Operating Instructions
for
Butterfly Valves
- manually operated -

Model: KLA

1. Contents

Manufactured and sold by:

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2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.
The instruction manuals on our website www.kobold.com are always for currently manufactured version of our products. Due to technical changes, the instruction manuals available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (info.de@kobold.com) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form against an applicable postage fee.

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC-machine guidelines.

3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition.
Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:
The standard delivery includes:
- Butterfly Isolating Valves - manually operated -model: KLA

4. Regulation Use

Any use of the Butterfly Valves - manually operated -, model: KLA, which exceeds the manufacturer's specifications, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

Butterfly valves will be used to cut off medium flow.
It should only be used with clean liquids and gases; as well as powdery, pasty and bulk materials as far as they are suitable for Butterfly valves and for which the material of the ball valve will be resistant. Pollution or exceeding the nominal pressure range and/or the nominal temperature range may lead to damages of the armature especially on the seals.

5. Safety Regulation

Depending on the technical circumstances and the conditions under which the armatures and valves are mounted, adjusted and commissioned, you must take into account particular safety aspects for each case!
If, for example, a pneumatic actuator works a slide in an operational chemical plant, the potential hazards of commissioning have another dimension from that when this is only being carried out for test purposes in a „dry“ part of the plant in the assembly room!
Since we do not know the circumstances at the time of the mounting/adjustment/ commissioning, you may find advice among the precautions in the following descriptions which are not relevant to you.
Please observe (only) the advices which apply to your situation!

5.1 Personal Advice

5.1.1 Safety Advice for Mounting

We wish to emphatically stress that the mounting, adjusting and commissioning of the pneumatic and electrical portion of the armatures and valves must be carried out by trained specialist personnel having mechanical, pneumatical and electrical knowledge!

- Ensure that the machine / plant come up to the Machinery Directive after the mounting and installing of the armatures and valves.
- Switch off all the devices / machines / plant affected by mounting or repair. If appropriate, isolate the devices / machines / plant from the mains.
- Check (for example in chemical plants) whether switching off the devices / machines / plant will cause potential danger.
- If appropriate, in the event of a fault in the armature / valve (in a plant which is in operation) inform the shift foreman / safety engineer or the works manager without delay so that precautionary steps can be taken to avoid an outflow / overflow of chemicals or the discharge of gases in timely fashion!
- Before mounting or repairing, remove the pressure from pneumatic / hydraulic devices /machines / plant.
- If necessary, set up warning signs in order to prevent the inadvertent starting up of the devices /machines / plant.
- Observe the respective relevant professional safety and accident prevention regulations when carrying out the mounting / repair work.
- Check the correct functioning of the safety equipment (for example the emergency push off buttons/ safety valves, etc)!

5.1.2 Safety Advice for Adjustment / Starting

As a result of the starting (pneumatic, electric or by hand) of the armatures and valves the flow of gases, steam, liquids, etc. may be enabled or interrupted! Satisfy yourself that, as a result of the starting or the test adjustment that potential hazards will be avoided for the personnel or the environment!

- If necessary, set up warning signs in order to prevent the inadvertent starting up or shutting down of the device / machine / plant.!
- When the adjustment is completed, check for proper operation and necessary, verify the position of the slide / valve / flap.
- Check the functioning of the limit switches (option)!
- Check-, whether the slide / valve / flap will totally closed, when the control signals the appropriate limit stop!
- Through suitable measures, prevent actuating links being trapped by moving actuating elements!
- Check for proper functioning of all safety devices (for example emergency push off buttons / safety valves)!
- Conduct out the start-up and the adjustments only in accordance with the instructions described in this documentation!

During adjustments of switched on (ready to operate) armatures and valves with options (e.g. actuators, drives, limit switches), there is the risk that live parts (230 V AC~) can be touched! Therefore the adjustments must be carried out only by an electrician or a person having adequate training, who is aware of the potential hazard!

5.1.3 Safety Advice for Maintaining / Repairing

Do not carry out any maintenance / repairs if the armature / valve will be under pressure.

Before disassembling an armature or valve some essential points should be clarified:

- Will the armature/valve to be disassembled be replaced by another immediately?
- If appropriate, does the production process of the plant needed to be stopped?
- Is it necessary to inform specific personnel about the disassembly?

If necessary, inform the shift foreman/ safety engineer or the manager about the maintenance or repair without delay, so that precautionary steps can be taken to avoid an outflow/ overflow of chemicals or a discharge of gases in timely fashion!

Observe that some valves / armatures are able to entrap the pressurized medium e.g. the ball in the ball valve. You have to relieve the pressure in the pipes in which the armature/valve is mounted.

Switch off pilot pressure and the power supply and relieve the pressure in the pipes.
If necessary set up warning signs in order to prevent:

- the inadvertent starting up of the devices/machines/plants in which the armature/valve is mounted
- the switching-on of pilot medium supply, pilot power supply and/or the power supply of actuators and accessories.

In case of a defect in the armature/valve, contact to the supplier.

If you detect damage of the armature/valve, isolate the device from the mains. Please observe the safety advices.

Do not mount, start or adjust the armature/valve if doing so would cause damage to itself, the pipes or a mounted actuator .

After any maintenance or repair, check for proper functioning of the armature/valve and the tightness of the pipe connections.
Also check the operation of the accessories (e.g. actuators, limit switches, etc).

5.2 Device Safety

The armatures/valves

- are quality products which are produced in accordance to the recognised industrial regulations.
- Shipped from the manufacturer's facility in a perfect safety condition.

In order to maintain this condition, as installer / user you must carry out the installation in accordance with the descriptions in these instructions; while maintaining, accuracy with the greatest possible precision.

We recommend that, as a trained specialist, the installer have adequate mechanical and electrical knowledge! Be certain that the armatures/vales will only be used within their permitted specified limits (see the technical data).

The armatures/valves must be used only for purposes which correspond to their physical configuration! The armatures/valves must be used within the values specified in the technical data! The operating of the armature/valve outside the nominal temperature range could destroy the seals and the bearings. The operating of the armatures/valves outside the nominal pressure range could destroy the inner parts and the body.

Never remove a cap or any other component part if the armature/valve is under pressure.

Do not mount, put into operation or adjust the armature/valve if the pipes or a mounted actuator are damaged.
After finishing the assembling and adjustments check for proper functioning of the armature/valve and the tightness of the pipe connections.
Also check the operation of the accessories (e.g. actuators, limit switches, etc).

6. Mounting/Disassembly

The mechanical installation of the butterfly valves differs, depending on the type of the body. The wafer type butterfly valve will be fixed between to flanges.

6.1 Mounting of the Snap-in Disc and the Handle

- For butterfly valves which will be actuated by hand the snap-in disc and the handle will be enclosed to the package separately. Before installing the butterfly valve you have to mount the handle and the snap-in disc.
- Observe the flow direction: the handle should point at the flow direction.
- Remove the packaging and the safety devices (e.g. caps or plugs). Take care that there will remain no parts of the package or other parts in the armature.
- Clean the pipes in which the ball valve will be mounted. Pollution could affect safety during operation and the duration of life of the armature.
- Avoid stress in case of non-aligned pipes.
- The flanges have to be aligned parallel and centrically and must have carefully worked surfaces.

- **The butterfly valve will be fixed between two flanges. The sealing takes places by the mating face of the butterfly valve other sealing compounds are not allowed. Take care that there are no remains of any other sealing compounds or other pollution into the armature.**
- **The flanges should not be welded into the pipes if the armature is mounted. The increasing temperatures will destroy the sleeve of the butterfly valve.**

- With polluted media we recommend installing the butterfly valve horizontally. In this case, the lower disc half has to close in the flow direction.

6.2 Mounting of a Wafer Type Butterfly Valve

In the following description we assume that you have welded the flanges at the end of the pipes and they have cooled down completely.

- Adjust the disc in a slightly open position so that the disc won't stand out off the body.
- Put the butterfly valve between the flanges. The butterfly valve has to be inserted between the flanges very carefully so that the sleeve won't be damaged.
- Align the butterfly valve and put hardware through the bolt holes of the flanges.
- Put the nuts onto the bolts and tighten them gradually and equally – in a crosswise pattern.
- Check whether the disc of the butterfly valve can be opened and closed easily. Keep the disc a little bit open afterwards.
- Tighten all the screws crosswise and check the operation of the butterfly valve again. Observe the max. torque rating of the screws.
- Check the tightness of all the connections.

7. Operating

The butterfly valve will be opened or closed by using a handle or actuator (option). The snap-in handle of a hand actuated butterfly valve can be snapped out during the operation. The disc has a 10 position intend into which the lever can click; this assists in correct placement of the handle.

During the closing operation take care that no objects are inserted into the armature. Serious **injuries or damages will be the consequence. If it's necessary, a protective device should be installed.**

8. Maintenance

Before you maintain or shut down the butterfly valve you have to read the safety advice. If you have not read the safety advice, read these important precautionary notes now and return to this point when finished.

Under normal operating conditions the butterfly valve is maintenance free. Periodically, the operator functionality and the tightness should be inspected.

- Check the tightness of stem seals
- Check the tightness of the sleeve
- Check the wear of the sleeve

In the event there's a leaky stem seal or sleeve you have to disassemble the butterfly valve and send it back to the manufacturer.

Don't try to disassemble the sleeve of the butterfly valve yourself. Heavy injuries or damages could be the consequence.

In case of a defect of the valve contact the supplier.

If you determinate that there is a damage to the valve, switch off the device/ machine/ plant! However, before doing this, it is essential to refer to the safety advice.

9. Technical Information

Design
One-piece construction; for mounting between two flanges.

Materials

Body:	aluminium alloy, GGG-40
Disc:	1.4408, St C22 (KLA-TAH only)
Shaft seal:	NBR
Shaft:	stainless steel 1.4016
Bushing:	bronze
Sleeve:	EPDM, FKM
Handle:	aluminium alloy

Technical Information

Connections:	DN 40...DN 300
Temperature range:	EPDM: -35 °C...+120 °C FKM: -20 °C...+180 °C
Operating pressure between 2 flanges:	max. 16 bar (GGG housing) max. 10 bar (Aluminium-housing)
end valve:	max. 6 bar
Operation:	Rotation of the handle through 90°, with 10 snap-in positions.

10. Order Codes

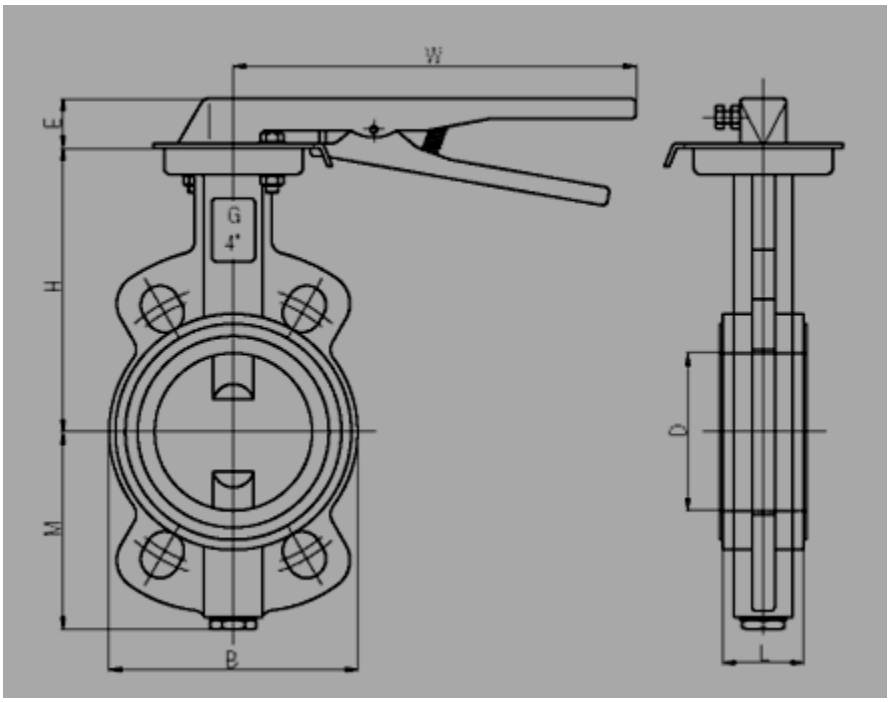
Example: **KLA-TA 7 E F40**

Order no.	Body	Seal	Connection size
KLA-TA	**7** = Aluminium **H** = GGG-40	**E** = EPDM **F** = FKM	**F40** = DN 40 **F50** = DN 50 **F65** = DN 65 **F80** = DN 80 **F1H** = DN 100 **F1Z** = DN 125 **F1F** = DN 150 **F2H** = DN 200 **F2F** = DN 250 **F3H** = DN 300

11. Dimension

KLA-TA

Flange DN	H mm	M mm	B mm	D mm	L mm	E mm	W mm	Weight kg
40	130	75	84	49	33	40	265	2.2
50	138	81	102	43	43	40	265	3.0
65	148	89	116	46	46	40	265	3.5
80	158	110	133	46	46	40	265	4.0
100	173	128	160	52	52	40	265	6.0
125	186	140	190	56	56	40	265	7.2
150	202	155	214	56	56	40	265	9.5
200	240	190	265	60	60	47	350	18.0
250	270	220	320	68	68	47	350	25.0
300	300	247	373	78	78	47	350	35.0



12. EU Declaration of Conformance

We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

Butterfly Isolating Valves - manually operated - Model: KLA -...

to which this declaration relates is in conformity with the standards noted below:

EN 12516-1:2018
Industrial valves - Shell design strength - Part 1: Tabulation method for steel valve shells

EN ISO 12100:2011
Safety of machinery - General principles for design - Risk assessment and risk reduction

EN 60204-1:2014
Safety of machinery - Electrical equipment of machines - Part 1: General requirements

Also the following EC guidelines are fulfilled:

2011/65/EU	**RoHS** (category 9)
2015/863/EU	Delegated Directive (RoHS III)
2006/42/EG	EC-machine guideline
2014/68/EU	PED

Hofheim, 05 May 2022

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