



Flow-rate curves for diaphragm valves

Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body



In this documentation flow characteristics for the Bürkert diaphragm valves 2730 and 2731 are given. These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate easily from the stated values. Reason is due to the elasticity and the grouting of the diaphragms. Therefore the curves serve only as a guideline for the rating of regulating valves.

Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

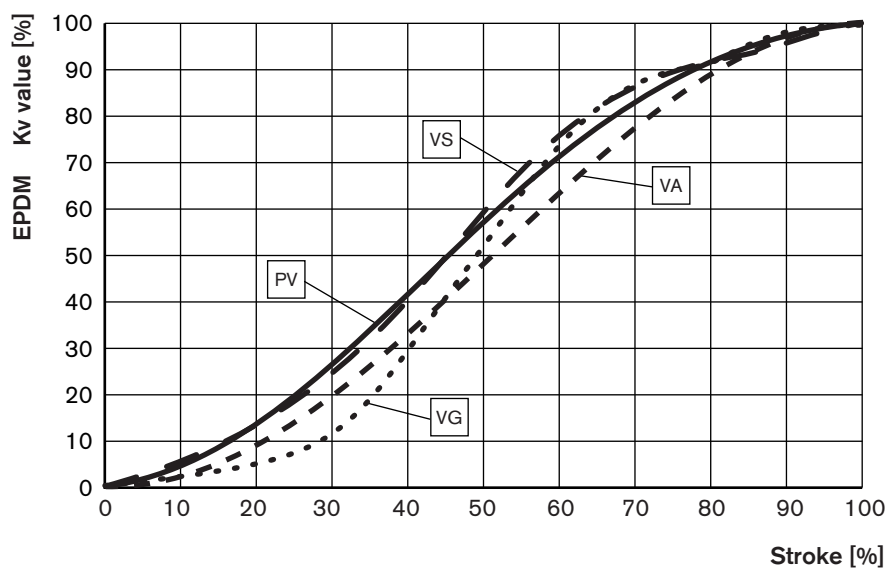


DN15

Flow-rate value

Stroke [%]	PVC body (PV)				Forged body (VS)				Cast body (VG)				Cold-formed pipe valve body (VA-ISO)			
	EPDM		PTFE		EPDM		PTFE		EPDM		PTFE		EPDM		PTFE	
	Kv value				Kv value				Kv value				Kv value			
	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0.15	5	0.07	3	0.29	6	0.21	5	0.11	2	0.15	3	0.1	2	0.1	2
20	0.38	13	0.16	6	0.51	11	0.42	9	0.25	5	0.29	7	0.5	10	0.4	9
30	0.88	29	0.58	21	1.1	23	0.82	18	0.36	8	1.1	25	1	20	0.9	20
40	1.3	43	1.1	39	1.9	40	1.6	36	1.3	28	2	45	1.6	32	1.5	33
50	1.7	57	1.3	46	2.8	60	2.6	58	2.3	50	2.8	64	2.4	48	2.1	47
60	2.1	70	1.8	64	3.5	74	3.3	73	3.4	74	3.4	77	3.2	64	2.9	64
70	2.5	83	2.1	75	4.1	87	3.7	82	4	87	4	91	3.9	78	3.6	80
80	2.7	90	2.4	86	4.3	91	4.1	91	4.2	91	4	91	4.5	90	4.1	91
90	2.9	97	2.6	93	4.5	96	4.3	96	4.5	98	4.3	98	4.9	98	4.4	98
100	3	100	2.8	100	4.7	100	4.5	100	4.6	100	4.4	100	5	100	4.5	100

Actuator size F-80mm - DN15



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.

Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

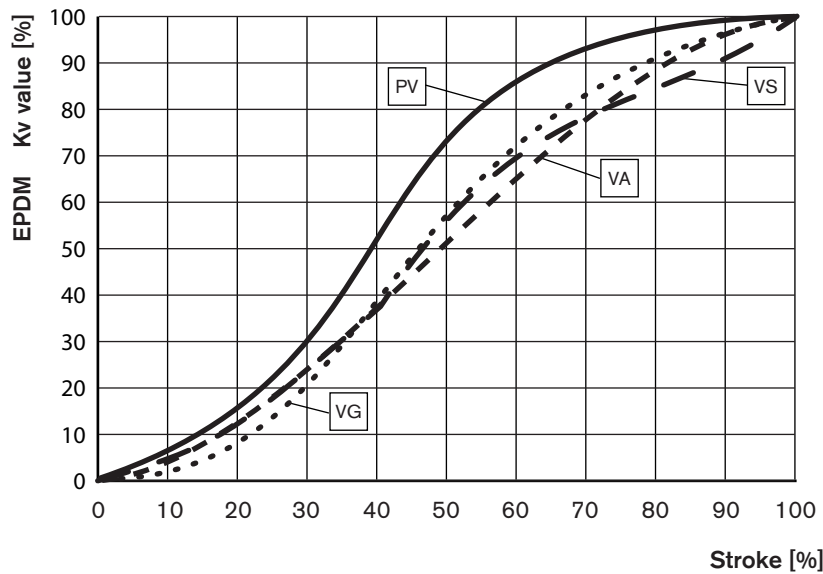


DN20

Flow-rate value

Stroke [%]	PVC body (PV)				Forged body (VS)				Cast body (VG)				Cold-formed pipe valve body (VA-ISO)			
	EPDM		PTFE		EPDM		PTFE		EPDM		PTFE		EPDM		PTFE	
	Kv value				Kv value				Kv value				Kv value			
	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0.40	6	0.30	4	0.50	5	0.40	5	0.10	1	0.60	6	0.70	5	0.70	5
20	0.90	13	0.80	12	1.0	11	0.80	9	0.30	3	1.1	10	1.8	12	1.6	12
30	2.1	30	1.8	26	2.3	25	1.8	21	2.2	21	2.5	24	3.4	23	3.1	23
40	3.5	50	3.3	49	3.4	37	2.9	33	4.2	39	3.9	37	5.3	37	5.0	37
50	5.1	73	4.5	66	5.3	58	4.9	56	6.1	57	6.3	60	7.4	51	6.9	51
60	6.0	86	5.6	82	6.5	71	6.2	71	7.6	71	7.9	75	9.3	64	8.7	64
70	6.6	94	6.3	93	7.2	79	6.8	78	8.8	82	8.6	82	11.4	79	10.6	79
80	6.8	97	6.6	97	7.7	85	7.5	86	9.8	92	9.5	90	12.8	88	11.9	88
90	6.9	99	6.7	99	8.4	92	8.2	94	10.5	98	10.3	98	13.9	96	13.0	96
100	7.0	100	6.8	100	9.1	100	8.7	100	10.7	100	10.5	100	14.5	100	13.5	100

Actuator size F-80mm - DN20



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.

Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

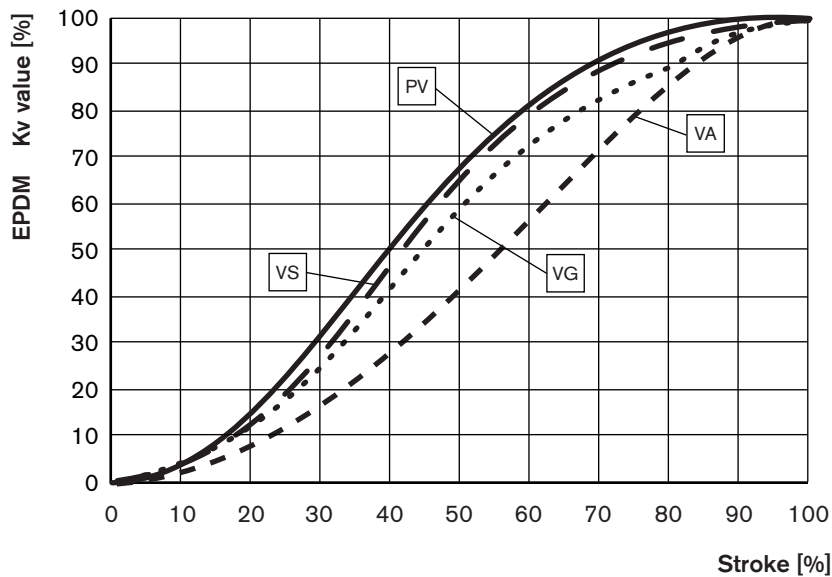


DN25

Flow-rate value

Stroke [%]	PVC body (PV)				Forged body (VS)				Cast body (VG)				Cold-formed pipe valve body (VA-ISO)			
	EPDM		PTFE		EPDM		PTFE		EPDM		PTFE		EPDM		PTFE	
	Kv value				Kv value				Kv value				Kv value			
	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0.32	3	0.18	2	0.43	3	0.33	3	0.71	5	0.35	3	0.50	3	0.40	3
20	1.9	16	0.75	7	1.5	11	0.95	8	1.5	10	0.71	5	1.0	6	0.90	6
30	3.7	32	2.4	23	3.7	28	2.1	17	3.7	25	2.3	17	2.9	16	2.5	16
40	5.8	50	4.2	40	6.0	46	4.2	34	6.3	43	4.2	31	5.0	28	4.3	28
50	7.9	68	6.0	57	8.4	64	6.4	52	8.6	59	6.2	46	7.3	41	6.3	41
60	9.5	81	7.6	72	10.5	80	8.4	69	10.5	72	8.2	60	10.4	58	8.9	57
70	10.9	93	8.9	84	11.8	90	10.0	82	12.2	84	9.9	73	12.9	72	11.1	72
80	11.4	97	9.8	92	12.3	94	11.2	92	13.0	89	11.9	88	15.5	86	13.3	86
90	11.6	99	10.4	98	12.7	97	11.6	95	14.1	97	13.0	96	17.1	95	14.7	95
100	11.7	100	10.6	100	13.1	100	12.2	100	14.6	100	13.6	100	18.0	100	15.5	100

Actuator size F-80mm - DN25



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.

Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

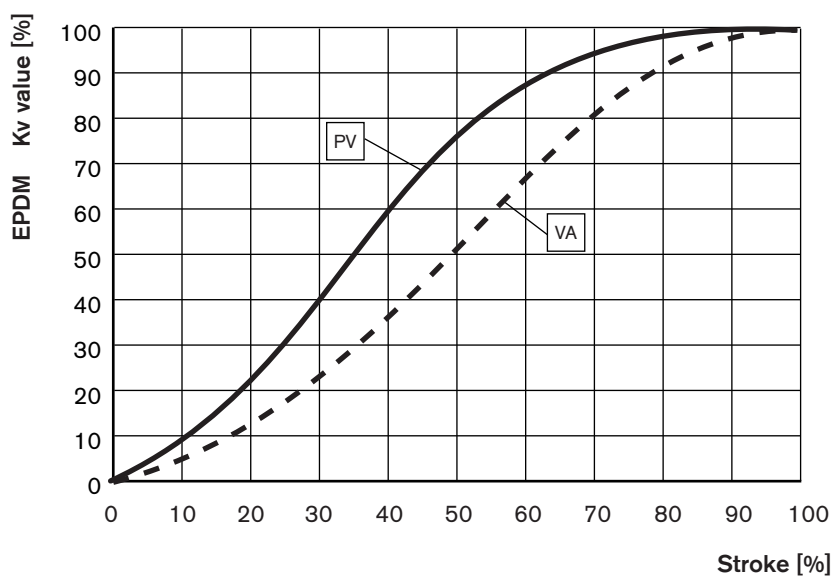


DN32

Flow-rate value

Stroke [%]	PVC body (PV)				Cold-formed pipe valve body (VA-ISO)			
	EPDM		PTFE		EPDM		PTFE	
	Kv value		Kv value		Kv value		Kv value	
	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]
0	0	0	0	0	0	0	0	0
10	1.5	9	1.0	6	1.2	4	1.1	4
20	3.6	21	2.2	13	3.8	12	3.6	12
30	6.7	40	5.3	32	7.7	23	7.2	23
40	9.9	59	8.5	51	12.3	37	11.6	37
50	12.5	74	11.2	67	17.3	52	16.3	53
60	15.0	89	14.0	84	22.1	67	20.8	67
70	16.1	95	15.6	93	26.6	81	25.0	81
80	16.5	98	16.3	98	30.5	92	28.6	92
90	16.7	99	16.5	99	32.8	99	30.9	100
100	16.9	100	16.7	100	33.0	100	31.0	100

Actuator size G-100mm - DN32



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.

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Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

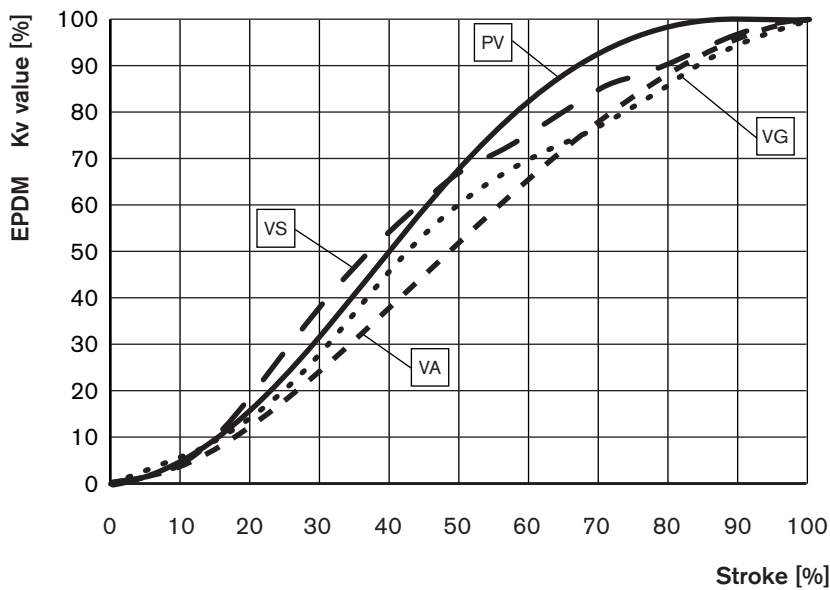


DN40

Flow-rate value

Stroke [%]	PVC body (PV)				Forged body (VS)				Cast body (VG)				Cold-formed pipe valve body (VA-ISO)			
	EPDM		PTFE		EPDM		PTFE		EPDM		PTFE		EPDM		PTFE	
	Kv value				Kv value				Kv value				Kv value			
	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]	[m³/h]	[%]
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1.0	4	0.61	2	0.77	3	0.51	2	1.7	6	1.8	6	1.4	3	1.4	3
20	4.3	16	3.6	14	4.9	19	4.3	17	3.6	12	3.8	14	5.4	12	5.2	12
30	8.5	32	7.6	29	9.9	38	9.3	37	8.4	28	8.1	29	10.7	24	10.3	24
40	13.4	50	12.9	49	14.5	55	14.1	56	13.8	46	12.5	45	16.7	37	16.0	37
50	18.2	68	17.3	66	17.6	67	17.1	67	18.6	62	17.2	62	22.9	51	21.9	51
60	21.8	82	20.1	77	19.7	75	19.2	76	20.9	70	20.4	74	29.5	66	28.2	66
70	24.7	93	23.5	90	22.2	85	21.4	84	23.2	77	22.1	80	34.9	78	33.3	77
80	26.4	99	25.5	98	23.7	90	22.9	90	25.7	86	24.3	88	39.6	88	37.8	88
90	26.6	100	25.9	99	25.3	97	24.5	96	28.4	95	26.7	96	43.3	96	41.4	96
100	26.6	100	26.1	100	26.2	100	25.4	100	30.0	100	27.7	100	45.0	100	43.0	100

Actuator size H-125mm - DN40



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.

Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

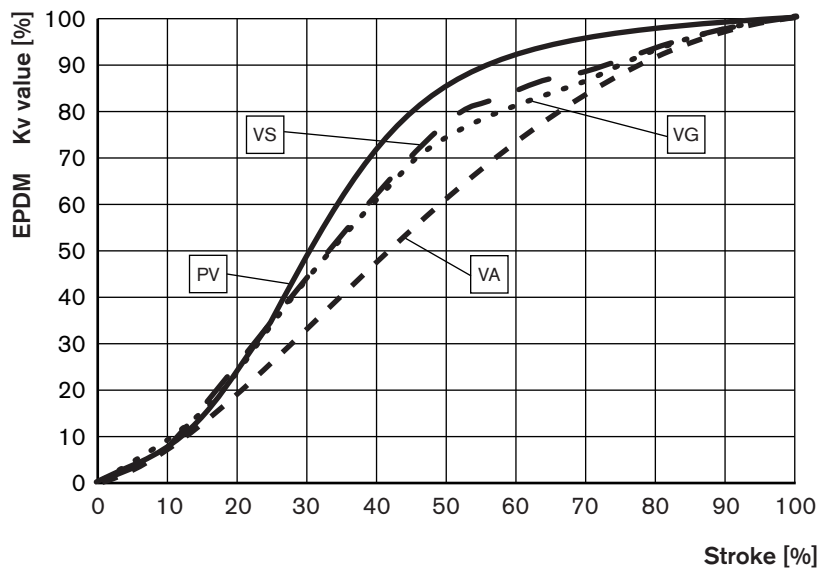


DN50

Flow-rate value

Stroke [%]	PVC body (PV)				Forged body (VS)				Cast body (VG)				Cold-formed pipe valve body (VA-ISO)			
	EPDM		PTFE		EPDM		PTFE		EPDM		PTFE		EPDM		PTFE	
	[m³/h]	Kv value [%]	[m³/h]	Kv value [%]	[m³/h]	Kv value [%]	[m³/h]	Kv value [%]	[m³/h]	Kv value [%]	[m³/h]	Kv value [%]	[m³/h]	Kv value [%]	[m³/h]	Kv value [%]
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2.31	6	1.95	5	2.68	6	1.88	4	4.21	9	3.56	7	4.4	6	4.2	6
20	8.6	22	8.1	21	11.9	25	10.4	22	10.4	22	11.5	24	14.4	19	13.6	19
30	18.8	48	17.6	45	21.6	45	18.4	39	20.9	44	20.7	43	25.3	34	24.0	34
40	27.9	71	26.6	69	30.4	63	28.0	59	29.2	62	30.3	63	36.0	48	34.1	48
50	34.5	87	33.4	86	37.8	78	36.3	77	35.2	75	36.1	75	45.9	61	43.5	61
60	36.1	91	35.4	91	41.1	85	40.0	85	38.0	81	39.4	82	55.8	74	51.8	73
70	37.2	94	36.4	94	42.8	88	41.7	88	40.8	86	41.8	87	62.3	83	58.9	83
80	38.6	98	37.7	97	44.9	93	43.4	92	43.7	93	45.1	94	68.7	92	65.0	92
90	39.0	99	38.6	99	47.4	98	45.6	96	46.0	97	47.4	99	73.0	97	69.1	97
100	39.5	100	38.8	100	48.4	100	47.3	100	47.2	100	47.9	100	75.0	100	71.0	100

Actuator size H-125mm - DN50



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.



Flow-rate curves for diaphragm valves

Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

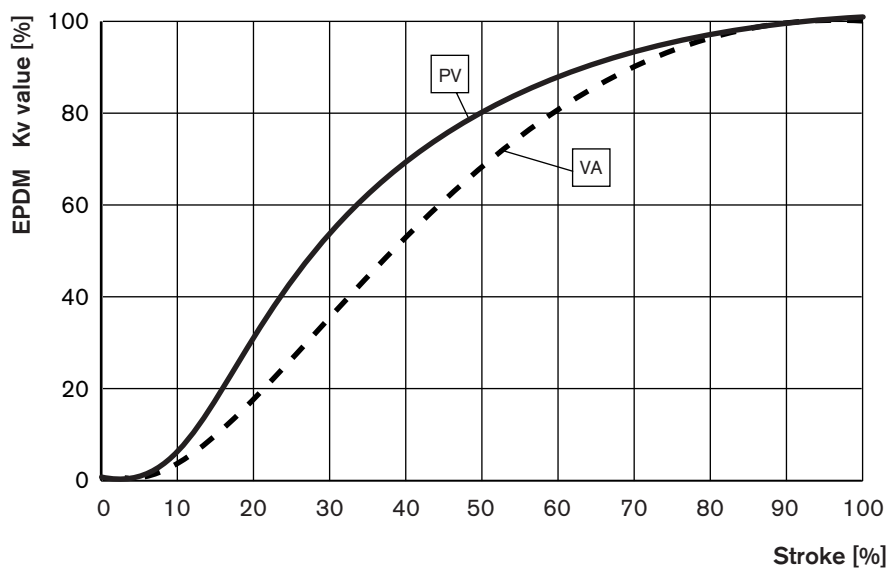
DN65

Flow-rate value

Stroke [%]	PVC body (PV) EPDM Kv value		Cold-formed pipe valve body (VA-ISO) EPDM Kv value	
	[m ³ /h]	[%]	[m ³ /h]	[%]
0	0	0	0	0
10	1.7	3	2.1	2
20	19	32	19	16
30	35	58	42	37
40	42	70	62	54
50	47	79	80	70
60	53	88	94	82
70	57	94	103	90
80	59	98	111	97
90	60	100	113	99
100	60	100	114	100

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Actuator size K-175mm - DN65



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.



Flow-rate curves for diaphragm valves

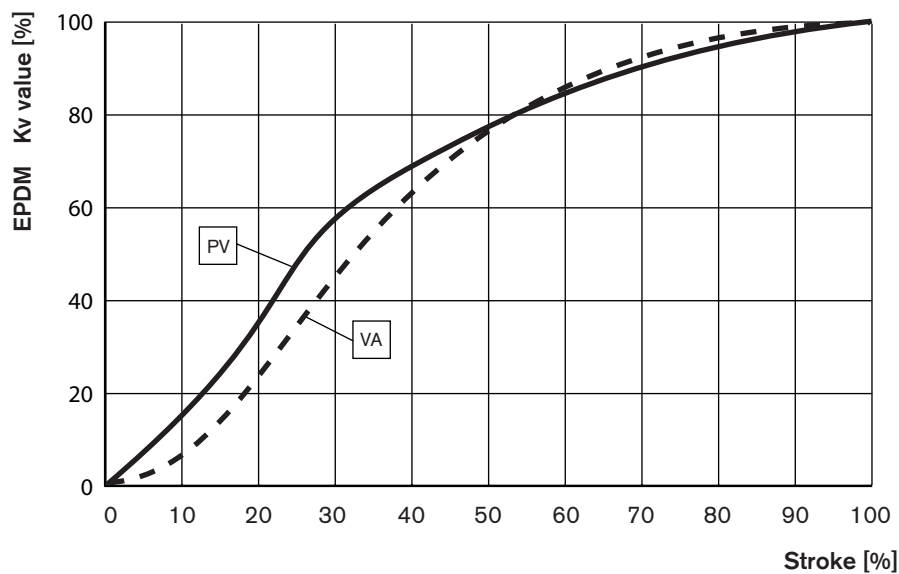
Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

DN80

Flow-rate value

Stroke [%]	PVC body (PV) EPDM Kv value		Cold-formed pipe valve body (VA-ISO) EPDM Kv value	
	[m³/h]	[%]	[m³/h]	[%]
0	0	0	0	0
10	13	13	8.3	5
20	37	35	42	25
30	60	58	77	47
40	72	69	103	62
50	80	76	126	76
60	86	84	145	88
70	94	89	154	93
80	99	95	162	98
90	104	99	165	100
100	105	100	165	100

Actuator size K-175mm oder L-225mm - DN80



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.



Flow-rate curves for diaphragm valves

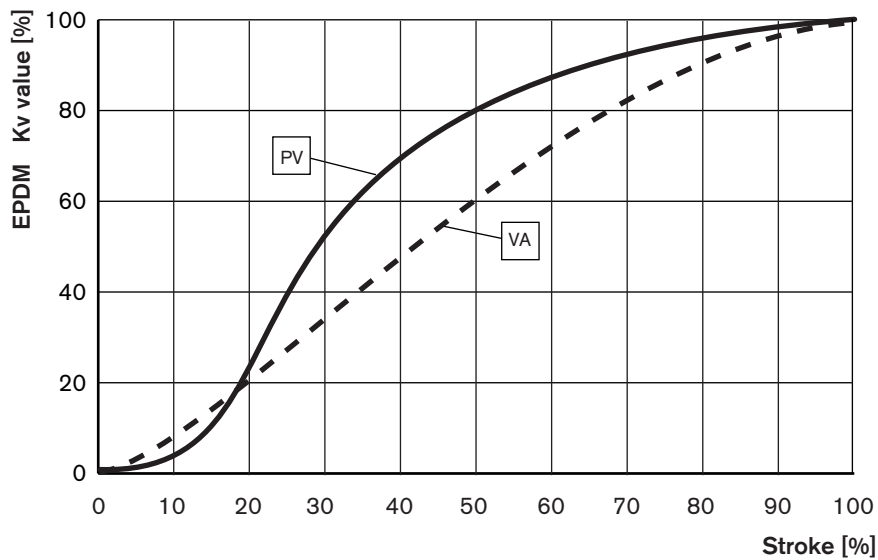
Type 2730 plastic, 2731 forged, 2731 cast, 2731 GP cold formed pipe valve body

DN100

Flow-rate value

Stroke [%]	PVC body (PV) EPDM Kv value		Cold-formed pipe valve body (VA-ISO) EPDM Kv value	
	[m³/h]	[%]	[m³/h]	[%]
0	0	0	0	0
10	6	4	21	8
20	37	24	52	20
30	82	53	88	34
40	106	69	124	48
50	123	80	156	60
60	134	87	186	72
70	142	92	214	83
80	146	95	235	91
90	151	98	250	97
100	154	100	258	100

Actuator size L-225mm - DN100



Note: These characteristics were determined with a pressure of 3 bar at the valve entrance and a pressure drop of 1 bar. With other operating conditions the curves can deviate from the stated values. Therefore the curves serve only as guideline for the rating of regulating valves.

Please note

This is an "on-line" formular, i.e. you can fill out the formular directly in the pdf document before you print it out

Please fill out and send to your nearest Bürkert facility* with your inquiry or order

Company	Contact person
Customer No	Department
Address	Tel./Fax
Postcode/Town	E-mail

= mandatory fields to fill out Quantity Required delivery date

Operating data

Site of control	<input type="text"/>			
Measuring and control task	<input type="text"/>			
Pipeline	DN <input type="text"/>	PN <input type="text"/>		
Pipe material	<input type="text"/>			
Process medium	<input type="text"/>			
Type of media	<input type="checkbox"/> Liquid	<input type="checkbox"/> Steam	<input type="checkbox"/> Gas	
	Min	Standard	Max	unit
Flow rate (Q, Q _N , W) ¹⁾	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Temperature at valve inlet T1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Absolute pressure at valve inlet P1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Absolute pressure at valve outlet P2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Steam pressure P _v	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kinematic viscosity (ν)	<input type="text"/>	mm ² /s or cSt		
Dynamic viscosity (η)	<input type="text"/>	mPa.s or cP		
Standard density	<input type="text"/>	Kg/m ³		
Max. sound level accepted	<input type="text"/>	DB (A)		

¹⁾standard unit
Liquid Q = m³/h; Steam W = Kg/h; Gas Q_N = Nm³/h

Valve features

Control valve type	<input type="checkbox"/> Globe	<input type="checkbox"/> Angle seat	<input type="checkbox"/> Diaphragm	<input type="checkbox"/> Ball Valve	<input type="checkbox"/> Butterfly	<input type="checkbox"/> Other
Body material	<input type="checkbox"/> Stainless steel	<input type="checkbox"/> PVC	<input type="checkbox"/> PP	<input type="checkbox"/> PVDF	<input type="checkbox"/> Other	
Surface finish ²⁾	<input type="text"/>	internal	<input type="text"/>	external		
Seat sealing material	<input type="checkbox"/> Metal	<input type="checkbox"/> PTFE	<input type="checkbox"/> EPDM ²⁾	<input type="checkbox"/> FPM ²⁾		
Nominal pressure	PN <input type="text"/>					
Nominal size	DN <input type="text"/>					
Type of connection	<input type="checkbox"/> Flange	<input type="checkbox"/> Socket union	<input type="checkbox"/> Welded	<input type="checkbox"/> Int. thread	<input type="checkbox"/> Ext. thread	<input type="checkbox"/> Tri-Clamp [®]
Standard connection	<input type="checkbox"/> ISO	<input type="checkbox"/> DIN	<input type="checkbox"/> ANSI	<input type="checkbox"/> JIS	<input type="checkbox"/> Other	
Function	<input type="checkbox"/> NC	<input type="checkbox"/> NO	<input type="checkbox"/> Double-acting			
Pilot pressure	<input type="text"/>	min.	<input type="text"/>	max.		

²⁾ Only diaphragm valve

Positioner / Controller

<input type="checkbox"/> Type 1067 - 3 wire	<input type="checkbox"/> Type 8630- 3 wire	<input type="checkbox"/> Type 8635- 2 wire
<input type="checkbox"/> Valve mounted <input type="checkbox"/> Remote version		<input type="checkbox"/> Standard <input type="checkbox"/> EEx ia
Power supply 24 VDC	Power supply 24 VDC	Power supply 24 VDC via setpoint or BUS
Communication	Communication	Communication
Setpoint/output analog signal	Setpoint/output analog signal	Setpoint/output analog signal
	or via BUS <input type="checkbox"/> Profibus DP	or via BUS <input type="checkbox"/> Profibus PA
	<input type="checkbox"/> Device Net	<input type="checkbox"/> Hart
<input type="checkbox"/> Positioner version	<input type="checkbox"/> Positioner version	<input type="checkbox"/> Positioner version
Input 0/4 - 20 mA / 0-10 V	Input 0/4 - 20 mA / 0-5/10 V	Input 4 - 20 mA
Output <input type="checkbox"/> 4 - 20 mA	Output <input type="checkbox"/> 4 - 20 mA	Output <input type="checkbox"/> 4 - 20 mA
or	or/and	or/and
<input type="checkbox"/> Binary	<input type="checkbox"/> Binary	<input type="checkbox"/> Binary
<input type="checkbox"/> PID Controller version ³⁾	<input type="checkbox"/> PID Controller version ³⁾	<input type="checkbox"/> PID Controller version ³⁾
Input measuring signal 4 - 20 mA	Input measuring signal 4 - 20 mA / Pt100 / Frequency	Input measuring signal 4 - 20 mA
	Inductive proximity switch <input type="checkbox"/> 1 <input type="checkbox"/> 2	Inductive proximity switch <input type="checkbox"/> 1 <input type="checkbox"/> 2

3) same setpoint for Input and Output signal as for Positioner version

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