

Cryogenic Relief Valves

CARBON DIOXIDE RELIEF VALVES, ASME UA3149A SERIES

Application

The UA3149A series "pop-type" relief valves are especially designed for use as a secondary relief valve in carbon dioxide transports and stationary storage tanks. The relief valve is designed to protect the tank from excessive over pressure in the event of fire or other emergencies. A small throttling-type primary relief valve must also be provided to control boil-off and maintain tank pressure. Provisions must be made to prevent the accumulation and build-up of water and foreign material in the valve by use of protective cap included.

CARBON DIOXIDE MULTIPOINT VALVES, UA8564A SERIES

Part Number	Start To Discharge Setting	Container Flange Connection	Relief Valve		
			Max Quantity	Part Number	Inlet Connection M. NPT Inches (mm)
UA8564A330	330 psig (22.7 barg)	3"-300#	4	UA3149A330	2-1/2" (63.5)
UA8574A290	290 psig (20.0 barg)	4"-300#		UA3149A290	



UA8564A330

Bolt Stud and Nut Assemblies				
7560-55	1-Bolt Stud and Nut	All RegO Multiports™	Modified 3" - 300# and 4"-ASA 300# Welding Neck Flange	8
7560-56			Manway Cover Plate	

CARBON DIOXIDE RELIEF VALVES, ASME UA3149A SERIES

Part Number	Pressure Setting psig (barg)**	Flow Capacity (SCFM/Air)	Inlet Connection (M.NPT) Inches (mm)	Height Inches (mm)	Wrenching Hex Inches (mm)
UA3149A303	303 psig (20.9 barg)	9,883*	2-1/2" (63.50)	10-1/2" (266.70)	4-1/8" (104.90)
UA3149A330	330 psig (22.7 barg)	10,726*			
UA3149A350	350 psig (24.1 barg)	11,351*			
UA3149A358	358 psig (24.7 barg)	11,601*			



UA3149A330

* Capacity certified by National Board of Boiler and Pressure Vessel Inspectors at 10% above set pressure.

** Other settings not ASME/NB Certified



Cryogenic Relief Valves

CO2 SERVICE EXTERNAL PRESSURE RELIEF VALVE

Designed for use as a secondary relief valve in carbon dioxide (CO₂), transports and stationary bulk plant storage tank applications.

A primary relief valve of the small throttle type configuration shall also be installed to maintain tank pressure and control boil-off. The relief valve is designed to protect the storage vessel from excessive over-pressurization due to fire impingement or other emergency situations. All working components are external to the container connection and away from possible product contamination. Compatible with 2-1/2" FNPT connections and all 2-1/2 FNPT multiple head units including ME903S & ME904S Series Quad Port Manifolds. Optional 2" MNPT tank adaptor available for adapting to standard 2" FNPT tank openings.

Features

- Durable ductile iron base
- All stainless steel internal components
- Seal material; FKM
- Integral break-away feature leaves seat and seal intact
- Supplied with weep hole deflector and hex socket plugs
- 3-1/2"-8 UNC straight outlet thread accepts 3" MNPT pipe away
- Corrosion resistant nickel chrome finish
- Tamper resistant
- 100% factory set and tested



MEV250VM ASME



MEPI70



MEP250

Part Number	Pressure Setting psig	Flow Capacity (SCFM/Air)	Seal Material	Inlet Connection (M.NPT) Inches	Height Inches (mm)	Wrenching Hex Inches (mm)	Service
MEV250VM/303-ASME	303 psig	11,803**	FKM	2-1/2"	10-1/2"	4-1/8"	CO ₂
MEV250VM/330-ASME	330 psig	12,814**					
MEV250VM/350-ASME	350 psig	13563**					
MEV250VM/358-ASME	358 psig	13862**					

* Flow rates are shown as bare relief valves. Pipe-aways will reduce flow.

** Capacity certified by National Board of Boiler and Pressure Vessel Inspectors at 10% above set pressure.

ACCESSORIES

RMI Part No.	Description
MEV250-013	Replacement Vinyl Cap W/Lanyard for MEV250 Series Relief Valves
MEV250-015	Replacement Stainless Steel Weep Hole Deflector for MEV250 Series Relief Valves
MEPI70	External Relief Valve Tank Adaptor Fitting 2-1/2" FNPT x 2" MNPT Plated Ductile Iron
MEP250	Installation/Removal Hex Socket Tool- 1" Drive



Cryogenic Relief Valves

3" CUSTOM FLANGED/CO2 SERVICE FULL INTERNAL PRESSURE RELIEF VALVE

Designed for use in mobile transport CO2 service applications as a primary pressure relief device.

These relief valves incorporate a custom flange configuration designed to be installed into inline piping, between two ASME/ANSI- Class300 pipe flanges.

This captured design prevents damage to the pressure relief valve in rugged over the road applications by ensuring all working components are fully enclosed within the piping system.

Features

- Durable single piece stainless steel body construction
- All stainless steel internal components for maximum corrosion resistance
- Durable HNBR seals for CO2 service
- Large seating surface featuring a double O-Ring design for superior performance and reliability.
- National Board Tested
- ASME-UV Certified
- Custom set pressures available between 300-350psi

RMI Part No.	Setting (PSIG)	Seat Material	Connection	Flow Capacity SCFM/Air ASME @120% Set Pressure
MEV300FIR-3CF/300-ASME	300	HNBR	3" Custom Flange	9,828
MEV300FIR-3CF/320-ASME	320			10,458
MEV300FIR-3CF/330-ASME	330			10,773
MEV300FIR-3CF/350-ASME	350			11,402

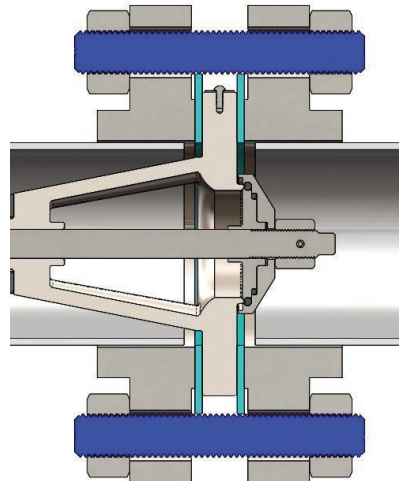


MEV300FIR-3CF

MEV300 GASKET

RMI Part No.	Description
MEV300FIR-3CFGG	Flange Gasket: Garlock3000-Ring Gasket for 3" ASME/ANSI- Class 300 Pipe Flange

* Two gaskets required for installation



Cryogenic Relief Valves

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



ASME AR4100 SERIES

RMI Part No.	Setting (PSIG)	Seat Material	Connection	Flow Capacity SCFM/Air ASME @120% Set Pressure	Flow Capacity SCFM/Air ASME @120% Set Pressure	Flow Capacity SCFM/Air ASME @120% Set Pressure		
AR4104A	1/2" (15)	1" (25)	Thread NPT	250 psig	406 SCFM	2.75 (1.25)		
AR4104B				17.23 barg	690 m ³ /hr			
AR4106A	3/4" (20)		Thread NPT	250 psig	451 SCFM			
AR4106B				17.23 barg	766 m ³ /hr			
AR4108A	1" (25)	1-1/4" (32)	Thread NPT	250 psig	1,003 SCFM	3.75 (1.7)		
AR4108B				17.23 barg	1704 m ³ /hr			
AR4112A	1-1/2" (40)		2" (50)	Thread NPT	250 psig		2,277 SCFM	8 (3.63)
AR4112B					17.23 barg		3869 m ³ /hr	

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Cryogenic Relief Valves

CRYOGENIC GAS RELIEF VALVES, ASME B-19434B SERIES

Application

The B-19434B Series relief valves are suitable for use with oxygen and non-corrosive industrial gases, such as nitrogen, argon and helium.

Features

- The B-19434B design permits the valve to open slightly to relieve moderately excessive pressure
- When the pressure increases beyond a predetermined point, the valve opens to its full discharge capacity to quickly reduce excess pressure
- Pipe-away adapter for venting gas to the outdoors is available (Sold Separately)
- ASME rated, certified
- Cleaned for use in oxygen service per CGA G-4.1
- Bubble tight at 95% of set pressure
- Full flow at 110% of set pressure
- Setpoint tolerance is $\pm 3\%$ of the set pressure or ± 2 psig whichever is greater
- Rated for gas service only
- 100% factory tested
- Temperature range: -60° to 165° F (-51° - 74° C)

Part Number	Pressure Setting	ASME Relief Capacity (CFM/Air)	Inlet Connection (M.NPT) Inches (mm)	Pipe-Away Adapter Part Number
B-19434B235	235 psig (16.2 barg)	476	1/2" (12.7)	*B-19434-5 1/2" F.NPT Outlet (12.70 mm)
B-19434B250	250 psig (17.2 barg)	505		
B-19434B300	300 psig (20.7 barg)	601		
B-19434B350	350 psig (24.1 barg)	711		
B-19434B375	375 psig (25.9 barg)	760		

* Pipe-away adapter sold separately



B-19434B250



B-19434-5

Cryogenic Relief Valves

CRYOGENIC GAS RELIEF VALVES, ASME C-19434B SERIES

Application

The C-19434B series relief valves are designed for use in carbon dioxide service.

Features

- The C-19434B design permits the valve to open slightly to relieve moderately excessive pressure
- When the pressure increases beyond a predetermined point, the valve opens to its full discharge capacity to quickly reduce excess pressure
- Pipe-away adapter for venting gas to the outdoors is available
- ASME rated, certified
- Cleaned for use in oxygen service per CGA G-4.1
- Bubble tight at 95% of set pressure
- Full flow at 110% of set pressure
- Setpoint tolerance is $\pm 3\%$ of the set pressure or ± 2 psig whichever is greater
- Repeatable performance guaranteed by well-proven seat design used in many other RegO relief valves for many years.
- Rated for gas service only
- 100% factory tested
- Temperature range: -40° to 165° F (-40° - 74° C)

Part Number	Pressure Setting (psig)	ASME Relief Capacity (CFM/Air)	Inlet Connection (M.NPT) Inches (mm)	Pipe-Away Adapter Part Number
C-19434B235	235 psig (16.2 barg)	476	1/2" (12.7)	*B-19484-6 1" F.NPT Outlet (25.40 mm)
C-19434B250	250 psig (17.2 barg)	505		
C-19434B280	280 psig (19.3 barg)	555		
C-19434B285	285 psig (19.6 barg)	579		
C-19434B300	300 psig (20.7 barg)	601		
C-19434B325	325 psig (22.4 barg)	649		
C-19434B335	335 psig (23.1 barg)	668		
C-19434B350	350 psig (24.1 barg)	711		
C-19434B375	375 psig (25.9 barg)	760		

* Pipe-away adapter sold separately



C-19434B250



B-19484-6

Cryogenic Relief Valves

CRYOGENIC GAS RELIEF VALVES, ASME PRV19430 & PRV29430 SERIES

Application

The 19430 and 29430 relief valves are designed for oxygen and other industrial gases and for cryogenic service in vapor space. Apply on piping systems, liquid cylinders or mini-bulk cryogenic containers where an ASME relief valve is required.

Features

- A.S.M.E. rated, National Board Certified
- Bubble tight at 95% of set pressure
- Full flow at 110% at set pressure
- Repeatable performance
- 100% factory tested
- Temperatures Range (Teflon Seat) -320° to +165° F (-196°C to +74°C)
(Fluorosilicone Seat) -60° to +165° F (-51°C to +74°C)
- Cleaned and packaged for oxygen service per CGA G-4.1
- Rated for gas service only
- Color coded labels clearly identify pressure setting range
- Tamper resistant
- In liquid service be sure to use with a candy cane riser (Sold Separately)



PRV19434

Part Number	Body and Valves Material	Pressure Setting Range psig (barg)	Inlet MNPT Inches	Wrenching Hex C inches (mm)	Kd value	Orifice Size In2 (mm2)
PRV19432	Brass	15-600 (1.03-41.36)	1/4"	7/8" (22.35)	0.686	.062 (40)
PRV29432	Stainless Steel					
PRV19433	Brass		3/8"			
PRV29433	Stainless Steel					
PRV19434	Brass		1/2"			
PRV29434	Stainless Steel					

Drain hole option cannot be used with pipe-away



Cryogenic Relief Valves

CRYOGENIC GAS RELIEF VALVES, NON-ASME 9400 SERIES

Application

9400 series relief valves are specifically designed for vapor line safety relief applications and cryogenic liquid containers.

Features

- Cleaned and packaged for oxygen service per CGA G-4.1
- Bubble tight at 95% of set pressure • Color coded labels clearly identify pressure setting range
- Tamper resistant
- Adapters provide standard pipe thread connections for venting gas to the outdoors • Repeatable performance
- 100% factory tested
- Temperature Range (Teflon Seat) -320° to +165° F (-196°C to +74°C) (Fluorosilicone Seat) -60° to +165° F (-51°C to +74°C)
- Rated for gas service only
- In liquid service be sure to use with a candy cane riser (Sold Separately)
- Setpoint tolerance $\pm 3\%$

Style	Size	Body and Valves Material	Pressure Setting Range psig (barg)	Inlet MNPT Inches (mm)	Height Inches (mm)	Wrenching Hex inches (mm)	Kd value	Orifice Size In2 (mm2)	Pipe-Away Adapter P/N	Pipe-Away Outlet FNPT Inches (mm)
PRV	9432	Brass	10-600 (0.68-41.36)	1/4" (6.35)	2.6" (66.04)	7/8" (22.35)	0.686	.062 (40)	B-9412-2	3/8" (9.65)
SS		Stainless Steel		SS9412-4					1/2" (6.35)	
PRV	9433	Brass		3/8" (9.65)	2.8" (71.12)				B-9412-2	3/8" (9.65)
SS		Stainless Steel		SS9412-4					1/2" (6.35)	
PRV	9434	Brass		1/2" (12.70)	2.8" (71.12)				B-9412-4	1/2" (6.35)
SS		Stainless Steel		SS9412-4	1/2" (6.35)					
B-	9425	Brass	20-300 (1.37-20.68)	3/4" (19.05)	3.4" (86.36)	3.4" (86.36)	0.894	.42 (271)	B-3131-10	1" (25.4)
	9426		60-300 (4.13-20.68)	1" (25.4)	5.3" (134.62)	5.3" (134.62)	0.986	.62 (400)	B-3132-10	1-1/4" (31.75)

Drain hole option cannot be used with pipe-away



B-9412-4



PRV9432T-230



SS9432T-230



Cryogenic Relief Valves

REGO® - BULK VESSEL SAFETY ASSEMBLY - RELIEF VALVE & DIVERTER DA6200 SERIES

Application

RegO® provides a complete unitized solution for pressure relief devices assembled in a factory setting ready for attachment to cryogenic bulk tanks. Ideal for OEM applications where prefabricated assemblies are favored to streamline construction. Excellent for protecting bulk liquid vessels, transport trailers, industrial pipelines and LNG systems.

Features

- High flow rates complement our AR series pressure relief valves and burst disks
- Valve side selection is accomplished with a heavy-duty control arm clearly labeled for positive isolation
- RegO® needle valves accessorize for easy bleed of gas before removing pressure relief devices
- Inlet pipe factory installed for easy assembly
- Pressure Rating: 600 psig (41.37 barg) MAWP
- Temperature Rating: -320°F (-196°C) to +165°F (+74°C)
- Oxygen cleaned per CGA G-4.1
- Packaged ready for installation
- PED Certified CE
- Copper inlet stubs available for DA6206CA



DA6206A

DR6208

Part Number*	Inlet Inches (DN)	Outlet Inches (DN)	Connection Type
DA6206AXXX	1" (25)	3/4" (20)	Thread NPT
DA6208AXXX	1-1/2" (40)	1" (25)	

* Include pressure setting in part number

Cryogenic Relief Valves

REGO® - RELIEF DEVICE DIVERTER (3-WAY) VALVE DR6100 SERIES

Application

The DR Diverter Valve Series provides a simple solution for the isolation of pressure relief devices during routine change out of a relief valve and burst discs without evacuating the vessel. Excellent for protecting bulk liquid vessels, transport trailers, industrial pipelines, and LNG systems.

Features

- High flow rates complement our AR series pressure relief valves.
- Valve side selection is accomplished with a heavy-duty control arm clearly labeled for positive isolation
- RegO® needle valves accessorize for easy bleed of gas before removing pressure relief devices
- Fitted with threaded top Relief Valve ports and bottom Burst Disk connections
- Pressure Rating: 600 psig (41.37 barg) MAWP • Temperature Rating: -320°F (-196°C) to +165°F (+74°C)
- 100% Factory tested
- Oxygen cleaned per CGA G-4.1
- PED Certified
- Stainless Steel inlet stub available, add the letter P in the end of the part number to request this option

Part Number	Inlet Inches (DN)	Outlet Inches (DN)	Connection Type	Weight Lbs (Kg)	Open Port	C v (Kv)
DR6108	1" (25)	3/4" (20)	Thread NPT	10 (4.50)	Right	13.3 (11.50)
					Left	
					Both	
DR6112	1-1/2" (40)	1" (25)	Thread NPT	28 (12.70)	Right	18.8 (16.26)
					Left	
					Both	
DR6113	1-1/2" (40)	1-1/2" (40)	Thread NPT	30 (13.60)	Right	22.6 (19.54)
					Left	
					Both	



DR6108

DR6112



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