




**DS** **DIESSE** S.p.A.  
Fluid Control



**BLOW DOWN VALVE**

**INSTALLATION & OPERATION MANUAL**

|   |   |  |
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|  | <p>Installation, use and maintenance instructions<br/>Quick-release valve – dwgs. 30.00 and 30.02</p> | <p><b>2/9</b><br/>rev. 05<br/>Sept. 2017</p> |
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**Note:**



this symbol means a special attention to be paid to the health and safety message.

## 1 GENERAL INFORMATION AND INSTRUCTION PURPOSE

These instructions explain how to properly install, dismantle, use and service the quick-release valve, dwg. No. 30.00 (manual lever valve with adjustment handwheel – Fig. 1) and dwg. No. 30.02 (pneumatic valve with actuator and adjustment handwheel - Fig. 2) and the relevant accessories.

These instructions must be available to the installation, use and maintenance operator.

## 2 EQUIPMENT DATA

Table 1

| <b>PRODUCT DATA</b>           |                             |
|-------------------------------|-----------------------------|
| Designation                   | DN 40 blow down valve       |
| Body material                 | WCB according to ASTM A 216 |
| Max. working temperature (°C) | 300                         |
| Rated pressure (bar)          | 40                          |

### PRELIMINARY WARNINGS:

When receiving the material, before and during the installation, it is required to carefully verify:

1. The equipment was not damaged during transport;
2. The model and temperature and pressure rating are compliant to the requirements;
3. The material is compatible with the process fluid and the environment atmosphere where it has to be installed;
4. For models complete with pneumatic actuator, that data on the data label are compatible with the power supply.

## 3 LIMITED RESPONSIBILITY

Manufacturer declines all responsibilities should the equipment be used under the following conditions that are considered as incorrect use.

## EQUIPMENT INTENDED USE

Equipment **must** be exclusively used for the discharge of sludge in hydraulic circuits where pressure and temperature are not higher than the max. values stated by the manufacturer and listed on the table 1.

Fluid in the tank or vessel must be compatible with the materials used for the equipment manufacturing. Contact the manufacturer, should you have any doubt or need for more detailed information.

The valve must be mounted downstream a suitable on-off valve, depending on the plant features.

## IMPROPER USE



Improper use of the equipment means a use that does not comply with the foreseen one and, in particular, when used under the following conditions:


- Failure to comply with or use for purposes contrary to the safety rules in force
- Failure to comply with the manufacturer instructions and in particular the max. permissible temperature and pressure values
- Equipment wrong mounting and installation
- Wrong installation after a maintenance operation
- Severe failures to the foreseen maintenance operations
- Changes or services to the equipments non previously discussed and authorized by the manufacturer
- Use of non-original spare parts or of spare parts different from those stated by the manufacturer
- Total or partial non-fulfilment of the installation instructions
- Use of the equipment by non-trained people (about Regulation)
- Actuator connection (if installed) to a different power supply than stated on the equipment's data plate
- No connection to a valve actuator (if installed) with consequent slowing down of the air flow for valve slow closing
- Unusual events like as earthquakes, floods, voluntary or accidental impacts and similar, that might have implied damages to the equipment, even if not immediately noticeable
- Maintenance operations carried out with components under pressure and/or temperature

## 4 SPECIAL PRECAUTIONS



- Considering the valve can reach very high temperatures, appropriate precautions should be taken (valve insulation, caution signs, etc.) to avoid the risk for injury to the staff who might get in touch with it, even accidentally.
- Removing the handwheel (pos. 1, Fig. 1) and the fork can cause the **contrast spring ejection** (pos. 2, fig. 1) with risk for injury to the involved operator. Therefore, the manufacturer only will be authorized to carry out the maintenance operations or the replacement of the spring and/or of other internal components.

## 5 HANDLING

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|---|---|---|
|  | <p style="text-align: center;">Installation, use and maintenance instructions<br/>Quick-release valve – dwgs. 30.00 and 30.02</p> | <p style="text-align: right;"><b>4/9</b><br/>rev. 05<br/>Sept. 2017</p> |
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No special instructions are foreseen for the sludge quick-release valve handling, except for paying attention to avoid all impacts that might damage its structure.

## 6 EQUIPMENT ASSEMBLY / DISASSEMBLY

The quick-release valve **must** be mounted according to the flow direction shown by the arrow on its body.

When mounting the valve, place the seals, according to the flow and the working temperature, between the connection flange contact surfaces.

Tight the bolts for parallel drawing up of the flanges ("cross-pulling") with a torque enough to assure the gasket sealing.

Before starting the plant and after the first assembly or a maintenance operation, check for the valve closing by looking at the handwheel, that should be in the highest position. Turn the handwheel clockwise till stroke-end, as required.

After a few working hours, check for the bolt tightening and retight if required.

Before disassembling the quick-release valve, be sure:

- The upstream plant is not operating;
- The upstream on-off valve is fully closed;
- The temperature is not dangerous for the maintenance operators (it must be less than or equal to 60°C).

Unscrew the bolts, remove the gaskets and the valve.

Be sure that valve, gaskets and any possible fluid waste are disposed according to the national standard in force at the disassembling time.

### 6.1 ASSEMBLING THE EQUIPMENT WITH PNEUMATIC ACTUATOR

Special attention should be paid to the pneumatic actuator (if installed) connection

- b) The actuator pneumatic supply **must** be compliant to the values stated on the product data label;
- c) Aiming at avoiding damages to the seat and the shutter or, if the worst comes to the worst, body strains (the valve foresees a very powerful closing spring), the air exhaust must be slow down so as the valve can slowly close by connecting a special valve to the actuator

## 7 USE

### Caution:


This equipment works under high-temperature conditions. Before touching any part of the equipment, it is important to wear personal safety devices (glasses, gloves, safety shoes, etc.....)

#### Manual version:

Opening: Lower the lever for discharging the sludge. The valve can be left open in the required position by turning the adjustment handwheel (pos. 1 Fig. 1) clockwise till locking the lever

Closing: Grip the lever and oppose the spring force, unscrew (anticlockwise) completely the adjustment handwheel till the stroke-end, slowly release the lever

#### Pneumatic version:

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Opening: Connect the actuator to the power supply. If the power plant is malfunctioning, the valve can be opened by turning (clockwise) the safety handwheel till the required opening level

Closing: Disconnect the actuator from the power supply. Should the power plant be malfunctioning, the valve can be closed by turning (counterclockwise) the safety handwheel till the required closing level (stroke-end)

## 8 MAINTENANCE

The valve has been designed to be disassembled with special tools only, allowing its parts opening.

### Whereas:

- **The operator is responsible for the maintenance operations and for evaluating the above said risks;**
- **The user is responsible for preparing the suitable maintenance files where to report the maintenance intervals, according to his requirements/use of the plant,**

it is suggested to carry out the following maintenance operations:

- a) Check of the linkage tightening (to assure a continuous sealing); Gently tight the screws on several occasions;
- b) If small fluid leakages from the pudding are noticed in the first working hours, slightly tight the pudding pusher (pos. 3 Fig. 1)  
Continuously check the correct pudding sealing. Tight it, as required.

When the pudding pusher reaches its stroke-end, a graphite plait can be added to temporarily reset the pudding: Contact the manufacturer, should you have any doubt or need for more detailed information.

### Caution:

- a) Before carrying out the operation, wait for the equipment to reach the room temperature
- b) Assure a continuous plant cleaning by checking the filters and avoid their seat and the shutter to be damaged by slag or foreign matters

Inside or outside wear means the environmental conditions are contrary or not compliant with the equipment manufacturing materials. The user is responsible for detecting the problem's cause.

## 9 SPARE PARTS

The spare parts that can be ordered are listed on the relevant updated catalogue.

## COMPLIANCE DECLARATION TO EEC DIRECTIVE 2014/68/EU

*We declare that the manufacturing and operating characteristics of the instruments above indicated, come under article 4 par. 3 of Directive 2014/68/EU and as a consequence, cannot be given the CE mark.*

It is also confirmed that the product was manufactured according to the state of the art and subject to the inspections as foreseen by the testing plans stated in the current company's quality control procedures

**Should you have any question, please contact:**

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FIG. 1

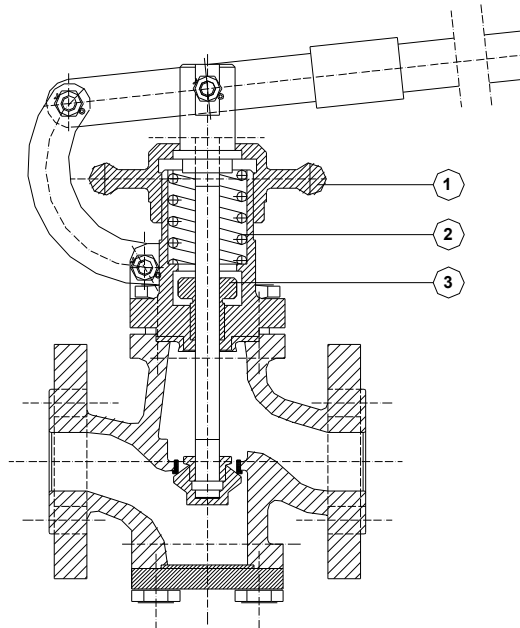
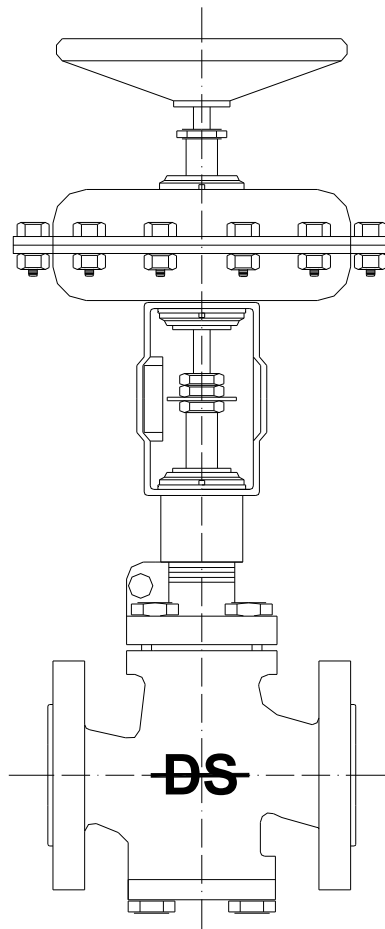



FIG. 2



|   |   |                                     |
|---|---|-------------------------------------|
|  | Installation, use and maintenance instructions<br>Quick-release valve – dwgs. 30.00 and 30.02 | <b>8/9</b><br>rev. 05<br>Sept. 2017 |
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## TECHNICAL SERVICE:

Our technical service is available to answer all your requests at the following addresses. For a better service, it is recommended to inform it about:

- equipment purchase / installation date
- operating data (fluid, working pressure and temperature)

Our technical service will assess the problem extent and will try to solve it as much as possible. Should a repair be required, the manufacturer will agree the service modes and times. Shipping costs from customer to manufacturer are at customer's charge.

### Under guarantee products

Technical service will provide for the inspections and the operations required. Should the manufacture be responsible for the problem, he will repair/replace the fault parts at no charges to the customer.

If, after analysing the product, it is confirmed that there are no manufacturing defects and the faults is due to the customer because of improper use, the manufacturer will charge the customer with the relevant costs.


Out of guarantee products: The service cost will be charged, upon customer's agreement. (added by the cost of any replaced component).

## Manufacturer:

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## GUARANTEE

The guarantee is for 12 months from the date of purchase and can be extended by the manufacturer on the basis of type and characteristics of the product purchased.

It covers eventual manufacturing defects or materials, excluding the parts subject to normal usage such as the gaskets and glasses.

The responsibility of the manufacturer is limited to the reparation or substitution of the product.

The manufacturer is therefore not responsible for eventual damage to other products, structures, personnel directly or indirectly connected to the improper use/installation of the product.

The guarantee is not applicable to disassembled products, repaired or mishandled without the authorisation on behalf of the manufacturer. For any problem, therefore, contact the manufacturer directly in order to evaluate and determine any eventual manufacturing defects.

In particular, the guarantee is not valid in the following cases:

- The user omitted controls prior to installation, in detail:
  - a) *verification that the data shown on the product label correspond to the requisite product*
  - b) *verification that the material is both compatible with the fluid of the process and with the ambient/atmosphere in which it is installed*
  - c) *careful verification that during transport the product has not been damaged*
- Repairs by personnel not authorised by the manufacturer
- Damages caused by fire, short circuits and natural disasters
- Inappropriate handling/installation executed differently from those indicated in the manual furnished with the product of installation-use and maintenance
- Fluid non-compatible with the materials used in the construction of the product
- Temperature and pressure during use different from that indicated on the offer /order
- Use of non-original spare parts
- Accidental shocks
- Cleaning of the installation either not effected or not effected correctly (presence of foreign bodies/scales on the installation)