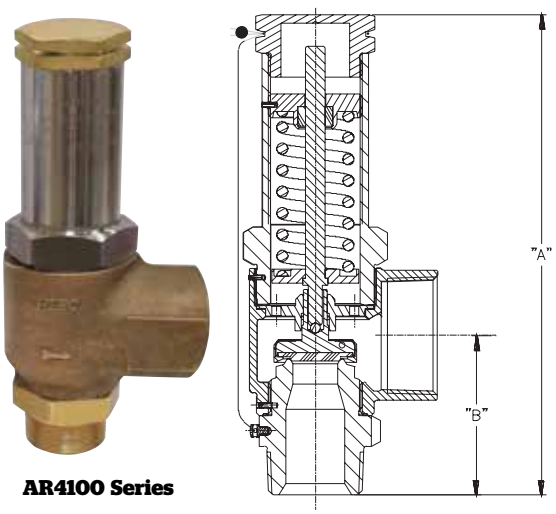
Angle Relief Valve, ASME
AR4100 Series

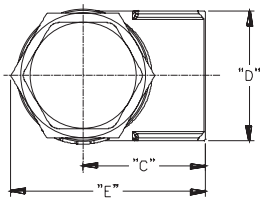
Application
The ASME approved 90° relief valves AR Series, provide precise relief set points which protect cryogenic vessels and piping systems for over-pressurization.

Features
- High flow rates are approved by rigorous testing to ASME BVPC Code Section VIII
- The ninety degree configuration provides relief of gases eliminating direct flow through the spring
- The ninety degree configuration allows easy incorporation to plumbing for output containment
- Bubble tight seat provides 100% shut off when reseating or static mode
- A variety of inlets and pressure settings assure adherence to application requirements
- Temperature Range: -320°F (-196°C) to +165°F (+74°C)
- Cleaned for Oxygen Service per CGA G-4.1
- 100% Factory Tested
- PED, TPED, ASME & CRN Certified

REGO 10 YEAR WARRANTY



AR4100 Series



Materials
Body ..... Bronze ASTM B61
Upper Body..... Stainless Steel ASTM A582
Seat & Stem ..... Brass ASTM B16
Poppet Guide..... Brass ASTM B16
Spring Retainer..... Brass ASTM B16
Adjusting Screw..... Brass ASTM B16
Cap ..... Brass ASTM B16
Ball..... Stainless Steel
Gasket ..... Copper ASTM B152-17
Spring ..... Stainless Steel ASTM A313
Seal .....PCTFE for > 75 psig, Fluorosilicone for ≤ 75 psig

Ordering Information
Fill in the blanks with options below.

Example: AR4106A300

AR	4106	A	300
Angle Relief	Size	Cert Requirements and Pressure Unit	Set Pressure

Certifications
A - ASME, TPED, PED
B - ASME, TPED, PED
N - TPED, PED
: - B Version Assembled in Europe

Set Pressure
A,N - psig
B - barg

Size
04=½"
06=¾"
08=1"
12=1½"

Setpoint tolerance is ± 3% of the set pressure or ± 2 psig whichever is greater.

Note: For psig pressure settings, the part numbers end in A
For barg pressure settings, the part numbers end in B

Air Capacity= m x P
Where:
m = Slope Value
P= Pressure, Absolute @10% overpressure.

Example: Pressure relief valve, ½" inlet x 1" outlet, at 80 psig. Part number AR4104A080.
m = 1.4
P= 80 psig
Air Capacity= 1.4 x [(80psi x 1.10) +14.7]
Air Capacity= 143.8 SCFM (air)

Flow Performance
AR4104A set pressures 75 - 500 capacity is 1.4 SCFM of air per psig of flow pressure.
AR4106A set pressures 75 - 400 capacity is 1.56 SCFM of air per psig of flow pressure.
AR4108A set pressures 75 - 425 capacity is 3.463 SCFM of air per psig of flow pressure.
AR4112A set pressures 80 - 425 capacity is 7.86 SCFM of air per psig of flow pressure.
Flow pressure per ASME is 10% above set pressure or +3 psig (0.2 barg), whichever is greater.

Ordering Information

Part Number	Inlet Inches (mm)	Outlet Inches (mm)	Ends	A Inches (mm)	B Inches (mm)	C Inches (mm)	D Inches (mm)	E Inches (mm)	Set Pressure	ASME Flow Capacity (Air) at 110% Set Pressure	Weight Lbs (Kg)
AR4104A	½" (15)	1" (25)	Thread NPT	6.03" (153.16)	1.97" (50.04)	1.63" (41.40)	1.63" (41.40)	2.49" (63.25)	250 psig	406 SCFM *	2.75 (1.25)
AR4104B									17.23 barg*	690 m³/hr	
AR4106A	¾" (20)		Thread NPT						250 psig*	451 SCFM	
AR4106B									17.23 barg*	766 m³/hr	
AR4108A	1" (25)	1¼" (32)	Thread NPT	6.88" (174.75)	2.37" (60.20)	2.00" (50.80)	1.90" (48.26	3.01" (76.45)	250 psig*	1,003 SCFM	3.75 (1.70)
AR4108B									17.23 barg*	1704 m³/hr	
AR4112A	1½" (40)	2" (50)	Thread NPT	9.64" (244.86)	3.20" (81.28)	2.45" (62.23)	2.60" (66.04)	3.89" (98.81)	250 psig*	2,277 SCFM	8.00 (3.63)
AR4112B									17.23 barg*	3869 m³/hr	

*Various pressure settings are available within listed ranges
Note: For Non-ASME stamp, the part numbers are: AR4104N, AR4106N, AR4108N, AR4112N.