法。
- 在安装和运行过程中管道是否设立在受到某种程度上的机械压力(例如在运行过程中产生的力量和转矩造成扩张, 颤动等)从而会影响阀体?(责任方不能确定)
- 管道是否能抵抗连续性排放冷凝物从而避免水冲击
- ☞ Note 注解: 阀门前后直管段或阻尼部分的长度大约为阀门进出口 DN 的 10 倍,这样就能够保证阀门的调节性能。
- ☞ Note: To carry out installations during operation of the valve, fit leak proof fittings and a bypass at an appropriate distance before and after the valve. The valved-off section of pipe must be drained.

注解: 阀门在运行期间执行安装,

4.2 Installing the valve 安装阀门

Please pay attention to the following details during installation:

- Remove the safety flaps directly before installation.
- Ensure that the flow arrow on the body matches the flow direction of the pipeline. Reversed flow direction will impair the function!
- Ensure that the pipelines are connected free of stress, without offset, mismatch or longitudinal shifting.
- Ensure that only matching seals, screws and nuts (not included in delivery) are used for the flange fittings.
- For welded-in valves, ensure that any work is carried out in accordance with the current regulations for welding work. Do not attach polarization to the valve as the flow of current might damage important sliding pieces. After welding is completed the pipeline will once again require cleaning. The valve will have to be opened and any foreign matter removed. (see separate installation instructions)
- Ensure that the draining muff, if supplied, is properly connected and that the condensate is continuously drained off.

Ensure the proper attachment of any other connections to the valve.

4 Installing the valve in the system

安装期间请注意以下几点:

- 阀门安装之前拆除安全密封.
- 确定阀体流向匹配管道流向. 相反的流向会削弱阀门功能.
- 确定管道连接无应力, 无偏离, 无错配或纵向偏移.
- 确定只有匹配的密封, 螺丝钉和螺母(交货期间不包括)使用适当的法兰装置.
- 对于焊接阀门, 确定执行正确规章的焊接工作. 阀门不能附带偏振否则可能会造成重要部件的损坏. 焊接完成以后会再需要一次清洗. 阀门将会被打开来拆除不相关的部件.
确定排水管, 如果提供, 必须被正确的连接和连续排放冷凝物直至排放干净.
- 确定阀门附件与阀门之间的连接.

当阀门已经安装在管道上, 随后需要安装和连接执行器和附件(如果分开提供). 对此, 请见执行器或附件的操作手册.

Once the valve has been installed in the pipeline, this will be followed by the installation and connection of the actuator and accessories (if supplied separately). For this, please see operating instructions of actuator or accessories.

Is the valve welded into the pipe, a random test to the welding seams must be make, because the welding factor is set to 0.85. Contact the supplier / manufacturer if the test isn't possible.

Valves and pipelines operated at high ($> 50\text{ }^{\circ}\text{C}$) or low ($< 0\text{ }^{\circ}\text{C}$) temperatures must be safeguarded against touch with insulation, and appropriate warnings have to be attached to point out the hazards caused by touch. The insulation will also absorb sounds.

如果焊接好适当的部件, 必须现场检查焊缝, 这些焊缝设计因数为 0.85. 如果不能检查这些, 情欲请于制造厂商/供应商商议.

如果阀门和管道温度高于 $50\text{ }^{\circ}\text{C}$ 或低于 $0\text{ }^{\circ}\text{C}$ 必须对阀门和管道安装绝缘装置, 并且标明出警告.

绝 缘 装 置 同 样 可 以 起 到 隔 音 作 用 .

5 Commissioning 交验

-  **Hazard!** Before commissioning a new system, after alterations and repairs check that:
- all installation and mounting work has been finished properly!
 - safe operation of the valve without hazards to persons or devices or the system is ensured!
- additional warnings stated in the operating instructions of the driving mechanism and the accessories are observed! 在新系统交验前, 修改和修理后, 应检查:
- 所有安装工作已正确完成!
 - 可安全操作阀门无人员及设备危险或确保系统安全!
 - 注意机械驱动操作说明书及附件中所述附加警告条款!

-  **Hazard!** Any handling between the yoke fitting / supports (of the operating assembly) is prohibited during operation due to health hazard.
- 阀门工作期间禁止操作柄配件/支架(安装操作)的任何手动操作, 都将导致危及人身安全。

The system is exposed to extreme stresses during commissioning. The pipeline and valve will be exposed to varying pressures and temperatures.

Make sure that the valve interior is neither exposed to excess differential pressure nor to any medium rendered impure by scale, welding residue, sand etc.

Depending on the period of storage, the stem packing will have lost elasticity and might be sticking to the gliding surfaces.

Please note the following:

- Move the piston several times at commissioning (when product flow starts going through valve).
- Observe the valve.
Possible leaks around the stem packing have to be repaired as described in "7 Error search list". Should this prove insufficient, please contact the supplier / manufacturer.

Leaking gaskets have to be replaced with new gaskets. For this you will need the installation instructions for the assembly and dismantling of valves supplied by the supplier / manufacturer.

系统在试运行期间会受到强度很高的应力. 管道和阀门会受到变化的压力和温度.

确定阀门内部不会受到超过设计时的压差或不纯介质例如测量装置, 焊渣, 砂砾等的破坏.

根据储存的时间, 阀杆密封可能会失去弹性以及粘在平滑的表面.

请注意以下:

- 试运行期间移动阀芯几次(当介质开始流过阀门时)
- 观测阀门.
阀杆密封可能会出现泄漏必须按照"操作错误索引表 7"进行维修. 如果过信息不够详细, 请联系供应商/制造厂商.

更换新的防泄漏垫圈. 因此需要阀门安装手册和供应商/制造厂商提供的阀门分解图.

6 Maintenance 维护

HORA valves are almost maintenance-free. A condition for reliable operation is proper commissioning.

To ensure faultless operation we recommend the inspection of all bolted connections for tight fit, followed by tightening, as necessary, approximately 6 month after commissioning, followed by annual inspections thereafter.

The stem packing needs to be checked regularly and tightened or replaced - as necessary – as described in the error search list.

The spindle nut of valves with multiturn actuators must be inspected (at least every 3 months) for sufficient lubrication and greased, as necessary.

Lubricant change is recommended after the following operating periods:

- For rare use after 10 – 12 years
- For frequent use after 6 – 8 years
- For regular use after 4 – 6 years

The stem/nut set is greased by HORA using the lubricator KLÜBERPLEX BE 31-502 by KLÜBER/LUBRICATION. If different but comparable lubrication is used (e. g.: Oest EP by Oest) the set has to be cleaned thoroughly before lubrication as to exclude mixing, and possible reaction, of the two different lubricants. **Attention: The manufacturer will not accept any liability for consequential damage caused by the use of different or mixed lubricants.**

For topping up and changing of lubricants see details in the operating instructions of the yoke fitting or the actuator. Both are available from the supplier / manufacturer.

HORA 阀门几乎为免费维护。正确的交验是获得可靠维护的一个条件。

为确保阀门工作正常，我们建议在交验后大约 6 个月及以后每年有必要对所有螺栓连接进行紧固检验工作。

阀杆衬套需要进行常规性检查，紧固或更换，如有必要遵照常见故障及措施表内情况执行。

带有多转向执行器的阀门轴向螺母必须进行润滑油及黄油检验（至少每 3 个月）。

更换润滑剂建议参照以下使用期限:

- 很少使用—10 – 12 年后
- 频繁使用— 6 – 8 年后
- 常规性使用—4 – 6 年后

阀杆/螺母装置 HORA 使用润滑剂为 KLÜBER/ LUBRICATION 生产的.KLÜBERPLEX BE 31-502 润滑剂。如使用不同但可比较的润滑剂（例如 Oest 生产的 Oest EP），在上润滑油前装置必须彻底清洁干净，避免两种不同的润滑剂相混合可能产生反应。

Attention 注意: 制造商不承担因使用不同或混合润滑油导致损坏的任何后果和义务。

蓄装和更换润滑油详见操作柄装配或执行器操作说明书，都可向供货商/制造商联系。

7 Error search list 故障对照表

 **Hazard!**

Before starting any work take the following steps:

- **Disconnect the lift drive and other electrical components and safeguard against unintentional reclosing!**
- **Work properly in accordance with EU safety regulations as well as the warnings and notes shown in these operating instructions.**
- **Lock the pipeline on both sides of the valve (valving-off of inlet/outlet of pipe section).**
- **Depressurize the pipe section (even if only dismantling the actuator).**
- **Allow the valve to cool down to room temperature.**
- **Seek information e. g. on the safety data sheet (EU directive 91/155/EWG) about the pipe content and in all cases of hazardous material (EU directive 67/548/EWG) empty the pipe section. Observe regulations on personal safety equipment stated on the safety data sheet.**
- **Wipe up leakages, e. g. on the valve stem immediately and / or collect substantial amounts or residue of medium in a suitable container.**

Dispose of medium residue in accordance with EU directive 75/442/EWG.

开始任何操作前采取以下步骤:

- **断开起重驱动和其它电气元件以及无目的再关安全装置!**
- **根据 EU 安全规范和本操作说明书所述警告及注释进行恰当的操作。**
- **锁住阀门管系两头 (阀门进口和管子出口)。**
- **释放管件压力(即使仅是拆卸执行器)。**
- **允许阀门冷却至室温。**
- **查看阀门安全数据表例如 EU directive 91/155/EWG 上有关管子和所有危险材料 EU directive 67/548/EWG 上的信息, 使管件清空。查看安全数据表上个人设备安全操作规则。**
- **立即擦净例如阀杆上的泄漏物并且/或把大量或残余的介质用适当的容器收集起来。**
- **根据 EU directive 75/442/EWG.处理残余介质。**

Error	No.	Possible causes	Measures
Stem not moving	1.1	<ul style="list-style-type: none"> • No auxiliary energy (pressurized air or electrical power) for actuator and accessories available. 	<ul style="list-style-type: none"> • Pneumatic drive: check for leaks and pressure (normally 6 bar) • Electric drive: Check power supply (connections, fuses, voltage)
	1.2	<ul style="list-style-type: none"> • Mounted accessories not working. 	<ul style="list-style-type: none"> • See maintenance and operating instructions of accessories.
	1.3	<ul style="list-style-type: none"> • Actuator not working. 	<ul style="list-style-type: none"> • See maintenance and operating instructions of actuators.
	1.4	<ul style="list-style-type: none"> • Stem packing screwed on too tightly. 	<ul style="list-style-type: none"> • Loosen stem packing until valve can be used again. Attention: Leakages must not occur!
	1.5	<ul style="list-style-type: none"> • Interior fittings rubbed off, stuck. 	<ul style="list-style-type: none"> • Inform supplier / manufacturer.

7 Error search list

Error	No.	Possible causes	Measures
Stem moving jerkily	2.1	<ul style="list-style-type: none"> Stem is dirty 	<ul style="list-style-type: none"> Clean stem using appropriate cleaning agent
	2.2	<ul style="list-style-type: none"> Stem is damaged 	<ul style="list-style-type: none"> Inform supplier / manufacturer
	2.3	<ul style="list-style-type: none"> Driving force too small 	<ul style="list-style-type: none"> Compare actuation data of nameplate with operating data of system - inform supplier / manufacturer about deviations
	2.4	<ul style="list-style-type: none"> Stem packing screwed on too tightly 	<ul style="list-style-type: none"> See 1.4
Stem does not move across entire lifting area (0 to 100% lifting)	3.1	<ul style="list-style-type: none"> Pneumatic drive: Air inlet pressure too low 	<ul style="list-style-type: none"> Read required air inlet pressure on nameplate and adjust
	3.2	<ul style="list-style-type: none"> Pneumatic drive with manual adjustment: Hand wheel wrongly set 	<ul style="list-style-type: none"> Put hand wheel to off-position (see operating instructions: Actuator)
	3.3	<ul style="list-style-type: none"> Electric drive: Displaced Limit switch 	<ul style="list-style-type: none"> Re-adjust limit switch according settings stated by driving-mechanism manufacturer
	3.4	<ul style="list-style-type: none"> Displaced or defect positioner 	<ul style="list-style-type: none"> Re-adjust positioner according to settings stated by positioner manufacturer
	3.5	<ul style="list-style-type: none"> Foreign matter in valve seat, damaged interior parts 	<ul style="list-style-type: none"> Inform supplier / manufacturer
Leakage of valve seat too great	4.1	<ul style="list-style-type: none"> Damaged seal edges of valve seat or control cone 	<ul style="list-style-type: none"> Inform supplier / manufacturer
	4.2	<ul style="list-style-type: none"> Foreign matter in seat area 	<ul style="list-style-type: none"> Inform supplier / manufacturer
	4.3	<ul style="list-style-type: none"> Cone does not close completely 	<ul style="list-style-type: none"> See 3.1 to 3.5
	4.4	<ul style="list-style-type: none"> Driving force too small 	<ul style="list-style-type: none"> Inform supplier / manufacturer

7 Error search list

Error	No.	Possible causes	Measures
Leakage of stem packing system	5.1	<ul style="list-style-type: none"> • Pressure force on packing too low 	<ul style="list-style-type: none"> • Tighten stem packing slightly or replace (inform supplier / manufacturer if replacing) Attention: The valve stem must remain movable!
	5.2	<ul style="list-style-type: none"> • Packing is worn 	<ul style="list-style-type: none"> • Tighten stem packing slightly or replace (inform supplier / manufacturer if replacing) Attention: The valve stem must remain movable!
	5.3	<ul style="list-style-type: none"> • Stem is dirty 	<ul style="list-style-type: none"> • Clean stem using appropriate cleaning agent
	5.4	<ul style="list-style-type: none"> • Stem is damaged 	<ul style="list-style-type: none"> • Inform supplier / manufacturer
Leaking gasket	6.1	<ul style="list-style-type: none"> • Pressure force on gasket(s) too low 	<ul style="list-style-type: none"> • Tighten nuts of cover crosswise
	6.2	<ul style="list-style-type: none"> • Gasket(s) defective • Pressure force on gasket(s) unequal 	<ul style="list-style-type: none"> • Inform supplier / manufacturer • Adjust equal split
Leaking body	7.1	<ul style="list-style-type: none"> • Medium/flow-related damage 	<ul style="list-style-type: none"> • Inform supplier / manufacturer
No signal from limit switch	8.1	<ul style="list-style-type: none"> • Power supply from limit switch interrupted 	<ul style="list-style-type: none"> • Check power supply (connection, fuses, voltage)
	8.2	<ul style="list-style-type: none"> • Displaced limit switch 	<ul style="list-style-type: none"> • Adjust limit switch, for distance to limit switch see type sheet
Positioner vibrating	9.1	<ul style="list-style-type: none"> • Defective positioner 	<ul style="list-style-type: none"> • See maintenance and operating instructions of positioner manufacturer
	9.2	<ul style="list-style-type: none"> • Control of system too sluggish or too fast 	<ul style="list-style-type: none"> • Check system control

Should the above stated measures fail to produce a satisfactory solution inform the supplier / manufacturer.

如上述措施不能将问题满意解决，请通知供货商/制造商。

8 Certificate Modul H1 证书



ANLAGENTECHNIK

ZERTIFIKAT

Qualitätssicherungs-System
nach Richtlinie 97/23/EG

Zertifikat-Nr.: 07 202 5635 Z 0019/2/H

Name und Anschrift des
Herstellers:

Holter Regelarmaturen GmbH & Co. KG
Helleforthstraße 58 - 60
33758 Schloß Holte - Stukenbrock

Hiermit wird bescheinigt, dass der Hersteller ein QS-System gemäß der Richtlinie 97/23/EG eingeführt hat und anwendet. Der Hersteller ist berechtigt, die von ihm im Rahmen des Geltungsbereichs dieses QS-Systems beschriebenen und hergestellten Druckgeräte mit dem abgebildeten Zeichen zu kennzeichnen:

CE 0045

Geprüft nach Richtlinie 97/23/EG:

**Umfassende Qualitätssicherung mit Entwurfsprüfung
und besonderer Überwachung der Abnahme (Modul H1)**

Prüfbericht-Nr.:

5635P0019/2/H

Geltungsbereich:

Armaturen

Fertigungsstätte:

**Holter Regelarmaturen GmbH & Co. KG
Helleforthstraße 58 - 60
33758 Schloß Holte - Stukenbrock**

Osnabrück, den 21. Mai 2002

TÜV CERT-Zertifizierungsstelle
für Druckgeräte
der TÜV NORD GRUPPE

Böwer

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Mitglied der



CONFÉDÉRATION EUROPÉENNE D'ORGANISMES DE CONTRÔLE



ANLAGENTECHNIK

CERTIFICATE

Quality- Assurance System
according to directive 97/23/EC

Certificate No.: 07 202 5635 Z 0019/2/H

Name and address of bearer: **Holter Regelarmaturen GmbH & Co. KG**
Helleforthstraße 58 - 60
33758 Schloß Holte - Stukenbrock

We hereby certify, that the manufacturer has established a quality system for the manufacturing of pressure equipment according to directive 97/23/EC. The manufacturer is entitled to mark the pressure equipment produced within the range of the quality system with the following mark:

CE 0045

Tested according to 97/23/EC: **full quality assurance with design examination and special surveillance of the final assessment (modul H1)**

Test report No.: **5635P0019/2/H**

Range of products: **valves**

Place of manufacture: **Holter Regelarmaturen GmbH & Co. KG**
Helleforthstraße 58 - 60
33758 Schloß Holte - Stukenbrock

Osnabrück, 23 May 2002

TÜV CERT-Certification Body for
Pressure Equipment
of TÜV NORD GRUPPE

Böwer

Certification Body EC-Reg.No. 0045

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CONFÉDÉRATION EUROPÉENNE D'ORGANISMES DE CONTRÔLE