



### 1. General

VAG valves are designed and manufactured in accordance with the state-of-the-art technology and are considered operationally safe.

Despite this, valves may be hazardous if they are not used properly or for the intended purpose.

Anybody at the user's company who is involved in the assembly, operation or servicing of the valves must read and fully comprehend the operating instructions (UVV, VBG1 § 14 and others).

It is recommended that the user obtains written confirmation of this (UVV VBG1 § 7, sec. 2).

The pipeline section should be depressurised and made free of hazards before protective fittings are removed or before work is commenced on the valves; if necessary, reduce the drop weight.

Unauthorised, incorrect and unexpected starting or hazardous movements caused by stored energy (compressed air, pressurised water) must be avoided.

When using the valves, observe the recognised engineering principles, e.g. DIN standards, DVGW data sheets, VDI guidelines, VDMA uniform sheets etc.

In case of systems which require monitoring, the laws, regulations, e.g. commercial regulations, accident prevention regulations, steam boiler regulations, AD data sheets should be adhered to. Furthermore, the local accident prevention regulations also apply.

### 2. Identification + Field of application

All valves must be identified in accordance with DIN EN 19 with the nominal diameter (DN), nominal pressure (PN), body material, manufacturer symbol and if required, a flow direction arrow.

Please refer to our offer papers/installation and operating instructions for field of application and operating restrictions. You can download the installation and operating instructions from [www.vag-group.com](http://www.vag-group.com).

### 3. Installation

Do not install directly after the pump outlet, ahead of or after elbows, Y-filters, T-pieces, flaps and also plunger valves.

The corresponding damping zones of at least 5 x DN upstream and of 5 - 8 x DN downstream of the valve must be observed. If the required distances are not complied with, this may cause disturbances in the plant and inside the valve due to flow turbulences. For the non-return valves the minimum flow velocity according to our technical data sheets has to be considered. The valves must be stored so that they are dry and protected against soiling and damage. Only remove protective lids from the connections just before installation. The passage must be cleaned before installation

and the sealing surfaces must be checked as far as possible. In the case of control valves and non-return valves, please note the flow direction.

During installation, steps should be taken to ensure that the seals to the connection flanges are well centred and that the flanges of the connecting pipeline are oriented to each other in both axial and parallel directions.

Flange screws must be unscrewed in a "cross-over" manner.

In the case of powder-coated valves, disks must be placed under the connection screws to the pipe flanges for protection purposes.

When installing clamping valves VAG CEREX® 300, VAG CEREX®-L 300, VAG CEREX® 200, VAG CEREX®-L 200, VAG INTEREX and VAG INTEREX-L with sealing collars, no additional flange sealing rings may be used.

When welding plastic valves, e.g. VAG HYDRUS® PE Underground Hydrant, please observe the special regulations, which will be supplied on request.

The pipes must be laid in a manner which protects the valve bodies from damaging pipeline forces.

If any construction work needs to be performed near or above the valves, the valves must be protected.

In the case of underground installations, steps should be taken to ensure that the pipeline is bedded carefully on both sides of the valve in order to prevent the pipe from sinking near the valve and creating bending stress.

Do not use the valve as a fixing point for the pipeline.

When systems are painted, the stems, stuffing boxes, connection plates for VAG ZETA® Knife Gate Valve, position display and identification signs may not be painted over.

If solvents are used for cleaning, steps should be taken to ensure that the solvent does not get into the stuffing boxes, stem seal or shaft seal or between the connection flanges to the pipelines as this could destroy the seals.

### 4. Commissioning and operation

Before commissioning new systems, in particular after repair work, the pipe system must be rinsed whilst the valve is fully opened. For control valves, a filter with a suitable mesh size has to be provided upstream of the valve to prevent the accumulation of dirt inside the control valve. It is important that the valve materials are not corroded. To close, turn in a clockwise direction.

The stems and actuators are designed so that the valve can be operated by one person with a hand lever, handwheel or T-key. Extensions to assist operation are not permitted and can lead to damage to the

valve caused by stress.

For valves with a 90° swing movement, e.g. disks, there is a limit stop on the hand lever or the gear unit. The valve may break if force is used to continue turning.

The function should be checked by means of opening and closing several times. In case of pressure tests, the closed valve should only be subjected to the nominal pressure.

In the case of warm pipelines, retighten the lid screws and stuffing box nuts evenly after the pipeline has been heated for the first time.

When doing this, ensure first that the valve can be opened by about complete turns.

In the case of electrically operated valves, steps should be taken to ensure that the valves are switched as follows:

Soft sealing valves:  
"CLOSED" moment-dependent,  
"OPEN" path-dependent.

All other construction types:  
"CLOSED" and,  
"OPEN" path-dependent.

### 5. Operation and maintenance

Do not exceed the maximum admissible temperature of the equipment.

Do not exceed the maximum admissible operating overpressure.

Do not load a close valve beyond the maximum admissible nominal pressure. Do not extend the control elements (e.g. with a lever).

### 6. Maintenance

We recommend to operate the valve at least once a year over the whole stroke.

#### 6.1 Safety Notes

Take any pressure from the valve before dismantling the complete valve from the pipeline or before starting any repair or maintenance works on the valve, especially

- before unfastening body connection screws - bonnet, cover, glands, plugs
- before dismantling directly screwed on drives.

Cool down warm or hot pipelines, so that the temperature of the medium drops below its evaporating temperature.

Empty and vent completely the valve in case of toxic or noxious mediums.

#### 6.2 Drives

If drives fed by separate energy (electric, pneumatic or hydraulic) have to be dismantled from the valve, the safety directives in 5.1 have to be observed and the separate energy is to be switched off.

Please notice that some valves are not self-locking! For operating and maintenance of the different valve types, please refer to the respective operating and maintenance instructions.