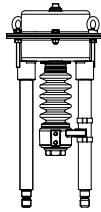




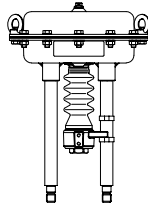
Pneumatic actuator ARI-DP

ARI-DP30
Pneumatic actuator



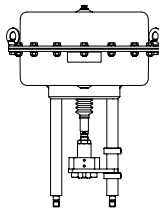
Page 2

ARI-DP32
ARI-DP33
Pneumatic actuator



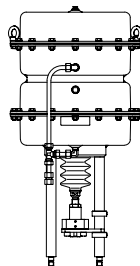
Page 2

ARI-DP34
Pneumatic actuator



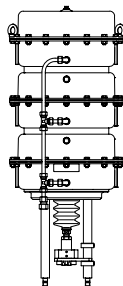
Page 2

ARI-DP34T
Pneumatic actuator



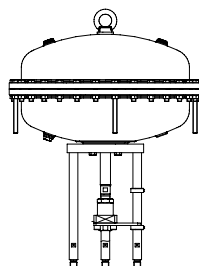
Page 6

ARI-DP34Tri
Pneumatic actuator



Page 10

ARI-DP35
Pneumatic actuator



Page 14



DP-Actuator
Extended stem on air failure



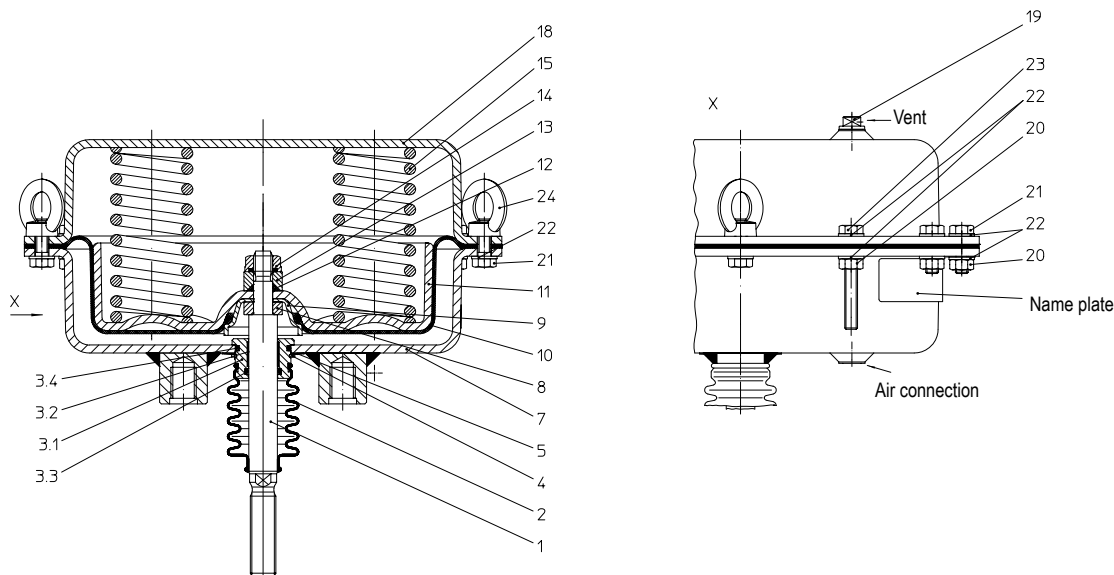
DP-Actuator
Retracted stem on air failure

Features:

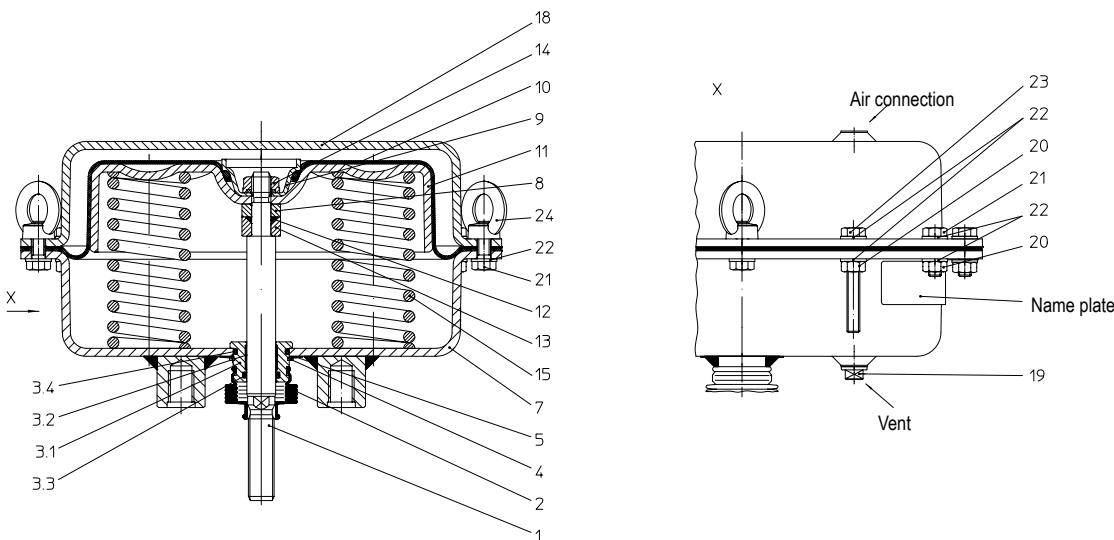
- Compact design
- Actuator with rolling diaphragm
- Actuator mountable in any position
- Travel up to 4.72 in
- DP32-34: Direct or reverse acting
- Burnished stem protected by bellow
- Max. air supply pressure 87 psi
- High spring thrust
- Maintenance-free O-ring sealing with flexible guiding
- Assembly of additional devices acc. to DIN IEC 60534-6
- Operative ambient temperatures 14°F up to +176°F (DP32-34Tri optional: -58°F up to +176°F)
- Favourable size / performance ratio
- Optional: C5-M design for DP32-34Tri (-40°F up to +176°F)

Pneumatic actuator ARI-DP30 / 32 / 33 / 34

Operating mode: Extended stem on air failure



Operating mode: Retracted stem on air failure



Pos.	Sp.p.	Description	Material	
			Standard	C5-M
1		Stem	X20Cr13+QT, 1.4021+QT	1.4571
2		Bellow seal	EPDM50 or 42CR	
3.1	x	Stem guide	X20Cr13+QT, 1.4021+QT	1.4571
3.2	x	Guiding band	PTFE + 25%C	
3.3	x	O-ring (stem)	NBR	
3.4	x	O-ring (guiding)	NBR	
4	x	Retaining ring	FSt - A2B	A4
5	x	Spring plate	FSt (Fe/Zn8M)	1.4310
6 / 7		Lower diaphragm casing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
8		Bushing	X20Cr13+QT, 1.4021+QT	
9		Diaphragm flange	DD13+QT, 1.0335+QT (Fe/Zn12B) or X20Cr13+QT, 1.4021+QT	
10	x	Diaphragm	NBR + Webbing	
11		Diaphragm plate	DD13+QT, 1.0335+QT (Fe/Zn12B)	

Pos.	Sp.p.	Description	Material	
			Standard	C5-M
12 ²⁾		O-ring	NBR	
13 ²⁾		Bushing	X20Cr13+QT, 1.4021+QT	
14	x	Collar nut with sealing ring	8-A2B	
15	x	Compression spring	FDSiCr	
16		Spring centring	DC01, 1.0330 (Fe/Zn12B)	
18		Upper diaphragm casing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
19		Screwed cap	Polyethylene	
20		Hexagon nut ¹⁾	8 - A2B	A4
21		Hexagon screw ¹⁾	8.8 - A2B	A4-70
22		Washer	St - A2B	A4
23		Hexagon screw ¹⁾	8.8 - A2B	A4-70
24		Eye nut ¹⁾	C15, 1.0401 - A4G	A4
L Spare parts				

¹⁾ Studs and nuts at temperatures below 14°F made of A4-70

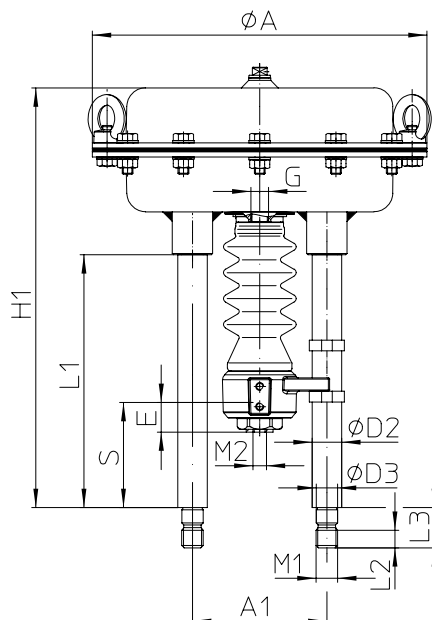
²⁾ Not present in DP32

Operating mode	Type of actuator	Spring range	Air supply pressure min.	Thrust	Spring qty.	Travel 0.79 in		Travel 1.18 in		Travel 1.97 in		Travel 2.56 in	
		(psi)	(psi)	(lbf)	(pcs.)	Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume
						(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)
 Spring closes on air failure (stem extending by spring)	DP30 12.4 in ²	32 - 65	70	450	1	0.17	0.17						
	DP32 38.8 in ²	3 - 15	17	110	4	0.5	0.5	0.5	0.7				
		6 - 17	20	220	4	0.6	0.5	0.7	0.7				
		12 - 35	39	441	8	0.6	0.5	0.7	0.7				
		22 - 42	46	826	6	0.5	0.5	--	--				
		29 - 55	59	1102	8	0.7	0.5	--	--				
	DP33 62 in ²	3 - 15	17	175	4	0.9	0.8	0.9	1.2				
		6 - 17	20	350	4	1.1	0.8	1.2	1.2				
		12 - 35	39	701	8	1.1	0.8	1.2	1.2				
		22 - 44	48	1315	6	--	--	1.0	1.2				
		25 - 39	45	1490	6	1.2	0.8	--	--				
		29 - 58	65	1754	8	--	--	1.0	1.2				
		33 - 54	58	2017	8	1.2	0.8	--	--				
	DP34 124 in ²	3 - 15	17	353	4			1.4	2.4	1.6	3.9	1.8	5.1
		6 - 17	20	706	4			2.0	2.4	2.7	3.9	3.1	5.1
		12 - 35	39	1412	8			2.0	2.4	2.7	3.9	--	--
		15 - 29	35	1765	4			--	--	--	--	1.7	5.1
		22 - 44	48	2647	6			--	--	3.0	3.9	--	--
		29 - 58	65	3530	8			--	--	3.0	3.9	1.7	5.1
		30 - 44	48	3706	6			4.5	2.4	--	--	--	--
		35 - 52	58	4235	8			3.7	2.4	--	--	--	--

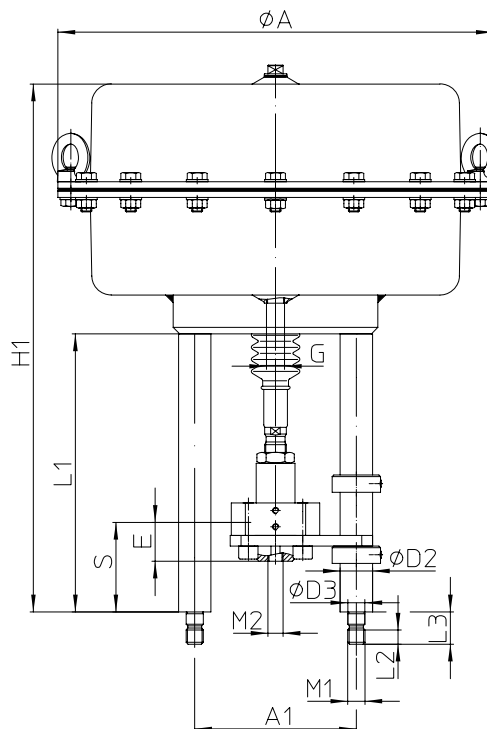
Operating mode	Type of actuator	Spring range	Air supply pressure min.	Thrust	Spring qty.	Travel 0.79 in		Travel 1.18 in		Travel 1.97 in		Travel 2.56 in	
		(psi)	(psi)	(lbf)	(pcs.)	Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume
						(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)
 Spring opens on air failure (stem retracting by spring)	DP30 12.4 in ²	9 - 22	44	315	1	0.2	0.17						
			58	495	1	0.2	0.17						
			73	674	1	0.2	0.17						
			87	854	1	0.2	0.17						
	DP32 38.8 in ²	3 - 15	17	110	4	0.5	0.5	0.5	0.7				
			20	220	4	0.5	0.5	0.5	0.7				
			29	551	4	0.5	0.5	0.5	0.7				
			44	1102	4	0.5	0.5	0.5	0.7				
			58	1652	4	0.5	0.5	0.5	0.7				
			73	2203	4	0.5	0.5	0.5	0.7				
			87	2754	4	0.5	0.5	0.5	0.7				
	DP33 62 in ²	3 - 15	17 ^{d)}	175	4	0.9	0.8	0.9	1.2				
			20 ^{d)}	351	4	0.9	0.8	0.9	1.2				
			29 ^{d)}	877	4	0.9	0.8	0.9	1.2				
			44 ^{d)}	1754	4	0.9	0.8	0.9	1.2				
			58	2630	4	0.9	0.8	0.9	1.2				
			73	3507	4	0.9	0.8	0.9	1.2				
			87	4384	4	0.9	0.8	0.9	1.2				
	DP34 124 in ²	3 - 15	17	353	4			1.4	2.4	1.6	3.9	1.8	5.1
			20	706	4			1.4	2.4	1.6	3.9	1.8	5.1
			29	1765	4			1.4	2.4	1.6	3.9	1.8	5.1
			44	3530	4			1.4	2.4	1.6	3.9	1.8	5.1
			58	5294	4			1.4	2.4	1.6	3.9	1.8	5.1
			73	7059	4			1.4	2.4	1.6	3.9	1.8	5.1
			87	8824	4			1.4	2.4	1.6	3.9	1.8	5.1

Air supply pressure max. to actuator: 87 psi Restriction: d) 51 psi

When using accessories. the corresponding air consumption has to be observed.



DP30 / 32 / DP33



DP34

Type of actuator		DP30	DP32				DP33					DP34										
		2-column mounting																				
Ø A	(in)	6.61	9.84				11.81					15.94										
H1 *	(in)	12.2	11.5	12.28	12.72	13.27	13.15	13.94	14.37	14.96	15.51	16.38	17.36	17.95	18.43	19.13	19.92	17.95	19.13	19.92	21.18	21.57
L1 *	(in)	7.4	6.61	7.4	7.83	8.39	6.61	7.4	7.83	8.39	8.98	7.4	8.39	8.98	9.45	10.16	10.94	8.98	10.16	10.94	12.2	12.6
A1	(in)	3.94	3.94				3.94					3.94						5.91				
Ø D2	(in)	0.87	0.87				0.87					0.87						1.18				
M1	(in)	M16	M16				M16					M16										
L2	(in)	0.55	0.55				0.55					0.55 (0.75)										
L3	(in)	1.18	1.18				1.18					1.18 (1.77)										
Ø D3	(in)	0.63	0.63				0.63					0.63										
M2	(in)	M10 / M12 / M14x1.5 / M16 / M16x1.5										M10 / M12 / M14x1.5 / M16 / M16x1.5						M16 / M20				
E max. (Screw-in depth)	(in)	0.87 / 0.83 / 0.83 / 0.75 / 0.79										1.1						1.42				
G	(in)	1/4"	1/4"				1/4"					3/8"										
Weight	(lbs)	11	20				33					99										

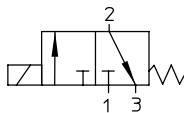
* The construction heights H1 of the actuator units vary due to the different lengths of the distance columns L1, which results from the excess length of the stem (3.27 in, 3.86 in, 5.12 in), and the different spring ranges (bench settings) of the actuator units.

Top mounted handwheel (refer to page 18)

3/2-way solenoid valves

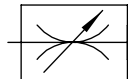
directly controlled with manual operating device

(Air is vented in the rest position
(incl. standard female connector)



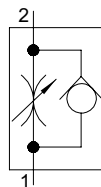
Throttling valves

(Increases operation time in 'open' and 'closed' direction)



Check valve with throttling function

(Increases operation time in 'open' or 'closed' direction)



Lock-up valve

(Holds the air in the actuator in the event of air failure)



Air set including gauge

(Reduces air pressure and removes dust and water droplets)



Limit switch

(to denote end of travel)
electrical (mechanical)
opener / shutter



Limit switch

(to denote end of travel)
inductive (contactless)
opener / shutter



Proximity sensors

(to denote end of travel in housing)

Position indicator

(analogue feedback of valve position in housing)

Pneumatic and electropneumatic positioner with column design

(allocation of valve control and control signal)



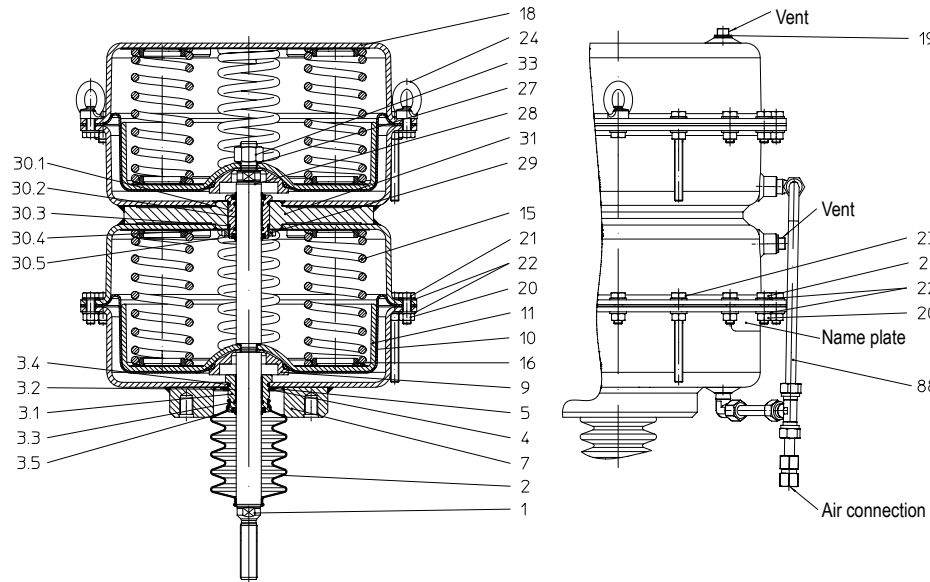
Electropneumatic positioner with direct mounting (DP32/DP33)

(allocation of valve control and control signal)

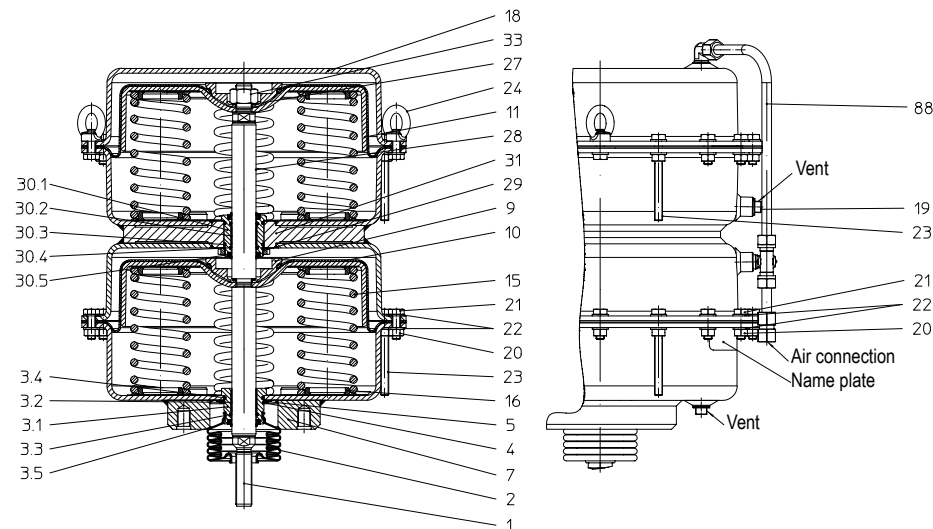


Pneumatic actuator ARI-DP34T

Operating mode: Extended stem on air failure



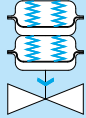
Operating mode: Retracted stem on air failure

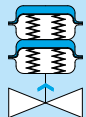


Pos.	Sp.p.	Description	Material	
			Standard	C5-M
1		Stem	X20Cr13+QT, 1.4021+QT	1.4571
2		Bellow seal	EPDM50 or 42CR	
3.1	x	Stem guide	X20Cr13+QT, 1.4021+QT	1.4571
3.2	x	Guiding band	PTFE + 25%C	
3.3	x	O-ring (stem)	NBR	
3.4	x	O-ring (guiding)	NBR	
3.5	x	Scraper	NBR	
4	x	Retaining ring	FSt - A2B	A4
5	x	Spring plate	FSt (Fe/Zn8M)	FSt (Fe/NiP50)
6 / 7		Lower diaphragm casing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
9		Diaphragm flange	DD13+QT, 1.0335+QT (Fe/Zn12B) or X20Cr13+QT, 1.4021+QT	
10	x	Diaphragm	NBR + Webbing	
11		Diaphragm plate	DD13+QT, 1.0335+QT (Fe/Zn12B)	
15	x	Compression spring	FDSiCr	
16		Spring centring	DC01, 1.0330 (Fe/Zn12B)	
18		Upper diaphragm casing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
19		Screwed cap	Polyethylene	
20		Hexagon nut ¹⁾	8 - A2B	A4

Pos.	Sp.p.	Description	Material	
			Standard	C5-M
21		Hexagon screw ¹⁾	8.8 - A2B	A4-70
22		Washer	St - A2B	A4
23		Hexagon screw ¹⁾	8.8 - A2B	A4-70
24		Eye nut ¹⁾	C15, 1.0401 - A2B	
27	x	Uisit-ring	St / NBR	
28		Stem extension	X20Cr13+QT, 1.4021+QT	
29		Slotted nut	St	
30.1	x	Stem guide	X20Cr13+QT, 1.4021+QT	
30.2	x	Guiding band	PTFE 25%C	
30.3	x	O-ring	NBR	
30.4	x	O-ring	NBR	
30.5	x	Scraper	NBR	
31		Intermediate housing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
33		Hexagon nut	8-A2B	
88		Pipe works	St / X6CrNiMoT17-12-2, 1.4571	1.4571
L Spare parts				

¹⁾ Studs and nuts at temperatures below 14°F made of A4-70

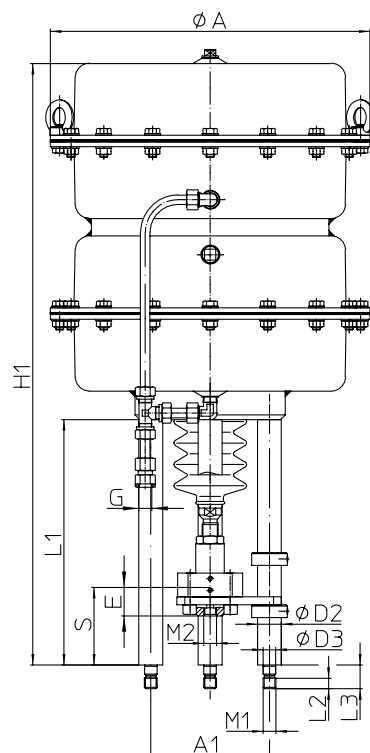
Operating mode	Type of actuator	Spring range	Air supply pressure min.	Thrust	Spring qty.	Travel 1.18 in		Travel 1.97 in		Travel 2.56 in		Travel 2.95 in	
						Dead volume	Travel volume	Dead volume	Travel volume	Dead volume	Travel volume	Dead volume	Travel volume
		(psi)	(psi)	(lbf)	(pcs.)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)
 Spring closes on air failure (stem extending by spring)	DP34T (2x124) 248 in ²	3 - 15	22	706	8	2.9	4.7	3.2	7.9	3.6	10.2	--	--
		6 - 17	25	1412	8	4.1	4.7	5.4	7.9	6.2	10.2	--	--
		8 - 35	42	1941	16	--	--	--	--	--	--	6.2	10.2
		12 - 35	42	2824	16	4.1	4.7	5.4	7.9	6.2	10.2	--	--
		15 - 29	36	3530	8	--	--	--	--	3.4	10.2	--	--
		22 - 44	51	5294	12	--	--	6.0	7.9	--	--	--	--
		29 - 58	65	7059	16	--	--	6.0	7.9	3.4	10.2	--	--
		30 - 44	51	7412	12	9.1	4.7	--	--	--	--	--	--
		35 - 52	59	8471	16	7.5	4.7	--	--	--	--	--	--

Operating mode	Type of actuator	Spring range	Air supply pressure min.	Thrust	Spring qty.	Travel 1.18 in		Travel 1.97 in		Travel 2.56 in		Travel 2.95 in	
						Dead volume	Travel volume	Dead volume	Travel volume	Dead volume	Travel volume	Dead volume	Travel volume
		(psi)	(psi)	(lbf)	(pcs.)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)
 Spring opens on air failure (stem retracting by spring)	DP34T (2x124) 248 in ²	3 - 15	22	1765	8	5.2	2.4	7.1	3.9	8.7	5.1		
			29	3530	8	5.2	2.4	7.1	3.9	8.7	5.1		
			44	7059	8	5.2	2.4	7.1	3.9	8.7	5.1		
			58	10589	8	5.2	2.4	7.1	3.9	8.7	5.1		
			73	14118	8	5.2	2.4	7.1	3.9	8.7	5.1		
			87 ¹⁵⁾	17648	8	5.2	2.4	7.1	3.9	8.7	5.1		

Air supply pressure max. to actuator: 87 psi

¹⁾ strengthened design

When using accessories, the corresponding air consumption has to be observed.



Type of actuator		DP34T 4-column mounting				
Ø A	(in)	15.94				
H1 *	(in)	26.69	27.87	28.66	29.92	30.31
L1 *	(in)	8.98	10.16	10.94	12.2	12.6
A1	(in)	5.91				
Ø D2	(in)	1.18				
M1	(in)	M16				
L2	(in)	0.55 (0.75)				
L3	(in)	1.18 (1.77)				
Ø D3	(in)	0.63				
M2	(in)	M16 / M20				
E max. (Screw-in depth)	(in)	1.42				
G	(in)	3/8"				
Weight	(lbs)	256				

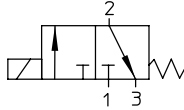
* The construction heights H1 of the actuator units vary due to the different lengths of the distance columns L1, which results from the excess length of the stem (3.27 in, 3.86 in, 5.12 in), and the different spring ranges (bench settings) of the actuator units.

Top mounted handwheel (refer to page 18)

3/2-way solenoid valves

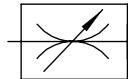
directly controlled with manual operating device

(Air is vented in the rest position
(incl. standard female connector)



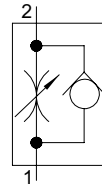
Throttling valves

(Increases operation time in 'open' or 'closed' direction)



Check valve with throttling function

(Increases operation time in 'open' or 'closed' direction)



Lock-up valve

(Holds the air in the actuator in the event of air failure)

Air set including gauge

(Reduces air pressure and removes dust and water droplets)

Limit switch

(to denote end of travel)

electrical (mechanical)

opener / shutter

Limit switch

(to denote end of travel)

inductive (contactless)

opener / shutter

Proximity sensors

(to denote end of travel in housing)

Position indicator

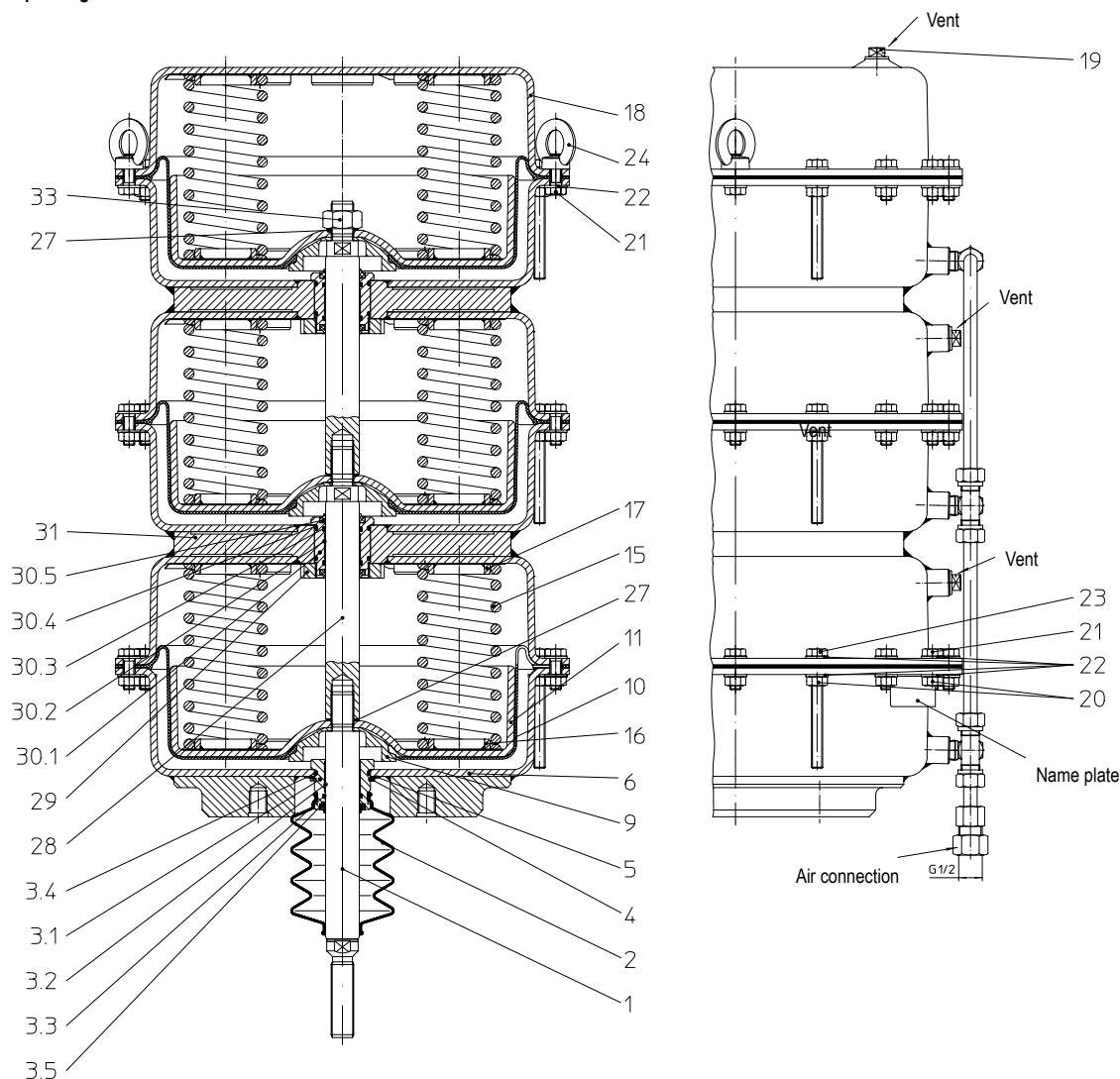
(analogue feedback of valve position in housing)

Pneumatic and electropneumatic positioner with column design

(allocation of valve control and control signal)

Pneumatic actuator ARI-DP34Tri

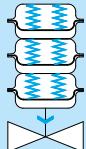
Operating mode: Extended stem on air failure



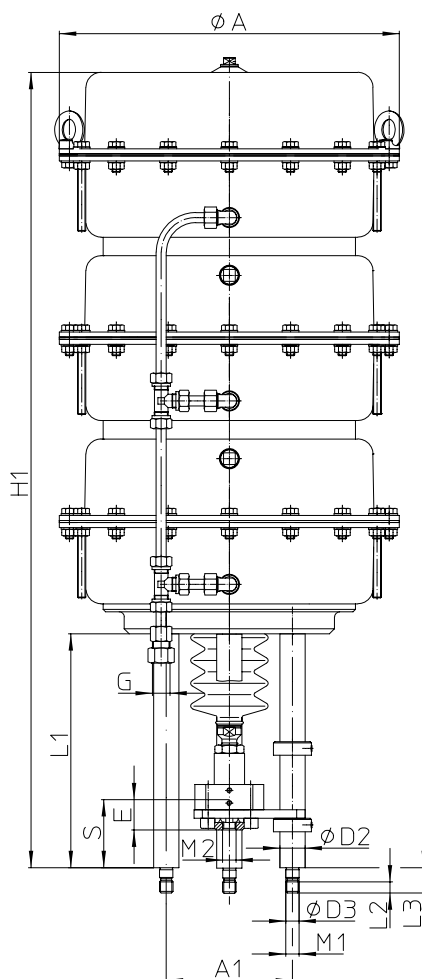
Pos.	Sp.p.	Description	Material	
			Standard	C5-M
1		Stem	X20Cr13+QT, 1.4021+QT	1.4571
2		Bellow seal	EPDM50 or 42CR	
3.1	x	Stem guide	X20Cr13+QT, 1.4021+QT	1.4571
3.2	x	Guiding band	PTFE + 25%C	
3.3	x	O-ring (stem)	NBR	
3.4	x	O-ring (guiding)	NBR	
3.5	x	Scraper	NBR	
4	x	Retaining ring	FSt - A2B	A4
5	x	Spring plate	FSt (Fe/Zn8M)	FSt (Fe/NiP50)
6 / 7		Lower diaphragm casing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
8		Bushing	X20Cr13+QT, 1.4021+QT	
9		Diaphragm flange	DD13+QT, 1.0335+QT (Fe/Zn12B) or X20Cr13+QT, 1.4021+QT	
10	x	Diaphragm	NBR + Webbing	
11		Diaphragm plate	DD13+QT, 1.0335+QT (Fe/Zn12B)	
15	x	Compression spring	FDSiCr	
16		Spring centring	DC01, 1.0330 (Fe/Zn12B)	
18		Upper diaphragm casing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
19		Screwed cap	Polyethylene	

Pos.	Sp.p.	Description	Material	
			Standard	C5-M
20		Hexagon nut ¹⁾	8 - A2B	A4
21		Hexagon screw ¹⁾	8.8 - A2B	A4-70
22		Washer	St - A2B	A4
23		Hexagon screw ¹⁾	8.8 - A2B	A4-70
24		Eye nut ¹⁾	C15, 1.0401 - A2B	A4
27	x	Usit-ring	St / NBR	
28		Stem extension	X20Cr13+QT, 1.4021+QT	
29		Slotted nut	St	
30.1	x	Stem guide	X20Cr13+QT, 1.4021+QT	
30.2	x	Guiding band	PTFE 25%C	
30.3	x	O-ring	NBR	
30.4	x	O-ring	NBR	
30.5	x	Scraper	NBR	
31		Intermediate housing	DD13+QT, 1.0335+QT (powder coated)	DD13+QT, 1.0335+QT (C5-M coated)
33		Hexagon nut	8-A2B	
88		Pipe works	St / X6CrNiMoT17-12-2, 1.4571	1.4571
L Spare parts				

¹⁾ Studs and nuts at temperatures below 14°F made of A4-70

Operating mode	Type of actuator	Spring range	Air supply pressure min.	Thrust	Spring qty.	Travel 1.18 in		Travel 1.97 in		Travel 2.56 in		Travel 2.95 in	
						Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume
		(psi)	(psi)	(lbf)	(pcs.)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)
 Spring closes on air failure (stem extending by spring)	DP34Tri (3x124) 372 in²	3 - 15	22	1059	12	4.3	7.1	4.7	11.8	5.4	15.3	--	--
		6 - 17	25	2118	12	6.1	7.1	8.0	11.8	9.3	15.3	--	--
		8 - 35	42	2911	24	--	--	--	--	--	--	9.3	15.3
		12 - 35	42	4235	24	6.1	7.1	8.0	11.8	9.3	15.3	--	--
		15 - 29	36	5294	12	--	--	--	--	5.1	15.3	--	--
		22 - 44	51	7941	18	--	--	8.9	11.8	--	--	--	--
		29 - 58	65	10589	24	--	--	8.9	11.8	5.1	15.3	--	--
		30 - 44	51	11118	18	13.6	7.1	--	--	--	--	--	--
		35 - 52	59	12706	24	11.2	7.1	--	--	--	--	--	--

Air supply pressure max. to actuator: 73 psi
When using accessories, the corresponding air consumption has to be observed.



Type of actuator		DP34Tri 4-column mounting				
Ø A	(in)	15.94				
H1 *	(in)	35.43	36.61	37.4	38.66	39.06
L1 *	(in)	8.98	10.16	10.94	12.2	12.6
A1	(in)	5.91				
Ø D2	(in)	1.18				
M1	(in)	M16				
L2	(in)	0.55 (0.75)				
L3	(in)	1.18 (1.77)				
Ø D3	(in)	0.63				
M2	(in)	M20				
E max.	(in)	1.42				
G	(in)	1/2"				
Weight	(lbs)	331				

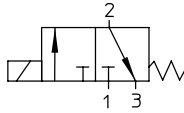
* The construction heights H1 of the actuator units vary due to the different lengths of the distance columns L1, which results from the excess length of the stem (3.27 in, 3.86 in, 5.12 in), and the different spring ranges (bench settings) of the actuator units.

Top mounted handwheel (refer to page 18)

3/2-way solenoid valves

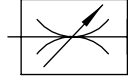
directly controlled with manual operating device

(Air is vented in the rest position
(incl. standard female connector)



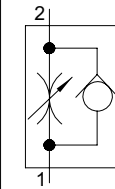
Throttling valves

(Increases operation time in 'open' or 'closed' direction)



Check valve with throttling function

(Increases operation time in 'open' or 'closed' direction)



Lock-up valve

(Holds the air in the actuator in the event of air failure)

Air set including gauge

(Reduces air pressure and removes dust and water droplets)

Limit switch

(to denote end of travel)

electrical (mechanical)

opener / shutter

Limit switch

(to denote end of travel)

inductive (contactless)

opener / shutter

Proximity sensors

(to denote end of travel in housing)

Position indicator

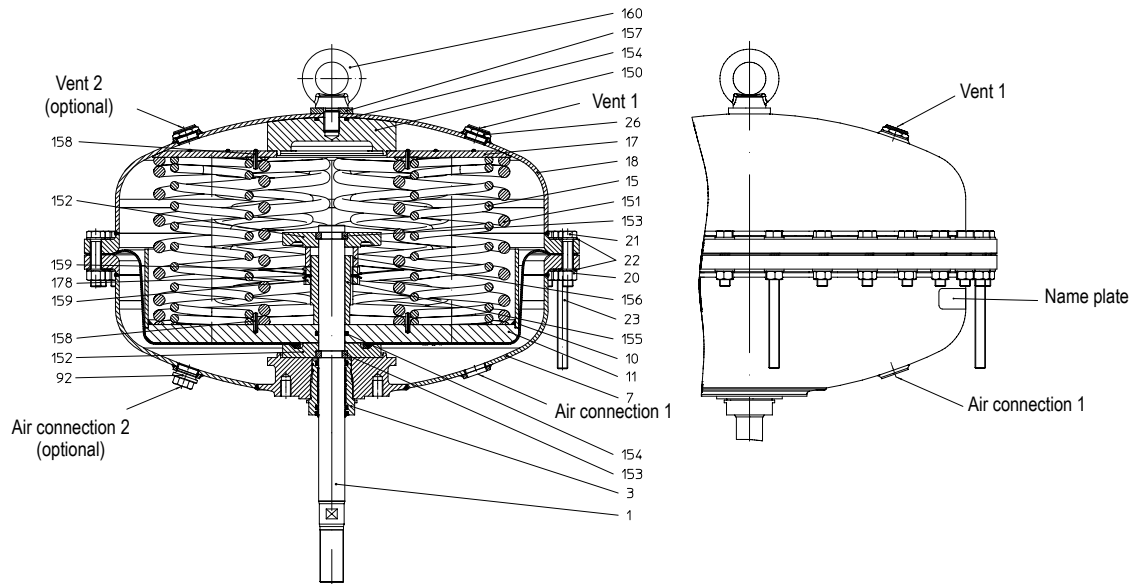
(analogue feedback of valve position in housing)

Pneumatic and electropneumatic positioner with column design

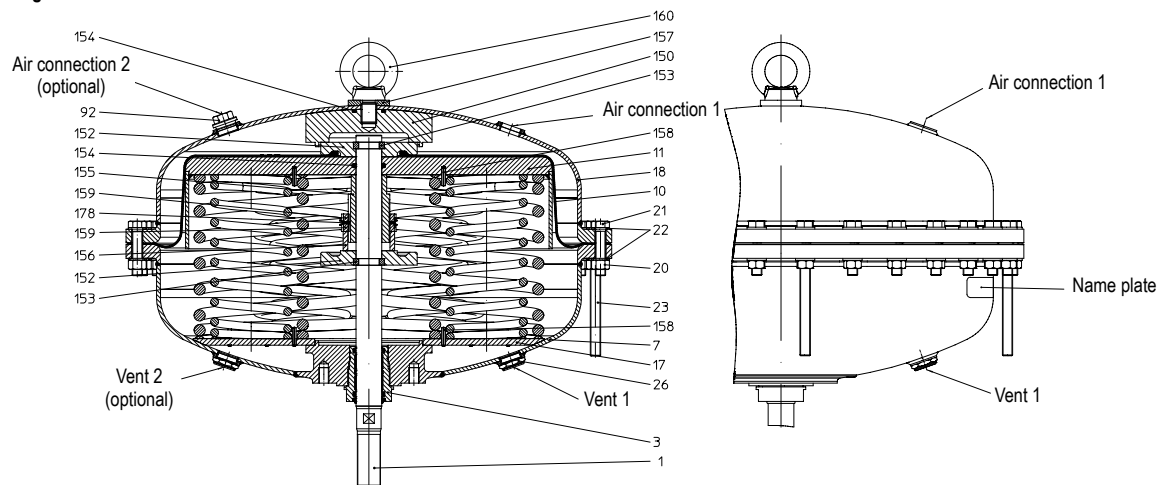
(allocation of valve control and control signal)

Pneumatic actuator ARI-DP35

Operating mode: Extended stem on air failure



Operating mode: Retracted stem on air failure



Pos.	Sp.p.	Description	Material
1		Stem	X20Cr13+QT, 1.4021+QT
3.	x	Stem guide	X20Cr13+QT, 1.4021+QT
7		Lower diaphragm casing	P265GH, 1.0425 / S235JR, 1.0037
10	x	Rolling diaphragm	NBR + Webbing
11		Diaphragm plate	St 52-3 G 03 g, 1.0570 G 03 g
15	x	Compression spring	FDSiCr
17		Spring centring	St 52-3 G 03 g, 1.0570 G 03 g
18		Upper diaphragm casing	P265GH, 1.0425 / S235JR, 1.0037
20		Hexagon nut ¹⁾	C35E, 1.1181
21		Hexagon screw ¹⁾	8.8 - A2B
22		Washer	St - A2B
23		Hexagon screw ¹⁾	10.9 - A2B
150		Limit stopper	X20Cr13+QT, 1.4021+QT

Pos.	Sp.p.	Description	Material
151	x	Compression spring	FDSiCr
152		Diaphragm flange	X20Cr13+QT, 1.4021+QT
153		Stem ring	X20Cr13+QT, 1.4021+QT
154		Quadring	EPDM
155		Clamp screw	X20Cr13+QT, 1.4021+QT
156		Clamping sleeve	X20Cr13+QT, 1.4021+QT
157		Spacer disc	X20Cr13+QT, 1.4021+QT
158		Grooved pin	A2
159		Slotted nut	St-A2B
160		Ring bolt	C15E, 1.1141
178		Locking plate	A2
	L Spare parts		

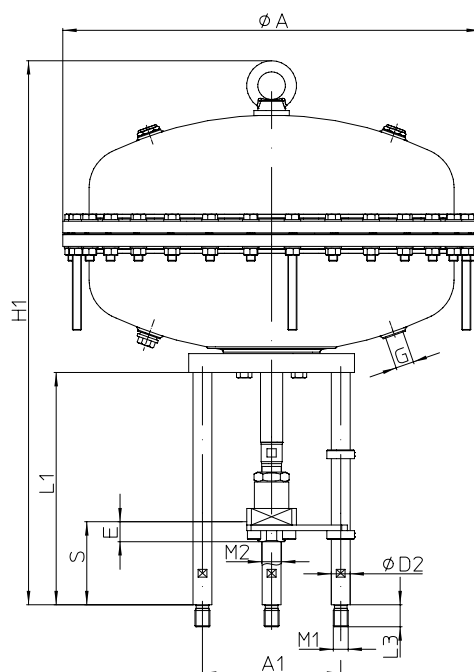
¹⁾ Studs and nuts at temperatures below 14°F made of A4-70

Operating mode	Type of actuator	Spring range	Air supply pressure min.	Thrust	Spring qty.	Travel 1.97 in		Travel 2.56 in		Travel 3.54 in		Travel 4.72 in	
						Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume
		(psi)	(psi)	(lbf)	(pcs.)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)
 Spring closes on air failure (stem extending by spring)	DP35 434 in ²	43 - 55	62	18674	12	33.7	14.1	--	--	--	--	--	--
		39 - 55	62	17101	12	--	--	29.4	18.4	--	--	--	--
		33 - 55	62	14478	12	--	--	--	--	22.3	25.5	--	--
		26 - 55	62	11330	12	--	--	--	--	--	--	13.8	34.0

Operating mode	Type of actuator	Spring range	Air supply pressure min.	Thrust	Spring qty.	Travel 1.97 in		Travel 2.56 in		Travel 3.54 in		Travel 4.72 in	
						Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume	Dead volume	Travel-volume
		(psi)	(psi)	(lbf)	(pcs.)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)	(liter)
 Spring opens on air failure (stem retracting by spring)	DP35 434 in ²	870 - 1,276	87	32229	3	13.8	14.1	--	--	--	--	--	--
		870 - 1,392	87	31725	3	--	--	13.8	18.4	--	--	--	--
		870 - 1,595	87	30844	3	--	--	--	--	13.8	25.5	--	--
		870 - 1,842	87	29774	3	--	--	--	--	--	--	13.8	34

Air supply pressure max. to actuator: 87 psi

When using accessories, the corresponding air consumption has to be observed.



Type of actuator		DP35 4-column mounting
Ø A	(in)	29.72
H1 *	(in)	38.74
L1 *	(in)	16.54
A1	(in)	9.84
Ø D2	(in)	1.34
M1	(in)	M27
L3	(in)	1.57
M2	(in)	M27 / M36 x 1.5
E max.	(in)	1.77
G	(in)	1"
Weight	(lbs)	717

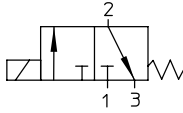
* The construction heights H1 of the actuator units vary due to the different lengths of the distance columns L1, which results from the excess length of the stem (S = 3.86 in, 5.12 in), and the different spring ranges (bench settings) of the actuator units.

Top mounted handwheel (refer to page 18)

3/2-way solenoid valves

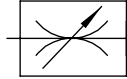
directly controlled with manual operating device

(Air is vented in the rest position
(incl. standard female connector)



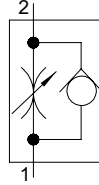
Throttling valves

(Increases operation time in 'open' or 'closed' direction)



Check valve with throttling function

(Increases operation time in 'open' or 'closed' direction)



Lock-up valve

(Holds the air in the actuator in the event of air failure)

Air set including gauge

(Reduces air pressure and removes dust and water droplets)

Limit switch

(to denote end of travel)

electrical (mechanical)

opener / shutter

Limit switch

(to denote end of travel)

inductive (contactless)

opener / shutter

Proximity sensors

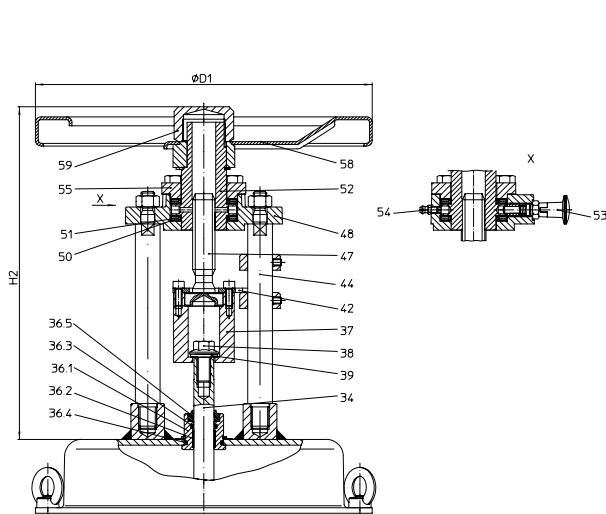
(to denote end of travel in housing)

Position indicator

(analogue feedback of valve position in housing)

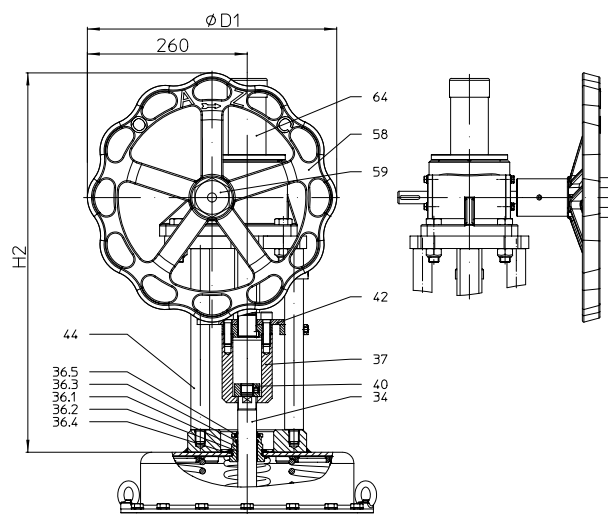
Pneumatic and electropneumatic positioner with column design

(allocation of valve control and control signal)



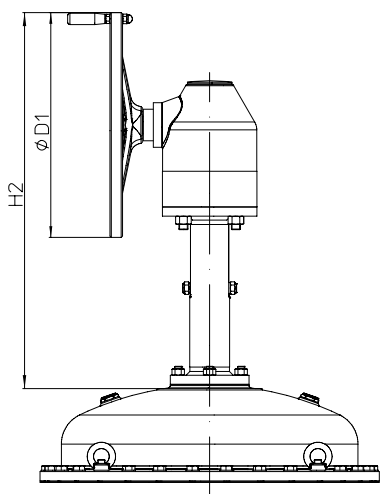
DP30 / DP32 / DP33 / DP34 Top mounted handwheel

Dimensions and weights		DP30	DP32	DP33	DP34
Ø D1	(in)	8.86	8.86	11.81	15.63
H2	(in)	11.18	11.18	11.69	18.03
Weight (with actuator)	(lbs)	22	31	44	137



DP34T/ DP34Tri Top mounted handwheel with worm gear

Dimensions and weights		DP34T	DP34Tri
Ø D1	(in)	15.75	15.75
H2	(in)	24.13	24.13
Weight (with actuator)	(lbs)	346	421

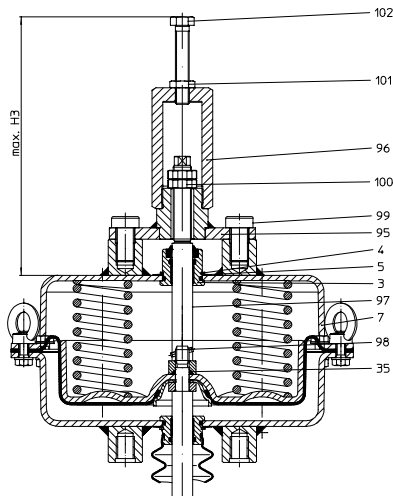


DP35 Top mounted handwheel with bevel gear

Dimensions and weights		DP35
Ø D1	(in)	19.69
H2	(in)	28.78
Weight (with actuator)	(lbs)	805

Parts

Pos.	Sp.p.	Description	Material	
			Standard	C5-M
34		Stem extension	X20Cr13+QT, 1.4021+QT	1.4571
35		Usit-ring	St / NBR	
36.1	x	Stem guide	X14CrMoS17+QT, 1.4104+QT	1.4571
36.2	x	Guiding band	PTFE +25%C	
36.3	x	O-ring	NBR	
36.4	x	O-ring	NBR	
36.5	x	Scraper	NBR	
37		Bushing	X20Cr13+QT, 1.4021+QT	
38		Hexagon screw	8.8 - A4G	
39		Washer	St - A4G	
40		lbfut	X20Cr13+QT, 1.4021+QT	
42		Torsion lock	S235JR, 1.0037	1.4571
43		Cylinder screw	8.8 - A4G	A4-70
44		Distance column	11SMn30+C, 1.0715+C (Fe/Zn12B)	1.4571
47		Stem	X20Cr13+QT, 1.4021+QT	1.4571
48		Traverse	EN-JS1049, EN-GJS-400-18U-LT (Fe/Zn12B)	EN-JS1049 (C5-M coated)
50		Axial-washer	St	
51		Needle bearing	St	
52		Threaded bush	CuZn35Ni3Mn2AlPb-R490, CW710R-R490	CC493K
53		Catch pin	St, Cu	1.4305/PA
54		Lubricating nipple	5.8 - A4G	A4
55		Covering for traverse	S235JR, 1.0037 (Fe/Zn12B)	1.4408 (DP34: 1.4571)
58		Handwheel	Fe P01, 1.0330 (epoxy coated)	Fe P01, 1.0330 (C5-M coated)
59		Safety cap	11SMn30+C, 1.0715+C (epoxy coated)	1.4571
64		Worm gear		
L Spare parts				

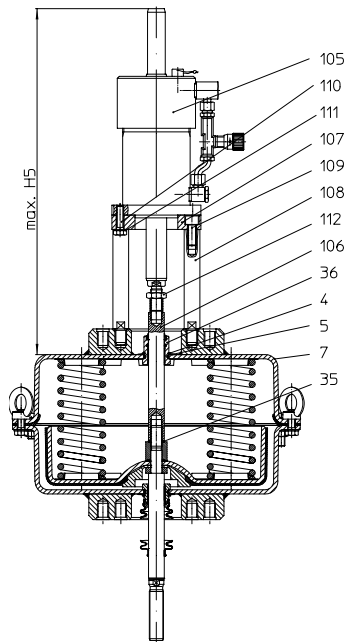


DP32 / DP33 / DP34 with travel limitation

- adjustable mechanical limit stop on the actuator
- for opening and closing direction

Dimensions and weights		DP32	DP33	DP34
max. H3	(in)	8.66	9.06	14.96
Weight	(lbs)	29	42	130

Pos.	Sp.p.	Description	Material
7		Lower diaphragm casing	DD13+QT, 1.0335+QT (powder coated)
35		Usit-ring / O-ring	ST / NBR
95		Traverse	1.0037 (Fe / Zn / 2B)
96		Cap	X14CrMoS17+QT, 1.4104+QT
97		Stem extension	X20Cr13+QT, 1.4021+QT
98		Straight pin	X10CrNi18-8, 1.4310
99		Cylinder screw	8.8 - A4G
100		Stem guiding	11SMnPb30+C, 1.0718+C
101		Stem guiding	17H - A4G
102		Hexagon bolt	8.8 - A4G
L Spare parts			



DP32 / DP33 / DP34 / DP34T with damping tube, hydraulic

Dimensions and weights		DP32	DP33	DP34	DP34T
max. H5	(in)	16.22	16.22	19.49	19.49
Weight	(lbs)	51	64	137	293

Pos.	Sp.p.	Description	Material
4		Retaining ring	Fst - A2B
5		Spring plate	C75S, 1.1248
7		Lower diaphragm casing	DD13+QT, 1.0335+QT (powder coated)
35		Usit-ring	St / NBR
36		Stem guide	X14CrMoS17+QT, PTFE, NBR
105		Damping tube	
106		Stem extension	X20Cr13+QT, 1.4021+QT
107		Flange	X20Cr13+QT, 1.4021+QT
108		Distance column	X20Cr13+QT, 1.4021+QT
109		Cylinder screw	8.8 - A2B
110		Hexagon bolt	8.8 - A2B
111		Washer	St / A4G
112		Stem guiding	11SMnPb30+C, 1.0718+C
L Spare parts			

Special design

Actuators for sub-zero temperatures -40°F to +176°F (on request)	Actuators for aggressive environments (on request)
DP in short design (on request)	Top mounted handwheel - short design (on request)



Application

The single acting pneumatic actuators series DP are designed to be mounted directly on control valves and stop valves. They supply large forces for the valve operation with short (1-10 seconds) lifting times on air supply or on air failure.
Please contact the supplier or manufacturer if there are any questions.

Set up and operation mode

The pneumatic actuators series DP converts pneumatic pressure into a linear travel at the actuator stem. Depending on the air supply pressure and different control signals the actuator is producing appropriate forces at the stem.

Depending on the air supply pressure and different control signals the actuator is producing appropriate forces at the stem.

Thus following operating modes can be achieved: „Extended stem (on air failure) or „Retracted stem (on air failure).

The compression springs and also the rolling diaphragm are laied out for approx. about one million double travels.

Please indicate when ordering:

- Type of actuator
- Operating mode
- Spring range
- lbfominal travel
- Connection dimensions of the valve
- Accessories

Example:

ARI-DP34; Operating mode: extended stem on air failure; 22 - 44 psi; travel 1.97 in; A = 3.94 in; stem excess length = 3.27 in; M2 = M12; E = 0.59 in.

