

VeGA CONTROL VALVE 1-6940 and 1-4640 SERIES

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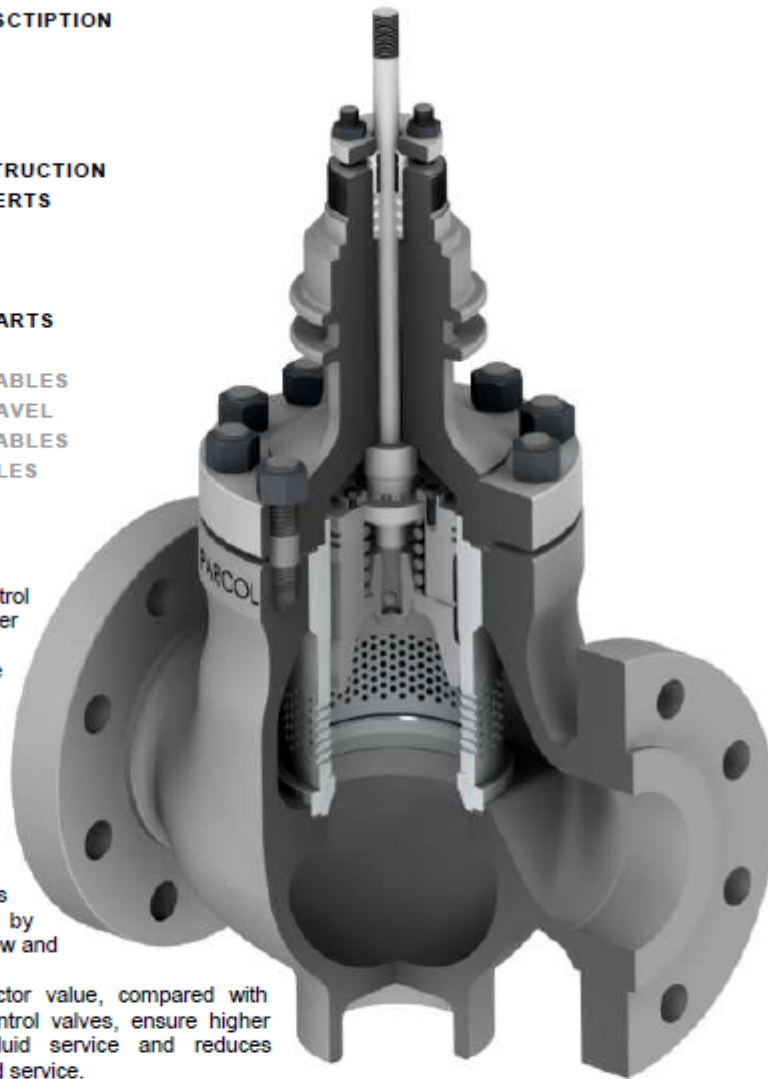
PRESSURE DROP TABLES

VeGA is the most Versatile control valve for General Applications ever designed by Parcol.

VeGA is a straight body single seat control valve with cage guided balanced plug, designed to withstand the most severe process conditions; the flow is mainly controlled by the special drilled cage, which acts as a continuous and full plug guide along the whole valve travel.

The special plug design allows improving valve rangeability by reducing minimum controllable flow and plug erosion.

The high pressure recovery factor value, compared with conventional Contoured plug control valves, ensure higher flow rates on compressible fluid service and reduces cavitation risk and effects on liquid service.



All versions have quick change trim with internal spring to extend the quick change design up to maximum working temperature.

Together with the standard trim, low noise trims and double cage trims are available respectively for critical service on compressible fluids (gas and vapor) and for high differential pressures or for cavitating service, where higher pressure recovery factor values are required.

Balanced Plug with Pilot execution allows to comply with IEC sealing class V up to 566°C for compressible fluids service; for incompressible fluids service, a special C-ring metallic seal is available to comply with IEC sealing class V without practical temperature limitations.

“Flow to close” configuration improves seat ring protection and increases seating force, making this solution particularly reliable.

Contoured unbalanced plugs are available up to DN 8” for dirty fluids service.

Bonnet style, finned and partially extended is specially designed to comply with all working conditions.

A special material configuration is available to comply with NACE MR0175 and MR0103 standards.

VeGA control valves are usually equipped with Parcol diaphragm spring return pneumatic actuators 1-X-290 and 1-X-250 series (pneumatic cylinders 1-X-400 series for DN 16” and over).

Electrical or hydraulic actuators are available on request.

MAIN FEATURES

- Wide range of sizes: from DN 1/2" to DN 24" ;
- Ratings from ANSI 150 up to ANSI 2500 (B10 to B100 for EN ratings);
- Wide operating temperature range (-55 °C to 566 °C, -196°C with optional extended bonnet);
- Quick change design up to maximum allowed working temperature;
- High flow capacity thanks to optimized body shape design;
- High rangeability thanks to Cascade Clearance Flow (CCF) plug design;
- Sealing class V IEC 60534-4 up to 566 °C for balanced plug with pilot ("flow to close" for compressible fluid applications) or metal C-ring seal for all applications;
- Unbalanced Contoured plug version available up to DN 8" for dirty fluids service;
- Soft seat ring insert, to comply with IEC 60534-4 leakage class VI;
- Partially extended, finned bonnet shape, to comply with all working temperatures.

GENERAL DATA

BODY

- Type: globe, straight way single port. Angle body version 1-4640 series is available on request.
- Construction: cast or forged (for small DN dimensions).
- Materials: wide material selection (from ASME and EN standards) is available, according to Material of Construction tables. Other materials are available on request.
- Sizes and ratings:
 - o 1-6941 Contoured Plug series from DN 1/2" up to DN 8", see table "Basic Ratings Availability";
 - o 1-6942 Contoured Integral Plug, Stem Guided series from DN 1/2" up to DN 8", up to ANSI 600;
 - o 1-6943 Cage Guided Plug series from DN 3/4" up to DN 24", see table "Basic Ratings Availability";
 - o 1-6948 Cage Balanced Plug with Pilot series from DN 2" up to DN 24", see table "Basic Ratings Availability".
- Connections:
 - o ANSI, EN flanged;
 - o BW ANSI B16.25;
 - o UNI EN 12627 butt welding ends;
 - o Socket welding & Threaded up to NPS 2";
- Ratings: according to EN 12516-1 and ASME B16.34 materials
 - o PN 10/16/25/40/63/100;
 - o see table "Basic Ratings Availability".

FLOW DIRECTION

- Flow over the plug on 1-6948 (balanced with pilot).
- Flow under the plug on 1-6941, 1-6942 and 1-6943.

BONNET

- Type: partially extended, finned. With bellows seal or extension bonnet for low temperature service (< -55 °C) on request (for series 1-6941 or 1-6943).
- Constructions: flanged type, cast or forged.
- Materials: same as body.

PLUG

- Sizes: full or reduced ports as per Cv table.
- Type: microflow or contoured, unbalanced, balanced with special Independent Throttling and Sealing (ITS) design with CCF to maximize valve reliability and reduce minimum controllable flow.
 - o Contoured Plug Unbalanced: port Ø3mm up to 8" for 1-6941;
 - o Contoured Integral Plug Unbalanced: port Ø6mm up to 8" for 1-6942;
 - o Cage Guided Unbalanced: port 1/2" up to 8", for 1-6943 series;
 - o Cage Guided Balanced: port 1/2" up to 24", for 1-6943 series;
 - o Cage Guided Balanced with Pilot: port 2" up to 24" for 1-6948 series.
- Materials: see Material of Construction tables.

FLOW CHARACTERISTIC

- Linear (also suitable for on-off service).
- Equal percentage.

SEAT

- Mounting: free fitted into the body without screwing or forcing. Centered in the cage granting alignment with the plug, body and seat. Coupling sealed by means of a flat gasket.
- Materials: see Material of Construction tables.

CAGE

- Type: Single Cage for 1-6943 and 1-6948 series valve, Double Cage (only for 1-6943 series).
- Execution: Not Balanced (NB), Standard Balanced (Std) and Additional Gasket Balanced (AG), High Temperature Balanced (HT) for intermediate and high temperature service.
- Constructions: rolled or forged cylinder, drilled or V-ported, tightened between body and bonnet.
- Drilling:
 - o Standard (ST), Low Noise(LN), Special Low Noise (XLN), Double Cage (DC) and Double Cage with Expansion (EDC) for 1-6943 series;
 - o Plug with Pilot Low Noise (PLN) and Plug with Pilot Special Low Noise (PXLN) for 1-6948 series.
- Materials: see Material of Construction tables.

STEM PACKINGS

- TFK: PTFE aramid fibers reinforced packing up to 250°C – 150 bar.
- GRF: Pure flexible graphite packing without practical temperature limitation (max 400 °C in presence of oxidizing fluids).
- TFP: Pure braided PTFE packing (suitable for oxygen service) up to 200°C – 150 bar.
- Low Emission TA-LUFT & ISO 15848-1 compliant certified packings are available on request.
- Special executions supplied as option:
 - o Double packing with leak off lateral connection;
 - o Sand protection;
 - o Live Loading System with Belleville Washers;

For further details see Parcol technical Bulletin 1-VII.

LEAKAGE CLASSES

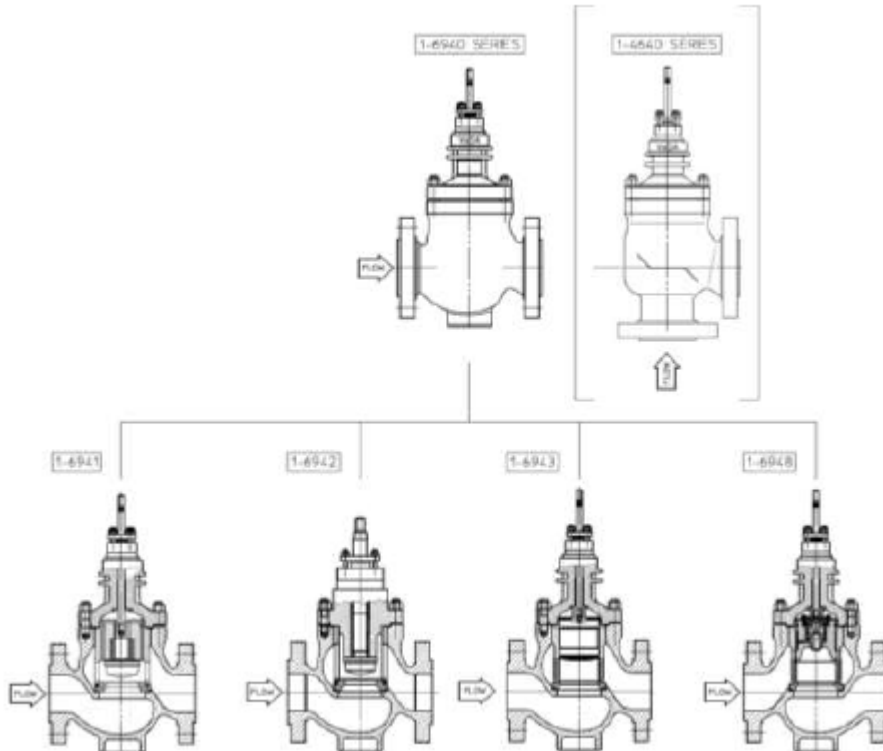
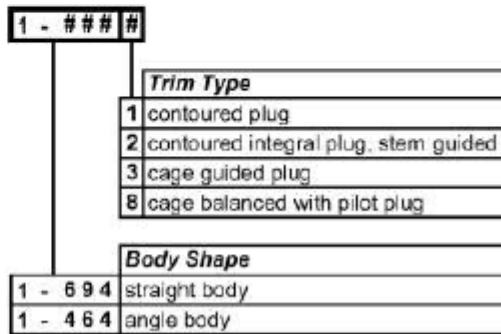
In accordance with IEC 60534-4 leakage classes, up to class VI for both balanced and unbalanced construction. For erosive/corrosive fluids applications, special sealing class with High Seating force (VHS) is available to prevent wear of sealing surfaces.

BASIC RATINGS

		Availability					
		RATING					
ANSI	PN	150	300	600	900	1500	2500
	10/16						
	15/40						
	63/100						
DN							(1)
1/2"		■	■	■	■	■	
3/4"		■	■	■	■	■	
1"		■	■	■	■	■	
1.1/2"		■	■	■	■	■	
2"		■	■	■	■	■	
3"		■	■	■	■	■	
4"		■	■	■	■	■	
6"		■	■	■	■	■	
8"		■	■	■	■	■	
10"		■	■	■	■	■	
12"		■	■	■	■	■	
14"		■	■	■	■	■	
16"		■	■	■	■	■	
20"		■	■	■	■	■	
24"		■	■	■	■	■	

(1) ON REQUEST

NUMBERING SYSTEM



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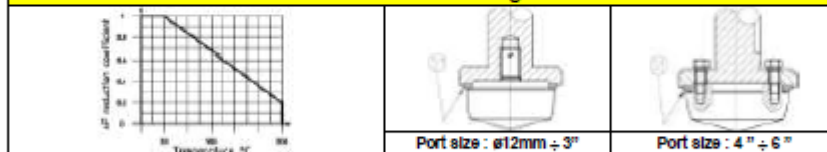
MATERIALS OF CONSTRUCTION

VeGA 1-6941 Control Valve Contoured Plug

Temp. Range ⁽¹⁾ Item Description		Carbon and CrMo Steels			Stainless Steels		NACE	
		-29 ÷ +427°C	-29 ÷ +566°C	-29 ÷ +566°C	-196 ÷ +343°C	-196 ÷ +343°C	-29 ÷ +427°C	-196 ÷ +343°C
1	BODY	SA 216 WCC EN GP240GH	SA 217 WC9 EN G17CMo9-19	SA 217 C12A	SA 351 CF8M EN GX5CrNiMo19-11-2	SA 351 CF3M EN GX2CrNiMo19-11-2	SA 216 WCC 22 HRC max	SA 351 CF8M 22 HRC max
2	BONNET	SA 216 WCC EN GP240GH SA 105 or SA 350 LF2 EN P265GH	SA 217 WC9 EN G17CMo9-19	SA 217 C12A	SA 351 CF8M EN GX5CrNiMo19-11-2	SA 351 CF3M EN GX2CrNiMo19-11-2	SA 216 WCC 22 HRC max	SA 351 CF8M 22 HRC max
3	BODY STUD	SA 193 B7	SA 182 F22 cl.3 EN 100CrMo9-10	SA 182 F91	SA 479 316 EN X5CrNiMo17-12-2	SA 479 316L EN X2CrNiMo17-12-2	SA 105 or SA 350 LF2 22 HRC max	SA 479 316 22 HRC max
4	NUT	SA 194 gr.2H	SA 193 B16 SA 479 XM-19	SA 479 XM-19	SA 479 XM-19	SA 193 B7	SA 194 gr.2H	SA 479 XM-19 33 HRC max
5 ⁽²⁾	PLUG	A479 316			A 479 316	A 479 316L	A 479 316 22 HRC	
		A 182 F6NM Nibided			A 479 316 + Hard Faced CoCr-A		A 182 F6NM 22 HRC max Nibided	-
		A479 316 + Hard Faced CoCr-A	-	-	-	A 479 316L + HVD1	A 479 316 22 HRC + Hard Faced CoCr-A	
6	SEAT	A479 316			A 479 316	A 479 316L	A 479 316 22HRC max	
		AISI 410 35 HRC			-	-	A 182 F6NM 23 HRC max + Hard Faced CoCr-A	-
		A479 316 + Hard Faced CoCr-A	-	-	A 479 316 + Hard Faced CoCr-A		A 479 316 22 HRC max + Hard Faced CoCr-A	
		A182 F6NM + Hard Faced CoCr-A			A 479 316 + Hard Faced CoCr-A		A 479 316 22 HRC max + Hard Faced CoCr-A	
7	STEM*	A 479 316	A 479 XM-19		A 479 316	A 479 316L	A 479 316 22 HRC max	
8 - 14	GASKET*	AISI 321 + GRAPHITE						
9	GUIDE	A 487 CA6NM Nibided			A 351 CF3M Cr Plated		A 487 CA6NM 22 HRC max Nibided	A 351 CF3M 22 HRC max Cr Plated
51	INSERT	PTFE						
12	PIN	AISI 300 SERIES			A 479 316L		AISI 300 SERIES 22 HRC max.	
27	PACKING*	TFK - aramid fibres reinforced PTFE rings GRF - Pure flexible graphite rings TFP - Pure PTFE rings						
36	BELLOW	AISI 316L						
37	EXTENSION	A 479 316	A 479 XM-19		A 479 316	A 479 316L	A 479 316 22 HRC max	
44	BELLOW CHAMBER	SA 105	SA 182 F22	SA 182 F91	SA 479 316	SA 479 316L	SA 105 22 HRC max	SA 479 316 22 HRC max
45	ANTIROT. PIN	AISI 316L						
46	GASKET	AISI 321 + GRAPHITE						
251	PLUG	AISI 316L						

Temp. Range Item Description		MICROFLOW TRIM						
		-29 ÷ +427°C	-29 ÷ +566°C	-29 ÷ +566°C	-196 ÷ +343°C	-196 ÷ +343°C	-29 ÷ +427°C	-196 ÷ +343°C
5	PLUG	A 479 316 Hardened			A 479 316 Hardened	A 479 316L	A 479 316	
		A 479 316			A 479 316	-	A 182 F6NM 23 HRC max Nibided	-
		A 182 F6NM Nibided	-	-	A 182 F6NM Nibided	-	A 479 316 Hardened 22 HRC max	
		A 479 316L Hardened	-	-	A 479 316L Hardened			
		A 479 S31803 Hardened	-	-	A479 S31803 Hardened	-		
6	SEAT	A 479 316			A 479 316	A 479 316L	A 479 316 22 HRC max	
		A 182 F6NM + Hard Faced CoCr-A	-	-	A 182 F6NM + Hard Faced CoCr-A	-	A 182 F6NM 23HRC max + Hard Faced CoCr-A	-
		A 479 316L + Hard Faced CoCr-A	-	-	A 479 316L + Hard Faced CoCr-A		-	-
		A 479 S31803 Hardened	-	-	A 479 S31803 Hardened	-	-	-

1-6941 Seal Insert for Leakage Class VI



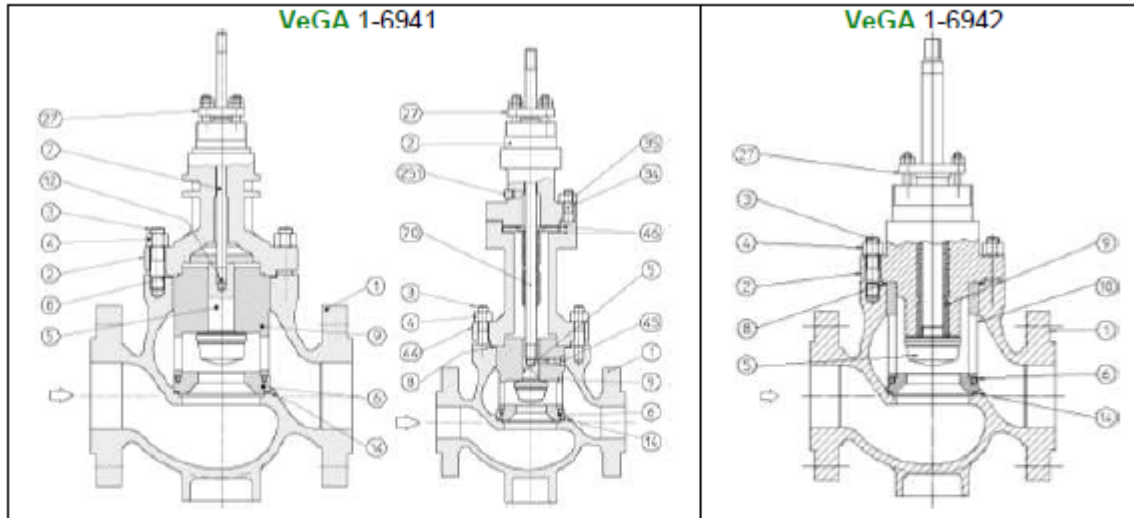
- (1) When PED (97/23CE) is applicable, minimum working temperatures are:
- -20°C for SA216 WCC, SA 216WCB, SA 193 B7 and B16;
 - 0°C for SA 217 WC9 and C12A;
 - -30°C for A890 4A.

- (2) Available also soft seat version for sealing class VI.
- * Suggested as spare part for commissioning and start-up.
- ** Suggested as spare part for the first two years.

VeGA 1-6942 Control Valve Contoured Integral Plug, Stem Guided

Temperature Range ⁽¹⁾ Item Description		Carbon Steels		Stainless Steels		NACE	
		-29 ÷ +427°C	-55 ÷ +343°C	-55 ÷ +343°C	-29 ÷ +427°C	-29 ÷ +343°C	
1	BODY	SA 216 WCC EN GP240GH	SA 351 CF8M EN GX5CrNiMo19-11-2	SA 351 CF3M EN GX2CrNiMo19-11-2	SA 216 WCC 22 HRC max	SA 351 CF8M 22 HRC max	
2	BONNET	SA 105 or SA 350 LF2 EN GP240GH	SA 479 316 EN X5CrNiMo17-12-2	SA 479 316L EN X2CrNiMo17-12-2	SA 105 or SA 350 LF2 22HRC max	SA 479 316 22 HRC max	
3	BODY STUD	SA 193 B7	-29<T<343: SA 193 B7 -55<T<343: SA 479 XM19		SA 193 B7	SA 479 XM19	
4	NUT	SA 194 gr.2H	-29<T<343: SA 194 gr.2H -55<T<343: SA 194 gr.8		SA 194 gr.2H	SA 194 gr.8	
5	PLUG and STEM**	A 479 316	A 479 316	A 479 316L	A 479 316 22 HRC max		
		A 479 316 + Hard Faced CoCr-A	A 479 316 + Hard Faced CoCr-A	A 479 316L + HVD1 A479 S32550 Hardened	A 479 316 22 HRC max + Hard Faced CoCr-A		
6	SEAT**	A 479 316	A 479 316	A 479 316L	A 479 316 22 HRC max		
		A 479 316 + Hard Faced CoCr-A	A 479 316 + Hard Faced CoCr-A	A 479 316L + HVD1 A479 S32550 Annealed	A 479 316 22 HRC max + Hard Faced CoCr-A		
8-14	GASKET*	AISI 321 + GRAPHITE					
9	SEAT RETAINER	S21800	S21800	HASTELLOY C276 A479 S32550 Annealed	S 21800		
10	CAGE	A 105 or A350 LF2	A 479 316L		A105 or A350 LF2 22 HRC max	A479 316L 22 HRC max	
27	PACKING*	TFK - aramid fibres reinforced PTFE GRF - Pure flexible graphite TFP - Pure PTFE					

Temperature Range Item Description		MICROFLOW TRIM				
		-29 ÷ +427°C	-55 ÷ +343°C	-55 ÷ +343°C	-29 ÷ +427°C	-29 ÷ +343°C
5	PLUG	A 479 316	A 479 316 + Hard Faced CoCr-A	A 479 S32550 Hardened	A 479 316 22 HRC max	
		A 479 316 + Hard Faced CoCr-A	A 479 316 + Hard Faced CoCr-A	A 479 S32550 Hardened	A 479 316 22 HRC max + Hard Faced CoCr-A	
		A 479 XM 19	A 479 XM 19		A 479 XM 19 35 HRC max	
6	SEAT	A 479 316	A 479 316 + Hard Faced CoCr-A	A 479 S32550 Hardened	A 479 316 22 HRC max	
		A 479 316 + Hard Faced CoCr-A	A 479 316 + Hard Faced CoCr-A	A 479 S32550 Hardened	A 479 316 22 HRC max + Hard faced CoCr-A	
9	GUIDE	S21800	S21800	A 479 S32550 Annealed	S21800	



- (1) When PED (97/23CE) is applicable, minimum working temperatures are:
- -20°C for SA216 WCC, SA 216WCB, SA 193 B7 and B16;
 - 0°C for SA 217 WCB and C12A;
 - -30°C for A890 4A.

* Suggested as spare part for commissioning and start-up.

** Suggested as spare part for the first two years.

VeGA 1-6943 Control Valve Cage Guided

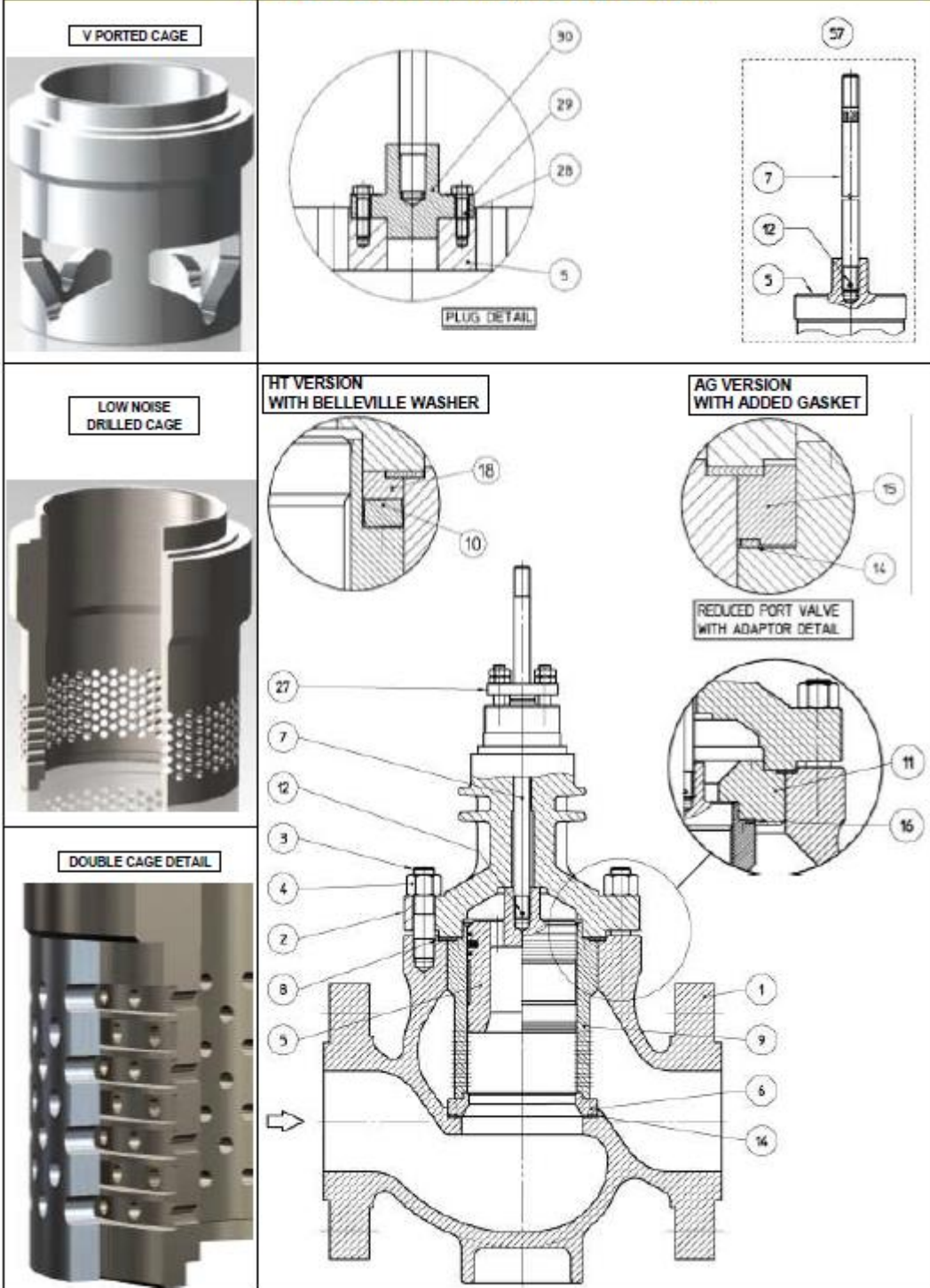
Temperature Range ⁽¹⁾	Carbon and CrMo Steels			Stainless Steels		NACE		
	-29 ÷ +427°C	-29 ÷ +566°C	-29 ÷ +566°C	-196 ÷ +343°C	-196 ÷ +343°C	-29 ÷ +427°C	-196 ÷ +343°C	
Item	Description							
1	BODY	SA 216 WCC EN GP240GH	SA 217 WC9 EN G17CMn9-10	SA 217 C12A	SA 351 CF8M EN G50NMb19-12	SA 351 CF3M EN G22NMb19-12	SA 216 WCC 22HRC max	SA 351 CF8M 22HRC max
2	BONNET	SA 216 WCC	SA 217 WC9	SA 217 C12A	SA 351 CF8M	SA 351 CF3M	SA 216 WCC 22HRC max	SA 351 CF8M 22HRC max
		SA 105 or SA 350LP2	SA 182 F22 cl.3	SA 182 F91	SA 479 316	SA 479 316L	SA 105 or SA 350 LP2 22HRC max	SA 479 316 22HRC max
3	BODY STUD	SA 193 B7	SA 193 B16 SA 479 XM-19	SA 479 XM-19	SA 479 XM-19 SA 193 B7		SA 193 B7	SA 479 XM-19
4	NUT	SA 194 gr.2H	SA 194 gr.8	SA 194 gr.8	SA 194 gr.8 SA 194 gr.2H		SA 194 gr.2H	SA 194 gr.8
5	PLUG*	A 182 F6NM Nibided			A 479 316	A 479 316	A 182 F6NM 23 HRC max Nibided	A 479 316 22HRC max
					A 479 316 + Hard Faced CoCr-A	A 479 316 + Hard Faced CoCr-A		A 479 316 22HRC max + Hard Faced CoCr-A
6	SEAT*	AISI 410 35 HRC		-	A 479 316	A 479 316	DN ≤ 3": A 479 316 22 HRC max + Hard Faced CoCr-A	A 479 316 22 HRC max
		For DN ≤ 3": A 479 316 + Hard Faced CoCr-A			A 479 316	A 479 316L		
		For DN > 3": A 182 F6NM + Hard Faced CoCr-A			A 479 316 + Hard Faced CoCr-A	A 479 316 + Hard Faced CoCr-A	DN > 3": A 182 F6NM 22 HRC max + Hard Faced CoCr-A	A 479 316 22 HRC max + Hard Faced CoCr-A
7	STEM*	A 479 316	A 479 XM-19		A 479 316	A 479 316L	A 479 316 HRC22 max	
8-14-16	GASKET*	AISI 321 + GRAFITE						
9	CAGE	A 487 CA6NM Nibided			A 479 316 Cr plated	A 479 316 Cr plated	A 487 CA6NM 23HRC max Nibided	A 479 316 22HRC max Cr plated
10	DISC SPRING	INCONEL 718 Hardened						
11	ADAPTER	A 105 or A 350LP2	A 182 F22		A 479 316L		A 105 or A 350 LP2 22 HRC max	A 479 316L 22 HRC max
12	PIN	AISI 300 SERIES			A479 316L		AISI 300 SERIES	
15-18	SPACER	A 105 or A 350LP2	A 182 F22		A 182 F316L		A 105 or A 350 LP2 22 HRC max	A 479 316L 22 HRC max
27	PACKING*	TFK - aramid fibres reinforced PTFE GRF - Pure flexible graphite TFP - Pure PTFE						
28	SCREW	A4 EN ISO3506					A4 EN ISO3506 22 HRC max	
29	STOP WASHER	A 479 304 Annealed					A 479 304 Annealed 22HRC max	
30	PLUG FLANGE	A 182 F6NM 240-300HB			A 479 316	A 479 316	A 182 F6NM 23HRC max Nibided	A 479 316 22HRC max
						A 479 316L		
33	RETAINING RING	A 182 F6NM 240-300 HB			A 479 316	A 479 316	A 182 F6NM 23HRC max Nibided	A 479 316 22HRC max
						A 479 316L		
34	STOP RING	INCONEL X 750						
111	FLANGE	A 182 F6NM 240-300 HB			A 479 316	A 479 316	A 182 F6NM 23HRC max	A 479 316 22HRC max
						A 479 316L		
112	SCREW	A4 50 EN ISO 3506					A4 50 EN ISO 3506 22 HRC max	
113	RING NUT	A 182 F6NM 240-300 HB			A 479 316	A 479 316	A 182 F6NM 23HRC max	A 479 316 22HRC max
						A 479 316L		
114	STOP WASHER	A 479 304 Annealed					A 479 304 Annealed 22HRC max	

(1) When PED (97/23CE) is applicable, minimum working temperatures are:
 • -20°C for SA216 WCC, SA 216WCB, SA 193 B7 and B16;
 • 0°C for SA 217 WC9 and C12A;
 • -30°C for A890 4A.

* Suggested as spare part for commissioning and start-up.

** Suggested as spare part for the first two years.

VeGA 1-6943 Control Valve Cage Guided

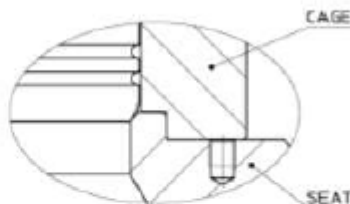
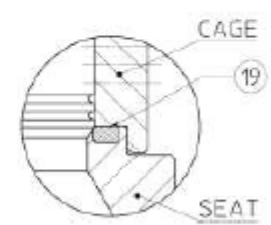
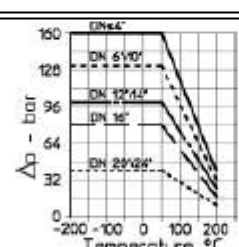


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VeGA 1-6943 Seat Leakage Availability And Balancing Seal Inserts

Sealing config. code		metallic seat					soft seat		
		N	S	B	D	C	R	P	U
TYPE	Not balanced	Graphite loaded pressure energized PTFE ring	Loaded PTFE + Back-up	Energized carbon graphite rings	Carbon graphite rings energ. w/ flexible graphite + back seal	Metallic C-ring balanced plug	Soft Seat, non balanced plug	Soft Seat, balanced plug (Graph. Loaded pressure energ. PTFE ring)	
Max leakage class	V	V	V	IV	IV S1	V	VI	VI	
Temp. range	as for mat. class	-50 ÷ +315°C	-50 ÷ +315°C	-120 ÷ 566°C	-120 ÷ 566°C	-196 ÷ 566°C	-196 ÷ +200°C	-50 ÷ +200°C	
Port size	1/2" ÷ 8"	1 1/2" ÷ 24"	1.1/2" ÷ 4"	1 1/2" ÷ 24"	1.1/2" ÷ 24"	1 1/2" ÷ 24"	1/2" ÷ 24"	1 1/2" ÷ 24"	
Item	Description	Δp (bar) see tabulated values							
19	SOFT SEAT	-	-	-	-	-	-	PTFE	PTFE
32	SEAL RING	-	Graphite Loaded PTFE	-	-	-	-	-	Graphite Loaded PTFE
37	SEAL RING	-	-	Graphite Loaded PTFE	-	-	-	-	-
46	RING SPRING	-	-	-	Carbon Graphite	-	-	-	-
47	SEAL RING	-	-	-	-	Carbon Graphite	-	-	-
48	BACK SEAL	-	-	-	-	Flexible graphite	-	-	-
49	SCRAPER RING	-	-	-	A 182 F6NM Hardened	A 182 F6NM Hardened	A 182 F6NM Hardened	-	-
		-	-	-	A479 316	A479 316	A479 316	-	-
		-	-	-	A479 316L	A479 316L	A479 316L	-	-
110	SEAL RING	-	-	-	-	-	INCONEL Silver Plated	-	-

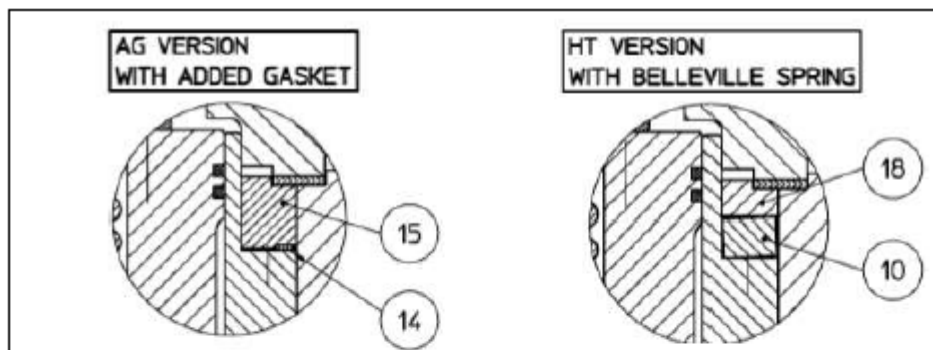
VeGA 1-6943 Seat Type

Metallic Seat		
Standard		
Max Sealing class:	V	
Soft Seat Insert		
Used for code	P	
Max Sealing class:	VI	
		

Section A – General Description

VeGA 1-6948 Control Valve⁽²⁾

Temperature Range ⁽¹⁾	Description	Carbon and CrMo Steels			Stainless Steels		
		-20 ÷ +427°C	-20 ÷ +566°C	-20 ÷ +566°C	-196 ÷ +343°C	-196 ÷ +343°C	
1	BODY	SA 216 WCC GP240GH	SA 217 WC9 G17CrMo9-10	SA 217 C12A	SA 351 CF8M EN GX5 CrNiMo19-11-2	SA 351 CF3M EN GX2 CrNiMo19-11-2	
2	BONNET	SA 216 WCC SA 105 or SA350 LF2	SA 217 WC9 SA 182 F22	SA 217 C12A SA182 F91	SA 351 CF8M SA 479 316	SA 351 CF3M SA 479 316L	
3	BODY STUD	SA 193 B7	SA 193 B16 SA 479 XM-19	SA 479 XM-19	SA 479 XM-19		
4	NUT	SA 194 gr.2H	SA 194 gr.8		SA 193 B7 SA 194 gr.8 SA 194 gr.2H		
5	PLUG**	A 182 F6NM Nibided AISI 410 35HRC			A 479 316 + Hard Faced CoCr-A	A 479 316L + HVD1	
6	SEAT**	-	DN<3": A 479 316 + Hard Faced CoCr-A	-	A 479 316 + Hard Faced CoCr-A	A 479 316L + HVD1	
7	STEM*	A 479 316	DN<3": A 182 F6NM + Hard Faced CoCr-A A 479 316 A 479 XM-19	A 479 XM-19	A 479 316	A 479 316L	
8-14	GASKET*	AISI 321 + GRAFITE					
9	CAGE	A 487 CA6NM Nibided			A 479 316L Or plated		
10	DISC SPRING	INCONEL 718 Hardened					
12	PIN	AISI 300 SERIES				A 479 316L	
18	SPACER	A 105	A 182 F22	A 192 F91	A 479 316L		
27	PACKING*	TFK - aramid fibres reinforced PTFE GRF - Pure flexible graphite TFP - Pure PTFE					
28	LOCK SCREW	EN ISO 3508 A2-70					
29	WASHER	A 479 304 Annealed					
30	FLANGE	A 182 F6NM Hardened			A 479 316	A 479 316L	
31	PILOT	A 182 F6NM Nibided			A 479 316L + Hard Faced CoCr-A		
32	SPRING	INCONEL X750 TTT					
49	SEAL RING*	A 182 F6NM Hardened			A 479 316L		



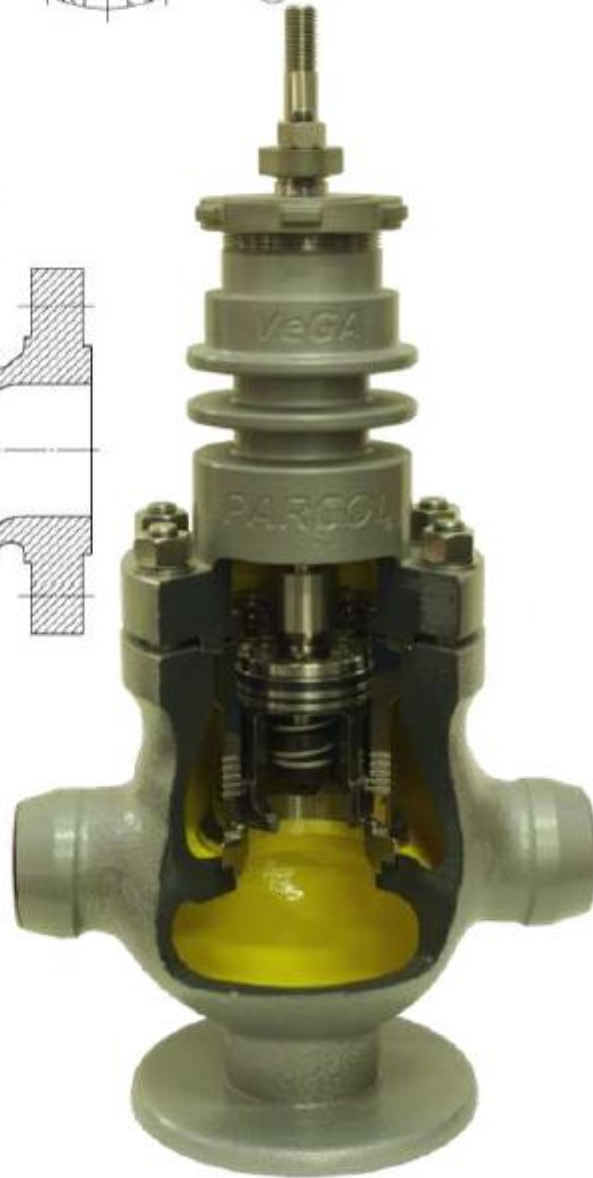
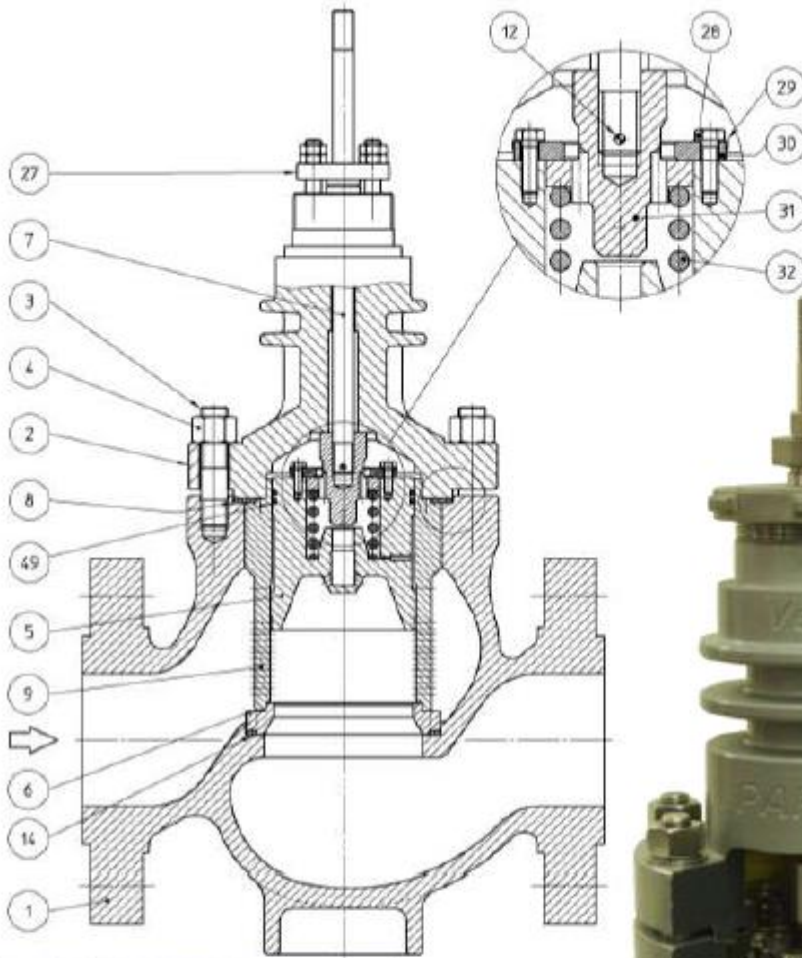
⁽¹⁾ When PED (97/23CE) is applicable, minimum working temperatures are:
 • -20°C for SA216 WCC, SA 216WCB, SA 193 B7 and B16,
 • 0°C for SA 217 WC9 and C12A;
 • -30°C for A890 4A.

⁽²⁾ Balanced plug with pilot 1-6948 series control valves are specifically designed for service on compressible fluids

* Suggested as spare part for commissioning and start-up.

** Suggested as spare part for the first two years.

VeGA 1-6948 Control Valve



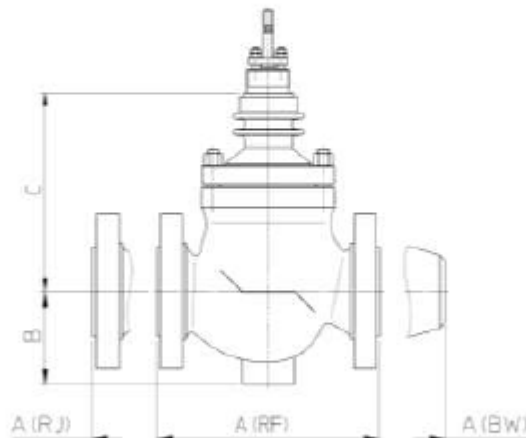
A-13

VALVE DIMENSIONS⁽¹⁾

Dimension A																					
FLANGED & BW																		SW & SCREWED			
DN	ANSI 150			ANSI 300			ANSI 600			ANSI 900			ANSI 1500			ANSI 2500			ANSI 300	ANSI 600	
	RF	RJ	BW	RF	RJ	BW	RF	RJ	BW	RF	RJ	BW	RF	RJ	BW	RF	RJ	BW			
1/2"	184	-	203	190	201	203	203	203	203										-	-	
3/4"	184	-	206	194	207	206	206	206	206	273	273	279	273	273	279	318	318	318	-	-	
1"	184	197	210	197	210	210	210	210	210	273	273	279	273	273	279	318	318	318	-	-	
1.1/2"	222	235	251	235	248	251	251	251	251	333	333	330	333	333	330	381	384	369	251	251	
2"	254	267	286	267	283	286	286	289	286	375	378	375	375	378	375	413	416	400	286	286	
3"	298	311	337	317	333	337	337	340	337	441	444	460	460	463	460	660	666	498			
4"	352	365	394	368	384	394	394	397	394	511	514	530	530	533	530	737	747	575			
6"	451	464	508	473	499	508	508	511	508	714	717	768	768	774	768						
8"	543	556	610	568	584	610	610	613	610	781	784	832	838	848	832						
10"	673	686	752	708	724	752	752	755	752	864	867	991	991	1001	991						
12"	737	750	819	775	791	819	819	822	819	1016	1019	1130	1130	1148	1130						
14"	889	902	1029	927	943	1029	972	975	1029	on request											
16"	1016	1029	1108	1057	1073	1108	1108	1111	1108	on request											
20"	1278	1291	1420	1320	1333	1420	1400	1413	1460	on request											
24"	1680	1693	1680	1724	1746	1724	1800	1809	1800	on request											

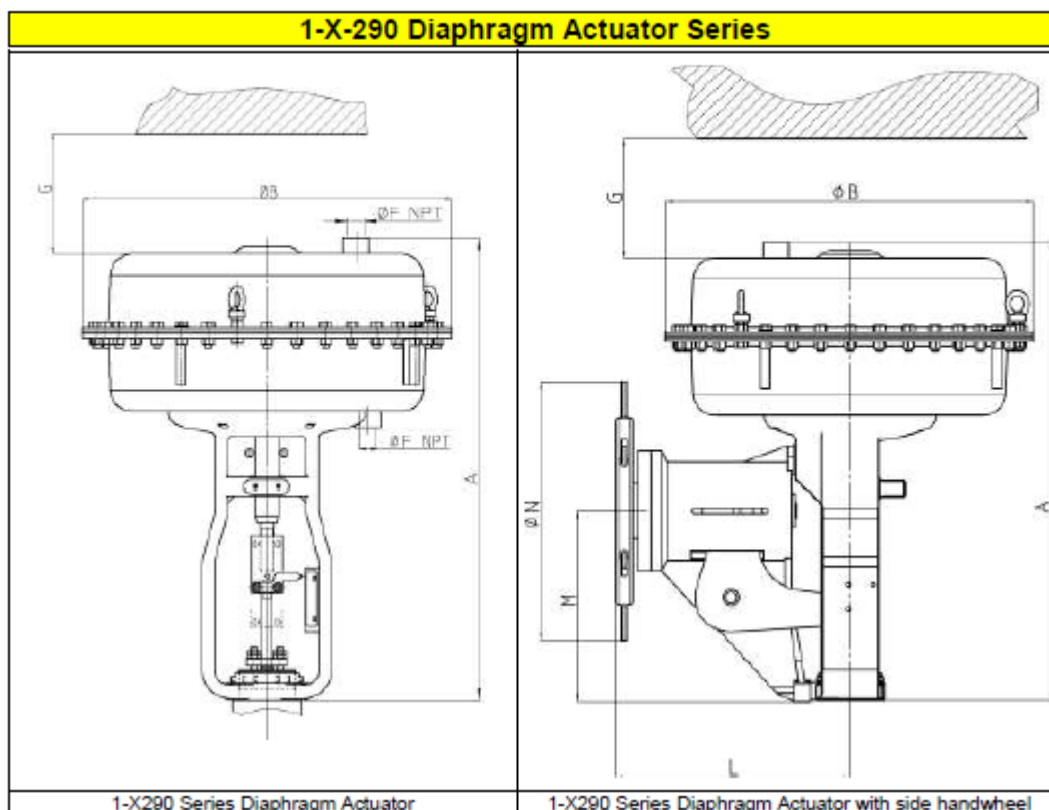
Dimension B						
DN	ANSI					
	150	300	600	900	1500	2500
1/2"	61	61	61	-	-	-
3/4"	70	70	70	70	70	75
1"	70	70	70	80	80	85
1.1/2"	100	100	100	110	110	125
2"	122	122	122	135	135	150
3"	150	150	150	170	170	185
4"	160	160	160	200	200	190
6"	200	200	205	210	220	
8"	200	200	220	250	260	
10"	258	258	265	300	335	
12"	290	290	300	330	370	
14"	320	325	340	on request		
16"	380	380	360	on request		
20"	490	490	500	on request		
24"	520	520	580	on request		

Dimension C ⁽²⁾					
ANSI					
150	300	600	900	1500	2500
150	164	164	164	-	-
188	188	188	218	218	242
188	188	188	218	218	242
250	250	250	280	280	320
290	290	290	310	310	360
330	330	330	340	370	400
380	380	380	400	410	450
430	430	430	460	460	
480	480	480	520	530	
620	620	620	670	670	
710	710	710	760	760	
820	820	820	on request		
950	950	950	on request		
1080	1080	1080	on request		
1260	1260	1260	on request		



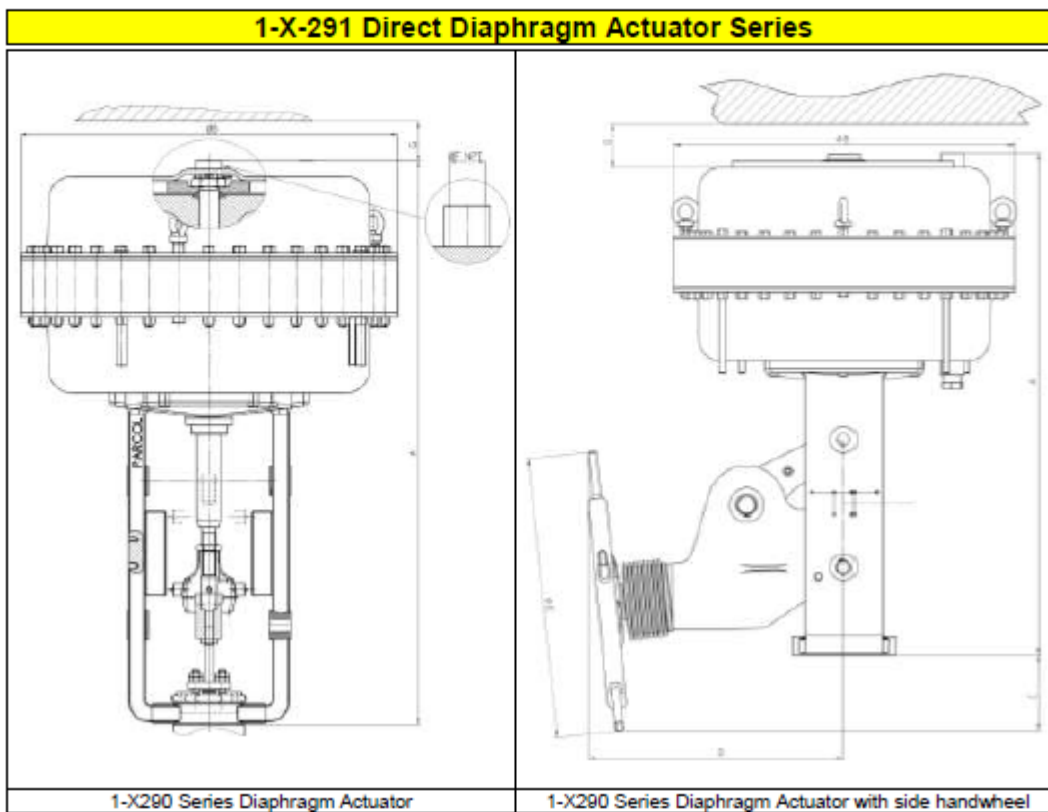
⁽¹⁾ Dimensions in mm. See following page drawings for dimensions positioning.
⁽²⁾ Approximate value, for more accurate value contact Parcol

ACTUATOR DIMENSIONS⁽³⁾



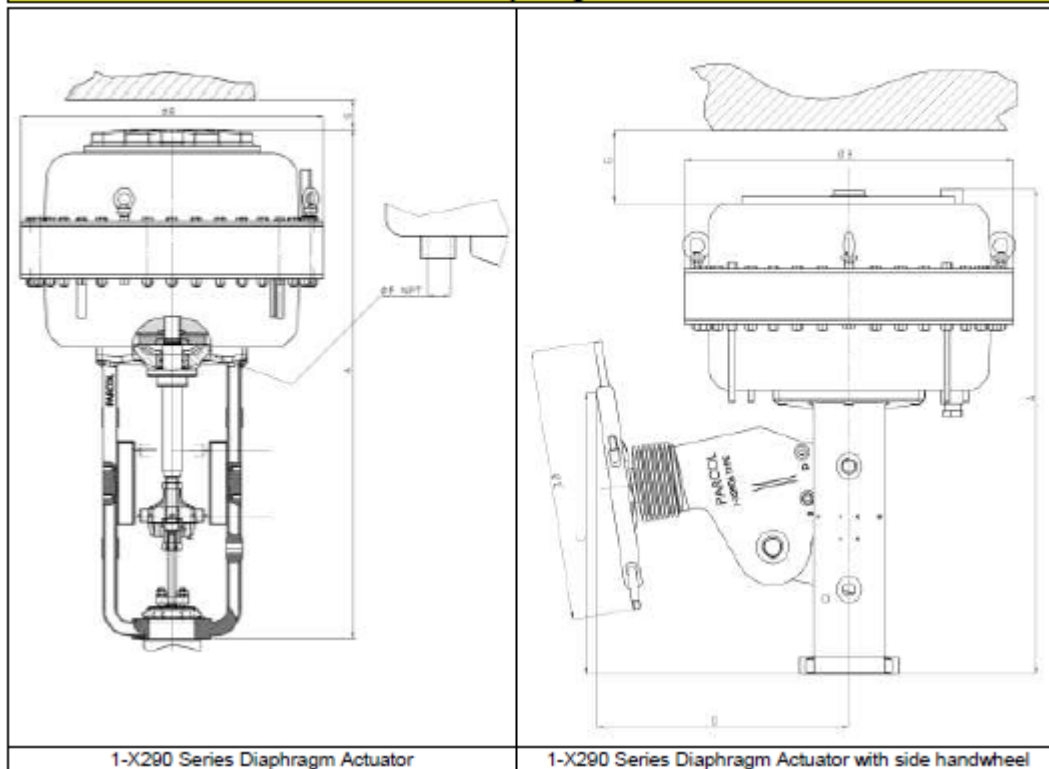
1-X-290 Diaphragm Series Overall Dimensions					
TYPE	D25	D33	D39	D46	D63-D63MM
Stroke	17	17-25	17-45	25-60	34-78
A	487	510	574	644	798
B	262	333	395	465	640
D	M12		M18x1.5		M24x2
F	1/4" / 1/2"		3/4"		1"
G	150		250		300
L	300		385		455
M	200		252		330
N	380		470		570

⁽³⁾ See Parcol Actuators bulletins 1-X290, 1-X250 and 1-X400 for further information



1-X-291 Direct Diaphragm Series Overall Dimensions				
TYPE	D46	D46	D63-D63MM	D63-D63MM
Stroke	76	100	100	120
A	735	787	920	970
ØB	465		640	
C	262		143	
D	376		480	
ØE	570		570	
ØF	3/4"		1"	
G	220	250	155	170

1-X-292 Reverse Diaphragm Actuator Series

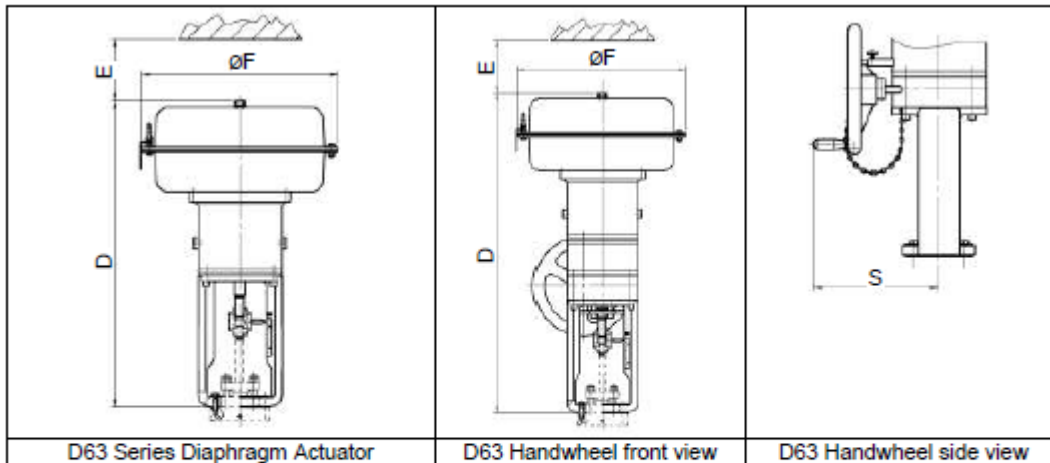


1-X-292 Reverse Diaphragm Series Overall Dimensions

TYPE	D46	D46	D63-D63MM	D63-D63MM
Stroke	76	100	100	120
A	760	782	910	960
ØB	465		640	
C	484		646	
D	382		497	
ØE	570		570	
ØF	3/4"		1"	
G	200		280	

A - 17

1-X-250 Diaphragm Actuator Series



D63 Series Diaphragm Actuator

D63 Handwheel front view

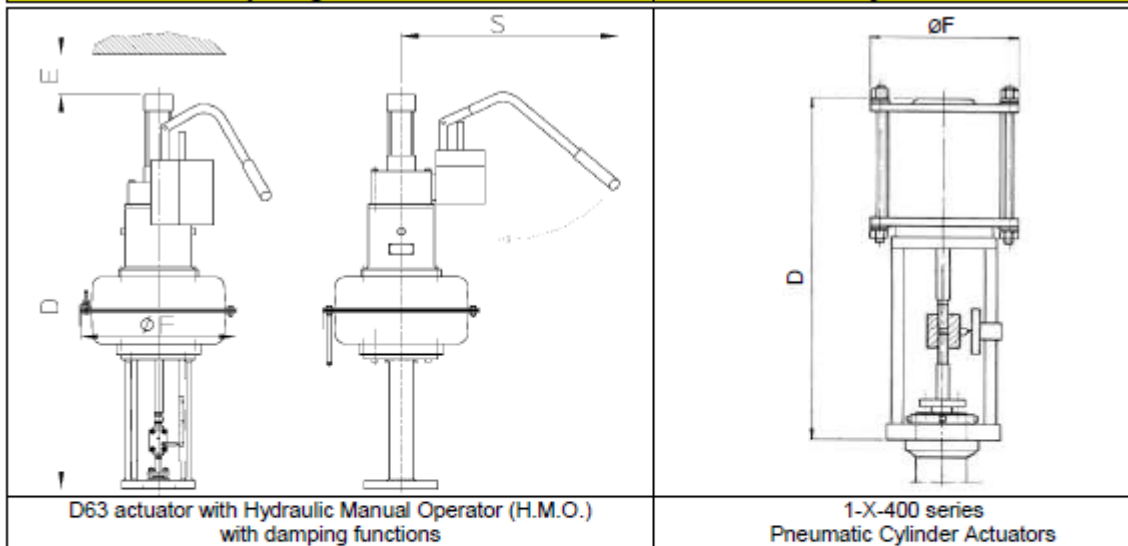
D63 Handwheel side view

1-X-250 Diaphragm Series Overall Dimensions

D63 TYPE		D		E	øF	S
		Direct	Reverse			
stroke ≤120mm	Standard	985	1022	350	640	-
	With side handwheel	1211	1248	350	640	385
	With H.M.O.	1385	1422	350	640	905
stroke >120mm	Standard	1370	1407	450	640	-
	With side handwheel	1686	1723	450	640	385
	With H.M.O.	1870	1907	450	640	905

1-X-250 Diaphragm Actuator Series

1-X-400 Cylinder Series



D63 actuator with Hydraulic Manual Operator (H.M.O.)
with damping functions

1-X-400 series
Pneumatic Cylinder Actuators

1-X-400 Cylinder Series Overall Dimensions

TYPE	D		øF
	Direct	Reverse	
C450	2010	1975	575
With side handwheel	2488	2453	575
C600	2090	2055	748
With side handwheel	2568	2595	748

MASSES⁽⁴⁾

PARCOL Actuators ⁽⁵⁾						
SERIES	TYPE	Direct	Reverse	Handwheel (to be added)		
				Side	Top	
1-X-290	D25		15	+10	+8	
1-X-290	D33		22	+10	+6	
1-X-290	D39		33	+19	+15	
1-X-290	D46		stroke 60mm	54	+19	+15
			stroke 76mm	87	+23	+40
			stroke 100mm	75	+23	+40
1-X-290	D63		stroke 76mm	120	+13	+40
			Stroke 100mm	155	+42	+40
			Stroke 120mm	170	+42	+40
1-X-250	D63		stroke 120mm	185	215	+40 both fo hadwheel and HMO
			stroke >120mm	220	250	+60 both fo hadwheel and HMO
1-X-400	C450		540		+110	
1-X-400	C600		1016		+140	

VeGA Valves											
DN	Flanged						BW				
	ANSI 150	ANSI 300	ANSI 600	ANSI 900	ANSI 1500	ANSI 2500	ANSI 300	ANSI 600	ANSI 900	ANSI 1500	ANSI 2500
1/2"	15	15	15				13	13			
3/4"	16	20	20	40	40	47	15	15	40	40	47
1"	18	22	22	45	45	53	15	15	45	45	48
1.1/2"	41	43	48	60	60	74	43	43	55	55	70
2"	48	60	63	102	102	143	57	57	93	93	130
3"	75	94	100	180	180	340	88	88	170	164	315
4"	110	120	135	260	260	500	110	110	243	236	457
6"	210	250	300	420	560		260	280	380	520	
8"	295	345	432	680	980		322	392	620	900	
10"	479	578	789	1200	1700		543	726	1120	1560	
12"	690	805	1100	1580	2250		760	1080	1470	2020	
14"	1040	1240	1650				1180	1570			
16"	1450	1700	2100			on request	1630	1990			on request
20"	2900	3300	3900				3260	3730			
24"	3400	4100	5000				4050	4780			

⁽⁴⁾ Masses in kg

⁽⁵⁾ See Parcol Actuators bulletins 1-X-290, 1-X-250 and 1-X-400 for further information

OPTIONS

- Cleaning for Oxygen Service
 - Reducers
 - Electric or hydraulic actuators
 - Special materials
 - Body drain connections
 - Special tools
 - Cold box for cryo service
-

SUGGESTED SPARE PARTS

Components suggested as spare parts for commissioning and start-up⁽⁶⁾:

- body gaskets
- packing
- soft balancing inserts (PTFE / Graphite)

Two years suggested spare parts⁽⁷⁾:

- plug
 - seat
 - stem
 - metallic balancing inserts
 - electrical accessories (2% per type)
-

SPECIAL TOOLS

(provided as options)

- blow out
- blow through/flushing
- pressure testing kit
- acid washing kit
- special trim for blowing

⁽⁶⁾See also part list where *

⁽⁷⁾See also part list where **

VEGA 1-6940 SERIES CAGE CONTROL VALVES SECTION B

CV, F_L, X_T VERSUS TRAVEL TABLES



B-1

KOSO PARCOL S.r.l. a socio unico
Sede legale: Via Isonzo, 2, 20010 Canegrate (Milano) ITALY
Partita IVA e Codice Fiscale 09684900963
Cap. Soc. €110.000,00 | R.E.A. MI - 2106767
Phone: +39 0331 413111 | Fax: +39 0331 404 215

SECTION A – GENERAL DESCRIPTION

SECTION B – TECHNICAL TABLES

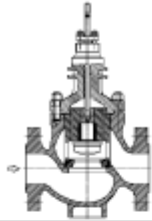
Cv, FL, XT VERSUS TRAVEL

	Page
1-6941 and 1-6942 Type: Microflow– Flow to Open	
- MF-L Flow To Open Linear flow characteristic ⁽¹⁾	3
- MF-E Flow To Open Equal percentage flow characteristic	3
1-6941 and 1-6942 Type: Contoured Plug – Flow to Open	
- CP-L Flow To Open Linear flow characteristic ⁽¹⁾	4
- CP-E Flow To Open Equal percentage flow characteristic	5
1-6943 Type: Standard Series – Flow to Open	
- ST-L Standard Linear flow characteristic	6
- ST-E Standard Equal percentage flow characteristic	7
- LN-L Low Noise Linear flow characteristic	8
- LN-E Low Noise Equal percentage flow characteristic	9
- XLN-L Special Low Noise Linear flow characteristic	10
- XLN-E Special Low Noise Equal percentage flow characteristic	11
- DC-L Double Cage Linear flow characteristic	12
- DC-E Double Cage Equal percentage flow characteristic	13
- EDC-L Double Cage with Expansion Linear flow characteristic	14
- EDC-E Double Cage with Expansion Equal percentage flow characteristic	15
1-6948 Type: Balanced with Pilot - Flow to Close	
- PLN-L Low Noise Linear flow characteristic	16
- PLN-E Low Noise Equal percentage flow characteristic	16
- PXLN-L Special Low Noise Linear flow characteristic	17
- PXLN-E Special Low Noise Equal percentage flow characteristic	17
1-6943 Type: High Flow Capacity Series – Flow to Open	
- ST-L Standard Linear flow characteristic	18
- ST-E Standard Equal percentage flow characteristic	18
- LN-L Low Noise Linear flow characteristic	19
- LN-E Low Noise Equal percentage flow characteristic	19
- XLN-L Special Low Noise Linear flow characteristic	20
- XLN-E Special Low Noise Equal percentage flow characteristic	20
- DC-L Double Cage Linear flow characteristic	21
- DC-E Double Cage Equal percentage flow characteristic	21
- EDC-L Double Cage with Expansion Linear flow characteristic	22
- EDC-E Double Cage with Expansion Equal percentage flow characteristic	22
1-6948 Type: Balanced with Pilot - High Flow Capacity Series - Flow to Close	
- PLN-L Low Noise Linear flow characteristic	23
- PLN-E Low Noise Equal percentage flow characteristic	23
- PXLN-L Special Low Noise Linear flow characteristic	24
- PXLN-E Special Low Noise Equal percentage flow characteristic	24

SECTION C – TECHNICAL TABLES

PRESSURE DROP TABLES

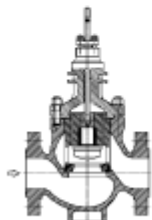
⁽¹⁾ For on off services linear plug is provided



VeGA valve 1-6941 Type - $C_v F_L x_T$

MF-L Trim type: Microflow-flow to open
Flow characteristic: LINEAR

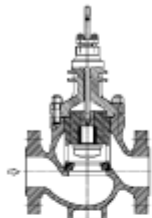
					TRAVEL %										
DN [in]	Port [mm]	Plug type ^(h)	ϕ Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Press. rec. factor F_L					0.98	0.97	0.97	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.93
Press. diff. ratio fact. x_T					0.91	0.89	0.86	0.84	0.82	0.79	0.77	0.75	0.73	0.71	0.68
1/2 3/4 1	Ø3	F	3	17	0.0071	0.0094	0.014	0.018	0.023	0.027	0.032	0.036	0.041	0.045	0.05
					0.0073	0.011	0.019	0.026	0.034	0.042	0.049	0.057	0.065	0.072	0.08
	Ø4	F	4	17	0.01	0.016	0.029	0.042	0.054	0.067	0.079	0.092	0.1	0.12	0.13
					0.01	0.019	0.038	0.57	0.078	0.095	0.11	0.13	0.15	0.17	0.19
	Ø6	F	6	17	0.018	0.032	0.061	0.09	0.12	0.15	0.18	0.2	0.23	0.26	0.29
					0.018	0.038	0.078	0.12	0.16	0.2	0.24	0.28	0.32	0.36	0.4



VeGA valve 1-6941 and 1-6942 Type - $C_v F_L x_T$

MF-L Trim type: Microflow-flow to open
Flow characteristic: LINEAR

					TRAVEL %										
DN [in]	Port [mm]	Plug type ^(h)	ϕ Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Press. rec. factor F_L					0.98	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.93	0.93	0.92
Press. diff. ratio fact. x_T					0.91	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.75	0.72	0.68
1/2 3/4 1	Ø6	C	6	17	0.028	0.06	0.13	0.19	0.26	0.32	0.39	0.45	0.52	0.58	0.65
					0.028	0.079	0.18	0.28	0.39	0.49	0.59	0.7	0.8	0.9	1
	Ø9	C	9.05	17	0.04	0.12	0.3	0.47	0.64	0.81	0.98	1.2	1.3	1.5	1.67
					0.04	0.17	0.43	0.69	0.96	1.2	1.5	1.7	2	2.3	2.5
	Ø12	C	12.05	17	0.06	0.27	0.68	1.1	1.5	1.9	2.3	2.8	3.2	3.6	4

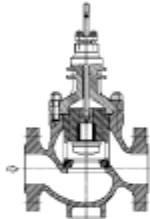


VeGA valve 1-6941 and 1-6942 Type - $C_v F_L x_T$

MF-E Trim type: Microflow-flow to open
Flow characteristic: EQUAL PERCENTAGE

					TRAVEL %										
DN [in]	Port [mm]	Plug type ^(h)	ϕ Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Press. rec. factor F_L					0.98	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.93	0.93	0.92
Press. diff. ratio fact. x_T					0.91	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.75	0.72	0.68
1/2 3/4 1	Ø6	C	6	17	0.028	0.033	0.046	0.064	0.089	0.12	0.17	0.24	0.33	0.46	0.65
					0.028	0.036	0.051	0.072	0.1	0.15	0.22	0.32	0.47	0.69	1
	Ø9	C	9.05	17	0.04	0.048	0.071	0.11	0.16	0.23	0.35	0.51	0.76	1.1	1.67
					0.04	0.049	0.072	0.11	0.17	0.25	0.38	0.58	0.87	1.3	2.5
	Ø12	C	12.05	17	0.059	0.072	0.11	0.16	0.26	0.39	0.6	0.92	1.4	2.1	4

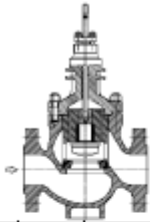
^(h)C=contoured, F=flatted



VeGA valve 1-6941 and 1-6942 Type - Cv F_L x_T

CP-L Trim type: Contoured plug-flow to open
Flow characteristic: LINEAR

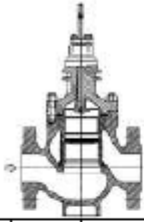
				TRAVEL %										
DN [in]	Port [in]	φ Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Press. recovery factor F _L				0.97	0.97	0.96	0.96	0.96	0.95	0.94	0.93	0.92	0.91	0.90
Press. diff. ratio factor x _T				0.90	0.89	0.88	0.86	0.84	0.82	0.80	0.77	0.72	0.67	0.62
1/2	1/2	15.1	17	0.16	0.42	0.95	1.5	2	2.6	3.2	3.7	4.3	4.9	5.6
3/4	3/4	19.1	17	0.22	0.66	1.6	2.5	3.4	4.4	5.3	6.3	7.5	8.8	10
	1/2	15.1	17	0.16	0.44	1	1.6	2.2	2.7	3.3	3.9	4.4	5	5.6
1	1	23.1	17	0.26	0.89	2.2	3.4	4.8	6.1	7.4	8.8	10	12	13.1
	3/4	19.1	17	0.22	0.74	1.8	2.8	3.9	4.9	6	7	8.1	9.1	10.2
	1/2	15.1	17	0.16	0.44	1	1.6	2.2	2.7	3.3	3.9	4.4	5	5.6
	1.1/2	35.1	25	0.51	1.9	4.8	7.6	11	14	17	20	23	28	29
	1.1/4	28.1	25	0.37	1.5	3.9	6.2	8.5	11	13	15	18	20	22
	1	23.1	25	0.27	1	2.6	4.2	5.7	7.3	8.9	10	12	14	15.1
	3/4	19.1	25	0.22	0.74	1.8	2.8	3.9	4.9	6	7	8.1	9.1	10.2
	1/2	15.1	25	0.16	0.44	1	1.6	2.2	2.7	3.3	3.9	4.4	5	5.6
	1/2	15.1	25	0.089	0.23	0.5	0.77	1	1.3	1.6	1.9	2.1	2.4	2.7
	2	45.2	25	0.95	3.1	7.6	12	17	21	26	31	36	40	47
	1.1/2	35.1	25	0.52	2.6	6.2	9.8	13	17	20	24	28	31	34
	1.1/4	28.1	25	0.37	1.6	4	6.5	9	12	14	17	19	22	25
	1	23.1	25	0.27	1	2.6	4.2	5.7	7.3	8.9	10	12	14	15.1
	3/4	19.1	25	0.22	0.74	1.8	2.8	3.9	4.9	6	7	8.1	9.1	10.2
	1/2	15.1	25	0.16	0.44	1	1.6	2.2	2.7	3.3	3.9	4.4	5	5.6
	1/2	15.1	25	0.089	0.23	0.5	0.77	1	1.3	1.6	1.9	2.1	2.4	2.7
	3	72.3	34	1.6	7	18	29	40	52	64	75	87	99	111
	2.1/2	60.2	34	1.1	5.7	15	24	34	43	52	61	71	80	88
	2	45.2	34	0.95	3.9	9.9	16	22	28	34	40	46	52	58
	1.1/2	35.1	34	0.52	2.6	6.2	9.8	13	17	20	24	28	31	34
	1.1/4	28.1	34	0.37	1.6	4	6.5	9	12	14	17	19	22	25
	1	23.1	34	0.27	1	2.6	4.2	5.7	7.3	8.9	10	12	14	15.1
	3	72.3	45	1.6	8.9	23	38	52	67	81	96	110	120	138
	2.1/2	60.2	45	1.1	6.7	18	29	40	51	63	74	85	96	107
	2	45.2	45	0.9	3.9	9.9	16	22	28	34	40	46	52	58
	1.1/2	35.1	45	0.5	2.6	6.2	9.8	13	17	20	24	28	31	34
	1.1/4	28.1	45	0.3	1.6	4	6.5	9	12	14	17	19	22	25



VeGA valve 1-6941 and 1-6942 Type - $C_v F_L x_T$

CP-E Trim type: Contoured plug-flow to open
Flow characteristic: EQUAL PERCENTAGE

				TRAVEL %											
DN (in)	Port (in)	Ø Seat (mm)	Travel (mm)	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Press. recovery factor F_L				0.97	0.97	0.96	0.96	0.96	0.95	0.94	0.93	0.92	0.91	0.90	
Press. diff. ratio factor x_T				0.90	0.89	0.88	0.86	0.84	0.82	0.80	0.77	0.72	0.67	0.62	
1/2	1/2	15.1	17	0.16	0.19	0.28	0.4	0.59	0.85	1.2	1.8	3	4.4	5.7	
3/4	3/4	19.1	17	0.22	0.27	0.4	0.59	0.87	1.3	1.9	3.5	5.7	8.2	10	
	1/2	15.1	17	0.16	0.19	0.28	0.41	0.6	0.88	1.3	1.9	2.7	4	5.5	
1	1	23.1	17	0.26	0.33	0.5	0.75	1.1	1.7	2.6	4	6.6	9.9	12.9	
	3/4	19.1	17	0.22	0.27	0.4	0.6	0.9	1.4	2	3	5.1	7.8	10.4	
	1/2	15.1	17	0.16	0.19	0.28	0.41	0.59	0.87	1.3	1.9	2.7	4	5.5	
1.1/2	1.1/2	35.1	25	0.52	0.63	0.98	1.5	2.4	3.6	5.7	8.7	14	21	29	
	1.1/4	28.1	25	0.36	0.45	0.7	1.1	1.7	2.6	4	6.1	10	16	22	
	1	23.1	25	0.26	0.33	0.51	0.78	1.2	1.9	2.9	4.4	6.6	10	15.1	
	3/4	19.1	25	0.22	0.27	0.4	0.6	0.9	1.4	2	3	5.1	7.8	10.4	
	1/2	15.1	25	0.16	0.19	0.28	0.41	0.59	0.87	1.3	1.9	2.7	4	5.5	
2	1/2	15.1	25	0.088	0.11	0.15	0.22	0.31	0.45	0.64	0.92	1.3	1.9	2.7	
	2	45.2	25	0.91	1.2	1.8	2.7	4.1	6.3	9.5	16	26	37	46	
	1.1/2	35.1	25	0.52	1.1	1.5	2.3	3.4	5	7.3	11	17	25	33	
	1.1/4	28.1	25	0.36	0.46	0.71	1.1	1.7	2.6	4	6.2	10	16	24	
	1	23.1	25	0.26	0.33	0.51	0.78	1.2	1.9	2.9	4.4	6.6	10	15.1	
	3/4	19.1	25	0.22	0.27	0.4	0.6	0.9	1.4	2	3	5.1	7.8	10.4	
	1/2	15.1	25	0.16	0.19	0.28	0.41	0.6	0.88	1.3	1.9	2.7	4	5.5	
3	1/2	15.1	25	0.088	0.11	0.15	0.22	0.31	0.45	0.64	0.92	1.3	1.9	2.7	
	3	72.3	34	1.7	5.1	7.3	11	15	22	32	46	67	90	112	
	2.1/2	60.2	34	1.1	1.4	2.3	3.7	5.9	9.4	15	27	46	68	88	
	2	45.2	34	0.93	1.2	1.8	2.8	4.4	6.9	11	17	27	42	58	
	1.1/2	35.1	34	0.52	1.1	1.5	2.3	3.4	5	7.3	11	17	25	33	
	1.1/4	28.1	34	0.36	0.46	0.71	1.1	1.7	2.6	4	6.2	10	16	24	
4	1	23.1	34	0.26	0.33	0.51	0.78	1.2	1.9	2.9	4.4	6.6	10	15.1	
	4	86.3	45	2.7	4	9.6	19	32	50	71	95	130	160	187	
	3	72.3	45	1.7	2.1	3.3	5.3	8.6	14	22	40	72	110	138	
	2.1/2	60.2	45	1.1	1.4	2.3	3.7	6.1	9.8	16	26	48	78	107	
	2	45.2	45	0.93	1.2	1.8	2.8	4.4	6.9	11	17	27	42	58	
	1.1/2	35.1	45	0.52	1.1	1.5	2.3	3.4	5	7.3	11	17	25	33	
6	1.1/4	28.1	45	0.36	0.46	0.71	1.1	1.7	2.6	4	6.2	10	16	24	
	6	130.4	60	5.1	8	20	40	68	110	150	200	270	330	390	
	5	110.4	60	4	6.5	16	32	55	83	120	160	210	260	310	
	4	86.3	60	2.7	4.3	11	22	37	57	82	110	140	190	230	
	3	72.3	60	1.7	2.1	3.3	5.3	8.6	14	22	40	72	110	138	
8	2.1/2	60.2	60	1.1	1.4	2.3	3.7	6.1	9.8	16	26	48	78	107	
	8	165.4	76	7	11	30	63	110	170	240	340	440	540	630	
	6	130.4	76	5.1	8.5	22	45	78	120	170	220	290	380	450	
	5	110.4	76	4	6.6	17	34	57	87	120	170	220	280	350	
8	4	86.3	76	2.7	4.3	11	22	37	57	82	110	140	190	230	



VeGA valve 1-6943 Type - Cv F_L x_T

ST-L Trim type: Standard
Flow characteristic: LINEAR

				TRAVEL %										
DN [in]	Port [in]	φ Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Press. recovery factor F _L				0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.92	0.91	0.91
Press. diff. ratio factor x _T				0.78	0.78	0.77	0.76	0.75	0.74	0.73	0.73	0.72	0.71	0.71
3/4	3/4	18.5	17	0.16	0.17	0.19	1.1	2.4	3.8	5.4	6.8	7.6	8.1	8.5
	1/2	12.5	17	0.11	0.12	0.13	0.71	1.6	2.2	3.2	4.2	5.1	5.8	5.9
	3/8	9	17	0.048	0.05	0.061	0.41	0.89	1.3	1.8	2.3	2.8	3.3	3.7
1	3/4	18.5	17	0.16	0.17	0.19	1.1	2.4	3.8	5.5	6.9	8.6	9.3	9.6
	1/2	12.5	17	0.11	0.12	0.13	0.71	1.6	2.2	3.2	4.2	5.1	5.9	6.6
	3/8	9	17	0.048	0.05	0.061	0.41	0.89	1.3	1.8	2.3	2.8	3.3	3.8
1.1/2	1.1/2	37.5	34	0.3	0.33	1.7	5.2	9.7	14	20	26	29	32	33
	1	27.5	34	0.22	0.24	1.9	5	8.1	11	14	18	23	24	25
				0.22	0.24	1.5	3.8	6.2	8.5	11	13	15	17	19.2
3/4	18.5	17	0.16	0.17	0.19	1.1	2.4	3.8	5.5	7	8.8	10	11.5	
2	2	64	34	1	1	7.4	20	34	43	47	52	58	63	68
	1.1/2	37.5	34	1	1	5.3	14	24	33	41	44	48	51	54
				0.3	0.33	1.7	5.2	9.7	14	20	27	34	38	39
1	27.5	34	0.22	0.24	1.9	5	8.1	11	14	19	23	26	29	
3	3	82	45	0.22	0.24	1.5	3.8	6.2	8.5	11	13	15	17	19.3
				0.22	0.24	1.1	2.6	4.2	5.8	7.4	9.2	11	14	15.7
	1.1/2	37.5	34	0.3	0.33	1.7	5.2	9.7	14	20	27	35	42	47
4	4	103.5	60	1.3	1.3	14	36	58	81	97	110	110	120	130
	3	82	45	1	1	7.4	20	35	49	61	74	87	95	100
	2	64	34	1	1	5.3	14	24	34	42	52	61	68	77
6	6	125.5	60	0.3	0.33	1.7	5.2	9.7	14	20	27	35	42	47
				2.9	2.9	25	77	150	210	270	310	350	370	390
	4	103.5	60	2.3	2.4	25	64	99	140	180	210	240	280	300
8	8	160.5	76	1.3	1.3	14	36	58	82	100	120	140	170	185
	6	125.5	60	2.9	2.9	25	78	150	230	290	350	400	440	470
	4	103.5	60	2.3	2.4	25	64	99	140	170	210	240	280	300
10	10	214.5	100	8.4	9	86	240	430	630	780	900	980	1000	1090
	8	160.5	76	5.1	5.1	47	140	250	390	490	590	660	730	780
	6	125.5	60	2.9	2.9	25	78	150	230	300	370	430	470	510
12	12	242.5	120	11	13	120	330	590	860	1100	1200	1300	1400	1470
	10	214.5	100	8.4	9	86	240	440	660	840	990	1100	1200	1270
	8	160.5	76	5.1	5.1	47	140	250	380	500	610	700	770	830
14	14	291.5	150	12	12	110	410	800	1200	1500	1700	1900	2000	2100
	12	242.5	120	11	13	120	340	610	900	1100	1300	1500	1600	1710
	10	214.5	100	8.4	9	86	240	450	670	880	1100	1200	1300	1410
16	16	341.5	200	16	16	220	700	1300	1800	2200	2400	2500	2600	2700
	14	291.5	150	12	12	110	410	810	1200	1600	1900	2100	2200	2300
	12	242.5	120	11	13	120	340	610	910	1200	1400	1600	1700	1840
20	20	440.5	250	25	30	450	1200	2200	3000	3600	4100	4300	4500	4700
	16	341.5	200	16	16	220	710	1400	2000	2600	3000	3300	3500	3700
24	24	521.5	300	40	47	640	1800	3100	4300	5200	5800	6100	6400	6600
	20	440.5	250	25	30	450	1300	2300	3300	4100	4700	5200	5500	5700



VeGA valve 1-6943 Type - Cv FL xT

ST-E Trim type: Standard
Flow characteristic: EQUAL PERCENTAGE

				TRAVEL %										
DN [in]	Port [in]	φ Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Press. recovery factor F_L				0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.91	0.91	0.90
Press. diff. ratio factor x_T				0.78	0.78	0.78	0.77	0.76	0.75	0.74	0.73	0.71	0.70	0.69
3/4	3/4	18.5	17	0.16	0.17	0.18	0.62	1.3	2.2	3.3	4.4	6	7.2	7.9
	1/2	12.5	17	0.11	0.12	0.12	0.32	0.69	1.2	1.9	2.9	4	5.1	5.9
	3/8	9	17	0.048	0.05	0.058	0.23	0.61	1.1	1.5	2.1	2.7	3.3	3.7
1	3/4	18.5	17	0.16	0.17	0.18	0.62	1.3	2.2	3.3	4.4	6	7.7	9
	1/2	12.5	17	0.11	0.12	0.12	0.32	0.69	1.2	1.9	2.9	4	5.2	6
	3/8	9	17	0.048	0.05	0.058	0.23	0.61	1.1	1.5	2.1	2.7	3.3	3.8
1.1/2	1.1/2	37.5	34	0.3	0.33	0.8	2	4	6.6	11	17	23	28	31
	1	27.5	34	0.22	0.24	0.66	1.8	3.4	5.7	8.8	12	16	21	24
	3/4	18.5	17	0.22	0.24	0.66	1.4	2.6	4.2	6.1	8.8	12	15	18.2
2	2	64	34	1	1	2.6	5.9	9.5	15	21	31	42	46	51
	1.1/2	37.5	34	0.3	0.33	0.8	2	4	6.6	11	17	23	31	37
	1	27.5	34	0.22	0.24	0.66	1.8	3.4	5.7	8.8	12	16	21	25
3	3	82	45	1.3	1.3	4.4	11	21	33	46	62	82	99	107
	2	64	34	1	1	2.6	5.9	9.5	15	21	32	45	56	69
	1.1/2	37.5	34	0.3	0.33	0.8	2	4	6.6	11	17	23	31	38
4	4	103.5	60	2.3	2.4	8	20	37	58	82	110	140	170	178
	3	82	45	1.3	1.3	4.4	11	21	33	46	62	83	100	123
	2	64	34	1	1	2.6	5.9	9.5	15	21	32	45	56	70
6	6	125.5	60	2.9	2.9	13	28	52	91	150	220	280	320	360
	4	103.5	60	2.3	2.4	8	20	37	58	82	110	150	180	210
	3	82	45	1.3	1.3	4.4	11	21	33	46	62	83	100	124
8	8	160.5	76	5.1	5.1	20	41	80	140	240	350	440	520	570
	6	125.5	60	2.9	2.9	12	27	51	90	150	220	290	340	390
	4	103.5	60	2.3	2.4	8	20	37	58	82	110	150	180	210
10	10	214.5	100	8.4	9	37	76	150	270	440	640	800	910	990
	8	160.5	76	5.1	5.1	20	41	80	140	240	370	480	580	650
	6	125.5	60	2.9	2.9	12	27	51	90	150	220	300	380	410
12	12	242.5	120	11	13	48	100	200	360	590	870	1100	1200	1340
	10	214.5	100	8.4	9	37	76	150	270	450	680	870	1000	1130
	8	160.5	76	5.1	5.1	20	41	80	140	240	370	490	600	690
14	14	291.5	150	12	12	59	140	280	510	850	1200	1500	1800	1910
	12	242.5	120	11	13	48	100	200	360	610	910	1200	1400	1520
	10	214.5	100	8.4	9	37	76	150	270	480	690	910	1100	1220
16	16	341.5	200	16	16	88	210	400	710	1100	1600	2000	2300	2500
	14	291.5	150	12	12	59	140	280	520	880	1300	1700	1900	2100
	12	242.5	120	11	13	48	100	200	360	610	930	1200	1400	1610
20	20	440.5	250	25	29	170	370	720	1300	2000	2900	3500	4000	4300
	16	341.5	200	16	16	89	210	400	730	1200	1800	2400	2800	3100
24	24	521.5	300	40	45	220	490	970	1700	2800	4100	5000	5800	6100
	20	440.5	250	25	29	170	380	720	1300	2100	3100	3900	4600	5000



VeGA valve 1-6943 Type – Cv F_L x_T

LN-L Trim type: Low Noise
Flow characteristic: LINEAR

				TRAVEL %										
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pressure recovery factor F _L				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93
Press. diff. ratio factor x _T				0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.76	0.76
3/4	3/4	18.5	17	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93
	1/2	12.5	17	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.76	0.76
	3/8	9	17	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93
1	3/4	18.5	17	0.16	0.17	0.18	1.7	3.6	5.3	6.9	8.6	9.2	9.6	9.8
	1/2	12.5	17	0.11	0.12	0.14	1.2	2.4	3.5	4.5	5.3	6	6.5	6.8
	3/8	9	17	0.048	0.05	0.067	0.75	1.5	2.1	2.7	3.1	3.4	3.7	4
1.1/2	1	27.5	34	0.3	0.33	5.4	13	21	26	29	32	33	34	35
				0.22	0.24	3.5	8.3	13	17	21	24	24	25	25
				0.22	0.24	1.9	4.3	6.8	9.2	12	14	16	18	21
	3/4	18.5	17	0.16	0.17	0.18	1.7	3.6	5.3	7	8.7	10	12	12.6
2	2	64	34	1	1	9	21	34	42	46	50	55	60	64
				1	1	6.1	14	22	31	39	43	46	49	53
	1.1/2	37.5	34	0.3	0.33	5.4	13	21	28	35	38	39	40	41
				0.22	0.24	3.5	8.3	13	17	22	25	27	29	30
3	1	27.5	34	0.22	0.24	1.9	4.3	6.8	9.2	12	14	16	18	21
				0.22	0.24	1.3	2.9	4.6	6.3	8.1	9.9	12	14	15.6
	3	82	45	1.3	1.3	17	38	60	79	96	100	110	120	127
				1	1	9	21	34	46	58	68	80	90	97
4	1.1/2	37.5	34	0.3	0.33	5.4	13	21	28	35	42	47	51	55
				1	1	6.1	14	22	31	41	49	57	65	73
	4	103.5	60	2.3	2.4	28	61	93	120	150	170	180	190	200
				3	82	45	1.3	1.3	17	38	60	80	99	120
6	2	64	34	1	1	9	21	34	46	58	69	81	92	103
				1	1	6.1	14	22	31	41	49	57	65	74
	6	125.5	60	2.9	2.9	35	78	120	160	200	230	270	310	340
				4	103.5	60	2.3	2.4	28	61	93	130	150	180
8	3	82	45	1.3	1.3	17	38	60	80	99	120	140	160	177
				8	160.5	76	5.1	5.1	65	130	190	260	320	380
	6	125.5	60	2.9	2.9	35	78	120	160	200	230	270	310	350
				4	103.5	60	2.3	2.4	28	61	93	130	150	180
10	10	214.5	100	8.4	10	120	230	350	470	570	680	770	890	960
				8	160.5	76	5.1	5.1	65	130	190	260	320	380
	12	242.5	120	11	20	170	330	490	640	780	920	1100	1200	1300
				10	214.5	100	8.4	10	120	230	350	470	570	680
12	8	160.5	76	5.1	5.1	65	130	190	260	320	380	440	500	560
				14	291.5	150	12	12	180	420	650	890	1100	1300
	12	242.5	120	11	20	170	330	490	640	780	930	1100	1200	1350
				10	214.5	100	8.4	10	120	230	350	470	570	680
14	16	341.5	200	16	16	310	680	1000	1400	1700	2000	2300	2400	2500
				14	291.5	150	12	12	180	420	650	890	1100	1300
	12	242.5	120	11	20	170	330	490	640	780	930	1100	1200	1360
				20	440.5	250	25	42	610	1200	1800	2300	2800	3300
20	16	341.5	200	16	16	310	680	1000	1400	1700	2100	2400	2700	3100
				24	521.5	300	40	62	900	1700	2600	3400	4100	4900
24	20	440.5	250	25	42	610	1200	1800	2300	2800	3400	3900	4400	4900



VeGA valve 1-6943 Type – Cv FL XT

LN-E Trim type: Low Noise
Flow characteristic: EQUAL PERCENTAGE

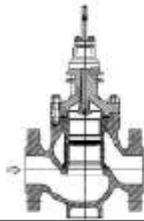
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	TRAVEL %											
				5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Pressure recovery factor F_L				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93
Press. diff. ratio factor x_T				0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.76	0.76	0.76
3/4	3/4	18.5	17	0.16	0.17	0.18	0.77	1.5	2.6	3.7	4.9	6.3	7.3	7.9	
				0.11	0.12	0.13	0.42	0.92	1.6	2.4	3.3	4.5	5.3	5.8	
	1/2	12.5	17	0.048	0.05	0.058	0.21	0.52	0.89	1.3	1.8	2.4	2.9	3.3	
				0.048	0.05	0.058	0.19	0.39	0.7	1.1	1.5	2.1	2.6	2.9	
1	3/4	18.5	17	0.16	0.17	0.18	0.77	1.5	2.6	3.7	5	6.3	7.8	9.1	
				0.11	0.12	0.13	0.42	0.92	1.6	2.4	3.3	4.5	5.3	5.9	
	1/2	12.5	17	0.048	0.05	0.058	0.21	0.52	0.89	1.3	1.8	2.4	2.9	3.3	
				0.048	0.05	0.058	0.19	0.39	0.7	1.1	1.5	2.1	2.6	2.9	
1.1/2	3/4	18.5	17	0.16	0.17	0.18	0.77	1.5	2.6	3.7	5	6.4	7.9	9.6	
				0.11	0.12	0.13	0.42	0.92	1.6	2.4	3.3	4.5	5.3	5.9	
	1	27.5	34	0.22	0.24	0.78	2	4	6.8	10	14	18	22	24	
				0.22	0.24	0.78	1.6	2.7	4.5	6.3	8.8	11	13	15.7	
2	1.1/2	37.5	34	0.3	0.33	1.2	3	5.8	9.8	15	20	26	29	32	
				0.22	0.24	0.78	2	4	6.8	10	14	18	22	24	
	1	27.5	34	0.3	0.33	1.2	3	5.8	9.8	15	20	27	33	38	
				0.22	0.24	0.78	2	4	6.8	10	14	18	23	26	
3	3	82	45	1.3	1.3	4	8.5	16	26	38	53	73	91	102	
				1.3	1.3	2.7	5.8	11	18	26	37	49	64	79	
	1.1/2	37.5	34	0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
				0.22	0.24	0.78	1.6	2.7	4.5	6.3	8.8	11	13	15.7	
4	3	82	45	1.3	1.3	4	8.5	16	26	38	53	73	93	111	
				1.3	1.3	2.7	5.8	11	18	26	37	49	64	80	
	2	64	34	1	1	2.2	4.6	8.4	14	21	29	38	49	60	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
6	4	103.5	60	2.3	2.4	8.7	18	34	53	78	110	140	180	250	
				1.3	1.3	4	8.5	16	26	38	53	73	93	112	
	3	82	45	1.3	1.3	2.7	5.8	11	18	26	37	49	64	80	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
8	6	125.5	60	2.9	2.9	9.2	22	40	64	97	140	180	210	250	
				1.3	1.3	4	8.5	16	26	38	53	73	93	112	
	4	103.5	60	2.3	2.4	8.7	18	34	53	78	110	140	170	199	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
10	8	160.5	76	5.1	5.1	17	39	73	120	170	240	300	360	420	
				2.9	2.9	9.2	22	40	64	97	140	180	210	250	
	6	125.5	60	2.3	2.4	8.7	18	34	53	78	110	140	170	199	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
12	10	214.5	100	8.4	8.4	27	64	120	200	290	410	520	630	730	
				5.1	5.1	17	39	73	120	170	240	300	360	420	
	8	160.5	76	5.1	5.1	17	39	73	120	170	240	300	360	420	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
14	12	291.5	150	12	12	34	99	200	350	530	760	990	1200	1410	
				11	12	41	98	180	300	440	600	750	890	1040	
	10	214.5	100	8.4	8.4	27	64	120	200	290	410	520	630	730	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
16	16	341.5	200	16	16	89	180	370	570	850	1200	1500	1800	2100	
				12	12	34	99	200	350	530	760	990	1200	1410	
	12	242.5	120	11	12	41	98	180	300	440	600	750	890	1040	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
20	20	440.5	250	25	29	140	320	570	920	1400	1900	2400	2900	3400	
				16	16	89	180	370	570	850	1200	1500	1900	2200	
	16	341.5	200	16	16	89	180	370	570	850	1200	1500	1900	2200	
				0.3	0.33	1.2	3	5.8	9.8	15	20	27	34	41	
24	24	521.5	300	40	43	180	460	870	1400	2100	3000	3700	4500	5200	
				25	29	140	320	570	920	1400	1900	2400	2900	3500	



VeGA valve 1-6943 Type - Cv F_L x_T

XLN-L Trim type: Special Low Noise
Flow characteristic: LINEAR

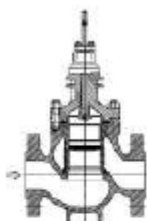
				TRAVEL %										
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pressure recovery factor F _L				0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93	0.93
Press. diff. ratio factor x _T				0.78	0.78	0.78	0.77	0.77	0.77	0.76	0.76	0.76	0.75	0.75
3/4	3/4	18.5	17	0.16	0.16	0.17	1.1	2.2	3.3	4.3	5.3	6.2	7	7.5
	1/2	12.5	17	0.11	0.12	0.12	0.82	1.6	2.3	3.1	3.8	4.5	5	5.5
	3/8	9	17	0.048	0.049	0.055	0.49	0.97	1.4	1.9	2.3	2.6	2.9	3.2
1	3/4	18.5	17	0.16	0.16	0.17	1.1	2.2	3.3	4.3	5.3	6.3	7.2	8.2
	1/2	12.5	17	0.11	0.12	0.12	0.82	1.6	2.3	3.1	3.8	4.5	5.1	5.5
	3/8	9	17	0.048	0.049	0.055	0.49	0.97	1.4	1.9	2.3	2.6	2.9	3.2
1.1/2	1.1/2	37.5	34	0.3	0.33	3.3	8.1	13	17	21	25	27	29	31
				0.22	0.24	2.1	5.2	8.2	11	14	16	19	22	24
				0.22	0.24	1.2	2.7	4.2	5.8	7.3	8.8	10	12	13.1
	3/4	18.5	17	0.16	0.16	0.17	1.1	2.2	3.3	4.3	5.3	6.3	7.3	8.3
2	2	64	34	1	1	5.7	13	20	28	35	41	44	46	49
				0.3	0.33	3.3	8.1	13	17	21	26	30	34	37
	1	27.5	34	0.22	0.24	2.1	5.2	8.2	11	14	16	19	22	24
				0.22	0.24	1.2	2.7	4.2	5.8	7.3	8.8	10	12	13.1
3	3	82	45	1.3	1.3	11	23	36	49	61	74	85	95	101
	2	64	34	1	1	5.7	13	20	28	35	43	50	57	63
	1.1/2	37.5	34	0.3	0.33	3.3	8.1	13	17	21	26	30	35	39
4	4	103.5	60	2.3	2.4	18	37	56	77	96	120	130	150	163
	3	82	45	1.3	1.3	11	23	36	49	61	74	86	97	109
	2	64	34	1	1	5.7	13	20	28	35	43	50	57	64
6	6	125.5	60	2.9	2.9	23	46	71	96	120	150	170	190	220
	4	103.5	60	2.3	2.4	18	37	56	77	96	120	130	150	170
	3	82	45	1.3	1.3	11	23	36	49	61	74	86	97	109
8	8	160.5	76	5.1	5.1	38	76	110	150	190	220	260	300	330
	6	125.5	60	2.9	2.9	23	46	71	96	120	150	170	190	220
	4	103.5	60	2.3	2.4	18	37	56	77	96	120	130	150	170
10	10	214.5	100	8.4	8.4	77	150	220	290	360	430	500	570	630
	8	160.5	76	5.1	5.1	38	76	110	150	190	220	260	300	330
	6	125.5	60	2.9	2.9	23	46	71	96	120	150	170	190	220
12	12	242.5	120	11	15	110	210	310	410	520	620	720	810	900
	10	214.5	100	8.4	8.4	77	150	220	290	360	430	500	570	630
	8	160.5	76	5.1	5.1	38	76	110	150	190	220	260	300	330
14	14	291.5	150	12	12	120	270	420	570	720	880	1000	1200	1290
	12	242.5	120	11	15	110	210	310	410	520	620	720	810	900
	10	214.5	100	8.4	8.4	77	150	220	290	360	430	500	570	630
16	16	341.5	200	16	16	200	420	650	880	1100	1300	1500	1700	1940
	14	291.5	150	12	12	120	270	420	570	720	880	1000	1200	1300
	12	242.5	120	11	15	110	210	310	410	520	620	720	810	900
20	20	440.5	250	25	31	380	730	1100	1400	1800	2200	2500	2800	3100
	16	341.5	200	16	16	200	420	650	880	1100	1300	1500	1800	1960
24	24	521.5	300	40	45	550	1100	1600	2100	2600	3100	3600	4000	4500
	20	440.5	250	25	31	380	730	1100	1400	1800	2200	2500	2800	3200



VeGA valve 1-6943 Type - $C_v F_L x_T$

XLN-E Trim type: Special Low Noise
Flow characteristic: EQUAL PERCENTAGE

				TRAVEL %											
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Pressure recovery factor F_L				0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93	0.93	
Press. diff. ratio factor x_T				0.78	0.78	0.78	0.77	0.77	0.77	0.76	0.76	0.75	0.75	0.74	
3/4	3/4	18.5	17	0.16	0.16	0.17	0.55	0.98	1.6	2.2	3	3.9	4.7	5.8	
				0.11	0.12	0.12	0.3	0.62	1.1	1.6	2.2	2.9	3.6	4.4	
	1/2	12.5	17	0.048	0.049	0.055	0.15	0.34	0.59	0.89	1.2	1.6	2	2.5	
				0.048	0.049	0.055	0.14	0.26	0.46	0.73	1	1.4	1.7	2.1	
1	3/4	18.5	17	0.16	0.16	0.17	0.55	0.98	1.6	2.2	3	3.9	4.8	5.8	
				0.11	0.12	0.12	0.3	0.62	1.1	1.6	2.2	2.9	3.6	4.4	
	1/2	12.5	17	0.048	0.049	0.055	0.15	0.34	0.59	0.89	1.2	1.6	2	2.5	
				0.048	0.049	0.055	0.14	0.26	0.46	0.73	1	1.4	1.7	2.1	
1.1/2	3/4	18.5	17	0.16	0.16	0.17	0.55	0.98	1.6	2.2	3	3.9	4.8	5.8	
				0.11	0.12	0.12	0.3	0.62	1.1	1.6	2.2	2.9	3.6	4.4	
	1	27.5	34	0.22	0.24	0.55	1.3	2.6	4.2	6.3	8.8	12	14	17.2	
				0.22	0.24	0.55	1.1	1.8	2.8	3.9	5.4	7	8.5	10	
2	1.1/2	37.5	34	0.3	0.33	0.83	1.9	3.5	5.9	8.8	12	16	21	25	
				0.22	0.24	0.55	1.3	2.6	4.2	6.3	8.8	12	14	17.2	
	1	27.5	34	0.22	0.24	0.55	1.3	2.6	4.2	6.3	8.8	12	14	17.2	
				0.22	0.24	0.55	1.1	1.8	2.8	3.9	5.4	7	8.5	10	
3	3	82	45	1.3	1.3	2.9	5.6	9.8	16	23	32	43	56	70	
				1.3	1.3	2.1	4	6.9	11	16	22	30	38	48	
	1.1/2	37.5	34	0.3	0.33	0.83	1.9	3.5	5.9	8.8	12	16	21	25	
				0.22	0.24	0.55	1.3	2.6	4.2	6.3	8.8	12	14	17.2	
4	4	103.5	60	2.3	2.4	6.3	11	21	33	47	64	85	100	124	
				1.3	1.3	2.9	5.6	9.8	16	23	32	43	56	70	
	3	82	45	1.3	1.3	2.1	4	6.9	11	16	22	30	38	48	
				1	1	1.7	3.1	5.2	8.5	12	17	22	29	37	
6	6	125.5	60	2.9	2.9	6.8	14	25	40	58	81	110	130	157	
				2.3	2.4	6.3	11	21	33	47	64	85	100	124	
	3	82	45	1.3	1.3	2.9	5.6	9.8	16	23	32	43	56	70	
				1.3	1.3	2.1	4	6.9	11	16	22	30	38	48	
8	8	160.5	76	5.1	5.1	12	25	43	68	99	140	170	210	250	
				2.3	2.4	6.3	11	21	33	47	64	85	100	125	
	6	125.5	60	2.9	2.9	6.8	14	25	40	58	81	110	130	157	
				2.3	2.4	6.3	11	21	33	47	64	85	100	125	
10	10	214.5	100	8.4	8.4	19	42	77	120	180	250	320	390	470	
				8.4	8.4	17	33	56	85	120	170	220	270	330	
	8	160.5	76	5.1	5.1	12	25	43	68	99	140	170	210	250	
				2.9	2.9	6.8	14	25	40	58	81	110	130	157	
12	12	242.5	120	11	11	30	67	120	190	280	390	490	590	700	
				8.4	8.4	19	42	77	120	180	250	320	390	470	
	10	214.5	100	8.4	8.4	17	33	56	85	120	170	220	270	330	
				5.1	5.1	12	25	43	68	99	140	170	210	250	
14	14	291.5	150	12	12	28	68	130	220	340	480	640	790	960	
				11	11	30	67	120	190	280	390	490	590	700	
	10	214.5	100	8.4	8.4	19	42	77	120	180	250	320	390	470	
				8.4	8.4	17	33	56	85	120	170	220	270	330	
16	16	341.5	200	16	16	61	120	230	360	530	720	950	1200	1410	
				12	12	28	68	130	220	340	480	640	790	960	
	12	242.5	120	11	11	30	67	120	190	280	390	490	590	700	
				8.4	8.4	17	33	56	85	120	170	220	270	330	
20	20	440.5	250	25	27	97	210	360	570	840	1100	1500	1900	2200	
				16	16	61	120	230	360	530	720	950	1200	1410	
	24	521.5	300	40	40	120	290	530	860	1300	1800	2300	2800	3300	
				20	20	61	120	230	360	530	720	950	1200	1410	
24	440.5	250	25	27	97	210	360	570	840	1100	1500	1900	2200		
			16	16	61	120	230	360	530	720	950	1200	1410		



VeGA valve 1-6943 Type - Cv F_L X_T

DC-L Trim type: Double Cage for liquid service
Flow characteristic: LINEAR

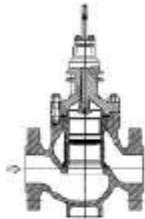
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	TRAVEL %											
				5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Pressure recovery factor F _L				0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	
3/4	3/4	18.5	17	0.16	0.17	0.18	1.63	2.67	3.6	4.2	4.9	5.2	5.6	5.8	
	1/2	12.5	17	0.11	0.12	0.13	1.28	2.10	2.83	3.4	4.0	4.1	4.3	4.3	
	3/8	9	17	0.048	0.05	0.061	0.79	1.33	1.77	2.10	2.47	2.67	2.9	3	
1	3/4	18.5	17	0.16	0.17	0.18	1.63	2.67	3.6	4.3	5.2	5.8	6.4	6.6	
	1/2	12.5	17	0.11	0.12	0.13	1.28	2.10	2.83	3.4	4.1	4.4	4.9	5	
	3/8	9	17	0.048	0.05	0.061	0.79	1.33	1.77	2.10	2.47	2.67	2.9	3.1	
1.1/2	1.1/2	37.5	34	0.3	0.32	4.7	6.7	9.9	14	16	18	20	21	21	
	1	27.5	34	0.22	0.24	3.9	5.6	7.9	11	13	15	17	18	17.8	
	3/4	18.5	17	0.16	0.17	0.18	1.63	2.67	3.6	4.3	5.3	6.1	7	7.6	
2	2	64	34	1	1	7.4	9.8	17	21	25	29	30	32	34	
	1.1/2	37.5	34	0.3	0.32	4.7	6.7	9.9	14	16	18	22	25	26	
	1	27.5	34	0.22	0.24	3.9	5.6	7.9	11	13	15	18	20	20	
3	3	82	45	1.3	1.3	13	19	28	41	46	54	64	67	70	
	2	64	34	1	1	7.4	9.8	17	21	25	33	35	40	45	
	1.1/2	37.5	34	0.3	0.32	4.7	6.7	9.9	14	16	18	23	25	27	
4	4	103.5	60	2.3	2.4	19	33	45	56	69	84	98	110	112	
	3	82	45	1.3	1.3	13	19	28	41	46	55	66	70	78	
	2	64	34	1	1	7.4	9.8	17	21	25	33	35	40	45	
6	6	125.5	60	2.9	2.9	25	39	52	75	93	110	120	140	155	
	4	103.5	60	2.3	2.4	19	33	45	56	69	85	99	110	120	
	3	82	45	1.3	1.3	13	19	28	41	46	55	66	71	78	
8	8	160.5	76	5.1	5.1	46	72	96	130	170	190	210	250	270	
	6	125.5	60	2.9	2.9	25	39	52	75	93	110	120	140	156	
	4	103.5	60	2.3	2.4	19	33	45	56	69	85	99	110	120	
10	10	214.5	100	8.4	9.3	65	120	160	210	250	290	350	400	430	
	8	160.5	76	5.1	5.1	46	72	96	130	170	190	210	250	280	
	6	125.5	60	2.9	2.9	25	39	52	75	93	110	120	140	156	
12	12	242.5	120	11	17	90	170	250	330	400	470	530	590	640	
	10	214.5	100	8.4	9.3	65	120	160	210	250	290	350	400	430	
	8	160.5	76	5.1	5.1	46	72	96	130	170	190	210	250	280	
14	14	291.5	150	12	12	100	190	290	390	500	610	700	790	860	
	12	242.5	120	11	17	90	170	250	330	400	470	530	590	650	
	10	214.5	100	8.4	9.3	65	120	160	210	250	290	350	400	430	
16	16	341.5	200	16	16	150	340	520	650	820	990	1100	1200	1390	
	14	291.5	150	12	12	100	190	290	390	500	610	700	790	860	
	12	242.5	120	11	17	90	170	250	330	400	470	530	590	650	
20	20	440.5	250	25	35	340	570	820	1100	1300	1600	1800	2000	2300	
	16	341.5	200	16	16	150	340	520	650	820	1000	1100	1300	1420	
24	24	521.5	300	40	52	510	870	1300	1700	2100	2400	2700	3100	3400	
	20	440.5	250	25	35	340	570	820	1100	1300	1600	1800	2000	2300	



VeGA valve 1-6943 Type - Cv FL XT

DC-E Trim type: Double Cage for liquid service
Flow characteristic: EQUAL PERCENTAGE

				TRAVEL %											
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Pressure recovery factor F _L				0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955
3/4	3/4	18.5	17	0.16	0.17	0.17	0.50	0.81	1.28	1.70	2.40	2.97	3.7	4.3	
	1/2	12.5	17	0.11	0.12	0.12	0.36	0.60	0.96	1.28	1.80	2.23	2.8	3.2	
	3/8	9	17	0.048	0.05	0.056	0.22	0.39	0.67	0.93	1.33	1.63	2	2.2	
1	3/4	18.5	17	0.16	0.17	0.17	0.50	0.81	1.28	1.70	2.43	3.03	3.8	4.3	
	1/2	12.5	17	0.11	0.12	0.12	0.36	0.60	0.96	1.28	1.80	2.23	2.8	3.3	
	3/8	9	17	0.048	0.05	0.056	0.22	0.39	0.67	0.93	1.33	1.63	2	2.2	
1.1/2	1.1/2	37.5	34	0.3	0.32	1.1	1.7	2.7	5.1	6.7	8.3	12	15	16.4	
	1	27.5	34	0.22	0.24	0.98	1.5	2.4	4.4	5.8	7	10	12	13.8	
	3/4	18.5	17	0.16	0.17	0.17	0.50	0.81	1.28	1.70	2.43	3.03	3.8	4.3	
2	2	64	34	1	1	2.3	2.9	5.9	8.4	11	17	19	25	29	
	1.1/2	37.5	34	0.3	0.32	1.1	1.7	2.7	5.1	6.7	8.3	12	15	16.6	
	1	27.5	34	0.22	0.24	0.98	1.5	2.4	4.4	5.8	7	10	13	13.9	
3	3	82	45	1.3	1.3	3.7	5.7	9.4	17	21	28	41	46	54	
	2	64	34	1	1	2.3	2.9	5.9	8.4	11	17	19	25	31	
	1.1/2	37.5	34	0.3	0.32	1.1	1.7	2.7	5.1	6.7	8.3	12	15	16.6	
4	4	103.5	60	2.3	2.4	6.2	12	18	25	35	49	66	78	88	
	3	82	45	1.3	1.3	3.7	5.7	9.4	17	21	28	41	47	55	
	2	64	34	1	1	2.3	2.9	5.9	8.4	11	17	19	25	31	
6	6	125.5	60	2.9	2.9	8.9	15	21	36	53	65	81	100	119	
	4	103.5	60	2.3	2.4	6.2	12	18	25	35	49	66	78	89	
	3	82	45	1.3	1.3	3.7	5.7	9.4	17	21	28	41	47	55	
8	8	160.5	76	5.1	5.1	16	28	40	64	95	120	140	180	210	
	6	125.5	60	2.9	2.9	8.9	15	21	36	53	65	81	100	119	
	4	103.5	60	2.3	2.4	6.2	12	18	25	35	49	66	78	89	
10	10	214.5	100	8.4	8.4	19	40	64	92	120	170	230	280	320	
	8	160.5	76	5.1	5.1	16	28	40	64	95	120	140	180	210	
	6	125.5	60	2.9	2.9	8.9	15	21	36	53	65	81	100	119	
12	12	242.5	120	11	12	24	50	90	140	200	270	340	410	470	
	10	214.5	100	8.4	8.4	19	40	64	92	120	170	230	280	320	
	8	160.5	76	5.1	5.1	16	28	40	64	95	120	140	180	210	
14	14	291.5	150	12	12	30	61	110	180	280	380	490	580	670	
	12	242.5	120	11	12	24	50	90	140	200	270	340	410	470	
	10	214.5	100	8.4	8.4	19	40	64	92	120	170	230	280	320	
16	16	341.5	200	16	16	44	110	190	270	390	560	710	860	1020	
	14	291.5	150	12	12	30	61	110	180	280	380	490	580	670	
	12	242.5	120	11	12	24	50	90	140	200	270	340	410	470	
20	20	440.5	250	25	27	100	190	310	490	670	920	1200	1400	1670	
	16	341.5	200	16	16	44	110	190	270	390	560	710	860	1020	
	14	291.5	150	12	12	30	61	110	180	280	380	490	580	670	
24	24	521.5	300	40	41	150	280	490	750	1000	1400	1800	2200	2500	
	20	440.5	250	25	27	100	190	310	490	670	920	1200	1400	1680	



VeGA valve 1-6943 Type - Cv FL XT

EDC-L Trim type: Double Cage with expansion for liquid service
Flow characteristic: LINEAR

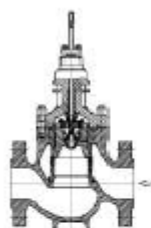
DN [in]	Port [in]	Seat [mm]	Travel [mm]	FL	TRAVEL %										
					5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3/4	3/4	18.5	17	0.984	0.16	0.16	0.17	1.46	2.40	3.23	3.87	4.47	4.73	5.1	5.2
	1/2	12.5	17	0.984	0.11	0.11	0.12	1.17	1.93	2.60	3.13	3.67	3.83	4	4
	3/8	9	17	0.984	0.048	0.048	0.057	0.74	1.25	1.67	2.00	2.33	2.50	2.7	2.8
1	3/4	18.5	17	0.984	0.16	0.16	0.17	1.46	2.40	3.27	3.93	4.77	5.23	5.8	6
	1/2	12.5	17	0.984	0.11	0.11	0.12	1.17	1.93	2.60	3.13	3.73	4.07	4.5	4.6
	3/8	9	17	0.984	0.048	0.048	0.057	0.74	1.25	1.67	2.00	2.33	2.50	2.7	2.8
1.1/2	1.1/2	37.5	34	0.985	0.3	0.3	4	5.7	8.4	12	14	15	17	17	18
	1	27.5	34	0.985	0.22	0.22	3.3	4.7	6.8	9.7	11	13	15	15	15.2
	3/4	18.5	17	0.984	0.16	0.16	0.17	1.46	2.40	3.27	3.93	4.87	5.53	6.4	6.8
2	2	64	34	0.984	1	1	6.2	8.2	15	18	21	25	25	27	29
	1.1/2	37.5	34	0.985	0.3	0.3	4	5.7	8.4	12	14	15	19	21	22
	1	27.5	34	0.985	0.22	0.22	3.3	4.7	6.8	9.7	11	13	15	17	17.5
3	3	82	45	0.983	1.3	1.3	10	15	22	32	36	43	51	53	55
	2	64	34	0.984	1	1	6.2	8.2	15	18	21	28	29	34	38
	1.1/2	37.5	34	0.985	0.3	0.3	4	5.7	8.4	12	14	16	19	22	23
4	4	103.5	60	0.985	2.3	2.3	14	24	33	41	51	62	72	79	82
	3	82	45	0.983	1.3	1.3	10	15	22	32	36	43	51	55	61
	2	64	34	0.984	1	1	6.2	8.2	15	18	21	28	29	34	38
6	6	125.5	60	0.985	2.9	2.9	18	27	37	52	65	74	85	100	108
	4	103.5	60	0.985	2.3	2.3	14	24	33	41	51	62	73	81	88
	3	82	45	0.983	1.3	1.3	10	15	22	32	36	43	51	55	61
8	8	160.5	76	0.986	5.1	5.1	30	47	63	85	110	120	140	160	178
	6	125.5	60	0.985	2.9	2.9	18	27	37	52	65	74	85	100	109
	4	103.5	60	0.985	2.3	2.3	14	24	33	41	51	62	73	81	88
10	10	214.5	100	0.985	2.9	2.9	18	27	37	52	65	74	85	100	108
	8	160.5	76	0.985	2.3	2.3	14	24	33	41	51	62	73	81	88
	6	125.5	60	0.983	1.3	1.3	10	15	22	32	36	43	51	55	61
12	12	242.5	120	0.986	5.1	5.1	30	47	63	85	110	120	140	160	178
	10	214.5	100	0.985	2.9	2.9	18	27	37	52	65	74	85	100	109
	8	160.5	76	0.985	2.3	2.3	14	24	33	41	51	62	73	81	88
14	14	291.5	150	0.983	12	12	76	140	220	300	380	460	530	590	650
	12	242.5	120	0.983	11	13	69	130	190	250	300	360	400	450	490
	10	214.5	100	0.986	8.4	8.4	46	86	120	150	170	210	250	280	310
16	16	341.5	200	0.985	16	16	110	240	370	470	590	710	800	890	1000
	14	291.5	150	0.983	12	12	76	140	220	300	380	460	530	590	650
	12	242.5	120	0.983	11	13	69	130	190	250	300	360	400	450	490
20	20	440.5	250	0.985	25	26	240	400	580	780	940	1100	1300	1400	1590
	16	341.5	200	0.985	16	15	110	240	370	470	590	710	810	900	1020
24	24	521.5	300	0.985	40	40	360	610	900	1200	1400	1700	1900	2200	2400
	20	440.5	250	0.985	25	25	240	400	580	780	940	1100	1300	1400	1610



VeGA valve 1-6943 Type - Cv F_L x_T

EDC-E Trim type: Double Cage with expansion for liquid service
Flow characteristic: EQUAL PERCENTAGE

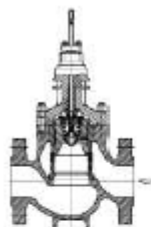
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	F _L	TRAVEL %										
					5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3/4	3/4	18.5	17	0.984	0.16	0.16	0.16	0.43	0.70	1.10	1.45	2.07	2.57	3.2	3.7
	1/2	12.5	17	0.984	0.11	0.11	0.11	0.32	0.53	0.83	1.11	1.57	1.97	2.5	2.9
	3/8	9	17	0.984	0.048	0.048	0.05	0.19	0.35	0.60	0.83	1.19	1.46	1.8	1.99
1	3/4	18.5	17	0.984	0.16	0.16	0.16	0.43	0.70	1.10	1.45	2.07	2.60	3.3	3.7
	1/2	12.5	17	0.984	0.11	0.11	0.11	0.32	0.53	0.83	1.11	1.57	1.97	2.5	2.9
	3/8	9	17	0.984	0.048	0.048	0.05	0.19	0.35	0.60	0.83	1.19	1.46	1.8	1.99
1.1/2	1.1/2	37.5	34	0.985	0.3	0.3	0.86	1.3	2.2	4.1	5.4	6.7	9.8	12	13.3
	1	27.5	34	0.985	0.22	0.22	0.8	1.2	2	3.6	4.7	5.7	8.3	10	11.3
	3/4	18.5	17	0.984	0.16	0.16	0.16	0.43	0.70	1.10	1.45	2.07	2.60	3.3	3.7
2	2	64	34	0.984	1	1	1.9	2.3	4.8	6.7	8.7	14	15	20	23
	1.1/2	37.5	34	0.985	0.3	0.3	0.86	1.3	2.2	4.1	5.4	6.7	9.8	12	13.4
	1	27.5	34	0.985	0.22	0.22	0.8	1.2	2	3.6	4.7	5.7	8.3	10	11.4
3	3	82	45	0.983	1.3	1.3	2.8	4.3	7.1	13	16	21	31	35	41
	2	64	34	0.984	1	1	1.9	2.3	4.8	6.7	8.7	14	15	21	25
	1.1/2	37.5	34	0.985	0.3	0.3	0.86	1.3	2.2	4.1	5.4	6.7	9.8	12	13.4
4	4	103.5	60	0.985	2.3	2.3	4.4	8.5	13	18	24	35	47	55	62
	3	82	45	0.983	1.3	1.3	2.8	4.3	7.1	13	16	21	31	35	41
	2	64	34	0.984	1	1	1.9	2.3	4.8	6.7	8.7	14	15	21	25
6	6	125.5	60	0.985	2.9	2.9	6.1	10	15	25	36	44	56	72	82
	4	103.5	60	0.985	2.3	2.3	4.4	8.5	13	18	24	35	47	56	63
	3	82	45	0.983	1.3	1.3	2.8	4.3	7.1	13	16	21	31	35	41
8	8	160.5	76	0.986	5.1	5.1	10	18	26	41	61	75	92	120	135
	6	125.5	60	0.985	2.9	2.9	6.1	10	15	25	36	44	56	72	82
	4	103.5	60	0.985	2.3	2.3	4.4	8.5	13	18	24	35	47	56	63
10	10	214.5	100	0.986	8.4	8.4	13	28	45	64	87	120	160	190	220
	8	160.5	76	0.986	5.1	5.1	10	18	26	41	61	75	92	120	135
	6	125.5	60	0.985	2.9	2.9	6.1	10	15	25	36	44	56	72	82
12	12	242.5	120	0.983	11	11	18	37	67	110	150	200	250	300	350
	10	214.5	100	0.986	8.4	8.4	13	28	45	64	87	120	160	190	220
	8	160.5	76	0.986	5.1	5.1	10	18	26	41	61	75	92	120	135
14	14	291.5	150	0.983	12	12	22	45	83	140	210	280	360	430	490
	12	242.5	120	0.983	11	11	18	37	67	110	150	200	250	300	350
	10	214.5	100	0.986	8.4	8.4	13	28	45	64	87	120	160	190	220
16	16	341.5	200	0.985	16	16	30	72	130	190	270	380	480	590	700
	14	291.5	150	0.983	12	12	22	45	83	140	210	280	360	430	490
	12	242.5	120	0.983	11	11	18	37	67	110	150	200	250	300	350
20	20	440.5	250	0.985	25	26	68	130	210	340	450	630	800	960	1140
	16	341.5	200	0.985	16	16	30	72	130	190	270	380	480	590	700
	14	291.5	150	0.983	12	12	22	45	83	140	210	280	360	430	490
24	24	521.5	300	0.985	40	40	100	190	330	500	680	950	1200	1500	1690
	20	440.5	250	0.985	25	26	68	130	210	340	450	630	800	960	1140



VeGA valve 1-6948 Type - Cv F_L x_T

PLN-L Trim type: Plug with Pilot - Low Noise
Flow characteristic: LINEAR

				TRAVEL %											
DN [in]	Port [in]	Φ Seat [mm]	Travel [mm]	5% *	10% *	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Pressure recovery factor F _L				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Press. diff. ratio factor x _T				0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.77	
2	2	65.5	34	0.0	0.0	3.5	9.2	20	30	39	43	47	50	54	
3	3	83.5	45	0.0	0.0	8.3	25	45	64	81	94	100	110	110	
4	4	105.5	60	0.0	3	15	44	74	100	130	150	160	170	180	
6	6	127.5	60	0.0	3.8	19	54	91	130	170	200	230	260	280	
8	8	162.5	76	0.0	6.7	38	99	160	220	280	330	390	440	460	
10	10	216.5	100	0.0	12	80	190	300	410	520	610	710	800	850	
12	12	244.5	120	0.0	17	120	260	400	550	680	800	920	1000	1110	
14	14	294.5	150	0.0	17	120	340	550	770	990	1200	1400	1600	1720	
16	16	344.5	200	15	24	220	580	930	1300	1600	1900	2100	2200	2300	
20	20	443.5	250	25	43	500	1100	1600	2200	2600	3100	3500	3800	4000	
24	24	524.5	300	39	64	750	1600	2400	3200	3900	4600	5200	5600	5800	

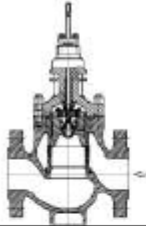


VeGA valve 1-6948 Type - Cv F_L x_T

PLN-E Trim type: Plug with Pilot - Low Noise
Flow characteristic: EQUAL PERCENTAGE

				TRAVEL %											
DN [in]	Port [in]	Φ Seat [mm]	Travel [mm]	5% *	10% *	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Pressure recovery factor F _L				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93	
Press. diff. ratio factor x _T				0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.76	0.76	0.76	0.75	
2	2	65.5	34	0.0	0.0	2.3	5	8.4	14	19	25	33	41	44	
3	3	83.5	45	0.0	0.0	5	10	18	29	43	57	72	88	94	
4	4	105.5	60	0.0	2.7	8.4	17	31	47	64	88	120	140	153	
6	6	127.5	60	0.0	3.6	13	28	50	77	110	150	180	210	230	
8	8	162.5	76	0.0	5.6	18	46	84	130	190	250	300	360	380	
10	10	216.5	100	0.0	9.4	32	77	140	230	330	440	550	640	690	
12	12	244.5	120	0.0	13	44	110	200	310	450	590	720	840	910	
14	14	294.5	150	0.0	14	56	150	280	450	660	880	1100	1300	1430	
16	16	344.5	200	15	19	88	190	350	540	810	1100	1400	1700	1910	
20	20	443.5	250	25	30	150	360	630	980	1400	2000	2500	2900	3300	
24	24	524.5	300	39	47	260	520	860	1500	2100	2800	3600	4300	4800	

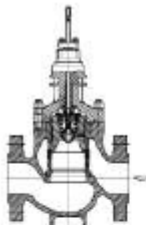
*When Cv value is not indicated pilot plug is open and main plug is still closed.



VeGA valve 1-6948 Type - $C_v F_L x_T$

PXLN-L Trim type: Plug with Pilot - Special Low Noise
Flow characteristic: LINEAR

				TRAVEL %										
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	5% *	10% *	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pressure recovery factor F_L				0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93	0.93	0.93
Press. diff. ratio factor x_T				0.78	0.78	0.78	0.77	0.77	0.76	0.76	0.76	0.75	0.75	
2	2	65.5	34	0.0	0.0	2.9	6.1	13	19	25	31	37	41	43
3	3	83.5	45	0.0	0.0	5.8	16	28	39	50	61	72	82	87
4	4	105.5	60	0.0	2.9	11	29	47	65	83	100	120	130	142
6	6	127.5	60	0.0	3.6	14	35	58	80	100	120	150	170	178
8	8	162.5	76	0.0	6	25	60	95	130	160	200	230	260	280
10	10	216.5	100	0.0	11	53	120	180	250	310	380	440	500	540
12	12	244.5	120	0.0	15	82	180	270	360	450	540	630	710	750
14	14	294.5	150	0.0	15	84	220	360	500	640	780	920	1100	1130
16	16	344.5	200	15	21	150	370	590	800	1000	1200	1400	1600	1720
20	20	443.5	250	25	37	320	670	1000	1400	1700	2000	2300	2600	2800
24	24	524.5	300	39	55	480	980	1500	2000	2500	3000	3400	3800	4100



VeGA valve 1-6948 Type - $C_v F_L x_T$

PXLN-E Trim type: Plug with Pilot - Special Low Noise
Flow characteristic: EQUAL PERCENTAGE

				TRAVEL %										
DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	5% *	10% *	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pressure recovery factor F_L				0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93	0.93
Press. diff. ratio factor x_T				0.78	0.78	0.78	0.77	0.77	0.77	0.76	0.76	0.75	0.75	0.74
2	2	65.5	34	0.0	0.0	2	3.6	6.8	11	16	21	26	32	38
3	3	83.5	45	0.0	0.0	3.9	9.1	17	25	34	45	56	67	73
4	4	105.5	60	0.0	2.6	7	16	26	39	54	72	90	110	117
6	6	127.5	60	0.0	3.4	9.6	19	33	50	72	94	120	140	148
8	8	162.5	76	0.0	5.3	13	30	51	77	110	140	180	210	230
10	10	216.5	100	0.0	8.9	23	51	94	150	210	280	340	410	440
12	12	244.5	120	0.0	13	39	80	140	210	300	390	480	570	620
14	14	294.5	150	0.0	13	41	100	190	300	430	570	710	850	930
16	16	344.5	200	15	18	64	160	280	450	660	870	1100	1300	1420
20	20	443.5	250	25	30	130	280	480	740	1100	1400	1700	2100	2300
24	24	524.5	300	39	44	180	400	680	1100	1500	2000	2500	3000	3300

*When C_v value is not indicated pilot plug is open and main plug is still closed.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

**ST-L Trim type: Standard
Flow characteristic: LINEAR**

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. (2)	C.F. end [%]	TRAVEL %										
						5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8	8 (1)	198.5	100	7.77	7.6	7.77	14.5	103	243	401	544	648	719	768	803	829
Press. recovery factor F _L						0.94	0.94	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.91	0.91
Press. diff. ratio factor x _T						0.78	0.78	0.77	0.76	0.74	0.73	0.72	0.71	0.71	0.71	0.71

- (1) Special Body's execution.
- (2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

**ST-E Trim type: Standard
Flow characteristic: EQUAL PERCENTAGE**

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. (2)	C.F. end [%]	TRAVEL %										
						5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8	8 (1)	198.5	100	7.77	7.6	7.77	14.5	61.7	118	196	301	430	562	664	733	781
Press. recovery factor F _L						0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.92	0.92
Press. diff. ratio factor x _T						0.78	0.78	0.77	0.77	0.76	0.76	0.75	0.74	0.73	0.73	0.73

- (1) Special Body's execution.
- (2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

LN-L Trim type: Low Noise
Flow characteristic: LINEAR

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. ⁽¹⁾	TRAVEL %												
					C.F. end [%]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
6	6	125.5	100	3.43	6.72	3.42	22.4	88.8	157	218	276	335	371	395	411	424	
8	8	160.5	120	5.77	6.33	5.75	38.7	140	242	337	425	515	584	626	654	675	
	8 ⁽¹⁾	198.5	100	8.72	7.6	8.72	27.6	129	232	334	435	524	608	658	695	732	
10	10	214.5	150	9.45	6.33	9.45	64.6	233	408	567	716	865	973	1040	1100	1130	
12	12	242.5	200	12.4	5.34	12.4	123	378	640	863	1090	1280	1380	1450	1500	1540	
Pressure recovery factor F _L						0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Press. diff. ratio factor x _T						0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.77	0.77	0.77

(1) Special Body's execution.

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

LN-E Trim type: Low Noise
Flow characteristic: EQUAL PERCENTAGE

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. ⁽¹⁾	TRAVEL %												
					C.F. end [%]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
6	6	125.5	100	3.43	6.72	3.42	7.22	20.5	43.7	73.2	115	164	215	274	333	372	
8	8	160.5	120	5.77	6.33	5.75	12.4	32.6	70	118	180	260	342	432	523	593	
10	10	214.5	150	9.45	6.33	9.45	18.7	46.8	103	178	272	388	528	668	819	957	
12	12	242.5	200	12.4	5.34	12.4	30.9	79.3	166	289	444	632	824	1050	1280	1380	
Pressure recovery factor F _L						0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Press. diff. ratio factor x _T						0.78	0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.77

(1) Special Body's execution.

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

**XLN-L Trim type: Special Low Noise
Flow characteristic: LINEAR**

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. (2)	TRAVEL %												
					C.F. end [%]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1.1/2	1.1/2	37.5	45	0.383	9.37	0.355	0.383	6.4	12.6	18.3	23.6	27.2	29.4	31.3	32.7	33.7	
2	2	64	60	1.21	7.03	1.21	4.3	16.8	29.5	40.8	45.1	49.5	54.2	59	63.8	68.1	
3	3	82	76	1.57	6.86	1.57	6.27	23.3	41.2	59.6	77.7	93.7	102	109	117	125	
4	4	103.5	100	2.77	6.72	2.76	9.96	37	64	92.7	120	146	164	175	187	199	
6	6	125.5	100	3.43	6.72	3.42	14.2	54.8	95.3	136	176	212	247	284	321	352	
8	8	160.5	120	5.77	6.33	5.75	23.5	80.4	138	196	255	310	362	413	465	517	
10	10	214.5	150	9.45	6.33	9.45	42.4	146	248	355	459	558	650	741	837	924	
12	12	242.5	200	12.4	5.34	12.4	82.2	248	412	581	737	881	1030	1180	1290	1370	
Press. recovery factor F _L					0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Press. diff. ratio factor x _T					0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

**XLN-E Trim type: Special Low Noise
Flow characteristic: EQUAL PERCENTAGE**

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. (2)	TRAVEL %												
					C.F. end [%]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1.1/2	1.1/2	37.5	45	0.383	9.37	0.355	0.383	1.39	3.45	6.57	10.8	16	21.3	26.1	28.4	30.7	
2	2	64	60	1.21	7.03	1.21	1.65	3.67	7.38	13.1	20.3	29	39.1	44.1	48.3	53.4	
3	3	82	76	1.57	6.86	1.57	2.51	5.93	12.4	20.5	31.3	44.9	61.1	77.4	94.8	105	
4	4	103.5	100	2.77	6.72	2.76	4.93	13	24.9	41	62.3	86.5	117	145	164	177	
6	6	125.5	100	3.43	6.72	3.42	5.58	13.7	29.7	51.4	78.6	111	152	191	227	266	
8	8	160.5	120	5.77	6.33	5.75	9.31	21.4	44.4	76.8	118	168	227	285	336	392	
10	10	214.5	150	9.45	6.33	9.45	15	35.8	70.4	123	191	275	375	478	575	674	
12	12	242.5	200	12.4	5.34	12.4	24.1	55.8	110	189	288	406	548	705	850	1010	
Pressure recovery factor F _L					0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93
Press. diff. ratio factor x _T					0.78	0.78	0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.76

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

DC-L Trim type: Double Cage for liquid service
Flow characteristic: LINEAR

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. (2)	C.F. end [%]	TRAVEL %											
						5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1.1/2	1.1/2	37.5	45	0.382	9.37	0.384	0.631	5.17	9.75	14	17.2	19.5	21.1	22.4	23.6	24.4	
2	2	64	60	1.21	7.02	1.21	3.92	10.3	17.7	24.2	29.1	32.4	35	37.8	40.6	43.6	
3	3	82	76	1.57	6.66	1.57	8.68	25.4	40.4	53.7	63.3	70.3	75.6	81.1	86.7	92	
4	4	103.5	100	2.76	6.72	2.76	14.4	36	58.5	79.4	98.1	111	120	127	135	142	
6	6	125.5	100	3.42	6.72	3.42	16.9	48.7	74.4	101	128	155	180	203	224	243	
8	8	160.5	120	5.75	6.33	5.75	29.4	80.8	128	172	213	254	296	338	380	404	
10	10	214.5	150	9.45	6.33	9.45	46	122	184	252	324	391	449	506	568	630	
12	12	242.5	200	12.4	5.34	12.4	89.6	191	318	438	542	649	745	831	899	938	
Pressure recovery factor F _L						0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955
Press. diff. ratio factor x _T						0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

DC-E Trim type: Double Cage for liquid service
Flow characteristic: EQUAL PERCENTAGE

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Cv end C.F. (2)	C.F. end [%]	TRAVEL %											
						5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1.1/2	1.1/2	37.5	45	0.382	9.37	0.384	0.423	1.18	3.04	5.43	8.55	12.2	15.6	18.2	19.9	21.3	
2	2	64	60	1.21	7.02	1.21	2.02	3.94	7.34	11.3	15.8	21.1	25.7	29.7	32.4	35.4	
3	3	82	76	1.57	6.66	1.57	2.99	6.34	12.1	18.6	25.8	35.4	46.5	58.1	68.9	74.2	
4	4	103.5	100	2.76	6.72	2.76	5.09	9.41	16.3	24.1	36.5	52.2	70.6	89.6	109	117	
6	6	125.5	100	3.42	6.72	3.42	6.12	12.5	22.4	35	51.6	73.4	97.6	121	144	169	
8	8	160.5	120	5.75	6.33	5.75	10.5	24.1	43.8	65.7	92.3	126	166	211	255	297	
10	10	214.5	150	9.45	6.33	9.45	18.6	37.6	68.1	105	152	202	258	319	388	455	
12	12	242.5	200	12.4	5.34	12.4	25.3	45.4	93.5	153	221	306	392	489	585	681	
Pressure recovery factor F _L						0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955	0.955
Press. diff. ratio factor x _T						0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844	0.844

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

EDC-L Trim type: Double Cage with expansion for liquid service
Flow characteristic: LINEAR

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	F _L	x _T	Cv end C.F. (2)	TRAVEL %												
							C.F. end [%]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1.1/2	1.1/2	37.5	45	0.982	0.944	0.351	9.37	0.364	0.364	0.538	4.39	8.28	11.9	14.6	16.6	17.9	19	20	20.7
2	2	64	60	0.981	0.940	1.21	7.02	1.21	3.3	8.7	14.9	20.4	24.5	27.3	29.5	31.9	34.2	36.8	36.8
3	3	82	76	0.981	0.940	1.54	6.86	1.57	6.81	20	31.7	42.1	49.7	55.2	59.4	63.6	68.1	72.2	72.2
4	4	103.5	100	0.982	0.944	2.74	6.72	2.76	10.6	26.4	42.9	58.2	71.9	81.2	88	93.5	98.9	104	104
6	6	125.5	100	0.982	0.944	3.42	6.72	3.42	11.8	34	52	70.5	89.2	108	126	142	157	170	170
8	8	160.5	120	0.983	0.948	5.75	6.33	5.75	19.2	52.8	83.7	112	139	166	193	221	248	264	264
10	10	214.5	150	0.983	0.948	9.45	6.33	9.45	32.7	86.6	130	179	230	278	319	359	403	447	447
12	12	242.5	200	0.981	0.940	12.4	5.34	12.4	68.1	145	242	333	412	493	566	631	684	714	714

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6943 High Flow Capacity Type - Cv F_L x_T

EDC-E Trim type: Double Cage with expansion for liquid service
Flow characteristic: EQUAL PERCENTAGE

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	F _L	x _T	Cv end C.F. (2)	TRAVEL %												
							C.F. end [%]	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1.1/2	1.1/2	37.5	45	0.982	0.944	0.351	9.37	0.364	0.364	0.954	2.46	4.39	6.91	9.84	12.6	14.7	16.1	17.2	17.2
2	2	64	60	0.981	0.940	1.21	7.02	1.21	1.63	3.18	5.93	9.14	12.8	17	20.8	24	26.2	28.6	28.6
3	3	82	76	0.981	0.940	1.54	6.86	1.57	2.27	4.81	9.16	14.1	19.6	26.9	35.3	44.1	52.3	56.3	56.3
4	4	103.5	100	0.982	0.944	2.74	6.72	2.76	3.61	6.67	11.5	17	25.9	37	50	63.5	77	82.7	82.7
6	6	125.5	100	0.982	0.944	3.42	6.72	3.42	4.19	8.54	15.4	24	35.4	50.3	66.9	83.2	98.5	116	116
8	8	160.5	120	0.983	0.948	5.75	6.33	5.75	6.69	15.4	28	41.9	58.9	80.3	106	134	163	189	189
10	10	214.5	150	0.983	0.948	9.45	6.33	9.45	12.9	26.2	47.4	73.1	105	141	180	222	270	317	317
12	12	242.5	200	0.982	0.944	12.4	5.34	12.4	17.3	31.1	64.1	105	152	210	269	335	401	467	467

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6948 High Flow Capacity Type - $C_v F_L x_T$

PLN-L Trim type: Plug with Pilot - Low Noise Flow characteristic: LINEAR

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Pilot travel [mm]	Cv End C.F. ⁽²⁾	C.F. end [%]	TRAVEL %											
							5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
2	2	65.5	60	4	1.09	13.7	0	1.09	7.31	19.5	34.3	44.7	51.9	59.1	66.2	71.2	74.4	
3	3	83.5	76	5	1.7	13.4	0	1.7	8.91	23	40.4	60.7	82.4	97.4	108	120	130	
4	4	105.5	100	5	2.48	11.7	0	2.48	17.6	40.4	68.4	102	138	161	179	196	209	
6	6	127.5	100	6	3.93	12.7	0	3.93	27.2	81.2	147	208	264	319	358	380	397	
8	8	162.5	120	6	6.26	11.3	0	6.26	48	124	219	309	392	472	540	587	631	
10	10	216.5	150	8	9.93	11.7	0	9.93	90.4	242	417	575	722	864	954	1020	1060	
12	12	244.5	200	9	12.8	9.4	12.8	14	175	411	650	866	1070	1240	1340	1400	1440	
Pressure recovery factor F_L							0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Press. diff. ratio factor x_T							0.78	0.78	0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6948 High Flow Capacity Type - $C_v F_L x_T$

PLN-E Trim type: Plug with Pilot - Low Noise Flow characteristic: EQUAL PERCENTAGE

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Pilot travel [mm]	Cv end C.F. ⁽²⁾	C.F. end [%]	TRAVEL %											
							5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
2	2	65.5	60	4	1.09	13.7	0	1.09	4.29	10.7	19.5	29.9	39.4	45.1	50.9	57.8	64.3	
3	3	83.5	76	5	1.7	13.4	0	1.7	13.4	18.3	32.8	50.4	70.6	90.3	102	112	124	
4	4	105.5	100	5	2.48	11.7	0	2.48	14.1	32.5	56.1	85.8	120	151	169	186	202	
6	6	127.5	100	6	3.93	12.7	0	3.93	18.9	44.5	75.5	111	154	198	244	292	341	
8	8	162.5	120	6	6.26	11.3	0	6.26	23	51.5	91.3	146	215	291	374	459	539	
10	10	216.5	150	8	9.93	11.7	0	9.93	36.9	84.2	150	243	357	490	630	774	906	
12	12	244.5	200	9	12.8	9.4	12.8	13.5	61.3	137	241	379	544	722	914	1120	1270	
Pressure recovery factor F_L							0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Press. diff. ratio factor x_T							0.78	0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77		

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6948 High Flow Capacity Type - Cv F_L x_T

**PXLN-L Trim type: Plug with Pilot - Special Low Noise
Flow characteristic: LINEAR**

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Pilot travel [mm]	Cv end C.F. (2)	C.F. end [%]	TRAVEL %											
							5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
2	2	65.5	60	4	1.09	13.7	0	1.09	6.18	17	29.4	39	44.3	48.4	52.6	57	60.5	
3	3	83.5	76	5	1.7	13.4	0	1.7	7.82	23.4	44.1	64.6	83.1	95.3	103	110	117	
4	4	105.5	100	5	2.48	11.7	0	2.48	22	52.4	83.9	115	142	159	170	180	190	
6	6	127.5	100	6	3.93	12.7	0	3.93	19.2	51.7	91.4	131	170	205	238	272	305	
8	8	162.5	120	6	6.26	11.3	0	6.26	42.9	97.9	155	210	266	317	366	414	461	
10	10	216.5	150	8	9.93	11.7	0	9.93	72.5	173	275	375	476	566	653	739	825	
12	12	244.5	200	9	12.8	9.4	12.8	13.6	118	269	428	586	729	864	998	1130	1240	
Pressure recovery factor F _L							0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93
Press. diff. ratio factor x _T							0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.76

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA valve 1-6948 High Flow Capacity Type - Cv F_L x_T

**PXLN-E Trim type: Plug with Pilot - Special Low Noise
Flow characteristic: EQUAL PERCENTAGE**

DN [in]	Port [in]	Ø Seat [mm]	Travel [mm]	Pilot travel [mm]	Cv end C.F. (2)	C.F. end [%]	TRAVEL %											
							5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
2	2	65.5	60	4	1.09	13.7	0	1.09	3.15	6.73	11.9	18.9	27.4	37	42.6	46.8	50.2	
3	3	83.5	76	5	1.7	13.4	0	1.7	5.14	11.6	20.2	30.8	43.3	57.4	73.2	88.9	98.3	
4	4	105.5	100	5	2.48	11.7	0	2.48	10.1	21	35.3	53.4	74.4	98.8	125	150	163	
6	6	127.5	100	6	3.93	12.7	0	3.93	13.6	29.2	49.1	72.4	99.8	132	167	202	236	
8	8	162.5	120	6	6.26	11.3	0	6.26	16.1	32.7	55.8	86.6	125	169	225	281	330	
10	10	216.5	150	8	9.93	11.7	0	9.93	26.2	57.2	103	160	235	326	427	525	611	
12	12	244.5	200	9	12.8	9.4	12.8	13.2	44.8	97.1	174	271	385	532	682	818	952	
Pressure recovery factor F _L							0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93
Press. diff. ratio factor x _T							0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.76	0.76	0.76	

(2) The minimum controllable Cv Value must be at least 30% above "Cv end C.F." to take in account for Cv nominal tolerances.

VeGA 1-6940 SERIES CAGE CONTROL VALVES

SECTION C

— PRESSURE DROP TABLES



C-1

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SECTION A – GENERAL DESCRIPTION

SECTION B – TECHNICAL TABLES

C_V , F_L , X_T VERSUS TRAVEL

SECTION C – TECHNICAL TABLES

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⁽¹⁾Tabulated values refers to room temperature conditions. Temperature influence on balancing inserts performances has not been taken into account. See relevant documentation for further information.

Maximum differential pressures $\Delta P=P_1-P_2$ are calculated under the assumption $P_2=0$. When P_2 is significantly higher than zero please contact Parcol Technical Department.

⁽²⁾Flatted plugs available only for 1-6941 type, max rating ANSI 600 for DN 1/2".

SECTION A – GENERAL DESCRIPTION

SECTION B – TECHNICAL TABLES CV, F_L, X_T VERSUS TRAVEL

SECTION C – TECHNICAL TABLES PRESSURE DROP TABLES⁽¹⁾

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⁽¹⁾Tabulated values refers to room temperature conditions. Temperature influence on balancing inserts performances has not been taken into account. See relevant documentation for further information.

Maximum differential pressures $\Delta P=P_1-P_2$ are calculated under the assumption $P_2=0$. When P_2 is significantly higher than zero please contact Parcol Technical Department.

⁽²⁾Flatted plugs available only for 1-6941 type, max rating ANSI 600 for DN1/2

1-6941 Type

Trim Type	Microflow	
Leakage class	IV	IEC 60534-4
Packing	GRF	

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	Ø3mm	F	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	Ø4mm	F	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	Ø6mm	F	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	Ø6mm	C	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	Ø9mm	C	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	Ø12mm	C	17	1-X-290 D33	30 ÷ 44	60	430	- ÷ -	-	-
					20 ÷ 29	40	398	9 ÷ 18	40	430

⁽¹⁾C=Contoured, F=Flatted

1-6941 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Suppl psi	ΔP shut-off bar	Spring range psi	Suppl psi	ΔP shut-off bar
1/2 3/4 1	1/2	17	1-X-290 D33	30 ÷ 44	60	416	13 ÷ 27	60	430
				20 ÷ 29	40	259	9 ÷ 18	40	293
3/4 1	3/4	17	1-X-290 D33	30 ÷ 44	60	266	13 ÷ 27	60	298
				20 ÷ 29	40	166	9 ÷ 18	40	187
1	1	17	1-X-290 D33	30 ÷ 44	60	185	13 ÷ 27	60	194
				20 ÷ 29	40	115	9 ÷ 18	40	130
1.1/2 2	1/2	25	1-X-290 D33	23 ÷ 44	60	304	7 ÷ 26	60	430
				15 ÷ 29	40	185	5 ÷ 17	40	297
			1-X-290 D39	25 ÷ 45	60	430	- ÷ -	-	-
				16 ÷ 30	40	272	5 ÷ 19	40	376
			1-X-290 D46	22 ÷ 31	40	430	11 ÷ 21	40	430
				23 ÷ 44	60	194	7 ÷ 26	60	302
	3/4	25	1-X-290 D33	15 ÷ 29	40	118	5 ÷ 17	40	189
				25 ÷ 45	60	287	7 ÷ 28	60	388
			1-X-290 D39	16 ÷ 30	40	174	5 ÷ 19	40	241
				32 ÷ 47	60	430	16 ÷ 31	60	430
			1-X-290 D46	22 ÷ 31	40	383	11 ÷ 21	40	338
				23 ÷ 44	60	135	7 ÷ 26	60	209
	1	25	1-X-290 D33	15 ÷ 29	40	81	5 ÷ 17	40	131
				25 ÷ 45	60	199	7 ÷ 28	60	269
			1-X-290 D39	16 ÷ 30	40	120	5 ÷ 19	40	167
				32 ÷ 47	60	418	16 ÷ 31	60	371
			1-X-290 D46	22 ÷ 31	40	266	11 ÷ 21	40	235
				23 ÷ 44	60	92	7 ÷ 26	60	143
	1 1/4	25	1-X-290 D33	15 ÷ 29	40	55	5 ÷ 17	40	89
				25 ÷ 45	60	136	7 ÷ 28	60	184
			1-X-290 D39	16 ÷ 30	40	82	5 ÷ 19	40	114
				32 ÷ 47	60	286	16 ÷ 31	60	254
			1-X-290 D46	22 ÷ 31	40	182	11 ÷ 21	40	160
				23 ÷ 44	60	59	7 ÷ 26	60	87
1 1/2	25	1-X-290 D33	15 ÷ 29	40	35	5 ÷ 17	40	58	
			25 ÷ 45	60	88	7 ÷ 28	60	119	
		1-X-290 D39	16 ÷ 30	40	53	5 ÷ 19	40	73	
			32 ÷ 47	60	185	16 ÷ 31	60	164	
		1-X-290 D46	22 ÷ 31	40	117	11 ÷ 21	40	104	
			23 ÷ 44	60	92	7 ÷ 26	60	143	

1-6941 Type

Trim Type Contoured
 Leakage class IV IEC 60534-4
 Packing GRF

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)				
				Spring range psi	Suppl psi	ΔP shut-off bar	Spring range psi	Suppl psi	ΔP shut-off bar		
2	2	25	1-X-290 D33	23 ÷ 44	60	36	7 ÷ 26	60	52		
				15 ÷ 29	40	21	5 ÷ 17	40	35		
			1-X-290 D39	25 ÷ 45	60	53	7 ÷ 28	60	72		
				16 ÷ 30	40	32	5 ÷ 19	40	44		
			1-X-290 D46	32 ÷ 47	60	113	16 ÷ 31	60	100		
				22 ÷ 31	40	71	11 ÷ 21	40	63		
3	1	34	1-X-290 D39	25 ÷ 45	60	201	12 ÷ 28	60	266		
				17 ÷ 30	40	121	8 ÷ 19	40	165		
			1-X-290 D46	24 ÷ 44	60	298	7 ÷ 28	60	417		
				16 ÷ 29	40	186	5 ÷ 18	40	265		
			1 1/4	34	1-X-290 D39	25 ÷ 45	60	137	12 ÷ 28	60	182
						17 ÷ 30	40	83	8 ÷ 19	40	112
	1-X-290 D46	24 ÷ 44			60	204	7 ÷ 28	60	285		
		16 ÷ 29			40	127	5 ÷ 18	40	181		
	1 1/2	34	1-X-290 D39	25 ÷ 45	60	89	12 ÷ 28	60	118		
				17 ÷ 30	40	53	8 ÷ 19	40	72		
			1-X-290 D46	24 ÷ 44	60	132	7 ÷ 28	60	185		
				16 ÷ 29	40	82	5 ÷ 18	40	117		
			2	34	1-X-290 D39	25 ÷ 45	60	54	12 ÷ 28	60	71
						17 ÷ 30	40	32	8 ÷ 19	40	44
	1-X-290 D46	24 ÷ 44			60	80	7 ÷ 28	60	112		
		16 ÷ 29			40	50	5 ÷ 18	40	71		
	2 1/2	34	1-X-290 D39	25 ÷ 45	60	30	12 ÷ 28	60	40		
				17 ÷ 30	40	18	8 ÷ 19	40	24		
			1-X-290 D46	24 ÷ 44	60	45	7 ÷ 28	60	64		
				16 ÷ 29	40	28	5 ÷ 18	40	40		
			3	34	1-X-290 D39	25 ÷ 45	60	21	12 ÷ 28	60	28
						17 ÷ 30	40	12	8 ÷ 19	40	17
	1-X-290 D46	24 ÷ 44			60	31	7 ÷ 28	60	44		
		16 ÷ 29			40	19	5 ÷ 18	40	28		

1-6941 Type

Trim Type Contoured
 Leakage class IV IEC 60534-4
 Packing GRF

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut- bar	Spring range psi	Supply psi	ΔP shut-off bar
4	1 1/4	45	1-X-290 D39	19 ÷ 47	60	99	7 ÷ 28	60	179
				13 ÷ 31	40	57	5 ÷ 19	40	110
			1-X-290 D46	24 ÷ 44	60	205	12 ÷ 28	60	280
				16 ÷ 30	40	128	8 ÷ 19	40	178
			1-X-290 D63	22 ÷ 41	60	406	7 ÷ 26	60	430
				15 ÷ 27	40	262	4 ÷ 17	40	423
			1-X-290 D63D	15 ÷ 27	40	430	4 ÷ 17	40	430
			1 1/2	45	1-X-290 D39	19 ÷ 47	60	64	7 ÷ 28
	13 ÷ 31	40				37	5 ÷ 19	40	71
	1-X-290 D46	24 ÷ 44			60	133	12 ÷ 28	60	182
		16 ÷ 30			40	83	8 ÷ 19	40	115
	1-X-290 D63	22 ÷ 41			60	263	7 ÷ 26	60	421
		15 ÷ 27			40	170	4 ÷ 17	40	275
	1-X-290 D63D	22 ÷ 41			60	430	- ÷ -	-	-
	15 ÷ 27	40			357	4 ÷ 17	40	430	
	2	45	1-X-290 D39	19 ÷ 47	60	38	7 ÷ 28	60	70
				13 ÷ 31	40	22	5 ÷ 19	40	43
			1-X-290 D46	24 ÷ 44	60	81	12 ÷ 28	60	111
				16 ÷ 30	40	50	8 ÷ 19	40	70
			1-X-290 D63	22 ÷ 41	60	160	7 ÷ 26	60	257
				15 ÷ 27	40	103	4 ÷ 17	40	167
			1-X-290 D63D	22 ÷ 41	60	332	7 ÷ 26	60	430
			15 ÷ 27	40	218	4 ÷ 17	40	346	
	2 1/2	45	1-X-290 D39	19 ÷ 47	60	21	7 ÷ 28	60	40
				13 ÷ 31	40	12	5 ÷ 19	40	24
			1-X-290 D46	24 ÷ 44	60	45	12 ÷ 28	60	63
				16 ÷ 30	40	28	8 ÷ 19	40	39
			1-X-290 D63	22 ÷ 41	60	91	7 ÷ 26	60	146
				15 ÷ 27	40	58	4 ÷ 17	40	95
			1-X-290 D63D	22 ÷ 41	60	189	7 ÷ 26	60	299
			15 ÷ 27	40	124	4 ÷ 17	40	197	
	3	45	1-X-290 D39	19 ÷ 47	60	15	7 ÷ 28	60	27
				13 ÷ 31	40	8	5 ÷ 19	40	16
			1-X-290 D46	24 ÷ 44	60	31	12 ÷ 28	60	43
				16 ÷ 30	40	19	8 ÷ 19	40	27
			1-X-290 D63	22 ÷ 41	60	63	7 ÷ 26	60	101
				15 ÷ 27	40	40	4 ÷ 17	40	66
			1-X-290 D63D	22 ÷ 41	60	132	7 ÷ 26	60	208
			15 ÷ 27	40	86	4 ÷ 17	40	137	
	4	45	1-X-290 D39	19 ÷ 47	60	10	7 ÷ 28	60	19
				13 ÷ 31	40	5	5 ÷ 19	40	11
			1-X-290 D46	24 ÷ 44	60	22	12 ÷ 28	60	30
				16 ÷ 30	40	13	8 ÷ 19	40	19
			1-X-290 D63	22 ÷ 41	60	44	7 ÷ 26	60	70
				15 ÷ 27	40	28	4 ÷ 17	40	46
			1-X-290 D63D	22 ÷ 41	60	91	7 ÷ 26	60	145
			15 ÷ 27	40	60	4 ÷ 17	40	95	

1-6941 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
6	2 1/2	60	1-X-290 D46	19 ÷ 48	60	34	7 ÷ 28	60	61
				13 ÷ 32	40	20	5 ÷ 19	40	39
			1-X-290 D63	21 ÷ 42	60	87	10 ÷ 28	60	144
				14 ÷ 28	40	56	7 ÷ 17	40	94
			1-X-290 D63D	21 ÷ 42	60	181	10 ÷ 28	60	296
				14 ÷ 28	40	119	7 ÷ 17	40	195
	3	60	1-X-290 D46	19 ÷ 48	60	23	7 ÷ 28	60	42
				13 ÷ 32	40	14	5 ÷ 19	40	27
			1-X-290 D63	21 ÷ 42	60	61	10 ÷ 28	60	100
				14 ÷ 28	40	39	7 ÷ 17	40	65
			1-X-290 D63	21 ÷ 42	60	126	10 ÷ 28	60	206
				14 ÷ 28	40	82	7 ÷ 17	40	136
	4	60	1-X-290 D46	19 ÷ 48	60	16	7 ÷ 28	60	29
				13 ÷ 32	40	9	5 ÷ 19	40	18
			1-X-290 D63	21 ÷ 42	60	42	10 ÷ 28	60	70
				14 ÷ 28	40	27	7 ÷ 17	40	45
			1-X-290 D63D	21 ÷ 42	60	88	10 ÷ 28	60	143
				14 ÷ 28	40	57	7 ÷ 17	40	94
	5	60	1-X-290 D46	19 ÷ 48	60	10	7 ÷ 28	60	18
				13 ÷ 32	40	5	5 ÷ 19	40	11
			1-X-290 D63	21 ÷ 42	60	26	10 ÷ 28	60	43
				14 ÷ 28	40	16	7 ÷ 17	40	28
			1-X-290 D63D	21 ÷ 42	60	54	10 ÷ 28	60	88
				14 ÷ 28	40	35	7 ÷ 17	40	58
6	60	1-X-290 D46	19 ÷ 48	60	7	7 ÷ 28	60	13	
			13 ÷ 32	40	4	5 ÷ 19	40	8	
		1-X-290 D63	21 ÷ 42	60	18	10 ÷ 28	60	30	
			14 ÷ 28	40	11	7 ÷ 17	40	20	
		1-X-290 D63D	21 ÷ 42	60	38	10 ÷ 28	60	63	
			14 ÷ 28	40	25	7 ÷ 17	40	41	
8	4	76	1-X290 D46	19 ÷ 40	60	16	6 ÷ 30	60	27
				13 ÷ 27	40	10	4 ÷ 20	40	17
			1-X-290 D63	15 ÷ 42	60	29	7 ÷ 28	60	68
				10 ÷ 28	40	18	4 ÷ 17	40	44
			1-X-290 D63D	15 ÷ 42	60	61	7 ÷ 28	60	140
				10 ÷ 28	40	40	4 ÷ 17	40	62
	5	76	1-X290 D46	19 ÷ 40	60	9	6 ÷ 30	60	17
				13 ÷ 27	40	6	4 ÷ 20	40	10
			1-X-290 D63	15 ÷ 42	60	17	7 ÷ 28	60	43
				10 ÷ 28	40	11	4 ÷ 17	40	27
			1-X-290 D63D	15 ÷ 42	60	37	7 ÷ 28	60	88
				10 ÷ 28	40	24	4 ÷ 17	40	56
	6	76	1-X290 D46	19 ÷ 40	60	7	6 ÷ 30	60	12
				13 ÷ 27	40	4	4 ÷ 20	40	7
			1-X-290 D63	15 ÷ 42	60	12	7 ÷ 28	60	31
				10 ÷ 28	40	7	4 ÷ 17	40	19
			1-X-290 D63D	15 ÷ 42	60	27	7 ÷ 28	60	63
				10 ÷ 28	40	17	4 ÷ 17	40	40
	8	76	1-X290 D46	19 ÷ 40	60	4	6 ÷ 30	60	7
				13 ÷ 27	40	2	4 ÷ 20	40	4
			1-X-290 D63	15 ÷ 42	60	7	7 ÷ 28	60	19
				10 ÷ 28	40	4	4 ÷ 17	40	12
			1-X-290 D63D	15 ÷ 42	60	16	7 ÷ 28	60	39
				10 ÷ 28	40	10	4 ÷ 17	40	25

1-6941 Type

Trim Type	Microflow
Leakage class	IV IEC 60534-4
Packing	TFK

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	Ø3mm	F	17	1-X-290 D25	17 ÷ 43	60	349	7 ÷ 26	60	430
				1-X-290 D33	11 ÷ 29	40	222	4 ÷ 18	40	348
	Ø4mm	F	17	1-X-290 D25	20 ÷ 29	40	430	9 ÷ 18	40	430
				1-X-290 D33	17 ÷ 43	60	349	7 ÷ 26	60	430
	Ø6mm	F	17	1-X-290 D25	11 ÷ 29	40	222	4 ÷ 18	40	390
				1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	Ø6mm	C	17	1-X-290 D25	17 ÷ 43	60	349	- ÷ -	-	-
				1-X-290 D33	11 ÷ 29	40	222	4 ÷ 18	40	430
	Ø6mm	C	17	1-X-290 D25	20 ÷ 29	40	430	- ÷ -	-	-
				1-X-290 D33	17 ÷ 43	60	349	- ÷ -	-	-
	Ø9mm	C	17	1-X-290 D25	11 ÷ 29	40	222	4 ÷ 18	40	430
				1-X-290 D33	20 ÷ 29	40	430	- ÷ -	-	-
Ø12mm	C	17	1-X-290 D25	17 ÷ 43	60	338	- ÷ -	-	-	
			1-X-290 D33	11 ÷ 29	40	213	4 ÷ 18	40	430	
Ø12mm	C	17	1-X-290 D25	20 ÷ 29	40	430	- ÷ -	-	-	
			1-X-290 D33	17 ÷ 43	60	199	7 ÷ 26	60	412	
Ø12mm	C	17	1-X-290 D25	11 ÷ 29	40	125	4 ÷ 18	40	267	
			1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430	

⁽¹⁾C=Contoured, F=Flatted

1-6941 Type

Trim Type	Contoured
Leakage class	IV IEC 60534-4
Packing	TFK

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Suppl psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	1/2	17	1-X-290 D25	17 ÷ 43	60	130	7 ÷ 26	60	270
			1-X-290 D33	11 ÷ 29	40	81	4 ÷ 18	40	174
3/4 1	3/4	17	1-X-290 D25	30 ÷ 44	60	430	13 ÷ 27	60	430
			1-X-290 D33	20 ÷ 29	40	296	9 ÷ 18	40	330
3/4 1	3/4	17	1-X-290 D25	17 ÷ 43	60	83	7 ÷ 26	60	168
			1-X-290 D33	11 ÷ 29	40	51	4 ÷ 18	40	111
1	1	17	1-X-290 D25	30 ÷ 44	60	290	13 ÷ 27	60	322
			1-X-290 D33	20 ÷ 29	40	189	9 ÷ 18	40	211
1	1	17	1-X-290 D25	17 ÷ 43	60	57	7 ÷ 26	60	116
			1-X-290 D33	11 ÷ 29	40	35	4 ÷ 18	40	77
1.1/2 2	1/2	25	1-X-290 D25	30 ÷ 44	60	201	13 ÷ 27	60	220
			1-X-290 D33	20 ÷ 29	40	131	9 ÷ 18	40	146
1.1/2 2	1/2	25	1-X-290 D33	23 ÷ 44	60	340	7 ÷ 26	60	430
			1-X-290 D39	15 ÷ 29	40	221	5 ÷ 17	40	333
1.1/2 2	3/4	25	1-X-290 D39	25 ÷ 45	60	430	- ÷ -	-	-
			1-X-290 D46	16 ÷ 30	40	330	5 ÷ 19	40	430
1.1/2 2	3/4	25	1-X-290 D33	22 ÷ 31	40	430	- ÷ -	-	-
			1-X-290 D39	23 ÷ 44	60	218	7 ÷ 26	60	325
1.1/2 2	3/4	25	1-X-290 D39	15 ÷ 29	40	141	5 ÷ 17	40	213
			1-X-290 D46	25 ÷ 45	60	325	7 ÷ 26	60	426
1.1/2 2	3/4	25	1-X-290 D39	16 ÷ 30	40	211	5 ÷ 19	40	278
			1-X-290 D46	32 ÷ 47	60	430	16 ÷ 31	60	430
1.1/2 2	3/4	25	1-X-290 D39	22 ÷ 31	40	420	11 ÷ 21	40	376
			1-X-290 D46	22 ÷ 31	40	420	11 ÷ 21	40	376

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Section C – Pressure Drop Tables

1-6941 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)				
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar		
1.1/2 2	1	25	1-X-290 D33	23 ÷ 44	60	151	7 ÷ 26	60	226		
				15 ÷ 29	40	98	5 ÷ 17	40	148		
			1-X-290 D39	25 ÷ 45	60	226	7 ÷ 28	60	298		
				16 ÷ 30	40	146	5 ÷ 19	40	193		
			1-X-290 D46	32 ÷ 47	60	430	16 ÷ 31	60	397		
				22 ÷ 31	40	292	11 ÷ 21	40	261		
	1 1/4	25	1-X-290 D33	23 ÷ 44	60	103	7 ÷ 26	60	154		
				15 ÷ 29	40	66	5 ÷ 17	40	101		
			1-X-290 D39	25 ÷ 45	60	154	7 ÷ 28	60	202		
				16 ÷ 30	40	100	5 ÷ 19	40	132		
			1-X-290 D46	32 ÷ 47	60	304	16 ÷ 31	60	272		
				22 ÷ 31	40	200	11 ÷ 21	40	178		
1 1/2	25	1-X-290 D33	23 ÷ 44	60	66	7 ÷ 26	60	98			
			15 ÷ 29	40	43	5 ÷ 17	40	65			
		1-X-290 D39	25 ÷ 45	60	100	7 ÷ 28	60	131			
			16 ÷ 30	40	64	5 ÷ 19	40	85			
		1-X-290 D46	32 ÷ 47	60	197	16 ÷ 31	60	176			
			22 ÷ 31	40	129	11 ÷ 21	40	115			
2	2	25	1-X-290 D33	23 ÷ 44	60	40	7 ÷ 26	60	60		
				15 ÷ 29	40	26	5 ÷ 17	40	39		
			1-X-290 D39	25 ÷ 45	60	60	7 ÷ 28	60	79		
				16 ÷ 30	40	39	5 ÷ 19	40	52		
			1-X-290 D46	32 ÷ 47	60	120	16 ÷ 31	60	107		
				22 ÷ 31	40	78	11 ÷ 21	40	70		
3	1	34	1-X-290 D39	25 ÷ 45	60	227	12 ÷ 28	60	292		
				17 ÷ 30	40	147	8 ÷ 19	40	191		
			1-X-290 D46	24 ÷ 44	60	324	7 ÷ 28	60	430		
				16 ÷ 29	40	212	5 ÷ 18	40	291		
			1 1/4	34	1-X-290 D39	25 ÷ 45	60	155	12 ÷ 28	60	200
						17 ÷ 30	40	101	8 ÷ 19	40	130
	1-X-290 D46	24 ÷ 44			60	222	7 ÷ 28	60	303		
		16 ÷ 29			40	145	5 ÷ 18	40	199		
	1 1/2	34	1-X-290 D39	25 ÷ 45	60	100	12 ÷ 28	60	129		
				17 ÷ 30	40	65	8 ÷ 19	40	84		
			1-X-290 D46	24 ÷ 44	60	143	7 ÷ 28	60	196		
				16 ÷ 29	40	94	5 ÷ 18	40	129		
	2	34	1-X-290 D39	25 ÷ 45	60	61	12 ÷ 28	60	78		
				17 ÷ 30	40	39	8 ÷ 19	40	51		
			1-X-290 D46	24 ÷ 44	60	87	7 ÷ 28	60	120		
				16 ÷ 29	40	57	5 ÷ 18	40	78		
			2 1/2	34	1-X-290 D39	25 ÷ 45	60	34	12 ÷ 28	60	44
						17 ÷ 30	40	22	8 ÷ 19	40	29
1-X-290 D46	24 ÷ 44	60			49	7 ÷ 28	60	68			
	16 ÷ 29	40			32	5 ÷ 18	40	44			
3	34	1-X-290 D39	25 ÷ 45	60	24	12 ÷ 28	60	31			
			17 ÷ 30	40	15	8 ÷ 19	40	20			
		1-X-290 D46	24 ÷ 44	60	34	7 ÷ 28	60	47			
			16 ÷ 29	40	22	5 ÷ 18	40	31			

1-6941 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
4	1 1/4	45	1-X-290 D39	19 ÷ 47	60	117	7 ÷ 28	60	197
				13 ÷ 31	40	75	5 ÷ 19	40	128
			1-X-290 D46	24 ÷ 44	60	223	12 ÷ 28	60	298
				16 ÷ 30	40	146	8 ÷ 19	40	196
	1 1/2	45	1-X-290 D63	22 ÷ 41	60	424	- ÷ -	-	-
				15 ÷ 27	40	280	4 ÷ 17	40	430
			1-X-290 D63D	15 ÷ 27	40	430	- ÷ -	-	-
				19 ÷ 47	60	75	7 ÷ 28	60	127
	2	45	1-X-290 D39	13 ÷ 31	40	48	5 ÷ 19	40	83
				24 ÷ 44	60	144	12 ÷ 28	60	193
			1-X-290 D46	16 ÷ 30	40	94	8 ÷ 19	40	127
				22 ÷ 41	60	275	7 ÷ 26	60	430
	2 1/2	45	1-X-290 D63	15 ÷ 27	40	181	4 ÷ 17	40	286
				22 ÷ 41	60	430	- ÷ -	-	-
			1-X-290 D63D	15 ÷ 27	40	369	4 ÷ 17	40	430
				19 ÷ 47	60	46	7 ÷ 28	60	77
	3	45	1-X-290 D39	13 ÷ 31	40	29	5 ÷ 19	40	50
				24 ÷ 44	60	88	12 ÷ 28	60	118
			1-X-290 D46	16 ÷ 30	40	57	8 ÷ 19	40	77
				22 ÷ 41	60	168	7 ÷ 26	60	264
	4	45	1-X-290 D63	15 ÷ 27	40	110	4 ÷ 17	40	174
				22 ÷ 41	60	339	7 ÷ 26	60	430
			1-X-290 D63D	15 ÷ 27	40	225	4 ÷ 17	40	353
				19 ÷ 47	60	26	7 ÷ 28	60	44
	3	45	1-X-290 D39	13 ÷ 31	40	16	5 ÷ 19	40	28
				24 ÷ 44	60	50	12 ÷ 28	60	67
			1-X-290 D46	16 ÷ 30	40	32	8 ÷ 19	40	43
				22 ÷ 41	60	95	7 ÷ 26	60	150
	4	45	1-X-290 D63	15 ÷ 27	40	62	4 ÷ 17	40	99
				22 ÷ 41	60	193	7 ÷ 26	60	303
			1-X-290 D63D	15 ÷ 27	40	128	4 ÷ 17	40	201
				19 ÷ 47	60	18	7 ÷ 28	60	30
	3	45	1-X-290 D39	13 ÷ 31	40	11	5 ÷ 19	40	19
				24 ÷ 44	60	34	12 ÷ 28	60	46
			1-X-290 D46	16 ÷ 30	40	22	8 ÷ 19	40	30
				22 ÷ 41	60	66	7 ÷ 26	60	104
	4	45	1-X-290 D63	15 ÷ 27	40	43	4 ÷ 17	40	69
				22 ÷ 41	60	134	7 ÷ 26	60	211
			1-X-290 D63D	15 ÷ 27	40	89	4 ÷ 17	40	140
				19 ÷ 47	60	12	7 ÷ 28	60	21
4	45	1-X-290 D39	13 ÷ 31	40	7	5 ÷ 19	40	13	
			24 ÷ 44	60	24	12 ÷ 28	60	32	
		1-X-290 D46	16 ÷ 30	40	15	8 ÷ 19	40	21	
			22 ÷ 41	60	46	7 ÷ 26	60	72	
4	45	1-X-290 D63	15 ÷ 27	40	30	4 ÷ 17	40	48	
			22 ÷ 41	60	93	7 ÷ 26	60	147	
		1-X-290 D63D	15 ÷ 27	40	62	4 ÷ 17	40	97	

1-6941 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
6	2 1/2	60	1-X-290 D46	19 ÷ 48	60	38	7 ÷ 28	60	65
				13 ÷ 32	40	24	5 ÷ 19	40	43
			1-X-290 D63	21 ÷ 42	60	91	10 ÷ 26	60	149
				14 ÷ 28	40	60	7 ÷ 17	40	98
			1-X-290 D63D	21 ÷ 42	60	185	10 ÷ 26	60	300
				14 ÷ 28	40	123	7 ÷ 17	40	199
	3	60	1-X-290 D46	19 ÷ 48	60	28	7 ÷ 28	60	45
				13 ÷ 32	40	17	5 ÷ 19	40	29
			1-X-290 D63	21 ÷ 42	60	63	10 ÷ 26	60	103
				14 ÷ 28	40	41	7 ÷ 17	40	68
			1-X-290 D63D	21 ÷ 42	60	129	10 ÷ 26	60	209
				14 ÷ 28	40	85	7 ÷ 17	40	138
	4	60	1-X-290 D46	19 ÷ 48	60	18	7 ÷ 28	60	31
				13 ÷ 32	40	11	5 ÷ 19	40	20
			1-X-290 D63	21 ÷ 42	60	44	10 ÷ 26	60	72
				14 ÷ 28	40	29	7 ÷ 17	40	47
			1-X-290 D63D	21 ÷ 42	60	90	10 ÷ 26	60	145
				14 ÷ 28	40	59	7 ÷ 17	40	96
	5	60	1-X-290 D46	19 ÷ 48	60	11	7 ÷ 28	60	19
				13 ÷ 32	40	7	5 ÷ 19	40	12
			1-X-290 D63	21 ÷ 42	60	27	10 ÷ 26	60	44
				14 ÷ 28	40	17	7 ÷ 17	40	29
			1-X-290 D63D	21 ÷ 42	60	55	10 ÷ 26	60	89
				14 ÷ 28	40	36	7 ÷ 17	40	59
6	60	1-X-290 D46	19 ÷ 48	60	8	7 ÷ 28	60	13	
			13 ÷ 32	40	5	5 ÷ 19	40	9	
		1-X-290 D63	21 ÷ 42	60	19	10 ÷ 26	60	31	
			14 ÷ 28	40	12	7 ÷ 17	40	20	
		1-X-290 D63D	21 ÷ 42	60	39	10 ÷ 26	60	64	
			14 ÷ 28	40	26	7 ÷ 17	40	42	
8	4	76	1-X290 D46	19 ÷ 40	60	18	6 ÷ 30	60	29
				13 ÷ 27	40	12	4 ÷ 20	40	19
			1-X-290 D63	15 ÷ 42	60	31	7 ÷ 26	60	70
				10 ÷ 28	40	20	4 ÷ 17	40	46
			1-X-290 D63D	15 ÷ 42	60	63	7 ÷ 26	60	142
				10 ÷ 28	40	41	4 ÷ 17	40	94
	5	76	1-X290 D46	19 ÷ 40	60	11	6 ÷ 30	60	18
				13 ÷ 27	40	7	4 ÷ 20	40	11
			1-X-290 D63	15 ÷ 42	60	19	7 ÷ 26	60	43
				10 ÷ 28	40	12	4 ÷ 17	40	28
			1-X-290 D63D	15 ÷ 42	60	39	7 ÷ 26	60	88
				10 ÷ 28	40	25	4 ÷ 17	40	58
	6	76	1-X290 D46	19 ÷ 40	60	7	6 ÷ 30	60	13
				13 ÷ 27	40	5	4 ÷ 20	40	8
			1-X-290 D63	15 ÷ 42	60	13	7 ÷ 26	60	31
				10 ÷ 28	40	8	4 ÷ 17	40	20
			1-X-290 D63D	15 ÷ 42	60	28	7 ÷ 26	60	63
				10 ÷ 28	40	18	4 ÷ 17	40	41
	8	76	1-X290 D46	19 ÷ 40	60	4	6 ÷ 30	60	8
				13 ÷ 27	40	3	4 ÷ 20	40	5
			1-X-290 D63	15 ÷ 42	60	8	7 ÷ 26	60	19
				10 ÷ 28	40	5	4 ÷ 17	40	12
			1-X-290 D63D	15 ÷ 42	60	17	7 ÷ 26	60	39
				10 ÷ 28	40	11	4 ÷ 17	40	25

1-6941 Type

Trim Type	Microflow	
Leakage class	V & VI*	IEC 60534-4
Packing	GRF	

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	∅3mm	F	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	∅4mm	F	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	∅6mm	F	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	∅6mm	C	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	∅9mm	C	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
	∅12mm	C	17	1-X-290 D33	30 ÷ 44 20 ÷ 29	60 40	430 367	13 ÷ 27 9 ÷ 18	60 40	430 418

⁽¹⁾C=Contoured, F=Flatted

* For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6941 Type

Trim Type	Contoured	
Leakage class	V & VI*	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			
				Spring range psi	Supply psi	ΔP shut-off bar	Spring psi	Supply psi	ΔP shut-off bar	
1/2 3/4 1	1/2	17	1-X-290 D33	30 ÷ 44	60	392	13 ÷ 27	60	413	
				20 ÷ 29	40	236	9 ÷ 18	40	269	
3/4 1	3/4	17	1-X-290 D33	30 ÷ 44	60	247	13 ÷ 27	60	279	
				20 ÷ 29	40	147	9 ÷ 18	40	168	
1	1	17	1-X-290 D33	30 ÷ 44	60	169	13 ÷ 27	60	178	
				20 ÷ 29	40	99	9 ÷ 18	40	114	
1.1/2 2	1/2	25	1-X-290 D33	23 ÷ 44	60	280	7 ÷ 26	60	430	
				15 ÷ 29	40	161	5 ÷ 17	40	273	
				25 ÷ 45	60	425	- ÷ -	-	-	
			1-X-290 D39	16 ÷ 30	40	248	5 ÷ 19	40	353	
				1-X-290 D46	22 ÷ 31	40	430	11 ÷ 21	40	430
					3/4	25	1-X-290 D33	23 ÷ 44	60	175
	15 ÷ 29	40	99					5 ÷ 17	40	171
	25 ÷ 45	60	268	7 ÷ 28				60	369	
	1-X-290 D39	16 ÷ 30	40	155			5 ÷ 19	40	222	
		1-X-290 D46	32 ÷ 47	60			430	16 ÷ 31	60	430
			22 ÷ 31	40			364	11 ÷ 21	40	319
	1		25	1-X-290 D33	23 ÷ 44	60	119	7 ÷ 26	60	194
		15 ÷ 29			40	66	5 ÷ 17	40	115	
		25 ÷ 45			60	184	7 ÷ 28	60	254	
		1-X-290 D39		16 ÷ 30	40	104	5 ÷ 19	40	151	
				1-X-290 D46	32 ÷ 47	60	402	16 ÷ 31	60	355
					22 ÷ 31	40	250	11 ÷ 21	40	219
	1 1/4	25	1-X-290 D33		23 ÷ 44	60	79	7 ÷ 26	60	130
				15 ÷ 29	40	42	5 ÷ 17	40	76	
				25 ÷ 45	60	123	7 ÷ 28	60	171	
			1-X-290 D39	16 ÷ 30	40	69	5 ÷ 19	40	101	
				1-X-290 D46	32 ÷ 47	60	273	16 ÷ 31	60	241
					22 ÷ 31	40	168	11 ÷ 21	40	147
	1 1/2	25	1-X-290 D33		23 ÷ 44	60	48	7 ÷ 26	60	76
15 ÷ 29				40	25	5 ÷ 17	40	47		
25 ÷ 45				60	77	7 ÷ 28	60	109		
1-X-290 D39			16 ÷ 30	40	42	5 ÷ 19	40	63		
			1-X-290 D46	32 ÷ 47	60	175	16 ÷ 31	60	154	
				22 ÷ 31	40	107	11 ÷ 21	40	93	

* For leakage class VI max ΔP see PARCOL NTG 76/503

1-6941 Type

Trim Type	Contoured	
Leakage	V & VI*	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Suppl psi	ΔP shut-off bar
2	2	25	1-X-290 D33	23 ÷ 44	60	27	7 ÷ 28	60	44
				15 ÷ 29	40	13	5 ÷ 17	40	26
			1-X-290 D39	25 ÷ 45	60	45	7 ÷ 28	60	64
				16 ÷ 30	40	23	5 ÷ 19	40	36
			1-X-290 D46	32 ÷ 47	60	104	16 ÷ 31	60	92
				22 ÷ 31	40	63	11 ÷ 21	40	55
3	1	34	1-X-290 D39	25 ÷ 45	60	185	12 ÷ 28	60	250
				17 ÷ 30	40	105	8 ÷ 19	40	149
			1-X-290 D46	24 ÷ 44	60	282	7 ÷ 28	60	401
				16 ÷ 29	40	170	5 ÷ 18	40	249
	1 1/4	34	1-X-290 D39	25 ÷ 45	60	124	12 ÷ 28	60	169
				17 ÷ 30	40	69	8 ÷ 19	40	99
			1-X-290 D46	24 ÷ 44	60	190	7 ÷ 28	60	272
				16 ÷ 29	40	114	5 ÷ 18	40	168
	1 1/2	34	1-X-290 D39	25 ÷ 45	60	78	12 ÷ 28	60	107
				17 ÷ 30	40	43	8 ÷ 19	40	62
			1-X-290 D46	24 ÷ 44	60	121	7 ÷ 28	60	174
				16 ÷ 29	40	71	5 ÷ 18	40	107
	2	34	1-X-290 D39	25 ÷ 45	60	45	12 ÷ 28	60	63
				17 ÷ 30	40	24	8 ÷ 19	40	36
			1-X-290 D46	24 ÷ 44	60	72	7 ÷ 28	60	104
				16 ÷ 29	40	41	5 ÷ 18	40	63
	2 1/2	34	1-X-290 D39	25 ÷ 45	60	24	12 ÷ 28	60	34
				17 ÷ 30	40	12	8 ÷ 19	40	18
			1-X-290 D46	24 ÷ 44	60	39	7 ÷ 28	60	57
				16 ÷ 29	40	22	5 ÷ 18	40	34
	3	34	1-X-290 D39	25 ÷ 45	60	16	12 ÷ 28	60	23
				17 ÷ 30	40	7	8 ÷ 19	40	12
			1-X-290 D46	24 ÷ 44	60	26	7 ÷ 28	60	39
				16 ÷ 29	40	14	5 ÷ 18	40	22

* For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6941 Type

Trim Type	Contoured	
Leakage class	V & VI*	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
4	1 1/4	45	1-X-290 D39	19 ÷ 47	60	86	7 ÷ 28	60	166
				13 ÷ 31	40	44	5 ÷ 19	40	97
			1-X-290 D46	24 ÷ 44	60	192	12 ÷ 28	60	267
				16 ÷ 30	40	115	8 ÷ 19	40	165
	1-X-290 D63	22 ÷ 41	60	393	7 ÷ 26	60	430		
		15 ÷ 27	40	249	4 ÷ 17	40	410		
	1-X-290 D63D	15 ÷ 27	40	430	4 ÷ 17	40	430		
		19 ÷ 47	60	53	7 ÷ 28	60	105		
	1 1/2	45	1-X-290 D39	13 ÷ 31	40	26	5 ÷ 19	40	61
				24 ÷ 44	60	122	12 ÷ 28	60	171
			1-X-290 D46	16 ÷ 30	40	72	8 ÷ 19	40	105
				22 ÷ 41	60	253	7 ÷ 26	60	410
	1-X-290 D63	15 ÷ 27	40	159	4 ÷ 17	40	264		
		22 ÷ 41	60	430	- ÷ -	-	-		
	1-X-290 D63D	15 ÷ 27	40	347	4 ÷ 17	40	430		
		19 ÷ 47	60	30	7 ÷ 28	60	62		
	2	45	1-X-290 D39	13 ÷ 31	40	14	5 ÷ 19	40	35
				24 ÷ 44	60	72	12 ÷ 28	60	102
			1-X-290 D46	16 ÷ 30	40	42	8 ÷ 19	40	62
				22 ÷ 41	60	152	7 ÷ 26	60	248
	1-X-290 D63	15 ÷ 27	40	95	4 ÷ 17	40	159		
		22 ÷ 41	60	324	7 ÷ 26	60	430		
	1-X-290 D63D	15 ÷ 27	40	210	4 ÷ 17	40	338		
		19 ÷ 47	60	15	7 ÷ 28	60	33		
	2 1/2	45	1-X-290 D39	13 ÷ 31	40	8	5 ÷ 19	40	18
				24 ÷ 44	60	39	12 ÷ 28	60	56
			1-X-290 D46	16 ÷ 30	40	22	8 ÷ 19	40	33
				22 ÷ 41	60	85	7 ÷ 26	60	140
1-X-290 D63	15 ÷ 27	40	52	4 ÷ 17	40	89			
	22 ÷ 41	60	183	7 ÷ 26	60	292			
1-X-290 D63D	15 ÷ 27	40	117	4 ÷ 17	40	191			
	19 ÷ 47	60	9	7 ÷ 28	60	22			
3	45	1-X-290 D39	13 ÷ 31	40	3	5 ÷ 19	40	11	
			24 ÷ 44	60	26	12 ÷ 28	60	38	
		1-X-290 D46	16 ÷ 30	40	14	8 ÷ 19	40	22	
			22 ÷ 41	60	58	7 ÷ 26	60	96	
1-X-290 D63	15 ÷ 27	40	35	4 ÷ 17	40	61			
	22 ÷ 41	60	126	7 ÷ 26	60	203			
1-X-290 D63D	15 ÷ 27	40	81	4 ÷ 17	40	132			
	19 ÷ 47	60	6	7 ÷ 28	60	14			
4	45	1-X-290 D39	- ÷ -	-	-	5 ÷ 19	40	7	
			24 ÷ 44	60	17	12 ÷ 28	60	26	
		1-X-290 D46	16 ÷ 30	40	9	8 ÷ 19	40	14	
			22 ÷ 41	60	39	7 ÷ 26	60	66	
1-X-290 D63	15 ÷ 27	40	24	4 ÷ 17	40	41			
	22 ÷ 41	60	87	7 ÷ 26	60	140			
1-X-290 D63D	15 ÷ 27	40	55	4 ÷ 17	40	91			

* For leakage class VI max ΔP see PARCOL NTG 76/503

Section C – Pressure Drop Tables

1-6941 Type

Trim Type	Contoured	
Leakage class	V & VI*	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
6	2 1/2	60	1-X-290 D46	19 ÷ 48	60	28	7 ÷ 28	60	55
				13 ÷ 32	40	14	5 ÷ 19	40	32
			1-X-290 D63	21 ÷ 42	60	81	10 ÷ 26	60	138
				14 ÷ 28	40	50	7 ÷ 17	40	88
			1-X-290 D63D	21 ÷ 42	60	175	10 ÷ 26	60	290
				14 ÷ 28	40	112	7 ÷ 17	40	189
	3	60	1-X-290 D46	19 ÷ 48	60	18	7 ÷ 28	60	37
				13 ÷ 32	40	9	5 ÷ 19	40	21
			1-X-290 D63	21 ÷ 42	60	55	10 ÷ 26	60	95
				14 ÷ 28	40	33	7 ÷ 17	40	60
			1-X-290 D63D	21 ÷ 42	60	121	10 ÷ 26	60	201
				14 ÷ 28	40	77	7 ÷ 17	40	130
	4	60	1-X-290 D46	19 ÷ 48	60	12	7 ÷ 28	60	25
				13 ÷ 32	40	5	5 ÷ 19	40	14
			1-X-290 D63	21 ÷ 42	60	38	10 ÷ 26	60	65
				14 ÷ 28	40	22	7 ÷ 17	40	41
			1-X-290 D63D	21 ÷ 42	60	83	10 ÷ 26	60	139
				14 ÷ 28	40	53	7 ÷ 17	40	90
	5	60	1-X-290 D46	19 ÷ 48	60	6	7 ÷ 28	60	14
				13 ÷ 32	40	2	5 ÷ 19	40	8
			1-X-290 D63	21 ÷ 42	60	22	10 ÷ 26	60	39
				14 ÷ 28	40	13	7 ÷ 17	40	24
			1-X-290 D63D	21 ÷ 42	60	50	10 ÷ 26	60	85
				14 ÷ 28	40	31	7 ÷ 17	40	54
6	60	1-X-290 D46	19 ÷ 48	60	4	7 ÷ 28	60	10	
			- ÷ -	-	-	5 ÷ 19	40	5	
		1-X-290 D63	21 ÷ 42	60	15	10 ÷ 26	60	28	
			14 ÷ 28	40	8	7 ÷ 17	40	17	
		1-X-290 D63D	21 ÷ 42	60	36	10 ÷ 26	60	60	
			14 ÷ 28	40	22	7 ÷ 17	40	38	
8	4	76	1-X-290 D46	19 ÷ 40	60	11	6 ÷ 30	60	23
				13 ÷ 27	40	5	4 ÷ 20	40	12
			1-X-290 D63	15 ÷ 42	60	24	7 ÷ 26	60	64
				10 ÷ 28	40	13	4 ÷ 17	40	40
			1-X-290 D63D	15 ÷ 42	60	57	7 ÷ 26	60	136
				10 ÷ 28	40	35	4 ÷ 17	40	88
	5	76	1-X-290 D46	19 ÷ 40	60	6	6 ÷ 30	60	15
				13 ÷ 27	40	2	4 ÷ 20	40	7
			1-X-290 D63	15 ÷ 42	60	14	7 ÷ 26	60	40
				10 ÷ 28	40	7	4 ÷ 17	40	23
			1-X-290 D63D	15 ÷ 42	60	34	7 ÷ 26	60	84
				10 ÷ 28	40	21	4 ÷ 17	40	53
	6	76	1-X-290 D46	19 ÷ 40	60	4	6 ÷ 30	60	10
				- ÷ -	-	-	4 ÷ 20	40	4
			1-X-290 D63	15 ÷ 42	60	9	7 ÷ 26	60	28
				10 ÷ 28	40	5	4 ÷ 17	40	16
			1-X-290 D63D	15 ÷ 42	60	24	7 ÷ 26	60	60
				10 ÷ 28	40	14	4 ÷ 17	40	38
	8	76	1-X-290 D46	19 ÷ 40	60	2	6 ÷ 30	60	5
				- ÷ -	-	-	4 ÷ 20	40	2
			1-X-290 D63	15 ÷ 42	60	5	7 ÷ 26	60	17
				10 ÷ 28	40	2	4 ÷ 17	40	9
			1-X-290 D63D	15 ÷ 42	60	14	7 ÷ 26	60	36
				10 ÷ 28	40	8	4 ÷ 17	40	23

* For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6941 Type

Trim Type	Microflow	
Leakage class	V & VI*	IEC 60534-4
Packing	TFK	

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	Ø3mm	F	17	1-X-290 D25	17 ÷ 43	60	349	7 ÷ 26	60	430
					11 ÷ 29	40	222	4 ÷ 18	40	348
	Ø4mm	F	17	1-X-290 D33	20 ÷ 29	40	430	9 ÷ 18	40	430
					17 ÷ 43	60	349	7 ÷ 26	60	430
	Ø6mm	F	17	1-X-290 D25	11 ÷ 29	40	222	4 ÷ 18	40	390
					20 ÷ 29	40	430	9 ÷ 18	40	430
	Ø8mm	C	17	1-X-290 D25	17 ÷ 43	60	349	- ÷ -	-	-
					11 ÷ 29	40	222	4 ÷ 18	40	430
	Ø9mm	C	17	1-X-290 D33	20 ÷ 29	40	430	- ÷ -	-	-
					17 ÷ 43	60	300	7 ÷ 26	60	430
	Ø12mm	C	17	1-X-290 D25	11 ÷ 29	40	175	4 ÷ 18	40	414
					30 ÷ 44	60	430	9 ÷ 18	40	430
	Ø12mm	C	17	1-X-290 D33	17 ÷ 43	60	170	7 ÷ 26	60	383
					11 ÷ 29	40	96	4 ÷ 18	40	238
Ø12mm	C	17	1-X-290 D33	20 ÷ 29	40	423	9 ÷ 18	40	430	
				20 ÷ 29	40	423	9 ÷ 18	40	430	

⁽¹⁾C=Contoured, F=Flatted

* For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6941 Type

Trim Type	Contoured	
Leakage class	V & VI*	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	1/2	17	1-X-290 D25	17 ÷ 43	60	106	7 ÷ 26	60	246
				11 ÷ 29	40	58	4 ÷ 18	40	151
				30 ÷ 44	60	429	13 ÷ 27	60	430
3/4 1	3/4	17	1-X-290 D33	20 ÷ 29	40	273	9 ÷ 18	40	306
				17 ÷ 43	60	64	7 ÷ 26	60	149
				11 ÷ 29	40	32	4 ÷ 18	40	92
1	1	17	1-X-290 D33	30 ÷ 44	60	271	13 ÷ 27	60	303
				20 ÷ 29	40	170	9 ÷ 18	40	192
				17 ÷ 43	60	41	7 ÷ 26	60	100
1.1/2 2	1/2	25	1-X-290 D25	11 ÷ 29	40	19	4 ÷ 18	40	61
				30 ÷ 44	60	185	13 ÷ 27	60	204
				20 ÷ 29	40	115	9 ÷ 18	40	130
				23 ÷ 44	60	317	7 ÷ 26	60	430
				15 ÷ 29	40	198	5 ÷ 17	40	310
				25 ÷ 45	60	430	- ÷ -	-	-
	3/4	25	1-X-290 D39	16 ÷ 30	40	307	5 ÷ 19	40	412
				18 ÷ 30	40	307	5 ÷ 19	40	412
				22 ÷ 31	40	430	11 ÷ 21	40	430
				23 ÷ 44	60	199	7 ÷ 26	60	306
				15 ÷ 29	40	122	5 ÷ 17	40	194
				25 ÷ 45	60	306	7 ÷ 28	60	407
3/4	25	1-X-290 D39	16 ÷ 30	40	192	5 ÷ 19	40	259	
			32 ÷ 47	60	430	16 ÷ 31	60	430	
			22 ÷ 31	40	401	11 ÷ 21	40	357	
			23 ÷ 44	60	199	7 ÷ 26	60	306	
			15 ÷ 29	40	122	5 ÷ 17	40	194	
			25 ÷ 45	60	306	7 ÷ 28	60	407	

* For leakage class VI max ΔP see PARCOL NTG 76/503.

C-17

1-6941 Type

Trim Type	Contoured	
Leakage class	V & VI*	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)				
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar		
1.1/2 2	1	25	1-X-290 D33	23 ÷ 44	60	135	7 ÷ 26	60	210		
				15 ÷ 29	40	82	5 ÷ 17	40	132		
			1-X-290 D39	25 ÷ 45	60	210	7 ÷ 28	60	280		
				16 ÷ 30	40	131	5 ÷ 19	40	177		
			1-X-290 D46	32 ÷ 47	60	428	16 ÷ 31	60	382		
				22 ÷ 31	40	276	11 ÷ 21	40	245		
	1 1/4	25	1-X-290 D33	23 ÷ 44	60	90	7 ÷ 26	60	141		
				15 ÷ 29	40	53	5 ÷ 17	40	88		
			1-X-290 D39	25 ÷ 45	60	141	7 ÷ 28	60	189		
				16 ÷ 30	40	87	5 ÷ 19	40	119		
			1-X-290 D46	32 ÷ 47	60	291	16 ÷ 31	60	259		
				22 ÷ 31	40	186	11 ÷ 21	40	165		
1 1/2	25	1-X-290 D33	23 ÷ 44	60	56	7 ÷ 26	60	88			
			15 ÷ 29	40	32	5 ÷ 17	40	54			
		1-X-290 D39	25 ÷ 45	60	89	7 ÷ 28	60	120			
			16 ÷ 30	40	54	5 ÷ 19	40	75			
		1-X-290 D46	32 ÷ 47	60	186	16 ÷ 31	60	166			
			22 ÷ 31	40	119	11 ÷ 21	40	105			
2	2	1-X-290 D33	23 ÷ 44	60	32	7 ÷ 26	60	51			
			15 ÷ 29	40	17	5 ÷ 17	40	31			
		1-X-290 D39	25 ÷ 45	60	52	7 ÷ 28	60	71			
			16 ÷ 30	40	31	5 ÷ 19	40	43			
		1-X-290 D46	32 ÷ 47	60	112	16 ÷ 31	60	99			
			22 ÷ 31	40	70	11 ÷ 21	40	62			
3	1	34	1-X-290 D39	25 ÷ 45	60	211	12 ÷ 28	60	276		
				17 ÷ 30	40	132	8 ÷ 19	40	175		
			1-X-290 D46	24 ÷ 44	60	308	7 ÷ 28	60	427		
				16 ÷ 29	40	196	5 ÷ 18	40	276		
			1 1/4	34	1-X-290 D39	25 ÷ 45	60	142	12 ÷ 28	60	187
						17 ÷ 30	40	87	8 ÷ 19	40	117
	1-X-290 D46	24 ÷ 44			60	208	7 ÷ 28	60	290		
		16 ÷ 29			40	132	5 ÷ 18	40	186		
	1 1/2	34	1-X-290 D39	25 ÷ 45	60	90	12 ÷ 28	60	119		
				17 ÷ 30	40	54	8 ÷ 19	40	74		
			1-X-290 D46	24 ÷ 44	60	133	7 ÷ 28	60	186		
				16 ÷ 29	40	83	5 ÷ 18	40	118		
			2	34	1-X-290 D39	25 ÷ 45	60	53	12 ÷ 28	60	70
						17 ÷ 30	40	31	8 ÷ 19	40	43
	1-X-290 D46	24 ÷ 44			60	79	7 ÷ 28	60	111		
		16 ÷ 29			40	48	5 ÷ 18	40	70		
	2 1/2	34	1-X-290 D39	25 ÷ 45	60	28	12 ÷ 28	60	38		
				17 ÷ 30	40	16	8 ÷ 19	40	22		
1-X-290 D46			24 ÷ 44	60	43	7 ÷ 28	60	61			
			16 ÷ 29	40	26	5 ÷ 18	40	38			
3			34	1-X-290 D39	25 ÷ 45	60	18	12 ÷ 28	60	25	
					17 ÷ 30	40	10	8 ÷ 19	40	14	
	1-X-290 D46	24 ÷ 44		60	29	7 ÷ 28	60	42			
		16 ÷ 29		40	17	5 ÷ 18	40	25			

* For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6941 Type

Trim Type	Contoured	
Leakage class	V & VI*	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
4	1 1/4	45	1-X-290 D39	19 ÷ 47	60	104	7 ÷ 28	60	184
				13 ÷ 31	40	62	5 ÷ 19	40	115
			1-X-290 D46	24 ÷ 44	60	210	12 ÷ 28	60	285
				16 ÷ 30	40	133	8 ÷ 19	40	183
			1-X-290 D63	22 ÷ 41	60	411	7 ÷ 26	60	430
				15 ÷ 27	40	267	4 ÷ 17	40	428
			1-X-290 D63D	15 ÷ 27	40	430	4 ÷ 17	40	430
			1 1/2	45	1-X-290 D39	19 ÷ 47	60	65	7 ÷ 28
	13 ÷ 31	40				38	5 ÷ 19	40	72
	1-X-290 D46	24 ÷ 44			60	134	12 ÷ 28	60	183
		16 ÷ 30			40	84	8 ÷ 19	40	116
	1-X-290 D63	22 ÷ 41			60	265	7 ÷ 26	60	422
		15 ÷ 27			40	171	4 ÷ 17	40	276
	1-X-290 D63D	22 ÷ 41			60	430	- ÷ -	-	-
		15 ÷ 27			40	358	4 ÷ 17	40	430
	2	45	1-X-290 D39	19 ÷ 47	60	37	7 ÷ 28	60	69
				13 ÷ 31	40	21	5 ÷ 19	40	42
			1-X-290 D46	24 ÷ 44	60	80	12 ÷ 28	60	109
				16 ÷ 30	40	49	8 ÷ 19	40	69
			1-X-290 D63	22 ÷ 41	60	159	7 ÷ 26	60	255
				15 ÷ 27	40	102	4 ÷ 17	40	166
			1-X-290 D63D	22 ÷ 41	60	331	7 ÷ 26	60	430
				15 ÷ 27	40	217	4 ÷ 17	40	345
	2 1/2	45	1-X-290 D39	19 ÷ 47	60	19	7 ÷ 28	60	37
				13 ÷ 31	40	10	5 ÷ 19	40	22
			1-X-290 D46	24 ÷ 44	60	43	12 ÷ 28	60	60
				16 ÷ 30	40	26	8 ÷ 19	40	37
			1-X-290 D63	22 ÷ 41	60	89	7 ÷ 26	60	144
15 ÷ 27				40	56	4 ÷ 17	40	93	
1-X-290 D63D			22 ÷ 41	60	187	7 ÷ 26	60	296	
			15 ÷ 27	40	122	4 ÷ 17	40	195	
3	45	1-X-290 D39	19 ÷ 47	60	12	7 ÷ 28	60	25	
			13 ÷ 31	40	6	5 ÷ 19	40	14	
		1-X-290 D46	24 ÷ 44	60	29	12 ÷ 28	60	41	
			16 ÷ 30	40	17	8 ÷ 19	40	25	
		1-X-290 D63	22 ÷ 41	60	61	7 ÷ 26	60	99	
			15 ÷ 27	40	38	4 ÷ 17	40	64	
		1-X-290 D63D	22 ÷ 41	60	129	7 ÷ 26	60	206	
			15 ÷ 27	40	84	4 ÷ 17	40	135	
4	45	1-X-290 D39	19 ÷ 47	60	8	7 ÷ 28	60	16	
			13 ÷ 31	40	3	5 ÷ 19	40	9	
		1-X-290 D46	24 ÷ 44	60	19	12 ÷ 28	60	28	
			16 ÷ 30	40	11	8 ÷ 19	40	16	
		1-X-290 D63	22 ÷ 41	60	41	7 ÷ 26	60	68	
			15 ÷ 27	40	26	4 ÷ 17	40	43	
		1-X-290 D63D	22 ÷ 41	60	89	7 ÷ 26	60	142	
			15 ÷ 27	40	57	4 ÷ 17	40	93	

* For leakage class VI max ΔP see PARCOL NTG 76/503.

Section C – Pressure Drop Tables

1-6941 Type

Trim Type	Contoured
Leakage class	V & VI* IEC 60534-4
Packing	TFK

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
6	2 1/2	60	1-X-290 D46	19 ÷ 48	60	32	7 ÷ 28	60	59
				13 ÷ 32	40	18	5 ÷ 19	40	36
			1-X-290 D63	21 ÷ 42	60	85	10 ÷ 26	60	142
				14 ÷ 28	40	54	7 ÷ 17	40	92
			1-X-290 D63D	21 ÷ 42	60	179	10 ÷ 26	60	294
				14 ÷ 28	40	116	7 ÷ 17	40	193
	3	60	1-X-290 D46	19 ÷ 48	60	21	7 ÷ 28	60	40
				13 ÷ 32	40	11	5 ÷ 19	40	24
			1-X-290 D63	21 ÷ 42	60	58	10 ÷ 26	60	98
				14 ÷ 28	40	36	7 ÷ 17	40	63
			1-X-290 D63D	21 ÷ 42	60	124	10 ÷ 26	60	204
				14 ÷ 28	40	80	7 ÷ 17	40	133
	4	60	1-X-290 D46	19 ÷ 48	60	14	7 ÷ 28	60	27
				13 ÷ 32	40	7	5 ÷ 19	40	16
			1-X-290 D63	21 ÷ 42	60	40	10 ÷ 26	60	67
				14 ÷ 28	40	24	7 ÷ 17	40	43
			1-X-290 D63D	21 ÷ 42	60	85	10 ÷ 26	60	141
				14 ÷ 28	40	55	7 ÷ 17	40	92
	5	60	1-X-290 D46	19 ÷ 48	60	7	7 ÷ 28	60	16
				13 ÷ 32	40	3	5 ÷ 19	40	9
			1-X-290 D63	21 ÷ 42	60	23	10 ÷ 26	60	40
				14 ÷ 28	40	14	7 ÷ 17	40	25
			1-X-290 D63D	21 ÷ 42	60	52	10 ÷ 26	60	86
				14 ÷ 28	40	33	7 ÷ 17	40	56
6	60	1-X-290 D46	19 ÷ 48	60	5	7 ÷ 28	60	11	
			13 ÷ 32	40	2	5 ÷ 19	40	6	
		1-X-290 D63	21 ÷ 42	60	16	10 ÷ 26	60	28	
			14 ÷ 28	40	9	7 ÷ 17	40	18	
		1-X-290 D63D	21 ÷ 42	60	36	10 ÷ 26	60	61	
			14 ÷ 28	40	23	7 ÷ 17	40	39	
8	4	76	1-X-290 D46	19 ÷ 40	60	13	6 ÷ 30	60	25
				13 ÷ 27	40	7	4 ÷ 20	40	14
			1-X-290 D63	15 ÷ 42	60	26	7 ÷ 26	60	66
				10 ÷ 28	40	15	4 ÷ 17	40	42
			1-X-290 D63D	15 ÷ 42	60	59	7 ÷ 26	60	138
				10 ÷ 28	40	37	4 ÷ 17	40	90
	5	76	1-X-290 D46	19 ÷ 40	60	7	6 ÷ 30	60	15
				13 ÷ 27	40	3	4 ÷ 20	40	8
			1-X-290 D63	15 ÷ 42	60	15	7 ÷ 26	60	40
				10 ÷ 28	40	8	4 ÷ 17	40	25
			1-X-290 D63D	15 ÷ 42	60	35	7 ÷ 26	60	84
				10 ÷ 28	40	22	4 ÷ 17	40	54
	6	76	1-X-290 D46	19 ÷ 40	60	5	6 ÷ 30	60	10
				13 ÷ 27	40	2	4 ÷ 20	40	5
			1-X-290 D63	15 ÷ 42	60	10	7 ÷ 26	60	28
				10 ÷ 28	40	5	4 ÷ 17	40	17
			1-X-290 D63D	15 ÷ 42	60	25	7 ÷ 26	60	60
				10 ÷ 28	40	15	4 ÷ 17	40	38
	8	76	1-X-290 D46	19 ÷ 40	60	2	6 ÷ 30	60	5
				-	-	-	4 ÷ 20	40	2
			1-X-290 D63	15 ÷ 42	60	6	7 ÷ 26	60	17
				10 ÷ 28	40	3	4 ÷ 17	40	10
			1-X-290 D63D	15 ÷ 42	60	15	7 ÷ 26	60	36
				10 ÷ 28	40	9	4 ÷ 17	40	23

* For leakage class VI max ΔP see PARCOL NTG 76/503

1-6942 Type

Trim Type Microflow
 Leakage class IV IEC 60534-
 Packing GRF

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	Ø6	C	17	1-X-290 D33	30 ÷ 44	60	397	13 ÷ 27	60	319
				20 ÷ 29	40	238	9 ÷ 18	40	196	
	Ø9	C	17	1-X-290 D39	33 ÷ 47	60	430	16 ÷ 30	60	430
				22 ÷ 31	40	408	11 ÷ 20	40	321	
	Ø12	C	17	1-X-290 D33	30 ÷ 44	60	397	13 ÷ 27	60	427
				20 ÷ 29	40	238	9 ÷ 18	40	262	
Ø12	C	17	1-X-290 D39	33 ÷ 47	60	430	16 ÷ 30	60	430	
			22 ÷ 31	40	408	11 ÷ 20	40	355		
Ø12	C	17	1-X-290 D33	30 ÷ 44	60	397	13 ÷ 27	60	430	
			20 ÷ 29	40	238	9 ÷ 18	40	272		
Ø12	C	17	1-X-290 D39	33 ÷ 47	60	430	- ÷ -	-	-	
			22 ÷ 31	40	408	11 ÷ 20	40	355		

⁽¹⁾C=Contoured, F=Flatted

1-6942 Type

Trim Type Contoured
 Leakage class IV IEC 60534-4
 Packing GRF

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	1/2	17	1-X-290 D33	30 ÷ 44	60	387	13 ÷ 27	60	430
			20 ÷ 29	40	238	9 ÷ 18	40	264	
1/2 3/4 1	3/4	17	1-X-290 D39	33 ÷ 47	60	430	- ÷ -	-	-
			22 ÷ 31	40	397	11 ÷ 20	40	346	
3/4 1	3/4	17	1-X-290 D33	30 ÷ 44	60	247	13 ÷ 27	60	279
			20 ÷ 29	40	238	9 ÷ 18	40	168	
3/4 1	3/4	17	1-X-290 D39	33 ÷ 47	60	408	16 ÷ 30	60	358
			22 ÷ 31	40	254	11 ÷ 20	40	221	
1	1	17	1-X-290 D33	30 ÷ 44	60	171	13 ÷ 27	60	194
			20 ÷ 29	40	238	9 ÷ 18	40	117	
1	1	17	1-X-290 D39	33 ÷ 47	60	284	16 ÷ 30	60	249
			22 ÷ 31	40	176	11 ÷ 20	40	153	
1.1/2 2	1/2	25	1-X-290 D39	25 ÷ 45	60	314	7 ÷ 28	60	426
			16 ÷ 30	40	187	5 ÷ 19	40	262	
	1/2	25	1-X-290 D46	32 ÷ 47	60	430	16 ÷ 31	60	430
			22 ÷ 31	40	420	11 ÷ 21	40	371	
	3/4	25	1-X-290 D39	25 ÷ 45	60	278	7 ÷ 28	60	378
			16 ÷ 30	40	164	5 ÷ 19	40	231	
	3/4	25	1-X-290 D46	32 ÷ 47	60	430	16 ÷ 31	60	430
			22 ÷ 31	40	373	11 ÷ 21	40	329	
	1	25	1-X-290 D39	25 ÷ 45	60	193	7 ÷ 28	60	263
			16 ÷ 30	40	114	5 ÷ 19	40	160	
	1	25	1-X-290 D46	32 ÷ 47	60	411	16 ÷ 31	60	364
			22 ÷ 31	40	259	11 ÷ 21	40	228	
1 1/4	25	1-X-290 D39	25 ÷ 45	60	131	7 ÷ 28	60	180	
		16 ÷ 30	40	77	5 ÷ 19	40	109		
1 1/4	25	1-X-290 D46	32 ÷ 47	60	281	16 ÷ 31	60	249	
		22 ÷ 31	40	177	11 ÷ 21	40	156		
1 1/2	25	1-X-290 D39	25 ÷ 45	60	85	7 ÷ 28	60	116	
		16 ÷ 30	40	50	5 ÷ 19	40	71		
1 1/2	25	1-X-290 D46	32 ÷ 47	60	182	16 ÷ 31	60	161	
		22 ÷ 31	40	114	11 ÷ 21	40	101		

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Section C – Pressure Drop Tables

1-6942 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			
				Spring psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar	
3	1	34	1-X-290 D46	24 ÷ 44	60	291	7 ÷ 28	60	410	
			1-X-290 D63	16 ÷ 29	40	179	5 ÷ 18	40	258	
	1 1/4	34	1-X-290 D46	19 ÷ 28	40	430	9 ÷ 18	40	430	
			1-X-290 D46	24 ÷ 44	60	189	7 ÷ 28	60	271	
			1-X-290 D63	16 ÷ 29	40	113	5 ÷ 18	40	167	
	1 1/2	34	1-X-290 D46	28 ÷ 43	60	430	13 ÷ 28	60	430	
			1-X-290 D63	19 ÷ 28	40	334	9 ÷ 18	40	388	
			1-X-290 D63D	19 ÷ 28	40	430	9 ÷ 18	40	430	
	2	34	1-X-290 D46	24 ÷ 44	60	123	7 ÷ 28	60	176	
			1-X-290 D63	16 ÷ 29	40	73	5 ÷ 18	40	108	
			1-X-290 D63D	28 ÷ 43	60	338	13 ÷ 28	60	391	
	2 1/2	34	1-X-290 D46	19 ÷ 28	40	216	9 ÷ 18	40	252	
			1-X-290 D63D	19 ÷ 28	40	430	9 ÷ 18	40	430	
			1-X-290 D46	24 ÷ 44	60	74	7 ÷ 28	60	107	
	3	34	1-X-290 D46	16 ÷ 29	40	44	5 ÷ 18	40	66	
			1-X-290 D63	28 ÷ 43	60	206	13 ÷ 28	60	238	
			1-X-290 D63D	19 ÷ 28	40	132	9 ÷ 18	40	153	
	4	1 1/4	45	1-X-290 D63D	28 ÷ 43	60	429	13 ÷ 28	60	430
				1-X-290 D46	19 ÷ 28	40	280	9 ÷ 18	40	323
				1-X-290 D63	24 ÷ 44	60	42	7 ÷ 28	60	60
		1 1/2	45	1-X-290 D46	16 ÷ 29	40	25	5 ÷ 18	40	37
				1-X-290 D63	28 ÷ 43	60	117	13 ÷ 28	60	135
				1-X-290 D63D	19 ÷ 28	40	75	9 ÷ 18	40	87
		2	45	1-X-290 D46	28 ÷ 43	60	244	13 ÷ 28	60	281
1-X-290 D63				19 ÷ 28	40	159	9 ÷ 18	40	184	
1-X-290 D63D				24 ÷ 44	60	29	7 ÷ 28	60	42	
2 1/2		45	1-X-290 D46	16 ÷ 29	40	17	5 ÷ 18	40	25	
			1-X-290 D63	28 ÷ 43	60	81	13 ÷ 28	60	94	
			1-X-290 D63D	19 ÷ 28	40	52	9 ÷ 18	40	60	
3		45	1-X-290 D46	28 ÷ 43	60	170	13 ÷ 28	60	196	
			1-X-290 D63	19 ÷ 28	40	111	9 ÷ 18	40	128	
			1-X-290 D63MM	22 ÷ 41	60	265	7 ÷ 28	60	430	
3 1/2		45	1-X-290 D63D	15 ÷ 27	40	164	4 ÷ 17	40	277	
			1-X-290 D63D	22 ÷ 41	60	430	- ÷ -	-	-	
			1-X-290 D63D	15 ÷ 27	40	365	4 ÷ 17	40	430	
4		45	1-X-290 D63MM	22 ÷ 41	60	245	7 ÷ 28	60	402	
			1-X-290 D63D	15 ÷ 27	40	151	4 ÷ 17	40	256	
			1-X-290 D63D	22 ÷ 41	60	430	- ÷ -	-	-	
4 1/2		45	1-X-290 D63D	15 ÷ 27	40	339	4 ÷ 17	40	430	
			1-X-290 D63MM	22 ÷ 41	60	149	7 ÷ 28	60	245	
			1-X-290 D63D	15 ÷ 27	40	92	4 ÷ 17	40	156	
5	45	1-X-290 D63D	22 ÷ 41	60	321	7 ÷ 28	60	430		
		1-X-290 D63D	15 ÷ 27	40	207	4 ÷ 17	40	335		
		1-X-290 D63MM	22 ÷ 41	60	85	7 ÷ 28	60	139		
5 1/2	45	1-X-290 D63D	15 ÷ 27	40	52	4 ÷ 17	40	88		
		1-X-290 D63D	22 ÷ 41	60	183	7 ÷ 28	60	292		
		1-X-290 D63D	15 ÷ 27	40	117	4 ÷ 17	40	190		
6	45	1-X-290 D63MM	22 ÷ 41	60	59	7 ÷ 28	60	97		
		1-X-290 D63D	15 ÷ 27	40	38	4 ÷ 17	40	61		
		1-X-290 D63D	22 ÷ 41	60	127	7 ÷ 28	60	203		
6 1/2	45	1-X-290 D63D	15 ÷ 27	40	81	4 ÷ 17	40	132		
		1-X-290 D63MM	22 ÷ 41	60	41	7 ÷ 28	60	67		
		1-X-290 D63D	15 ÷ 27	40	25	4 ÷ 17	40	43		
7	45	1-X-290 D63D	22 ÷ 41	60	88	7 ÷ 28	60	142		
		1-X-290 D63D	15 ÷ 27	40	57	4 ÷ 17	40	92		
		1-X-290 D63D	22 ÷ 41	60	88	7 ÷ 28	60	142		

1-6942 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	GRF	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
6	2 1/2	60	1-X290 D46MM	19 ÷ 48	60	25	- ÷ -	-	-
				13 ÷ 32	40	12	- ÷ -	-	-
			1-X-290 D63MM	21 ÷ 42	60	79	10 ÷ 26	60	136
				14 ÷ 28	40	47	7 ÷ 17	40	85
			1-X-290 D63D	21 ÷ 42	60	173	10 ÷ 26	60	287
				14 ÷ 28	40	110	7 ÷ 17	40	186
	3	60	1-X290 D46MM	19 ÷ 48	60	17	- ÷ -	-	-
				13 ÷ 32	40	8	- ÷ -	-	-
			1-X-290 D63MM	21 ÷ 42	60	55	10 ÷ 26	60	94
				14 ÷ 28	40	33	7 ÷ 17	40	59
			1-X-290 D63D	21 ÷ 42	60	120	10 ÷ 26	60	200
				14 ÷ 28	40	76	7 ÷ 17	40	130
	4	60	1-X290 D46MM	19 ÷ 48	60	12	- ÷ -	-	-
				13 ÷ 32	40	5	- ÷ -	-	-
			1-X-290 D63MM	21 ÷ 42	60	55	10 ÷ 26	60	94
				14 ÷ 28	40	22	7 ÷ 17	40	41
			1-X-290 D63D	21 ÷ 42	60	84	10 ÷ 26	60	139
				14 ÷ 28	40	53	7 ÷ 17	40	90
	5	60	1-X290 D46MM	19 ÷ 48	60	7	- ÷ -	-	-
				13 ÷ 32	40	3	- ÷ -	-	-
			1-X-290 D63MM	21 ÷ 42	60	23	10 ÷ 26	60	40
				14 ÷ 28	40	14	7 ÷ 17	40	25
			1-X-290 D63D	21 ÷ 42	60	51	10 ÷ 26	60	85
				14 ÷ 28	40	32	7 ÷ 17	40	55
6	60	1-X290 D46MM	19 ÷ 48	60	5	- ÷ -	-	-	
			13 ÷ 32	40	2	- ÷ -	-	-	
		1-X-290 D63MM	21 ÷ 42	60	18	10 ÷ 26	60	29	
			14 ÷ 28	40	10	7 ÷ 17	40	18	
		1-X-290 D63 D	21 ÷ 42	60	37	10 ÷ 26	60	61	
			14 ÷ 28	40	23	7 ÷ 17	40	40	
8	4	76	1-X-290 D63MM	15 ÷ 42	60	24	7 ÷ 26	60	64
				10 ÷ 28	40	14	4 ÷ 17	40	40
		1-X-290 D63D	15 ÷ 42	60	57	7 ÷ 26	60	136	
			10 ÷ 28	40	35	4 ÷ 17	40	88	
	5	76	1-X-290 D63MM	15 ÷ 42	60	15	7 ÷ 26	60	39
				10 ÷ 28	40	8	4 ÷ 17	40	24
		1-X-290 D63D	15 ÷ 42	60	35	7 ÷ 26	60	83	
			10 ÷ 28	40	21	4 ÷ 17	40	54	
	6	76	1-X-290 D63MM	15 ÷ 42	60	10	7 ÷ 26	60	28
				10 ÷ 28	40	6	4 ÷ 17	40	17
		1-X-290 D63D	15 ÷ 42	60	25	7 ÷ 26	60	60	
			10 ÷ 28	40	15	4 ÷ 17	40	39	
8	76	1-X-290 D63MM	15 ÷ 42	60	6	7 ÷ 26	60	17	
			10 ÷ 28	40	3	4 ÷ 17	40	10	
	1-X-290 D63D	15 ÷ 42	60	15	7 ÷ 26	60	37		
		10 ÷ 28	40	9	4 ÷ 17	40	24		

Section C – Pressure Drop Tables

1-6942 Type

Trim Type	Microflow	
Leakage class	IV	IEC 60534-
Packing	TFK	

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	Ø8	C	17	1-X-290 D33	30 ÷ 44	60	430	13 ÷ 27	60	352
					20 ÷ 29	40	297	9 ÷ 18	40	229
				1-X-290 D39	- ÷ -	-	-	16 ÷ 30	60	430
	Ø9	C	17	1-X-290 D33	30 ÷ 44	60	430	13 ÷ 27	60	430
					20 ÷ 29	40	297	9 ÷ 18	40	307
				1-X-290 D39	22 ÷ 31	40	430	11 ÷ 20	40	415
Ø12	C	17	1-X-290 D33	30 ÷ 44	60	430	13 ÷ 27	60	430	
				20 ÷ 29	40	297	9 ÷ 18	40	331	
			1-X-290 D39	22 ÷ 31	40	430	11 ÷ 20	40	415	

⁽¹⁾C=Contoured, F=Flatted

1-6942 Type

Trim Type	Contoured	
Leakage class	IV	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	1/2	17	1-X-290 D33	30 ÷ 44	60	430	13 ÷ 27	60	430
				20 ÷ 29	40	299	9 ÷ 18	40	322
			1-X-290 D39	22 ÷ 31	40	430	11 ÷ 20	40	404
3/4 1	3/4	17	1-X-290 D33	30 ÷ 44	60	285	13 ÷ 27	60	317
				20 ÷ 29	40	185	9 ÷ 18	40	206
			1-X-290 D39	33 ÷ 47	60	430	16 ÷ 30	60	396
1	1	17	1-X-290 D33	22 ÷ 31	40	292	11 ÷ 20	40	259
				30 ÷ 44	60	198	13 ÷ 27	60	220
			1-X-290 D39	20 ÷ 29	40	128	9 ÷ 18	40	143
1.1/2 2	1/2	25	1-X-290 D39	33 ÷ 47	60	310	16 ÷ 30	60	275
				22 ÷ 31	40	203	11 ÷ 20	40	179
			1-X-290 D46	25 ÷ 45	60	364	7 ÷ 28	60	430
	3/4	25	1-X-290 D39	16 ÷ 30	40	237	5 ÷ 19	40	312
				22 ÷ 31	40	430	11 ÷ 21	40	421
			1-X-290 D46	25 ÷ 45	60	323	7 ÷ 28	60	423
	1	25	1-X-290 D39	16 ÷ 30	40	209	5 ÷ 19	40	276
				32 ÷ 47	60	430	16 ÷ 31	60	430
			1-X-290 D46	22 ÷ 31	40	418	11 ÷ 21	40	373
	1 1/4	25	1-X-290 D39	25 ÷ 45	60	224	7 ÷ 28	60	294
				16 ÷ 30	40	145	5 ÷ 19	40	192
			1-X-290 D46	32 ÷ 47	60	430	16 ÷ 31	60	396
1 1/2	25	1-X-290 D39	22 ÷ 31	40	290	11 ÷ 21	40	259	
			25 ÷ 45	60	153	7 ÷ 28	60	201	
		1-X-290 D46	16 ÷ 30	40	99	5 ÷ 19	40	131	
2	2	25	1-X-290 D39	32 ÷ 47	60	302	16 ÷ 31	60	271
				22 ÷ 31	40	198	11 ÷ 21	40	177
			1-X-290 D46	25 ÷ 45	60	99	7 ÷ 28	60	130
2	2	25	1-X-290 D39	16 ÷ 30	40	64	5 ÷ 19	40	84
				32 ÷ 47	60	196	16 ÷ 31	60	175
			1-X-290 D46	22 ÷ 31	40	128	11 ÷ 21	40	115
2	2	25	1-X-290 D39	25 ÷ 45	60	60	7 ÷ 28	60	79
				16 ÷ 30	40	38	5 ÷ 19	40	51
			1-X-290 D46	32 ÷ 47	60	119	16 ÷ 31	60	107
				22 ÷ 31	40	78	11 ÷ 21	40	70

1-6942 Type

Trim Type	Contoured
Leakage class	IV IEC 60534-4
Packing	TFK

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
3	1	34	1-X-290 D46	24 ÷ 44	60	322	7 ÷ 28	60	430
			16 ÷ 29	40	210	5 ÷ 18	40	290	
			19 ÷ 28	40	430	9 ÷ 18	40	430	
	1 1/4	34	1-X-290 D46	24 ÷ 44	60	218	7 ÷ 28	60	300
			16 ÷ 29	40	141	5 ÷ 18	40	196	
			1-X-290 D63	28 ÷ 43	60	430	13 ÷ 28	60	430
			19 ÷ 28	40	362	9 ÷ 18	40	416	
			1-X-290 D63D	19 ÷ 28	40	430	9 ÷ 18	40	430
			24 ÷ 44	60	141	7 ÷ 28	60	194	
	1 1/2	34	1-X-290 D46	16 ÷ 29	40	91	5 ÷ 18	40	127
			28 ÷ 43	60	357	13 ÷ 28	60	409	
			1-X-290 D63	19 ÷ 28	40	235	9 ÷ 18	40	270
			1-X-290 D63D	19 ÷ 28	40	430	9 ÷ 18	40	430
			24 ÷ 44	60	86	7 ÷ 28	60	118	
			16 ÷ 29	40	55	5 ÷ 18	40	77	
	2	34	1-X-290 D63	28 ÷ 43	60	217	13 ÷ 28	60	250
			19 ÷ 28	40	143	9 ÷ 18	40	165	
			1-X-290 D63D	28 ÷ 43	60	430	13 ÷ 28	60	430
			19 ÷ 28	40	292	9 ÷ 18	40	335	
			24 ÷ 44	60	48	7 ÷ 28	60	67	
			16 ÷ 29	40	31	5 ÷ 18	40	43	
	2 1/2	34	1-X-290D63	28 ÷ 43	60	123	13 ÷ 28	60	142
			19 ÷ 28	40	81	9 ÷ 18	40	93	
			1-X-290D63D	28 ÷ 43	60	251	13 ÷ 28	60	288
19 ÷ 28			40	166	9 ÷ 18	40	190		
24 ÷ 44			60	33	7 ÷ 28	60	46		
16 ÷ 29			40	21	5 ÷ 18	40	30		
3	34	1-X-290 D63	28 ÷ 43	60	86	13 ÷ 28	60	99	
		19 ÷ 28	40	56	9 ÷ 18	40	65		
		1-X-290D63D	28 ÷ 43	60	175	13 ÷ 28	60	200	
		19 ÷ 28	40	115	9 ÷ 18	40	133		
		22 ÷ 41	60	292	7 ÷ 26	60	430		
		15 ÷ 27	40	191	4 ÷ 17	40	304		
4	1 1/4	45	1-X-290 D63D	22 ÷ 41	60	430	- ÷ -	-	-
			15 ÷ 27	40	393	4 ÷ 17	40	430	
			22 ÷ 41	60	271	7 ÷ 26	60	428	
	1 1/2	45	1-X-290 D63D	15 ÷ 27	40	177	4 ÷ 17	40	282
			22 ÷ 41	60	430	- ÷ -	-	-	
			15 ÷ 27	40	364	4 ÷ 17	40	430	
	2	45	1-X-290 D63MM	22 ÷ 41	60	165	7 ÷ 26	60	261
			15 ÷ 27	40	108	4 ÷ 17	40	172	
			1-X-290 D63D	22 ÷ 41	60	337	7 ÷ 26	60	430
	2 1/2	45	1-X-290 D63D	15 ÷ 27	40	222	4 ÷ 17	40	350
			22 ÷ 41	60	94	7 ÷ 26	60	148	
			15 ÷ 27	40	61	4 ÷ 17	40	97	
	3	45	1-X-290 D63D	22 ÷ 41	60	192	7 ÷ 26	60	301
			15 ÷ 27	40	126	4 ÷ 17	40	199	
			22 ÷ 41	60	65	7 ÷ 26	60	103	
	4	45	1-X-290 D63MM	15 ÷ 27	40	42	4 ÷ 17	40	68
			22 ÷ 41	60	133	7 ÷ 26	60	210	
			15 ÷ 27	40	88	4 ÷ 17	40	139	
			22 ÷ 41	60	45	7 ÷ 26	60	72	
			15 ÷ 27	40	29	4 ÷ 17	40	47	
			22 ÷ 41	60	93	7 ÷ 26	60	146	
	4	45	1-X-290 D63D	15 ÷ 27	40	61	4 ÷ 17	40	96

Section C – Pressure Drop Tables

1-6942 Type

Trim Type Contoured
 Leakage class IV IEC 60534-4
 Packing TFK

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
6	2 1/2	60	1-X290 D46MM	19 ÷ 48	60	36	7 ÷ 28	60	63
				13 ÷ 32	40	22	5 ÷ 19	40	41
			1-X-290 D63MM	21 ÷ 42	60	89	10 ÷ 28	60	146
				14 ÷ 28	40	58	7 ÷ 17	40	96
			1-X-290 D63D	21 ÷ 42	60	183	10 ÷ 28	60	298
				14 ÷ 28	40	121	7 ÷ 17	40	197
	3	60	1-X290 D46MM	19 ÷ 48	60	25	7 ÷ 28	60	44
				13 ÷ 32	40	15	5 ÷ 19	40	28
			1-X-290 D63MM	21 ÷ 42	60	62	10 ÷ 28	60	102
				14 ÷ 28	40	40	7 ÷ 17	40	67
			1-X-290 D63D	21 ÷ 42	60	128	10 ÷ 28	60	207
				14 ÷ 28	40	84	7 ÷ 17	40	137
	4	60	1-X290 D46MM	19 ÷ 48	60	17	7 ÷ 28	60	30
				13 ÷ 32	40	10	5 ÷ 19	40	19
			1-X-290 D63MM	21 ÷ 42	60	43	10 ÷ 28	60	71
				14 ÷ 28	40	28	7 ÷ 17	40	46
			1-X-290 D63D	21 ÷ 42	60	89	10 ÷ 28	60	144
				14 ÷ 28	40	58	7 ÷ 17	40	95
	5	60	1-X290 D46MM	19 ÷ 48	60	10	7 ÷ 28	60	18
				13 ÷ 32	40	6	5 ÷ 19	40	12
			1-X-290 D63MM	21 ÷ 42	60	26	10 ÷ 28	60	43
				14 ÷ 28	40	17	7 ÷ 17	40	28
			1-X-290 D63D	21 ÷ 42	60	54	10 ÷ 28	60	89
				14 ÷ 28	40	35	7 ÷ 17	40	58
6	60	1-X290 D46MM	19 ÷ 48	60	7	7 ÷ 28	60	13	
			13 ÷ 32	40	4	5 ÷ 19	40	8	
		1-X-290 D63MM	21 ÷ 42	60	19	10 ÷ 28	60	31	
			14 ÷ 28	40	12	7 ÷ 17	40	20	
		1-X-290 D63D	21 ÷ 42	60	39	10 ÷ 28	60	64	
			14 ÷ 28	40	25	7 ÷ 17	40	42	
8	4	76	1-X290 D46MM	19 ÷ 40	60	17	6 ÷ 30	60	28
				13 ÷ 27	40	10	4 ÷ 20	40	18
			1-X-290 D63MM	15 ÷ 42	60	30	7 ÷ 28	60	69
				10 ÷ 28	40	19	4 ÷ 17	40	45
			1-X-290 D63D	15 ÷ 42	60	62	7 ÷ 28	60	141
				10 ÷ 28	40	40	4 ÷ 17	40	93
	5	76	1-X290 D46MM	19 ÷ 40	60	10	6 ÷ 30	60	17
				13 ÷ 27	40	6	4 ÷ 20	40	11
			1-X-290 D63MM	15 ÷ 42	60	18	7 ÷ 28	60	42
				10 ÷ 28	40	11	4 ÷ 17	40	27
			1-X-290 D63D	15 ÷ 42	60	38	7 ÷ 28	60	87
				10 ÷ 28	40	25	4 ÷ 17	40	57
	6	76	1-X290 D46MM	19 ÷ 40	60	7	6 ÷ 30	60	12
				13 ÷ 27	40	4	4 ÷ 20	40	7
			1-X-290 D63MM	15 ÷ 42	60	13	7 ÷ 28	60	30
				10 ÷ 28	40	8	4 ÷ 17	40	20
			1-X-290 D63D	15 ÷ 42	60	27	7 ÷ 28	60	62
				10 ÷ 28	40	17	4 ÷ 17	40	41
	8	76	1-X290 D46MM	19 ÷ 40	60	4	6 ÷ 30	60	7
				13 ÷ 27	40	2	4 ÷ 20	40	4
			1-X-290 D63MM	15 ÷ 42	60	8	7 ÷ 28	60	18
				10 ÷ 28	40	5	4 ÷ 17	40	12
			1-X-290 D63D	15 ÷ 42	60	17	7 ÷ 28	60	38
				10 ÷ 28	40	11	4 ÷ 17	40	25

1-6942 Type

Trim Type	Microflow
Leakage class	V IEC 60534-4
Packing	GRF

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	Ø6	C	17	1-X-290 D33	30 ÷ 44	60	397	13 ÷ 27	60	319
				1-X-290 D39	20 ÷ 29	40	238	9 ÷ 18	40	198
	Ø9	C	17	1-X-290 D33	33 ÷ 47	60	430	16 ÷ 30	60	430
				1-X-290 D39	22 ÷ 31	40	408	11 ÷ 20	40	321
	Ø12	C	17	1-X-290 D33	30 ÷ 44	60	397	13 ÷ 27	60	427
				1-X-290 D39	20 ÷ 29	40	238	9 ÷ 18	40	262
				1-X-290 D39	33 ÷ 47	60	430	16 ÷ 30	60	430
				1-X-290 D39	22 ÷ 31	40	408	11 ÷ 20	40	355

⁽¹⁾C=Contoured, F=Flatted

1-6942 Type

Trim Type	Contoured
Leakage class	V IEC 60534-4
Packing	GRF

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar	
1/2 3/4 1	1/2	17	1-X-290 D33	30 ÷ 44	60	363	13 ÷ 27	60	413	
			1-X-290 D39	20 ÷ 29	40	208	9 ÷ 18	40	240	
			1-X-290 D39	33 ÷ 47	60	430	16 ÷ 30	60	430	
3/4 1	3/4	17	1-X-290 D39	22 ÷ 31	40	374	11 ÷ 20	40	322	
			1-X-290 D33	30 ÷ 44	60	228	13 ÷ 27	60	260	
			1-X-290 D39	20 ÷ 29	40	128	9 ÷ 18	40	149	
1	1	17	1-X-290 D39	33 ÷ 47	60	389	16 ÷ 30	60	339	
			1-X-290 D33	22 ÷ 31	40	235	11 ÷ 20	40	202	
			1-X-290 D39	30 ÷ 44	60	156	13 ÷ 27	60	178	
1.1/2 2	1/2	25	1-X-290 D33	20 ÷ 29	40	86	9 ÷ 18	40	101	
			1-X-290 D39	33 ÷ 47	60	268	16 ÷ 30	60	233	
			1-X-290 D39	22 ÷ 31	40	161	11 ÷ 20	40	137	
		3/4	25	1-X-290 D39	25 ÷ 45	60	314	7 ÷ 28	60	426
				1-X-290 D46	16 ÷ 30	40	187	5 ÷ 19	40	262
				1-X-290 D46	32 ÷ 47	60	430	16 ÷ 31	60	430
	1	25	1-X-290 D39	22 ÷ 31	40	420	11 ÷ 21	40	371	
			1-X-290 D39	25 ÷ 45	60	259	7 ÷ 28	60	360	
			1-X-290 D46	16 ÷ 30	40	145	5 ÷ 19	40	212	
		1 1/4	25	1-X-290 D39	32 ÷ 47	60	430	16 ÷ 31	60	430
				1-X-290 D46	22 ÷ 31	40	354	11 ÷ 21	40	310
				1-X-290 D39	25 ÷ 45	60	177	7 ÷ 28	60	247
	1 1/2	25	1-X-290 D39	16 ÷ 30	40	98	5 ÷ 19	40	144	
			1-X-290 D46	32 ÷ 47	60	395	16 ÷ 31	60	349	
			1-X-290 D46	22 ÷ 31	40	243	11 ÷ 21	40	212	
		1 1/2	25	1-X-290 D39	25 ÷ 45	60	118	7 ÷ 28	60	167
				1-X-290 D46	16 ÷ 30	40	64	5 ÷ 19	40	96
				1-X-290 D46	32 ÷ 47	60	268	16 ÷ 31	60	236
				1-X-290 D46	22 ÷ 31	40	164	11 ÷ 21	40	143
				1-X-290 D39	25 ÷ 45	60	74	7 ÷ 28	60	106
				1-X-290 D46	16 ÷ 30	40	39	5 ÷ 19	40	60
				1-X-290 D46	32 ÷ 47	60	172	16 ÷ 31	60	151
				1-X-290 D46	22 ÷ 31	40	104	11 ÷ 21	40	90

C-27

1-6942 Type

Trim Type Contoured
 Leakage class V IEC 60534-4
 Packing GRF

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar	
2	2	25	1-X-290 D39	25 ÷ 45	60	43	7 ÷ 28	60	62	
				16 ÷ 30	40	22	5 ÷ 19	40	34	
			1-X-290 D46	32 ÷ 47	60	103	16 ÷ 31	60	90	
				22 ÷ 31	40	61	11 ÷ 21	40	53	
3	1	34	1-X-290 D46	24 ÷ 44	60	275	7 ÷ 28	60	394	
				16 ÷ 29	40	163	5 ÷ 18	40	243	
		1 1/4	34	1-X-290 D46	24 ÷ 44	60	176	7 ÷ 28	60	258
					16 ÷ 29	40	100	5 ÷ 18	40	154
	1-X-290 D63		28 ÷ 43	60	430	13 ÷ 28	60	430		
			19 ÷ 28	40	321	9 ÷ 18	40	375		
	1 1/2	34	1-X-290 D63D	19 ÷ 28	40	430	9 ÷ 18	40	430	
				24 ÷ 44	60	112	7 ÷ 28	60	165	
		1-X-290 D46	16 ÷ 29	40	62	5 ÷ 18	40	98		
			28 ÷ 43	60	327	13 ÷ 28	60	380		
	2	34	1-X-290 D63	19 ÷ 28	40	206	9 ÷ 18	40	241	
				19 ÷ 28	40	430	9 ÷ 18	40	430	
		1-X-290 D63D	24 ÷ 44	60	66	7 ÷ 28	60	99		
			16 ÷ 29	40	36	5 ÷ 18	40	57		
	2 1/2	34	1-X-290 D63	28 ÷ 43	60	198	13 ÷ 28	60	230	
				19 ÷ 28	40	123	9 ÷ 18	40	145	
		1-X-290 D63D	28 ÷ 43	60	421	13 ÷ 28	60	430		
			19 ÷ 28	40	272	9 ÷ 18	40	315		
	3	34	1-X-290 D46	24 ÷ 44	60	36	7 ÷ 28	60	54	
				16 ÷ 29	40	18	5 ÷ 18	40	31	
		1-X-290D63	28 ÷ 43	60	111	13 ÷ 28	60	129		
			19 ÷ 28	40	68	9 ÷ 18	40	81		
	3	34	1-X-290 D63D	28 ÷ 43	60	238	13 ÷ 28	60	275	
				19 ÷ 28	40	153	9 ÷ 18	40	178	
1-X-290 D46		24 ÷ 44	60	24	7 ÷ 28	60	37			
		16 ÷ 29	40	12	5 ÷ 18	40	20			
4	1 1/4	45	1-X-290 D63	28 ÷ 43	60	76	13 ÷ 28	60	89	
				19 ÷ 28	40	47	9 ÷ 18	40	55	
	1 1/2	45	1-X-290 D63MM	22 ÷ 41	60	285	7 ÷ 28	60	430	
				15 ÷ 27	40	164	4 ÷ 17	40	277	
1-X-290 D63D		22 ÷ 41	60	430	- ÷ -	-	-			
		15 ÷ 27	40	365	4 ÷ 17	40	430			
2	45	1-X-290 D63MM	22 ÷ 41	60	234	7 ÷ 28	60	392		
			15 ÷ 27	40	141	4 ÷ 17	40	246		
	1-X-290 D63D	22 ÷ 41	60	430	- ÷ -	-	-			
		15 ÷ 27	40	328	4 ÷ 17	40	430			
2 1/2	45	1-X-290 D63MM	22 ÷ 41	60	141	7 ÷ 28	60	237		
			15 ÷ 27	40	84	4 ÷ 17	40	148		
	1-X-290 D63D	22 ÷ 41	60	313	7 ÷ 28	60	430			
		15 ÷ 27	40	198	4 ÷ 17	40	326			
4	1 1/4	45	1-X-290 D63MM	22 ÷ 41	60	78	7 ÷ 28	60	133	
				15 ÷ 27	40	46	4 ÷ 17	40	82	
	1-X-290 D63D	22 ÷ 41	60	176	7 ÷ 28	60	286			
		15 ÷ 27	40	111	4 ÷ 17	40	184			

1-6942 Type

Trim Type Contoured
 Leakage class V IEC 60534-4
 Packing GRF

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
4	3	45	1-X-290 D63MM	22 ÷ 41	60	54	7 ÷ 28	60	92
			15 ÷ 27	40	31	4 ÷ 17	40	56	
			22 ÷ 41	60	122	7 ÷ 28	60	198	
	4	45	1-X-290 D63D	15 ÷ 27	40	76	4 ÷ 17	40	127
			22 ÷ 41	60	36	7 ÷ 28	60	63	
			15 ÷ 27	40	20	4 ÷ 17	40	38	
6	2 1/2	60	1-X-290 D46MM	22 ÷ 41	60	84	7 ÷ 28	60	137
			15 ÷ 27	40	52	4 ÷ 17	40	88	
			1-X-290 D63MM	19 ÷ 48	60	19	- ÷ -	-	-
			13 ÷ 32	40	5	- ÷ -	-	-	
			21 ÷ 42	60	72	10 ÷ 28	60	130	
			14 ÷ 28	40	41	7 ÷ 17	40	79	
	3	60	1-X-290 D63D	21 ÷ 42	60	167	10 ÷ 28	60	281
			14 ÷ 28	40	104	7 ÷ 17	40	180	
			1-X-290 D46MM	19 ÷ 48	60	12	- ÷ -	-	-
			13 ÷ 32	40	3	- ÷ -	-	-	
			1-X-290 D63MM	21 ÷ 42	60	49	10 ÷ 28	60	89
			14 ÷ 28	40	27	7 ÷ 17	40	54	
	4	60	1-X-290 D63D	21 ÷ 42	60	115	10 ÷ 28	60	195
			14 ÷ 28	40	71	7 ÷ 17	40	124	
			1-X-290 D46MM	19 ÷ 48	60	8	- ÷ -	-	-
			21 ÷ 42	60	33	10 ÷ 28	60	61	
			14 ÷ 28	40	18	7 ÷ 17	40	37	
			21 ÷ 42	60	79	10 ÷ 28	60	135	
	5	60	1-X-290 D63D	14 ÷ 28	40	49	7 ÷ 17	40	86
			1-X-290 D46MM	19 ÷ 48	60	4	- ÷ -	-	-
			21 ÷ 42	60	20	10 ÷ 28	60	37	
			14 ÷ 28	40	10	7 ÷ 17	40	22	
			21 ÷ 42	60	48	10 ÷ 28	60	82	
			14 ÷ 28	40	29	7 ÷ 17	40	52	
6	60	1-X-290 D63D	14 ÷ 28	40	29	7 ÷ 17	40	52	
		1-X-290 D46MM	19 ÷ 48	60	2	- ÷ -	-	-	
		21 ÷ 42	60	13	10 ÷ 28	60	26		
		14 ÷ 28	40	7	7 ÷ 17	40	15		
		21 ÷ 42	60	34	10 ÷ 28	60	58		
		14 ÷ 28	40	20	7 ÷ 17	40	37		
8	4	76	1-X-290 D63MM	15 ÷ 42	60	20	7 ÷ 28	60	60
			10 ÷ 28	40	9	4 ÷ 17	40	36	
			1-X-290 D63D	15 ÷ 42	60	53	7 ÷ 28	60	132
			10 ÷ 28	40	31	4 ÷ 17	40	84	
	5	76	1-X-290 D63MM	15 ÷ 42	60	11	7 ÷ 28	60	36
			10 ÷ 28	40	5	4 ÷ 17	40	21	
			1-X-290 D63D	15 ÷ 42	60	31	7 ÷ 28	60	80
			10 ÷ 28	40	18	4 ÷ 17	40	50	
	6	76	1-X-290 D63MM	15 ÷ 42	60	8	7 ÷ 28	60	25
			10 ÷ 28	40	3	4 ÷ 17	40	14	
			1-X-290 D63D	15 ÷ 42	60	22	7 ÷ 28	60	57
			10 ÷ 28	40	12	4 ÷ 17	40	36	
8	76	1-X-290 D63MM	15 ÷ 42	60	4	7 ÷ 28	60	15	
		- ÷ -	-	-	4 ÷ 17	40	8		
		1-X-290 D63D	15 ÷ 42	60	13	7 ÷ 28	60	35	
		10 ÷ 28	40	7	4 ÷ 17	40	21		

1-6942 Type

Trim Type	Microflow
Leakage class	V IEC 60534-4
Packing	TFK

DN in	Port in	Plug Type ⁽¹⁾	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
					Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	Ø6	C	17	1-X-290 D33	30 ÷ 44	60	430	13 ÷ 27	60	352
					20 ÷ 29	40	297	9 ÷ 18	40	229
				1-X-290 D39	- ÷ -	-	-	16 ÷ 30	60	430
	Ø9	C	17	1-X-290 D33	30 ÷ 44	60	430	13 ÷ 27	60	430
					20 ÷ 29	40	297	9 ÷ 18	40	307
				1-X-290 D39	22 ÷ 31	40	430	11 ÷ 20	40	415
Ø12	C	17	1-X-290 D33	30 ÷ 44	60	430	13 ÷ 27	60	430	
				20 ÷ 29	40	297	9 ÷ 18	40	331	
			1-X-290 D39	22 ÷ 31	40	430	11 ÷ 20	40	415	

⁽¹⁾C=Contoured, F=Flatted

1-6942 Type

Trim Type	Contoured
Leakage class	V IEC 60534-4
Packing	TFK

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1/2 3/4 1	1/2	17	1-X-290 D33	30 ÷ 44	60	422	13 ÷ 27	60	430
				20 ÷ 29	40	285	9 ÷ 18	40	299
3/4 1	3/4	17	1-X-290 D39	22 ÷ 31	40	430	11 ÷ 20	40	381
			1-X-290 D33	30 ÷ 44	60	288	13 ÷ 27	60	298
				20 ÷ 29	40	168	9 ÷ 18	40	187
1	1	17	1-X-290 D39	33 ÷ 47	60	427	16 ÷ 30	60	377
				22 ÷ 31	40	273	11 ÷ 20	40	240
			1-X-290 D33	30 ÷ 44	60	182	13 ÷ 27	60	204
1.1/2 2	1/2	25	1-X-290 D39	25 ÷ 45	60	384	7 ÷ 28	60	430
				16 ÷ 30	40	237	5 ÷ 19	40	312
	3/4	25	1-X-290 D46	22 ÷ 31	40	430	11 ÷ 21	40	421
			1-X-290 D39	25 ÷ 45	60	304	7 ÷ 28	60	404
				16 ÷ 30	40	190	5 ÷ 19	40	257
	1	25	1-X-290 D46	32 ÷ 47	60	430	16 ÷ 31	60	430
				22 ÷ 31	40	399	11 ÷ 21	40	354
			1-X-290 D39	25 ÷ 45	60	208	7 ÷ 28	60	278
	1 1/4	25	1-X-290 D39	16 ÷ 30	40	129	5 ÷ 19	40	176
				32 ÷ 47	60	426	16 ÷ 31	60	380
			1-X-290 D46	22 ÷ 31	40	274	11 ÷ 21	40	243
	1 1/2	25	1-X-290 D39	25 ÷ 45	60	140	7 ÷ 28	60	188
			16 ÷ 30	40	86	5 ÷ 19	40	118	
1-X-290 D46			32 ÷ 47	60	289	16 ÷ 31	60	258	
2	2	25	1-X-290 D39	22 ÷ 31	40	185	11 ÷ 21	40	164
			1-X-290 D39	25 ÷ 45	60	88	7 ÷ 28	60	120
				16 ÷ 30	40	53	5 ÷ 19	40	74
2	2	25	1-X-290 D46	32 ÷ 47	60	186	16 ÷ 31	60	165
				22 ÷ 31	40	118	11 ÷ 21	40	104
			1-X-290 D39	25 ÷ 45	60	52	7 ÷ 28	60	71
			16 ÷ 30	40	30	5 ÷ 19	40	43	
			1-X-290 D46	32 ÷ 47	60	111	16 ÷ 31	60	98
				22 ÷ 31	40	70	11 ÷ 21	40	61

1-6942 Type

Trim Type Contoured
 Leakage class V IEC 60534-4
 Packing TFK

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)				AIR TO CLOSE (direct)			
				Spring range psi		Supply psi	ΔP shut-off bar	Spring range psi		Supply psi	ΔP shut-off bar
				24	÷ 44	60	307	7	÷ 28	60	426
3	1	34	1-X-290 D46	24	÷ 44	60	307	7	÷ 28	60	426
				16	÷ 29	40	195	5	÷ 18	40	274
			1-X-290 D63	19	÷ 28	40	430	9	÷ 18	40	430
	1 1/4	34	1-X-290 D46	24	÷ 44	60	205	7	÷ 28	60	286
				16	÷ 29	40	128	5	÷ 18	40	183
			1-X-290 D63	28	÷ 43	60	430	13	÷ 28	60	430
			19	÷ 28	40	349	9	÷ 18	40	403	
			1-X-290 D63D	19	÷ 28	40	430	9	÷ 18	40	430
			19	÷ 28	40	430	9	÷ 18	40	430	
	1 1/2	34	1-X-290 D46	24	÷ 44	60	131	7	÷ 28	60	184
				16	÷ 29	40	81	5	÷ 18	40	116
			1-X-290 D63	28	÷ 43	60	346	13	÷ 28	60	399
			19	÷ 28	40	224	9	÷ 18	40	260	
			1-X-290 D63D	19	÷ 28	40	430	9	÷ 18	40	430
			19	÷ 28	40	430	9	÷ 18	40	430	
	2	34	1-X-290 D46	24	÷ 44	60	78	7	÷ 28	60	110
				16	÷ 29	40	47	5	÷ 18	40	69
			1-X-290 D63	28	÷ 43	60	209	13	÷ 28	60	241
			19	÷ 28	40	135	9	÷ 18	40	156	
			1-X-290 D63D	28	÷ 43	60	430	13	÷ 28	60	430
			19	÷ 28	40	283	9	÷ 18	40	327	
	2 1/2	34	1-X-290 D46	24	÷ 44	60	42	7	÷ 28	60	61
				16	÷ 29	40	25	5	÷ 18	40	37
			1-X-290D63	28	÷ 43	60	117	13	÷ 28	60	136
19			÷ 28	40	75	9	÷ 18	40	87		
1-X-290 D63D			28	÷ 43	60	244	13	÷ 28	60	281	
19			÷ 28	40	160	9	÷ 18	40	184		
3	34	1-X-290 D46	24	÷ 44	60	28	7	÷ 28	60	41	
			16	÷ 29	40	16	5	÷ 18	40	25	
		1-X-290 D63	28	÷ 43	60	81	13	÷ 28	60	93	
		19	÷ 28	40	51	9	÷ 18	40	60		
		1-X-290 D63D	28	÷ 43	60	169	13	÷ 28	60	195	
		19	÷ 28	40	110	9	÷ 18	40	127		
4	1 1/4	45	1-X-290 D63MM	22	÷ 41	60	292	7	÷ 26	60	430
				15	÷ 27	40	191	4	÷ 17	40	304
			1-X-290 D63D	22	÷ 41	60	430	-	÷ -	-	-
			15	÷ 27	40	393	4	÷ 17	40	430	
			1-X-290 D63MM	22	÷ 41	60	260	7	÷ 26	60	417
			15	÷ 27	40	166	4	÷ 17	40	271	
	1 1/2	45	1-X-290 D63MM	22	÷ 41	60	430	-	÷ -	-	-
				15	÷ 27	40	354	4	÷ 17	40	430
			1-X-290 D63D	22	÷ 41	60	157	7	÷ 26	60	253
			15	÷ 27	40	99	4	÷ 17	40	163	
			1-X-290 D63D	22	÷ 41	60	328	7	÷ 26	60	430
			15	÷ 27	40	214	4	÷ 17	40	342	
	2	45	1-X-290 D63MM	22	÷ 41	60	87	7	÷ 26	60	142
				15	÷ 27	40	55	4	÷ 17	40	91
			1-X-290 D63D	22	÷ 41	60	185	7	÷ 26	60	295
			15	÷ 27	40	120	4	÷ 17	40	193	
			1-X-290 D63MM	22	÷ 41	60	60	7	÷ 26	60	98
			15	÷ 27	40	37	4	÷ 17	40	62	
	2 1/2	45	1-X-290 D63MM	22	÷ 41	60	128	7	÷ 26	60	204
				15	÷ 27	40	82	4	÷ 17	40	133
			1-X-290 D63D	22	÷ 41	60	41	7	÷ 26	60	67
			15	÷ 27	40	25	4	÷ 17	40	43	
			1-X-290 D63D	22	÷ 41	60	88	7	÷ 26	60	142
			15	÷ 27	40	57	4	÷ 17	40	92	

1-6942 Type

Trim Type	Contoured	
Leakage class	V	IEC 60534-4
Packing	TFK	

DN in	Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)						
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar				
6	2 1/2	60	1-X290 D46MM	19	±	48	60	30	7	±	28	60	57
				13	±	32	40	16	5	±	19	40	34
			1-X-290 D63MM	21	±	42	60	83	10	±	26	60	140
				14	±	28	40	52	7	±	17	40	90
			1-X-290 D63D	21	±	42	60	177	10	±	26	60	292
				14	±	28	40	114	7	±	17	40	191
	3	60	1-X290 D46MM	19	±	48	60	20	7	±	28	60	39
				13	±	32	40	10	5	±	19	40	23
			1-X-290 D63MM	21	±	42	60	57	10	±	26	60	97
				14	±	28	40	35	7	±	17	40	61
			1-X-290 D63D	21	±	42	60	122	10	±	26	60	202
				14	±	28	40	79	7	±	17	40	132
	4	60	1-X290 D46MM	19	±	48	60	20	7	±	28	60	39
				13	±	32	40	6	5	±	19	40	15
			1-X-290 D63MM	21	±	42	60	39	10	±	26	60	66
				14	±	28	40	23	7	±	17	40	42
			1-X-290 D63D	21	±	42	60	84	10	±	26	60	140
				14	±	28	40	54	7	±	17	40	91
	5	60	1-X290 D46MM	19	±	48	60	7	7	±	28	60	15
				13	±	32	40	3	5	±	19	40	8
			1-X-290 D63MM	21	±	42	60	23	10	±	26	60	40
				14	±	28	40	13	7	±	17	40	25
			1-X-290 D63D	21	±	42	60	51	10	±	26	60	85
				14	±	28	40	32	7	±	17	40	55
6	60	1-X290 D46MM	19	±	48	60	4	7	±	28	60	10	
			-	±	-	-	-	5	±	19	40	5	
		1-X-290 D63MM	21	±	42	60	16	10	±	26	60	28	
			14	±	28	40	9	7	±	17	40	17	
		1-X-290 D63D	21	±	42	60	38	10	±	26	60	61	
			14	±	28	40	22	7	±	17	40	39	
8	4	76	1-X-290 D46MM	19	±	40	60	12	6	±	30	60	24
				13	±	27	40	6	4	±	20	40	13
			1-X-290 D63MM	15	±	42	60	25	7	±	26	60	65
				10	±	28	40	14	4	±	17	40	41
			1-X-290 D63D	15	±	42	60	58	7	±	26	60	137
				10	±	28	40	38	4	±	17	40	89
	5	76	1-X-290 D46MM	19	±	40	60	7	6	±	30	60	14
				13	±	27	40	3	4	±	20	40	7
			1-X-290 D63MM	15	±	42	60	15	7	±	26	60	39
				10	±	28	40	8	4	±	17	40	24
			1-X-290 D63D	15	±	42	60	35	7	±	26	60	83
				10	±	28	40	21	4	±	17	40	54
	6	76	1-X-290 D46MM	19	±	40	60	4	6	±	30	60	9
				-	±	-	-	-	4	±	20	40	5
			1-X-290 D63MM	15	±	42	60	10	7	±	26	60	27
				10	±	28	40	5	4	±	17	40	17
			1-X-290 D63D	15	±	42	60	24	7	±	26	60	59
				10	±	28	40	15	4	±	17	40	38
	8	76	1-X-290 D46MM	19	±	40	60	2	6	±	30	60	5
				-	±	-	-	-	4	±	20	40	2
			1-X-290 D63MM	15	±	42	60	5	7	±	26	60	16
				10	±	28	40	2	4	±	17	40	10
			1-X-290 D63D	15	±	42	60	14	7	±	26	60	38
				10	±	28	40	8	4	±	17	40	23

1-6943 TYPE

Plug Not-balanced
 Packing GRF
 Leakage class IV IEC 60534-4

Balancing seal
 Type None
 Code N

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
3/8	17	1-X-290 D25	1500	17 ÷ 43	60	189	7 ÷ 26	60	430
				11 ÷ 29	40	101	- ÷ -	-	-
		1-X-290 D33	2500	20 ÷ 29	40	420	9 ÷ 18	40	430
				17 ÷ 43	60	108	7 ÷ 26	60	252
1/2	17	1-X-290 D25	1500	11 ÷ 29	40	57	- ÷ -	-	-
				30 ÷ 44	60	420	13 ÷ 27	60	420
		1-X-290 D33	1500	20 ÷ 29	40	279	9 ÷ 18	40	313
				33 ÷ 47	60	420	16 ÷ 30	60	420
		1-X-290 D39	2500*	22 ÷ 31	40	413	11 ÷ 20	40	360
				30 ÷ 44	60	225	13 ÷ 27	60	253
3/4	17	1-X-290 D33	1500	20 ÷ 29	40	140	9 ÷ 18	40	159
				33 ÷ 47	60	348	16 ÷ 30	60	305
		1-X-290 D39	2500	22 ÷ 31	40	217	11 ÷ 20	40	189
				25 ÷ 45	60	124	12 ÷ 28	60	164
1	34	1-X-290 D39	2500	17 ÷ 30	40	75	8 ÷ 19	40	102
				24 ÷ 44	60	183	7 ÷ 28	60	256
		1-X-290 D46	2500	16 ÷ 29	40	115	5 ÷ 18	40	163
				25 ÷ 45	60	71	12 ÷ 28	60	93
1 1/2	34	1-X-290 D39	2500	17 ÷ 30	40	43	8 ÷ 19	40	58
				24 ÷ 44	60	104	7 ÷ 28	60	146
		1-X-290 D46	2500	16 ÷ 29	40	65	5 ÷ 18	40	93
				25 ÷ 45	60	25	12 ÷ 28	60	34
2	34	1-X-290 D39	2500	17 ÷ 30	40	15	8 ÷ 19	40	21
				24 ÷ 44	60	38	7 ÷ 28	60	53
		1-X-290 D46	2500	16 ÷ 29	40	23	5 ÷ 18	40	33
				19 ÷ 47	60	11	7 ÷ 28	60	20
3	45	1-X-290 D39	2500	13 ÷ 31	40	6	5 ÷ 19	40	12
				24 ÷ 44	60	23	12 ÷ 28	60	32
		1-X-290 D46	2500	16 ÷ 30	40	14	8 ÷ 19	40	20
				19 ÷ 48	60	11	7 ÷ 28	60	20
4	60	1-X-290 D46	2500	13 ÷ 32	40	6	5 ÷ 19	40	12
				21 ÷ 42	60	28	10 ÷ 26	60	46
		1-X-290 D63	2500	14 ÷ 28	40	18	7 ÷ 17	40	30
				21 ÷ 42	60	58	10 ÷ 26	60	95
		1-X-290 D63D	2500	14 ÷ 28	40	38	7 ÷ 17	40	63
				19 ÷ 48	60	7	7 ÷ 28	60	13
6	60	1-X-290 D46	2500	13 ÷ 32	40	4	5 ÷ 19	40	8
				21 ÷ 42	60	19	10 ÷ 26	60	32
		1-X-290 D63	2500	14 ÷ 28	40	12	7 ÷ 17	40	21
				21 ÷ 42	60	40	10 ÷ 26	60	65
		1-X-290 D63D	2500	14 ÷ 28	40	26	7 ÷ 17	40	43
				19 ÷ 40	60	4	6 ÷ 30	60	7
8	76	1-X-290 D46	2500	13 ÷ 27	40	2	4 ÷ 20	40	4
				15 ÷ 42	60	8	7 ÷ 26	60	19
		1-X-290 D63	2500	10 ÷ 28	40	5	4 ÷ 17	40	12
				15 ÷ 42	60	17	7 ÷ 26	60	39
		1-X-290 D63D	2500	10 ÷ 28	40	11	4 ÷ 17	40	26

Section C – Pressure Drop Tables

1-6943 TYPE

Plug Packing Leakage class	Not-balanced		Balancing seal	
	TFK		Type	None
	IV	IEC 60534-4	Code	N

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
3/8	17	1-X-290 D25	1500	17 ÷ 43	60	243	7 ÷ 26	60	420
				11 ÷ 29	40	154	4 ÷ 18	40	323
		1-X-290 D33	2500	20 ÷ 29	40	420	9 ÷ 18	40	420
1/2	17	1-X-290 D25	1500	17 ÷ 43	60	138	7 ÷ 26	60	282
				11 ÷ 29	40	88	4 ÷ 18	40	184
		1-X-290 D33	1500	30 ÷ 44	60	420	13 ÷ 27	60	420
				20 ÷ 29	40	309	9 ÷ 18	40	343
		1-X-290 D39	2500*	22 ÷ 31	40	420	11 ÷ 20	40	420
3/4	17	1-X-290 D25	1500	17 ÷ 43	60	71	7 ÷ 26	60	147
				11 ÷ 29	40	44	4 ÷ 18	40	95
		1-X-290 D33	1500	30 ÷ 44	60	246	13 ÷ 27	60	273
				20 ÷ 29	40	161	9 ÷ 18	40	179
		1-X-290 D39	2500	33 ÷ 47	60	379	16 ÷ 30	60	337
				22 ÷ 31	40	249	11 ÷ 20	40	221
1	34	1-X-290 D39	2500	25 ÷ 45	60	140	12 ÷ 28	60	180
				17 ÷ 30	40	91	8 ÷ 19	40	118
		1-X-290 D46	2500	24 ÷ 44	60	199	7 ÷ 28	60	272
				16 ÷ 29	40	131	5 ÷ 18	40	179
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	80	12 ÷ 28	60	102
				17 ÷ 30	40	52	8 ÷ 19	40	67
		1-X-290 D46	2500	24 ÷ 44	60	113	7 ÷ 28	60	155
				16 ÷ 29	40	74	5 ÷ 18	40	102
2	34	1-X-290 D39	2500	25 ÷ 45	60	29	12 ÷ 28	60	37
				17 ÷ 30	40	19	8 ÷ 19	40	24
		1-X-290 D46	2500	24 ÷ 44	60	41	7 ÷ 28	60	56
				16 ÷ 29	40	27	5 ÷ 18	40	37
3	45	1-X-290 D39	2500	19 ÷ 47	60	13	7 ÷ 28	60	22
				13 ÷ 31	40	8	5 ÷ 19	40	15
		1-X-290 D46	2500	24 ÷ 44	60	25	12 ÷ 28	60	34
				16 ÷ 30	40	17	8 ÷ 19	40	22
4	60	1-X-290 D46	2500	19 ÷ 48	60	12	7 ÷ 28	60	21
				13 ÷ 32	40	8	5 ÷ 19	40	14
		1-X-290 D63	2500	21 ÷ 42	60	29	10 ÷ 26	60	48
				14 ÷ 28	40	19	7 ÷ 17	40	32
		1-X-290 D63D	2500	21 ÷ 42	60	60	10 ÷ 26	60	97
				14 ÷ 28	40	39	7 ÷ 17	40	64
6	60	1-X-290 D46	2500	19 ÷ 48	60	8	7 ÷ 28	60	14
				13 ÷ 32	40	5	5 ÷ 19	40	9
		1-X-290 D63	2500	21 ÷ 42	60	20	10 ÷ 26	60	33
				14 ÷ 28	40	13	7 ÷ 17	40	22
		1-X-290 D63D	2500	21 ÷ 42	60	41	10 ÷ 26	60	66
				14 ÷ 28	40	27	7 ÷ 17	40	44
8	76	1-X-290 D46	2500	19 ÷ 40	60	5	6 ÷ 30	60	8
				13 ÷ 27	40	3	4 ÷ 20	40	5
		1-X-290 D63	2500	15 ÷ 42	60	8	7 ÷ 26	60	20
				10 ÷ 28	40	5	4 ÷ 17	40	13
		1-X-290 D63D	2500	15 ÷ 42	60	18	7 ÷ 26	60	40
				10 ÷ 28	40	11	4 ÷ 17	40	26

* AVAILABLE ONLY FOR RATING ANSI 2500.

1-6943 TYPE

Plug Balanced
Packing GRF
Leakage class IV IEC 60534-4

Balancing seal
Max. Δp 200 bar
Type energ. carbon graphite rings
Code D

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	17 ÷ 30	40	200	8 ÷ 19	40	200
		1-X-290 D39	2500	25 ÷ 45	60	200	12 ÷ 28	60	200
2	34	1-X-290 D46	2500	17 ÷ 30	40	193	8 ÷ 19	40	139
		1-X-290 D46	2500	16 ÷ 29	40	200	5 ÷ 18	40	200
3	45	1-X-290 D39	2500	19 ÷ 47	60	200	7 ÷ 28	60	162
		1-X-290 D39	2500	13 ÷ 31	40	124	5 ÷ 19	40	103
4	60	1-X-290 D46	2500	- ÷ -	-	-	12 ÷ 28	60	200
		1-X-290 D46	2500	16 ÷ 30	40	200	8 ÷ 19	40	138
4	60	1-X-290 D46	2500	19 ÷ 48	60	200	7 ÷ 28	60	183
		1-X-290 D63	2500	13 ÷ 32	40	184	5 ÷ 19	40	118
6	60	1-X-290 D63	2500	14 ÷ 28	40	200	7 ÷ 17	40	200
		1-X-290 D46	2500	19 ÷ 48	60	200	7 ÷ 28	60	143
6	60	1-X-290 D63	2500	13 ÷ 32	40	169	5 ÷ 19	40	93
		1-X-290 D63D	2500	- ÷ -	-	-	10 ÷ 26	60	200
8	76	1-X-290 D63	2500	14 ÷ 28	40	200	7 ÷ 17	40	168
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	200
8	76	1-X-290 D46	2500	19 ÷ 40	60	195	6 ÷ 30	60	118
		1-X-290 D46	2500	13 ÷ 27	40	120	4 ÷ 20	40	76
10	100	1-X-290 D63	2500	- ÷ -	-	-	7 ÷ 26	60	200
		1-X-290 D63	2500	10 ÷ 28	40	200	4 ÷ 17	40	136
10	100	1-X-290 D63D	2500	- ÷ -	-	-	4 ÷ 17	40	200
		1-X-290 D46	2500	19 ÷ 40	60	112	6 ÷ 30	60	85
10	100	1-X-290 D46	2500	13 ÷ 27	40	65	4 ÷ 20	40	54
		1-X-250 D63	2500	19 ÷ 40	60	200	6 ÷ 30	60	182
10	100	1-X-250 D63	2500	13 ÷ 27	40	170	4 ÷ 20	40	118
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	6 ÷ 30	60	177
12	120	1-X-250 D63	2500	15 ÷ 34	40	200	6 ÷ 30	40	119
		1-X-250 D63 d.e.	2500	15 ÷ 34	50	200	- ÷ -	-	-
12	120	1-X-290 D63	2500	19 ÷ 40	60	200	6 ÷ 30	60	151
		1-X-290 D63	2500	13 ÷ 27	40	159	4 ÷ 20	40	98
12	120	1-X-250 D63	2500	15 ÷ 38	60	200	5 ÷ 34	60	176
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	5 ÷ 34	40	54
14	150	1-X-250 D63	2500	15 ÷ 38	50	200	- ÷ -	-	-
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	6 ÷ 30	60	123
14	150	1-X-250 D63	2500	14 ÷ 28	40	146	6 ÷ 30	40	73
		1-X-250 D63 d.e.	2500	14 ÷ 28	50	200	- ÷ -	-	-
16	200	1-X-250 D63	2500	14 ÷ 28	50	200	- ÷ -	-	-
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	6 ÷ 30	60	99
16	200	1-X-250 D63 d.e.	2500	10 ÷ 29	40	77	6 ÷ 30	40	59
		1-X-400 C450	2500	10 ÷ 29	50	196	- ÷ -	-	-
16	200	1-X-400 C450	2500	36 ÷ 58	87	200	44 ÷ 65	87	125
		1-X-400 C600	2500	29 ÷ 51	60	167	22 ÷ 44	60	83
20	250	1-X-400 C600	2500	- ÷ -	-	-	29 ÷ 51	87	200
		1-X-400 C450	2500	29 ÷ 51	60	200	22 ÷ 44	60	171
20	250	1-X-400 C450	2500	44 ÷ 65	87	200	36 ÷ 58	87	100
		1-X-400 C600	2500	29 ÷ 51	60	124	15 ÷ 36	60	68
24	300	1-X-400 C600	2500	- ÷ -	-	-	36 ÷ 58	87	184
		1-X-400 C450	2500	29 ÷ 51	60	200	15 ÷ 36	60	128
24	300	1-X-400 C450	2500	36 ÷ 58	87	158	44 ÷ 65	87	83
		1-X-400 C600	2500	29 ÷ 51	87	200	22 ÷ 44	60	54
24	300	1-X-400 C600	2500	29 ÷ 51	60	193	22 ÷ 44	60	115
		1-X-400 C600	2500	29 ÷ 51	87	200	44 ÷ 65	87	154

Section C – Pressure Drop Tables

1-6943 TYPE

Plug Balanced
 Packing TFK
 Leakage class IV IEC 60534-4

Balancing seal
 Max. Δp 200 bar
 Type energ. carbon graphite rings
 Code D

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	17 ÷ 30	40	200	8 ÷ 19	40	200
2	34	1-X-290 D39	2500	- ÷ -	-	-	12 ÷ 28	60	200
		1-X-290 D46	2500	17 ÷ 30	40	200	8 ÷ 19	40	153
3	45	1-X-290 D39	2500	- ÷ -	-	-	5 ÷ 18	40	200
			2500	19 ÷ 47	60	200	7 ÷ 28	60	172
		1-X-290 D46	2500	13 ÷ 31	40	162	5 ÷ 19	40	113
4	60	1-X-290 D46	2500	- ÷ -	-	-	12 ÷ 28	60	200
		1-X-290 D63	2500	16 ÷ 30	40	200	8 ÷ 19	40	148
6	60	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	191
		1-X-290 D63	2500	13 ÷ 32	40	200	5 ÷ 19	40	126
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	200
8	76	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	149
		1-X-290 D63	2500	13 ÷ 32	40	200	5 ÷ 19	40	98
		1-X-290 D63D	2500	- ÷ -	-	-	10 ÷ 26	60	200
10	100	1-X-290 D46	2500	19 ÷ 40	60	200	6 ÷ 30	60	123
			2500	13 ÷ 27	40	149	4 ÷ 20	40	81
		1-X-290 D63	2500	- ÷ -	-	-	7 ÷ 26	60	200
			2500	10 ÷ 28	40	200	4 ÷ 17	40	142
		1-X-250 D63	2500	- ÷ -	-	-	4 ÷ 17	40	200
1-X-250 D63 d.e.	2500	19 ÷ 40	60	136	6 ÷ 30	60	90		
12	120	1-X-290 D63	2500	13 ÷ 27	40	89	4 ÷ 20	40	59
			2500	19 ÷ 40	60	200	6 ÷ 30	60	187
		1-X-250 D63	2500	13 ÷ 27	40	194	4 ÷ 20	40	124
14	150	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	182
			2500	15 ÷ 34	40	200	6 ÷ 30	40	143
		1-X-250 D63 d.e.	2500	15 ÷ 34	50	200	- ÷ -	-	-
16	200	1-X-290 D63	2500	19 ÷ 40	60	200	6 ÷ 30	60	155
			2500	13 ÷ 27	40	182	4 ÷ 20	40	103
		1-X-250 D63	2500	- ÷ -	-	-	5 ÷ 34	60	180
			2500	15 ÷ 38	40	200	5 ÷ 34	40	77
		1-X-250 D63 d.e.	2500	15 ÷ 38	50	200	- ÷ -	-	-
20	250	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	128
			2500	14 ÷ 28	40	167	6 ÷ 30	40	94
		1-X-250 D63 d.e.	2500	14 ÷ 28	50	200	- ÷ -	-	-
			2500	- ÷ -	-	-	6 ÷ 30	60	103
24	300	1-X-400 C450	2500	10 ÷ 29	40	96	6 ÷ 30	40	77
			2500	10 ÷ 29	50	196	- ÷ -	-	-
		1-X-400 C600	2500	36 ÷ 58	87	200	44 ÷ 65	87	136
20	250	1-X-400 C450	2500	29 ÷ 51	60	183	22 ÷ 44	60	102
			2500	- ÷ -	-	-	29 ÷ 51	87	200
		1-X-400 C600	2500	29 ÷ 51	60	200	22 ÷ 44	60	185
24	300	1-X-400 C450	2500	44 ÷ 65	87	200	36 ÷ 58	87	104
			2500	29 ÷ 51	60	140	15 ÷ 36	60	73
		1-X-400 C600	2500	- ÷ -	-	-	36 ÷ 58	87	188
24	300	1-X-400 C450	2500	29 ÷ 51	60	200	15 ÷ 36	60	132
			2500	36 ÷ 58	87	166	44 ÷ 65	87	87
		1-X-400 C600	2500	29 ÷ 51	60	112	22 ÷ 44	60	65
24	300	1-X-400 C600	2500	- ÷ -	-	-	44 ÷ 65	87	157
			2500	29 ÷ 51	60	200	22 ÷ 44	60	119

1-6943 TYPE

Plug Balanced
 Packing GRF
 Leakage class IV IEC 60534-4

Balancing seal
 Max. Δp 250 bar
 Type energized PTFE
 Code S

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	250	- ÷ -	- ÷ -	-
		1-X-290 D46	2500	17 ÷ 30	40	247	8 ÷ 19	40	250
2	34	1-X-290 D39	2500	16 ÷ 29	40	250	- ÷ -	- ÷ -	-
		1-X-290 D46	2500	25 ÷ 45	60	250	12 ÷ 28	60	231
3	45	1-X-290 D39	2500	17 ÷ 30	40	227	8 ÷ 19	40	145
		1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	250
4	60	1-X-290 D39	2500	16 ÷ 29	40	250	5 ÷ 18	40	243
		1-X-290 D46	2500	19 ÷ 47	60	250	7 ÷ 28	60	168
6	60	1-X-290 D39	2500	13 ÷ 31	40	144	5 ÷ 19	40	106
		1-X-290 D46	2500	- ÷ -	-	-	12 ÷ 28	60	224
8	76	1-X-290 D39	2500	16 ÷ 30	40	250	8 ÷ 19	40	143
		1-X-290 D46	2500	19 ÷ 48	60	250	7 ÷ 28	60	191
10	100	1-X-290 D46	2500	13 ÷ 32	40	231	5 ÷ 19	40	122
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	250
12	120	1-X-290 D63	2500	14 ÷ 28	40	250	7 ÷ 17	40	222
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	250
14	150	1-X-290 D46	2500	19 ÷ 48	60	250	7 ÷ 28	60	148
		1-X-290 D63	2500	13 ÷ 32	40	217	5 ÷ 19	40	95
16	200	1-X-290 D46	2500	- ÷ -	-	-	10 ÷ 26	60	250
		1-X-290 D63	2500	14 ÷ 28	40	250	7 ÷ 17	40	172
18	250	1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	250
		1-X-290 D46	2500	19 ÷ 40	60	250	6 ÷ 30	60	122
20	300	1-X-290 D46	2500	13 ÷ 27	40	145	4 ÷ 20	40	77
		1-X-290 D63	2500	- ÷ -	-	-	7 ÷ 28	60	217
22	350	1-X-290 D63	2500	10 ÷ 28	40	250	4 ÷ 17	40	141
		1-X-290 D63D	2500	- ÷ -	-	-	4 ÷ 17	40	250
24	400	1-X-290 D46	2500	19 ÷ 40	60	129	6 ÷ 30	60	87
		1-X-290 D63	2500	13 ÷ 27	40	68	4 ÷ 20	40	54
26	450	1-X-290 D63	2500	19 ÷ 40	60	250	6 ÷ 30	60	189
		1-X-290 D63D	2500	13 ÷ 27	40	205	4 ÷ 20	40	122
28	500	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	184
		1-X-250 D63 d.e.	2500	15 ÷ 34	40	250	6 ÷ 30	40	138
30	550	1-X-250 D63	2500	15 ÷ 34	50	250	- ÷ -	-	-
		1-X-290 D63	2500	19 ÷ 40	60	250	6 ÷ 30	60	156
32	600	1-X-290 D63	2500	13 ÷ 27	40	194	4 ÷ 20	40	100
		1-X-250 D63	2500	- ÷ -	-	-	5 ÷ 34	60	182
34	650	1-X-250 D63	2500	15 ÷ 38	40	250	5 ÷ 34	40	53
		1-X-250 D63 d.e.	2500	15 ÷ 38	50	250	- ÷ -	-	-
36	700	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	127
		1-X-250 D63 d.e.	2500	14 ÷ 28	40	171	6 ÷ 30	40	78
38	750	1-X-250 D63	2500	14 ÷ 28	50	250	- ÷ -	-	-
		1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	101
40	800	1-X-250 D63	2500	10 ÷ 29	40	83	6 ÷ 30	40	59
		1-X-250 D63 d.e.	2500	10 ÷ 29	50	196	- ÷ -	-	-
42	850	1-X-400 C450	2500	36 ÷ 58	87	250	44 ÷ 65	87	135
		1-X-400 C600	2500	29 ÷ 51	60	192	22 ÷ 44	60	91
44	900	1-X-400 C450	2500	- ÷ -	-	-	36 ÷ 58	87	231
		1-X-400 C600	2500	29 ÷ 51	60	250	22 ÷ 44	60	188
46	950	1-X-400 C450	2500	44 ÷ 65	87	236	36 ÷ 58	87	102
		1-X-400 C600	2500	29 ÷ 51	60	140	15 ÷ 36	60	69
48	1000	1-X-400 C450	2500	- ÷ -	-	-	44 ÷ 65	87	206
		1-X-400 C600	2500	29 ÷ 51	60	250	22 ÷ 44	60	138
50	1050	1-X-400 C450	2500	36 ÷ 58	87	178	36 ÷ 58	87	78
		1-X-400 C600	2500	29 ÷ 51	60	109	22 ÷ 44	60	53
52	1100	1-X-400 C450	2500	29 ÷ 51	87	250	44 ÷ 65	87	158
		1-X-400 C600	2500	29 ÷ 51	60	223	22 ÷ 44	60	118

1-6943 TYPE

Plug Balanced **Balancing seal**
Packing TFK **Max. Δp** 250 bar
Leakage class IV IEC 60534-4 **Type** pressure energized PTFE
Code S

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	17 ÷ 30	40	250	8 ÷ 19	40	250
2	34	1-X-290 D39	2500	- ÷ -	-	-	12 ÷ 28	60	246
		1-X-290 D46	2500	- ÷ -	-	-	5 ÷ 18	40	250
3	45	1-X-290 D39	2500	19 ÷ 47	60	250	7 ÷ 28	60	179
		1-X-290 D39	2500	13 ÷ 31	40	194	5 ÷ 19	40	116
		1-X-290 D46	2500	- ÷ -	-	-	12 ÷ 28	60	234
4	60	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	199
		1-X-290 D46	2500	13 ÷ 32	40	250	5 ÷ 19	40	130
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	250
6	60	1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	230
		1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 17	40	250
		1-X-290 D46	2500	13 ÷ 32	40	250	5 ÷ 19	40	155
8	76	1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	101
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	250
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	178
10	100	1-X-290 D46	2500	19 ÷ 40	60	250	6 ÷ 30	60	250
		1-X-290 D46	2500	13 ÷ 27	40	185	4 ÷ 20	40	127
		1-X-290 D63	2500	- ÷ -	-	-	4 ÷ 17	40	83
		1-X-290 D63	2500	10 ÷ 28	40	250	4 ÷ 17	40	223
		1-X-290 D63D	2500	- ÷ -	-	-	4 ÷ 17	40	147
12	120	1-X-250 D63	2500	19 ÷ 40	60	161	6 ÷ 30	60	250
		1-X-250 D63	2500	13 ÷ 27	40	100	4 ÷ 20	40	92
		1-X-250 D63	2500	19 ÷ 40	60	250	6 ÷ 30	60	56
		1-X-250 D63	2500	13 ÷ 27	40	237	4 ÷ 20	40	194
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	6 ÷ 30	60	127
14	150	1-X-250 D63	2500	15 ÷ 34	50	250	6 ÷ 30	40	189
		1-X-250 D63	2500	15 ÷ 34	50	250	- ÷ -	-	169
		1-X-250 D63 d.e.	2500	19 ÷ 40	60	250	6 ÷ 30	60	161
16	200	1-X-250 D63	2500	13 ÷ 27	40	225	4 ÷ 20	40	105
		1-X-250 D63	2500	- ÷ -	-	-	5 ÷ 34	60	187
		1-X-250 D63 d.e.	2500	15 ÷ 38	40	250	5 ÷ 34	40	84
20	250	1-X-250 D63	2500	15 ÷ 38	50	250	- ÷ -	-	-
		1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	132
		1-X-250 D63 d.e.	2500	14 ÷ 28	40	197	6 ÷ 30	40	104
24	300	1-X-250 D63	2500	14 ÷ 28	50	250	- ÷ -	-	-
		1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	106
		1-X-250 D63 d.e.	2500	10 ÷ 29	40	107	6 ÷ 30	40	83
		1-X-250 D63 d.e.	2500	10 ÷ 29	50	196	- ÷ -	-	-
		1-X-400 C450	2500	38 ÷ 58	87	250	44 ÷ 65	87	140
20	250	1-X-400 C450	2500	29 ÷ 51	60	212	22 ÷ 44	60	105
		1-X-400 C600	2500	- ÷ -	-	-	36 ÷ 58	87	235
		1-X-400 C600	2500	29 ÷ 51	60	250	22 ÷ 44	60	192
24	300	1-X-400 C450	2500	44 ÷ 65	87	250	36 ÷ 58	87	107
		1-X-400 C450	2500	29 ÷ 51	60	161	15 ÷ 36	60	73
		1-X-400 C600	2500	- ÷ -	-	-	44 ÷ 65	87	211
24	300	1-X-400 C600	2500	29 ÷ 51	60	250	22 ÷ 44	60	158
		1-X-400 C450	2500	36 ÷ 58	87	197	36 ÷ 58	87	81
		1-X-400 C450	2500	29 ÷ 51	60	124	22 ÷ 44	60	66
24	300	1-X-400 C450	2500	29 ÷ 51	87	250	44 ÷ 65	87	162
		1-X-400 C600	2500	29 ÷ 51	60	237	22 ÷ 44	60	122

1-6943 TYPE

Plug
Packing
Leakage class

Balanced
GRF
IV-S1 IEC 60534-4

Balancing seal
Max. Δp 200 bar
Type carbon graphite + back seal
Code C

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
2	34	1-X-290 D39	2500	25 ÷ 45	60	200	12 ÷ 28	60	200
		1-X-290 D46	2500	17 ÷ 30	40	173	8 ÷ 19	40	133
3	45	1-X-290 D39	2500	16 ÷ 29	40	200	- ÷ -	-	-
				19 ÷ 47	60	188	7 ÷ 28	60	156
		1-X-290 D46	2500	13 ÷ 31	40	107	5 ÷ 19	40	99
				- ÷ -	-	-	12 ÷ 28	60	200
4	60	1-X-290 D46	2500	16 ÷ 30	40	200	8 ÷ 19	40	133
				19 ÷ 48	60	200	7 ÷ 28	60	177
		1-X-290 D63	2500	13 ÷ 32	40	159	5 ÷ 19	40	114
				14 ÷ 28	40	200	7 ÷ 17	40	200
6	60	1-X-290 D46	2500	19 ÷ 48	60	200	7 ÷ 28	60	139
				13 ÷ 32	40	143	5 ÷ 19	40	89
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	200
				14 ÷ 28	40	200	7 ÷ 17	40	161
8	76	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 17	40	200
				19 ÷ 40	60	167	6 ÷ 30	60	114
		1-X-290 D63	2500	13 ÷ 27	40	101	4 ÷ 20	40	73
				15 ÷ 42	60	200	7 ÷ 26	60	200
10	100	1-X-290 D63D	2500	10 ÷ 28	40	200	4 ÷ 17	40	200
				19 ÷ 40	60	96	6 ÷ 30	60	82
		1-X-290 D46	2500	13 ÷ 27	40	54	4 ÷ 20	40	52
				19 ÷ 40	60	200	6 ÷ 30	60	176
		1-X-250 D63	2500	13 ÷ 27	40	149	4 ÷ 20	40	114
				- ÷ -	-	-	6 ÷ 30	60	172
1-X-250 D63 d.e.	2500	15 ÷ 34	40	200	6 ÷ 30	40	102		
12	120	1-X-290 D63	2500	15 ÷ 34	50	200	- ÷ -	-	-
				19 ÷ 40	60	200	6 ÷ 30	60	147
		1-X-250 D63	2500	13 ÷ 27	40	137	4 ÷ 20	40	95
14	150	1-X-250 D63 d.e.	2500	15 ÷ 38	40	200	5 ÷ 34	50	171
				15 ÷ 38	50	200	- ÷ -	-	-
		1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	120
16	200	1-X-250 D63	2500	14 ÷ 28	40	129	6 ÷ 30	40	63
				14 ÷ 28	50	200	- ÷ -	-	-
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	6 ÷ 30	60	96
				10 ÷ 29	40	67	6 ÷ 30	40	49
				10 ÷ 29	50	196	- ÷ -	-	-
1-X-400 C450	2500	36 ÷ 58	87	199	44 ÷ 65	87	135		
		29 ÷ 51	60	150	22 ÷ 44	60	91		
		- ÷ -	-	-	36 ÷ 58	87	231		
20	250	1-X-400 C600	2500	29 ÷ 51	60	200	22 ÷ 44	60	188
				44 ÷ 65	87	180	38 ÷ 58	87	102
		1-X-400 C450	2500	29 ÷ 51	60	109	15 ÷ 36	60	69
24	300	1-X-400 C600	2500	- ÷ -	-	-	44 ÷ 65	87	206
				29 ÷ 51	60	200	22 ÷ 44	60	138
		1-X-400 C450	2500	36 ÷ 58	87	132	36 ÷ 58	87	79
1-X-400 C600	2500	29 ÷ 51	60	89	22 ÷ 44	60	53		
		29 ÷ 51	87	200	44 ÷ 65	87	158		
1-X-400 C450	2500	29 ÷ 51	60	175	22 ÷ 44	60	118		

Section C – Pressure Drop Tables

1-6943 TYPE

Plug	Balanced	Balancing seal
Packing	TFK	Max. Δp 200 bar
Leakage class	IV-S1 IEC 60534-4	Type carbon graphite + back seal
		Code C

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
2	34	1-X-290 D39	2500	- ÷ -	-	-	12 ÷ 28	60	200
		1-X-290 D46	2500	17 ÷ 30	40	200	8 ÷ 19	40	147
3	45	1-X-290 D39	2500	- ÷ -	-	-	5 ÷ 18	40	200
		1-X-290 D46	2500	19 ÷ 47	60	200	7 ÷ 28	60	166
4	60	1-X-290 D39	2500	13 ÷ 31	40	142	5 ÷ 19	40	109
		1-X-290 D46	2500	- ÷ -	-	-	12 ÷ 28	60	200
6	60	1-X-290 D46	2500	16 ÷ 30	40	200	8 ÷ 19	40	142
		1-X-290 D63	2500	19 ÷ 48	60	200	7 ÷ 28	60	185
8	76	1-X-290 D46	2500	13 ÷ 32	40	190	5 ÷ 19	40	121
		1-X-290 D63	2500	14 ÷ 28	40	200	7 ÷ 17	40	200
10	100	1-X-290 D46	2500	19 ÷ 48	60	200	7 ÷ 28	60	144
		1-X-290 D63	2500	13 ÷ 32	40	171	5 ÷ 19	40	95
12	120	1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	200
		1-X-290 D63D	2500	14 ÷ 28	40	200	7 ÷ 17	40	166
14	150	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 17	40	200
		1-X-290 D63	2500	19 ÷ 40	60	193	6 ÷ 30	60	119
16	200	1-X-290 D63	2500	13 ÷ 27	40	126	4 ÷ 20	40	78
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 28	60	200
18	250	1-X-290 D46	2500	10 ÷ 28	40	200	4 ÷ 17	40	137
		1-X-290 D63	2500	- ÷ -	-	-	4 ÷ 17	40	200
20	250	1-X-250 D63	2500	19 ÷ 40	60	118	6 ÷ 30	60	87
		1-X-250 D63	2500	13 ÷ 27	40	76	4 ÷ 20	40	57
22	300	1-X-250 D63	2500	19 ÷ 40	60	200	6 ÷ 30	60	182
		1-X-250 D63	2500	13 ÷ 27	40	170	4 ÷ 20	40	120
24	300	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	177
		1-X-250 D63	2500	15 ÷ 34	40	200	6 ÷ 30	40	124
26	300	1-X-250 D63	2500	19 ÷ 40	60	200	6 ÷ 30	60	151
		1-X-250 D63	2500	13 ÷ 27	40	158	4 ÷ 20	40	99
28	300	1-X-250 D63	2500	- ÷ -	-	-	5 ÷ 34	60	175
		1-X-250 D63	2500	15 ÷ 38	40	200	5 ÷ 34	40	64
30	300	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	124
		1-X-250 D63 d.e.	2500	14 ÷ 28	40	147	6 ÷ 30	40	81
32	300	1-X-250 D63	2500	14 ÷ 28	50	200	- ÷ -	-	-
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	6 ÷ 30	60	100
34	300	1-X-250 D63	2500	10 ÷ 29	40	83	6 ÷ 30	40	66
		1-X-250 D63 d.e.	2500	10 ÷ 29	50	196	- ÷ -	-	-
36	300	1-X-400 C450	2500	36 ÷ 58	87	200	36 ÷ 58	87	122
		1-X-400 C600	2500	29 ÷ 51	60	165	15 ÷ 36	60	85
38	300	1-X-400 C450	2500	- ÷ -	-	-	29 ÷ 51	87	200
		1-X-400 C600	2500	29 ÷ 51	60	200	22 ÷ 44	60	169
40	300	1-X-400 C450	2500	44 ÷ 65	87	195	36 ÷ 58	87	101
		1-X-400 C600	2500	29 ÷ 51	60	124	15 ÷ 36	60	70
42	300	1-X-400 C450	2500	- ÷ -	-	-	36 ÷ 58	87	183
		1-X-400 C600	2500	29 ÷ 51	60	200	15 ÷ 36	60	128
44	300	1-X-400 C450	2500	36 ÷ 58	87	146	36 ÷ 58	87	78
		1-X-400 C600	2500	29 ÷ 51	60	100	15 ÷ 36	60	54
46	300	1-X-400 C450	2500	29 ÷ 51	87	200	44 ÷ 65	87	153
		1-X-400 C600	2500	29 ÷ 51	60	187	22 ÷ 44	60	114

1-6943 TYPE

Plug	Not-balanced	Balancing seal
Packing	GRF	Type
Leakage class	V IEC 60534-4	Code
Leakage class	VI** IEC 60534-4	Code
		Code

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
3/8	17	1-X-290 D25	1500	17 ÷ 43	60	189	7 ÷ 26	60	420
				11 ÷ 29	40	94	- ÷ -	-	-
		1-X-290 D33	2500	20 ÷ 29	40	420	9 ÷ 18	40	420
1/2	17	1-X-290 D25	1500	17 ÷ 43	60	108	7 ÷ 26	60	252
				11 ÷ 29	40	44	- ÷ -	-	-
		1-X-290 D33	1500	30 ÷ 44	60	420	13 ÷ 27	60	420
				20 ÷ 29	40	279	9 ÷ 18	40	313
1-X-290 D39	2500*	33 ÷ 47	60	420	16 ÷ 30	60	420		
		22 ÷ 31	40	413	11 ÷ 20	40	360		
3/4	17	1-X-290 D33	1500	30 ÷ 44	60	225	13 ÷ 27	60	253
				20 ÷ 29	40	140	9 ÷ 18	40	159
		1-X-290 D39	2500	33 ÷ 47	60	348	16 ÷ 30	60	305
				22 ÷ 31	40	217	11 ÷ 20	40	189
1	34	1-X-290 D39	2500	25 ÷ 45	60	124	12 ÷ 28	60	164
				17 ÷ 30	40	71	8 ÷ 19	40	101
		1-X-290 D46	2500	24 ÷ 44	60	183	7 ÷ 28	60	256
				16 ÷ 29	40	115	5 ÷ 18	40	163
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	67	12 ÷ 28	60	92
				17 ÷ 30	40	36	8 ÷ 19	40	53
		1-X-290 D46	2500	24 ÷ 44	60	104	7 ÷ 28	60	146
				16 ÷ 29	40	61	5 ÷ 18	40	92
2	34	1-X-290 D39	2500	25 ÷ 45	60	20	12 ÷ 28	60	29
				17 ÷ 30	40	9	8 ÷ 19	40	15
		1-X-290 D46	2500	24 ÷ 44	60	33	7 ÷ 28	60	49
				16 ÷ 29	40	18	5 ÷ 18	40	29
3	45	1-X-290 D39	2500	19 ÷ 47	60	6	7 ÷ 28	60	16
				- ÷ -	-	-	5 ÷ 19	40	8
		1-X-290 D46	2500	24 ÷ 44	60	19	12 ÷ 28	60	28
				16 ÷ 30	40	10	8 ÷ 19	40	16
4	60	1-X-290 D46	2500	19 ÷ 48	60	7	7 ÷ 28	60	16
				13 ÷ 32	40	3	5 ÷ 19	40	9
		1-X-290 D63	2500	21 ÷ 42	60	25	10 ÷ 26	60	44
				14 ÷ 28	40	15	7 ÷ 17	40	27
		1-X-290 D63D	2500	21 ÷ 42	60	57	10 ÷ 26	60	95
				14 ÷ 28	40	36	7 ÷ 17	40	61
6	60	1-X-290 D46	2500	19 ÷ 48	60	4	7 ÷ 28	60	10
				- ÷ -	-	-	5 ÷ 19	40	5
		1-X-290 D63	2500	21 ÷ 42	60	16	10 ÷ 26	60	29
				14 ÷ 28	40	9	7 ÷ 17	40	18
		1-X-290 D63D	2500	21 ÷ 42	60	38	10 ÷ 26	60	64
				14 ÷ 28	40	24	7 ÷ 17	40	41
8	76	1-X-290 D46	2500	19 ÷ 40	60	2	6 ÷ 30	60	5
				- ÷ -	-	-	4 ÷ 20	40	2
		1-X-290 D63	2500	15 ÷ 42	60	5	7 ÷ 26	60	17
				10 ÷ 28	40	2	4 ÷ 17	40	10
		1-X-290 D63D	2500	15 ÷ 42	60	15	7 ÷ 26	60	38
				10 ÷ 28	40	8	4 ÷ 17	40	24

* AVAILABLE ONLY FOR RATING ANSI 2500.
 ** For leakage class VI max ΔP see PARCOL NTG 76/503.

Section C – Pressure Drop Tables

1-6943 TYPE

Plug	Not-balanced	Balancing seal
Packing	TFK	Type none
Leakage class	V IEC 60534-4	Code N
Leakage class	VI** IEC 60534-4	Code P

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
3/8	17	1-X-290 D25	1500	17 ÷ 43	60	243	7 ÷ 26	60	420
				11 ÷ 29	40	154	4 ÷ 18	40	323
		1-X-290 D33	2500	20 ÷ 29	40	420	9 ÷ 18	40	420
1/2	17	1-X-290 D25	1500	17 ÷ 43	60	138	7 ÷ 26	60	282
				11 ÷ 29	40	84	4 ÷ 18	40	184
		1-X-290 D33	1500	30 ÷ 44	60	420	13 ÷ 27	60	420
		1-X-290 D39	2500*	20 ÷ 29	40	309	9 ÷ 18	40	343
				22 ÷ 31	40	420	11 ÷ 20	40	420
3/4	17	1-X-290 D25	1500	17 ÷ 43	60	64	7 ÷ 26	60	147
				11 ÷ 29	40	32	4 ÷ 18	40	93
		1-X-290 D33	1500	30 ÷ 44	60	246	13 ÷ 27	60	273
				20 ÷ 29	40	161	9 ÷ 18	40	179
		1-X-290 D39	2500	33 ÷ 47	60	379	16 ÷ 30	60	337
				22 ÷ 31	40	249	11 ÷ 20	40	221
1	34	1-X-290 D39	2500	25 ÷ 45	60	140	12 ÷ 28	60	180
				17 ÷ 30	40	89	8 ÷ 19	40	118
		1-X-290 D46	2500	24 ÷ 44	60	199	7 ÷ 28	60	272
				16 ÷ 29	40	131	5 ÷ 18	40	179
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	77	12 ÷ 28	60	102
				17 ÷ 30	40	46	8 ÷ 19	40	63
		1-X-290 D46	2500	24 ÷ 44	60	113	7 ÷ 28	60	155
				16 ÷ 29	40	71	5 ÷ 18	40	102
2	34	1-X-290 D39	2500	25 ÷ 45	60	24	12 ÷ 28	60	32
				17 ÷ 30	40	13	8 ÷ 19	40	19
		1-X-290 D46	2500	24 ÷ 44	60	37	7 ÷ 28	60	53
				16 ÷ 29	40	22	5 ÷ 18	40	32
3	45	1-X-290 D39	2500	19 ÷ 47	60	9	7 ÷ 28	60	18
				13 ÷ 31	40	4	5 ÷ 19	40	10
		1-X-290 D46	2500	24 ÷ 44	60	21	12 ÷ 28	60	31
				16 ÷ 30	40	12	8 ÷ 19	40	18
4	60	1-X-290 D46	2500	19 ÷ 48	60	9	7 ÷ 28	60	18
				13 ÷ 32	40	4	5 ÷ 19	40	10
		1-X-290 D63	2500	21 ÷ 42	60	26	10 ÷ 26	60	46
				14 ÷ 28	40	16	7 ÷ 17	40	29
		1-X-290 D63D	2500	21 ÷ 42	60	58	10 ÷ 26	60	96
				14 ÷ 28	40	37	7 ÷ 17	40	62
6	60	1-X-290 D46	2500	19 ÷ 48	60	5	7 ÷ 28	60	11
				13 ÷ 32	40	2	5 ÷ 19	40	6
		1-X-290 D63	2500	21 ÷ 42	60	17	10 ÷ 26	60	30
				14 ÷ 28	40	10	7 ÷ 17	40	19
		1-X-290 D63D	2500	21 ÷ 42	60	39	10 ÷ 26	60	65
				14 ÷ 28	40	25	7 ÷ 17	40	42
8	76	1-X-290 D46	2500	19 ÷ 40	60	2	6 ÷ 30	60	6
				- ÷ -	-	-	4 ÷ 20	40	3
		1-X-290 D63	2500	15 ÷ 42	60	6	7 ÷ 26	60	17
				10 ÷ 28	40	3	4 ÷ 17	40	11
		1-X-290 D63D	2500	15 ÷ 42	60	15	7 ÷ 26	60	38
				10 ÷ 28	40	9	4 ÷ 17	40	24

* AVAILABLE ONLY FOR RATING ANSI 2500.

** For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6943 TYPE

Plug	Balanced	Balancing seal
Packing	GRF	Max. Δp 250 bar
Leakage class	V IEC 60534-4	Type pressure energized PTFE ring
Leakage class	VI** IEC 60534-4	Code S
		Code U (S+P)

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	250	- ÷ -	- ÷ -	-
		1-X-290 D46	2500	17 ÷ 30	40	247	8 ÷ 19	40	250
2	34	1-X-290 D39	2500	16 ÷ 29	40	250	- ÷ -	- ÷ -	-
		1-X-290 D46	2500	25 ÷ 45	60	250	12 ÷ 28	60	231
3	45	1-X-290 D39	2500	17 ÷ 30	40	227	8 ÷ 19	40	145
		1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	250
4	60	1-X-290 D39	2500	16 ÷ 29	40	250	5 ÷ 18	40	243
		1-X-290 D46	2500	19 ÷ 47	60	250	7 ÷ 28	60	168
4	60	1-X-290 D46	2500	13 ÷ 31	40	144	5 ÷ 19	40	106
		1-X-290 D63	2500	- ÷ -	-	-	12 ÷ 28	60	224
4	60	1-X-290 D63	2500	16 ÷ 30	40	250	8 ÷ 19	40	143
		1-X-290 D63D	2500	19 ÷ 48	60	250	7 ÷ 28	60	191
6	60	1-X-290 D46	2500	13 ÷ 32	40	231	5 ÷ 19	40	122
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	250
6	60	1-X-290 D63	2500	14 ÷ 28	40	250	7 ÷ 17	40	222
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 17	40	250
8	76	1-X-290 D46	2500	19 ÷ 48	60	250	7 ÷ 28	60	148
		1-X-290 D63	2500	13 ÷ 32	40	217	5 ÷ 19	40	85
8	76	1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	250
		1-X-290 D63D	2500	14 ÷ 28	40	250	7 ÷ 17	40	172
10	100	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 17	40	250
		1-X-290 D63	2500	19 ÷ 40	60	129	6 ÷ 30	60	87
10	100	1-X-290 D63	2500	- ÷ -	-	-	4 ÷ 20	40	54
		1-X-250 D63	2500	19 ÷ 40	60	250	6 ÷ 30	60	189
12	120	1-X-290 D63	2500	13 ÷ 27	40	194	4 ÷ 20	40	100
		1-X-250 D63	2500	15 ÷ 38	40	250	5 ÷ 34	50	182
14	150	1-X-250 D63	2500	14 ÷ 28	40	171	6 ÷ 30	50	127
		1-X-250 D63 d.e.	2500	14 ÷ 28	50	250	- ÷ -	-	-
16	200	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	50	101
		1-X-400 C450	2500	- ÷ -	-	-	44 ÷ 65	87	135
20	250	1-X-400 C450	2500	29 ÷ 51	60	250	15 ÷ 36	60	85
		1-X-400 C600	2500	- ÷ -	-	-	36 ÷ 58	87	231
20	250	1-X-400 C600	2500	29 ÷ 51	60	250	22 ÷ 44	60	188
		1-X-400 C450	2500	44 ÷ 65	87	236	36 ÷ 58	87	102
24	300	1-X-400 C450	2500	29 ÷ 51	60	140	15 ÷ 36	60	69
		1-X-400 C600	2500	- ÷ -	-	-	44 ÷ 65	87	206
24	300	1-X-400 C450	2500	- ÷ -	-	-	22 ÷ 44	60	138
		1-X-400 C600	2500	36 ÷ 58	87	178	36 ÷ 58	87	78
24	300	1-X-400 C600	2500	29 ÷ 51	60	109	- ÷ -	-	-
		1-X-400 C450	2500	29 ÷ 51	87	250	44 ÷ 65	87	158
24	300	1-X-400 C450	2500	29 ÷ 51	60	223	22 ÷ 44	60	118
		1-X-400 C600	2500	29 ÷ 51	60	223	22 ÷ 44	60	118

** For leakage class max ΔP see PARCOL NTG 76/503.

Section C – Pressure Drop Tables

1-6943 TYPE

Plug	Balanced	Balancing seal
Packing	TFK	Max. Δp 250 bar
Leakage class	V IEC 60534-4	Type pressure energized PTFE ring
Leakage class	VI** IEC 60534-4	Code S
		Code U (S+P)

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	17 ÷ 30	40	250	8 ÷ 19	40	250
2	34	1-X-290 D39	2500	- ÷ -	-	-	12 ÷ 28	60	246
		1-X-290 D46	2500	17 ÷ 30	40	250	8 ÷ 19	40	161
3	45	1-X-290 D39	2500	- ÷ -	-	-	5 ÷ 18	40	250
		1-X-290 D46	2500	19 ÷ 47	60	250	7 ÷ 28	60	179
4	60	1-X-290 D39	2500	13 ÷ 31	40	194	5 ÷ 19	40	116
		1-X-290 D46	2500	- ÷ -	-	-	12 ÷ 28	60	234
4	60	1-X-290 D46	2500	16 ÷ 30	40	250	8 ÷ 19	40	154
		1-X-290 D63	2500	- ÷ -	-	-	7 ÷ 28	60	199
6	60	1-X-290 D63	2500	13 ÷ 32	40	250	5 ÷ 19	40	130
		1-X-290 D63D	2500	- ÷ -	-	-	10 ÷ 26	60	250
6	60	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	155
		1-X-290 D63	2500	13 ÷ 32	40	250	5 ÷ 19	40	101
8	76	1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	250
		1-X-290 D63D	2500	- ÷ -	-	-	7 ÷ 28	60	178
8	76	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	250
		1-X-290 D63	2500	19 ÷ 40	60	250	6 ÷ 30	60	127
10	100	1-X-290 D63	2500	13 ÷ 27	40	185	4 ÷ 20	40	83
		1-X-250 D63	2500	- ÷ -	-	-	7 ÷ 28	60	223
10	100	1-X-290 D46	2500	10 ÷ 28	40	250	4 ÷ 17	40	147
		1-X-290 D63D	2500	- ÷ -	-	-	4 ÷ 17	40	250
12	120	1-X-290 D46	2500	19 ÷ 40	60	161	6 ÷ 30	60	92
		1-X-290 D63	2500	- ÷ -	-	-	4 ÷ 20	40	59
12	120	1-X-250 D63	2500	19 ÷ 40	60	250	6 ÷ 30	60	194
		1-X-250 D63	2500	13 ÷ 27	40	237	4 ÷ 20	40	127
14	150	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	189
		1-X-250 D63	2500	15 ÷ 38	40	250	6 ÷ 30	40	169
14	150	1-X-250 D63	2500	19 ÷ 40	60	250	6 ÷ 30	60	161
		1-X-250 D63	2500	13 ÷ 27	40	225	4 ÷ 20	40	105
16	200	1-X-250 D63	2500	15 ÷ 38	40	250	5 ÷ 34	50	187
		1-X-400 C450	2500	14 ÷ 28	40	197	6 ÷ 30	50	132
16	200	1-X-400 C600	2500	14 ÷ 28	50	250	- ÷ -	-	-
		1-X-400 C450	2500	- ÷ -	-	-	6 ÷ 30	50	106
20	250	1-X-400 C450	2500	44 ÷ 65	87	250	44 ÷ 65	87	140
		1-X-400 C600	2500	29 ÷ 51	60	212	22 ÷ 44	60	105
20	250	1-X-400 C600	2500	- ÷ -	-	-	36 ÷ 58	87	235
		1-X-400 C450	2500	29 ÷ 51	60	250	22 ÷ 44	60	192
24	300	1-X-400 C450	2500	44 ÷ 65	87	250	36 ÷ 58	87	107
		1-X-400 C600	2500	29 ÷ 51	60	161	15 ÷ 36	60	73
24	300	1-X-400 C600	2500	- ÷ -	-	-	44 ÷ 65	87	211
		1-X-400 C450	2500	29 ÷ 51	60	250	22 ÷ 44	60	158
24	300	1-X-400 C450	2500	36 ÷ 58	87	197	36 ÷ 58	87	81
		1-X-400 C600	2500	29 ÷ 51	60	124	15 ÷ 36	60	56
24	300	1-X-400 C450	2500	29 ÷ 51	87	250	44 ÷ 65	87	162
		1-X-400 C600	2500	29 ÷ 51	60	237	22 ÷ 44	60	122

** For leakage class max ΔP see PARCOL NTG 76/503.

1-6943 TYPE

Plug Balanced
Packing Leakage GRF
V IEC 60534-4

Balancing seal
Max. Δp 400 bar
Type Loaded PTFE + back up
Code B

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	386	12 ÷ 28	60	400
				17 ÷ 30	40	232	8 ÷ 19	40	316
		1-X-290 D46	2500	24 ÷ 44	60	400	- ÷ -	-	-
2	34	1-X-290 D39	2500	16 ÷ 29	40	357	5 ÷ 18	40	400
				25 ÷ 45	60	346	12 ÷ 28	60	223
		1-X-290 D46	2500	17 ÷ 30	40	206	8 ÷ 19	40	141
3	45	1-X-290 D39	2500	24 ÷ 44	60	400	7 ÷ 28	60	366
				16 ÷ 29	40	320	5 ÷ 18	40	235
		1-X-290 D46	2500	19 ÷ 47	60	231	7 ÷ 28	60	164
4	60	1-X-290 D46	2500	13 ÷ 31	40	129	5 ÷ 19	40	104
				24 ÷ 44	60	400	12 ÷ 28	60	218
		1-X-290 D63	2500	16 ÷ 30	40	301	8 ÷ 19	40	140
6	60	1-X-290 D46	2500	19 ÷ 48	60	337	7 ÷ 28	60	186
				13 ÷ 32	40	200	5 ÷ 19	40	120
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	331
8	76	1-X-290 D46	2500	14 ÷ 28	40	400	7 ÷ 17	40	216
				- ÷ -	-	-	7 ÷ 17	40	400
		1-X-290 D63	2500	19 ÷ 48	60	254	7 ÷ 28	60	139
10	100	1-X-290 D46	2500	13 ÷ 32	40	143	5 ÷ 19	40	87
				- ÷ -	-	-	10 ÷ 26	60	249
		1-X-290 D63	2500	14 ÷ 28	40	400	7 ÷ 17	40	161
12	120	1-X-290 D46	2500	- ÷ -	-	-	10 ÷ 26	60	400
				- ÷ -	-	-	7 ÷ 17	40	337
		1-X-290 D63	2500	19 ÷ 40	60	171	6 ÷ 30	60	113
14	150	1-X-290 D46	2500	- ÷ -	-	-	4 ÷ 20	40	71
				15 ÷ 42	60	331	7 ÷ 28	60	204
		1-X-290 D63	2500	10 ÷ 28	40	197	4 ÷ 17	40	132
16	200	1-X-290 D63	2500	- ÷ -	-	-	7 ÷ 28	60	400
				10 ÷ 28	40	400	4 ÷ 17	40	277
		1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	80
20	250	1-X-290 D46	2500	19 ÷ 40	60	246	6 ÷ 30	60	177
				13 ÷ 27	40	149	4 ÷ 20	40	114
		1-X-250 D63	2500	15 ÷ 34	40	227	6 ÷ 30	50	173
24	300	1-X-250 D63 d.e.	2500	15 ÷ 34	50	400	- ÷ -	-	-
				19 ÷ 40	60	227	6 ÷ 30	60	147
		1-X-290 D63	2500	13 ÷ 27	40	136	4 ÷ 20	40	94
18	200	1-X-250 D63	2500	15 ÷ 38	40	214	5 ÷ 34	50	171
				15 ÷ 38	50	349	- ÷ -	-	-
		1-X-250 D63 d.e.	2500	14 ÷ 28	40	127	6 ÷ 30	50	119
22	250	1-X-250 D63	2500	14 ÷ 28	50	296	- ÷ -	-	-
				- ÷ -	-	-	6 ÷ 30	50	95
		1-X-400 C450	2500	44 ÷ 65	87	226	36 ÷ 58	87	117
26	250	1-X-400 C450	2500	29 ÷ 51	60	150	15 ÷ 36	60	79
				36 ÷ 58	87	400	44 ÷ 65	87	229
		1-X-400 C600	2500	29 ÷ 51	60	304	22 ÷ 44	60	153
30	250	1-X-400 C450	2500	44 ÷ 65	87	184	36 ÷ 58	87	95
				44 ÷ 65	87	364	36 ÷ 58	87	180
		1-X-400 C600	2500	29 ÷ 51	60	225	15 ÷ 36	60	123
34	300	1-X-400 C450	2500	44 ÷ 65	87	130	36 ÷ 58	87	73
				44 ÷ 65	87	262	44 ÷ 65	87	147
		1-X-400 C600	2500	29 ÷ 51	60	178	22 ÷ 44	60	94

Section C – Pressure Drop Tables

1-6943 TYPE

Plug	Balanced	Balancing seal
Packing	TFK	Max. Δp 400 bar
Leakage	V IEC 60534-4	Type Loaded PTFE + back up
		Code B

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	400	12 ÷ 28	60	400
		1-X-290 D46	2500	17 ÷ 30	40	283	8 ÷ 19	40	342
2	34	1-X-290 D39	2500	16 ÷ 29	40	400	5 ÷ 18	40	400
		1-X-290 D46	2500	25 ÷ 45	60	393	12 ÷ 28	60	239
3	45	1-X-290 D39	2500	17 ÷ 30	40	252	8 ÷ 19	40	156
		1-X-290 D46	2500	24 ÷ 44	60	400	7 ÷ 28	60	381
4	60	1-X-290 D46	2500	16 ÷ 29	40	366	5 ÷ 18	40	251
		1-X-290 D63	2500	19 ÷ 47	60	274	7 ÷ 28	60	174
6	60	1-X-290 D39	2500	13 ÷ 31	40	173	5 ÷ 19	40	114
		1-X-290 D46	2500	24 ÷ 44	60	400	12 ÷ 28	60	228
8	76	1-X-290 D46	2500	18 ÷ 30	40	344	8 ÷ 19	40	150
		1-X-290 D63	2500	19 ÷ 48	60	378	7 ÷ 28	60	194
10	100	1-X-290 D63	2500	13 ÷ 32	40	241	5 ÷ 19	40	127
		1-X-290 D63D	2500	- ÷ -	-	-	10 ÷ 28	60	339
12	120	1-X-290 D46	2500	14 ÷ 28	40	400	7 ÷ 17	40	224
		1-X-290 D63	2500	- ÷ -	-	-	7 ÷ 17	40	400
14	150	1-X-290 D46	2500	19 ÷ 48	60	287	7 ÷ 28	60	144
		1-X-290 D63	2500	13 ÷ 32	40	176	5 ÷ 19	40	93
16	200	1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 28	60	255
		1-X-290 D63D	2500	14 ÷ 28	40	400	7 ÷ 17	40	167
20	250	1-X-290 D46	2500	- ÷ -	-	-	10 ÷ 28	60	400
		1-X-290 D63	2500	19 ÷ 40	60	200	8 ÷ 30	60	119
24	300	1-X-290 D63	2500	15 ÷ 42	60	361	7 ÷ 28	60	210
		1-X-290 D63D	2500	10 ÷ 28	40	226	4 ÷ 17	40	137
10	100	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	400
		1-X-290 D63	2500	10 ÷ 28	40	400	4 ÷ 17	40	283
12	120	1-X-290 D46	2500	19 ÷ 40	60	115	6 ÷ 30	60	86
		1-X-290 D63	2500	- ÷ -	-	-	4 ÷ 20	40	54
14	150	1-X-290 D63	2500	19 ÷ 40	60	270	6 ÷ 30	60	183
		1-X-250 D63	2500	13 ÷ 27	40	174	4 ÷ 20	40	119
16	200	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	178
		1-X-250 D63 d.e	2500	15 ÷ 34	40	251	6 ÷ 30	40	121
18	225	1-X-250 D63	2500	15 ÷ 34	50	400	- ÷ -	-	-
		1-X-290 D63	2500	19 ÷ 40	60	251	6 ÷ 30	60	151
20	250	1-X-290 D63	2500	13 ÷ 27	40	180	4 ÷ 20	40	98
		1-X-250 D63	2500	15 ÷ 38	40	237	5 ÷ 34	50	176
22	275	1-X-250 D63	2500	15 ÷ 38	50	366	- ÷ -	-	-
		1-X-250 D63 d.e	2500	14 ÷ 28	40	148	6 ÷ 30	50	124
24	300	1-X-250 D63	2500	14 ÷ 28	50	296	- ÷ -	-	-
		1-X-400 C450	2500	- ÷ -	-	-	6 ÷ 30	50	99
26	300	1-X-400 C450	2500	44 ÷ 65	87	242	36 ÷ 58	87	121
		1-X-400 C600	2500	29 ÷ 51	60	167	15 ÷ 36	60	83
28	300	1-X-400 C450	2500	36 ÷ 58	87	400	44 ÷ 65	87	241
		1-X-400 C600	2500	29 ÷ 51	60	320	22 ÷ 44	60	172
30	300	1-X-400 C450	2500	44 ÷ 65	87	200	36 ÷ 58	87	99
		1-X-400 C600	2500	29 ÷ 51	60	122	15 ÷ 36	60	68
32	300	1-X-400 C450	2500	44 ÷ 65	87	380	36 ÷ 58	87	184
		1-X-400 C600	2500	29 ÷ 51	60	241	15 ÷ 36	60	127
34	300	1-X-400 C450	2500	44 ÷ 65	87	142	36 ÷ 58	87	76
		1-X-400 C600	2500	29 ÷ 51	60	96	7 ÷ 29	60	45
36	300	1-X-400 C450	2500	44 ÷ 65	87	274	44 ÷ 65	87	153
		1-X-400 C600	2500	29 ÷ 51	60	191	22 ÷ 44	60	110

1-6943 TYPE

Plug Balanced
 Packing GRF
 Leakage class V IEC 60534-4

Balancing seal metallic C-ring
 Type R
 Code R

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			C-Ring Max Δp bar
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar	
1 1/2	34	1-X-290 D39	2500	25 ÷ 45	60	350	12 ÷ 28	60	255	350
		1-X-290 D46	2500	17 ÷ 30	40	301	8 ÷ 19	40	86	
2	34	1-X-290 D39	2500	- ÷ -	-	-	7 ÷ 28	60	350	345
		1-X-290 D46	2500	16 ÷ 29	40	350	5 ÷ 18	40	280	
3	45	1-X-290 D39	2500	25 ÷ 45	60	345	12 ÷ 28	60	52	329
		1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	196	
4	60	1-X-290 D39	2500	16 ÷ 29	40	345	5 ÷ 18	40	64	263
		1-X-290 D46	2500	19 ÷ 47	60	320	- ÷ -	-	-	
4	60	1-X-290 D46	2500	- ÷ -	-	-	5 ÷ 19	40	12	219
		1-X-290 D63	2500	- ÷ -	-	-	12 ÷ 28	60	128	
		1-X-290 D63D	2500	16 ÷ 30	40	257	8 ÷ 19	40	48	
6	60	1-X-290 D46	2500	19 ÷ 48	60	263	7 ÷ 28	60	99	173
		1-X-290 D63	2500	- ÷ -	-	-	5 ÷ 19	40	29	
		1-X-290 D63D	2500	14 ÷ 28	40	263	7 ÷ 17	40	130	
8	76	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	64	153
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	187	
		1-X-290 D63D	2500	14 ÷ 28	40	219	7 ÷ 17	40	89	
10	100	1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	219	113
		1-X-290 D63	2500	- ÷ -	-	-	6 ÷ 30	60	103	
		1-X-250 D63 d.e.	2500	15 ÷ 34	50	153	- ÷ -	-	-	
12	120	1-X-290 D46	2500	19 ÷ 40	60	153	6 ÷ 30	60	75	97
		1-X-290 D63	2500	- ÷ -	-	-	4 ÷ 20	40	12	
		1-X-250 D63	2500	- ÷ -	-	-	5 ÷ 34	60	105	
14	150	1-X-290 D63	2500	15 ÷ 38	40	136	- ÷ -	-	-	75
		1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	40	
		1-X-250 D63 d.e.	2500	14 ÷ 28	50	113	- ÷ -	-	-	
		1-X-400 C450	2500	36 ÷ 58	87	113	29 ÷ 51	87	55	
16	200	1-X-400 C450	2500	29 ÷ 51	60	87	- ÷ -	-	-	64
		1-X-250 D63	2500	29 ÷ 51	60	113	15 ÷ 36	60	113	
		1-X-250 D63 d.e.	2500	- ÷ -	-	-	6 ÷ 30	60	18	
		1-X-400 C450	2500	10 ÷ 29	50	97	- ÷ -	-	-	
20	250	1-X-400 C450	2500	44 ÷ 65	87	97	29 ÷ 51	87	29	75
		1-X-400 C600	2500	- ÷ -	-	-	7 ÷ 29	60	6	
		1-X-400 C600	2500	- ÷ -	-	-	29 ÷ 51	87	97	
		1-X-400 C600	2500	29 ÷ 51	60	97	15 ÷ 36	60	74	
24	300	1-X-400 C450	2500	44 ÷ 65	87	66	- ÷ -	-	-	64
		1-X-400 C600	2500	- ÷ -	-	-	38 ÷ 58	87	75	
24	300	1-X-400 C600	2500	29 ÷ 51	60	75	7 ÷ 29	60	21	64
		1-X-400 C600	2500	- ÷ -	-	-	38 ÷ 58	87	60	

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Section C – Pressure Drop Tables

1-6943 TYPE

Plug	Balanced	Balancing seal
Packing	TFK	Type
Leakage class	V IEC 60534-4	Code
		metallic C-ring
		R

Port in	Travel mm	Actuator type	Max. Rating	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			C-Ring Max Δp bar
				Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar	
1 1/2	34	1-X-290 D39	2500	- ÷ -	-	-	12 ÷ 28	60	286	350
				17 ÷ 30	40	350	8 ÷ 19	40	117	
		1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	350	
				- ÷ -	-	-	5 ÷ 18	40	311	
2	34	1-X-290 D39	2500	25 ÷ 45	60	345	12 ÷ 28	60	67	345
				17 ÷ 30	40	234	- ÷ -	-	-	
		1-X-290 D46	2500	- ÷ -	-	-	7 ÷ 28	60	212	
				16 ÷ 29	40	345	5 ÷ 18	40	79	
3	45	1-X-290 D39	2500	19 ÷ 47	60	329	7 ÷ 28	60	84	329
				- ÷ -	-	-	5 ÷ 19	40	22	
		1-X-290 D46	2500	- ÷ -	-	-	12 ÷ 28	60	139	
				16 ÷ 30	40	285	8 ÷ 19	40	59	
4	60	1-X-290 D46	2500	19 ÷ 48	60	263	7 ÷ 28	60	107	263
				- ÷ -	-	-	5 ÷ 19	40	37	
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	259	
		1-X-290 D63D	2500	14 ÷ 28	40	263	7 ÷ 17	40	138	
				- ÷ -	-	-	7 ÷ 17	40	263	
6	60	1-X-290 D46	2500	19 ÷ 48	60	219	7 ÷ 28	60	70	219
				- ÷ -	-	-	5 ÷ 19	40	14	
		1-X-290 D63	2500	- ÷ -	-	-	10 ÷ 26	60	194	
		1-X-290 D63D	2500	14 ÷ 28	40	219	7 ÷ 17	40	96	
				- ÷ -	-	-	7 ÷ 17	40	219	
8	76	1-X-290 D46	2500	- ÷ -	-	-	6 ÷ 30	60	47	173
				- ÷ -	-	-	7 ÷ 28	60	156	
		1-X-290 D63	2500	10 ÷ 28	40	173	4 ÷ 17	40	69	
		1-X-290 D63D	2500	- ÷ -	-	-	4 ÷ 17	40	173	
10	100	1-X-290 D63	2500	19 ÷ 40	60	153	6 ÷ 30	60	109	153
				- ÷ -	-	-	4 ÷ 20	40	37	
		1-X-250 D63	2500	15 ÷ 34	40	153	6 ÷ 30	50	104	
12	120	1-X-290 D63	2500	19 ÷ 40	60	136	6 ÷ 30	60	81	136
				- ÷ -	-	-	4 ÷ 20	40	17	
		1-X-250 D63	2500	- ÷ -	-	-	5 ÷ 34	60	110	
				15 ÷ 38	40	136	- ÷ -	-	-	
14	150	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	50	46	113
				14 ÷ 28	50	113	- ÷ -	-	-	
		1-X-250 D63 d.e.	2500	36 ÷ 58	87	113	29 ÷ 51	87	60	
		1-X-400 C450	2500	29 ÷ 51	60	101	7 ÷ 29	60	11	
		1-X-400 C600	2500	29 ÷ 51	60	113	15 ÷ 36	60	113	
16	200	1-X-250 D63	2500	- ÷ -	-	-	6 ÷ 30	60	22	97
				10 ÷ 29	50	97	- ÷ -	-	-	
		1-X-250 D63 d.e.	2500	44 ÷ 65	87	97	29 ÷ 51	87	29	
		1-X-400 C450	2500	29 ÷ 51	60	67	- ÷ -	-	-	
		1-X-400 C600	2500	- ÷ -	-	-	29 ÷ 51	87	97	
				29 ÷ 51	60	97	15 ÷ 36	60	79	
20	250	1-X-400 C450	2500	44 ÷ 65	87	75	- ÷ -	-	-	75
				- ÷ -	-	-	36 ÷ 58	87	75	
		1-X-400 C600	2500	29 ÷ 51	60	75	15 ÷ 36	60	41	
				- ÷ -	-	-	36 ÷ 58	87	63	
24	300	1-X-400 C600	2500	29 ÷ 51	60	64	7 ÷ 29	60	8	64

1-6948 TYPE (FOR SERVICE ON COMPRESSIBLE FLUIDS ONLY)

Max Rating	ANSI 600 - 2500	Balancing Seal Type	-
Plug	Balanced with pilot	Characteristic	Linear
Packing Type	GRF or TFK		
Leakage class	V IEC 60534-4		

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)					AIR TO CLOSE (direct)				
			Spring range psi	Supply psi	ΔP shut-off bar		Spring range psi	Supply psi	ΔP shut-off bar			
					A	B			A	B		
2	34	1-X-290 D46	24 ÷ 44	60	300	300	7 ÷ 28	60	300	300		
3	45	1-X-290 D46	24 ÷ 44	60	163	122	12 ÷ 28	60	163	122		
4	60	1-X-290 D46	19 ÷ 48	60	82	62	7 ÷ 28	60	82	62		
6	60	1-X-290 D46	19 ÷ 48	60	68	51	7 ÷ 28	60	68	51		
		1-X-290 D63	21 ÷ 42	60	100	75	10 ÷ 26	60	100	75		
8	76	1-X-290 D46	19 ÷ 40	60	26	20	6 ÷ 30	60	26	20		
		1-X-290 D63	15 ÷ 42	60	49	37	7 ÷ 26	60	49	37		
10	100	1-X-290 D46	19 ÷ 40	60	14	11	- ÷ -	-	-	-		
		1-X-290 D63	19 ÷ 40	60	30	23	6 ÷ 30	60	30	23		
		1-X-250 D63	15 ÷ 34	60	31	23	6 ÷ 30	60	31	23		
12	120	1-X-290 D63	19 ÷ 40	60	27	20	6 ÷ 30	60	27	20		
		1-X-250 D63	15 ÷ 38	60	33	25	6 ÷ 30	60	33	25		
14	150	1-X-250 D63	14 ÷ 28	60	15	11	6 ÷ 30	60	15	11		
16	200	1-X-250 D63	10 ÷ 29	60	7	5	6 ÷ 30	60	7	5		
		1-X-400 C450	22 ÷ 44	87	14	11	7 ÷ 29	87	14	11		
20	250	1-X-400 C450	22 ÷ 44	87	7	5	7 ÷ 29	87	7	5		
		1-X-400 C600	25 ÷ 44	87	13	10	11 ÷ 29	87	13	10		
24	300	1-X-400 C450	22 ÷ 44	87	3	2	7 ÷ 29	87	3	2		
		1-X-400 C600	22 ÷ 44	87	7	5	7 ÷ 29	87	7	5		

For port size >3", hydraulic speed control is always suggested. For critical services such as atmospheric vent or similar, use shut-off ΔP from column "B" unless hydraulic speed control is provided: in this case values can be selected from column "A".

1-6948 TYPE (FOR SERVICE ON COMPRESSIBLE FLUIDS ONLY)

Max Rating	ANSI 600 - 2500	Balancing Seal Type	-
Plug	Balanced with pilot		
Packing Type	GRF or TFK		
Leakage class	V IEC 60534-4	Characteristic	Equal Percentage

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)				AIR TO CLOSE (direct)			
			Spring range psi	Supply psi	ΔP shut-off bar		Spring range psi	Supply psi	ΔP shut-off bar	
					A	B			A	B
2	34	1-X-290 D46	24 ÷ 44	60	300	300	7 ÷ 28	60	300	300
3	45	1-X-290 D46	24 ÷ 44	60	300	300	12 ÷ 28	60	300	300
4	60	1-X-290 D46	19 ÷ 48	60	246	185	7 ÷ 28	60	246	185
6	60	1-X-290 D46	19 ÷ 48	60	204	153	7 ÷ 28	60	204	153
		1-X-290 D63	21 ÷ 42	60	300	226	10 ÷ 28	60	300	226
8	76	1-X-290 D46	19 ÷ 40	60	80	60	6 ÷ 30	60	80	60
		1-X-290 D63	15 ÷ 42	60	149	112	7 ÷ 28	60	149	112
10	100	1-X-290 D46	19 ÷ 40	60	44	33	6 ÷ 30	60	-	-
		1-X-290 D63	19 ÷ 40	60	91	68	6 ÷ 30	60	91	68
		1-X-250 D63	15 ÷ 34	60	93	70	6 ÷ 30	50	93	70
12	120	1-X-290 D63	19 ÷ 40	60	81	61	6 ÷ 30	60	81	61
		1-X-250 D63	15 ÷ 38	60	99	74	6 ÷ 30	60	99	74
14	150	1-X-250 D63	14 ÷ 28	60	46	35	6 ÷ 30	60	46	35
16	200	1-X-250 D63	10 ÷ 29	60	21	16	6 ÷ 30	60	21	16
		1-X-400 C450	22 ÷ 44	87	42	32	7 ÷ 29	87	42	32
20	250	1-X-400 C450	22 ÷ 44	87	23	17	7 ÷ 29	87	23	17
		1-X-400 C600	25 ÷ 44	87	40	30	11 ÷ 29	87	40	30
24	300	1-X-400 C450	22 ÷ 44	87	11	8	7 ÷ 29	87	11	8
		1-X-400 C600	22 ÷ 44	87	21	16	7 ÷ 29	87	21	16

For port size >3", hydraulic speed control is always suggested. For critical services such as atmospheric vent or similar, use shut-off ΔP from column "B" unless hydraulic speed control is provided; in this case values can be selected from column "A".

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing Leakage class: Not-balanced, GRF, IV, IEC 60534-4
 Balancing seal Type Code: None, N

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	51	7 ÷ 28	60	92
			13 ÷ 31	40	30	5 ÷ 19	40	57
		1-X-290 D46	24 ÷ 44	60	105	12 ÷ 28	60	143
			16 ÷ 30	40	66	8 ÷ 19	40	91
		1-X-290 D63	22 ÷ 41	60	207	7 ÷ 26	60	330
			15 ÷ 27	40	134	4 ÷ 17	40	216
1-X-290 D63D	22 ÷ 41	60	427	-	-	-		
	15 ÷ 27	40	281	4 ÷ 17	40	403		
2	60	1-X-290 D46	19 ÷ 48	60	28	7 ÷ 28	60	51
			13 ÷ 32	40	17	5 ÷ 19	40	32
		1-X-290 D63	21 ÷ 42	60	72	10 ÷ 26	60	119
			14 ÷ 28	40	46	7 ÷ 17	40	77
		1-X-290 D63D	21 ÷ 42	60	149	10 ÷ 26	60	242
			14 ÷ 28	40	98	7 ÷ 17	40	160
3	76	1-X-290 D46	19 ÷ 40	60	17	6 ÷ 30	60	29
			13 ÷ 27	40	11	4 ÷ 20	40	18
		1-X-290 D63	15 ÷ 42	60	31	7 ÷ 26	60	72
			10 ÷ 28	40	19	4 ÷ 17	40	47
		1-X-290 D63D	15 ÷ 42	60	65	7 ÷ 26	60	147
			10 ÷ 28	40	42	7 ÷ 17	40	160
4	100	1-X-290 D46	19 ÷ 40	60	10	6 ÷ 30	60	18
			13 ÷ 27	40	6	4 ÷ 20	40	11
		1-X-290 D63	19 ÷ 40	60	24	6 ÷ 30	60	39
			13 ÷ 27	40	16	4 ÷ 20	40	25
		1-X-250 D63	-	-	-	6 ÷ 30	60	38
			15 ÷ 34	40	22	6 ÷ 30	40	11
1-X-250 D63	15 ÷ 34	40	91	-	-	-		
6	100	1-X-290 D46	19 ÷ 40	60	7	6 ÷ 30	60	12
			13 ÷ 27	40	4	4 ÷ 20	40	7
		1-X-290 D63	19 ÷ 40	60	16	6 ÷ 30	60	27
			13 ÷ 27	40	10	4 ÷ 20	40	17
		1-X-250 D63	-	-	-	6 ÷ 30	60	26
			15 ÷ 34	40	15	6 ÷ 30	40	7
1-X-250 D63	15 ÷ 34	40	62	-	-	-		
8 ⁽¹⁾	100	1-X-290 D46	19 ÷ 40	60	2	-	-	-
			19 ÷ 40	60	6	6 ÷ 30	60	10
		1-X-290 D63	13 ÷ 27	40	4	4 ÷ 20	40	6
			-	-	-	6 ÷ 30	60	10
		1-X-250 D63	15 ÷ 34	40	5	6 ÷ 30	40	2
			15 ÷ 34	40	25	-	-	-
1-X-250 D63	15 ÷ 34	40	25	-	-	-		
8	120	1-X-290 D63	19 ÷ 40	60	9	6 ÷ 30	60	16
			13 ÷ 27	40	6	4 ÷ 20	40	10
		1-X-250 D63	-	-	-	5 ÷ 34	60	13
			15 ÷ 38	40	9	5 ÷ 34	40	2
		1-X-250 D63	15 ÷ 38	40	38	-	-	-
		-	-	-	6 ÷ 30	60	8	
10	150	1-X-250 D63	14 ÷ 28	40	4	6 ÷ 30	40	2
		1-X-250 D63	14 ÷ 28	40	21	-	-	-
12	200	1-X-250 D63	-	-	-	6 ÷ 30	60	6
		1-X-250 D63	10 ÷ 29	40	2	6 ÷ 30	50	4
1-X-250 D63	10 ÷ 29	40	15	-	-	-		

SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing Leakage class	Not-balanced		Balancing seal	
	TFK		Type	None
	IV		Code	N
			IEC 60534-4	

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	60	7 ÷ 28	60	101
			13 ÷ 31	40	39	5 ÷ 19	40	66
		1-X-290 D46	24 ÷ 44	60	114	12 ÷ 28	60	152
			18 ÷ 30	40	75	8 ÷ 19	40	100
2	60	1-X-290 D63	22 ÷ 41	60	216	7 ÷ 28	60	339
			15 ÷ 27	40	143	4 ÷ 17	40	225
		1-X-290 D63D	22 ÷ 41	60	430	- ÷ -	-	-
			15 ÷ 27	40	290	4 ÷ 17	40	430
3	76	1-X-290 D46	19 ÷ 48	60	32	7 ÷ 28	60	54
			13 ÷ 32	40	21	5 ÷ 19	40	36
		1-X-290 D63	21 ÷ 42	60	75	10 ÷ 28	60	122
			14 ÷ 28	40	50	5 ÷ 19	40	36
4	100	1-X-290 D63D	21 ÷ 42	60	152	10 ÷ 28	60	246
			14 ÷ 28	40	101	7 ÷ 17	40	163
		1-X-290 D46	19 ÷ 40	60	19	6 ÷ 30	60	31
			13 ÷ 27	40	13	4 ÷ 20	40	20
6	100	1-X-290 D63	15 ÷ 42	60	33	7 ÷ 28	60	74
			10 ÷ 28	40	21	4 ÷ 17	40	49
		1-X-290 D63D	15 ÷ 42	60	67	7 ÷ 28	60	149
			10 ÷ 28	40	44	4 ÷ 17	40	99
8	100	1-X-290 D46	19 ÷ 40	60	12	6 ÷ 30	60	19
			13 ÷ 27	40	8	4 ÷ 20	40	12
		1-X-290 D63	19 ÷ 40	60	25	6 ÷ 30	60	40
			13 ÷ 27	40	17	4 ÷ 20	40	26
8 ⁽¹⁾	100	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	39
			15 ÷ 34	40	23	6 ÷ 30	40	12
		1-X-250 D63	15 ÷ 34	40	92	- ÷ -	-	-
			- ÷ -	-	-	- ÷ -	-	-
10	120	1-X-290 D46	19 ÷ 40	60	8	6 ÷ 30	60	13
			13 ÷ 27	40	5	4 ÷ 20	40	8
		1-X-290 D63	19 ÷ 40	60	17	6 ÷ 30	60	28
			13 ÷ 27	40	11	4 ÷ 20	40	18
12	200	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	27
			15 ÷ 34	40	16	6 ÷ 30	40	8
		1-X-250 D63	15 ÷ 34	40	63	- ÷ -	-	-
			- ÷ -	-	-	- ÷ -	-	-
10	150	1-X-290 D46	19 ÷ 40	60	3	6 ÷ 30	60	5
			13 ÷ 27	40	2	4 ÷ 20	40	3
		1-X-290 D63	19 ÷ 40	60	7	6 ÷ 30	60	11
			13 ÷ 27	40	4	4 ÷ 20	40	7
8	120	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	11
			15 ÷ 34	40	6	6 ÷ 30	40	3
		1-X-250 D63	15 ÷ 34	40	26	- ÷ -	-	-
			- ÷ -	-	-	- ÷ -	-	-
10	150	1-X-290 D63	19 ÷ 40	60	10	6 ÷ 30	60	17
			13 ÷ 27	40	7	4 ÷ 20	40	11
		1-X-250 D63	- ÷ -	-	-	5 ÷ 34	60	14
			15 ÷ 38	40	10	5 ÷ 34	40	2
12	200	1-X-250 D63	15 ÷ 38	40	39	- ÷ -	-	-
			- ÷ -	-	-	- ÷ -	-	-
		1-X-250 D63	14 ÷ 28	40	5	6 ÷ 30	60	9
			14 ÷ 28	40	21	6 ÷ 30	40	2
1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	7		
	10 ÷ 29	40	2	6 ÷ 30	40	2		
1-X-250 D63	10 ÷ 29	40	15	- ÷ -	-	-		
	- ÷ -	-	-	- ÷ -	-	-		

SPECIAL BODY'S EXECUTION

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Balanced
 Packing GRF
 Leakage class IV IEC 60534-4

Balancing seal 200 bar
 Max. Δp 200 bar
 Type energ. carbon graphite rings
 Code D

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	200	- ÷ -	-	-
		1-X-290 D46	13 ÷ 31	40	154	5 ÷ 19	40	200
2	60	1-X-290 D46	16 ÷ 30	40	200	- ÷ -	-	-
		1-X-290 D46	13 ÷ 32	40	200	5 ÷ 19	40	200
3	76	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	200
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	170
4	100	1-X-290 D46	- ÷ -	-	-	4 ÷ 17	40	200
		1-X-290 D46	19 ÷ 40	60	200	6 ÷ 30	60	198
		1-X-290 D46	13 ÷ 27	40	184	4 ÷ 20	40	128
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	200
6	100	1-X-250 D63	15 ÷ 34	40	200	6 ÷ 30	40	200
		1-X-290 D46	19 ÷ 40	60	200	6 ÷ 30	60	155
		1-X-290 D46	13 ÷ 27	40	169	4 ÷ 20	40	100
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	200
8 ⁽¹⁾	100	1-X-250 D63	15 ÷ 34	40	200	6 ÷ 30	40	200
		1-X-290 D46	19 ÷ 40	60	115	- ÷ -	-	-
		1-X-290 D46	19 ÷ 40	60	200	6 ÷ 30	60	200
		1-X-290 D63	13 ÷ 27	40	175	4 ÷ 20	40	134
8	120	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	200
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	158
		1-X-250 D63	- ÷ -	-	-	5 ÷ 34	60	200
		1-X-250 D63	15 ÷ 38	40	200	5 ÷ 34	40	104
10	150	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	177
		1-X-250 D63	14 ÷ 28	40	200	6 ÷ 30	40	119
12	200	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	150
		1-X-250 D63 d.e.	10 ÷ 29	40	145	6 ÷ 30	40	113
		1-X-250 D63 d.e.	10 ÷ 29	40	200	- ÷ -	-	-

(1) SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Balanced
 Packing TFK
 Leakage class IV IEC 60534-4

Balancing seal
 Max. Δp 200 bar
 Type energ. carbon graphite rings
 Code D

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	13 ÷ 31	40	200	5 ÷ 19	40	200
2	60	1-X-290 D46	13 ÷ 32	40	200	5 ÷ 19	40	200
3	76	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	200
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	180
4	100	1-X-290 D46	- ÷ -	-	-	4 ÷ 20	40	200
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	200
		1-X-250 D63	15 ÷ 34	40	200	4 ÷ 17	40	200
6	100	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	161
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	106
		1-X-250 D63	- ÷ -	-	-	4 ÷ 20	40	200
8 ⁽¹⁾	100	1-X-290 D46	15 ÷ 34	40	200	6 ÷ 30	40	200
		1-X-290 D63	19 ÷ 40	60	140	6 ÷ 30	60	103
		1-X-290 D46	13 ÷ 27	40	92	4 ÷ 20	40	67
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	200
		1-X-250 D63	13 ÷ 27	40	200	4 ÷ 20	40	140
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	200
		1-X-250 D63	13 ÷ 27	40	200	4 ÷ 20	40	163
		1-X-250 D63	- ÷ -	-	-	5 ÷ 34	60	200
10	150	1-X-250 D63	15 ÷ 38	40	200	5 ÷ 34	40	133
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	182
12	200	1-X-250 D63	14 ÷ 28	40	200	6 ÷ 30	40	143
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	154
		1-X-250 D63 d.e.	10 ÷ 29	40	168	6 ÷ 30	40	136
			10 ÷ 29	40	200	- ÷ -	-	-

SPECIAL BODY'S EXECUTION

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Balanced
 Packing GRF
 Leakage class IV IEC 60534-4

Balancing seal
 Max. Δp 200 bar
 Type Pressure energized PTFE
 Code S

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	250	- ÷ -	-	-
			13 ÷ 31	40	170	5 ÷ 19	40	250
		1-X-290 D46	16 ÷ 30	40	250	- ÷ -	-	-
2	60	1-X-290 D46	- ÷ -	-	-	7 ÷ 28	60	250
			13 ÷ 32	40	250	5 ÷ 19	40	246
		1-X-290 D63	- ÷ -	-	-	7 ÷ 17	40	250
3	76	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	177
		1-X-290 D63	- ÷ -	-	-	4 ÷ 17	40	250
4	100	1-X-290 D46	19 ÷ 40	60	250	6 ÷ 30	60	207
			13 ÷ 27	40	231	4 ÷ 20	40	133
		1-X-290 D63	13 ÷ 27	40	250	4 ÷ 20	40	250
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	250
6	100	1-X-290 D46	19 ÷ 40	60	250	6 ÷ 30	60	161
			13 ÷ 27	40	217	4 ÷ 20	40	103
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	250
		1-X-250 D63	13 ÷ 27	40	250	4 ÷ 20	40	222
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	250
8 ⁽¹⁾	100	1-X-290 D46	19 ÷ 40	60	133	- ÷ -	-	-
			19 ÷ 40	60	250	6 ÷ 30	60	215
		1-X-290 D63	13 ÷ 27	40	209	4 ÷ 20	40	139
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	209
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	141
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	164
		1-X-250 D63	- ÷ -	-	-	5 ÷ 34	60	250
		1-X-250 D63	15 ÷ 38	40	250	5 ÷ 34	40	123
10	150	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	184
			14 ÷ 28	40	250	6 ÷ 30	40	138
12	200	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	155
			10 ÷ 29	40	175	6 ÷ 30	40	132
		1-X-250 D63 d.e.	10 ÷ 29	40	250	- ÷ -	-	-

SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug _____
 Packing TFK _____
 Leakage class IV _____ IEC 60534-4

Balancing seal _____
 Max. Δp 200 bar _____
 Type Pressure energized PTFE _____
 Code S _____

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	250	- ÷ -	-	-
			13 ÷ 31	40	225	5 ÷ 19	40	250
		1-X-290 D46	16 ÷ 30	40	250	- ÷ -	-	-
2	60	1-X-290 D46	13 ÷ 32	40	250	5 ÷ 19	40	250
3	76	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	187
		1-X-290 D63	- ÷ -	-	-	4 ÷ 17	40	250
4	100	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	215
			13 ÷ 27	40	250	4 ÷ 20	40	141
			- ÷ -	-	-	4 ÷ 20	40	250
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	250
6	100	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	167
			13 ÷ 27	40	250	4 ÷ 20	40	109
			- ÷ -	-	-	6 ÷ 30	60	250
		1-X-290 D63	- ÷ -	-	-	4 ÷ 20	40	228
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	250
8 ⁽¹⁾	100	1-X-290 D46	19 ÷ 40	60	165	6 ÷ 30	60	105
			13 ÷ 27	40	103	4 ÷ 20	40	68
		1-X-290 D63	19 ÷ 40	60	250	6 ÷ 30	60	221
			13 ÷ 27	40	241	4 ÷ 20	40	145
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	216
			15 ÷ 34	40	250	6 ÷ 30	40	173
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	169
			- ÷ -	-	-	5 ÷ 34	60	250
		1-X-250 D63	15 ÷ 38	40	250	5 ÷ 34	40	163
10	150	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	189
			14 ÷ 28	40	250	6 ÷ 30	40	169
12	200	1-X-250 D63	10 ÷ 29	40	206	6 ÷ 30	40	159
			1-X-250 D63 d.e.	10 ÷ 29	40	250	- ÷ -	-

(1) SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Balanced _____
Packing GRF _____
Leakage class IV S1 IEC 60534-4

Balancing seal
Max. Δp 200 bar
Type Carbon graphite + back
Code C

Por in	Trav mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi		Supp psi	ΔP shut- bar	Spring psi	
1.1/2	45	1-X-290 D39	19 ÷ 47	60	200	- ÷ -	-	-
			13 ÷ 31	40	142	5 ÷ 19	40	200
		1-X-290 D46	16 ÷ 30	40	200	- ÷ -	-	-
			19 ÷ 48	60	200	- ÷ -	-	-
2	60	1-X-290 D46	13 ÷ 32	40	197	5 ÷ 19	40	200
			14 ÷ 28	40	200	- ÷ -	-	-
3	76	1-X-290 D46	19 ÷ 40	60	200	6 ÷ 30	60	200
			13 ÷ 27	40	180	4 ÷ 20	40	164
		1-X-290 D63	10 ÷ 28	40	200	4 ÷ 17	40	200
			19 ÷ 40	60	200	6 ÷ 30	60	192
4	100	1-X-290 D46	13 ÷ 27	40	158	4 ÷ 20	40	124
			13 ÷ 27	40	200	4 ÷ 20	40	200
		1-X-250 D63	15 ÷ 34	40	200	6 ÷ 30	40	200
			19 ÷ 40	60	200	6 ÷ 30	60	150
6	100	1-X-290 D46	13 ÷ 27	40	143	4 ÷ 20	40	97
			13 ÷ 27	40	200	4 ÷ 20	40	200
		1-X-250 D63	15 ÷ 34	40	200	6 ÷ 30	40	200
			19 ÷ 40	60	100	- ÷ -	-	-
8 ⁽¹⁾	100	1-X-290 D63	19 ÷ 40	60	200	6 ÷ 30	60	200
			13 ÷ 27	40	154	4 ÷ 20	40	130
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	195
			15 ÷ 34	40	200	6 ÷ 30	40	107
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	200
			13 ÷ 27	40	200	4 ÷ 20	40	153
		1-X-250 D63	- ÷ -	-	-	5 ÷ 34	60	200
			15 ÷ 38	40	200	5 ÷ 34	40	87
10	150	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	172
			14 ÷ 28	40	200	6 ÷ 30	40	102
12	200	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	145
			10 ÷ 29	40	125	6 ÷ 30	40	96
		1-X-250 D63 d.e.	10 ÷ 29	40	200	- ÷ -	-	-

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1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing Leakage class	Balanced		Balancing seal
	TFK		Max. Δp 200 bar
	IV S1	IEC 60534-4	Type Carbon graphite + back Code C

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	200	- ÷ -	-	-
			13 ÷ 31	40	187	5 ÷ 19	40	200
		1-X-290 D46	16 ÷ 30	40	200	- ÷ -	-	-
2	60	1-X-290 D46	13 ÷ 32	40	200	5 ÷ 19	40	200
3	78	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	200
			13 ÷ 27	40	200	4 ÷ 20	40	173
		1-X-290 D63	- ÷ -	-	-	4 ÷ 17	40	200
4	100	1-X-290 D46	19 ÷ 40	60	200	6 ÷ 30	60	199
			13 ÷ 27	40	190	4 ÷ 20	40	131
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	200
		1-X-250 D63	15 ÷ 34	40	200	6 ÷ 30	40	200
6	100	1-X-290 D46	19 ÷ 40	60	200	6 ÷ 30	60	156
			13 ÷ 27	40	171	4 ÷ 20	40	102
		1-X-290 D63	13 ÷ 27	40	200	4 ÷ 20	40	200
		1-X-250 D63	15 ÷ 34	40	200	6 ÷ 30	40	200
8 ⁽¹⁾	100	1-X-290 D46	19 ÷ 40	60	123	6 ÷ 30	60	99
			13 ÷ 27	40	79	4 ÷ 20	40	64
		1-X-290 D63	19 ÷ 40	60	200	6 ÷ 30	60	200
			13 ÷ 27	40	177	4 ÷ 20	40	136
		1-X-250 D63	15 ÷ 34	60	200	6 ÷ 30	60	200
		1-X-250 D63 d.e.	13 ÷ 27	40	177	6 ÷ 30	40	129
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	200
			13 ÷ 27	40	200	4 ÷ 20	40	158
		1-X-250 D63	- ÷ -	-	-	5 ÷ 34	60	200
			15 ÷ 38	40	200	5 ÷ 34	40	112
10	150	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	177
			14 ÷ 28	40	200	6 ÷ 30	40	124
12	200	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	150
			10 ÷ 29	40	145	6 ÷ 30	40	117
		1-X-250 D63 d.e.	10 ÷ 29	40	200	- ÷ -	-	-

(1) SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug	Not-balanced		Balancing seal
Packing	GRF		Type None
Leakage class	V	IEC 60534-4	Code N
Leakage class	VI**	IEC 60534-4	Code P

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	45	7 ÷ 28	60	90
			13 ÷ 31	40	22	5 ÷ 19	40	52
		1-X-290 D46	24 ÷ 44	60	105	12 ÷ 28	60	143
			16 ÷ 30	40	62	8 ÷ 19	40	90
		1-X-290 D63	22 ÷ 41	60	207	7 ÷ 26	60	330
1-X-290 D63D	15 ÷ 27	40	134	4 ÷ 17	40	216		
	22 ÷ 41	60	430	-	-	-		
2	60	1-X-290 D46	19 ÷ 48	60	23	7 ÷ 28	60	47
			13 ÷ 32	40	12	5 ÷ 19	40	27
		1-X-290 D63	21 ÷ 42	60	70	10 ÷ 26	60	119
			14 ÷ 28	40	42	7 ÷ 17	40	75
		1-X-290 D63D	21 ÷ 42	60	149	10 ÷ 26	60	242
14 ÷ 28	40	97	7 ÷ 17	40	180			
3	76	1-X-290 D46	19 ÷ 40	60	13	6 ÷ 30	60	25
			13 ÷ 27	40	6	4 ÷ 20	40	14
		1-X-290 D63	15 ÷ 42	60	27	7 ÷ 26	60	70
			10 ÷ 28	40	15	4 ÷ 17	40	44
		1-X-290 D63D	15 ÷ 42	60	63	7 ÷ 26	60	147
10 ÷ 28	40	39	4 ÷ 17	40	97			
4	100	1-X-290 D46	19 ÷ 40	60	7	6 ÷ 30	60	15
			13 ÷ 27	40	3	4 ÷ 20	40	8
		1-X-290 D63	19 ÷ 40	60	21	6 ÷ 30	60	36
			13 ÷ 27	40	12	4 ÷ 20	40	22
		1-X-250 D63	-	-	-	6 ÷ 30	60	36
15 ÷ 34	40	19	6 ÷ 30	40	7			
1-X-250 D63	15 ÷ 34	40	90	-	-	-		
6	100	1-X-290 D46	19 ÷ 40	60	4	6 ÷ 30	60	9
			-	-	-	4 ÷ 20	40	4
		1-X-290 D63	19 ÷ 40	60	13	6 ÷ 30	60	24
			13 ÷ 27	40	7	4 ÷ 20	40	14
		1-X-250 D63	-	-	-	6 ÷ 30	60	23
15 ÷ 34	40	12	6 ÷ 30	40	4			
1-X-250 D63	15 ÷ 34	40	61	-	-	-		
8 ⁽¹⁾	100	1-X-290 D63	19 ÷ 40	60	4	6 ÷ 30	60	8
			13 ÷ 27	40	2	4 ÷ 20	40	4
		1-X-250 D63	-	-	-	6 ÷ 30	60	8
			15 ÷ 34	40	4	6 ÷ 30	50	4
		1-X-250 D63	15 ÷ 34	40	23	-	-	-
8	120	1-X-290 D63	19 ÷ 40	60	7	6 ÷ 30	60	14
			13 ÷ 27	40	4	4 ÷ 20	40	8
		1-X-250 D63	-	-	-	5 ÷ 34	60	11
			15 ÷ 38	40	7	5 ÷ 34	50	5
		1-X-250 D63	15 ÷ 38	40	37	-	-	-
10	150	1-X-250 D63	-	-	-	6 ÷ 30	60	7
		14 ÷ 28	40	2	6 ÷ 30	50	3	
		14 ÷ 28	40	19	-	-	-	
12	200	1-X-250 D63	-	-	-	6 ÷ 30	60	5
		-	-	-	6 ÷ 30	50	2	
		10 ÷ 29	40	14	-	-	-	

(1) SPECIAL Body's execution.

** For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug	Not-balanced		Balancing seal
Packing	TFK		Type
Leakage class	V	IEC 60534-4	None
Leakage class	VI**	IEC 60534-4	Code
			N
			P

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	55	7 ÷ 28	60	100
			13 ÷ 31	40	32	5 ÷ 19	40	62
		1-X-290 D46	24 ÷ 44	60	114	12 ÷ 28	60	152
			16 ÷ 30	40	72	8 ÷ 19	40	100
		1-X-290 D63	22 ÷ 41	60	216	7 ÷ 26	60	339
			15 ÷ 27	40	143	4 ÷ 17	40	225
1-X-290 D63D	22 ÷ 41	60	430	- ÷ -	-	-		
2	60	1-X-290 D46	19 ÷ 48	60	27	7 ÷ 28	60	51
			13 ÷ 32	40	15	5 ÷ 19	40	31
		1-X-290 D63	21 ÷ 42	60	73	10 ÷ 26	60	122
			14 ÷ 28	40	46	7 ÷ 17	40	79
		1-X-290 D63D	21 ÷ 42	60	152	10 ÷ 26	60	246
			14 ÷ 28	40	100	7 ÷ 17	40	163
3	76	1-X-290 D46	19 ÷ 40	60	15	6 ÷ 30	60	27
			13 ÷ 27	40	8	4 ÷ 20	40	16
		1-X-290 D63	15 ÷ 42	60	29	7 ÷ 26	60	72
			10 ÷ 28	40	17	4 ÷ 17	40	46
		1-X-290 D63D	15 ÷ 42	60	65	7 ÷ 26	60	149
			10 ÷ 28	40	41	4 ÷ 17	40	99
4	100	1-X-290 D46	19 ÷ 40	60	8	6 ÷ 30	60	16
			13 ÷ 27	40	4	4 ÷ 20	40	9
		1-X-290 D63	19 ÷ 40	60	22	6 ÷ 30	60	38
			13 ÷ 27	40	13	4 ÷ 20	40	23
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	37
			15 ÷ 34	40	20	6 ÷ 30	40	9
1-X-250 D63 d.e.	15 ÷ 34	40	92	- ÷ -	-	-		
6	100	1-X-290 D46	19 ÷ 40	60	5	6 ÷ 30	60	10
			13 ÷ 27	40	2	4 ÷ 20	40	5
		1-X-290 D63	19 ÷ 40	60	14	6 ÷ 30	60	25
			13 ÷ 27	40	8	4 ÷ 20	40	15
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	24
			15 ÷ 34	40	13	6 ÷ 30	40	5
1-X-250 D63 d.e.	15 ÷ 34	40	62	- ÷ -	-	-		
8 ⁽¹⁾	100	1-X-290 D63	19 ÷ 40	60	5	6 ÷ 30	60	9
			13 ÷ 27	40	2	4 ÷ 20	40	5
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	9
			15 ÷ 34	40	4	6 ÷ 30	50	5
		1-X-250 D63 d.e.	15 ÷ 34	40	24	- ÷ -	-	-
		8	120	1-X-290 D63	19 ÷ 40	60	8	6 ÷ 30
13 ÷ 27	40				4	4 ÷ 20	40	8
1-X-250 D63	- ÷ -			-	-	5 ÷ 34	60	12
	15 ÷ 38			40	7	5 ÷ 34	50	6
1-X-250 D63 d.e.	15 ÷ 34			40	24	- ÷ -	-	-
10	150			1-X-250 D63	- ÷ -	-	-	6 ÷ 30
		14 ÷ 28	40	3	6 ÷ 30	50	4	
		1-X-250 D63 d.e.	14 ÷ 28	40	20	- ÷ -	-	-
12	200	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	5
		- ÷ -	-	-	6 ÷ 30	50	3	
		1-X-250 D63 d.e.	10 ÷ 29	40	14	- ÷ -	-	-

(1) SPECIAL BODY'S EXECUTION.
 ** For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing Balanced
GRF

Balancing seal
Max. Δp 200 bar
Type Pressure energized PTFE
Code S
Code U (S+P)

Leakage class V IEC 60534-4
Leakage class VI** IEC 60534-4

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	250	- ÷ -	-	-
			13 ÷ 31	40	170	5 ÷ 19	40	250
		1-X-290 D46	16 ÷ 30	40	250	- ÷ -	-	-
			- ÷ -	-	-	7 ÷ 28	60	250
2	60	1-X-290 D46	13 ÷ 32	40	250	5 ÷ 19	40	246
			- ÷ -	-	-	7 ÷ 17	40	250
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	177
3	76	1-X-290 D46	- ÷ -	-	-	4 ÷ 17	40	250
			- ÷ -	-	-	6 ÷ 30	60	250
		1-X-290 D63	19 ÷ 40	60	250	6 ÷ 30	60	207
			13 ÷ 27	40	231	4 ÷ 20	40	133
4	100	1-X-290 D63	13 ÷ 27	40	250	4 ÷ 20	40	250
			15 ÷ 34	40	250	6 ÷ 30	40	250
		1-X-250 D63	19 ÷ 40	60	250	6 ÷ 30	60	161
			13 ÷ 27	40	217	4 ÷ 20	40	103
6	100	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	222
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	250
			19 ÷ 40	60	133	- ÷ -	-	-
8 ⁽¹⁾	100	1-X-290 D46	19 ÷ 40	60	250	6 ÷ 30	60	215
			13 ÷ 27	40	209	4 ÷ 20	40	139
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	209
			15 ÷ 34	40	250	6 ÷ 30	40	141
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	164
		1-X-250 D63	15 ÷ 38	40	250	5 ÷ 34	50	250
			14 ÷ 28	40	250	6 ÷ 30	50	184
10	150	1-X-250 D63	14 ÷ 28	40	250	6 ÷ 30	50	184
12	200	1-X-250 D63	10 ÷ 29	40	175	6 ÷ 30	50	155
			10 ÷ 29	40	250	- ÷ -	-	-

(1) SPECIAL BODY'S EXECUTION.

** For leakage class VI max ΔP see PARCOL NTG 76/503

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing	Balanced		Balancing seal	
	TFK		Max. Δp	200 bar
Leakage class	V	IEC 60534-4	Type	Pressure energized PTFE
Leakage class	VI**	IEC 60534-4	Code	S
			Code	U (S+P)

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	250	-	-	-
			13 ÷ 31	40	225	5 ÷ 19	40	250
		1-X-290 D46	16 ÷ 30	40	250	-	-	-
2	60	1-X-290 D46	13 ÷ 32	40	250	5 ÷ 19	40	250
3	76	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	250
			13 ÷ 27	40	250	4 ÷ 20	40	187
		1-X-290 D63	10 ÷ 28	40	250	4 ÷ 17	40	250
4	100	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	215
			13 ÷ 27	40	250	4 ÷ 20	40	141
			- ÷ -	-	-	4 ÷ 20	40	250
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	250
6	100	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	167
			13 ÷ 27	40	250	4 ÷ 20	40	109
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	250
			- ÷ -	-	-	4 ÷ 20	40	228
		1-X-250 D63	15 ÷ 34	40	250	6 ÷ 30	40	250
		1-X-250 D63 d.e.	15 ÷ 34	40	250	-	-	-
8 ⁽¹⁾	100	1-X-290 D46	19 ÷ 40	60	165	6 ÷ 30	60	105
			- ÷ -	-	-	4 ÷ 20	40	68
		1-X-290 D63	19 ÷ 40	60	250	6 ÷ 30	60	221
			13 ÷ 27	40	241	4 ÷ 20	40	145
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	216
			15 ÷ 34	40	250	6 ÷ 30	40	173
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	250
			15 ÷ 34	40	250	4 ÷ 20	40	169
		1-X-250 D63	15 ÷ 38	40	250	5 ÷ 34	50	250
10	150	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	189
			14 ÷ 28	40	250	6 ÷ 30	40	169
12	200	1-X-250 D63	10 ÷ 29	40	206	6 ÷ 30	40	159
			10 ÷ 29	40	250	-	-	-

(1) SPECIAL BODY'S EXECUTION.
 ** For leakage class VI max ΔP see PARCOL NTG 76/503.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing Balanced
GRF

Leakage class V IEC 60534-4

Balancing seal
 Max. Δp 200 bar
 Type Loaded PTFE + back up
 Code B

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	278	7 ÷ 28	60	400
			13 ÷ 31	40	180	5 ÷ 19	40	311
		1-X-290 D46	24 ÷ 44	60	400	- ÷ -	-	-
2	60	1-X-290 D46	16 ÷ 30	40	380	8 ÷ 19	40	400
			19 ÷ 48	60	390	7 ÷ 28	60	370
		1-X-290 D83	13 ÷ 32	40	235	5 ÷ 19	40	238
3	76	1-X-290 D46	14 ÷ 28	40	400	7 ÷ 17	40	400
			19 ÷ 40	60	358	6 ÷ 30	60	267
		1-X-290 D83	13 ÷ 27	40	222	4 ÷ 20	40	172
4	100	1-X-290 D46	- ÷ -	-	-	7 ÷ 26	60	400
			10 ÷ 28	40	400	4 ÷ 17	40	309
		1-X-290 D83D	- ÷ -	-	-	4 ÷ 17	40	400
6	100	1-X-290 D46	19 ÷ 40	60	326	6 ÷ 30	60	202
			13 ÷ 27	40	200	4 ÷ 20	40	130
		1-X-290 D83	- ÷ -	-	-	6 ÷ 30	60	400
8	120	1-X-250 D83	13 ÷ 27	40	400	4 ÷ 20	40	278
			- ÷ -	-	-	6 ÷ 30	60	400
		1-X-250 D83	15 ÷ 34	40	400	6 ÷ 30	40	344
10	150	1-X-290 D46	19 ÷ 40	60	245	6 ÷ 30	60	150
			13 ÷ 27	40	142	4 ÷ 20	40	95
		1-X-290 D83	19 ÷ 40	60	400	6 ÷ 30	60	320
12	200	1-X-250 D83	13 ÷ 27	40	372	4 ÷ 20	40	209
			- ÷ -	-	-	6 ÷ 30	60	312
		1-X-250 D83	15 ÷ 34	40	400	6 ÷ 30	40	259
8 ⁽¹⁾	100	1-X-290 D83	19 ÷ 40	60	255	6 ÷ 30	60	201
			13 ÷ 27	40	156	4 ÷ 20	40	129
		1-X-250 D83	15 ÷ 34	40	235	6 ÷ 30	50	196
8	120	1-X-250 D83 d.e.	15 ÷ 34	40	400	- ÷ -	-	-
			19 ÷ 40	60	400	6 ÷ 30	60	237
		1-X-290 D83	13 ÷ 27	40	256	4 ÷ 20	40	154
10	150	1-X-250 D83	15 ÷ 38	40	388	5 ÷ 34	50	276
			15 ÷ 38	40	400	- ÷ -	-	-
		1-X-250 D83 d.e.	14 ÷ 28	40	208	6 ÷ 30	50	173
12	200	1-X-250 D83	14 ÷ 28	40	363	- ÷ -	-	-
			- ÷ -	-	-	6 ÷ 30	50	145
		1-X-250 D83 d.e.	10 ÷ 29	40	342	- ÷ -	-	-

(1) SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing	Balanced		Balancing seal	200 bar
	TFK		Max. Δp	
Leakage class	V	IEC 60534-4	Type	Loaded PTFE + back up
			Code	B

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	329	7 ÷ 28	60	400
			13 ÷ 27	40	211	5 ÷ 19	40	361
		1-X-290 D46	24 ÷ 44	60	400	- ÷ -	-	-
			16 ÷ 30	40	360	8 ÷ 19	40	400
2	60	1-X-290 D46	19 ÷ 48	60	400	7 ÷ 28	60	385
			13 ÷ 32	40	235	5 ÷ 19	40	253
		1-X-290 D63	14 ÷ 28	40	400	7 ÷ 17	40	400
			19 ÷ 40	60	400	6 ÷ 30	60	278
3	76	1-X-290 D46	13 ÷ 27	40	222	4 ÷ 20	40	183
			- ÷ -	-	-	7 ÷ 26	60	400
		1-X-290 D63	10 ÷ 28	40	400	4 ÷ 17	40	309
			- ÷ -	-	-	4 ÷ 17	40	400
4	100	1-X-290 D46	19 ÷ 40	60	367	6 ÷ 30	60	209
			13 ÷ 27	40	200	4 ÷ 20	40	137
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	400
			13 ÷ 27	40	400	4 ÷ 20	40	286
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	400
			15 ÷ 34	40	400	6 ÷ 30	40	385
6	100	1-X-290 D46	19 ÷ 40	60	278	6 ÷ 30	60	156
			13 ÷ 27	40	142	4 ÷ 20	40	101
		1-X-290 D63	19 ÷ 40	60	400	6 ÷ 30	60	326
			13 ÷ 27	40	372	4 ÷ 20	40	215
		1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	318
			15 ÷ 34	40	400	6 ÷ 30	40	293
8 ⁽¹⁾	100	1-X-290 D46	19 ÷ 40	60	120	6 ÷ 30	60	98
			- ÷ -	-	-	4 ÷ 20	40	62
		1-X-290 D63	19 ÷ 40	60	280	6 ÷ 30	60	207
			13 ÷ 27	40	156	4 ÷ 20	40	135
		1-X-250 D63	15 ÷ 34	60	261	6 ÷ 30	60	202
			15 ÷ 34	40	235	6 ÷ 30	40	127
		1-X-250 D63 d.e.	15 ÷ 34	40	400	- ÷ -	-	-
			19 ÷ 40	60	400	6 ÷ 30	60	242
8	120	1-X-290 D63	13 ÷ 27	40	256	4 ÷ 20	40	159
			15 ÷ 38	60	400	5 ÷ 34	50	282
		1-X-250 D63	15 ÷ 38	40	386	- ÷ -	-	-
			15 ÷ 38	40	400	- ÷ -	-	-
10	150	1-X-250 D63	- ÷ -	-	-	6 ÷ 30	60	178
			14 ÷ 28	40	232	6 ÷ 30	40	121
		1-X-250 D63 d.e.	14 ÷ 28	40	383	- ÷ -	-	-
			10 ÷ 29	60	146	6 ÷ 30	50	150
12	200	1-X-250 D63 d.e.	10 ÷ 29	40	345	- ÷ -	-	-

(1) SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug Packing Balanced
TFK

Leakage class V IEC 60534-4

Balancing seal
 Max. Δp 200 bar
 Type Loaded PTFE + back up
 Code B

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)		
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar
1.1/2	45	1-X-290 D39	19 ÷ 47	60	329	7 ÷ 28	60	400
			13 ÷ 27	40	211	5 ÷ 19	40	361
		1-X-290 D46	24 ÷ 44	60	400	- ÷ -	-	-
			16 ÷ 30	40	360	8 ÷ 19	40	400
2	60	1-X-290 D46	19 ÷ 48	60	400	7 ÷ 28	60	385
			13 ÷ 32	40	235	5 ÷ 19	40	253
		1-X-290 D63	14 ÷ 28	40	400	7 ÷ 17	40	400
			19 ÷ 40	60	400	6 ÷ 30	60	278
3	76	1-X-290 D46	13 ÷ 27	40	222	4 ÷ 20	40	183
			- ÷ -	-	-	7 ÷ 28	60	400
		1-X-290 D63	10 ÷ 28	40	400	4 ÷ 17	40	309
			- ÷ -	-	-	4 ÷ 17	40	400
		1-X-290 D63D	- ÷ -	-	-	4 ÷ 17	40	400
			19 ÷ 40	60	367	6 ÷ 30	60	209
4	100	1-X-290 D46	13 ÷ 27	40	200	4 ÷ 20	40	137
			- ÷ -	-	-	6 ÷ 30	60	400
		1-X-290 D63	13 ÷ 27	40	400	4 ÷ 20	40	288
			- ÷ -	-	-	6 ÷ 30	60	400
		1-X-250 D63	15 ÷ 34	40	400	6 ÷ 30	40	385
			19 ÷ 40	60	278	6 ÷ 30	60	156
6	100	1-X-290 D46	13 ÷ 27	40	142	4 ÷ 20	40	101
			19 ÷ 40	60	400	6 ÷ 30	60	326
		1-X-290 D63	13 ÷ 27	40	372	4 ÷ 20	40	215
			- ÷ -	-	-	6 ÷ 30	60	318
		1-X-250 D63	15 ÷ 34	40	400	6 ÷ 30	40	293
			19 ÷ 40	60	120	6 ÷ 30	60	98
8 ⁽¹⁾	100	1-X-290 D46	- ÷ -	-	-	4 ÷ 20	40	62
			19 ÷ 40	60	280	6 ÷ 30	60	207
		1-X-290 D63	13 ÷ 27	40	156	4 ÷ 20	40	135
			15 ÷ 34	60	261	6 ÷ 30	60	202
		1-X-250 D63	15 ÷ 34	40	235	6 ÷ 30	40	127
			15 ÷ 34	40	400	- ÷ -	-	-
		1-X-250 D63 d.e.	19 ÷ 40	60	400	6 ÷ 30	60	242
			13 ÷ 27	40	256	4 ÷ 20	40	159
8	120	1-X-290 D63	15 ÷ 38	60	400	5 ÷ 34	50	282
			15 ÷ 38	40	386	- ÷ -	-	-
		1-X-250 D63 d.e.	15 ÷ 38	40	400	- ÷ -	-	-
			- ÷ -	-	-	6 ÷ 30	60	178
10	150	1-X-250 D63	14 ÷ 28	40	232	6 ÷ 30	40	121
			14 ÷ 28	40	383	- ÷ -	-	-
12	200	1-X-250 D63	10 ÷ 29	60	146	6 ÷ 30	50	150
			10 ÷ 29	40	345	- ÷ -	-	-

(1) SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug	Balanced	Balancing seal
Packing	GRF	Type metallic C-ring
Leakage class	V IEC 60534-4	Code R

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			C-Ring Max ΔP bar
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar	
1 1/2	45	1-X-290 D39	19 ÷ 47	60	350	7 ÷ 28	60	308	350
			13 ÷ 27	40	118	5 ÷ 19	40	121	
		1-X-290 D46	- ÷ -	-	-	12 ÷ 28	60	350	
2	60	1-X-290 D63	16 ÷ 30	40	350	8 ÷ 19	40	232	345
			- ÷ -	-	-	4 ÷ 17	40	350	
		1-X-290 D46	19 ÷ 48	60	345	7 ÷ 28	60	201	
		13 ÷ 32	40	341	5 ÷ 19	40	67		
3	76	1-X-290 D63	14 ÷ 28	40	345	7 ÷ 17	40	260	329
			- ÷ -	-	-	7 ÷ 17	40	345	
		1-X-290 D46	19 ÷ 40	60	329	6 ÷ 30	60	179	
		13 ÷ 27	40	300	4 ÷ 20	40	82		
4	100	1-X-290 D63	10 ÷ 28	40	329	4 ÷ 17	40	221	263
			- ÷ -	-	-	4 ÷ 17	40	329	
		1-X-290 D46	19 ÷ 40	60	263	6 ÷ 30	60	115	
		- ÷ -	-	-	4 ÷ 20	40	39		
6	100	1-X-290 D63	13 ÷ 27	40	263	4 ÷ 20	40	195	219
			- ÷ -	-	-	6 ÷ 30	60	219	
		1-X-250 D63	15 ÷ 34	40	263	6 ÷ 30	40	263	
		- ÷ -	-	-	4 ÷ 20	40	16		
8 ⁽¹⁾	100	1-X-290 D63	19 ÷ 40	60	219	6 ÷ 30	60	77	173
			- ÷ -	-	-	4 ÷ 20	40	142	
		1-X-250 D63	15 ÷ 34	40	219	6 ÷ 30	40	219	
		- ÷ -	-	-	6 ÷ 30	60	219		
10	150	1-X-290 D63	19 ÷ 40	60	113	6 ÷ 30	60	83	153
			- ÷ -	-	-	4 ÷ 20	40	29	
		1-X-250 D63	15 ÷ 34	40	113	6 ÷ 30	50	85	
12	200	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	173	136
			13 ÷ 27	40	173	4 ÷ 20	40	94	
		1-X-250 D63	15 ÷ 38	40	173	5 ÷ 34	50	173	
10	150	1-X-250 D63	14 ÷ 28	40	153	6 ÷ 30	50	104	136
			- ÷ -	-	-	6 ÷ 30	50	79	
12	200	1-X-250 D63	- ÷ -	-	-	-	-	-	136
			- ÷ -	-	-	-	-	-	

SPECIAL BODY'S EXECUTION.

1-6943 TYPE SERIES HIGH FLOW CAPACITY

Plug	Balanced	Balancing seal
Packing	TFK	Type
Leakage class	V IEC 60534-4	Code
		metallic C-ring
		R

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)			AIR TO CLOSE (direct)			C-Ring Max Δp bar
			Spring range psi	Supply psi	ΔP shut-off bar	Spring range psi	Supply psi	ΔP shut-off bar	
1 1/2	45	1-X-290 D39	19 ÷ 47	60	350	7 ÷ 28	60	339	350
			13 ÷ 31	40	272	5 ÷ 19	40	152	
		1-X-290 D46	- ÷ -	-	-	12 ÷ 28	60	350	
		1-X-290 D63	16 ÷ 30	40	350	8 ÷ 19	40	263	
			- ÷ -	-	-	4 ÷ 17	40	350	
2	60	1-X-290 D46	- ÷ -	-	-	7 ÷ 28	60	216	345
			13 ÷ 32	40	345	5 ÷ 19	40	82	
		1-X-290 D63	- ÷ -	-	-	10 ÷ 28	60	345	
		1-X-290 D63D	- ÷ -	-	-	7 ÷ 17	40	278	
			- ÷ -	-	-	7 ÷ 17	40	345	
3	76	1-X-290 D46	- ÷ -	-	-	6 ÷ 30	60	189	329
			13 ÷ 27	40	329	4 ÷ 20	40	92	
		1-X-290 D63	- ÷ -	-	-	7 ÷ 28	60	329	
		1-X-290 D63D	- ÷ -	-	-	4 ÷ 17	40	231	
			- ÷ -	-	-	4 ÷ 17	40	329	
4	100	1-X-290 D46	19 ÷ 40	60	263	6 ÷ 30	60	123	263
			- ÷ -	-	-	4 ÷ 20	40	48	
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	263	
		1-X-250 D63	13 ÷ 27	40	263	4 ÷ 20	40	204	
			15 ÷ 34	40	263	6 ÷ 30	40	263	
6	100	1-X-290 D46	19 ÷ 40	60	219	6 ÷ 30	60	83	219
			- ÷ -	-	-	4 ÷ 20	40	22	
		1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	219	
		1-X-250 D63	13 ÷ 27	40	219	4 ÷ 20	40	149	
			15 ÷ 34	40	219	6 ÷ 30	40	219	
8 ⁽¹⁾	100	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	88	173
			13 ÷ 27	40	113	4 ÷ 20	40	34	
		1-X-250 D63	15 ÷ 34	40	113	6 ÷ 30	50	90	
8	120	1-X-290 D63	- ÷ -	-	-	6 ÷ 30	60	173	100
			13 ÷ 27	40	173	4 ÷ 20	40	100	
		1-X-250 D63	15 ÷ 38	40	173	5 ÷ 34	50	173	
10	150	1-X-250 D63	14 ÷ 28	40	153	6 ÷ 30	50	111	153
12	200	1-X-250 D63 d.e.	- ÷ -	-	-	6 ÷ 30	50	85	136
			10 ÷ 29	40	136	- ÷ -	-	-	

(1) SPECIAL BODY'S EXECUTION.

1-6948 TYPE SERIES HIGH FLOW CAPACITY
(FOR SERVICE ON COMPRESSIBLE FLUIDS ONLY)

Max Rating	ANSI 600 - 2500	Balancing Seal Type	-
Plug	Balanced with pilot		
Packing Type	GRF or TFK	Characteristic	Linear
Leakage class	V IEC 60534-4		

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)					AIR TO CLOSE (direct)				
			Spring range psi	Supply psi	ΔP shut-off bar		Spring range psi	Supply psi	ΔP shut-off bar			
					A	B			A	B		
2	60	1-X-290 D46	19 ÷ 48	60	265	199	7 ÷ 28	60	265	199		
		1-X-290 D63	21 ÷ 42	60	300	225	10 ÷ 28	60	300	225		
3	76	1-X-290 D46	19 ÷ 40	60	129	97	6 ÷ 30	60	129	97		
		1-X-290 D63	15 ÷ 42	60	241	181	7 ÷ 28	60	241	181		
4	100	1-X-290 D46	19 ÷ 40	60	49	37	6 ÷ 30	60	49	37		
		1-X-290 D63	19 ÷ 40	60	100	75	6 ÷ 30	60	100	75		
		1-X-250 D63	15 ÷ 34	60	103	77	6 ÷ 30	60	103	77		
6	100	1-X-290 D46	19 ÷ 40	60	41	31	6 ÷ 30	60	41	31		
		1-X-290 D63	19 ÷ 40	60	83	62	6 ÷ 30	60	83	62		
		1-X-250 D63	15 ÷ 34	60	85	64	6 ÷ 30	60	85	64		
8	120	1-X-290 D63	19 ÷ 40	60	34	25	6 ÷ 30	60	34	25		
		1-X-250 D63	15 ÷ 38	60	42	31	5 ÷ 34	60	42	31		
10	150	1-X-250 D63	14 ÷ 28	60	20	15	6 ÷ 30	60	20	15		
12	200	1-X-250 D63	10 ÷ 29	60	16	12	6 ÷ 30	60	16	12		

For port size >3", hydraulic speed control is always suggested. For critical services such as atmospheric vent or similar, use shut-off ΔP from column "B" unless hydraulic speed control is provided: in this case values can be selected from column "A".

1-6948 TYPE SERIES HIGH FLOW CAPACITY
(FOR SERVICE ON COMPRESSIBLE FLUIDS ONLY)

Max Rating	ANSI 600 - 2500	Balancing Seal Type	-
Plug	Balanced with pilot		
Packing Type	GRF or TFK	Characteristic	Equal Percentage
Leakage class	V IEC 60534-4		

Port in	Travel mm	Actuator type	AIR TO OPEN (reverse)					AIR TO CLOSE (direct)				
			Spring range psi	Supply psi	ΔP shut-off bar		Spring range psi	Supply psi	ΔP shut-off bar			
					A	B			A	B		
2	60	1-X-290 D46	19 ÷ 48	60	300	225	7 ÷ 28	60	300	225		
		1-X-290 D63	21 ÷ 42	60	300	225	10 ÷ 28	60	300	225		
3	76	1-X-290 D46	19 ÷ 40	60	300	225	6 ÷ 30	60	300	225		
		1-X-290 D63	15 ÷ 42	60	300	225	7 ÷ 28	60	300	225		
4	100	1-X-290 D46	19 ÷ 40	60	149	112	6 ÷ 30	60	149	112		
		1-X-290 D63	19 ÷ 40	60	300	225	6 ÷ 30	60	300	225		
		1-X-250 D63	15 ÷ 34	60	300	225	6 ÷ 30	60	300	225		
6	100	1-X-290 D46	19 ÷ 40	60	123	92	6 ÷ 30	60	123	92		
		1-X-290 D63	19 ÷ 40	60	249	187	6 ÷ 30	60	249	187		
		1-X-250 D63	15 ÷ 34	60	256	192	6 ÷ 30	60	256	192		
8	120	1-X-290 D63	19 ÷ 40	60	102	77	6 ÷ 30	60	102	77		
		1-X-250 D63	15 ÷ 38	60	126	95	5 ÷ 34	60	126	95		
10	150	1-X-250 D63	14 ÷ 28	60	62	47	6 ÷ 30	60	62	47		
12	200	1-X-250 D63	10 ÷ 29	60	49	37	6 ÷ 30	60	49	37		

For port size >3", hydraulic speed control is always suggested. For critical services such as atmospheric vent or similar, use shut-off ΔP from column "B" unless hydraulic speed control is provided: in this case values can be selected from column "A".