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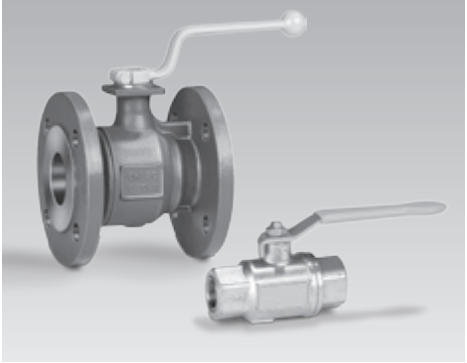
Operating instructions
Manual valves AKT, flow adjusting cocks GEHV, GEH, LEH



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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 09.16

The following chapters have been changed:
– 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/I 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.

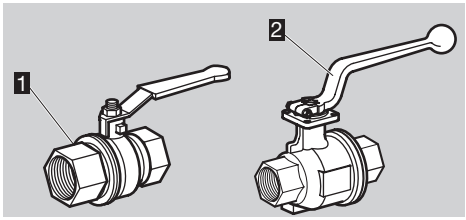
GB

Type code

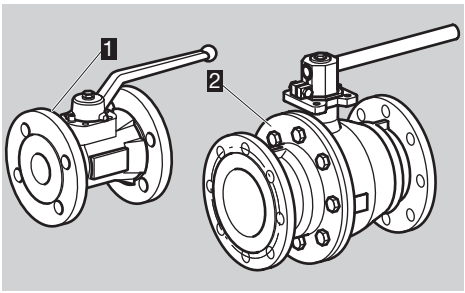
Code	Description
AKT	Manual valve
6–250/200	Nominal size
R	Rp internal thread
F	Flange to ISO 7005
	Max. inlet pressure
50	p_u max. 5 bar
160	p_u max. 16 bar
B	Brass housing
S	Steel housing
M	Stainless steel housing, suitable for biogas
G1	Two-part housing, GGG 40, ball: cast steel
C	Two-part housing, GGG 40, ball: stainless steel
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
	Max. inlet pressure
10	p_u max. 1 bar
40	p_u max. 4 bar
50	p_u max. 5 bar

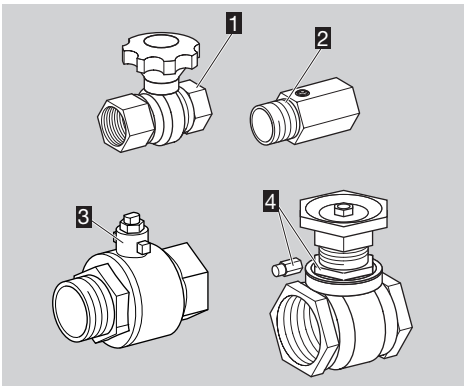
Part designations



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



1 AKT 25–100F160C
2 AKT 125–250/200F160G1

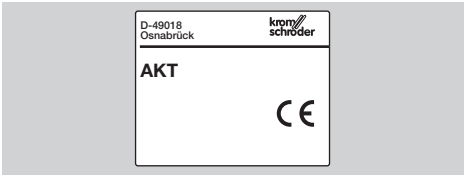


1 GEHV
2 GEH 8–25
3 GEH 32–50
4 LEH with safety cap

Type label

AKT

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



Installation

! CAUTION

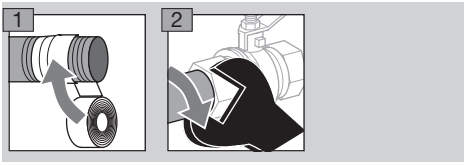
Please observe the following to ensure that the unit is not damaged during installation and operation:

– 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.



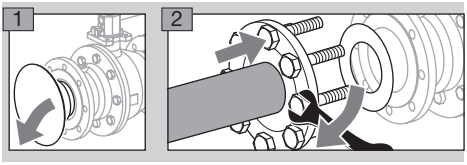
AKT..F

▷ AKT..F160C-HTB meets the requirement for internal tightness under increased thermal stress.

! CAUTION

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

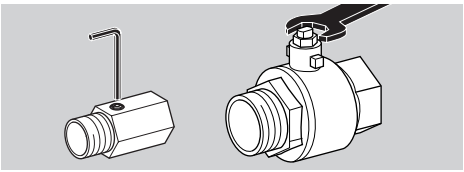
– When installing, use high temperature resistant seals.



GEH

3 Adjust the flow rate.

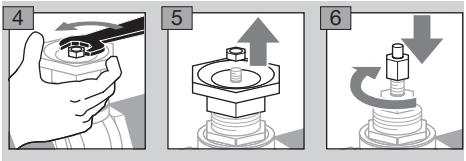
▷ Use an Allen key, screwdriver or spanner.



LEH

3 Adjust the flow rate using the hand wheel.

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

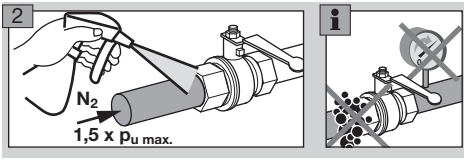


▷ Turn the safety cap as far as it will go.

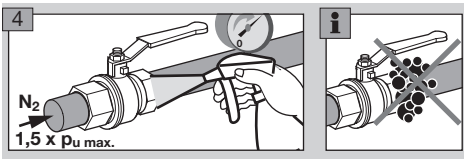
Tightness test

▷ 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/I and air.

AKT 6–50R50B

With internal thread to DIN 2999.
Inlet pressure p_u:
for gas $p_{u\ max.}$: 5 bar,
other media $p_{u\ max.}$: 16 bar.
Temperature range:
for gas: -20 to +60°C,
other media: -20 to +180°C.
Housing: CW617N, chromium-plated.
Ball: CW617N, chromium-plated.
Ball seal: PTFE (Teflon).
Stem: brass, nickel-plated.
Stem seal: 2 Viton O-rings.

AKT 15–50R160S, AKT 15–50R160M

With internal thread to DIN 2999.
Inlet pressure p_u:
for gas $p_{u\ max.}$: 16 bar,
other media $p_{u\ max.}$: 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.

GB

AKT 25–100F160C
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: GGG 40.
Ball: stainless steel 1.4301.
Ball seal: PTFE (Teflon).
Stem: stainless steel 1.4021.
Stem seal: FKM (Viton).
Housing flange seal: Perbunan.
Up to PN 4, this series meets the requirements for high thermal capacity (HTR) as well as for internal tightness pursuant to DIN 3537-1.

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: GGG 40.
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 2999.
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 2999.
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 2999.
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 2999.
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

CE

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,
AKT 25F160CK – 100F160C, AKT 65 – 100F160C with product ID No. CE-0085CM0523
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
Directives:
– 2009/142/EC (valid until 20 April 2018)
Regulation:
– (EU) 305/2011
– (EU) 2016/426 (valid from 21 April 2018)
Standards:
– DIN EN 331

AKT 15–50R160S/M
Directives:
– 2009/142/EC (valid until 20 April 2018)
Regulation:
– (EU) 2016/426 (valid from 21 April 2018)
Standards:
– DIN EN 13774, DVGW VP 303

AKT 25–100F160G
Directives:
– 90/396/EEC
– 2014/68/EU (AKT 65–150F160G)
Regulation:
– (EU) 2016/426 (valid from 21 April 2018)
Standards:
– DIN EN 13774

AKT 125–250/200F160G1
Directives:
– 2009/142/EC (valid until 20 April 2018)
– 2014/68/EU
Regulation:
– (EU) 2016/426 (valid from 21 April 2018)
Standards:
– DIN EN 13774

AKT 25F160CK–100F160C
Directives:
– 2009/142/EC (valid until 20 April 2018)
– 2014/68/EU (AKT 65–100F160C)
Regulation:
– (EU) 2016/426 (valid from 21 April 2018)
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 Directive 2009/142/EC (90/396/EEC) Annex II paragraph 3 (valid until 20 April 2018) and to Regulation (EU) 2016/426 Annex III Point 2 Module C2 (valid from 21 April 2018) 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

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

AKT 6–50R50B

CE

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

EAC

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.

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