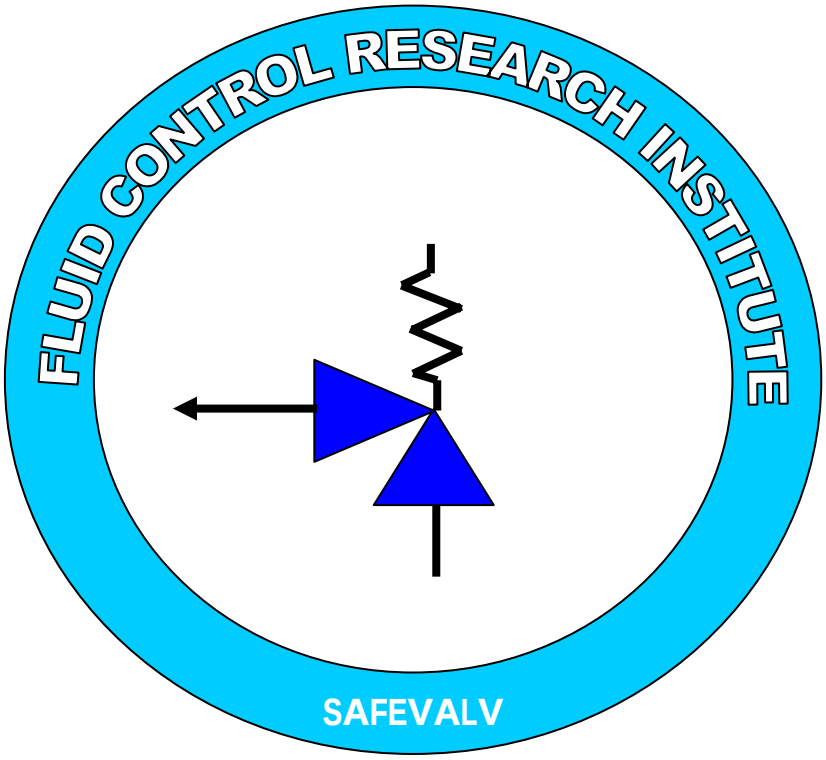
एफ.सी.आर.आई.

FLUID CONTROL RESEARCH INSTITUTE

SAFEVALV 1.0

A SOFTWARE FOR SAFETY RELIEF VALVE SELECTION AND SIZING



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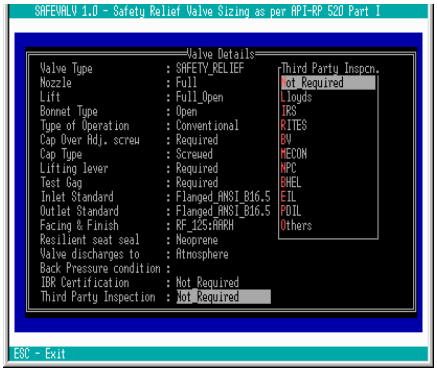
SCOPE

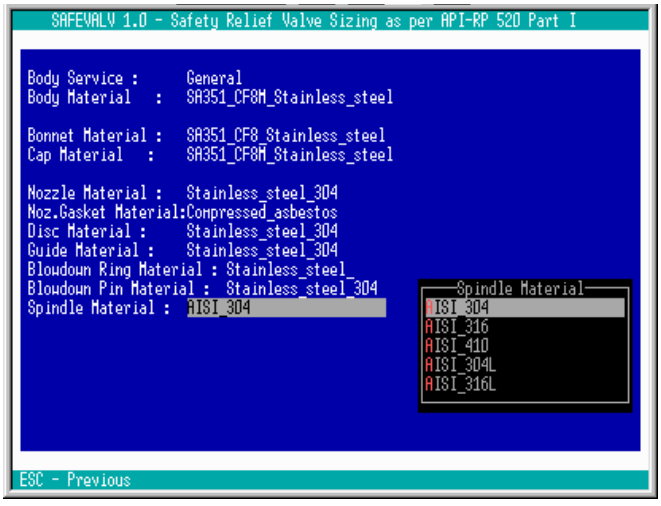
The purpose of a safety relief valve is to discharge a given amount of vapour, gas or liquid, while preventing the pressure increase exceeding a predetermined level. Therrefore it is imperative that the sizing of the safety relief valve is done with utmost care and caution. It is here that SAFEVALV comes handy, as it helps you size the valve as per API standard giving you fast and accurate results.

STANDARD FEATURES

Safevalv is a user-friendly software using which the user is able to select the appropriate valve, which meets technical performance specifications. Very little help is required to run the program, however a complete instruction manual is included. Inputs are through easy pull-down or popup Menus. Error traps are provided to ensure validity of data.



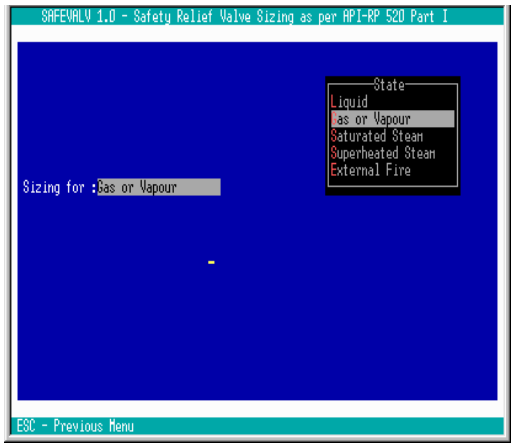
The Valve sizing is based on American Petroleum Institute (API) standard RP 520 Part I. The software supports nearly 60 liquids like Acetaldehyde, Acetic acid, Acetone, fresh water, sea water, O-Xylene, etc., and steam. The properties of the above fluids like viscosity / specific gravity / compressibility factor / molecular weight etc. are stored in a database. Option is available for sizing other liquids, gases or vapors also. Safevalv provides a range of choices for the units used and they are readily available by pressing a hot key during data entry. Provision is there to store results in a file on a disk or to print it. The output of the software gives computed valve orifice area, selected valve from the database and its characteristics.
Specification details, type of accessories used and material selection for the valve components are also inbuilt into SAFEVALV.



System Requirements
A PC with DOS version 3.0 or above and 640 KB RAM.

The software is used by Industries like Asian Industrial Valves

Date : -



SAFETY RELIEF VALVE DESIGN AS PER API 520

GENERAL

Customer	:
Our Qtn.No & Date	: -
Tag No	: -
Quantity	: 1.0000

VALVE

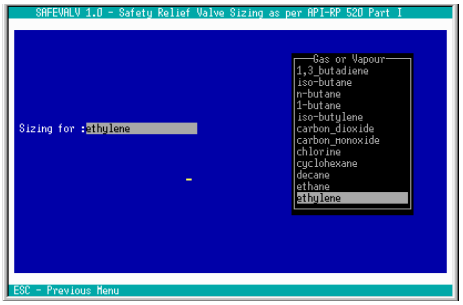
Type	: Spring Loaded
SAFETY / RELIEF	: SAFETY_RELIEF
Nozzle	: Full
Lift	: Full_Open
Bonnet Type	: Open
Type of Operation	: Conventional
Cap Over Adj.Screw	: Required
Cap Type	: Screwed
Lifting Lever	: Required
Test Gag	: Required

END CONNECTIONS

Valve Size(Inlet x Outlet)	: 1.50 inch x 3.00 inch
Flanges ANSI(Inlet x Outlet)	: 300.00 lbs RF x 150.00 lbs RF
Inlet standard	: Flanged_ANSI_B16.5
Outlet standard	: Flanged_ANSI_B16.5
Facing & finish	: RF_125:AARH

MATERIAL

Body & Bonnet	: SA351_CF8_Stainless_steel
Nozzle & Disc	: Stainless_steel_304
Spring	: Carbon_steel
Resilient Seat seal	: Neoprene

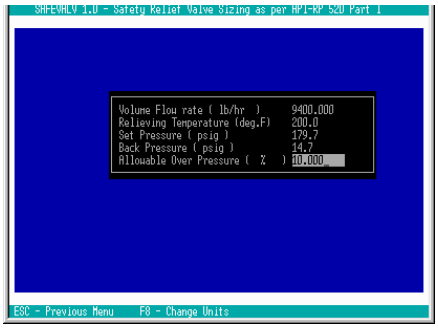


SIZING

Code	: API
Basis	: Gas or Vapour

SERVICE CONDITIONS

Fluid	: ethylene
State	: Gas
Required Flow Rate	: 9400.00 lb/hr
Compressibility factor	: 1.0000
Molecular weight	: 28.0500
Specific Gravity	: 0.9770
Sp. Heat Ratio (CP/Cv)	: 1.2400
Operating Temperature	: 200.00 deg.F
Set Pressure (gauge)(sp)	: 179.70 psig
Operating Pressure (gauge)(0.9 * sp)	: 161.73 psig
Cold Differential Test Pressure (gauge)	: 179.70 psig
Back Pressure (gauge)	: 14.70 psig
Back Pressure Condn.	: Constant
Blow down Pressure	: 10 %
Over Pressure	: 10.00 %
Operating Density	: 10.26 kg/m3
Valve Discharges to	: Atmosphere



ORIFICE SELECTION

Calculated Area	: 0.64562 Sq. inch
Selected Area	: 0.7850 Sq. inch
Orifice Designation	: H
No. of Valves Reqd. for Capacity	: 1.0000
Total Area	: 0.7850 Sq. inch
Actual Flow Rate	: 11429.26 lb/hr
Model No	:
Our Drawing No	:
IBR Certification	: Not_Required
Third Party Inspection	: Not_Required
Total Quantity in numbers	: 1.0000