

PRESSURE RELIEF VALVES X SERIES



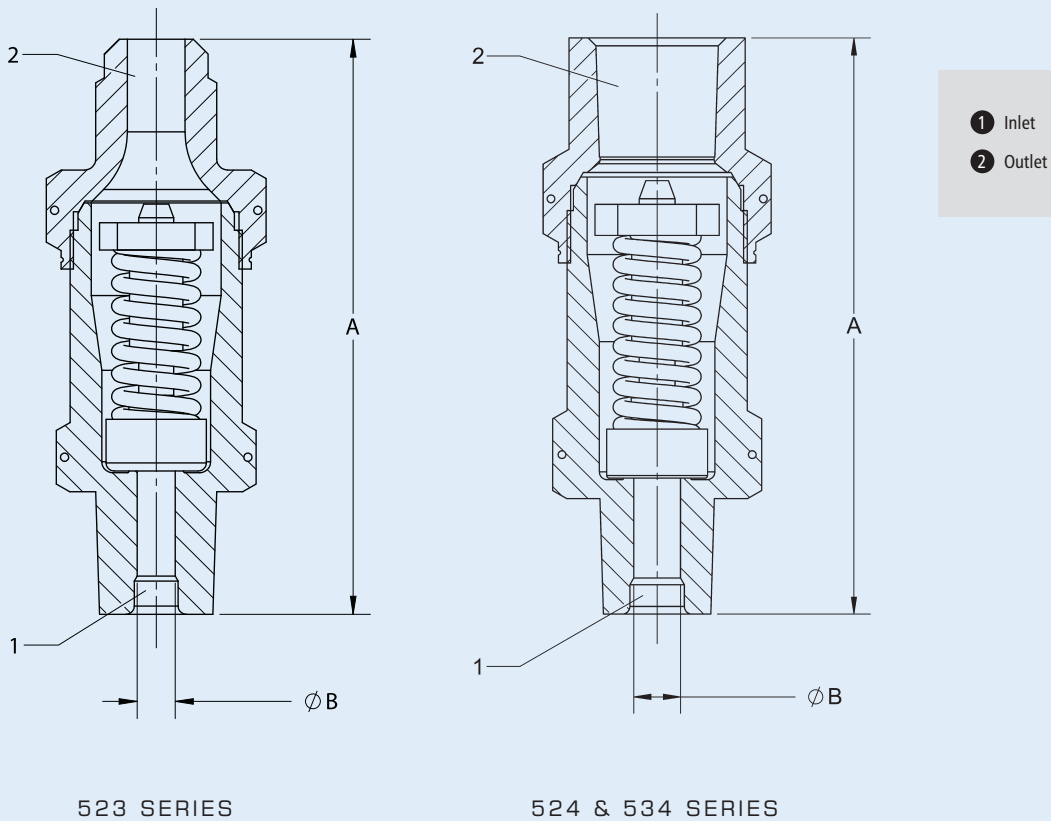
The 'X' Series of Pressure Relief Valves is based on the proven design of the standard range with some enhanced features. The valves are EN ISO 4126 compliant and will reseal within 15% of set pressure following a discharge. Consequently a minimum amount of refrigerant is lost to the atmosphere. The 523 series can also be used at pressures up to 46 bar.

Main features

- In accordance with EN ISO 4126 the valve reseats within 15% of set pressure following a discharge
- High flow capacity
- Fluoroelastomer soft seat material provides excellent sealing characteristics
- Allowable operating temperature = -40°C to +120°C
- Suitable for HFC, HCFC and CO₂ refrigerant gases
- 53 Series also suitable for R717

Part No	Connection Size (inch)		Dimensions (mm)		Flow Area (mm ²)	K _{dr}	Weight (kg)	CE Cat
	Inlet	Outlet	A	ØB				
	5230AX-xx.x BAR	1/4 NPTF	1/2 SAE Flare	94				
5231AX-xx.x BAR	3/8 NPTF	1/2 SAE Flare	94	7	38.48	0.71	0.39	Cat IV
5231BX-xx.x BAR	1/2 NPTF	5/8 SAE Flare	106	7	38.48	0.71	0.42	Cat IV
5232AX-xx.x BAR	1/2 NPTF	3/4 SAE Flare	119	9	63.62	0.76	0.56	Cat IV
5240X-xx.x BAR	1/2 NPTF	3/4 NPTF (female)	111	9	63.62	0.76	0.55	Cat IV
5242X-xx.x BAR	3/4 NPTF	3/4 NPTF (female)	111	9	63.62	0.76	0.58	Cat IV
5340X-xx.x BAR	1/2 NPTF	3/4 NPTF (female)	111	9	63.62	0.76	0.53	Cat IV
5342X-xx.x BAR	3/4 NPTF	3/4 NPTF (female)	111	9	63.62	0.76	0.57	Cat IV

xx.x = set pressure



Standard pressure settings (barg): 10.3, 13.8, 14.0, 16.2, 17.2, 20.7, 24.1, 24.8, 25.0, 25.9, 27.6, 29.3, 31.0, 40.0*, 42.0*, 45.0*, 46.0*
*523 series only.

Valve Capacity Ratings (kg Air/min) @ 20°C.										
Part No	Standard Pressure setting (barg)									
	10.3	14.0	16.2	20.7	24.1	24.8	27.6	31.0	40.0	46.0
526E-CE	N/A	2.9	3.3	4.2	4.9	5.1	5.7	6.4	N/A	N/A
5230A-CE	N/A	4.8	5.5	7.0	8.2	8.4	9.4	10.5	N/A	N/A
5231A-CE										
5231B-CE										
5230AX	4.4	6.0	7.0	8.9	10.4	10.7	11.9	13.4	17.2	19.8
5231AX										
5231BX										
5232A-CE	7.8	10.5	12.2	15.6	18.2	18.7	20.8	23.4	N/A	N/A
5240-CE										
5242-CE										
5340-CE										
5342-CE										
5232AX	7.9	10.7	12.4	15.8	18.4	18.9	21.1	23.7	N/A	N/A
5240X										
5242X										
5340X										
5342X										
5244-CE	14.0	19.0	22.0	28.1	32.8	33.7	37.5	42.1	N/A	N/A
5344-CE										
5344A-CE										
5246-CE	24.4	33.2	38.4	49.1	57.1	58.8	65.4	73.5	N/A	N/A
5345-CE										
5346-CE										

N/A denotes a pressure setting unavailable for this model. See product description pages for max and min available settings.

Valve Capacity Table

Discharge capacities for each PRV model are given in the table for a range of standard pressure settings. This table is intended as a reference guide only. Final selection of a relief valve using the method described in EN13136 is recommended.

All capacities shown in the table have been calculated in accordance with the relief valve capacity calculation outlined in EN13136 and using air at 20°C as a reference medium.

If a conversion from air to refrigerant is required, the following formula can be used:

$$W_r = \frac{W_{air}}{\Gamma_w}$$

Where:-

- W_r = Mass flow of refrigerant, kg/min
- W_{air} = Mass flow of air, kg/min
- Γ_w = Conversion factor

Γ_w factors are presented for a number of common refrigerants. These can be used in conjunction with the table to provide an approximation of valve capacity.

Refrigerant	Γ _w
R-11	0.49
R-12	0.51
R-13	0.46
R-22	0.59
R-23	0.52
R-113	0.43
R-114	0.45
R-123	0.47
R-134a	0.56
R-236fa	0.47
R-245fa	0.50
R-290	0.84
R-404A	0.56
R-407C	0.59
R-407F	0.60
R-410A	0.62
R-500	0.56
R-502	0.52
R-507A	0.55
R-600	0.76
R-717	1.28
R-718	1.28
R-744	0.65

ANSI/ASHRAE standard 15-2007

Current European Refrigeration Standards do not use air capacity for valve selection. The information included here is presented for reference purposes and to enable a comparison between valve models to be easily attained.

In line with current European standards, the valve selection procedure outlined in EN13136 is recommended by Henry Technologies. This method uses the valve flow area, A, and de-rated coefficient of discharge, K_{dr}, which are listed in the dimension tables for each valve.