

Straight Through Type Diaphragm Valves with Pneumatic Actuator

Main Features

- For DIAVAL manufactured valves in weir and straight through type, with rubber diaphragms and PTFE / rubber backed diaphragms.
- Rugged & compact design, long life span at the plant. Favourable size / performance ratio.
- Rolling diaphragm design, allowing long cycle operations.
- Single acting (Direct and reverse actions).
- High quality spring, large thrust.
- Visual position indicator for open / close.
- Burnished stem protected by bellow.
- Maintenance-free O-ring sealing with flexible guiding.
- Possibility of assembly of additional devices / accessories.
- Operating ambient temperatures -40°C to +100°C.
- Fully traceable at the manufacture facility, identified by aluminum riveted plates.
- Optional top mounted emergency hand wheels for manual operation.
- Compliant with Machinery Directive 2006/42/EC



Working Principle

Direct Acting actuator is designed to operate from a normally open position. Air pressure on the top side of actuator diaphragm closes the valve and the spring opens the valve when the air is released from the actuator.

Reverse Acting actuator is designed to operate from a normally closed position. Air pressure on the bottom side of the actuator diaphragm opens the valve. When air is released spring closes the valve.

Control Accesories

There is a number of control accessories available to be assembled on to the ARI actuators. These accessories are comprehensive of limit switches (mechanical or inductive type), proximity sensors, solenoid valves, air speed regulators, positioners, air gauge sets... and many other customized solutions.

Control accessories may be specified and provided by the customer or by DIAVAL, however, only those accessories installed and tested at any DIAVAL facilities are covered by a performance guarantee.

Tests - After Market

All actuators are tested after assembly and before dispatch. Tests are comprehensive of visual and functional tests as per EN-12266-1/DIN 3230 P.3 - EN.10.204/2.2

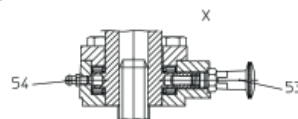
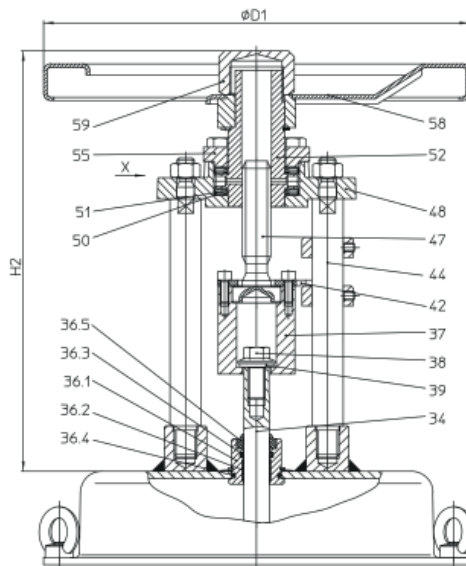
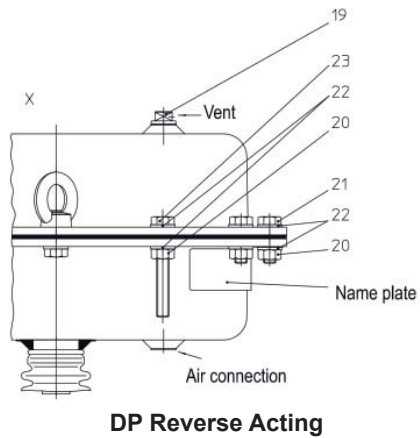
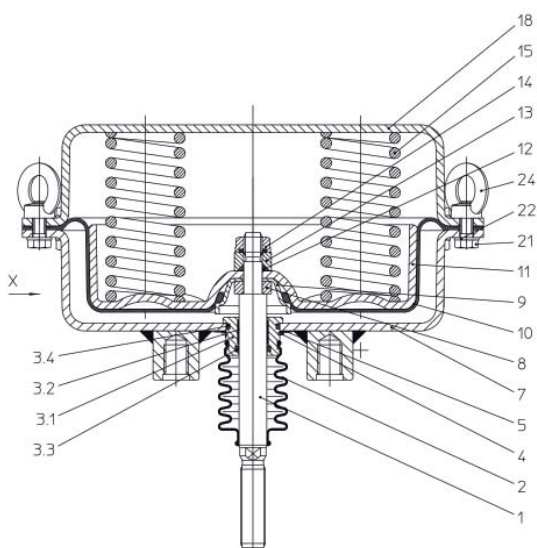
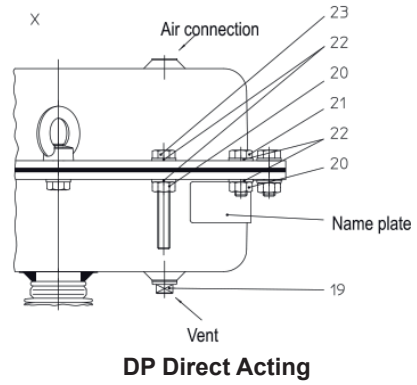
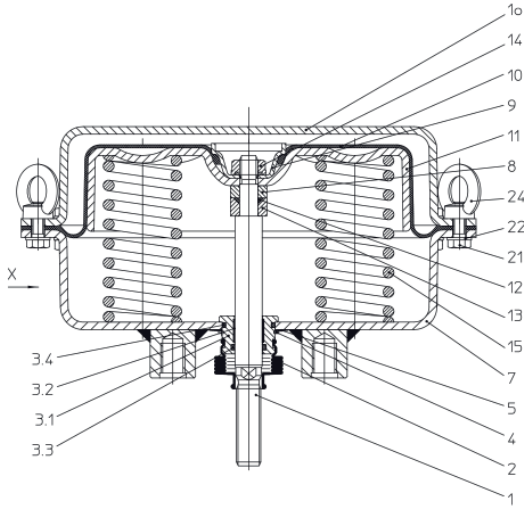
Actuators can be serviced at DIAVAL facilities where a stock of common spares is permanently available. Off site service engineers are available on demand and against usual service rates.

Operating and Maintenance Instructions

Please ensure that the DIAVAL Operating and Maintenance Instructions are provided by your supplier along with the valves. Do not try to start maintenance without having read and understood the Essential Safety Guidelines. Please consult us for further information.

Standard Materials

Only the best quality materials are incorporated to the DIAVAL manufacturing process and are subject to a strict quality control by our DIAVAL engineers at the assembly plant.



Top Handwheel (Optional)

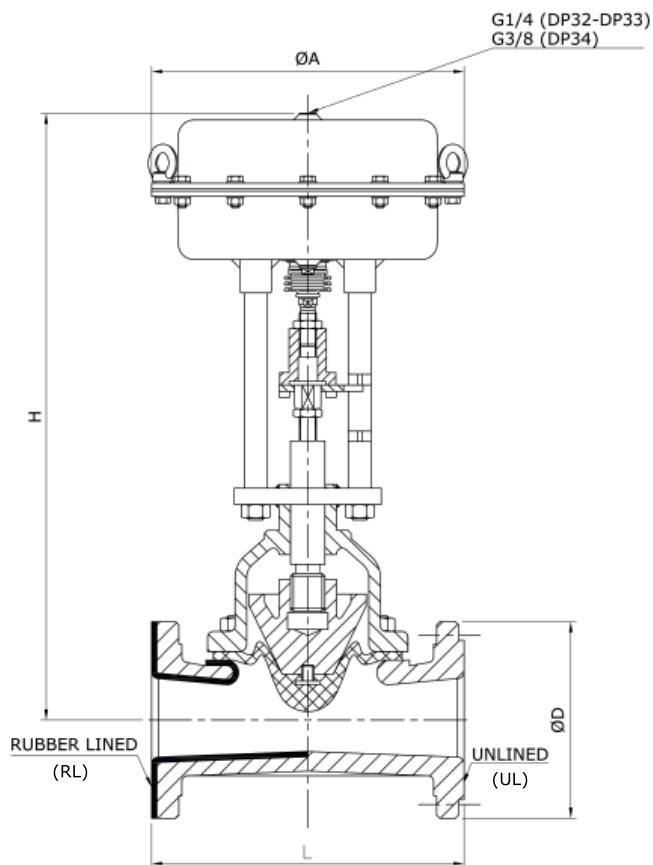
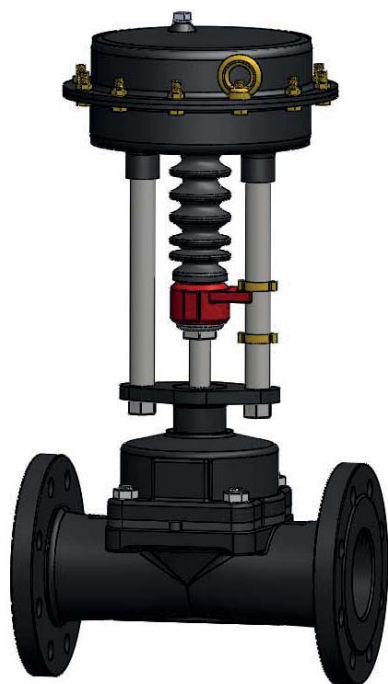
Standard Materials

Pos.	Description	Material
1	Stem	X20Cr13+QT, 1.4021+QT
2	Bellow seal	EPDM50 or 42CR
3	Stem guiding *	X20Cr13+QT, 1.4021+QT
3.1	Stem guiding *	X20Cr13+QT, 1.4021+QT
3.2	Guiding band *	PTFE + 25%C
3.3	O-ring (stem) *	NBR
3.4	O-ring (guiding) *	NBR
3.5	Scraper *	NBR
4	Retaining ring	FSt - A3B
5	Spring plate	FSt (Fe/Zn12B)
6 / 7	Lower diaphragm casing (DP32-34Tri)	DD13+QT, 1.0335+QT (powder coated)
7	Lower diaphragm casing (DP35)	P265GH, 1.0425 / S235JR, 1.0037
8	Bushing	X20Cr13+QT, 1.4021+QT
9	Diaphragm lange	DD13+QT, 1.0335+QT (Fe/Zn12B) or X20Cr13+QT,
10	Rolling diaphragm *	1.4021+QT
11	Diaphragm plate (DP32-34Tri)	NBR + webbing
11	Diaphragm plate (DP35) *	DD13+QT, 1.0335+QT (Fe/Zn12B)
12	O-ring	St 52-3 G 03 g, 1.0570 G 03 g
13	Bushing	NBR
14	Flange nut	X20Cr13+QT, 1.4021+QT
15	Compression spring *	8 - A4G
16	Spring centring	FDSiCr
17	Spring centring	DC01, 1.0330 (Fe/Zn12B)
18	Upper diaphragm casing (DP32-34Tri)	St 52-3 G 03 g, 1.0570 G 03 g
18	Upper diaphragm casing (DP35)	DD13+QT, 1.0335+QT (powder coated)
19	Screwed cap	P265GH, 1.0425 / S235JR, 1.0037
20	Hexagon nut (DP32-34Tri) 1)	Polyäthylen
20	Hexagon nut (DP35) 1)	8 - A4G

Pos.	Description	Material
21	Hexagon screw (DP32-34Tri) 1)	C35E, 1.1181
21	Hexagon screw (DP35) 1)	8.8 - A4G
22	Washer	8.8 - A4G
23	Hexagon screw (DP32-34Tri) 1)	St - A4G
23	Hexagon screw (DP35) 1)	8.8 - A4G
24	Eye nut 1)	10.9 - A2G
34	Stem extension	8-A4G
36.1	Bellow seal *	X20Cr13+QT, 1.4021+QT
36.2	Guiding band *	X14CrMoS17+QT, 1.4104+QT
36.3	O-ring *	PTFE +25%C
36.4	O-ring *	NBR
36.5	Scraper *	NBR
37	Bushing	NBR
38	Hexagon screw	X20Cr13+QT, 1.4021+QT
39	Washer	8.8 - A4G
42	Torsion lock	X20Cr13+QT, 1.4021+QT
44 1	Distance column	8.8 - A4G
47	Stem	1SMn30+C, 1.0715+C (Fe/Zn12B)
48	Traverse	X20Cr13+QT, 1.4021+QT
50	Axial-washer	EN-JS1049, EN-GJS-400-18U-LT (Fe/Zn12B)
51	Axial-dial ring	St
52	Threaded bush	St
53	Catch pin	CuZn35Ni3Mn2Al-Pb-R490, CW710RR490
54	Lubricating nipple	St, Cu
55	Covering for traverse	5.8 - A4G
58	Handwheel	S235JR, 1.0037 (Fe/Zn12B)
59	Safety cap	Fe P01, 1.0330 (epoxy coating)

Straight Through Type Diaphragm Valves with Direct Acting Pneumatic Actuator- Rubber Diaphragm

Main Dimensions



DN	L			H	ØD	ØA
	EN 558 S1 (DIN 3202 F1)		EN 558 S7 (BS 5156)			
	UL/RL	UL	RL			
15	130	108	114	420	95	250
20	150	117	123	423	105	250
25	160	127	133	453	115	250
32	180	146	152	455	140	250
40	200	159	165	463	150	250
50	230	190	196	493	165	250
65	290	216	222	685	185	250
80	310	254	260	716	200	250
100	350	305	313	754	220	405
125	400	356	364	780	250	405

Dimensions in mm subject to manufacturing tolerance.

Dimensions are based on the serialized manufacture and should be taken as preliminary.

Please, bear in mind the service clearance area when planning a skid or when installation happens in a very tight area.

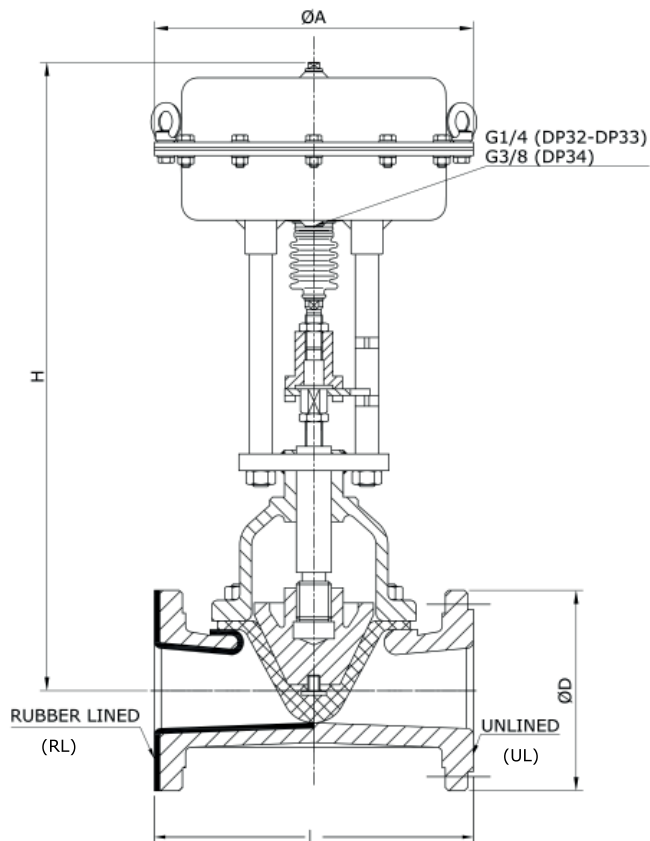
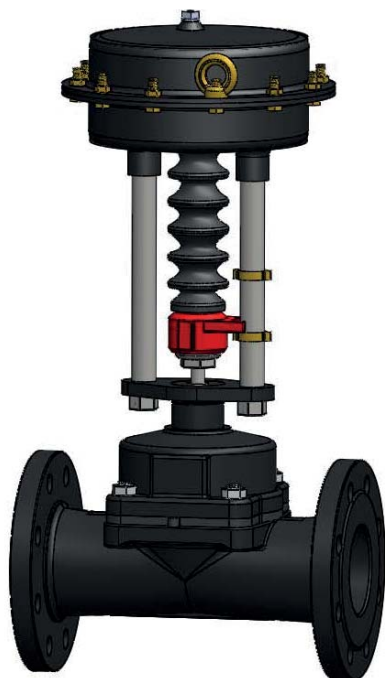
Actuation Selection Chart

Direct Acting (actuator opens at air failure, springs to open/air to close).

Valve Size	Actuator Type	Max. Closing Pressure 100% ΔP (bar)	Max. Closing Pressure 0% ΔP (bar)	Air Supply to Close (bar)
DN15	DP32021020NA	8	8	2,0-2,5
DN20	DP32021020NA	8	8	2,5-3,0
DN25	DP32021030NA	8	8	2,5-3,0
DN32	DP32021030NA	8	8	2,5-3,0
DN40	DP32021030NA	8	7	2,5-3,0
DN50	DP32021030NA	8	6	4,0-4,5
DN65	DP34021050NA	8	6	2,5-3,0
DN80	DP34021065NA	8	6	3,0-3,5
DN100	DP34021065NA	8	6	3,5-4,0
DN125	DP34021065NA	6	4	4,0-4,5

Straight Through Type Diaphragm Valves with Reverse Acting Pneumatic Actuator- Rubber Diaphragm

Main Dimensions



DN	L			H	ØD	ØA
	EN 558 S1 (DIN 3202 F1)		EN 558 S7 (BS 5156)			
	UL/RL	UL	RL			
15	130	108	114	420	95	250
20	150	117	123	423	105	250
25	160	127	133	453	115	250
32	180	146	152	455	140	250
40	200	159	165	463	150	250
50	230	190	196	493	165	250
65	290	216	222	685	185	250
80	310	254	260	716	200	250
100	350	305	313	754	220	405
125	400	356	364	780	250	405

Dimensions in mm subject to manufacturing tolerance.

Dimensions are based on the serialized manufacture and should be taken as preliminary.

Please, bear in mind the service clearance area when planning a skid or when installation happens in a very tight area.

Actuation Selection Chart

Reverse Acting (actuator closes at air failure, air to open/spring to close).

Valve Size	Actuator Type	Max. Closing Pressure 100% ΔP (bar)	Max. Closing Pressure 0% ΔP (bar)	Air Supply to Open (bar)
DN15	DP32041220NC	8	8	2,0-2,5
DN20	DP32082420NC	8	8	3,0-3,5
DN25	DP32082430NC	8	8	3,0-3,5
DN32	DP32082430NC	8	7	3,5-4,0
DN40	DP32082430NC	8	6	3,5-4,0
DN50	DP33153030NC	8	6	4,0-4,5
DN65	DP34082450NC	8	6	3,5-4,0
DN80	DP34102065NC	8	6	3,5-4,0
DN100	DP34204065NC	8	6	5,0-5,5
DN125	DP34204065NC	6	4	5,0-5,5

Information / restriction of technical rules need to be observed! Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsible for the selection of the correct valve Product suitability must be verified, contact manufacturer for information