

## Pressure & Vacuum Relief Valve

### Model: MDRV

#### Applications

- Oil and gas
- Chemical/petro chemical
- Pressure vessels in various industries

#### Special features

- 1 year warranty
- Positive pressure adjustable from 2 ... 1034 mbar
- Negative pressure adjustable from -2 ... -820 mbar
- Sizes available 2" ... 12" (DN50...DN300).
- Designed and tested according to API 2000

#### Description

Low Pressure Relief Valves MDRV are designed to control and stabilize the upstream pressure ( $p_1$ ) in systems operating with protective or inert gases. These valves ensure reliable pressure relief while maintaining a controlled process environment, preventing the ingress of atmospheric air into sensitive process systems.

The MDRV

series is engineered for high operational reliability, long service life, and minimal maintenance requirements. Their robust design supports continuous operation in demanding industrial environments while contributing to environmental protection, efficient resource utilization, and reduced emission levels.

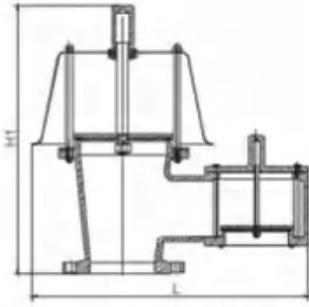
In many industrial processes, protective or inert gases such as Nitrogen (N<sub>2</sub>) are used to create an effective isolation layer between the process medium and the surrounding atmosphere. This inerting function prevents the formation of hazardous or explosive mixtures that could result from the interaction between hydrocarbons and atmospheric oxygen. Additionally, it avoids undesirable chemical reactions between atmospheric oxygen, humidity, and the processed materials, thereby protecting product integrity and ensuring consistent product quality.

Low Pressure Relief Valves MDRV are particularly suitable for blanketing and inerting applications in chemical, pharmaceutical, and related process industries. Typical installations include reactors, centrifuges, storage tanks, and pressure vessels where pressure control and atmospheric isolation are required.

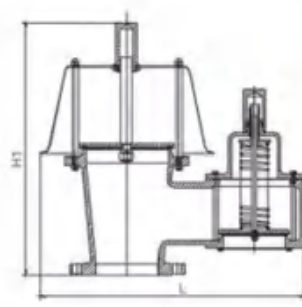
For optimal system performance, MDRV valves are commonly installed in combination with Low Pressure Reducing Valves. Integrated or combined units that provide both pressure regulation and pressure relief functions are available upon request.



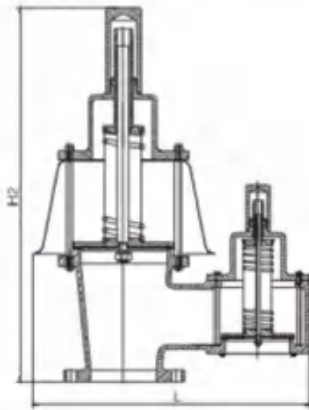
model MDRV10 - MDRV20 Pressure/Vacuum Relief Valve is designed for use on atmospheric and low-pressure storage tanks, vents to atmosphere. The primary function is to protect tanks from damage, deformation, and minimize emission to the environment as well as loss of product due to evaporation.



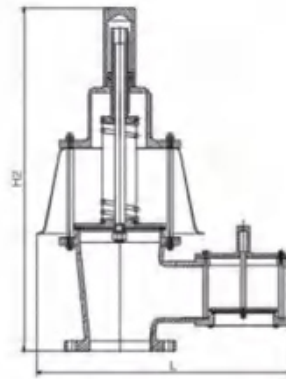
MDRV 10, MDRV20 Weight loaded



MDRV11,MDRV21 Vacuum Spring loaded



MDRV12, MDRV22 Pressure/Vacuum Spring Loaded



MDRV13,MDRV23 Pressure Spring Loaded

Sizes available: 2"-12" (DN50-DN300).

The Model MDRV10 series outlet ports are the same size as the inlet.

The Model MDRV20 series outlet ports are one pipe size larger than the inlet flange to optimize flow capacity. Vent to atmosphere.

The weather hood and cover are easily removable for inspection and maintenance.

Protective screens are provided at the pressure and vacuum ports to prevent the entry of foreign matter.

The flame arrester, inlet pipe, steam jacket, blowing hole, lining, or humidity absorber are available as options upon request.

Designed and tested according to API 2000.

The flanges comply with ANSI B16.5, EN 1092, or JIS standards.

Available materials: Aluminum, Carbon Steel, Stainless Steel, and special materials upon request.

## Setting pressure

Model	MDRV10&20	MDRV11&21	MDRV12&22	MDRV13&23
Set Pressure (mbar)	2 ... 69	2 ... 69	69 ... 1034	69 ... 1034
Set Vacuum (mbar)	-2 ... -43	-43 ... -820	-43 ... -820	-02 ... -43

## MDRV 10,11,12,13 Dimensions (mm)

Nominal Size (inch)	2"	3"	4"	6"	8"	10"	12"
(mm)	DN50	DN80	DN100	DN150	DN200	DN250	DN300
L	301	368	416	525	675	824	967
Width	160	200	248	290	390	488	584
H1	290	352	393	490	622	746	876
H2	394	422	505	636	870	1030	1230

## MDRV 20,21,22,23 Dimensions (mm)

Nominal Size (inch)	2"	3"	4"	6"	8"	10"	12"
(mm)	DN50	DN80	DN100	DN150	DN200	DN250	DN300
L	322	405	473	620	770	912	1075
Width	200	248	290	390	488	584	680
H1	335	378	466	613	701	830	956
H2	403	490	615	860	985	1182	1225

“MADECO Company is recognized as one of the leading and premier manufacturers of safety valves in Canada. The foundation of our design and production processes lies in the utilization of cutting-edge equipment and state-of-the-art global technologies. Leveraging international standards, MADECO’S products have secured a prestigious position and extensive market presence across strategic industries, including oil and gas, petrochemicals, food and beverage, pharmaceuticals, steel, and various other industrial sectors.”



**MDRV Industrial Pressure /Vacuum Relief Valve**

ORDERING CODE	Example: MDRV	10	S	A	G	Note
<b>Model</b>						
10 - MDRV 10		10				
11 - MDRV 11						
12 - MDRV 12						
13 - MDRV 13						
20 - MDRV 20						
21 - MDRV 21						
22 - MDRV 22						
23 - MDRV 23						
<b>Size</b>						
S - 2" ... 12" (According to customer request)			S			
<b>Flanged Type</b>						
A - ANSI 50LB RF						
P - PN10 RF						
B - PN16 RF						
<b>Body Material</b>						
A - Aluminum				A		
G - carbon steel						
B - 304 Stainless steel						
S - 316L Stainless steel						
M - Monel® 400						
H - Hastelloy						
T - Titanium						
L - Tantalum						
I - Inconel 600						
P - PTFE coated (max. temp 200°C and 1500 PSI)						
F - PTFE coated (max. temp 300°C and 1500 PSI)						
O - Silver						
G - Gold						
C - Customer						
<b>Seat Material</b>						
A - Aluminum						
G - Carbon steel					G	
B - 304 Stainless steel						
S - 316L Stainless steel						
M - Monel® 400						
H - Hastelloy						
T - Titanium						
L - Tantalum						
I - Inconel 600						
P - PTFE coated (max. temp 200°C and 1500 PSI)						
F - PTFE coated (max. temp 300°C and 1500 PSI)						
O - Silver						
G - Gold						
C - Customer						
<b>Other</b>						



## MDRV Industrial Pressure / Vacuum Relief Valve

ORDERING CODE	Example: MDRV	A	F	WV
<b>Disc Material</b>				
A - Aluminum		A		
G - Carbon steel				
B - 304 Stainless steel				
S - 316L Stainless steel				
M - Monel® 400				
H - Hastelloy				
T - Titanium				
L - Tantalum				
I - Inconel 600				
P - PTFE coated (max. temp 200°C and 1500 PSI)				
F - PTFE coated (max. temp 300°C and 1500 PSI)				
O - Silver				
G - Gold				
C - Customer				
<b>Diaphragm Material</b>				
F - FEP			F	
V - Viton				
B - Buna-N				
M - Metal to Metal				
C - Customer				
<b>Options</b>				
NA - No Option				
WV - With Flame Arrester for EX Type				WV
ST - Steam Jacket				
BA - Blowing Hole				
MV - With Inlet Pipe				
LI - Lining				
OT - Helium leak test				
OC - Calibration test certificate				
OM - Material test certificate				
NH - Stainless steel tag wired to case				
WA - One year warranty				
<b>Other</b>				



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