Vacuum Relief Valve
End of Line, Spring Loaded

Model No : 193

ATEX approved

Storagetech™'s Model 193 Top Mounted, Spring Loaded Vacuum Relief Valve is designed to protect the tank from excessive internal pressure during operation.

Product Description

Storagetech™'s Model 193 Vacuum Relief Valve is designed to protect the tank from excessive under pressurisation during operation. The spring-loaded pallet and diaphragm assembly is held tightly against a seal to prevent the loss of vapour to atmosphere in the closed position. As the internal pressure in the tank decreases, due to product empting or vacuum development, the set pressure is reached, accordingly, the diaphragm shall be opened and charge the gas into the tank. Model 190 set vacuum can be arranged as per storage tank requirements and the valve will reseat when internal pressure returns to above set pressure.

Storagetech Valves Activated as close as to set pressures, less than 10% of set pressures, ensuring accurate pressure management and isolate emission losses perfectly.

Key Features

- Easy to install. Do not need a special tool or experience.
- Light weight construction
- Quick and easy to install, inspect and clean
- Any grade materials are available.
- Has stainless steel pallets
- Large weatherhood provides maximum airflow
- Internal materials are resistant to winter conditions.
- Special designs can be achiveable upon request to meet individual specifications
- Vacuum and relief cases can be managed effectively as per the set requirements of bulk storage tank.
- Super Duo technology provides extra curves and perfect seating with zero leakage.
- Set values can be arranged as per the site conditions, no need supervising.
- Diaphragm is manufactured from PTFE material to prevent possibility of ice formation and sticky residues hindering the valve from opening, while the pallet assembly moves freely on guide posts.
- Design, manufacturing and test according to EN ISO 80079-36.
- PTFE, XYLAN, Rubber lining,etc. coating options are available.
- Protected by a weather hood and stainless mesh screen to prevent ingress of pollution that might obstruct the opening.
- ANSI, DIN, JIS, API,etc. any special end connections are available
- Breathing requirements are fulfilled according to API 2000 7th Edition.
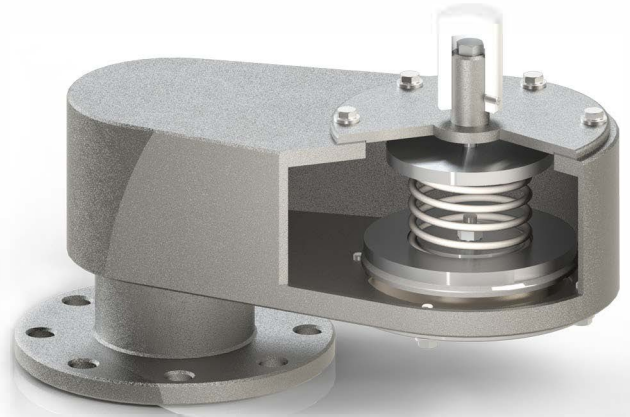
Setting Range

**Vacuum** Spring-loaded -35 mbar and -800 mbar (-14 inch W.C. and -320 inch W.C.)

*Different settings can be applicable as per request

Ambient temp. -20°C to +60°C

Construction

Standard Sizes	2" to 12" (DN50 to DN300) - Further sizes are applicable upon request.
Flanges	ANSI, DIN, JIS, BSP
Body	Carbon Steel, Stainless Steel or Aluminium
Seals	Klingrit, Nitrile, Viton, PTFE
Pallet	Stainless Steel AISI 304/316
Springs	Stainless Steel
Paint finish	1.Customer Specification
	2.Powder Coating, Colour RAL 9006
	3.Expoxy Paint, Colour RAL 9006
	4. PTFE Coating
ATEX Cert.	Ex II 1/2 G c II B

Weight and Dimensions
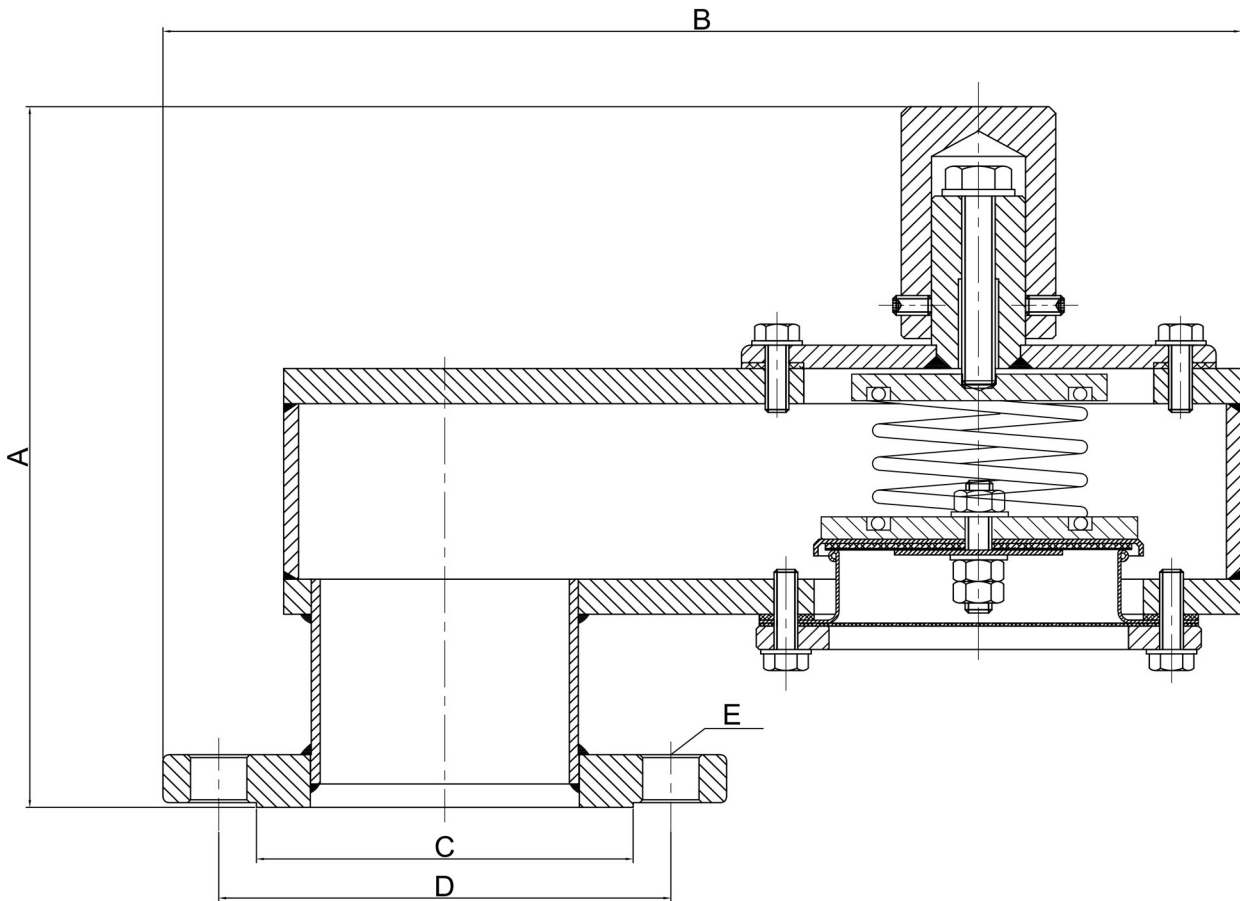
SIZE		A	B	C		D		E		Total Weight (kg)
NPS	DN			ANSI 150# RF	PN 16	ANSI 150# RF	DN	ANSI 150# RF	DN	
2"	50	200	271	Ø92,1	Ø102	Ø120,6	Ø125	Ø19x4	Ø18x4	9
3"	80	219	349	Ø127	Ø138	Ø152.4	Ø160	Ø19x4	Ø18x8	15
4"	100	280	446	Ø157,2	Ø158	Ø190,5	Ø180	Ø19x8	Ø18x8	23
6"	150	282	616	Ø215,9	Ø212	Ø241,3	Ø240	Ø22,2x8	Ø22x8	32
8"	200	329	751	Ø269,9	Ø268	Ø298,4	Ø295	Ø22,2x8	Ø22x12	57
10"	250	405	871	Ø323,8	Ø320	Ø362	Ø355	Ø25,4x12	Ø26x12	77
12"	300	441	997	Ø381	Ø378	Ø431,8	Ø410	Ø25,4x12	Ø26x12	110

Flow Capacity Table

Vacuum Capacity Graphic

Pressure (mmWC)

875	
825	
775	
725	
675	
625	
575	
525	
475	
425	
375	
325	
275	
225	
175	
125	
75	
25	

2"   3"   4"   6"   8"   10"   12"

400   1200   2000   4000   8000   16000   25000

Maximum Flow Capacity (m³/h)
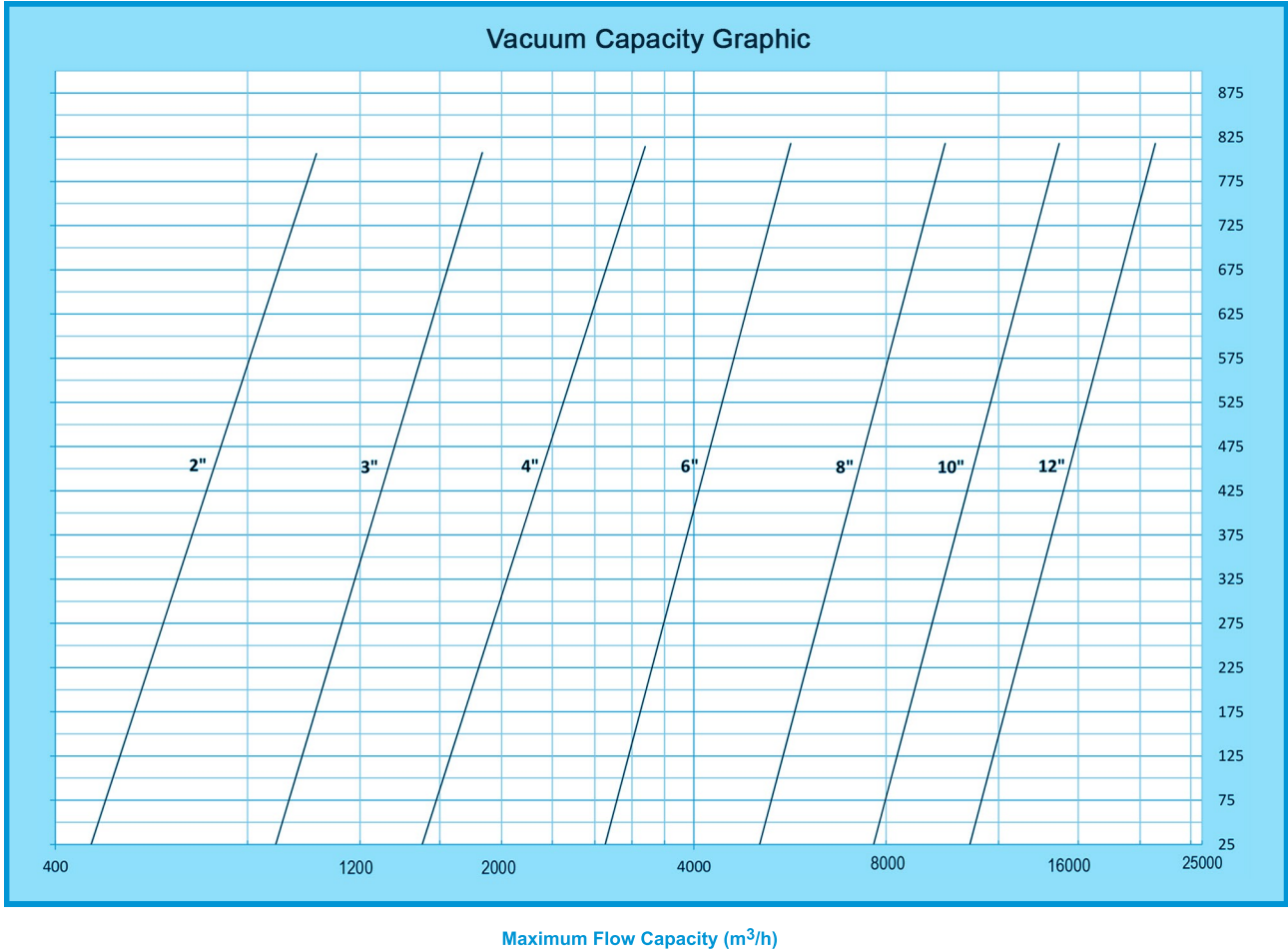
Flow Capacity Table

| VACUUM RELIEF CAPACITIES [m3/h] - UNDERPRESSURE SPRING													
	2"		3"		4"		6"		8"		10"		12"	
mbar(g)	20%	40%	20%	40%	20%	40%	20%	40%	20%	40%	20%	40%	20%	40%
40	556	587	1031	1090	1813	1915	3138	3315	5475	5785	8260	8728	11686	12347
50	567	599	1052	1112	1849	1954	3200	3381	5584	5900	8425	8902	11920	12594
60	578	611	1073	1134	1886	1993	3264	3449	5696	6018	8594	9080	12158	12846
70	590	623	1095	1156	1924	2032	3330	3518	5810	6139	8766	9262	12401	13103
80	602	636	1116	1180	1962	2073	3396	3588	5926	6261	8941	9447	12649	13365
90	614	648	1139	1203	2001	2115	3464	3660	6045	6387	9120	9636	12902	13632
100	626	661	1162	1227	2041	2157	3533	3733	6165	6514	9302	9829	13160	13905
120	639	675	1185	1252	2082	2200	3604	3808	6289	6645	9488	10025	13423	14183
140	651	688	1208	1277	2124	2244	3676	3884	6415	6778	9678	10226	13692	14467
160	664	702	1233	1302	2166	2289	3750	3962	6543	6913	9872	10430	13966	14756
180	678	716	1257	1328	2210	2335	3825	4041	6674	7051	10069	10639	14245	15051
200	691	730	1282	1355	2254	2381	3901	4122	6807	7192	10270	10852	14530	15352
240	705	745	1308	1382	2299	2429	3979	4204	6943	7336	10476	11069	14820	15659
280	726	767	1347	1424	2368	2502	4099	4331	7152	7556	10790	11401	15265	16129
300	748	790	1388	1466	2439	2577	4222	4460	7366	7783	11114	11743	15723	16613
350	770	814	1429	1510	2512	2654	4348	4594	7587	8017	11447	12095	16195	17111
400	793	838	1472	1556	2587	2734	4479	4732	7815	8257	11791	12458	16681	17625
450	817	864	1516	1602	2665	2816	4613	4874	8049	8505	12144	12832	17181	18154
500	842	889	1562	1650	2745	2900	4751	5020	8291	8760	12509	13217	17696	18698
550	875	925	1624	1716	2855	3016	4941	5221	8622	9110	13009	13745	18404	19446
600	910	962	1689	1785	2969	3137	5139	5430	8967	9475	13529	14295	19140	20224
650	947	1000	1757	1856	3088	3262	5345	5647	9326	9854	14071	14867	19906	21033
700	985	1040	1827	1931	3211	3393	5558	5873	9699	10248	14633	15462	20702	21874
750	1024	1082	1900	2008	3340	3529	5781	6108	10087	10658	15219	16080	21530	22749
800	1065	1125	1976	2088	3473	3670	6012	6352	10490	11084	15828	16723	22392	23659

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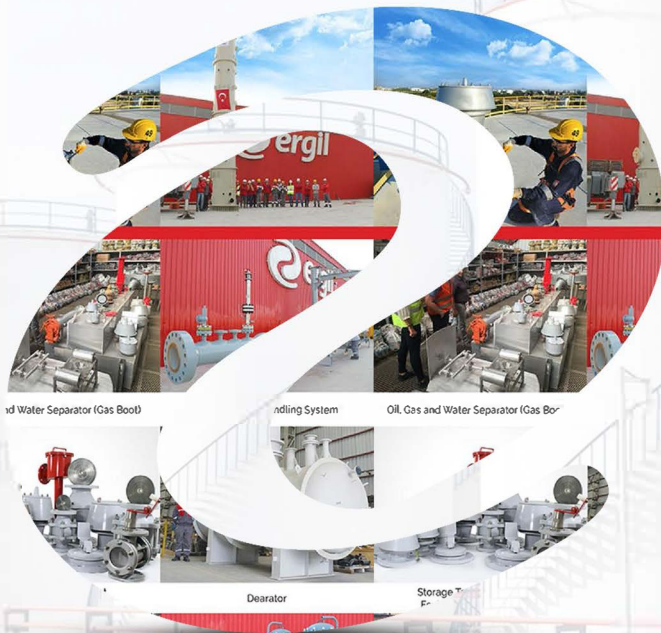
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