

Bottom drain ball valve

with ball, stem
and Richter ENVIPACK
universal packing



Keep for future use!

This operating manual must be strictly observed before transport, installation, commissioning etc. in order to avoid endangering.

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Relevant documents

- ◆ Declaration of conformity acc. to the EC Pressure Equipment Directive 97/23/EG
- ◆ Form for General Safety Certificate QM 0912-16-2001_en
- ◆ ForKAP-N: Operating manual for actuator
- ◆ Option double packing bonnet: Supplementary Installation and Operating Manual for double packing bonnet 9520-055-en

Depending on option, relevant drawing:

Double packing bonnet	9520-00-0002
Extended stem	9520-00-0003
Extended stem, round	9520-00-0019
Lever elevation	9520-00-0004
Limit switch IFM	9520-00-0006
Limit switch VDE/VDI	9520-00-0008
Spring return unit Kinetrol	9520-00-0007
Initiator Turck	9520-00-0011
Locking plate	9520-00-0009

1 Technical data

Manufacturer:

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 Otto-Schott-Str. 2
 D-47906 Kempen
 Telephone: +49 (0) 2152 146-0
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Designation :

Bottom drain ball valve with ball, stem and Richter ENVIPACK universal self-adjusting packing, two-piece body.

Series **KA-N** → Design with lever or hand gear
KAP-N → Design prepared for pneum., hydr. or elec. actuator to DIN/ISO 5211

Certified to Clean Air Act (TA-Luft)

Strength and tightness (P10, P11) of the pressure-bearing body tested to DIN EN 12266-1.

Gas-tight (P12) in the seat to DIN EN 12266-1, leak rate A

Face to face according to the manufacturer

Flange connecting dimensions:
 DIN EN 1092-2, type B
 (ISO 7005-2 type B) PN 16.

Materials :

Body material: Ductile cast iron EN-JS 1049 to DIN EN 1563 (0.7043 DIN 1693)

Lining material: PFA
 on request: conductive design

Temperature range :

See pressure-temperature diagram in Section 1.5.

Operating pressure: from vacuum to 16 bar

Bottom drain ball valve sizes in mm :

DN 50/25, 80/50, 100/50, 150/100

Weight, KA-N manually operated :

Nom. size	50/25	80/50	100/50	150/100
ca. kg	7,9	17,3	17,8	

For weight of actuator, see actuator manufacturer's manual.

Installation position :

Arbitrary, with balls with additional relief bore a direction arrow indicates the direction of flow. See Sections 6.2 and 10.2.

Dimensions and individual parts:

See sectional drawings in Section 10.

Wear parts : Seat rings
 Packing components
 Ball

Options :

Richter ENVIPACK double packing for particularly high safety requirements, self-adjusting.

On request, monitoring and flushing connection.

Extended stem for isolated pipes.

Hand lever extension depending on requirements.

Limit switches

for remote monitoring of hand and remote-actuated bottom drain ball valves.

Lockable hand lever

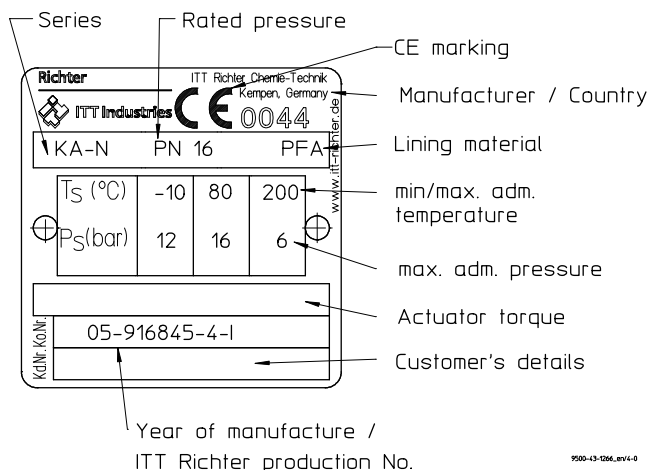
to prevent unauthorised operation.

1.1 Name plate, CE and body markings

The stainless steel name plate is firmly riveted to the body.

If the operator attaches his identification, it must be ensured that the valve matches the application in question.

Example of name plate with CE marking:



Body identification :

The following are visible on the body according to DIN EN 19 and AD 2000 A4:

- ◆ Nominal size
- ◆ Rated pressure
- ◆ Body material
- ◆ Manufacturer's identification
- ◆ Melt number/Foundry identification
- ◆ Cast date

1.2 Tightening torques

All screws greased, tighten in diametrically opposite sequence!

The tightening torques for pipe screws and body screws mentioned must not be exceeded. For an exception, see **Section 8**, Flange connection valve/pipe is leaking.

The following tightening torques are recommended:

Packing screws

The pretension has been reached when the spring gland follower is bent horizontally.

Pipe screws

Flanges nom. size [mm]	Screws [ISO/DIN]	Tightening torque [Nm]
25	4 x M12	12
50	4 x M16	30
80	8 x M16	25
100	8 x M16	30
150	8 x M20	55

Body screws

Nom. size [mm]	Screws [ISO/DIN]	Tightening torque [Nm]
50/25	4 x M12	35
80/50	4 x M16	45
100/50	4 x M16	45
150/100	8 x M16	60

1.3 Breakaway torques

Test medium: water 20 °C

Higher breakaway torques may occur with other media.

DN [mm]	Δp in bar				max. admin. [Nm]
	3 [Nm]	6 [Nm]	10 [Nm]	16 [Nm]	
50/25	12	12	12	12	28
80/50	25	30	35	50	100
100/50	25	30	35	50	100
150/100	80	130	200	280	350

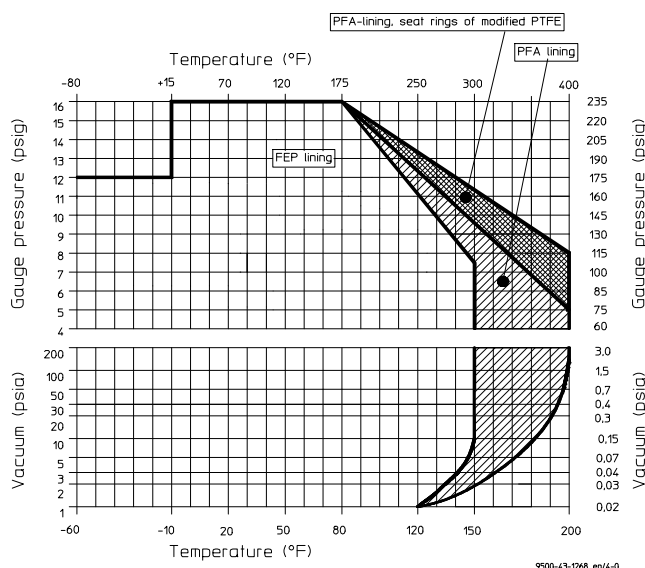
1.4 Flow values

Nom. size [mm]	kv100 [m ³ /h]
50/25	22
80/50	90
100/50	87
150/100	388

1.5 Pressure-temperature-diagram



When used in the minus temperature range, the regulations applicable in the country in question must be observed.



A special core material is used for the stem for operating limits under – 10 °C to – 60 °C.

2 Notes on safety

This operating manual contains fundamental information which is to be observed during installation, operation and maintenance. It must therefore be read before installation and commissioning.

For valves which are used in potentially explosive areas, see **Section 3**.

Installation and operation are to be performed by qualified staff.

The area of responsibility, authority and supervision of the staff must be regulated by the customer.



General hazard symbol!
People may be put at risk.



Safety symbol! The valve and its function may be put at risk if this safety symbol is not observed.

It is imperative to observe warnings and signs attached directly to the valve and they are to be kept fully legible.

Non-observance of the notes on safety may result in the loss of any and all claims for damages.

For example, non-observance may involve the following hazards:

- ◆ Failure of important functions of the valve/plant.
- ◆ Risk to people from electric, mechanical and chemical effects.
- ◆ Risk to the environment through leaks of hazardous substances.

When using the valve, it must be ensured that

- ◆ actuators which are retrofitted are adapted to suit the valve
- ◆ hot or cold valve parts are protected by the customer against being touched
- ◆ the valve has been properly installed in the pipe system
- ◆ the usual flow rates are not exceeded in continuous operation.

This is not the manufacturer's responsibility.



Ball valves which are used as end valves must be sealed with a blind flange at the free connection end or appropriately secured against unauthorised actuation. Fire protection to DIN EN ISO 10497 is not possible (plastic lining and plastic components).

2.1 Intended use

Ball valves are on/off valves.

Richter bottom drain ball valves of the seriesKA-N/KNP are pressure containing components in accordance with the Pressure Equipment Directive (PED) for the passage and shut-off of fluids. The valves are suitable for vapours, gases and non-boiling liquids of group 1 according to the PED and have a corrosion-resistant plastic lining.

Solids can lead to increased wear, damage to sealing surfaces or to a reduction in the service life of the valve.

The operator must carefully examine in the event of operating data other than those provided whether the designs of the valve, accessories and materials are suitable for the new application (consult the manufacturer).

2.2 Inadmissible modes of operation

The operational reliability of the valve supplied is only guaranteed if it is used properly in accordance with **Section 1.1** of this operating manual.



The operation limits specified on the identification plate and in the pressure-temperature diagram must under no circumstances be exceeded.

3 Safety notes for applications in potentially explosive areas based on the Directive 94/9/ EC (Atex 95)

The valves are intended for use in a potentially explosive area and are therefore subject to the conformity assessment procedure of the directive 94/9/EC (ATEX).

As part of this conformity assessment, an ignition hazard analysis to EN 13463-1 to satisfy the fundamental safety and health requirements was conducted with the following result:

- ◆ **The valves do not have any ignition source of their own and can be operated both manually as well as mechanically/electrically.**
- ◆ **The valves are not covered by the scope of application of the ATEX directive and therefore do not need to be identified accordingly.**
- ◆ **The valves may be used in a potentially explosive area.**

Supplementary notes:

- ◆ **Electric/mechanical actuators must be subjected to their own conformity assessment to ATEX.**

It is imperative to observe the individual points of intended use for application in a potentially explosive area.

3.1 Intended use

Inadmissible modes of operation, even for brief periods, may result in serious damage to the unit. In connection with explosion protection, potential sources of ignition (overheating, electrostatic and induced charges, mechanical and electric sparks) may result from these inadmissible modes of operation; their occurrence can only be prevented by adhering to the intended use.

Furthermore, reference is made in this connection to the Directive 95/C332/06 (ATEX 118a) which contains the minimum regulations for improving the occupational health and safety of the workers who may be at risk from an explosive atmosphere.

A difference is made between two cases for the use of chargeable liquids (conductivity $< 10^{-8}$ S/m):

1. Chargeable liquid and non-conductive lining

Charges can occur on the lining surface. As a result, this can produce discharges inside the valve. However, these discharges cannot cause ignitions if the valve is completely filled with medium.

If the valve is not completely filled with medium, e.g. during evacuation and filling, the formation of an explosive atmosphere must be prevented, e.g. by superimposing a layer of nitrogen.

It is recommended to wait 1 hour before removing the valve from the plant in order to permit the elimination of static peak charges.

This means that, to safely prevent ignitions, the valve must be completely filled with medium at all times or else a potentially explosive atmosphere must be excluded by superimposing a layer of inert gas.

2. Chargeable liquid and conductive lining

No hazardous charges can occur as charges are discharged direct via the lining and shell (surface resistance $< 10^9$ Ohm, leakage resistance $< 10^8$ Ohm).

Static discharges of non-conductive linings are only produced through the interaction with a non-conductive medium and are therefore the responsibility of the plant operator.

Static discharges are not sources of ignition which stem from the valves themselves!

- The temperature of the medium must not exceed the temperature of the corresponding temperature class or the maximum admissible medium temperature as per the operating manual.
- If the valve is heated (e.g. heating jacket), it must be ensured that the temperature classes prescribed in the Annex are observed.
- To achieve safe and reliable operation, it must be ensured in inspections at regular intervals that the unit is properly serviced and kept in technically perfect order.
- Increased wear to the valve can be expected with the conveyance of liquids containing abrasive constituents. The inspection intervals are to be reduced compared with the usual times.
- Actuators and electric peripherals, such as temperature, pressure and flow sensors etc., must comply with the valid safety requirements and explosion protection provisions.
- The valve must be grounded.
This can be achieved in the simplest way via the pipe screws using tooth lock washers. Otherwise grounding must be ensured by other action, e.g. cable bridges.
- Attachments such as actuators, position controllers, limit switches etc. must satisfy the relevant safety regulations as regards explosion protection and, if required, be designed in compliance with Atex.
- Special attention must be paid to the appropriate safety and explosion protection notes in the respective operating manuals.
- Plastic-lined valves must not be operated with carbon disulphide.

4 Safety note for valves, certified to Clean Air Act (TA-Luft)

Certificate / Manufacturer Declaration Validity is dependent on the operating instructions being read and observed.

In particular, servicing must be conducted at regular intervals, and the bolted connections relevant for tightness must be inspected and retightened if necessary.

5 Transport and storage



It is imperative, for all transport work, to observe generally accepted engineering practice and the accident prevention regulations.



The valve is supplied with flange caps. Do not remove them until just before installation. They protect the plastic surfaces against dirt and mechanical damage.

Handle the goods being transported with care. During transport the valve must be protected against impacts and collisions.

Directly after receipt of the goods, the consignment must be checked for completeness and any in-transit damage.

Do not damage paint protection.

5.1 Storage

If the valve is not installed immediately after delivery, it must be put into proper storage.

It should be stored in a dry, vibration-free and well-ventilated room at as constant a temperature as possible.

5.2 Return consignments



Valves which have conveyed aggressive or toxic media must be well rinsed and cleaned before being returned to the manufacturer's works.

A **General Safety Certificate** on the field of application is to be enclosed with the returned goods.

Pre-printed forms are enclosed with the installation and operating manual.

Safety precautions and decontamination measures are to be mentioned.

6 Installation

Examine valve for in-transit damage, damaged valves must not be installed.

Before installation the valve and the connecting pipe must be carefully cleaned to remove any dirt, especially hard foreign matter.

During installation, pay attention to the correct tightening torque, aligned pipes and tension-free assembly.

6.1 Flange caps and gaskets

Leave protective caps on the flanges until just prior to installation.

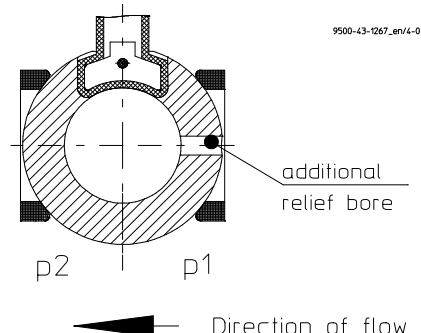
Where there is a particularly high risk of damage to the plastic sealing surfaces, e.g. if the mating flanges are made of metal or enamel, PTFE-lined gaskets with a metal inlay should be used. These gaskets are available as special accessories in the Richter range.

6.2 Direction of flow and installation position

Installation is independent of the direction of flow.

Any installation position can be chosen.

Otherwise, it is marked by a direction arrow on the bottom drain ball valve, e.g. in the case of an additional relief bore in the ball.



6.3 Grounding

The valve must be grounded. The simplest solution is to use tooth lock washers which are placed under one pipe bolt of each flange.

Otherwise grounding must be ensured by different measures e.g. a cable link.

The stem **202** is grounded using a grounding spring washer **557**.

6.4 Test pressure

The test pressure PT of an **open valve** must not exceed the value of $1.5 \times PS(PN)$ as per the identification of the valve.

7 Operation

7.1 Initial commissioning

Normally, the valves have been tested for leaks with air or water. Prior to initial operation check body bolting. For torques see **Section 1.2**.



Unless otherwise agreed, there could be residual amounts of water in the flow section of the valve; this could result in a possible reaction with the medium.

To prevent leaks, all connection screws should be retightened after the initial loading of the valve with operating pressure and operating temperature.

For torques see **Section 1.2**.

- ◆ Operation with solids leads to increased wear.
- ◆ Operating during cavitation leads to increased wear.
- ◆ Non-observance of the pressure-temperature diagram can lead to damage.
- ◆ Do not subject the lever to heavy loads; the lever or bottom drain ball valve may be damaged.
- ◆ Do not use a lever extension as otherwise there is a risk of damage.

7.2 Inadmissible modes of operation and their consequences

- ◆ The bottom drain ball valve is an on/off valve and is not to be operated in an intermediate position. Damage to the seat rings or the ball/stem unit could occur.
- ◆ Crystallisation may result in damage to the seat rings or ball/stem. This can be prevented by heating.
- ◆ In extreme cases this may cause blocking.
- ◆ If the ball blocks, do not apply force as the ball/stem may break if the max. adm. torque is exceeded.

7.3 Shutdown

The local regulations are to be observed when dismantling the valve.

Prior to undoing the flange connection ensure, that the plant is depressurised and emptied.



Prior to starting any repair work, the valve is to be thoroughly cleaned. Even if the valve has been properly emptied and rinsed, residual medium may still be found in the valve,

After dismantling, immediately protect the valve flanges against mechanical damage with flange caps. See also **Section 6.1**.



Ensure that a remotely actuated actuator cannot be accidentally switched on.

8 Malfunctions

◆ Flange connection valve/pipe is leaking

Retighten the flange screws to a tightening torque according to **Section 1.2**. If this does not remedy the leak, the recommended torques may be exceeded by 10%.

If this also fails to stop the leak, dismantle and inspect the valve.

◆ Flange connection main body/body end piece is leaking

Retighten body screws. See paragraph "Flange connection valve/pipe is leaking".

◆ Packing is leaking

Retighten packing nuts according to the details in **Section 1.2**.

◆ Ball valve does not operate

Is the actuator being supplied with power?

Is any directional control valve connected correctly?

Is there any foreign matter in the bottom drain ball valve?

◆ The ball no longer closes completely

Is the stem deformed?

Is the coupling worn?

With a worm gear or actuator, check whether the end stops can be re-adjusted. The operating manuals of the gear and actuator manufacturers contain accurate instructions.



Never apply force to the lever or use an extension.

1. Try to get the bottom drain ball valve working again by moving the lever to and fro.
2. Remove the lever stop and try to switch against the normal direction of rotation.
3. If activation is not possible with the max. admissible breakaway torque as per **Section 1.3**, dismantle bottom drain ball valve and inspect individual components.

9 Maintenance

Spare parts are to be ordered with all the details in acc. with the valve identification.

Only original spare parts may be installed.

To prevent leaks, a regular check of the connection screws should be made in line with the operating requirements.

For torques see [Section 1.2](#).

9.1 Dismantling

9.1.1 KA-N with lever

It is possible with a KA-N, KAP-N with ball and stem to replace the seat rings and ball without dismantling the entire bottom drain ball valve.

It is equally possible to remove the packing gland follower, spring gland follower and packing insert? without dismantling the body.

The entire bottom drain ball valve must merely be taken apart to remove the stem.

For sectional drawings, see [Section 10](#).

9.1.2 Ball and seat rings

- Move ball **200** into the 'closed' position.
- Undo body nuts and bolts.
- Remove body end piece **102**.
- Remove ball **200** from the main body **101** by swivelling it.
- Remove seat rings **401** from the main body **101** and body end piece **102** and replace.

9.1.3 Packing bellows

- Remove lever **203**.
- Dismantle packing gland follower **503** and spring gland follower **502**.
- Remove grounding spring washer **557**.
- The thrust ring **405/1**, packing bellows **403** and retaining washer **526** (not in DN 150 and DN 200) are one unit and it is levered out using 2 screwdrivers.
- Remove retaining washer **526**.
- Separate thrust ring **405/1** and packing bellows **403** by pushing them apart.

9.1.4 KAP-N with actuator

- Remove actuator **850** and coupling **804**.
- Dismantle packing gland follower **503** and spring gland follower **502**.
- Remove bracket **510**.

Further dismantling is performed as described in [Section 9.1.3](#).

9.1.5 Stem

- Dismantling as described in [Section 9.1.3](#).
- Undo screw connection body end piece/main body.
- Remove body end piece **102**.
- Remove ball **200** with stem **202** in the 'closed' position. Make sure that the body lining is not damaged.
- Swivel ball **200** out of the stem **202**.

9.2 Assembly

- Prior to assembly all parts are to be cleaned and the plastic-lined components checked for damage. An entire assembly procedure is described.
- Insert seat rings **401** into the main body **101** and body end piece **102**.
- Insert stem **202** from inside into the main body **101**.
- Move stem **202** into the 'closed' position.
- Swivel ball **200** into the stem **202**. Any pressure-relief or drain bore must lie on the p1 side in the 'closed' position. See also [Section 10.2](#).
- Mount body end piece **102**. Tighten the greased body screw to a tightening torque in accordance with [Section 1.2](#) in diametrically opposite sequence.

9.2.1 Packing bellows

- Press thrust ring **405/1** into the packing bellows **403**.
- Insert retaining washer **526**.
- Press unit into main body **101**.
- Press in grounding spring washer **557**.

9.2.2 KA-N with lever

- Mount lever stop **577**, spring gland follower **502** and packing gland follower **503**. Tighten packing gland follower until there is no gap between it and the spring gland follower. See Sections 1.2 and 10.4.
- Seal any tapped bores still open with plugs.
- Attach lever **203**.

9.2.3 KAP-N with actuator

- Mount spring gland follower **502** and packing gland follower **503**. Tighten packing gland follower until there is no gap between it and the spring gland follower. See Sections 1.2 and 10.5.
- Mount bracket **510** with the opening at right angles to the direction of flow.
- Mount coupling **804** and actuator **850**. Observe the actuator position in accordance with the actuator operating manual.

9.3 Conversion from lever to actuator

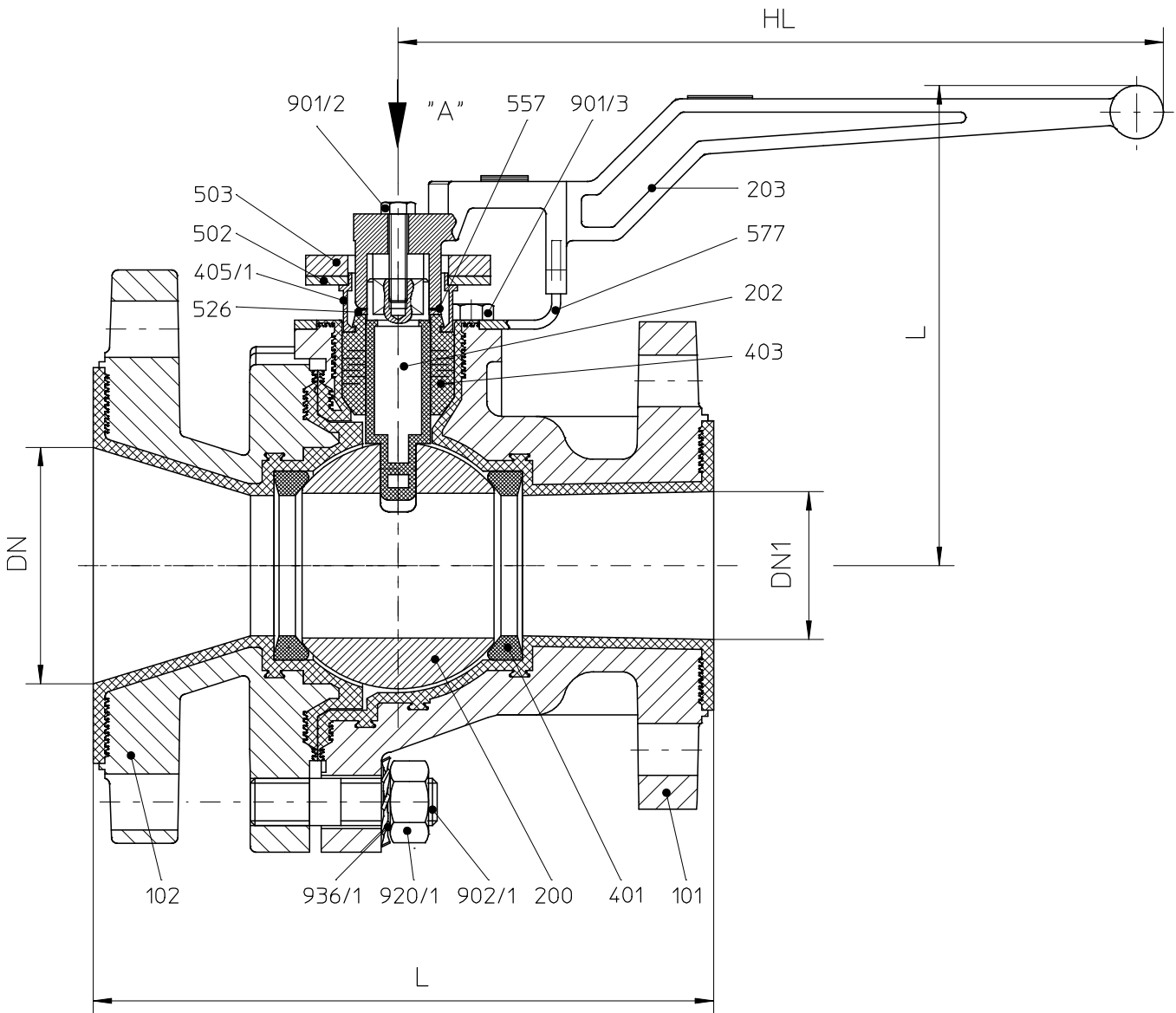
- Select the actuator in accordance with the actuator manufacturer's manual.
- Remove lever **203**.
- Remove lever stop **577** and plug.
- Check the fits of the coupling **804**, bracket **510** and actuator **850**.
- Mount bracket **510** with the opening at right angles to the direction of flow.
- Mount coupling **804** and actuator **850**. Observe the actuator position in accordance with the actuator operating manual.

10 Drawings

10.1 Legend

101	main body	557	grounding spring washer
102	body end piece	577	lever stop
200	ball	804	coupling
202	stem	includes:	
203	lever	500	ring
401	seat ring	952	pressure spring
403	packing bellows	980/1	round head grooved pin
405/1	thrust ring	850	actuator
502	spring gland follower	901/x	hex. screw
503	packing gland follower	902/1	stud screw
526	retaining washer	904/1	set screw
554/1	washer	914/2	hex. Socket screw (only F07)
		920/x	hex. nut
		936/x	toothed lock washer

10.2 Sectional drawing KA-N with lever

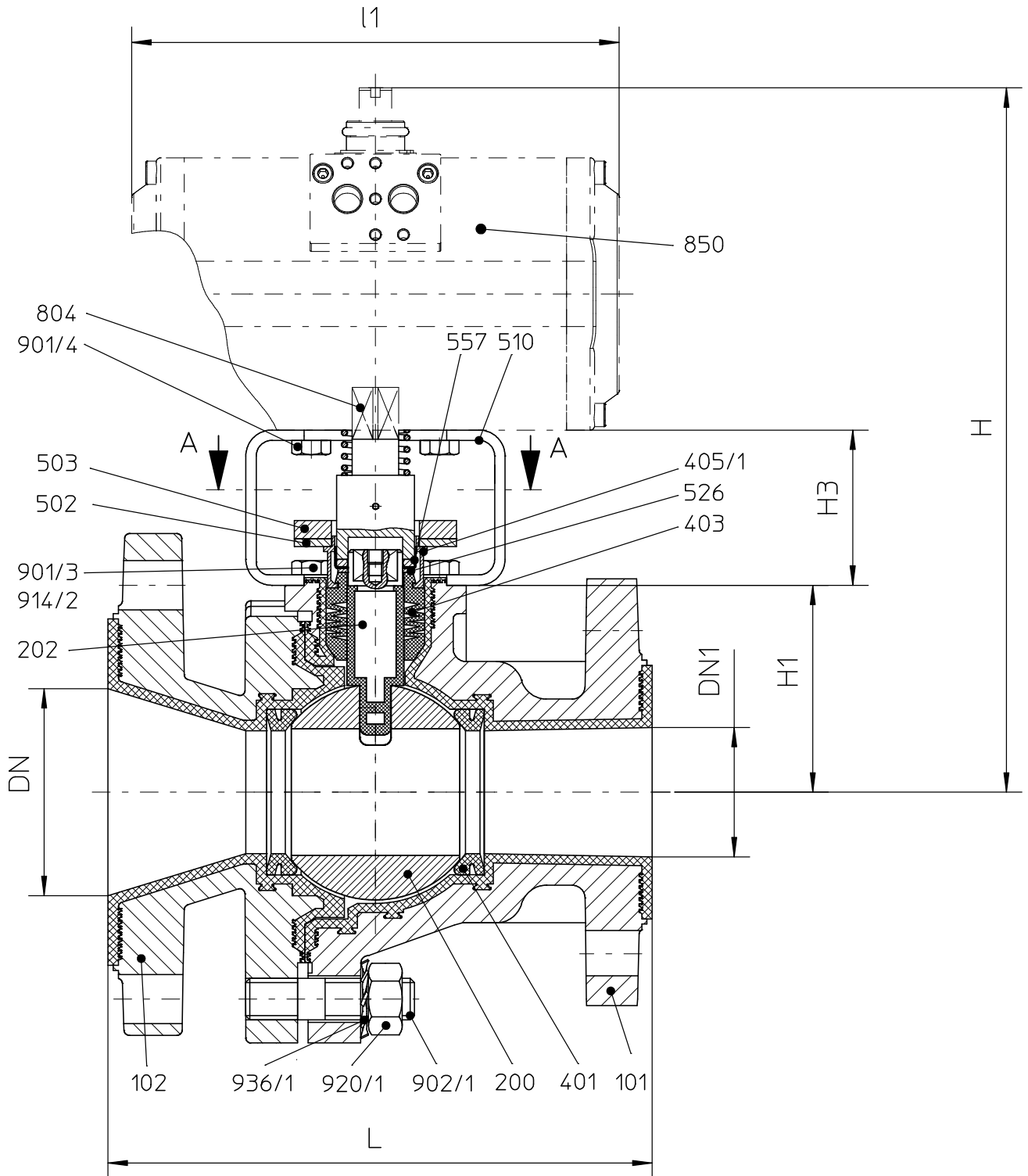


DN/DN1	50/25	80/50	100/50	150/100
L	160	210	210	325
H	130	130	130	155
HL	179	179	179	260

dimensions in mm

9500-43-1264/4-0

10.3 Sectional drawing KAP-N with actuator



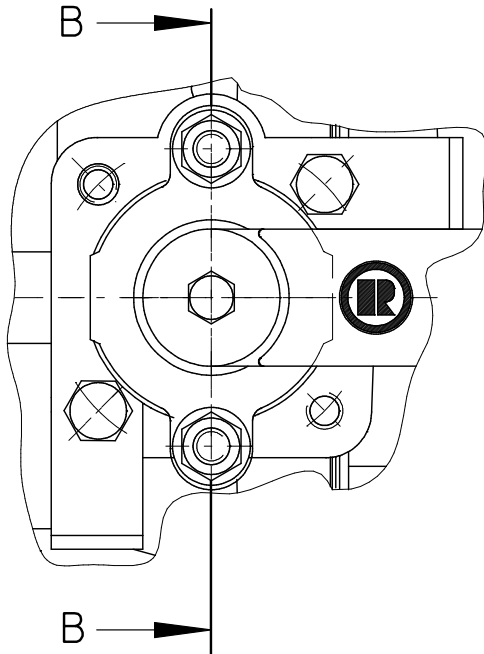
DN/DN1	50/25	80/50	100/50	150/100
H1	50	80	80	134
H2	60	97	97	156
H3	60	60	60	80
L	160	210	210	325

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dimension H and l1 vary depending on the actuator manufacturer
 dimensions in mm

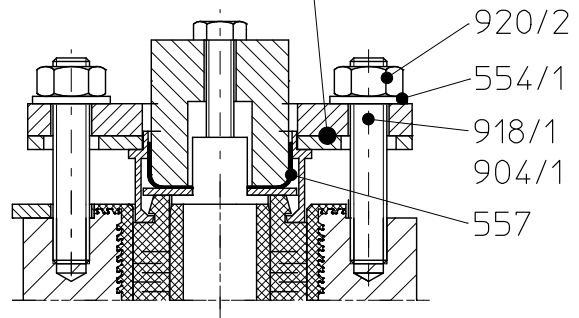
10.4 View and section KA-N

View "A"



Section B-B

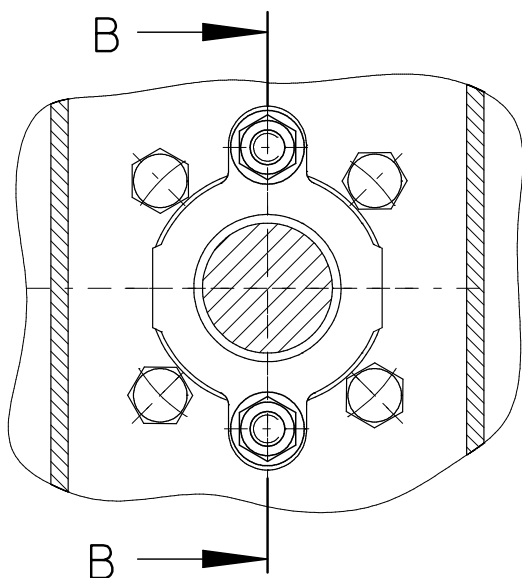
Tighten packing gland follower 503 until spring gland follower 502 is in contact without any gap



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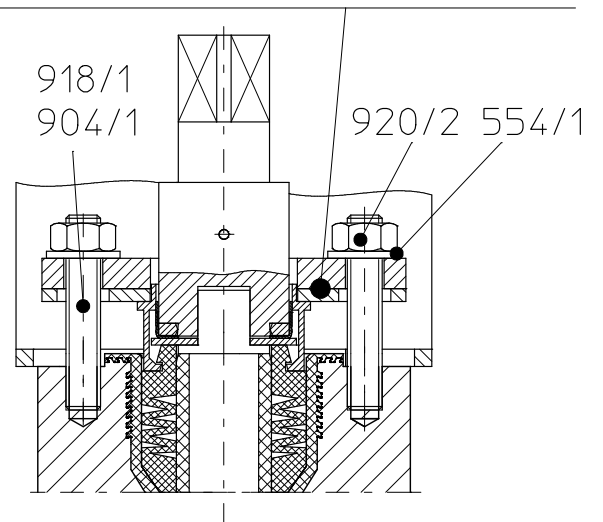
10.5 Sections KAP-N

Section A-A



Section B-B

Tighten packing gland follower 503 until spring gland follower 502 is in contact without any gap



9500-43-1210_en/4-0

CE Konformitätserklärung nach EN ISO//IEC 17050
Declaration of Conformity according to EN ISO//IEC 17050

Produkt <i>Product</i>	Kunststoffausgekleidete Dreharmaturen <i>Plastic lined quarter turn valves</i>		
Bauart <i>Design</i>	Kugelhahn, Regel-Kugelhahn, Kompakt-Kugelhahn, Bodenablass-Kugelhahn, Absperr- und Regelklappe <i>Ball valve, control ball valve, sandwich ball valve, bottom drain ball valve, shut-off and control butterfly valve</i>		
Baureihe <i>Serie</i>	KN..., KNA..., BVA..., BVI..., KNR..., KNAR..., KH..., KK..., KK-FU., KA-N..., NK..., NKL..., NKS...		
Nennweite <i>Size</i>	DN 15 bis DN 400, ½" bis 16" <i>DN 15 to DN 400, ½" to 16"</i>		
Seriennummer <i>Series number</i>	ab/from 29.12.2009		
EU-Richtlinie <i>EU-Directive</i>	97/23/EG Druckgeräterichtlinie <i>97/23/EC Pressure Equipment</i>	2006/42/EG ²⁾ <i>2006/42/EC²⁾</i>	Maschinenrichtlinie <i>Directive Machinery</i>
Angewandte Technische Spezifikation <i>Applied Technical Specification</i>	DIN EN ISO 12100-2 AD 2000		
Überwachungsverfahren <i>Surveillance Procedure</i>	97/23/EG Zertifizierungsstelle für Druckgeräte der TÜV Nord Systems GmbH & Co. KG Notified Body 0045		
Konformitätsbewertungsverfahren 97/23/EG <i>Conformity assessment procedure 97/23/EC</i>	Modul H		
Kennzeichnung <i>Marking</i>	97/23/EG ¹⁾	97/23/EC ¹⁾ ≥ DN 32, ≥ 1"	CE 0045
	2006/42/EG ²⁾	2006/42/EC ²⁾	CE


Das Unternehmen Richter Chemie-Technik GmbH bescheinigt hiermit, dass die o.a. Baureihen die grundsätzlichen Anforderungen der aufgeführten Richtlinien und Normen erfüllt.
Richter Chemie-Technik GmbH confirms that the basic requirements of the above specified directives and standards have been fulfilled.

- ¹⁾ Für nicht aufgeführte Nennweiten ist eine Kennzeichnung nicht zulässig.
For sizes not listed a marking is not permitted.
²⁾ Alle Armaturen, mit Ausnahme der Armaturen mit Handbetätigung.
For all valves, with exceptions to valves with hand operation

Kempen, 14.01.2011



G. Kleining
Leiter Forschung & Entwicklung
Manager Research & Development



A. Linges
Leiter Qualitätsmanagement
Quality Manager

Safety Information / **Declaration of No Objection** Concerning the Contamination of Richter-Pumps, -Valves and Components

1 SCOPE AND PURPOSE

Each entrepreneur (operator) carries the responsibility for the health and safety of his employees. This extends also to the personnel, who implements repairs with the operator or with the contractor.

Enclosed declaration is for the information of the contractor concerning the possible contamination of the pumps, valves and component sent in for repair. On the basis of this information for the contractor is it possible to meet the necessary preventive action during the execution of the repair.

Note: The same regulations apply to repairs **on-site**.

2 PREPARATION OF DISPATCH

Before the dispatch of the aggregates the operator must fill in the following declaration completely and attach it to the shipping documents. The shipping instructions indicated in the respective manual are to be considered, for example:

- Discharge of operational liquids
- remove filter inserts
- lock all openings hermetically
- proper packing
- Dispatch in suitable transport container
- Declaration of the contamination fixed **outside!!** on the packing

Declaration about the Contamination of Richter Pumps, -Valves and Components

The repair and/or maintenance of pumps, valves and components can only be implemented if a completely filled out declaration is available. If this is not the case, delay of the work will occur. If this declaration is not attached to the devices, which have to be repaired, the transmission can be rejected.

Every aggregate has to have it's own declaration.

This declaration may be filled out and signed only by authorized technical personnel of the operator.

Contractor/dep./institute : _____ Street : _____ Postcode, city: _____ Contact person: _____ Phone : _____ Fax : _____ End user : _____	Reason for transmitting <input checked="" type="checkbox"/> Please mark the applicable Repair: <input type="checkbox"/> subject to fee <input type="checkbox"/> Warranty Exchange: <input type="checkbox"/> subject to fee <input type="checkbox"/> Warranty <input type="checkbox"/> Exchange/ Replacement already initiated/received Return: <input type="checkbox"/> Leasing <input type="checkbox"/> Loan <input type="checkbox"/> for credit note																																												
A. Details of Richter-product:																																													
Classification: _____ Article number: _____ Serial number: _____	Failure description: _____ Equipment: _____ Application tool: _____ Application process: _____																																												
B. Condition of the Richter-product:																																													
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;"></th> <th style="width:10%; text-align:center;">no¹⁾</th> <th style="width:10%; text-align:center;">yes</th> <th style="width:10%; text-align:center;">no</th> </tr> </thead> <tbody> <tr> <td>Was it in operation ?</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Drained (product/operating supply item) ?</td> <td style="text-align:center;"><input checked="" type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>All openings hermetically locked!</td> <td style="text-align:center;"><input checked="" type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>Cleaned ?</td> <td style="text-align:center;"><input checked="" type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> </tbody> </table>		no ¹⁾	yes	no	Was it in operation ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Drained (product/operating supply item) ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All openings hermetically locked!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cleaned ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;"></th> <th style="width:10%; text-align:center;">no¹⁾</th> <th style="width:10%; text-align:center;">yes</th> </tr> </thead> <tbody> <tr> <td>toxic</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>caustic</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>flammable</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>explosive²⁾</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>mikrobiological²⁾</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>radioactive³⁾</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> <tr> <td>other pollutant</td> <td style="text-align:center;"><input type="checkbox"/></td> <td style="text-align:center;"><input type="checkbox"/></td> </tr> </tbody> </table>		no ¹⁾	yes	toxic	<input type="checkbox"/>	<input type="checkbox"/>	caustic	<input type="checkbox"/>	<input type="checkbox"/>	flammable	<input type="checkbox"/>	<input type="checkbox"/>	explosive ²⁾	<input type="checkbox"/>	<input type="checkbox"/>	mikrobiological ²⁾	<input type="checkbox"/>	<input type="checkbox"/>	radioactive ³⁾	<input type="checkbox"/>	<input type="checkbox"/>	other pollutant	<input type="checkbox"/>	<input type="checkbox"/>
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If yes, with which cleaning agent: _____ and with which cleaning method: _____																																													
¹⁾ if "no", then forward to D. ← ²⁾ Aggregates, which are contaminated with microbiological or explosive substances, are only accepted with documented evidence of an approved cleaning. ³⁾ Aggregates, which are contaminated with radioactive substances, are not accepted in principle.																																													
C. Details of the discharged materials (must be filled out imperatively)																																													
1. With which materials did the aggregate come into contact ? Trade name and/or chemical designation of operational funds and discharged materials, material properties, e.g. as per safety data sheet (e.g. toxic, inflammable, caustic)																																													
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2. Are the materials specified above harmful to health ? <table style="display: inline-table; border: none;"><tr><td style="text-align:center; border-bottom: 1px solid black;">no</td><td style="text-align:center; border-bottom: 1px solid black;">yes</td></tr><tr><td style="text-align:center;"><input type="checkbox"/></td><td style="text-align:center;"><input type="checkbox"/></td></tr></table> ←		no	yes	<input type="checkbox"/>	<input type="checkbox"/>																																								
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If yes, which ones ? _____																																													

D. Mandatory declaration: We assure that the data in this explanation are truthful and complete and as a signatory I am able to form an opinion about this. We are aware that we are responsible towards the contractor for damages, which results from incomplete and incorrect data. We commit ourselves to exempt the contractor from claims for damages of thirds resulting from incomplete or incorrect data. We are aware that we are directly responsible towards thirds, irrespective of this declaration, which belongs in particularly to the employees of the contractor consigned with the handling repair of the product.

Name of the authorized person (in block letters): _____

_____ Date

_____ Signature

Company stamp

FAX

Fax No. ()

Pages (incl. cover sheet) ()

To:

()

Richter Chemie-Technik GmbH
Otto-Schott-Straße 2
D-47906 Kempen

Telefon +49 (0) 21 52/146-0
Telefax +49 (0) 21 52/146-190

richter-info@richter-ct.com
www.richter-ct.com

Contact person:
()

Reference:
()

Extension:
- ()

E-Mail Address:
()

Date:
()

Your order No.: ()

Our Kom. No.: ()

Serial No.: ()

Dear Sirs,

The compliance with laws for the industrial safety obligates all commercial enterprises to protect their employees and/or humans and environment against harmful effects while handling dangerous materials.

The laws are such as: the Health and Safety at Work Act (ArbStättV), the Ordinance on Harzadous Substances (GefStoffV, BIOSTOFFV), the procedures for the prevention of accidents as well as regulations to environmental protection, e.g. the Waste Management Law (AbfG) and the Water Resources Act (WHG)

An inspection/repair of Richter products and parts will only take place, if the attached explanation is filled out correctly and completely by authorized and qualified technical personnel and is available.

In principle, radioactively loaded devices sent in, are not accepted.

Despite careful draining and cleaning of the devices, safety precautions should be necessary however, the essential information must be given.

The enclosed declaration of no objection is part of the inspection/repair order. Even if this certificate is available, we reserve the right to reject the acceptance of this order for other reasons.

Best regards
RICHTER CHEMIE-TECHNIK GMBH

Enclosures

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