

 **automatic valve**
RÉALISATION



**PNEUMATIC ROTARY ACTUATOR WITH
ROLLING DIAPHRAGM**

PNEUMATIC ROLLING DIAPHRAGM ACTUATOR



VPR 34100 HF (with manual actuation)



VPR 34100 HFI (High temperature valve = 900°C)



VPR 34100 CFEM

GENERALITIES

The pneumatic diaphragm actuators type “MK” are actuators with spring return and rolling diaphragm designed for butterfly valves or all rotary valves. They deliver the necessary torque to actuate the valve obturator.

The “MK” actuator may be used for “ON-OFF” with a solenoid valve or for “control” with a positioner. In addition, they may be equipped with a hand wheel actuation and with limit switch.

CHARACTERISTICS

Robustness

The use of high-quality materials with large dimensions ensures that the “MK” series actuators are exceptionally stable over time. Except for stainless steel parts, all other metal parts undergo a suitable surface treatment; thus ensuring an excellent corrosion resistance of the actuators.

Assembly

In four possible positions on the valves can be assemble for AFO and AFC function.

Possibility of field assembly modification without additional parts:
AFO: air failure opening
AFC: air failure closing

Function:

- ON-OFF with a solenoid valve.
- Control with a positioner:
- AFO or AFC according to assembly.

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Safety

A stop enclosed in the diaphragm case of actuators serial “MK” protects the moving parts – diaphragm, plates, actuator stem and swivel trap – from the effect of any accidental excessive pressure of pneumatic control signal.

The coupling elements, actuator stem, butterfly valve shaft, are mounted in a rigid housing with an open face allowing monitoring of moving parts. This open face is closed by a protective grid to prevent accidental access.

Hysteresis

The diaphragm case with floating stem actuates the valve shaft through a swivel rod end and a square coupling of lever and shaft.

That mechanism ensures an accurate positioning of the valve disk while reducing the clearance.

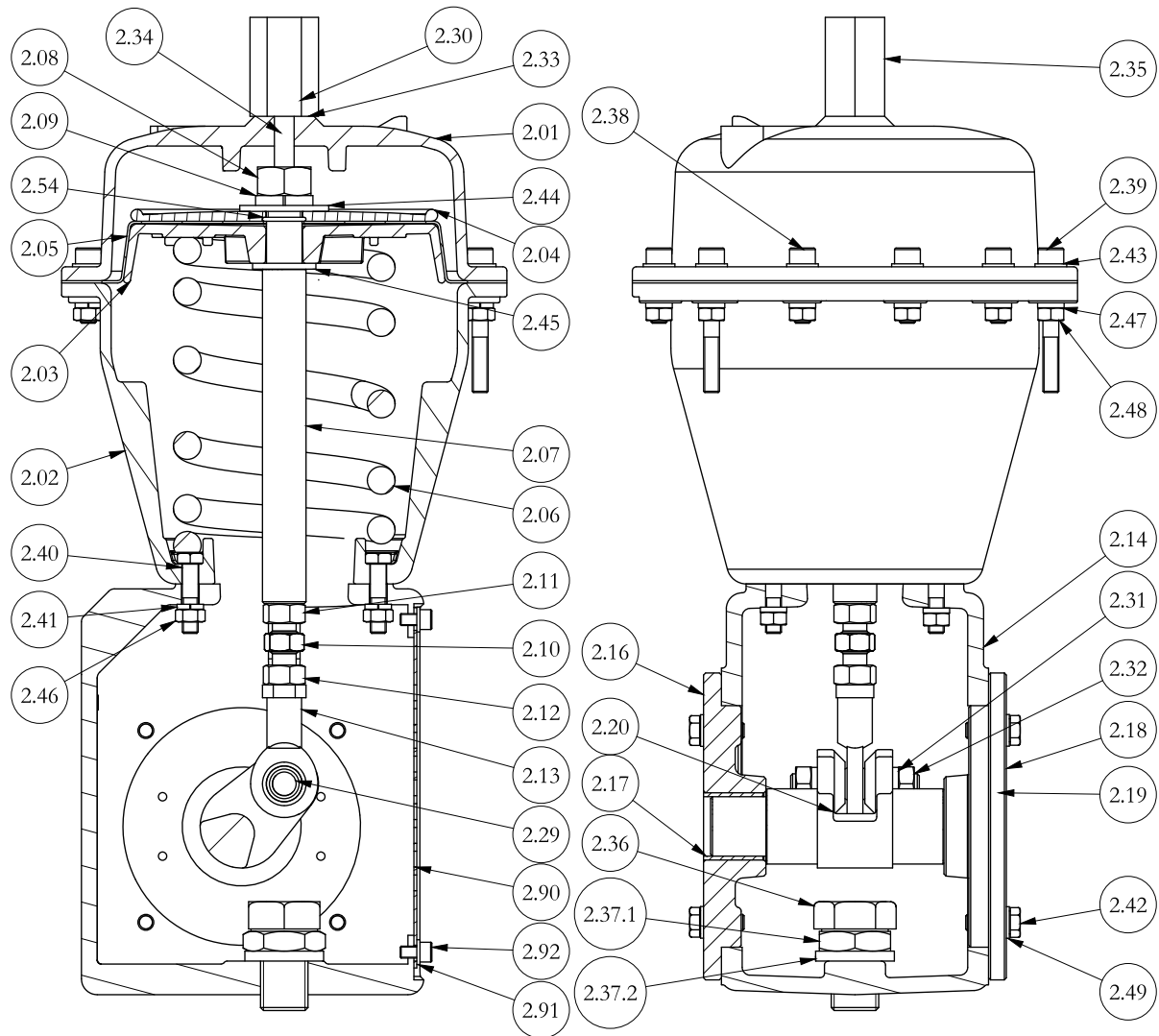
The use of spring belongs to a precise type and of a rolling diaphragm with constant effective cross-section results in an approximately linear characteristic of the actuators serial “MK”.

Existing range:

Type of actuator MK	Efficient section [cm ²]	Minimum air supply [bar]	Control range [bar]	Maximal torque at rest [N.m]
6225 MK 45	200	3,6	0,6 - 3,2	45
6280 MK 60	350	2,4	0,4 - 2	60
6280 MK 100	350	3,9	0,8 - 3,5	100
6280 MK 150	350	4,4	1,3 - 4	150
6350 MK 140	500	2,4	0,4 - 2	140
6350 MK 300	500	4,4	1,1 - 4	300
6350 MK 360	500	5,4	1,3 - 5	360
6430 MK 300	800	2,4	0,4 - 2	300
6430 MK 600	800	4,4	1 - 4	600

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PNEUMATIC ACTUATOR PARTS LIST

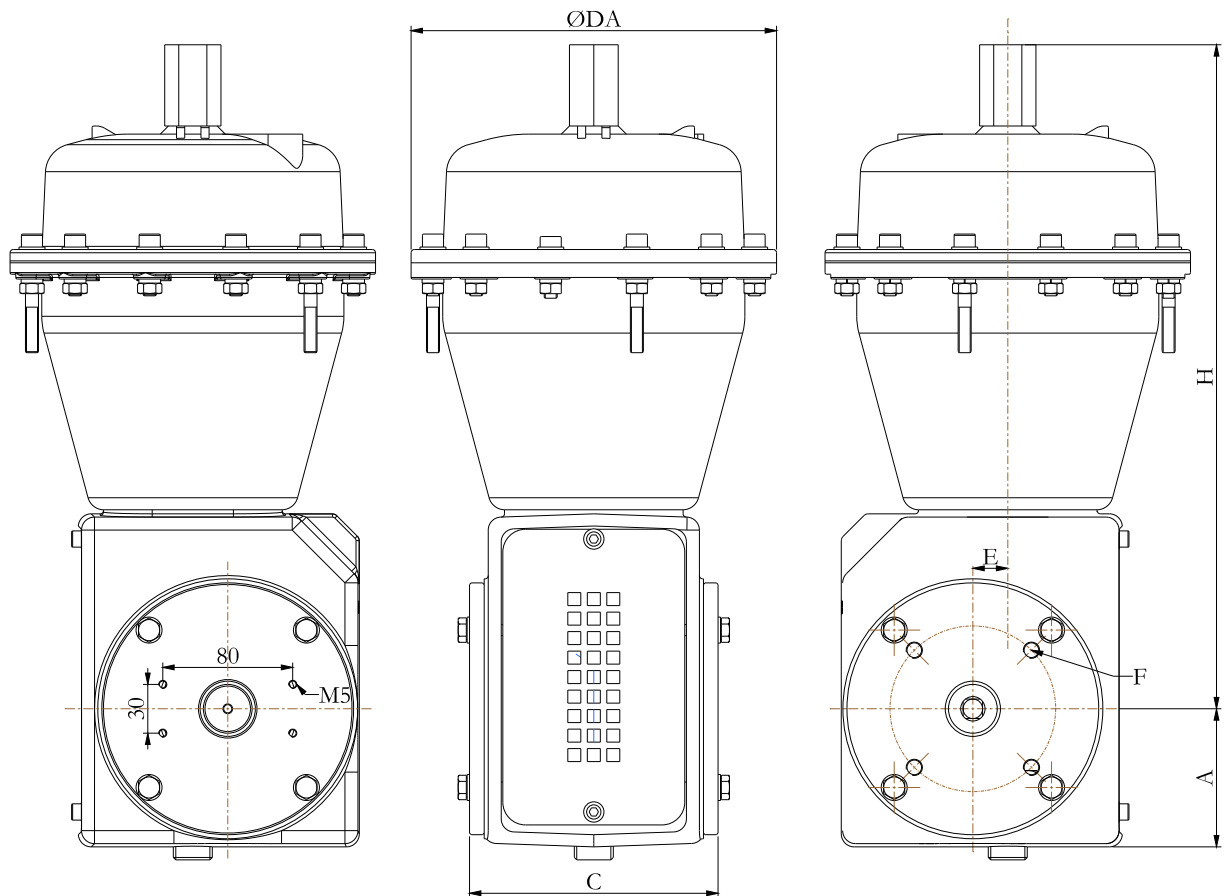


R	Qty	LABEL	MATERIAL
2.01	1	DIAPHRAGM CASING	Aluminum
2.02	1	SPRING CASING	Aluminum
2.03	1	DIAPHRAGM PLATE	Aluminum
2.04	1	PLATE	Aluminum
2.05	1	DIAPHRAGM	Aluminum
2.06	1	SPRING	Steel
2.07	1	ACTUATOR ROD	AISI 420
2.08	1	NUT	Class 8.8
2.09	1	SPRING WASHER	Class 8.8
2.10	1	COUPLING SCREW RIGHT/LEFT	AISI 304
2.11	1	LEFTHANDED NUT	Class 8.8
2.12	1	RIGHTHANDED NUT	Class 8.8
2.13	1	SWIVEL	DIN 12240-4
2.14	1	ACTUATOR CASING	Cast Iron
2.16	1	FONTE SIDE PLATE	Cast Iron
2.17	1	FRONT BUSHING	PTFE
2.18	1	REAR SIDE PLATE	Cast Iron
2.19	1	REAR BUSHING	PTFE

R	Qty	LABEL	MATERIAL
2.20	1	ACTUATOR CRANK SHAFT	Cast Iron
2.29	1	LEVER SHAFT	AISI 304
2.33	1	CAP O'RING	NBR
2.39	3	LONG SCREWS	Class 8.8
2.40	6	SPRING CASING SCREW	Class 8.8
2.41	6	SPRING CASING WASHERS	Class 8.8
2.42	8	SIDE PLATE SCREWS	Class 8.8
2.43	12	WASHERS	Class 8.8
2.44	1	LARGE WASHER	Class 8.8
2.45	1	WASHER	Class 8.8
2.46	6	SPRING CASING NUTS	Class 8.8
2.47	12	SPRING CASING WASHER	Class 8.8
2.48	12	NUTS	Class 8.8
2.49	8	SIDE PLATE WASHERS	Class 8.8
2.54	2	DIAPHRAGM O'RING	NBR
2.90	1	PROTECTION	Aluminum
2.91	2	WASHERS	Class 8.8
2.92	2	SCREW CHC	Class 8.8

OVERALL DIMENSIONS

ACTUATORS OVERALL DIMENSIONS

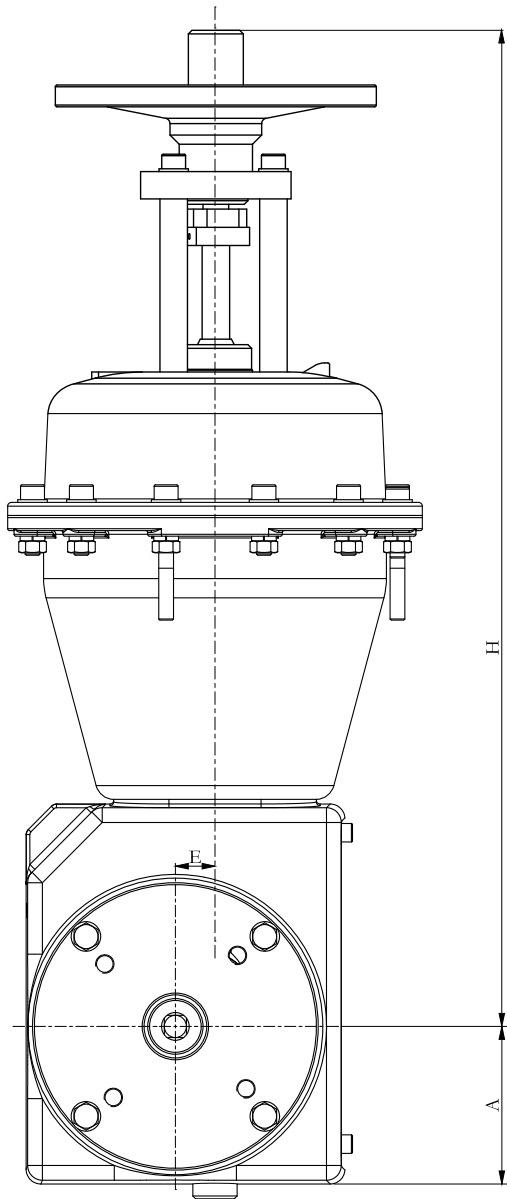


ND	6225	6280	6350	6430
ØDA	225	280	350	460
C	153	161	211	260
H	410	460	675	837
A	95	105	160	233
E	21	32	50	82.5
F	F10	F10	F12	/

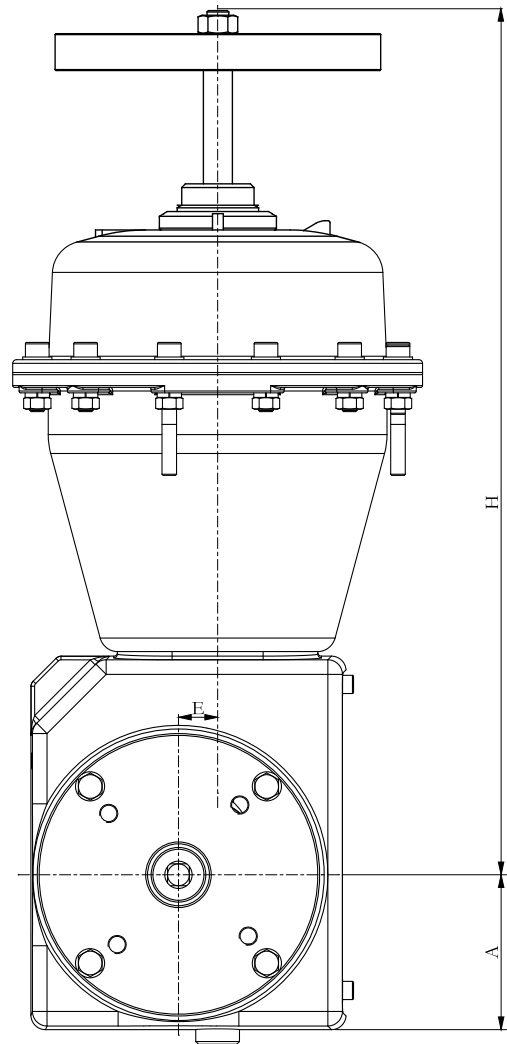
- Coupling with accessories (solenoid valve, positioner, limit switch) according to VDI/VDE 3845
- Coupling with valves according to EN ISO 5211 (other dimensions possible on request)

OVERALL DIMENSIONS

ACTUATORS WITH HANDWHEEL ACTUATION OVERALL DIMENSIONS



Handwheel actuation type standard



Handwheel actuation type "S"

DN	6225	6280	6350	6430
H standard	542	666	937	1150
H type S	480	556	764	
A	95	105	160	233
ØV	180	350	500	500