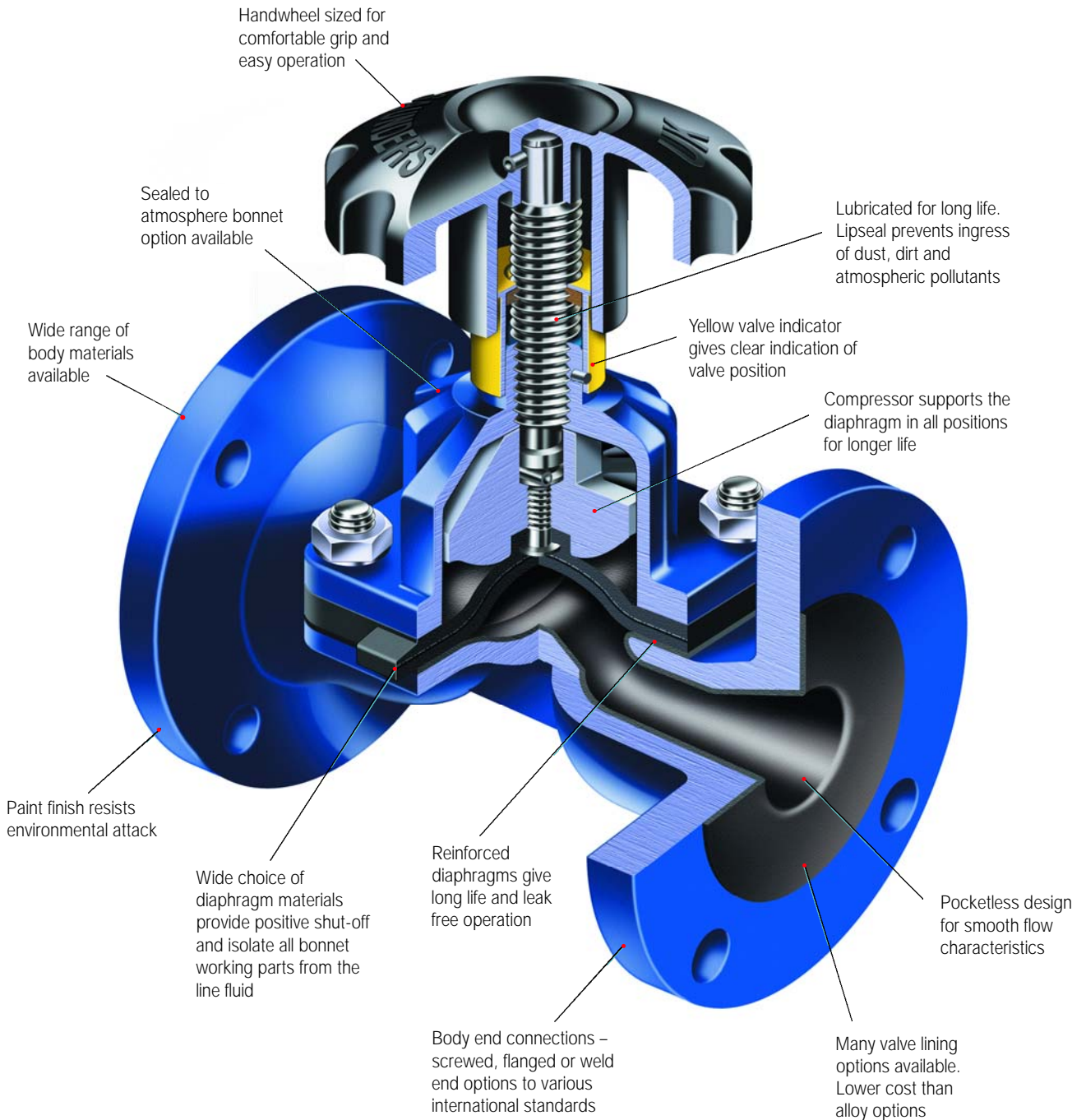


The Original and the Best

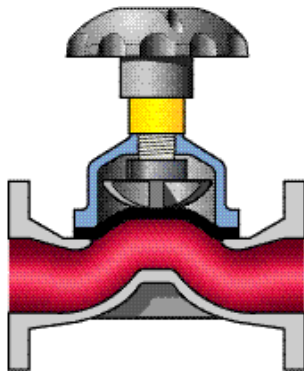
Saunders diaphragm valve features and benefits for corrosive and abrasive applications with 100% leaktight closure operation



Saunders A Type Diaphragm Valves

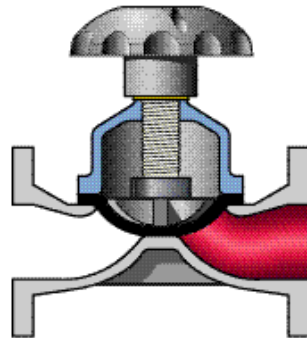
Valve Benefits for Corrosive and Abrasive Applications

Our Saunders A Type diaphragm valves have been developed to handle a wider range of fluids and gases than any other valve type. A wide choice is available for materials, methods of operation and body end connections – to satisfy the needs of most corrosive and abrasive applications.



Valve flow

Pocketless design for contamination free performance and smooth flow characteristics. Linear operation ensures valve does not induce damaging pressure surges or static charges.



Ease of maintenance

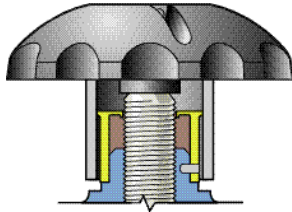
Three part design allows maintenance and actuator retrofitting without removing the valve from the pipeline. Overall this results in lower cost of ownership compared to other valve types.



On pressure and vacuum, Saunders diaphragm valves operate and close 100% leaktight even after thousands of operations. This feature reduces processing and handling costs, by eliminating emissions normally associated with conventional valve designs.

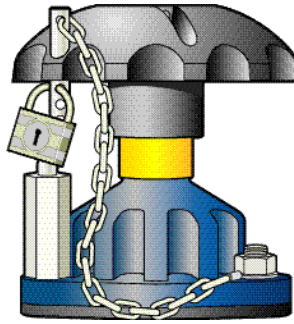
All working parts of the valves are isolated from the line media and positive closure is obtained even on frequent cycling or with entrained particulates in the line unlike quarter turn ball and butterfly valves. Throttling and control characteristics are enhanced by a streamlined flow path that is cavity free and provides excellent flow control capabilities.

Extended life, reliability, safety and ease of use, combined with an essentially simple design, results in low maintenance for minimum running costs.



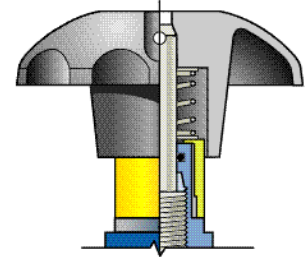
Lubrication

Bonnet assembly lubricated for long life. Needs no additional grease. The indicator lip seal stops the ingress of dust, dirt and atmospheric contaminants.



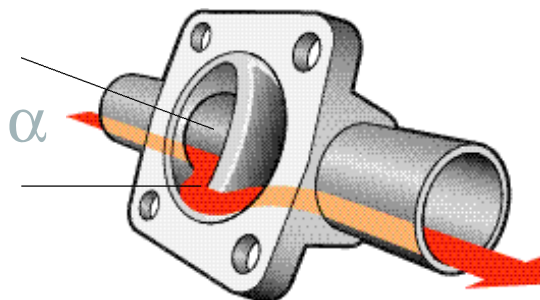
Padlock bonnet

Restricted valve operation can be achieved by utilising the padlocking bonnet option.



Sealed bonnet

In cases where hazardous liquids or gases are being handled and where additional safety features are considered to be necessary.

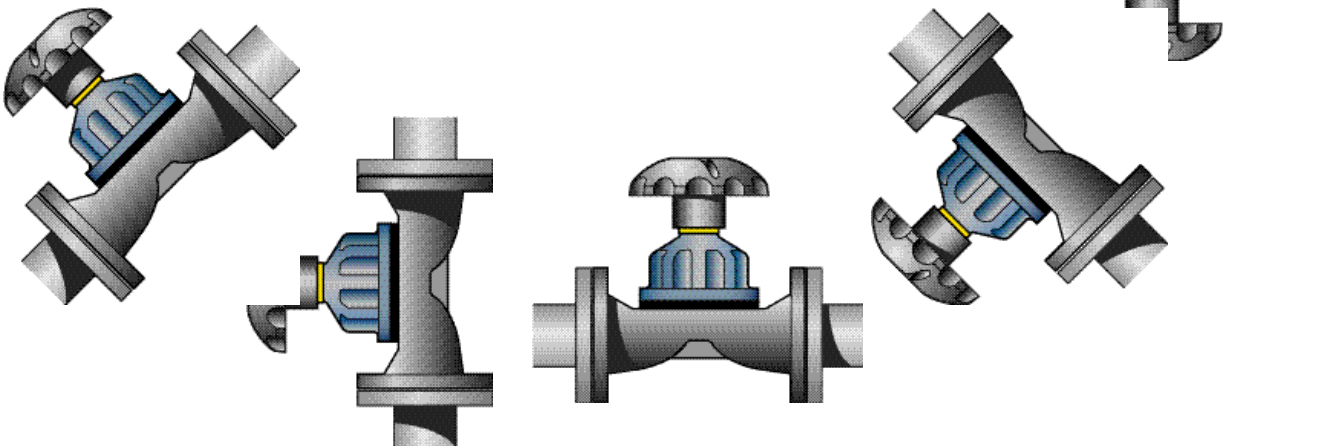


Valve set for self draining

The Saunders valve can be installed to assist self-draining if required. Please consult us for drainage angle advice.

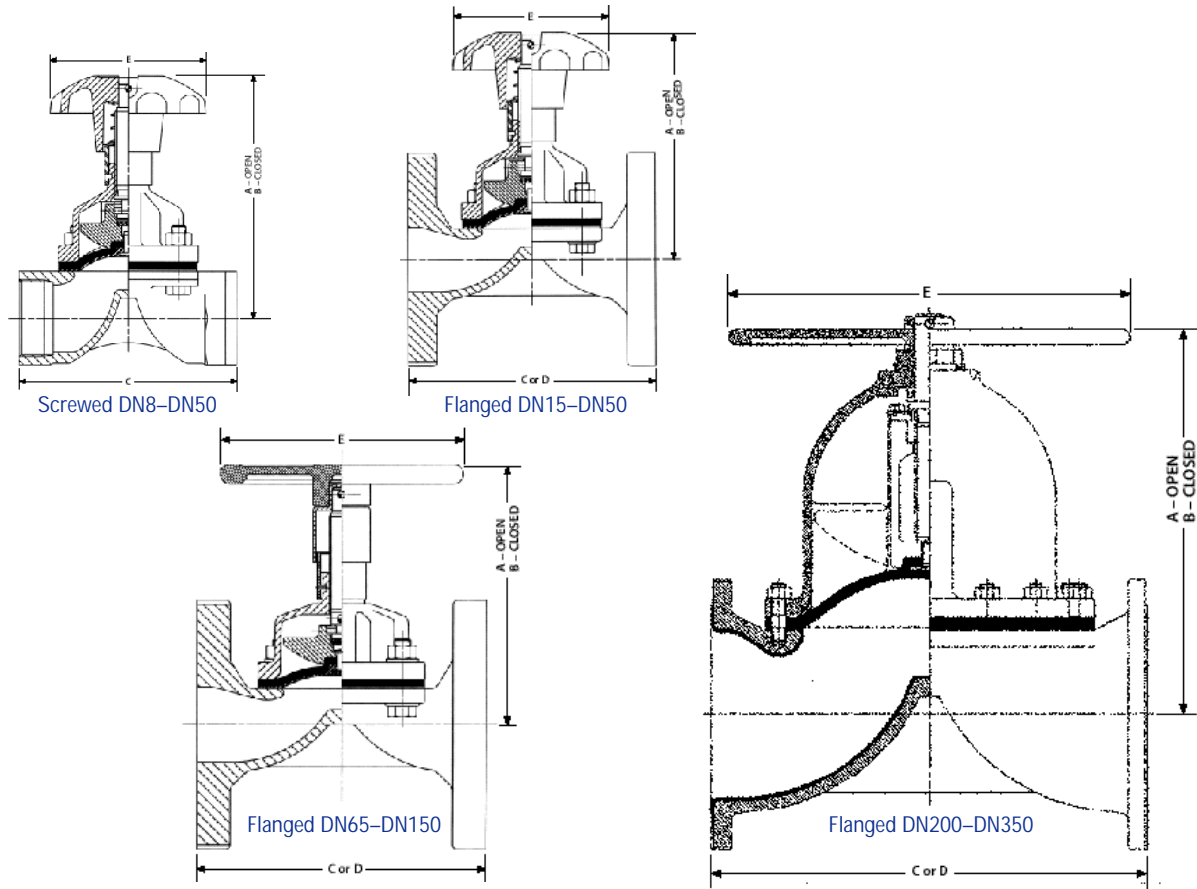
Valve usable in any position

The Saunders valve can be installed in any position without affecting its operation. However, we recommend 6x pipe diameter from bend or pump.



Saunders A Type Diaphragm Valves

Dimensions and Weights



Valve Diameter (DN)

	8	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	
Screwed	A	54	67	90	94	119	154	164	188	-	-	-	-	-	-	-	-	-
	B	52	61	84	88	108	142	148	164	-	-	-	-	-	-	-	-	-
	C	49	49	63.5	83	111	125	145	168	-	-	-	-	-	-	-	-	-
	Weight	0.11	0.15	0.45	0.90	1.13	1.80	2.70	5.00	-	-	-	-	-	-	-	-	-
Flanged	A	-	-	100	91	108	143	157	175	226	243	308	388	442	495	581	679	660
	B	-	-	93	85	98	131	141	152	194	208	262	322	367	-	-	-	-
	C	-	-	108	117	127	146	159	190	216	254	305	356	406	521	635	749	749
	D	-	-	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
	Weight	-	-	1.80	1.80	2.70	4.00	4.90	7.70	14.0	19.0	31.7	48.0	62.1	152	270	360	506
Flanged Rubber Lined	A	-	-	-	97	111	146	160	177	229	246	311	391	445	498	585	683	664
	B	-	-	-	91	101	134	144	154	197	212	265	325	370	-	-	-	-
	C	-	-	-	121	131	150	163	194	220	258	309	362	412	527	641	755	755
	D	-	-	-	150	160	180	200	230	290	310	350	400	480	600	730	850	980
	Weight	-	-	-	2.70	3.10	4.50	5.40	8.20	15.0	20.4	33.1	49.2	63.0	154	273	365	512
Flanged Glass Lined	A	-	-	101	92	109	144	158	176	227	244	309	389	443	496	582	-	-
	B	-	-	94	86	99	132	142	153	195	210	263	323	368	-	-	-	-
	C	-	-	110	119	129	148	161	192	218	256	307	358	408	523	637	-	-
	D	-	-	130	150	160	180	200	230	290	310	350	400	480	600	730	-	-
	Weight	-	-	1.80	1.80	3.10	4.50	5.40	8.20	14.5	19.5	32.2	48.5	62.6	153	272	-	-
Flanged Plastic Lined	A	-	-	-	97	112	-	162	176	-	246	314	-	450	-	-	-	-
	B	-	-	-	91	102	-	145	155	-	211	267	-	374	-	-	-	-
	C	-	-	-	123	133	-	165	196	-	260	311	-	412	-	-	-	-
	D	-	-	-	150	160	-	200	230	-	310	350	-	480	-	-	-	-
	Weight	-	-	-	2.70	3.10	-	5.40	8.20	-	20.4	33.1	-	63.0	-	-	-	-
E	38	50	62	62	80	120	120	120	170	230	280	280	368	482	584	699	699	

Weights in kg. **C** valve length = EN 558-1 Series 7 (ex BS 5156). **D** valve length = EN 558-1 Series 1 (ex DIN 3202 Series F1).

Saunders A Type Valve

Flow Co-efficient of Valve Range Cv (Kv)

DN 15 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	5.50	4.71	-	-	6.00	5.14	-	-	
90	5.28	4.53	-	-	5.75	4.93	-	-	
80	5.06	4.33	-	-	5.51	4.72	-	-	
70	4.83	4.14	-	-	5.27	4.52	-	-	
60	4.61	3.95	-	-	5.03	4.31	-	-	
50	3.84	3.29	-	-	4.19	3.59	-	-	
40	3.08	2.62	-	-	3.35	2.87	-	-	
30	2.30	1.97	-	-	2.51	2.15	-	-	
20	1.54	1.32	-	-	1.67	1.43	-	-	
10	0.77	0.66	-	-	0.83	0.71	-	-	
0	0	0	-	-	0	0	-	-	

DN 20 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	11.50	9.86	9.20	7.89	12.00	10.29	6.50	5.59	
90	11.03	9.45	9.00	7.71	11.51	9.87	6.24	5.35	
80	10.57	9.06	8.80	7.54	11.03	9.45	5.98	5.13	
70	10.12	8.67	8.40	7.20	10.55	9.04	5.72	4.90	
60	9.66	8.28	7.70	6.60	10.07	8.63	5.45	4.67	
50	8.05	6.90	6.70	5.74	8.39	7.19	4.54	3.89	
40	6.43	5.51	5.50	4.71	6.71	5.75	3.63	3.11	
30	4.83	4.14	4.10	3.51	5.03	4.31	2.72	2.33	
20	3.21	2.75	2.50	2.14	3.35	2.87	1.81	1.55	
10	1.60	1.37	1.00	0.86	1.67	1.43	0.90	0.77	
0	0	0	0	0	0	0	0	0	

DN 25 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	17.60	15.09	14.00	12.00	18.00	15.43	11.19	9.60	
90	16.29	13.96	13.70	11.74	17.28	14.81	10.75	9.21	
80	16.19	13.88	13.40	11.49	16.56	14.19	10.30	8.83	
70	15.48	13.26	12.70	10.89	15.83	13.57	9.85	8.42	
60	14.78	12.67	11.60	9.94	15.11	12.95	9.40	8.06	
50	12.32	10.56	10.20	8.74	12.59	10.79	7.83	6.71	
40	9.85	8.44	8.40	7.20	10.07	8.63	6.27	5.37	
30	7.39	6.33	6.30	5.40	7.55	6.47	4.70	4.02	
20	4.92	4.22	3.80	3.25	5.03	4.31	3.13	2.68	
10	2.46	2.11	1.50	1.29	2.51	2.15	1.56	1.34	
0	0	0	0	0	0	0	0	0	

DN 32 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	27.50	23.57	22.00	18.86	28.00	24.00	16.70	14.31	
90	26.39	22.61	21.12	18.10	26.88	23.04	16.03	13.74	
80	25.29	21.68	20.24	17.35	25.75	22.07	15.36	13.17	
70	24.20	20.74	19.35	16.59	24.64	21.11	14.69	12.59	
60	23.09	19.79	18.47	15.83	23.51	20.15	14.02	12.02	
50	19.25	16.50	15.39	13.19	19.60	16.80	11.69	10.02	
40	15.39	13.19	12.32	10.57	15.67	13.43	9.35	8.01	
30	11.54	9.89	9.23	7.91	11.75	10.07	7.01	6.01	
20	7.69	6.59	6.16	5.28	7.83	6.71	4.67	4.00	
10	3.84	3.29	3.08	2.62	3.91	3.35	2.33	1.98	
0	0	0	0	0	0	0	0	0	

DN 40 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	43.00	36.86	35.00	30.00	45.00	38.57	31.00	26.57	
90	41.28	35.40	34.00	29.14	43.20	37.03	29.76	25.51	
80	39.56	33.91	33.6	28.80	41.39	35.48	28.51	24.43	
70	37.84	32.43	32.00	27.43	39.59	33.93	27.28	23.38	
60	36.11	30.95	29.00	24.86	37.79	32.41	26.03	22.32	
50	30.10	25.81	26.00	22.28	31.50	27.00	21.69	18.59	
40	24.07	20.63	21.00	18.00	25.19	21.59	17.35	14.87	
30	18.05	15.47	16.00	13.68	18.89	16.19	13.01	11.15	
20	12.03	10.31	9.5	8.14	12.59	10.79	8.67	7.43	
10	6.01	5.15	3.9	3.34	6.29	5.39	4.33	3.71	
0	0	0	0	0	0	0	0	0	

DN 50 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	80.00	68.61	64.00	54.89	88.00	75.47	59.00	50.60	
90	76.80	65.86	63.00	54.03	84.48	72.45	56.00	48.00	
80	73.59	63.11	61.00	52.31	80.96	69.43	54.00	46.29	
70	70.40	60.37	58.00	49.71	77.43	66.40	52.00	44.57	
60	67.19	57.62	53.00	45.43	73.91	63.38	50.00	42.86	
50	56.00	48.03	47.00	40.29	61.69	52.82	41.00	35.14	
40	44.79	38.39	38.00	32.57	49.28	42.24	33.00	28.28	
30	33.59	28.79	29.00	24.86	36.95	31.67	25.00	21.43	
20	22.39	19.19	17.00	14.57	24.64	21.11	16.00	13.71	
10	11.19	9.60	7.00	6.00	12.32	10.56	8.00	6.86	
0	0	0	0	0	0	0	0	0	

DN 65 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	127.00	108.80	102.00	87.40	132.00	113.10	83.00	71.10	
90	121.00	103.70	97.90	83.90	126.00	108.00	79.70	68.30	
80	116.00	99.40	93.80	80.40	121.00	103.70	76.40	65.40	
70	111.00	95.10	89.80	76.90	116.00	99.40	73.00	62.60	
60	106.00	90.90	85.70	73.40	110.00	94.30	69.70	59.80	
50	88.90	76.20	71.40	61.20	92.40	79.20	58.10	49.80	
40	71.12	60.90	57.10	48.90	73.90	63.40	46.50	39.80	
30	53.33	45.70	42.80	36.70	55.40	47.50	34.90	29.90	
20	35.56	30.50	28.60	24.50	37.00	31.70	23.20	19.90	
10	17.78	15.20	14.30	12.20	18.50	15.84	11.60	9.90	
0	0	0	0	0	0	0	0	0	

DN 80 BODY MATERIAL / LINING									
% Open	Cast iron		Rubber Lined		Glass		Plastic Lined		
	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	
100	185.00	158.60	148.00	126.90	186.00	159.40	148.00	126.90	
90	177.00	151.70	145.00	124.30	178.00	152.60	142.00	121.70	
80	170.00	145.70	142.00	121.70	171.00	146.60	136.00	116.60	
70	162.00	138.90	135.00	115.70	163.00	139.70	130.00	111.40	
60	155.00	132.90	123.00	105.40	156.00	133.70	124.00	106.30	
50	129.00	110.60	108.00	92.60	130.00	111.40	103.00	88.30	
40	103.00	88.30	89.00	76.30	104.00	89.10	82.90	71.00	
30	77.70	66.60	67.00	48.90	78.10	67.00	62.20	44.70	
20	51.80	44.40	40.00	34.30	52.10	44.60	41.40	35.50	
10	25.90	22.20	16.00	13.70	26.00	22.30	20.70	17.80	
0	0	0	0	0	0	0	0	0	

DN 100		BODY MATERIAL / LINING							
		Cast iron		Rubber Lined		Glass		Plastic Lined	
% Open		Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv
100		315	270	252	216	336	288	270	231
90		302	259	247	212	322	276	259	222
80		289	248	242	207	309	265	248	213
70		277	237	229	196	295	253	237	203
60		264	226	209	179	282	242	226	194
50		220	189	184	158	235	201	189	172
40		176	151	151	129	188	161	151	129
30		132	113	113	97	141	121	113	97
20		88.20	76	68	50	94.10	81	75.60	65
10		44.10	38	28	24	47.00	40	37.80	32.40
0		0	0	0	0	0	0	0	0

DN 125		BODY MATERIAL / LINING							
		Cast iron		Rubber Lined		Glass		Plastic Lined	
% Open		Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv
100		420	360	363	311	440	377	-	-
90		403	345	348	298	422	362	-	-
80		386	331	333	285	404	346	-	-
70		369	316	319	273	387	332	-	-
60		352	302	304	261	369	316	-	-
50		294	252	254	218	308	264	-	-
40		235	201	203	174	246	211	-	-
30		176	151	152	130	184	158	-	-
20		117	100	101	87	123	105	-	-
10		59	49	51	44	62	53	-	-
0		0	0	0	0	0	0	-	-

DN 150		BODY MATERIAL / LINING							
		Cast iron		Rubber Lined		Glass		Plastic Lined	
% Open		Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv
100		605	519	484	415	630	540	505	433
90		580	497	474	406	604	518	484	414
80		556	477	465	399	579	496	464	398
70		532	456	440	377	554	475	444	381
60		508	435	402	345	529	453	424	363
50		423	363	353	303	441	378	353	303
40		338	290	290	249	352	302	282	242
30		254	218	218	187	264	226	212	182
20		169	145	131	112	176	151	141	121
10		85	73	53	45	88	75	71	61
0		0	0	0	0	0	0	0	0

DN 200		BODY MATERIAL / LINING							
		Cast iron		Rubber Lined		Glass		Plastic Lined	
% Open		Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv
100		1300	1114	1309	1122	1320	1131	-	-
90		1248	1070	1256	1077	1267	1086	-	-
80		1196	1025	1204	1032	1214	1041	-	-
70		1144	981	1151	987	1161	995	-	-
60		1092	936	1099	942	1108	950	-	-
50		910	780	916	785	924	792	-	-
40		728	624	733	628	739	633	-	-
30		546	468	549	471	554	475	-	-
20		364	312	366	314	369	316	-	-
10		182	156	183	157	184	158	-	-
0		0	0	0	0	0	0	-	-

DN 250		BODY MATERIAL / LINING					
		Cast iron		Rubber Lined		Glass	
% Open		Cv	Kv	Cv	Kv	Cv	Kv
100		1980	1697	2000	1714	2100	1800
90		1900	1629	1920	1646	2015	1727
80		1821	1561	1840	1577	1932	1656
70		1742	1493	1760	1509	1848	1584
60		1663	1425	1679	1439	1763	1511
50		1386	1188	1400	1200	1470	1260
40		1108	950	1120	960	1176	1008
30		831	712	839	719	881	755
20		554	475	560	480	588	504
10		277	237	280	240	294	252
0		0	0	0	0	0	0

DN 300		BODY MATERIAL / LINING					
		Cast iron		Rubber Lined		Glass	
% Open		Cv	Kv	Cv	Kv	Cv	Kv
100		3700	3171	3750	3214	3880	3326
90		3552	3045	3600	3086	3724	3191
80		3404	2917	3450	2957	3569	3059
70		3256	2791	3300	2829	3414	2926
60		3107	2663	3149	2699	3259	2793
50		2590	2220	2625	2250	2716	2327
40		2072	1776	2100	1800	2172	1861
30		1553	1331	1574	1349	1629	1396
20		1036	888	1050	900	1086	931
10		518	444	525	450	543	465
0		0	0	0	0	0	0

DN 350		BODY MATERIAL / LINING					
		Cast iron		Rubber Lined		Glass	
% Open		Cv	Kv	Cv	Kv	Cv	Kv
100		3700	3171	3750	3214	3880	3326
90		3552	3045	3600	3086	3724	3191
80		3404	2917	3450	2957	3569	3059
70		3256	2791	3300	2829	3414	2926
60		3107	2663	3149	2699	3259	2793
50		2590	2220	2625	2250	2716	2327
40		2072	1776	2100	1800	2172	1861
30		1553	1331	1574	1349	1629	1396
20		1036	888	1050	900	1086	931
10		518	444	525	450	543	465
0		0	0	0	0	0	0

Note: Differing Cv & Kv rating can be derived, depending on the method used for testing. The tables above are based on British Standards 1042 and EN 605314/IEC 534.2.3 and show flow in US gallons per minute and cubic metres per hour.

Cv is flow in US gpm through valve at Δ P of 1 psi
Kv is flow in m³/hr through valve at Δ P of 1 bar