Operating and maintenance instructions for
Combi-III Gate Valve „E2“ - BAIO®, Order No. 438-00
Combi-IV Gate Valve „E2“ - BAIO®, Order No. 439-00

1. Intended Use / Product Description:

Medium: Potable Water

Max. Operating Pressure: 16 bar

Material: Body: GJS-400, Hawle epoxy powder coated
Spindle: stainless steel, Wedge nut: brass
Wedge: GJS-400, EPDM inside and outside EPDM acc. to DVGW W 270 for potable water
DCI-pipe BLD® gasket/PE/PVC pipe GKS-gasket: EPDM acc. to DVGW W 270 for water
E3-edge protection: PE
Metal materials in contact with potable water according to the positive list of the German Federal Environmental Agency (UBA)*

Outlet Options	
Vertical	With optional vertical BAIO® socket / vertical flange for the connection of hydrants or air release valve sets.
Horizontal (only BAIO® Combi-III)	With optional horizontal ZAK® outlets or female thread outlets on the housing. A blind cover is also possible.

Combi-III or VI gate valve with BAIO® double function socket on all sides for a restraint connection with BAIO® spigot ends and for the connection of cast iron, steel, PE and PVC pipes.
Installation of valve junctions with a maximum of 3 or 4 gate valves in a confined space.

Delivered with round thread adaptor for the pinless fixing of Hawle extension spindles. Square end cap for manhole installation on request.

The typical applications for gate valves are either completely „open“ or completely „closed“. Gate valves are not control valves! The gate valve is actuated by an extension spindle when installed in the ground. In the manhole or plant area, a hand wheel or electric actuator is to be used. Lever extensions for operational purposes are not permitted.

The Hawle gate valve must be protected against damage during transportation.
When loading and transporting the gate valve with the aid of cranes, it may only be suspended from ring bolts provided for this purpose. The gate valve spindles are equipped with female threads, into which ring bolts may be screwed. The hand wheel must not be used for the purpose of suspension.

Before installing the Hawle gate valve, the pipeline must be cleaned. No impurities or debris may be present as these can lead to malfunctions.

When installing gate valves with electric actuators, the accompanying operating instructions and the CE marking regulations are to be complied with.
During laying, installation and maintenance operations, all valid standards and guidelines, accident prevention regulations and the regulations of professional associations are to be observed and complied with.
Installation and maintenance should only be undertaken by qualified personnel.

Caution: a support liner must **always** be used when laying PE pipes.

2. Installation

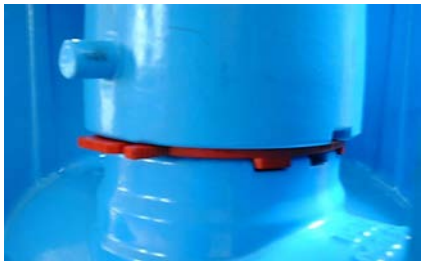
	Turning tool, art. no. 855 800 0010, or other suitable tool Ratchet 1/2“ Screwdriver	

If a hydrant DN 80 with spigot end is installed in the socket, the socket must be turned to a 45° position. The hydrant is then inserted. To lock the socket, place the turning tool on the lateral bolts and turn the socket counter clockwise with the ratchet until the hydrant is locked. The anti-rotation device and dirt cap supplied must be fitted to prevent unintentional twisting and contamination.



To secure the swivel socket, the supplied anti-twist device DN80 is installed in the gap between the body and the socket. If required, enlarge the gap by lifting the socket. There are notches in the body and in the socket. The anti-twist device is now inserted into these notches. Caution: Do not damage the coating!

The individual cams must face upwards!



During installation, the correct alignment of the notches must be ensured (see photo).

The twist lock device can simply be locked in place and removed with a screwdriver. To dismantle, simply insert the screwdriver into the slots and lever the toothing. The anti-twist device can be reused if properly dismantled!


3. Maintenance

Hawle gate valves are maintenance-free, and tested acc. to DVGW technical bulletin W400-3.
In order to ensure trouble-free operation, we recommend that the valve be activated once a year (and more frequently if deposits are expected to form).
For gate valves with electric drive, a visual inspection of the gate valve, drive and electrical installation is required at least once a year in addition to a functional check. European regulations on CE marking (e.g. EU Machinery Directive, EU EMC Directive, accident prevention regulations, etc.) must be complied with.

4. Commissioning/Pressure test

After having been successfully installed, a pressure test must be carried out in an open pipe trench, observing the maximum operating pressures in accordance with DVGW regulations.
Following the leak test, a function check must be conducted.

* Brass/red brass components > 0.1% lead acc. to Regulation (EU) No. 1907/2006 (REACH Regulation)

If you have any other questions or if you need more information please contact:

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