

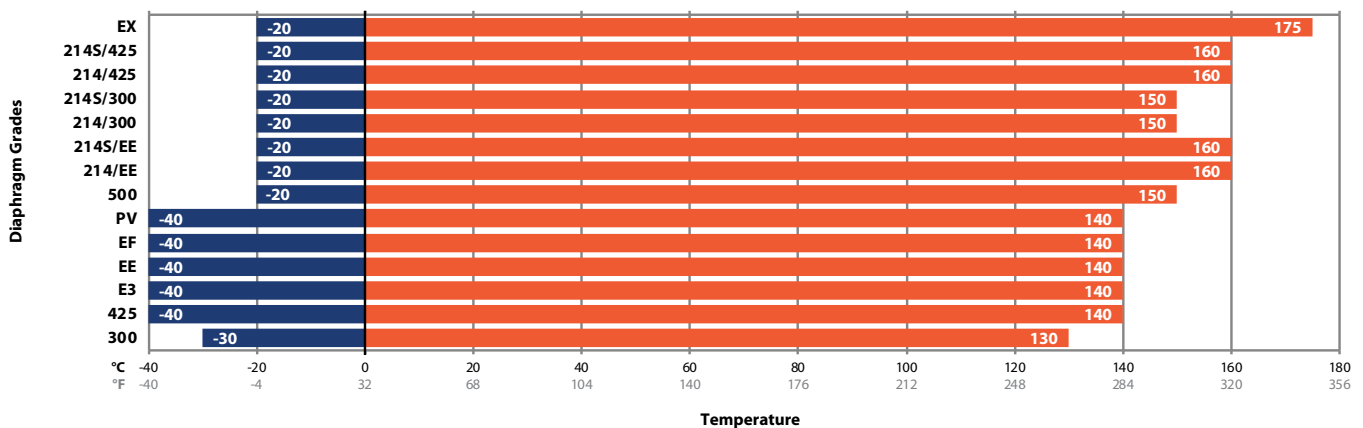
Saunders[®] HC4 Diaphragm Valve Performance (Pressure/Temperature Relationships)

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Although there are many aspects of a process specification that can affect both valve and diaphragm life, temperature and pressure are the major limiting factors of valve operating capability. It is therefore essential to provide the fullest process and operating details such as operating cycles, speed of temperature fluctuations, sterilising fluids, steam sterilisation temperatures or any other parameter that may be present, when selecting a valve.

Temperature bands for diaphragms are shown as a guide only. Many aspects of service conditions will determine the highest working temperature.

Saunders[®] HC4 Diaphragm Temperatures



Saunders[®] 2-Way Forgings

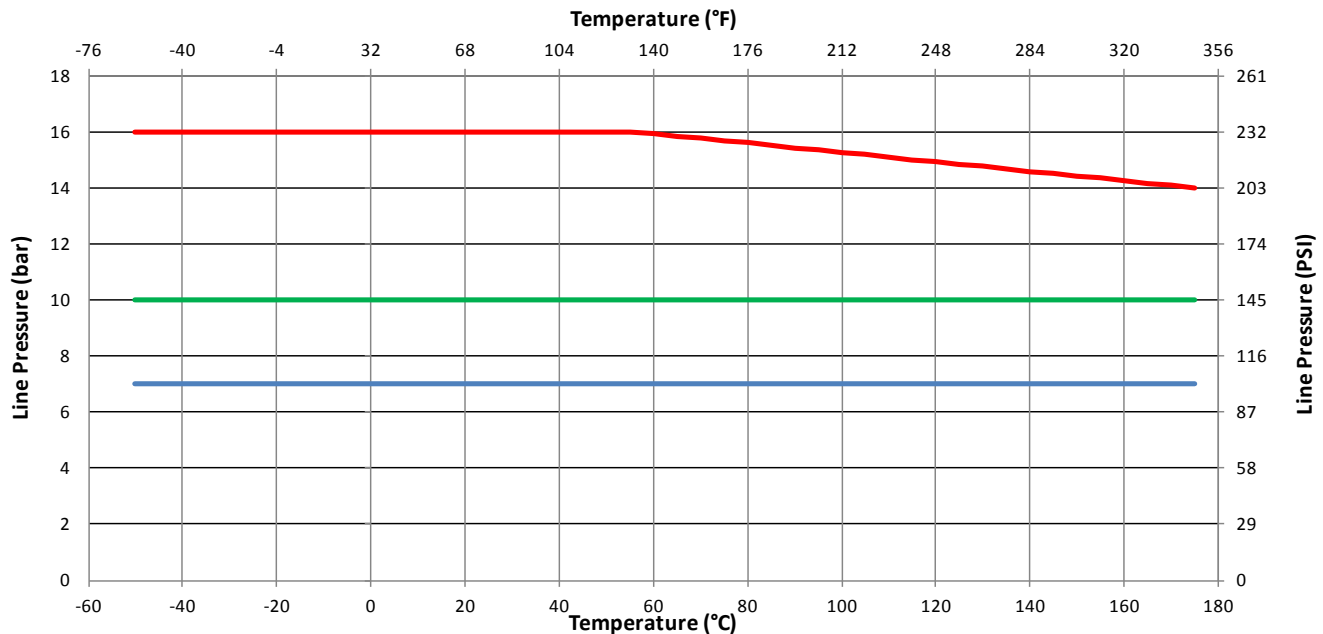
Maximum Rated Working Pressure (Manual Valves)

Valve Size	DN	8	10	15	20	25	40	50	65	80	100	125	150
	SAE	0.250"	0.375"	0.500"	0.750"	1.000"	1.500"	2.000"	2.500"	3.000"	4.000"	5.000"	6.000"
Diaphragm Type	Steam Grade 214S/425 (PTFE (TFM) / EPM)	16 (232)	16 (232)	16 (232)	16 (232)	16 (232)	16 (232)	16 (232)	10 (145)	10 (145)	10 (145)	10 (145)	7 (101.5)
	All Rubber/Elastomer Types	16 (232)	16 (232)	16 (232)	16 (232)	16 (232)	16 (232)	16 (232)	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)
	All Other PTFE Types	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)	10 (145)	7 (101.5)

For sizing automated valves, please refer to the relevant actuator datasheet (S360 & EC Actuator)

Valve Body Temperature / Pressure Relationships

The chart displays the temperature/pressure operating performance for manual operated valves, in accordance with BS EN 1092. It is used to ensure that the pipeline pressure and temperature subjected to the valve during service are within the valve safe working capacity.



- Maximum for valves DN8 to DN50 rubber diaphragms
- Maximum for valves DN65 to DN150 rubber diaphragms
Maximum for Valves DN8 to DN100 (0.25" to 4") PTFE and Modified PTFE Diaphragms
- Maximum for Valves DN150 (6") PTFE and Modified PTFE Diaphragms

Grange Road
Cwmbran, Gwent, UK.
NP44 3XX
Phone: +44 1633 486666
Fax: +44 1633 486777
www.cranecpe.com

Crane ChemPharma & Energy, SAUNDERS[®]

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Pressure / Temperature Equivalent (for Saturated Steam only)

Gauge Pressure				Approx. Temperature	
ib/in2 (PSI)	Kg/cm2	bar	kPa	°C	°F
0	0.0	0.0	0.0	100	212
5	0.4	0.3	34.5	109	227
10	0.7	0.7	68.9	115	239
15	1.1	1.0	103.4	121	250
20	1.4	1.4	137.9	126	259
25	1.8	1.7	172.4	131	267
30	2.1	2.1	206.8	135	274
35	2.5	2.4	241.3	138	281
40	2.8	2.8	275.8	142	281
45	3.2	3.1	310.3	145	292
50	3.5	3.4	344.7	148	298
55	3.9	3.8	379.2	150	303
60	4.2	4.1	413.7	153	307
65	4.6	4.5	448.2	156	312
70	4.9	4.8	482.6	158	316
75	5.3	5.2	517.1	160	320
80	5.6	5.5	551.6	162	324
85	6.0	5.9	586.1	164	328
90	6.3	6.2	620.5	166	331
95	6.7	6.6	655.0	168	335
100	7.0	6.9	689.5	170	338
110	7.7	7.6	758.4	173	344
120	8.4	8.3	827.4	177	350
130	9.1	9.0	896.3	180	356
140	9.8	9.7	965.3	183	361
150	10.5	10.3	1034.2	186	366

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