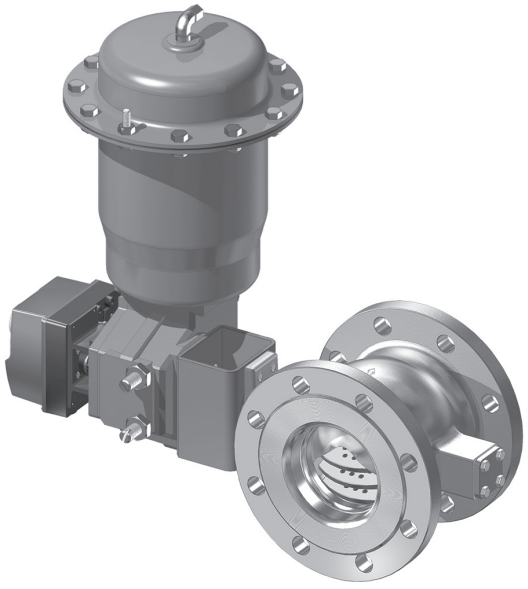
Neles™ V-port segment valve Wafer RE1 and flanged RE13 series

Neles RE series V-port segment valves are economical high performance valves in a quarter-turn design. They are offered with a variety of trim options from standard and low Cv trims for general applications, to noise/cavitation Q-Trim™ for reducing aerodynamic noise and preventing cavitation. Standard units are equipped with either diaphragm or cylinder actuators and ND9000™ intelligent valve controllers for precise.



Features

Integral body construction

- Integrally flanged R-Series valves feature one piece body construction with no flange rings, inserts or end caps to create potential leak paths, even if the valve is subjected to pipe bending forces. Seating capabilities are totally unaffected by pipeline forces, which assures reliable valve operation.

Accurate control

- Carefully designed V-ported segment, low torque requirements and clearance-free movement result in good control performance. The design provides steady and gentle contact between the seat and segment at all times to minimize friction while providing tightness. Bearings are located inside the valve body providing larger bearing areas, lower bearing loads and longer bearing life.

Safety and environment

- Rotary operation reduces fugitive emissions dramatically compared to a sliding stem design.

Durable metal seat

- The seat of the R-series V-port segment valve is firm and uniquely durable. The seat is designed in such a way that its sealing surface is not located directly in the flow stream. This gives the seat an extended service life. The working principle is a pressure-aided seat which enables good sealing properties at a low pressure difference. The seat is located inside the valve, which prevents forces from the pipe system influencing the sealing effect. Two-way tight seat is available as an option.

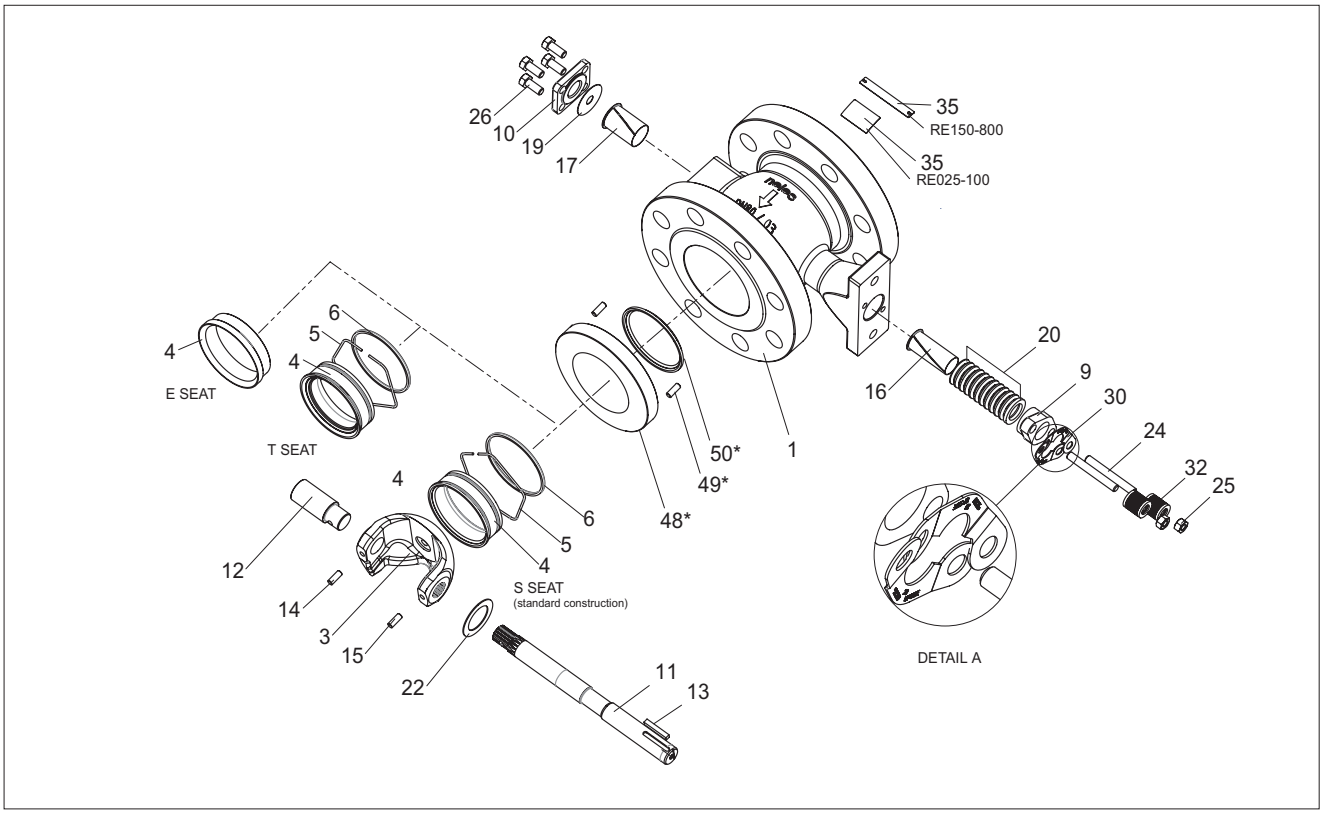
Economical

- Low torque requirements reduce wear, resulting in better reliability. In addition, standard designs carry hard chromium facing on the segment and cobalt based alloy seat, which has been designed to avoid the flow impingement. Together with low load bearing design and live-loaded packing, operational life is improved and maintenance needs are minimized. Low torque combined with the well integrated actuator design provides a lower cost valve unit.

Small flow and low noise/cavitation Q-Trim options

- DN25/1" valves feature five different segments. They extend the valves' application range to very low-flow high accuracy services, such as additive and coloring lines, pilot plants etc. Cavitation and aerodynamic noise are reduced with the patented Q-Trim option. This self-cleaning design handles contaminated flows (impure steam, river water, etc.) without plugging.

Exploded view



Parts list (standard construction)

Part	Name	Body material	
		Stainless steel	Carbon steel
1	Body	ASTM A351 gr. CF8M	ASTM A216 gr. WCB
3	V-port segment	AISI 329 + chromium / CG8M + chromium [1)]	AISI 329 + chromium / CG8M + chromium [1)]
4	Seat	AISI 316 + Cobalt based alloy / PTFE [1)]	AISI 316 + Cobalt based alloy / PTFE [1)]
5	Lock spring	INCONEL 625	INCONEL 625
6	Back seal	Stainless steel + PTFE	Stainless steel + PTFE
9	Gland follower	ASTM A351 gr. CF8M	ASTM A351 gr. CF8M
10	Blind flange	ASTM A351 gr. CF8M	ASTM A351 gr. CF8M
11	Drive shaft	AISI 329 / 17-4PH [1)]	AISI 329 / 17-4PH [1)]
12	Shaft	AISI 329 / 17-4PH [1)]	AISI 329 / 17-4PH [1)]
13	Key	AISI 329	AISI 329
14	Cylindrical pin	AISI 329 / 17-4PH [1)]	AISI 329 / 17-4PH [1)]
15	Cylindrical pin	AISI 329 / 17-4PH [1)]	AISI 329 / 17-4PH [1)]
19	Sealing plate	Graphite / PTFE	Graphite / PTFE
20	Packing	Graphite / PTFE	Graphite / PTFE
22	Filling ring (only low Cv 1"/DN 25)	Stainless steel AISI 316	Stainless steel AISI 316
24	Stud	ISO 3506 A4-80/B8M	ISO 3506 A4-80/B8M
25	Hexagon nut	ISO 3506 A4-80/B8M	ISO 3506 A4-80/B8M
26	Hexagon bolt	ISO 3506 A4-80/B8M	ISO 3506 A4-80/B8M
30	Retainer plate	AISI 316	AISI 316
32	Spring stack	SIS 2324 & CrMo steel + ENP	SIS 2324 & CrMo steel + ENP
35	Identification plate	AISI 316	AISI 316
48*	Flange	AISI 316	AISI 316
49*	Seal	Graphite / PTFE	Graphite / PTFE
50*	Pin	AISI 316	AISI 316

[1)] Alternative materials
* Only in RE13 series

Technical specifications

Type
Integrally flanged V-ported ball, quarter-turn valve
Pressure ratings are as follows:
Body: ASME 150 - 300, see page 5.
Trim: See tables on page 5.

Sizes
RE1; 1", 1 1/2", 2", 3", 4", 6", 8"
RE13; 1", 1 1/2", 2", 3", 4", 6", 8", 10", 12"
RE; 1", 1 1/2", 2", 3", 4", 6", 8", 10", 12"

End Connections
Wafer (RE1)
Flanged (RE, RE13)

Face-to-face dimensions
ASME/ISA S75.04, IEC 534-3-2. IEC 534-3-2. Optional B16.10 with spool piece construction.

Temperature range
-50 °C ... +260 °C / -58…+500 °F with soft bearings

Inherent flow characteristic
Standard V-port: Equal percentage.
Q-Trim: Modified equal percentage.

Fire safety
Fire safe design to meet API 607

Shut-off classification
ANSI/FCI 70.2 Class IV
- Standard with metal seats.
Tested with 50 psig water.

ANSI/FCI 70.2 Class V
- Standard with soft seats.
Tested with 100 psig water.

1/10th ANSI/FCI 70.2 Class IV
(Not Available with Low Cv Trims)
- Optional with metal seats.
Tested with 50 psig air.

ANSI / FCI 70.2 Class VI
- Optional with soft seats.
Tested with 50 psig air

E-Seat is non-tight

Flow capacity
See table on this page.

Valve trim rotation
Clockwise to close.

Options
Q-trim: Inch 2", 3", 4", 6",8", 10", 12", 14"

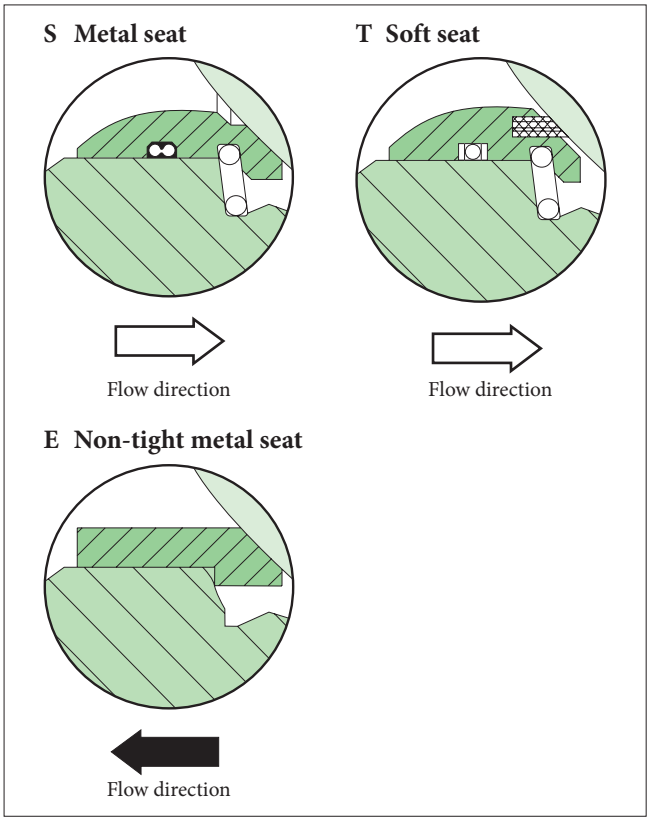
Reduced Cv trim: For 1" valve only.

Valve body and seat test
All valves manufactured by Valmet undergo pressure testing. The test pressure of R-series valve body is 1.5 x the pressure rating and the standard test pressure of seat is 1.1 x the maximum permissible shut-off pressure or lower depending on size and material. The test medium is water containing a corrosion inhibitor.
Seat design options shown on the next page.

Maximum C_v-coefficients for RE-series valves

Size		Metal seat, S	Q-trim, S-seat	Soft seat, T	Q-trim, T-seat
DN	INCH	Cv 100 %[1)]	Cv 100 %[2)]	Cv 100 %	Cv 100 %
25	1	45	-	21	-
40	1.5	110	-	61	-
50	2	180	47	110	29
65	2.5	280	96	215	74
80	3	420	160	340	130
100	4	620	250	520	210
150	6	1260	540	1070	459
200	8	2030	880	1760	763
250	10	3210	1510	2830	1331
300	12	4490	2140	4080	1945

1) 100 % corresponds to 95° turning angle
2) For Q-R-valves, 100 % corresponds to 90° turning angle



Seat designs

S Metal seat

Seat:	316 SS + Cobalt based hard facing, sizes 1" - 20" / DN 32 - 800
Spring:	Inconel 625
Seat seal:	Filled PTFE lipseal / SS Elgiloy spring
Temp. range:	-52…+315 °C / -60 …+599 °F
Service:	General

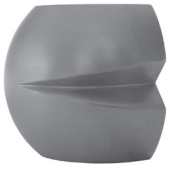
T Soft seat

Seat:	316 SS with PTFE + X-treme™, sizes 1" - 6" 316 SS with PTFE + C25 % insert, sizes 8" - 32"
Spring:	Inconel 625
Seat seal:	Filled PTFE lipseal
Back seal:	PTFE
Temp. range:	-52…+260 °C / -60 …+500 °F
Service:	General service with tight shut-off.

E Non-tight metal seat

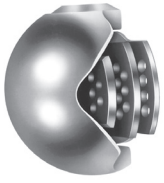
Seat:	Cobalt based alloy
Temp. range:	-80…+425 °C / -112 …+797 °F
Service:	Extremely erosive applications, non-tight.
NOTE !	Flow direction is reversed.

Construction options



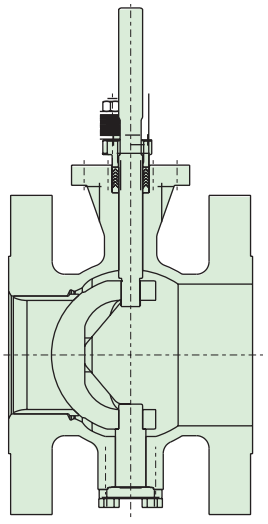
Low C_v trims

Reduced C_v trims are available on the DN25/1" valve to control very low flows with high accuracy. The narrow orifice is a selfflushing design because the trim orifice is continually increasing.



Q-trim™ valve trim for cavitation/noise abatement

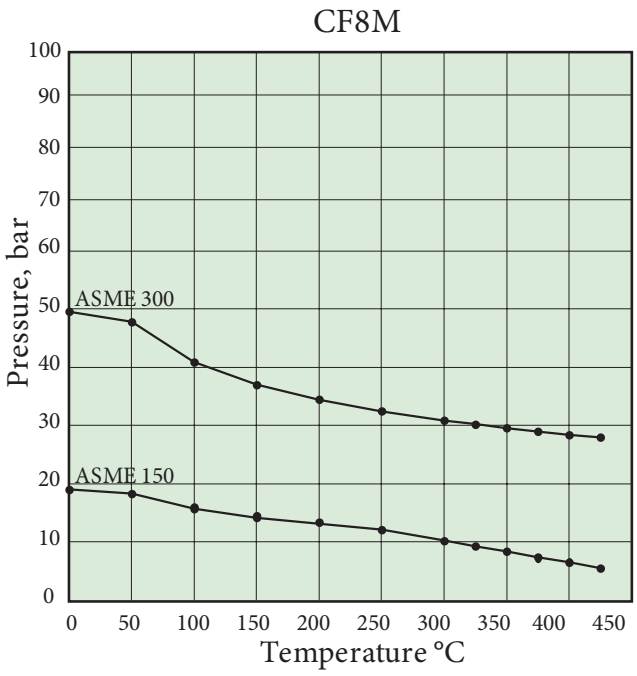
Liquid cavitation and aerodynamic noise problems can be solved with the patented Q-Trim™ valve trim. This design employs the two well-known principles of dividing the pressure drop into a series of small pressure drops and of separating the flow stream into many small jet streams. The use of these two principles combined with the rotation of the attenuator elements provides a combination of cavitation/noise abatement with high rangeability, high capacity and capability to handle impure fluids.

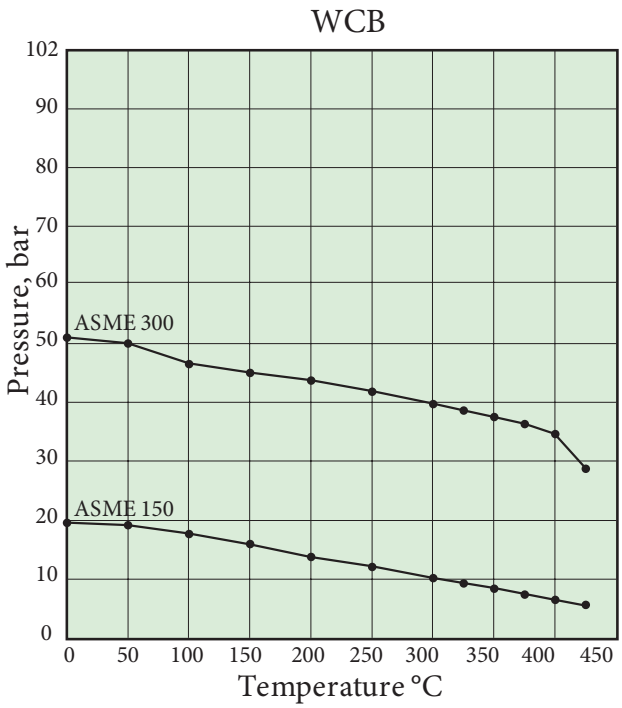


Erosion resistant version

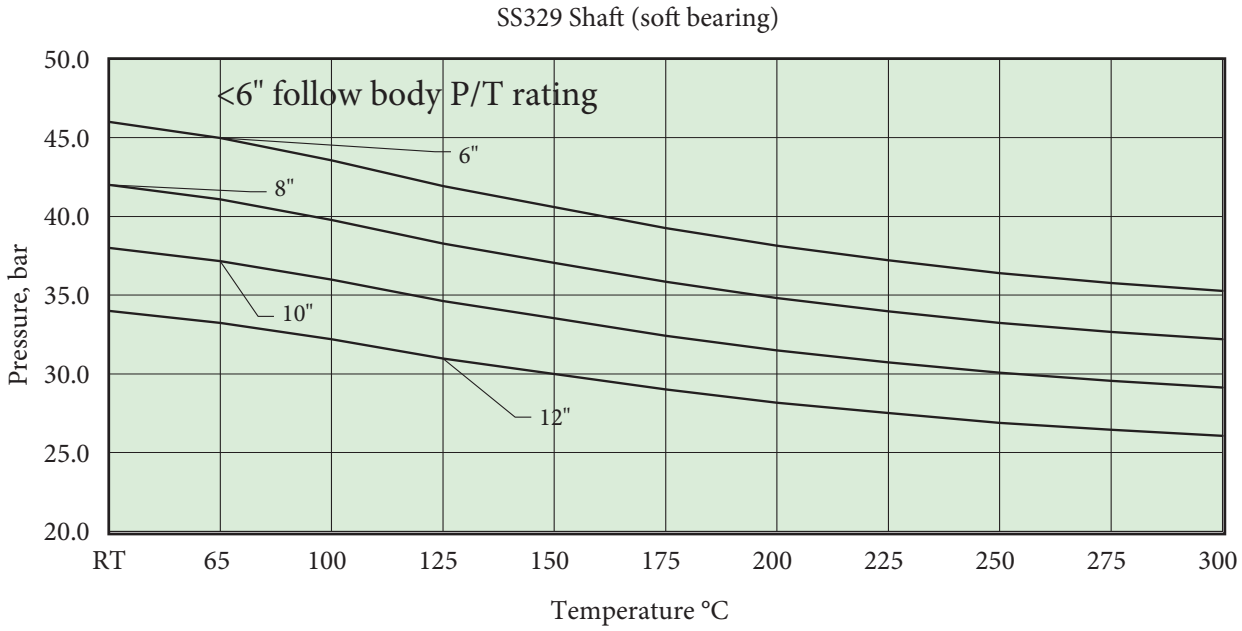
This heavy duty erosion resistant design handles contaminated flows and abrasive media at a favorable cost/useable life ratio. The seat is machined from cobalt chromium alloy and the seat design is changed from normal to reverse flow for maximum abrasion resistance. This version should not be used for isolation service since the seat is not in contact with the segment.

Body pressure ratings

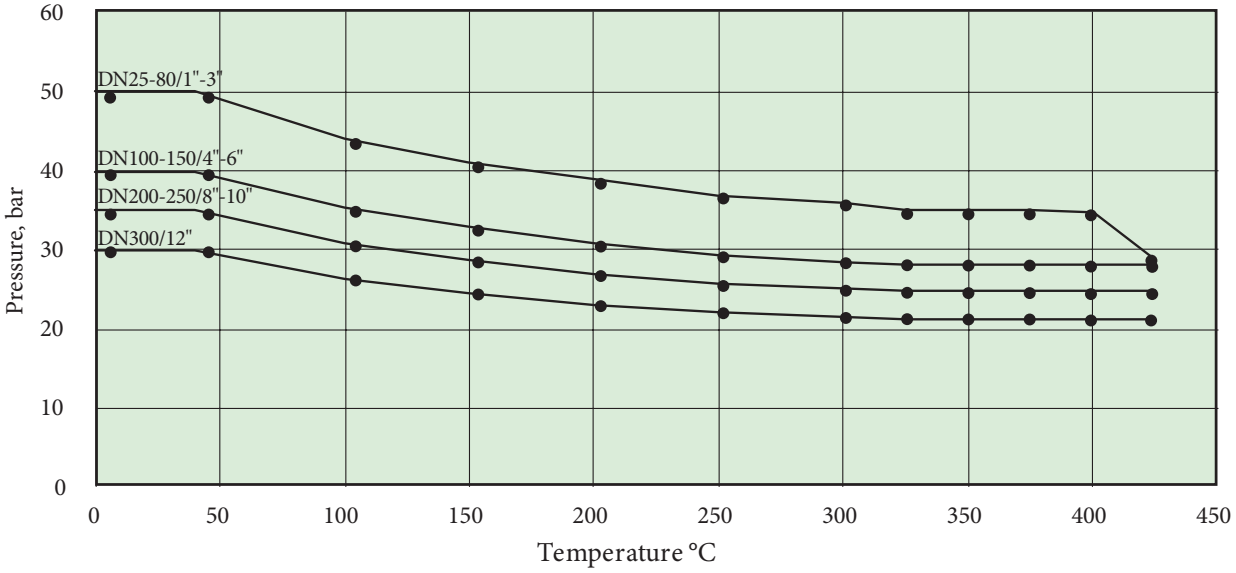




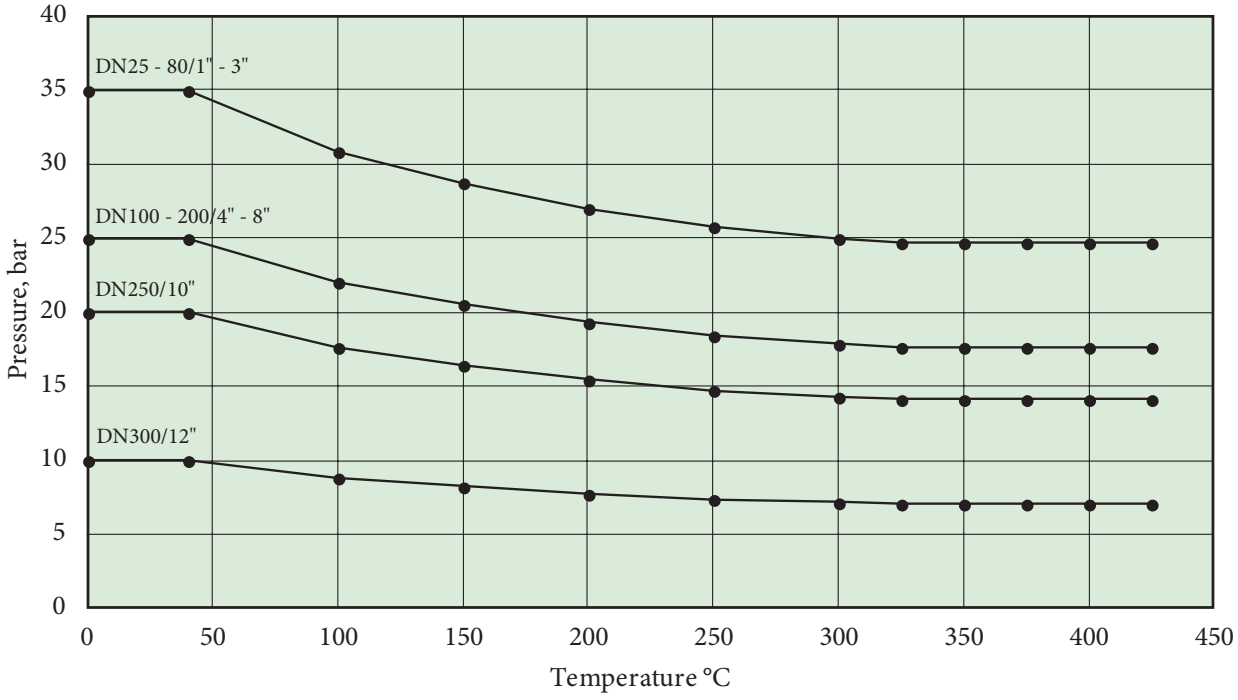
Maximum operating pressure differential in shut-off service



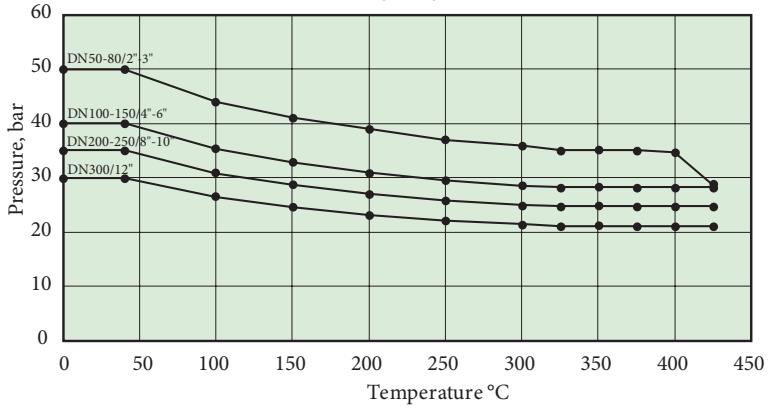
Max operating pressure differential in control service, RE opening range 0 %-70 %



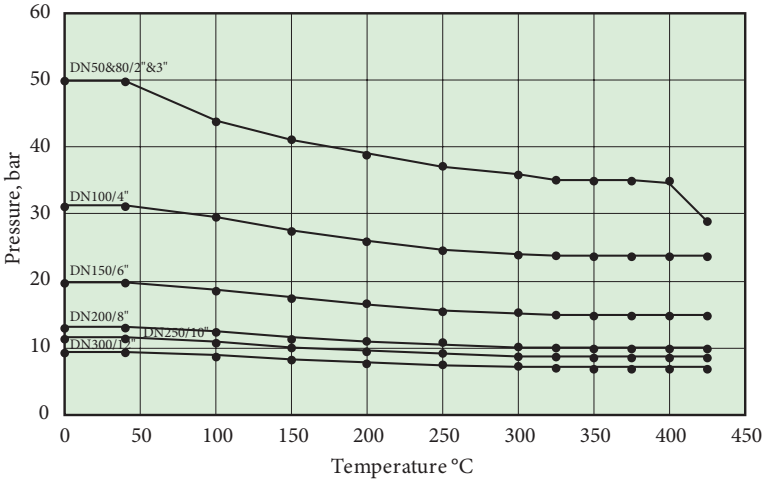
Max operating pressure differential in control service, RE opening range 70 %-100 %



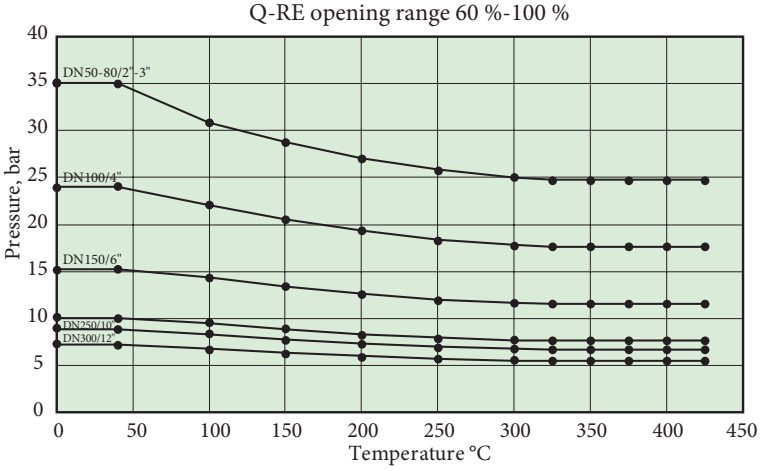
Max operating pressure differential in control service,
Q-RE opening range 0 %- 30 %



Max operating pressure differential in control service,
Q-RE opening range 30 % - 60 %



Max operating pressure differential in control service,
Q-RE opening range 60 %-100 %



Note:
1) RE-valves are not recommended for applications with high on-off cycling rate. X- or L-series valves should be used in these cases.
2) Please observe body rating for material in question when determining maximum allowable shut-off pressure differential.

Given maximum allowable throttling differential pressures are based on mechanical strength of the parts only. Nelprof analysis determines actual throttling dp capability, taking into account trim velocity, exit velocity, noise and cavitation.

Selection of standard actuatros, Quadra Powr

VALVE SIZE inch	ACTUATOR SIZE	SPRING RATE psi	MAX SHUT-OFF DP psi RE, Q-RE	MAX CONTROL DP psi RE	MAX CONTROL DP psi Q-RE	ND Intelligent Valve Controller Recommmended model	NP Pneumatic Positioner Recommmended model
1	QP1C	60	727	509	507	ND 9103	NP 729
1 1/2	QP1C	60	727	509	507	ND 9103	NP 729
2	QP1C	60	727	509	507	ND 9103	NP 729
3	QP1C	60	320	320	319	ND 9103	NP 729
3	QP2B	41	509	509	507	ND 9103	NP 729
3	QP2C	60	727	509	507	ND 9103	NP 729
3	QP2D	80	727	509	507	ND 9103	NP 729
4	QP2C	60	509	364	261	ND 9103	NP 729
4	QP2D	80	582	364	261	ND 9103	NP 729
4	QP3B	41	582	364	261	ND 9103	NP 724
4	QP3C	60	582	364	261	ND 9103	NP 724
6	QP3B	41	320	320	261	ND 9103	NP 724
6	QP3C	60	407	364	261	ND 9103	NP 724
6	QP3D	80	582	364	261	ND 9103	NP 724
6	QP4B	41	582	364	261	ND 9106	NP 724
6	QP4C	60	582	364	261	ND 9106	NP 724
8	QP3C	60	233	233	217	ND 9103	NP 724
8	QP4B	41	407	364	217	ND 9106	NP 724
8	QP4C	60	509	364	217	ND 9106	NP 724
8	QP4D	80	509	364	217	ND 9106	NP 724
10	QP4C	60	291	291	145	ND 9106	NP 724
10	QP4D	80	407	291	145	ND 9106	NP 724
10	QP5B	41	465	291	145	ND 9106	NP 726
10	QP5C	60	509	291	145	ND 9106	NP 726
12	QP5B	41	218	145	116	ND 9106	NP 726
12	QP5C	60	364	145	116	ND 9106	NP 726
12	QP5D	80	436	145	116	ND 9106	NP 726

NOTES

1) Maximum shut-off differential pressures for valves are given considering clean media. Safety margins between 10 % - 25 % are typically recommended for cases where media is sticky or has tendency to built-up inside the valve.

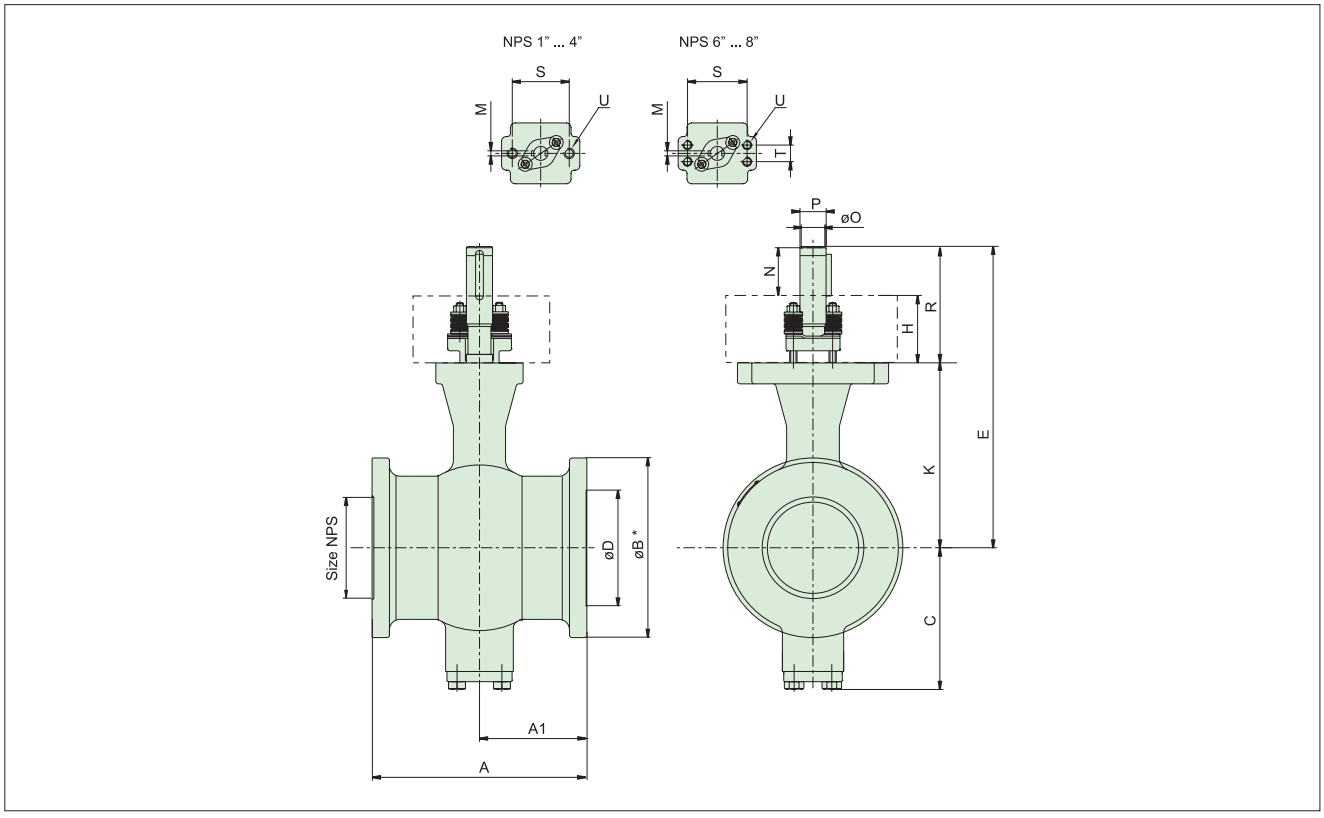
2) Selection is based on supply pressures as per relevant spring rate.

3) Maximum shut-off differential pressures are given at ambient temperature, see curves on page 5.

4) Maximum control differential pressures must not be based on values in this table only. Nelprof calculation, taking into account noise level, inlet/outlet velocity, existence of cavitation, and actuator load factors must be observed when determing valves' differential pressure capability.

Dimensions

RE1-Series



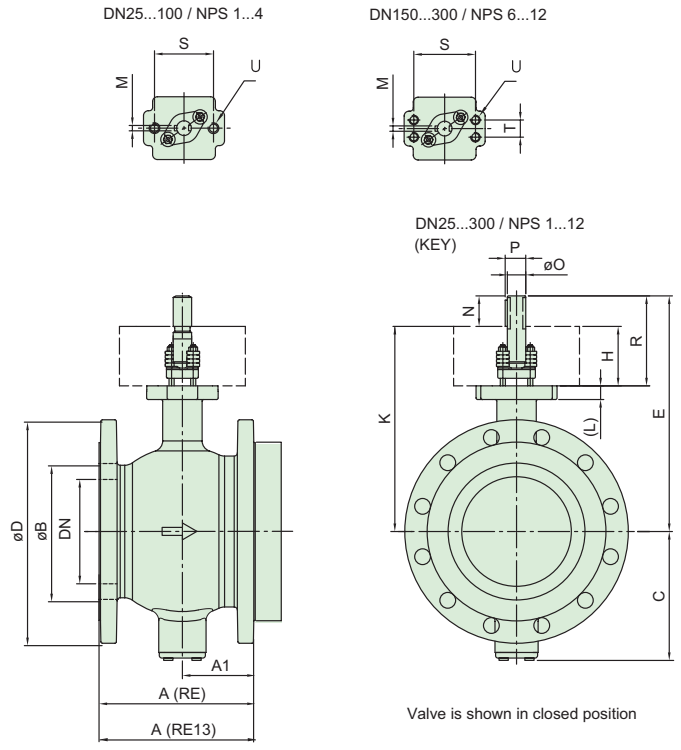
RE1-Series

INCH	DN	Dimensions (inch)										Shaft Dimensions (inch) (RE_A Keyed Shaft)						Flange Dimensions & Weights	
		A1	A	C	øD	K	S	T	U	L	H	E	R	øO	M	P	N	øB	lbs
1	25	2.01	4.02	2.2	1.3	7.17	2.76	-	M10	0.61	3.15	8.15	4.13	0.59	0.19	0.67	0.98	2.52	9
1.5	40	2.24	4.49	2.56	1.93	7.42	2.76	-	M10	0.61	3.15	8.41	4.13	0.59	0.19	0.67	0.98	3.23	11
2	50	2.44	4.88	3.58	2.36	7.85	2.76	-	M10	0.61	3.15	8.84	4.13	0.59	0.19	0.67	0.98	3.94	18
3	80	3.25	6.5	4.25	3.5	9.13	3.54	-	M12	0.63	3.54	10.51	4.92	0.79	0.19	0.87	1.38	5.12	31
4	100	3.82	7.64	4.72	4.45	9.49	3.54	-	M12	0.63	3.54	10.87	4.92	0.79	0.19	0.87	1.38	6.22	40
6	150	4.51	9.02	6.85	6.46	11.42	4.33	1.26	M12	0.87	3.54	13.19	5.31	0.98	0.25	1.09	1.81	8.5	84
8	200	4.39	9.57	7.91	8.07	13.58	5.12	1.26	M12	0.87	4.33	15.55	6.3	1.18	0.25	1.3	2.01	10.55	143

RE1-Series

INCH	DN	Dimensions (mm)										Shaft Dimensions (mm) (RE_A Keyed Shaft)						Flange Dimensions & Weights	
		A1	A	C	øD	K	S	T	U	L	H	E	R	øO	M	P	N	øB	kg
1	25	51	102	56	33	182	70	-	M10	15.5	80	207	105	15	4.76	17	25	64	4
1.5	40	57	114	65	49	188.5	70	-	M10	15.5	80	213.5	105	15	4.76	17	25	82	5
2	50	62	124	91	60	199.5	70	-	M10	15.5	80	224.5	105	15	4.76	17	25	100	8
3	80	82.5	165	108	89	232	90	-	M12	16	90	267	125	20	4.76	22.2	35	130	14
4	100	97	194	120	113	241	90	-	M12	16	90	276	125	20	4.76	22.2	35	158	18
6	150	114.5	229	174	164	290	110	32	M12	22	90	335	135	25	6.35	27.8	46	216	38
8	200	111.5	243	201	205	345	130	32	M12	22	110	395	160	30	6.35	32.9	51	268	65

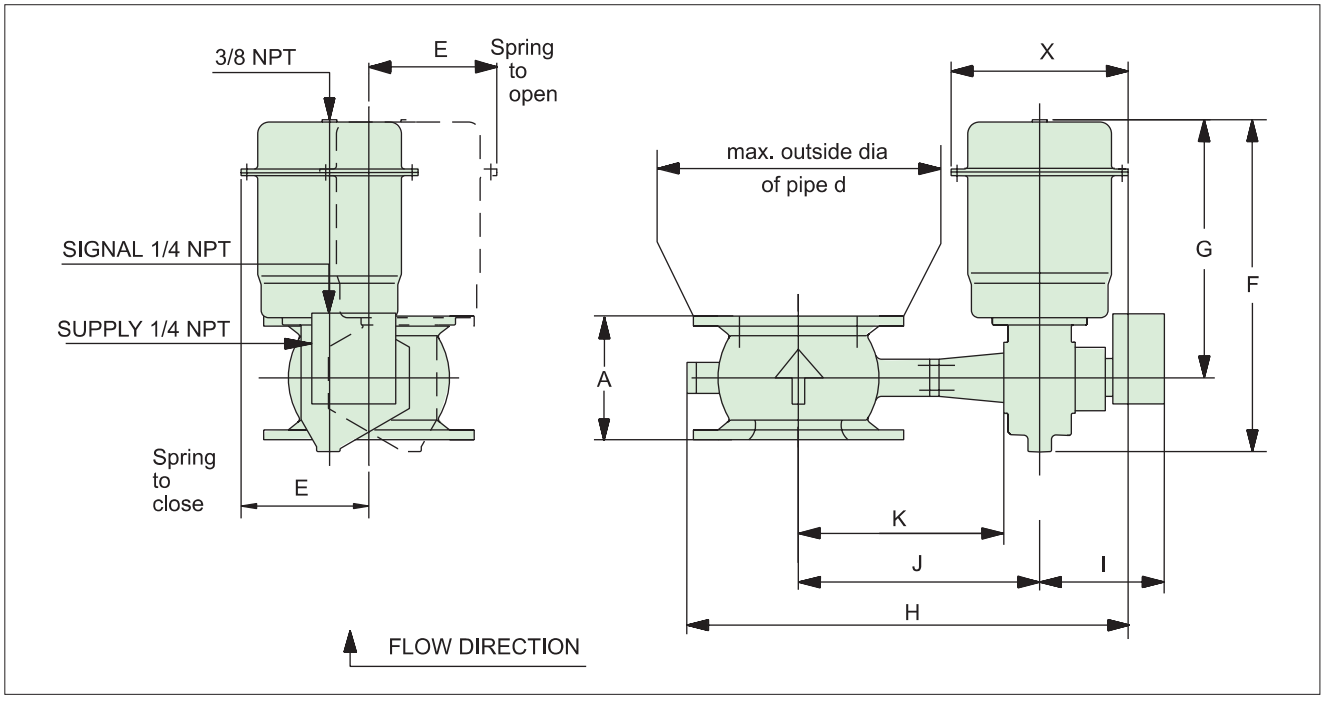
Series RE13



DN/inch	A1	RE	RE13		C	ØD #150	ØD #300	K	S	T	U	L	H	Shaft dimensions, mm					
														RE_A (Key)					
		A	A#150	A#300										E	R	øO	M	P	N
25/1"	51	102	127	-	56	108	124	182	70	-	M10	15.5	80	207	105	15	4.76	17	25
40/1 1/2"	57	114	165	-	65	127	155	188.5	70	-	M10	15.5	80	213.5	105	15	4.76	17	25
50/2"	62	124	178	216	91	152	165	199.5	70	-	M10	15.5	80	224.5	105	15	4.76	17	25
65/2 1/2"	72.5	145	-	-	97	185	185	205	70	-	M10	15.5	80	231	105	15	4.76	17	25
80/3"	82.5	165	203	282	108	191	210	232	90	-	M12	16	90	267	125	20	4.76	22.2	35
100/4"	97	194	229	305	120	229	254	241	90	-	M12	16	90	276	125	20	4.76	22.2	35
150/6"	114.5	229	267	403	174	279	318	290	110	32	M12	22	90	335	135	25	6.35	27.8	46
200/8"	111.5	243	292	419	201	343	381	345	130	32	M12	22	110	395	160	30	6.35	32.9	51
250/10"	138.5	297	330	-	251	406	450	387	130	32	M12	26	110	445	168	35	9.53	39.1	58
300/12"	154	338	356	-	269	417	520	445	160	40	M16	26	120	485	188	40	9.53	44.2	68

DN/inch	Flange dimensions (B) and weights					
	ASME 150				ASME 300	
	øB	Kg	C	D	øB	Kg
25/1”	108	3.6	12	31	124/125	4.3/5.2
40/1 1/2”	127	4.6	14	58	155	7.5
50/2”	152	7.4	18	62	165	9.5
65/2 1/2”	180	13	-	-	190	13
80/3”	191	14	20	48	210	19
100/4”	229	21	25	46	254	29
150/6”	279	39	27	50	318	54
200/8”	343	62	30	62	381	83
250/10”	406	91	35	17	450	139
300/12”	483	142	40	33	520	199

RE1-QPX



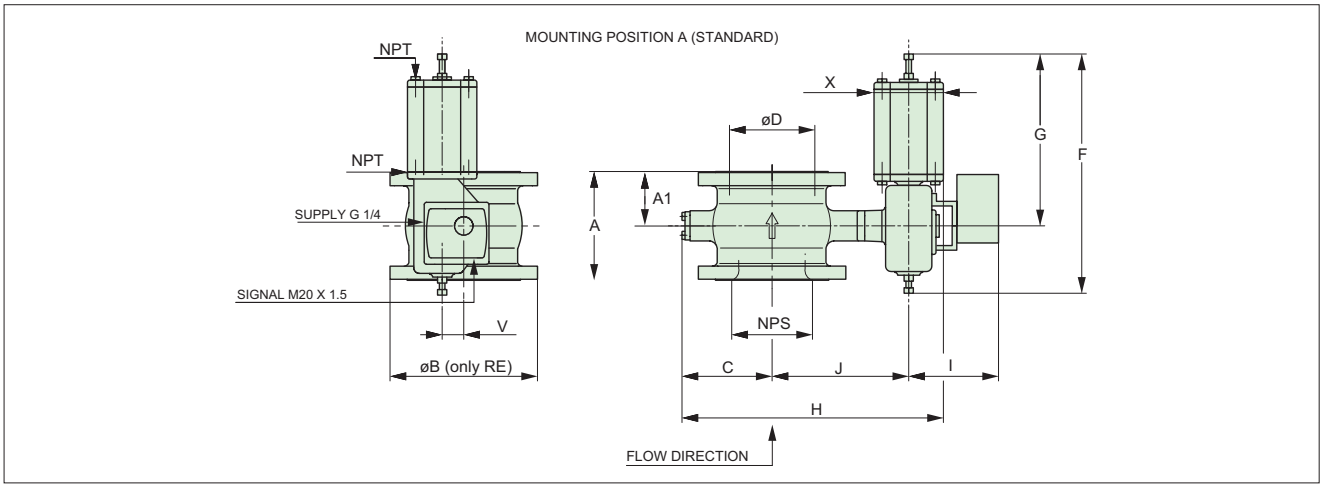
RE1-QPX

INCH	DN	QPX Size	Dimensions (inch)										Weight	Weight	Weight
			A	E	F	G	H	I	J	K	X	Pipe d	150# (lbs)	300# (lbs)	RE1 (lbs)
1	25	1	4.02	5.6	15.04	13	15.28	6.3	8.86	7.17	8.39	9.06	42	46	33
1.5	40	1	4.49	5.6	15.04	13	15.91	6.3	9.14	7.45	8.39	9.65	44	51	38
2	50	1	4.89	5.6	15.04	13	17.37	6.3	9.57	7.88	8.39	10.44	49	55	42
3	80	2	6.5	5.6	15.04	13	19.93	6.78	11.19	9.14	8.39	13	84	95	73
4	100	2	7.64	6.15	18.9	15.32	20.75	6.78	11.54	9.49	8.98	13.78	99	117	82
6	150	2	9.02	6.15	18.9	15.32	24.81	7.52	13.47	11.42	8.98	17.72	139	172	126
			9.02	7.49	22.25	17.56	25.87	8.43	13.63	11.42	10.79	16.15	172	205	157
8	200	3	9.57	7.49	22.25	17.56	29.1	7.52	15.79	13.59	9.73	20.48	223	269	216
			9.57	8.98	25	19.49	30.24	8.43	16.03	13.59	12.6	19.1	267	313	260
10	250	4	11.7	8.98	25	19.49	33.86	8.43	17.68	15.24	12.6	22.45	330	436	-
			11.7	10.87	30.24	23.94	35.67	9.57	18.27	15.24	15.04	21.26	451	557	-
12	300	5	13.31	10.87	30.24	23.94	38.67	8.43	20.56	17.52	15.04	25.6	564	689	-

RE1-QPX

INCH	DN	QPX Size	Dimensions (mm)										Weight	Weight	Weight
			A	E	F	G	H	I	J	K	X	Pipe d	150# (lbs)	300# (lbs)	RE1 (lbs)
1	25	1	102	142	382	330	388	160	225	182	213	230	19	20.5	15
1.5	40	1	114	142	382	330	404	160	232	189	213	245	20	23	17
2	50	1	124	142	382	330	441	160	243	200	213	265	22	25	19
3	80	2	165	142	382	330	506	172	284	232	213	330	38	43	33
4	100	2	194	156	480	389	527	172	293	241	228	350	45	53	37
6	150	2	229	156	480	389	630	191	342	290	228	450	63	78	57
6	150	3	229	190	565	446	657	214	346	290	274	410	78	93	71
8	200	3	243	190	565	446	739	191	401	345	247	520	101	122	98
8	200	4	243	228	635	495	768	214	407	345	320	485	121	142	118
10	250	4	297	228	635	495	860	214	449	387	320	570	150	198	-
10	250	5	297	276	768	608	906	243	464	387	382	540	205	253	-
12	300	5	338	276	768	608	982	214	522	445	382	650	256	313	-

RE13-B1C



RE13-B1C

INCH	DN	B1C Size	Dimensions (mm)										NPT	REC_ASME 150		REC_ASME 300		RE1
			A	C	øD	F	G	X	V	J	H	Imax		øB	kg	øB	kg	kg
1	25	6	102	56	33/38[1]	400	260	90	36	240	341	310	1/4	108	11.9	124	11.9	8.2
1.5	40	6	114	65	49	400	260	90	36	247	357	310	1/4	127	13.5	155	14.3	9.5
2	50	6	124	91	60	400	260	90	36	258	394	310	1/4	152	16.1	165	16.8	12
2.5	65	6	145	97	75	400	260	90	36	265	410	310	1/4	185	18	-	-	-
3	80	6	165	108	89	400	260	90	36	290	443	310	1/4	191	21	210	26	18
4	100	6	194	120	113	400	260	90	36	299	464	310	1/4	229	28.3	254	34.3	22
6	150	6	229	174	164	400	260	90	36	348	567	310	1/4	279	46.3	318	51.3	40
		9				455	315	110	43	349	578	305	1/4		52		57	50
		11				540	375	135	65	355	597	310	3/8		59		64	55
8	200	6	243	201	205	400	260	90	36	403	649	310	1/4	343	69	381	90	67
		9				455	315	110	43	404	660	305	1/4		75		96	71
		11				540	375	135	51	410	679	310	3/8		82		103	80
10	250	9	297	251	259	455	315	110	43	446	752	310	1/4	406	104	450	152	-
		11				540	375	135	51	452	771	310	3/8		114		159	-
		13				635	445	175	65	468	807	325	3/8		139		174	-
		17				770	545	215	78	483	842	340	1/2		162		197	-
12	300	11	338	269	300	540	375	135	51	482	819	310	3/8	483	162	520	219	-
		13				635	445	175	65	498	855	325	3/8		177		234	-
		17				770	545	215	78	513	890	340	1/2		200		257	-

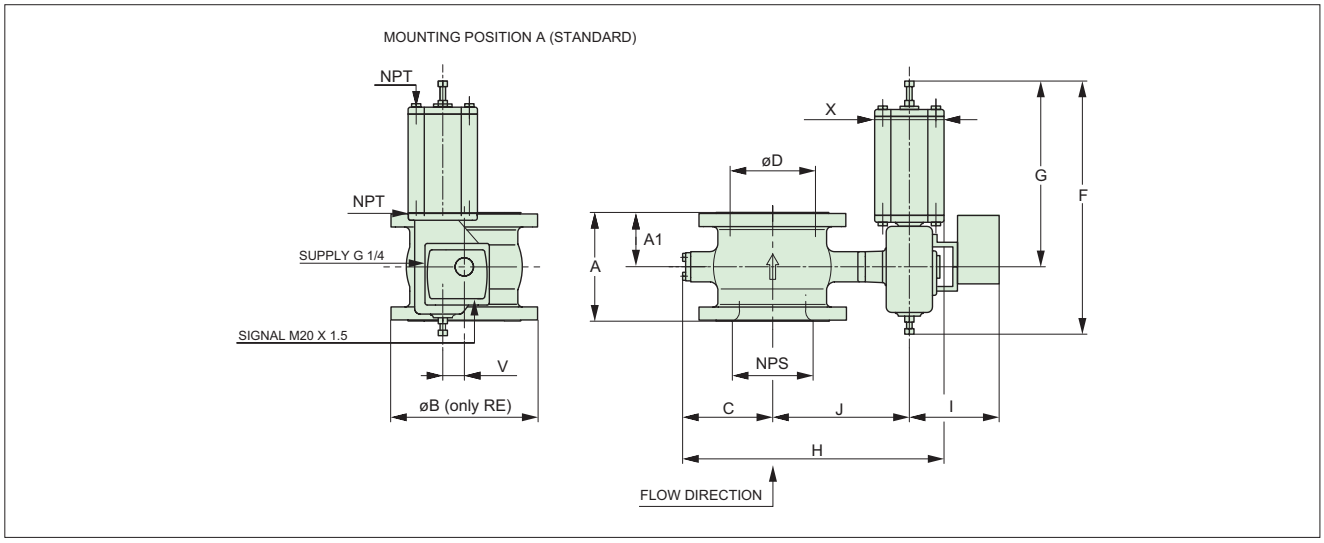
[1] 1.49" (38 mm) for low capacity segment (eg C005-RE)

RE13-B1C

INCH	DN	B1C Size	Dimensions (inch)										NPT	REC_ASME 150		REC_ASME 300		RE1
			A	C	øD	F	G	X	V	J	H	Imax		øB	lbs	øB	lbs	lbs
1	25	6	4.02	2.21	1.29/ 1.49[1]	15.75	10.24	3.55	1.42	9.45	13.43	12.21	1/4	108	27	124	27	18
1.5	40	6	4.49	2.56	1.93	15.75	10.24	3.55	1.42	9.73	14.06	12.21	1/4	127	30	155	32	21
2	50	6	4.89	3.59	2.37	15.75	10.24	3.55	1.42	10.16	15.52	12.21	1/4	152	36	165	37	27
2.5	65	6	5.71	3.82	2.96	15.75	10.24	3.55	1.42	10.44	16.15	12.21	1/4	185	40	-	-	-
3	80	6	6.5	4.26	3.51	15.75	10.24	3.55	1.42	11.42	17.45	12.21	1/4	191	47	210	58	40
4	100	6	7.64	4.73	4.45	15.75	10.24	3.55	1.42	11.78	18.27	12.21	1/4	229	63	254	76	49
6	150	6	9.02	6.86	6.46	15.75	10.24	3.55	1.42	13.71	22.33	12.21	1/4	279	102	318	113	97
		9				17.92	12.41	4.34	1.7	13.75	22.76	12.01	1/4		115		126	110
		11				21.26	14.77	5.32	2.56	13.98	23.51	12.21	3/8		130		141	121
8	200	6	9.57	7.92	8.08	15.75	10.24	3.55	1.42	15.87	25.56	12.21	1/4	343	152	381	198	147
		9				17.92	12.41	4.34	1.7	15.91	25.99	12.01	1/4		165		212	156
		11				21.26	14.77	5.32	2.01	16.15	26.74	12.21	3/8		181		227	176
10	250	9	11.7	9.89	10.2	17.92	12.41	4.34	1.7	17.56	29.61	12.21	1/4	406	229	450	335	-
		11				21.26	14.77	5.32	2.01	17.8	30.36	12.21	3/8		251		350	-
		13				25	17.52	6.89	2.56	18.43	31.78	12.8	3/8		306		383	-
		17				30.32	21.46	8.47	3.08	19.02	33.15	13.39	1/2		357		434	-
12	300	11	13.31	10.6	11.82	21.26	14.77	5.32	2.01	18.98	32.25	12.21	3/8	483	357	520	482	-
		13				25	17.52	6.89	2.56	19.61	33.67	12.8	3/8		390		515	-
		17				30.32	21.46	8.47	3.08	20.2	35.04	13.39	1/2		440		566	-

[1] 1.49" (38 mm) for low capacity segment (eg C005-RE)

RE-B1J / B1JA



RE-B1J / B1JA

INCH	DN	B1J / B1JA Size	Dimensions (inch)										NPT	REC_ASME 150		REC_ASME 300		RE1
			A	C	øD	F	G	X	V	J	H	Imax		øB	lbs	øB	lbs	lbs
1	25	6	4.02	2.21	1.29/ 1.49[1)]	19.1	14.49	4.34	1.42	9.41	13.86	12.01	3/8	4.26	47	4.89	47	38
		8				22.05	16.54	5.32	1.7	9.45	14.34	12.01	3/8		55		55	47
1.5	40	6	4.49	2.56	1.93	19.1	14.49	4.34	1.42	9.69	14.49	12.01	3/8	5	51	6.11	53	42
		8				22.05	16.54	5.32	1.7	9.73	14.97	12.01	3/8		60		62	51
2	50	6	4.89	3.59	2.37	19.1	14.49	4.34	1.42	10.12	15.91	12.01	3/8	5.99	55	6.5	58	44
		8				22.05	16.54	5.32	1.7	10.16	16.38	12.01	3/8		64		66	55
2.5	65	6	5.71	3.82	2.96	19.1	14.49	4.34	1.42	10.4	16.46	12.01	3/8	7.29	58	-	-	-
		8				22.05	16.54	5.32	1.7	10.44	16.93	12.01	3/8		66		-	-
3	80	6	6.5	4.26	3.51	19.1	14.49	4.34	1.42	11.38	17.88	12.01	3/8	7.52	66	8.27	77	58
		8				22.05	16.54	5.32	1.7	11.42	18.35	12.01	3/8		75		86	66
4	100	6	7.64	4.73	4.45	19.1	14.49	4.34	1.42	11.74	18.71	12.01	3/8	9.02	84	10	95	69
		8				22.05	16.54	5.32	1.7	11.78	19.18	12.01	3/8		93		104	77
6	150	6	9.02	6.86	6.46	19.1	14.49	4.34	1.42	13.67	22.76	12.01	3/8	10.99	121	12.52	135	113
		8				22.05	16.54	5.32	1.7	13.71	23.23	12.01	3/8		130		143	121
		10				25.6	19.3	6.89	2.01	13.98	24.3	8.86	3/8		159		170	154
8	200	6	9.57	7.92	8.08	19.1	14.49	4.34	1.42	15.87	26.03	12.01	3/8	13.51	172	15	218	165
		8				22.05	16.54	5.32	1.7	15.91	26.5	12.01	3/8		181		227	176
		10				25.6	19.3	6.89	2.01	16.15	27.56	12.21	3/8		209		256	209
		12				31.5	24.41	8.47	2.56	16.78	28.98	9.26	1/2		271		317	264
10	250	10	11.7	9.89	10.2	25.6	19.3	6.89	2.01	17.8	31.11	12.21	3/8	15.99	273	17.72	379	-
		12				31.5	24.41	8.47	2.56	18.43	32.56	12.8	1/2		319		440	-
		16				38.98	29.93	10.44	3.08	19.02	34.14	13.39	1/2		480		557	-
12	300	12	13.31	10.6	11.82	31.5	24.41	8.47	2.56	19.61	34.45	12.8	1/2	19.02	447	20.48	572	-
		16				38.98	29.93	10.44	3.08	20.2	36.07	13.39	1/2		542		667	-
		20				47.25	36.82	15.56	3.82	21.03	39.38	10.63	3/4		707		832	-

[1)] 1.49" (38 mm) for low capacity segment (eg C005-RE)

RE13-B1J / B1JA

INCH	DN	B1J / B1JA Size	Dimensions (mm)										NPT	REC_ASME 150		REC_ASME 300		RE1
			A	C	øD	F	G	X	V	J	H	Imax		øB	kg	øB	kg	kg
1	25	6	102	56	33/38[1)]	485	368	110	36	239	352	305	3/8	108	21	124	21	17
		8				560	420	135	43	240	364	305	3/8		25		25	21
1.5	40	6	114	65	49	485	368	110	36	246	368	305	3/8	127	23	155	24	19
		8				560	420	135	43	247	380	305	3/8		27		28	23
2	50	6	124	91	60	485	368	110	36	257	404	305	3/8	152	25	165	26	20
		8				560	420	135	43	258	416	305	3/8		29		30	25
2.5	65	6	145	97	75	485	368	110	36	264	418	305	3/8	185	26	-	-	-
		8				560	420	135	43	265	430	305	3/8		30		-	-
3	80	6	165	108	89	485	368	110	36	289	454	305	3/8	191	30	210	35	26
		8				560	420	135	43	290	466	305	3/8		34		39	30
4	100	6	194	120	113	485	368	110	36	298	475	305	3/8	229	38	254	43	31
		8				560	420	135	43	299	487	305	3/8		42		47	35
6	150	6	229	174	164	485	368	110	36	347	578	305	3/8	279	55	318	61	51
		8				560	420	135	43	348	590	305	3/8		59		65	55
		10				650	490	175	51	355	617	225	3/8		72		77	70
8	200	6	243	201	205	485	368	110	36	403	661	305	3/8	343	78	381	99	75
		8				560	420	135	43	404	673	305	3/8		82		103	80
		10				650	490	175	51	410	700	310	3/8		95		116	95
		12				800	620	215	65	426	736	235	1/2		123		144	120
10	250	10	297	251	259	650	490	175	51	452	790	310	3/8	406	124	450	172	-
		12				800	620	215	65	468	827	325	1/2		145		200	-
		16				990	760	265	78	483	867	340	1/2		218		253	-
12	300	12	338	269	300	800	620	215	65	498	875	325	1/2	483	203	520	260	-
		16				990	760	265	78	513	916	340	1/2		246		303	-
		20				1200	935	395	97	534	1000	270	3/4		321		378	-

[1)] 1.49” (38 mm) for low capacity segment (eg C005-RE)

How to order

Example:

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.		11.
-	RE1	D	A	03	D	J	J	S	T	/	-

1. Sign	Trim codes
---	Standard V-port (no sign)
Q-	Low noise and anti-cavitation trim (for 2" and larger)
C005-	Maximum Cv = 0.5 (for 1" only)
C015-	Maximum Cv = 1.5 (for 1" only)
C05-	Maximum Cv = 5.0 (for 1" only)
C15-	Maximum Cv = 15.0 (for 1" only)

2. Sign	Product series
RE1	Flangeless body, face-to-face acc. to ISA S75.04 and DIN/IEC 534 Part 3-2. (Available in sizes 1" - 8")
RE13	Flanged body, face-to-face acc. to ASME B16.10 (spool piece construction) (Available in sizes 1" - 12")
RE*	Flanged body, face-to-face acc. to ISA-75.08.02 and IEC 60534 Part 3-2. Only L-Construction (4th sign = L) (Available in sizes 1"-12")

* For RE options other than Sign 4 "L" reference technical bulletin 3 R 24 EN.

3. Sign	Pressure rating (Note: See charts on page 4)
C	ASME 150
D	ASME 300 for RE1D use sign "D" for both 150# and 300# valves.

5. Sign	Size
	Inch 1", 1 1/2", 2", 3", 4", 6", 8", 10", 12"

4. Sign	Construction
A	Standard, drive shaft with ANSI keyway to actuator
L	RE13 Body (drilled to accept spool piece, but does not include spool

6. Sign	Body, blind flange & screw materials
A	ASTM A351 gr. CF8M (standard for sizes 12" and larger as well as 300# Class Flanged models)
D	ASTM A216 gr. WCB / 1-0619 (blind flange & gland bolting A4-80, corresponds to B8M)
D1	ASTM A216 gr. WCB / 1-0619 + Nitrated (US markets only)
C	ASTM A351 gr. CG8M (blind flange & gland bolting A4-80, corresponds to B8M)

Note: - Gland material is always CF8M

7. Sign	Segment materials
J	Type AISI 329+HCr; ANSI 316+HCr for low Cv segments
C	CG8M + HCr
S	Type AISI 329 (without chrome). Used with soft seats, eg. RECA_CSJT2T

8. Sign	Shaft, pin & bearing materials
J	Type AISI 329 Drive Shaft & PTFE on SS 316 net

9. Sign	Seat design and materials
S	Stainless Steel+Cobalt Hard facing, Inconel 625 spring, Filled PTFE/Elgiloy lipseal, -40 °F …+480 °F ANSI/FCI 70-2 class IV, General services
T2	Stainless Steel with PTFE+C25 % insert
E	Cobalt based alloy, -40 °F …+480 °F Non-tight, extremely erosive services.

10. Sign	Stem packing & blind flange seal
T	PTFE V-rings, live-loaded
G	Graphite rings, live loaded (fire-safe)

11. Sign	Model code
-	Version 0
A	Version A is used only with NPS02, NPS03-10 / DN50, DN80-DN250, only in RE series

12. Sign	Flange facing
/ -	ASME B16.5 (Ra 3.2 – 6.3 / RMS 125-250) Cover EN1092-1 Type B1

Valmet Flow Control Oy
Vanha Porvoontie 229, 01380 Vantaa, Finland.
Tel. +358 10 417 5000.
www.valmet.com/flowcontrol