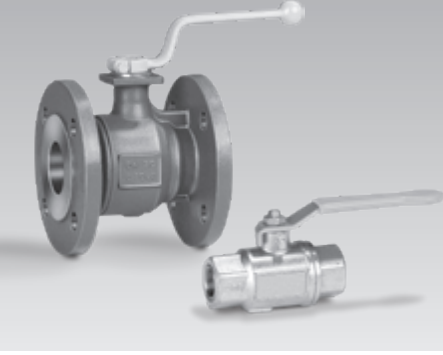


Operating instructions
Manual valves AKT, flow adjusting cocks GEHV, GEH, LEH



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Manual valves AKT, flow adjusting cocks GEHV, GEH, LEH 1

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Safety

Please read and keep in a safe place



Please read through these instructions carefully before installing or operating. Following the installation, pass the instructions on to the operator. This unit must be installed and commissioned in accordance with the regulations and standards in force. These instructions can also be found at www.docuthek.com.

Explanation of symbols

■, **1**, **2**, **3**... = Action
 > = Instruction

Liability

We will not be held liable for damage resulting from non-observance of the instructions and non-compliant use.

Safety instructions

Information that is relevant for safety is indicated in the instructions as follows:

⚠ DANGER

Indicates potentially fatal situations.

⚠ WARNING

Indicates possible danger to life and limb.

! CAUTION

Indicates possible material damage.

All interventions may only be carried out by qualified gas technicians. Electrical interventions may only be carried out by qualified electricians.

Conversion, spare parts

All technical changes are prohibited. Only use OEM spare parts.

Changes to edition 03.18

The following chapters have been changed:

- Checking the usage
- Installation
- Technical data
- Certification

Checking the usage

Intended use

AKT

Manual valve AKT is used for the manual shut-off of all gases to DVGW Code of Practice G 260/1 and air.

GEHV, GEH, LEH

Flow adjusting cocks GEHV, GEH, LEH are used for precise flow rate adjustment.

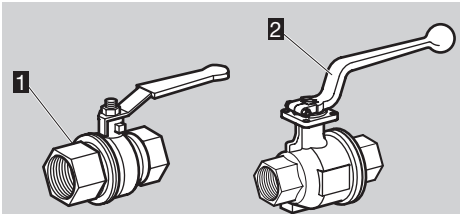
This function is only guaranteed when used within the specified limits – see page 3 (Technical data). Any other use is considered as non-compliant.

Type code

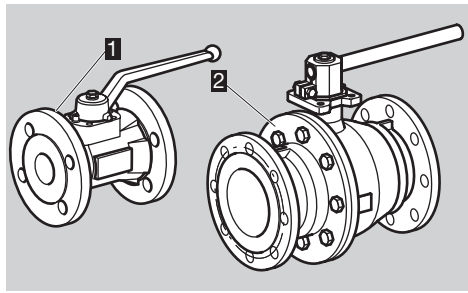
Code	Description
AKT	Manual valve
6–250/200	Nominal size
R	Rp internal thread
F	Flange to ISO 7005
50	Max. inlet pressure p_u max. 5 bar
160	16 bar
B	Brass housing
G	Housing: GJS400-18, ball: C45 steel, hard chromium-plated
G1	Two-part housing, GJS400-18, ball: C45 steel, hard chromium-plated
S	Steel housing
M	Stainless steel housing, suitable for biogas
K	Short length

Code	Description
GEHV	Flow adjusting cock for gas and air
GEH	Flow adjusting cock for gas
LEH	Flow adjusting cock for air
8–50	Nominal size
R	Rp internal thread
10	Max. inlet pressure p_u max. 1 bar
40	4 bar
50	5 bar

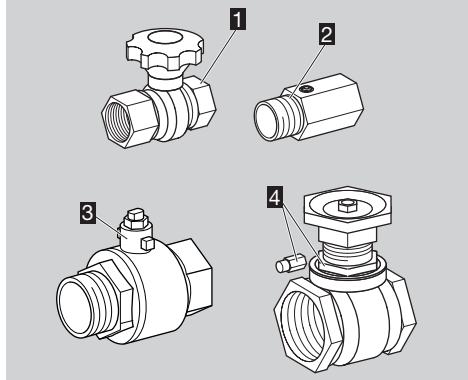
Part designations



- 1 AKT 6–50R50B
2 AKT 15–50R160S, AKT 15–50R160M



- 1 AKT 25–100F160G
2 AKT 125–250/200F160G1

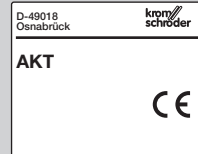


- 1 GEHV
2 GEH 8–25
3 GEH 32–50
4 LEH with safety cap

Type label

AKT

Ambient temperature and max. inlet pressure, see type label.



Installation

! CAUTION

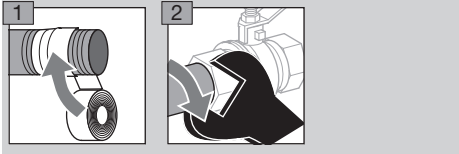
Please observe the following to ensure that the unit is not damaged during installation and operation:

- For gases which tend to form condensation, installation of a condensate drain is recommended.
- Do not clamp the unit in a vice. Risk of external leakage.
- Sealing material and dirt, e.g. thread cuttings, must not be allowed to get into the housing.

- ▷ Any installation position and flow direction.
- ▷ Install the unit in the pipe free of mechanical stress.
- ▷ Avoid subjecting the unit to shocks and vibrations.
- ▷ Use approved sealing material only.
- ▷ The device must not be in contact with masonry. Ensure that there is sufficient installation space and that the lever can be operated freely.

AKT..R, GEHV, GEH, LEH

- ▷ Use the lever and hand wheel for shut-off or adjustment only.



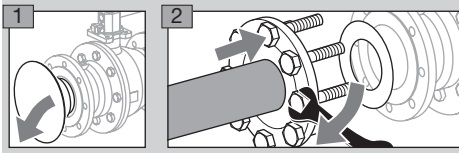
AKT..F160G-HTB

- ▷ AKT..F160G-HTB meets the requirement for internal tightness under increased thermal stress.
- ▷ If $p_U > 5$ bar, use heat-resistant screws and an HTR flange seal on the inlet side.

! CAUTION

In the case of increased thermal stress, please observe the following:

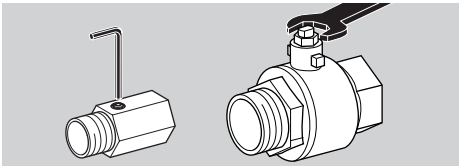
- When installing, use high temperature resistant seals.



GEH

- 3** Adjust the flow rate.

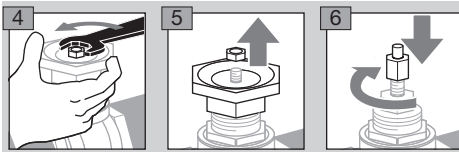
- ▷ Use an Allen key, screwdriver or spanner.



LEH

- 3** Adjust the flow rate using the hand wheel.

- ▷ A safety cap is enclosed for locking the air flow setting.

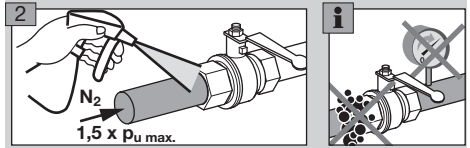


- ▷ Turn the safety cap as far as it will go.

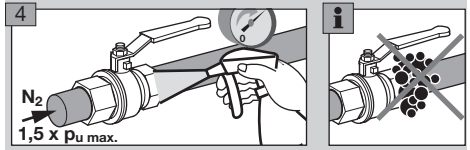
Tightness test

- ▷ The test procedure is the same for the threaded and flanged versions.

- 1** Close the manual valve.



- 3** Open the manual valve.



Maintenance

- ▷ The valves require little servicing.
- ▷ An annual function check is recommended.

Technical data

AKT

Media: all gases to DVGW Code of Practice G 260/ and air.

AKT 6–50R50B

With internal thread to DIN EN 10226-1.

Inlet pressure p_U :

for gas $p_{U \text{ max.}}$: 5 bar,

other media $p_{U \text{ max.}}$: 16 bar.

Temperature range:

for gas: -20 to +60°C,

other media: -20 to +180°C.

High temperature resistance (HTR):

Class B 0.1 (100 mbar).

Housing: CW617N, chromium-plated.

Ball: CW617N, chromium-plated.

Ball seal: PTFE (Teflon).

Stem: brass, nickel-plated.

Stem seal:

1 Viton O-ring (gas approval),

1 NBR O-ring (gas and drinking water approval).

AKT 15–50R160S, AKT 15–50R160M

With internal thread to DIN EN 10226-1.

Inlet pressure p_U :

for gas $p_{U \text{ max.}}$: 16 bar,

other media $p_{U \text{ max.}}$: 16 bar.

Temperature range:

for gas: -20 to +60°C,

other media: -20 to +180°C.

AKT...S housing: cast steel 1.0619, galvanized.

AKT...M housing: stainless steel 1.4408.

Ball: stainless steel 1.4408.

Ball seal: PTFE (Teflon).

Stem: stainless steel 1.4401.

Stem seal: PTFE/Viton.

AKT 25–100F160G

Flanged connection to EN 1092-2, PN 16.

Inlet pressure $p_{U \max.}$: 16 bar.

Temperature range:

for gas: -20 to +60°C,
other media: -20 to +180°C.

Housing: GJS 400-18-LT.

Ball: stainless steel 1.4301.

Ball seal: PTFE (Teflon).

Stem: stainless steel 1.4104.

Stem seal: FKM (Viton).

Housing flange seal: Viton.

Up to 16 bar, this series meets the requirements for high thermal capacity (HTR up to 650°C) as well as for internal and external tightness pursuant to DIN EN 1775:2007, Annex A, Procedure B.

AKT 125–250/200F160G1

AKT 250/200F160G1: with bore reduced to DN 200.

Flanged connection to EN 1092-2, PN 16.

Inlet pressure $p_{U \max.}$: 16 bar.

Temperature range:

for gas: -20 to +60°C,
other media: -20 to +180°C.

Housing: GJS 400-18-LT.

Ball: cast steel GG 25.

Ball seal: PTFE (Teflon).

Stem: stainless steel.

Stem seal: 2 × Viton.

Housing flange seal: Perbunan.

GEHV, GEH

Gas type: natural gas, town gas, LPG (gaseous) and air.

GEHV

Connection: internal thread to DIN EN 10226-1.

Inlet pressure $p_{U.}$:

for gas $p_{U \max.}$: 5 bar,

for air $p_{U \max.}$: 25 bar.

Temperature range:

for gas: -20 to +60°C,

for air: -10 to +90°C.

Housing: CW 617 N (2.0402), nickel-plated.

Ball: CW 617 N (2.0402), hard chromium-plated.

Ball seal: PTFE (Teflon).

Spindle seal: NBQ.

Hand wheel: PA 6 polyamide.

GEH 8–25R10

Connection: internal/external thread to DIN EN 10226-1.

Inlet pressure $p_{U.}$:

for gas $p_{U \max.}$: 1 bar,

for air $p_{U \max.}$: 4 bar.

Temperature range:

for gas: -15 to +60°C,

for air: -15 to +60°C.

Housing: Ms 58.

Ball: Ms 58.

Ball seal: O-ring, nitrile.

Spindle seal: O-ring, nitrile.

GEH 32–50R50

Connection: internal/external thread to DIN EN 10226-1.

Inlet pressure $p_{U.}$:

for gas $p_{U \max.}$: 5 bar,

for air $p_{U \max.}$: 16 bar.

Temperature range:

for gas: -20 to +60°C,

for air: -20 to +120°C.

Housing: Ms 58, nickel-plated.

Ball: Ms 58, chromium-plated.

Ball seal: PTFE.

Spindle seal: O-rings, Viton.

LEH

Gas type: air.

Connection: internal thread to DIN EN 10226-1.

Inlet pressure $p_{U \max.}$: 4 bar.

Temperature range: 0 to 120°C.

Housing: pressed brass.

Seal: gland.

Storage temperature (for all): -20 to +40°C.

Designed lifetime

This information on the designed lifetime is based on using the product in accordance with these operating instructions.

Once the designed lifetime has been reached, safety-relevant products must be replaced.

Designed lifetime (based on date of manufacture): 10 years.

You can find further explanations in the applicable rules and regulations and on the afecor website (www.afecor.org).

This procedure applies to heating systems. For thermoprocessing equipment, observe local regulations.

Logistics

Transport

Protect the unit from external forces (blows, shocks, vibration). On receipt of the product, check that the delivery is complete, see page 2 (Part designations). Report any transport damage immediately.

Storage

Store the product in a dry and clean place.
Storage temperature: see page 3 (Technical data).
Storage time: 6 months before using for the first time. If stored for longer than this, the overall service life will be reduced by the corresponding amount of extra storage time.

Packaging

The packaging material is to be disposed of in accordance with local regulations.

Disposal

Components are to be disposed of separately in accordance with local regulations.

Certification

Declaration of conformity



We, the manufacturer, hereby declare that the products AKT..R50B with product ID No. CE-0085AU0271, AKT 15 – 50R160S/M with product ID No. CE-0085BQ0576, AKT 25 – 150F160G, AKT 65 – 150F160G with product ID No. CE-0085AT0438, AKT 125 – 250/200F160G1 with product ID No. CE-0085BN0275 and the flow adjusting cocks GEHV 40..50 and GEH 32 – 50R50 comply with the requirements of the listed Directives, Regulations and Standards.

AKT..R50B

Regulation:
– (EU) 305/2011
– (EU) 2016/426
Standards:
– DIN EN 331

AKT 15–50R160S/M

Regulation:
– (EU) 2016/426
Standards:
– DIN EN 13774, DVGW VP 303

AKT 25–100F160G

Directives:
– 2014/68/EU (AKT 65–150F160G)
Regulation:
– (EU) 2016/426
Standards:
– DIN EN 13774

AKT 125–250/200F160G1

Directives:
– 2014/68/EU
Regulation:
– (EU) 2016/426
Standards:
– DIN EN 13774

GEHV 40..50, GEH 32–50R50

Directives:
– 2014/68/EU

The relevant products (not GE... and LEH) correspond to the tested type samples. The production is subject to the surveillance procedure pursuant to Regulation (EU) 2016/426 Annex III Point 2 Module C2 or to Directive 2014/68/EU Annex III Module D1 or Annex III Module A. Elster GmbH

Scan of the Declaration of conformity (D, GB) – see www.docuthek.com

DIN-DVGW type-examination certificates

Type	DVGW test mark
AKT 650R50B	NG-4312AU0247
AKT 15–50R160S	DG-4313BQ0568
AKT 15–50R160M	DG-4313BQ0568
AKT 25–100F160G	NG-4313AT2770
AKT 125–250/200F160G1	NG-4313BN0274

Scan of the type-examination certificate (D, GB) – see www.docuthek.com

**Declaration of performance pursuant to
annex III of Regulation (EU) No. 305/2011**

AKT 6-50R50B



Elster GmbH
Strotheweg 1
49504 Lotte (Büren)
Germany

2015

DIN EN 331
Manual valve

AKT (DN)R50B

Manual valve for
gas installations

Fuel gases of the 1st, 2nd and 3rd gas families
pursuant to G 260

DIN-DVGW NG-4312AU0247

Features:	DIN EN 331
Pressure class:	MOP 5 bar
Temperature class:	-20°C to +60°C
Rated flow rate:	passed
Dimensional tolerances:	passed
Tightness test:	≤ 20 cm ³ /h
Mechanical strength:	passed
Operating torque:	passed
Strength of stops:	passed
Endurance:	passed

Eurasian Customs Union



The products AKT, GEHV, GEH and LEH meet the technical specifications of the Eurasian Customs Union.

Contact

If you have any technical questions, please contact your local branch office/agent. The addresses are available on the Internet or from Elster GmbH.

We reserve the right to make technical modifications in the interests of progress.

Honeywell

**krom//
schroder**

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