

Pneumatic Gate Valve INSTRUCTION MANUAL



dc DELCO

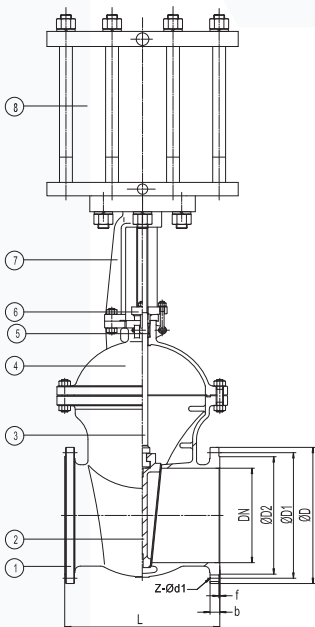
Specialized Control Valve Manufacturer



Introduction

Pneumatic gate valves are driven by pneumatic actuators to lift and lower the gate, achieving full open or full closed control of pipeline media. They are suitable for clean fluids and high-temperature and high-pressure environments, and have the characteristics of low flow resistance and long service life. Composed of pneumatic piston actuator, valve body, parallel or wedge-shaped gate, valve stem, connected by flange or clamp. External force is required to seal when closing. Double acting (gas on/off) or single acting (spring reset), the gas source pressure is usually 4-8 bar. Sealing form: metal hard seal (such as Stellite alloy welding) or soft seal (EPDM), with a leakage rate as low as $10^{-6} \text{C} \times \text{KV}$. Resistant to extreme environments: suitable for temperatures ranging from $-196 \text{ }^{\circ}\text{C}$ to $500 \text{ }^{\circ}\text{C}$, with a pressure of up to PN6.4MPa. The valve body can be equipped with insulation sleeves to prevent medium condensation.

Main Parts Materials



NO	Name	Material
1	Body	Stainless Steel 304、316、 WCB
2	Lashboard	Stainless Steel 304、316、 WCB
3	Stem	Stainless Steel 304、316
4	Bonnet	Stainless Steel 304、316、 WCB
5	Packing	PTFE
6	Packing Gland	Stainless Steel 304、316、 WCB
7	Connecyng Set	Stainless Steel 304、316
8	Actuator	Direct Stroke Pneumatic Actuator

Main Outline and Connecting Size 1.6 MPa

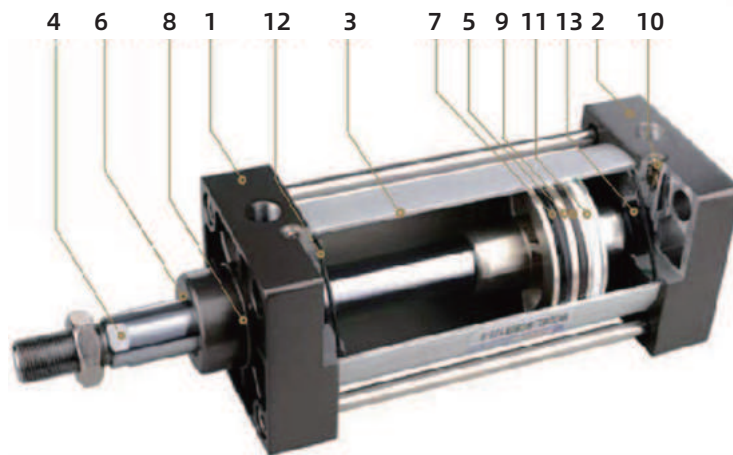
MODEL	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
G	1/2"	3/4"	1"	1-1/4"	-1-1/2"	2"	2-1/2"	3"	4"	5"	6"
D2	45	58	68	78	88	102	122	138	180	188	212
D1	65	75	85	100	110	125	145	160	180	210	240
D	95	105	115	140	150	165	185	200	220	250	285
L	108	117	127	140	240	250	270	280	300	325	350
b	16	18	18	18	18	18	18	20	20	22	22
f	2	2	2	2	2	2	2	2	2	2	2
n-m	4-14	4-14	4-14	4-18	4-18	4-18	4-18	8-18	8-18	8-18	8-22



Product Features

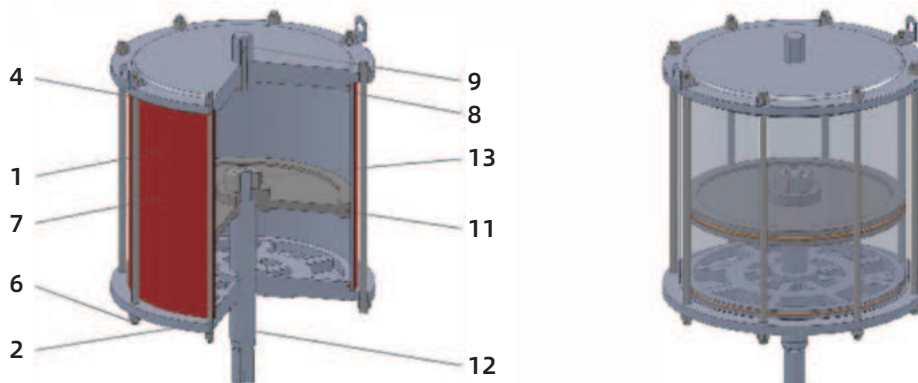
1. Adjustable travel stop for the rod-retract position, piston bottoms out for the rod-extend position
Specific travel applications available, consult factory.
2. Spring rod nut is locked to prevent unauthorized disassembly of the spring cartridge
3. Pneumatic cylinder material is hard anodized aluminum
4. Drive rod material is carbon steel chrome plated. with option for stainless steel
5. Other colors/coatings available upon request
6. Consult factory for custom thrust, travel and pressure requirements.

Structure



NO.	Description	Material	Protection	Qty
01	Fontcap	Cast aluminum	Painted etc	1
02	Endcap	Cast aluminum	Painted etc	1
03	Body	Alloy	Hard anodized etc	1
04	Piston rod	All steel	Nickel plated	1
05	Piston	Cast Aluminum		1
06	O-ring (piston rod)	NBR		1
07	O-ring (piston)	NBR		2
08	Bearing	Lubrication-free Bearings		1
09	Magnet	Plastic material		1
10	Buffer seal	Carbon Steel 45#		2
11	Wearing	PTFE/PTFE		1
12	O-ring (end cap)	NBR		2
13	Cushion seal	NBR		2

Structure of Pneumatic Actuators with Double Acting



NO.	Name	Material	Qty
01	Body	Steel	1
02	Bottom	Ductile iron	1
03	Cap	Ductile iron	1
04	Nut	Steel	16
05	Bolt	Steel	8
06	Screw	Steel	1
07	Nut	Steel	1
08	Piston	Ductile iron	1
09	Stem	Quality steel	1
10	Screw	Steel	1

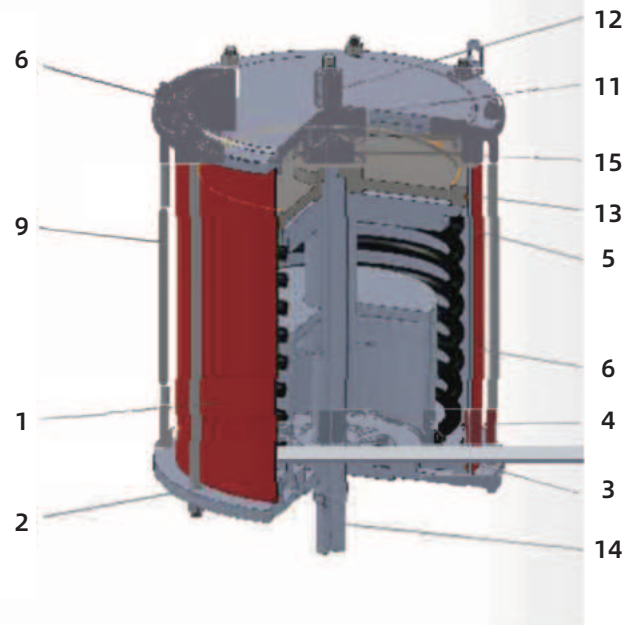
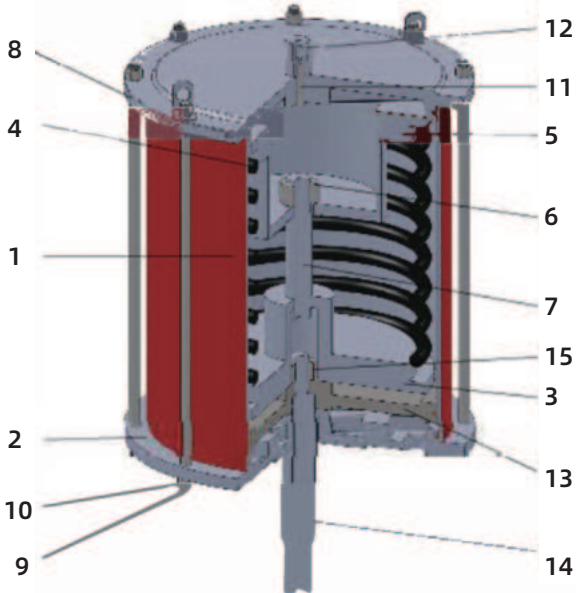
Output Torque Table of Pneumatic Actuators with Double Acting

DN mm	Cylinder output force N													
	Gas source pressure unit MPa													
	0.3		0.35		0.4		0.45		0.5		0.55		0.6	
	Thrust N	Tensile Force N	Thrust N	Tensile Force N	Thrust N	Tensile Force N	Thrust N	Tensile Force N	Thrust N	Tensile Force N	Thrust N	Tensile Force N	Thrust N	Tensile Force N
80	1507	1360	1758	1587	2010	1813	2261	2040	2512	2267	2763	2493	3014	2720
100	2355	2208	2748	2576	3140	2944	3533	3312	3925	3680	4318	4048	4710	4418
125	3680	3439	4293	4012	4906	4585	5520	5158	6133	5731	6746	6304	7359	6877
160	6029	5652	7034	6594	8033	7536	9043	8478	10048	9420	11053	10362	12058	11304
200	9420	9043	10990	10550	12560	12058	14130	13565	15700	15072	17570	16579	18840	18086
250	14719	14342	17172	16732	19625	19123	22078	21513	24531	23903	26984	26294	29438	28684
280	18463	18086	21540	21101	24618	24115	27695	27130	30772	30144	33849	33158	36926	36173
320	24115	23738	28134	27695	32154	31651	36173	35808	40192	39564	44211	43520	48230	47477
350	28849	28472	33657	33217	38465	37963	43273	42708	48081	47453	52886	52199	57698	56944
400	37680	37303	43960	43520	50240	49738	56520	55965	62800	62172	69080	68389	75360	74606
450	47689	47100	55637	54850	63585	62800	71533	70650	79481	78500	87429	86350	95378	94200
500	58875	58027	68688	67698	78500	77370	88313	87041	98125	96712	107988	106383	117750	116054
550	73853	73005	86162	85173	98470	97340	110779	109508	123088	121675	135397	133843	147706	146010
600	84780	83932	98910	97921	113040	111910	127170	125898	141300	139887	155430	153876	169560	167864
630	93470	92622	109048	108059	124627	123496	140205	138933	155783	154370	171362	169807	186940	185244
700	115395	114547	134628	133638	153860	152730	173083	171821	192325	190912	211558	210003	230790	229094
800	150720	149566	178540	174494	200960	199421	226060	224349	251200	249277	276320	274204	301440	299132
900	190755	189601	222548	221201	254340	252801	286133	284402	317925	316002	349718	347602	381210	379202

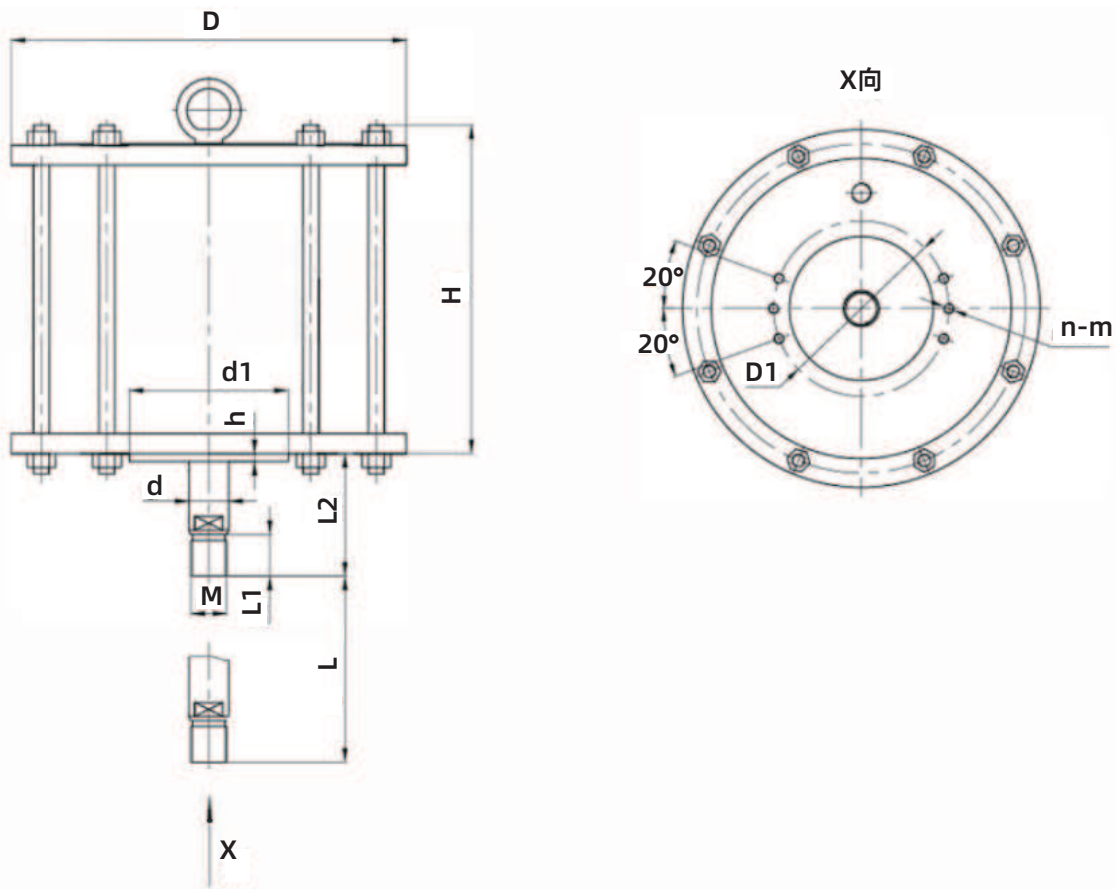
Structure of Pneumatic Actuators with Spring Return

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NO.	Name	Material	Qty
01	Body	Steel	1
02	Spring Seat	Ductile iron	1
03	Spring	Steel	1
04	Spring	Spring Steel	1
05	Spring Seat	Steel	1
06	Nut	Steel	1
07	Spring Stem	Quality Steel	1
08	Cap	Ductile iron	1
09	Studs	Steel	8
10	Screw	Steel	16
11	Bolt	Steel	1
12	Nut	Steel	1
13	Piston	Ductile iron	1
14	Piston Stem	Quality steel	1
15	Locknut	Steel	1



280~900 Dimension of Double Acting Linear Actuator

Model	d	M	L1	L2	H	h	d1	D1	n-m	D
280	Φ36	M33×2	56	80	185+L	6	Φ140	Φ180	6-M10 Deep 16	Φ355
320	Φ36	M33×2	56	80	185+L	6	Φ140	Φ180	6-M10 Deep 16	Φ395
350	Φ40	M33×2	56	80	185+L	6	Φ160	Φ195	6-M12 Deep 20	Φ425
400	Φ40	M36×2	56	80	190+L	6	Φ160	Φ195	6-M12 Deep 20	Φ490
450	Φ50	M42×2	56	80	190+L	6	Φ200	Φ238	8-M14 Deep 22	Φ540
500	Φ60	M48×2	65	110	190+L	7	Φ228	Φ252	8-M14 Deep 22	Φ595
560	Φ60	M48×2	65	110	195+L	7	Φ228	Φ252	8-M14 Deep 22	Φ650
600	Φ60	M48×2	65	110	195+L	7	Φ228	Φ252	8-M14 Deep 22	Φ692
630	Φ60	M48×2	65	110	195+L	7	Φ228	Φ252	8-M14 Deep 22	Φ725
700	Φ70	M56×2	65	115	215+L	7	Φ235	Φ285	8-M16 Deep 26	Φ795
800	Φ70	M56×2	65	115	215+L	8	Φ235	Φ285	8-M16 Deep 26	Φ905
900	Φ80	M64×2	66	115	215+L	8	Φ340	Φ380	8-M22 Deep 35	Φ1010

Seeking For Global Distributors



dc DELCO

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