



automatic valve



**BUTTERFLY REGULATING VALVE
TYPE VPR 34 100 AND 34 000**

BUTTERFLY VALVES TYPE 34 100 AND 34 000

GÉNÉRAUX

The BUTTERFLY VALVES 34 100 types are control valve design to cover a wide application range for which an absolute closing tightness is not required.

Those valves are solid and carefully built with high quality materials.

The overall design of the butterfly valve 34 100 types, entirely focused on control, leads to the adoption of original solution which gives the valves their specific features: reduced cost, performance, easy installation and reduced maintenance.

Those valves are fitted with pneumatic or electro mechanic actuators and are therefore perfectly appropriate to service with liquid and gases, either as cold version or, more particularly, as hot versions. The temperature range is from -25°C to $+650^{\circ}\text{C}$. Higher temperatures are possible with specific material.

The slanted lent disk may be used for on-off or throttling control. The flow characteristic is approximatively equal percentage.

Thanks to the specific geometry of the valve body disk unit, it is also possible to obtain an excellent relative tightness without jamming of the disk in the body. The closed valve relative leakage is 1% of Cv for the hot version and 0,5% for the cold version.

INSTALLING

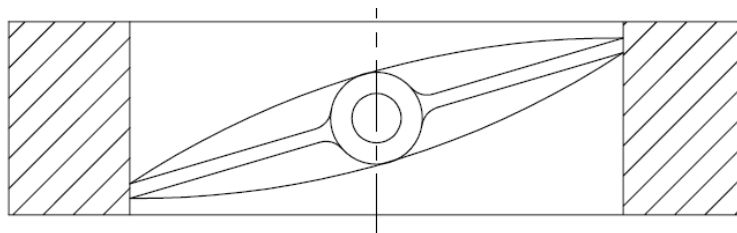
The valves are sandwich type bodies. The connections are NP6 – NP10 – NP16 – NP20 (ANSI 150lbs). The available dimensions are ND65 to ND1200. They are normally equipped with pneumatic actuators but electrical actuators are also available.

MAINTENANCE

The small number of moving parts combined to the easy access to the packing rings and to the swivel joint mean easier maintenance and limited spare parts.

SPECIFICITY OF THE TYPE 34 000 VALVES

The type 34 000 BUTTERFLY VALVES are similar to the type 34 100. The difference is on the positioning of the butterfly in the valve body. For the 34 000, when the valve is closed, the butterfly is inclined with 15° . This result in a reduced stroke of 75° and allows the butterfly to end his motion against the inside of the valve body to decrease considerably the valve leakage. The leakage is then 0,2% of the Cv for the hot version and 0,05% for the cold version.



BUTTERFLY VALVES TYPE 34 100 AND 34 000

FEATURES

<p>BODY ND 65 to 1200mm (2"½ to 48")</p> <p>CONNECTIONS Sandwich type According to standards: NFE : 29 201 PN 10-16 ANSI : B 16 1/5 150</p> <p>SERVICE CONDITIONS According to pressure and temperature limits given by standards.</p> <p>ALLOWED PRESSURE DROPS Up to 10 bars according to valve and actuator sizes.</p> <p>TEMPERATURE CAPABILITIES -25° to +650°C</p> <p>FLOW DIRECTION Flow turbulator downstream with opened valve</p> <p>LEAKAGE Cold version T° < 250°C : maximal leakage : 0,5% Cv (0,05% for the type 34 000) Hot version T° > 250°C : maximal leakage : 1% Cv (0,2% for the type 34 000)</p>	<p>Pneumatic types</p> <ul style="list-style-type: none">• 6225 MK 30/45/75• 6280 MK 60/100/150• 6350 MK 140/300/360• 6350 MK 300/600 <p>With rolling diaphragm, floating rod, and spring return.</p> <ul style="list-style-type: none">- Control function: Signal 4-20 mA Air supply about. 5-6b (with pressure regulator)- On-Off function: Electrical signal 24V/110V/220V Air supply 5-6b max <p>Electrical Different actuators are possible</p>
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VALVE FITTINGS

- Manual hand wheel :
 - On pneumatic actuator: at actuator head, single acting, reverse action by drawback spring.
 - On electrical actuator: depending on actuator
- Solenoid 3 ways pilot valve
- Electro-pneumatic positioner
- Double inductive end of travel switches
- Position copy potentiometer
- 3 ways trigger action pilot with manual rearmament
- security air tank

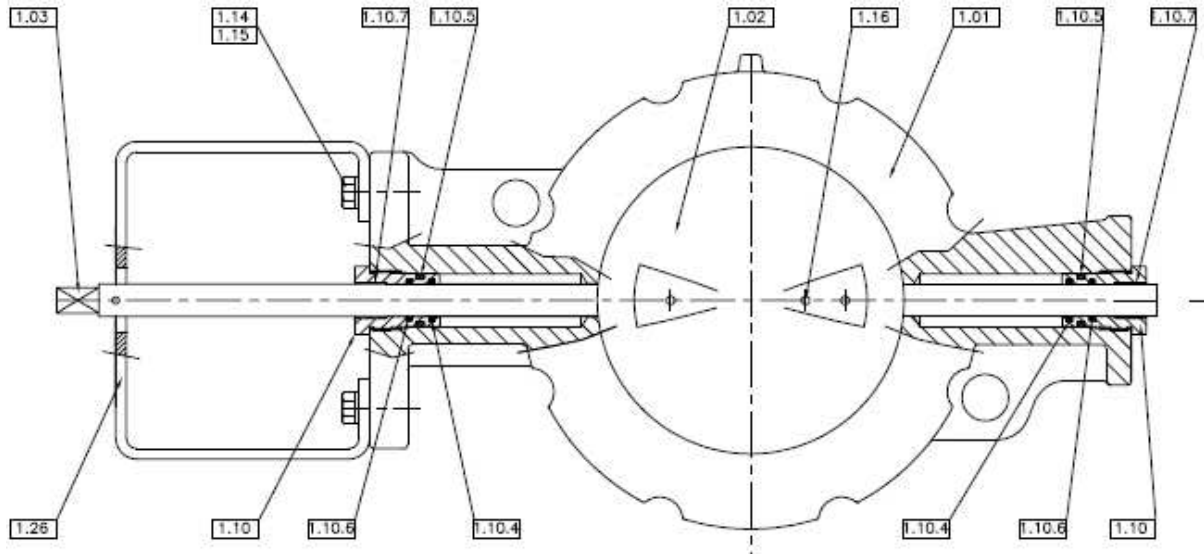
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MATERIALS :

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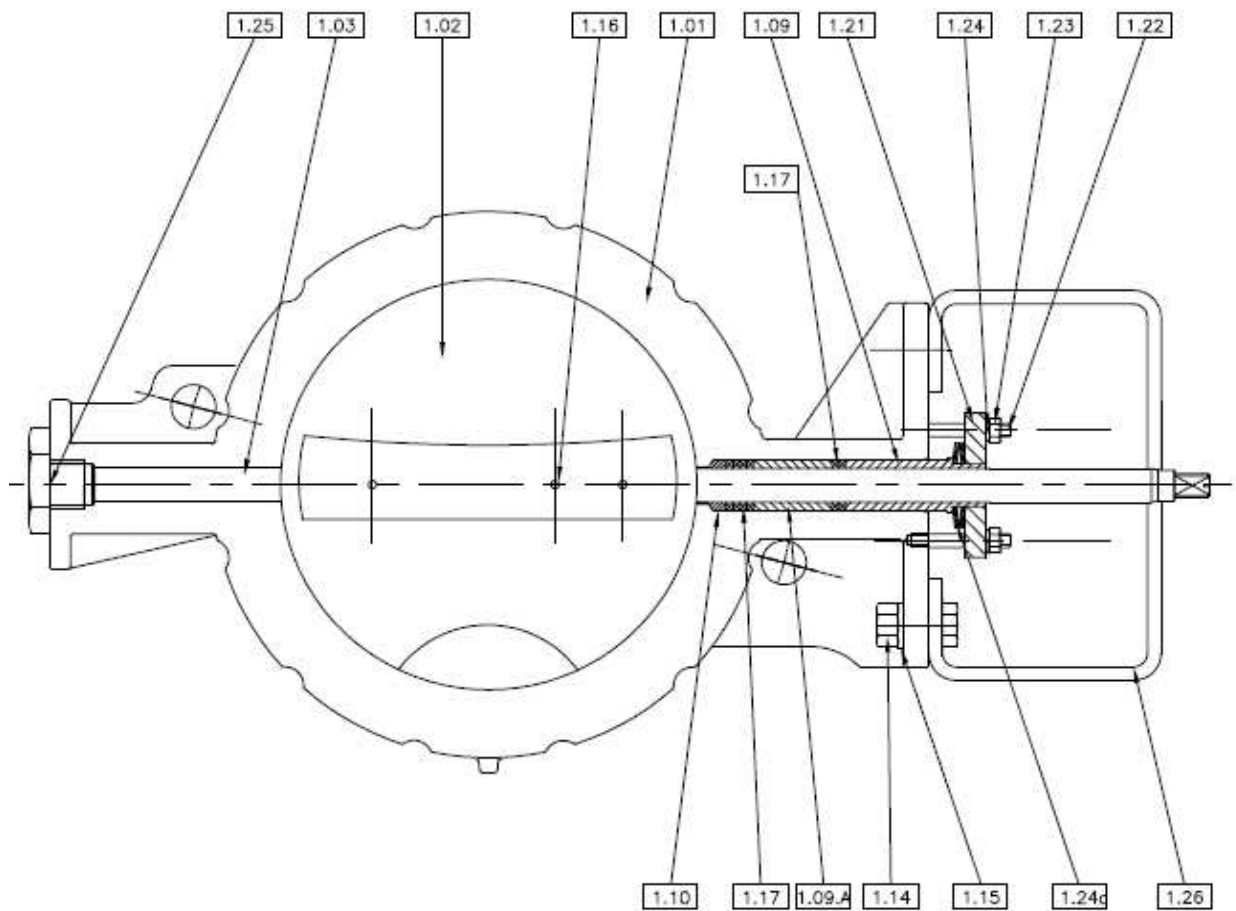
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BUTTERFLY VALVES TYPE 34 100 AND 34 000

R	VALVE PART	MATERIAL	MAX TEMPERATURE (°C)	STANDARD	GAS VERSION
1.01	BODY	ENGJL 250 ENGJL 250 Ni-Cr	-25 / +250 -25 / +650	X X	X
1.02	BUTTERFLY	ENGJL250 ENGJL 250 Ni-Cr	-25 / +250 -25 / +650	X X	X
1.03	BUTTERFLY SHAFT	Stainless steel Z30C13 Stainless steel 304L	-25 / +650 -25 / +650	X	X
1.26	CONNEXION SUPPORT	Galvanized steel	-25 / +650	X	X
1.16	BUTTERFLY PIN	Stainless steel	-25 / +650	X	X
1.10	BARREL	Stainless steel 304L	-25 / +650		X
1.10.4 1.10.5 1.10.6	BARREL JOINTS	Viton	-25 / +240		X
1.21 1.22	PACKING FLANGE STUB BOLT	Galvanized steel Stainless steel 304L	-25 / +650 -25 / +650	X X	
1.24c	SPRING WASHERS	Steel 50 Cr V4	-25 / +650	X	
1.17	PACKING RINGS	PTFE Rings Graphite rings	-25 / +100 -25 / +650	X X	

PNEUMATIC ROLLING DIAPHRAGM ACTUATOR TYPE MK

GENERALS

The pneumatic diaphragm actuators serial “MK” are actuators with spring return and rolling diaphragm designed for butterfly valves. They deliver the necessary torque to actuate the valve disk.

The “MK” actuator may be used for “shut-off” or for “throttling control” operation, in that last operation with a positioner. In addition to the positioner, they may be equipped with a hand wheel actuation, with limit switch contactors or with an electromagnetic actuation pilot.

CHARACTERISTICS

Robustness

The use of noble’s materials and large dimension gives to the actuator “MK” type an exceptional stability in time. Except for the stainless steel parts, all other metallic components undergo an appropriate 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: AFO or AFC according to the assembly. Throttling control with positioner: AFO or AFC according to assembly.

Safety

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

The coupling parts, actuator stem, butterfly valve shaft, are mounted in a solid housing fitted with one opened side for supervision and access. That access is closed by a protection grid. That housing however does not enclose the valve packing box, so that the maintenance operation of the valves and that of their actuator are independent.

Hysteresis

The diaphragm case with floating stem actuates the valve shaft through a swivel actuator and a lever keyed and tightened on the 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”.

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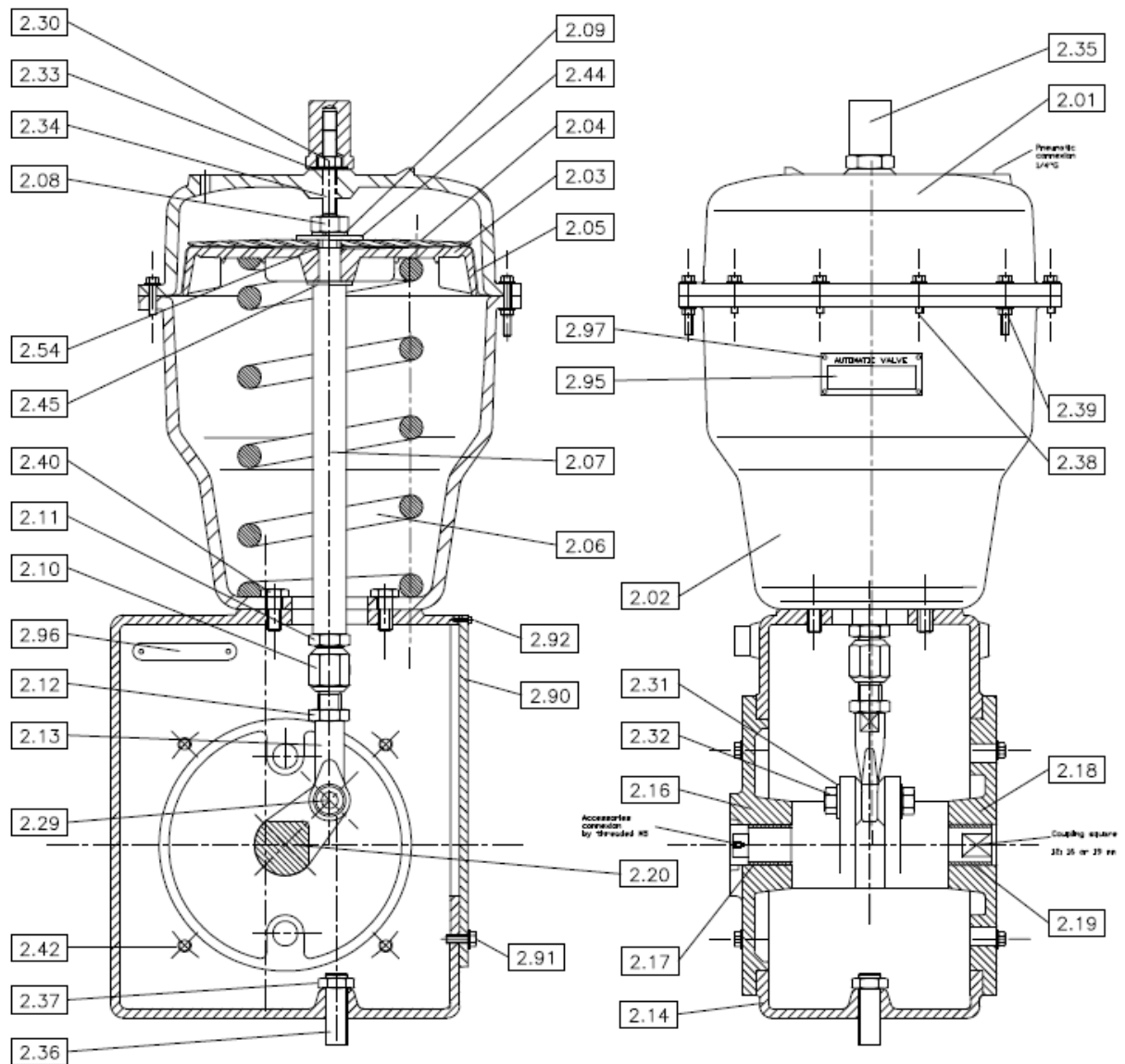
Existing range :

Type of actuator	Section	Shut-Off function air supply	Control function supply range	Pause maximal torque	Maximal torque
6225 MK 30	200	3	0,4 – 2	30	150
6225 MK 45	200	4	0,6 – 3,2	45	240
6225 MK 75	200	5	1,7 – 4	75	175
6280 MK 60	350	3	0,4 – 2	60	300
6280 MK 100	350	4,5	0,8 – 3,5	100	430
6350 MK 150	500	5	0,4 – 2	150	750
6350 MK 300	500	5	1,1 – 4	300	1000
6350 MK 360	500	6	1,3 – 5	360	1350
6430 MK 300	800	3	0,4 – 2	300	1500
6430 MK 600	800	5	1 – 4	600	2400
MK Type	cm ²	bar	bar	Nm	Nm

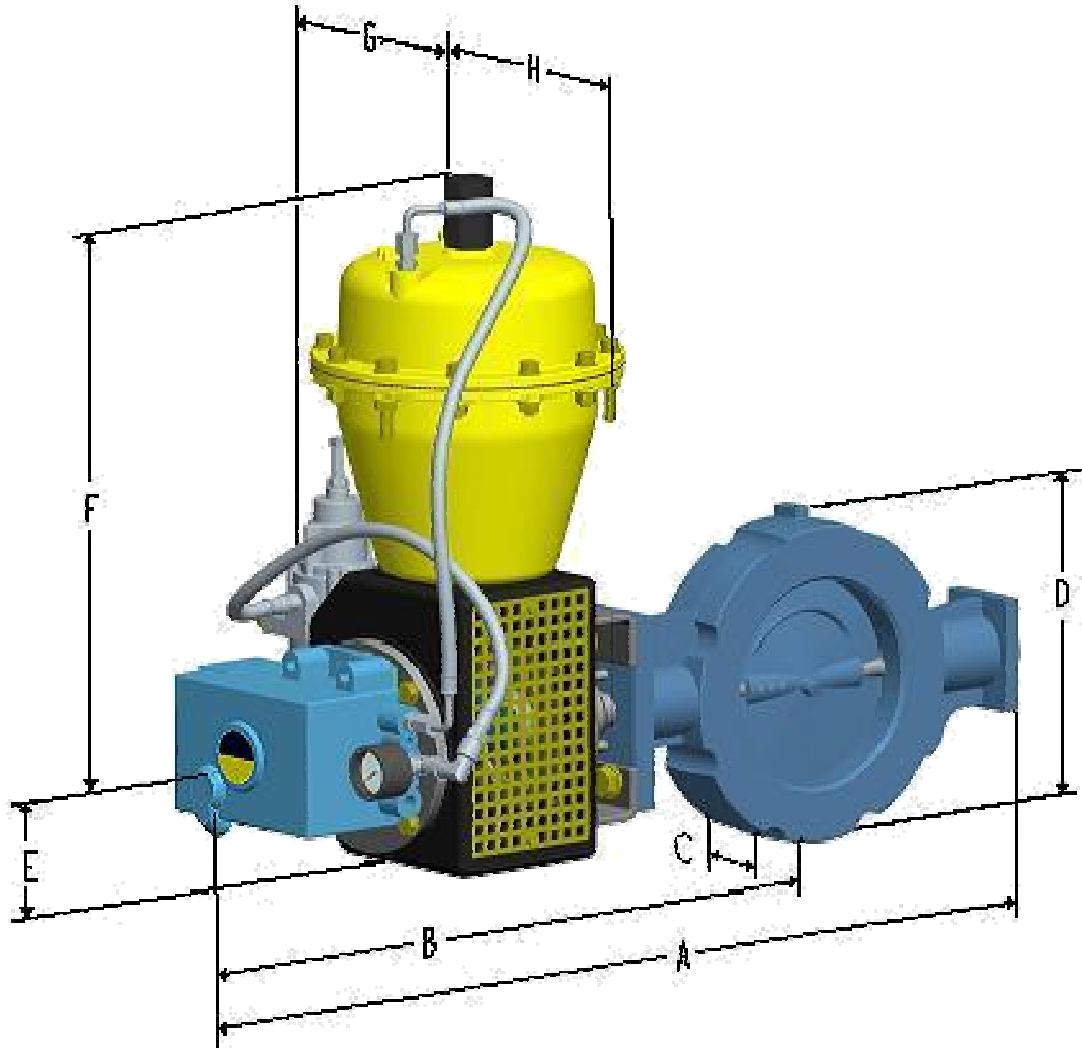
PNEUMATIC ROLLING DIAPHRAGM ACTUATOR TYPE MK

MATERIALS :

2.01	Spring case	Alu AS 10 G	2.13	Swivel	Galvanised steel
2.02	Diaphragm case	Alu AS 10 G	2.14	Housing	Cast iron ENGJS
2.03	Plate	Alu AS 10 G	2.16	Plates	Cast ENGJSL
2.07	Actuator stem	Stainless steel Z30 C13	2.18		
2.06	Spring	Steel XC 85 K	2.17	Bushings	« DU » Bushing
2.04	Diaphragm	Elastomer		Screws	Galvanised steel class 8/8
2.10	Coupling screw	Stainless steel 304L		Painting	Epoxy painting
2.20	Lever	Cast iron ENGJS400			



OVERALL DIMENSIONS



DN	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
Servomoteur	6225	6225	6225	6225	6225	6280	6280	6280	6280	6280	6280	6280	6350	6350	6350	6350	6430	6430
D	130	150	170	200	225	280	335	395	445	495	550	600	705	810	920	1020	1120	1340
C (34000)	46	46	52	56	56	60	68	78	110	×	×	×	×	×	×	×	×	×
C (34100)	46	46	52	56	56	60	68	78	78	80		100	100	100	100	115	115	115
B	548	568	588	593	598	653	678	730	770	815	848	875	955	1025	1082	1080	1230	
A	683	723	773	783	793	898	948	1035	1115	1205	1265	1310	1430	1570	1684	1680	1995	
E	95	95	95	95	95	105	105	105	105	105	105	105	160	160	160	160	200	200
F	410	410	410	410	410	450	450	450	450	450	450	450	650	650	650	650	840	840
G	183	183	183	183	183	194	194	194	194	194	194	194	277	277	277	277	215	215
H	113	113	113	113	113	140	140	140	140	140	140	140	175	175	175	175	215	215
Poids																		