REQUIRED VALVE CAPACITY FOR PRESSURE VESSELS

The ANSI/ASHRAE 15-1994 Safety Code give the following formula for determining the necessary relief valve capacity for a given pressure vessel. The minimum required discharge capacity of the safety relief valve shall be: C = 13.1(f)(D)(L) where:

Relief Valve Capacity Formula	
C	= Minimum required discharge capacity of the relief valve in SCFM of AIR
13.1	= Constant to convert AIR, LB/MIN to SCFM
f	= Factor dependent upon kind of refrigerant:
	Ammonia (Refrigerant 717) f = 0.5
	Refrigerant 12, 22, & 500 f = 1.6
D	= Outside Diameter of vessel in ft.
L	= Length of vessel in ft.

SIZES and WEIGHTS

The sizes below are normal for cast surfaces. The weight is approximate for the median pressure setting spring unit used.

Size and Weight Specifications											
	800[2], 801[2], 800SS[2], 801SS[2]	**800QR[2], 800QRW[1]**	**800D, 801D, 801DHC, 803**	**803QC**	**812 & 813**	**804, 804R**	**814**	**805, 805R**	**815**	**CS5602A**	**CS5602B**
Inlet Port FNPT	1/2”	1/2”	1/2”	1/2”	1/2”	3/4”	3/4”	1”	1”	1/2”	1/2”
Outlet Port FNPT	3/4”	3/4”	3/4”	3/4”	1”	1”	1 1/4”	1 1/4”	1 1/2”	3/4”	1”
L—Inlet Pipe C/L to Outlet Face	1.1”	1.3”	1.7”	1.25”	1.7”	2.0”	2.0”	2.4”	2.4”	2.1”	2.1”
M—Back of Body to Outlet Face	2.2”	2.4”	2.8”	2.5”	2.8”	3.3”	3.3”	3.8”	3.8”	3.4”	3.4”
N— Outlet Pipe C/L to Top of Cap	3.2”	3.2”	3.4”	3.6”	3.4”	4.0”	4.0”	4.9”	4.9”	4.1”	4.1”
P—Outlet Pipe C/L to Inlet Face	2.8”	2.8”	1.8”	1.9”	1.8”	2.0”	2.0”	2.4”	2.4”	2.7”	2.7”
Weight approx. (LBS)	3.2	3.8	3.2	4.4	3.2	5.3	5.3	7.9	7.9	6.25	6.2

[1] Socket Weld instead of NPT

[2] MNPT inlet port