

Valves for Industrial Refrigeration





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Shut Off Valves

Type CSVA-2 DN15 to DN 40 Type CSVA-4 DN15 to DN 200

■ Shut Off Valves ■ Regulating Valves ■ Strainers ■ Solenoid Valves ■ Level Controllers



Castle Shut off valves for industrial refrigeration, type CSVA-AV, CSVA-ST

Technical Data

Introduction

Refrigerants

Applicable to all common non flammable refrigerants including R717 and non corrosive gases/liquids dependent on sealing material compatability. For further information please see installation instruction for CSVA

Temperature range

Standard version : - 46/+150°C

Pressure range

The valves are designed for max, working pressure CSVA-2 DN-15 to DN-40 : 25 bar (362 psig) CSVA-4 DN 15 to DN 200 : 40 bar (580 psig)

Features

Made of special, cold resistant steel.

Valve cone

The valve cone can be turned on the spindle, thus there will be no friction between the cone and the seat, when the valve is opened and closed.

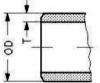
Spindle

Made of polished stainless steel so that PTFE and Graphite gaskets are not damaged.

Sealing

Spindle sealing is done with PTFE and Graphite gaskets assuring 100% sealing.



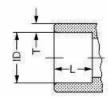


Size	Size in	OD mm	T mm	OD in.	T in.	K _V -angle m ³ /h	K _v -straight m³/h	C _V -angle USgal/min	C _V -straight USgal/mi n
Butt-w	eld ANS	I (B 36.	10 Sch	edule 8	0)	1270	W N		
15	1/2	21.3	3.7	0.839	0.146	7.0	4.9	8.1	5.7
20	3/4	26.9	4.0	1.059	0.158	14.6	10.2	16.9	11.8
25	1	33.7	4.6	1.327	0.181	24.8	17.4	28.8	20.2
32	11/4	42.4	4.9	1.669	0.193	42.6	29.8	49.4	34.6
40	11/2	48.3	5.1	1.902	0.201	45.2	31.6	52.4	36.7

Butt-weld ANSI (B 36.10 Schedule 40)

50	2	60.3	3.9	2.37	0.15	80	65	93	76
65	21/2	73.0	5.2	2.87	0.20	120	97	140	113
80	3	88.9	5.5	3.50	0.22	182	152	211	176
100	4	114.3	6.0	4.50	0.24	313	278	363	323
125	5	141.3	6.6	5.56	0.26	514	470	596	545
150	6	168.3	7.1	6.63	0.28	785	597	911	693
200	8	219.1	8.2	8.63	0.32	1168	1024	1355	1188

Connections SOC



Size mm	Size in	ID mm	T mm	ID in.	T in.	L mm	L in.	K _v -angle m³/h	K _v -straight m³/h	C _V -angle USgal/min	C _V -straight USgal/min
ocket	weld A	NSI (B 1	16.11)		3	0.5		.13	20 00		
15	1/2	21.8	6.0	0.858	0.235	10	0.39	7.0	4.9	8.1	5.7
20	34	27.2	4,6	1.071	0.181	13	0.51	10.0	7.0	11.9	8,1
25	1	33.9	7.2	1.335	0.284	13	0.51	24.8	17.4	28.8	20.2
32	11/4	42.7	6.1	1.743	0.240	13	0.51	42.6	29.8	49,4	34.6
40	13/2	48.8	6.6	1.921	0.260	13	0.51	45.2	31.6	52.4	36.7





Regulating Valves

Type CREG DN-15 to DN-50

■ Shut Off Valves ■ Regulating Valves ■ Strainers

■ Solenoid Valves

Level Controllers



Castle Regulating valves for industrial refrigeration, type CREG-AV, CREG-ST





CREG are angle-way and straight-way regulating valves, which act as normal stop valves in closed position. The valves are designed to meet the strict quality requirements on refrigerating installations and are carefully designed to present favourable flow conditions and accurate linear characteristics.

CREG are equipped with internal backseating enabling the spindle seal to be replaced with the valve still under pressure.

Features

- Applicable to all common non flammable refrigerants including R 717 and non corrosive gases/liquids dependent to sealing material compatibility
- Designed to ensure perfect regulation
- Internal backseating enables replacement of the spindle seal whilst the valve is active, i.e. under pressure
- Easy to disassemble for inspection and possible repair
- Max. operating pressure: CREG: 25 bar g (362 psig) Full temperature range packing gland-46/+150°C

Housing

Made of special, cold resistant steel.

Valve cone

The valve cone can be turned on the spindle, thus there will be no friction between the cone and the seat, when the valve is opened and closed.

Spindle

Made of polished stainless steel so that PTFE and Graphite gaskets are not damaged.

Sealing

Spindle sealing is done with PTFE and Graphite gaskets assuring 100% sealing.



Castle Regulating valves for industrial refrigeration, type CREG-AV, CREG-ST

Design

Housing

Made of special, cold resistant steel.

Connections

Available with the following connections:

- Butt-weld ANSI

DN15-40(B 36.10 Schedule 80)

Butt-weld ANSI

DN 50(B 36.10 Schedule 40)

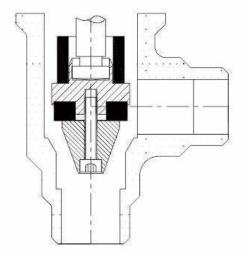
Butt-weld ANSI

Socket weld (ANSI B 16.11)

- DN 15 - 40 (1/2 - 11/2 in.)

Valve cone

The valve cone is designed to ensure perfect regulation.



A cone seal ring provides perfect sealing at a minimum closing momentum.

The valve cone can be turned on the spindle, thus there will be no friction between the cone and the seat when the valve is opened and closed.

Spindle

Made of polished stainless steel so that PTFE and Graphite gaskets are not damaged.

Packing gland - CREG

The "full temperature range" packing gland ensures perfect tightness in the whole range: -46/+150°C

Installation

Install the valve with the spindle up or in horizontal position. The flow must be directed towards the cone.

The valve is designed to withstand high internal pressure. However, the piping system in general should be designed to avoid liquid traps and reduce the risk of hydraulic pressure caused by thermal expansion.

For further information refer to installation instruction for CREG.

Technical data

Refrigerants

Applicable to all common non flammable refrigerants including R 717 and non corrosive gases/liquids dependent on sealing material compability.

Flammable hydrocarbons are not recommended. For further information please contact your local Castle Sales Distributor.

Temperature range

CREG: -46/+150°C

For further information please see installation instruction for CREG

Pressure range

Max. operating pressure: CREG: 25 bar g (362 psig).







Strainers

Type CFIA DN-15 to DN-200

■ Shut Off Valves ■ Regulating Valves ■ Strainers

■ Solenoid Valves ■ Level Controllers



Castle Strainer-type CFIA

Introduction

CFIA filters are a range of angle-way and straight-way filters which are carefully designed to give favourable flow conditions. The design makes the filter easy to install, and ensures quick filter inspection and cleaning.

CFIA filters are used ahead of automatic controls, pumps, compressors etc. for initial plant start-up and where permanent filtration of the refrigerant is required. The filter reduces the risk of undesirable system breakdowns and reduces wear and tear on plant components.

CFIA filters are equipped with a screen mesh of stainless steel, available in sizes 100, 150, 250 and 500µ (microns*), (US 150, 100, 72, 38 mesh*).

Features

- Applicable to all common refrigerants and all noncorrosiv gases/liquids.
- Filter net of stainless steel mounted direct without extra gaskets means easy servicing.
- CFIA filter housing compatible with housings belonging to other Castle products. A compatibility overview can be obtained from local Castle Sales Distributor.
- Mesh is the number of threads per inch.
 μ (microns) is the distance between two threads (1μ = 1/1000 mm).
- CFIA 50-200 (2 8 in.) can be equipped with a magnetic insert for detention of iron particles and other magnetic particles.
- Each filter clearly marked with type, size and performance range
- Housing and bonnet of low temperature steel.
- Temperature range –46 °C /+150°C
- Pressure range: CFIA: 40 bar g (580 psi g)



Technical data

Refrigerants Applicable to all common refrigerants including flammable refrigerants and all non-corrosive gases/liquids. For further information please see installation instruction for CFIA.

Temperature range -46°C/+150°C

Pressure range

Max. working pressure: CFIA: 40 bar g (580 psi g).

Design Connections

Available with the following connections:

- Butt-weld ANSI (B 36.10 Schedule 80), DN 15-40 (1/2-11/2 in.)
- Butt-weld ANSI (B 36.10 Schedule 40),
 DN 50 200 (2 8 in.)

Filter Insert

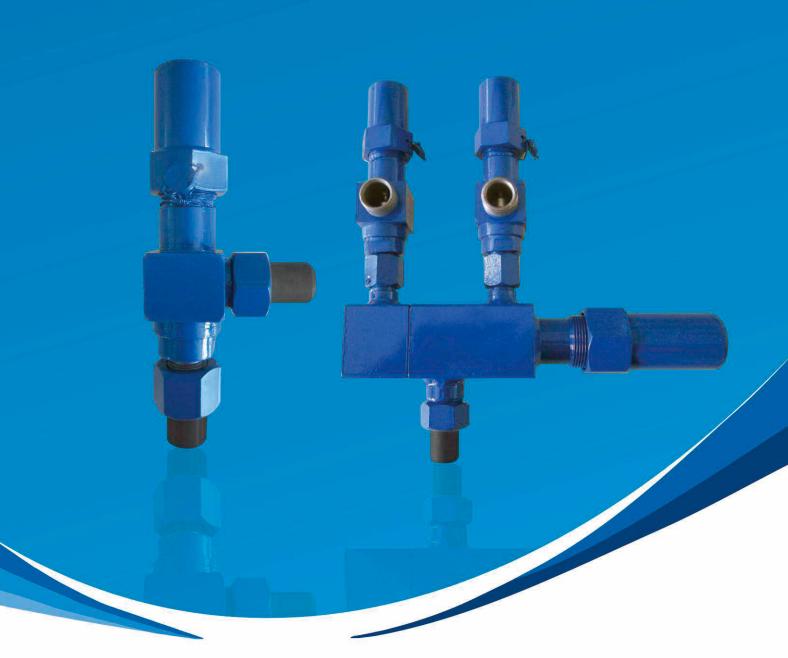
A filter grid and filter net of stainless steel ensure long element life. The filter net offers a very high degree of cleanability.

Housing

Made of special, cold resistant steel.







Safety relief Valves Double Stop Valves

DN 15 To DN25

■ Shut Off Valves ■ Regulating Valves ■ Strainers ■ Solenoid Valves ■ Level Controllers



Castle Safety Relief Valves for industrial refrigeration, type CSRVA



CSRVA 15 - 25 are standard, back pressure dependent safety relief valves in angle-way execution, specially designed for protection of vessels and other components against excessive pressure.

The valve is designed to meet the strict quality demands and safety requirements for refrigeration installations, specified by the international classification societies.

The valve is recommended as an external and internal safety relief valve in refrigeration plants. The spring housing is closed tightly to avoid refrigerant leakage.

The inlet flow diameters of the valves are: 13 mm (½ in.) for CSRVA 15 18 mm (3/4 in.) for CSRVA 20 23 mm (1 in.) for CSRVA 25

The valves can be delivered with set pressures between 10 and 25 bar g (145 and 363 psig).

valves can also be supplied with non-standard set pressures between 10 to 25 bar g (145 to 363 psig) to suit the customer's specific requirement.

Technical data

Applicable for the refrigerants R717 (ammonia, Nh3), HFC, HCFC (e.g. R22, R134a, R404a) and other refrigerants dependent on sealing materials compatibility within a temperature range of –30°C/+100°C

Flammable hydrocarbons are not recommended.

Pressure

Pressure setting range: 10 - 25 bar (145 - 363 psig).the valve is designed for strength test: 40 bar (580psig). Leakage safety: Same as set pressure.

For further information please contact your local Castle Sales Distributor.

Important:

The CSRVA safety relief valve is dependent on the back pressure (if the back pressure is higher than the atmospheric

pressure, the opening pressure will be higher than stated set pressure).

Special circumstances such as vibrations (which should be avoided) and oscillating pressure may

require an increased difference between the operational pressure and the closing pressure.

Pressure Setting:

The operating pressure of the plant should be at least 15% below the set pressure. This allows a perfect re-seating of the safety relief valve after having been activated.

Temperature Range: -30/+100°C



Castle Double Stop Valves for industrial refrigeration, type CDSVA



Double stop valve are 3-way valve, which are designed to meet all industrial refrigeration application requirements.

CDSVA valves are designed specifically for use with double safety valve systems.

The valves are designed to give favourable flow characteristics and are easy to dismantle for servicing. The valve cone is designed to ensure perfect closing, even with minimum torque the valve will close effectively. which permit easy inspection or replacement of safety valves.

Features

Applicable for the refrigerants R717 (ammonia, Nh3), HFC, HCFC (e.g. R22, R134a, R404a) and other refrigerants dependent on sealing materials compatibility within a temperature range of - 40°/ +100°C Flammable hydrocarbons are not recommended.

Each valve type is clearly marked with type, size and performance range.

The valves and caps are prepared for sealing, to prevent operation by un authorised persons, using a seal wire.

Can accept flow in both directions.

Housing and seat housing are made from low temperature steel according to requirements of the Pressure Equipment Directive and other international classification authorities.

Design

Housing and Seat housing

Made from special, cold resistant steel approved for low temperature operation.

Valve cone

A Teflon tightening ring provides perfect sealing with a minimum closing torque.

Spindle

Made of polished stainless steel so that PTFE and Graphite gaskets are not damaged.

Packing gland

The full temperature range packing gland ensures perfect tightness in the whole temperature range: - 40/+100°C The packing gland is equipped with a scraper ring to prevent penetration of dirt and other foreign bodies.

Temperature range: -40/+100°C.

Pressure range: Max. operating pressure: 40 bar g (580

psig)



Castle Overflow valve - Type COFV 20-25



Technical Data

Introduction

Refrigerants

Applicable to HCFC, HFC, R717(Ammonia) and R744 (CO2). For further information please see installation information for COFV

Temperature range

Standard version: -46 / +150°C

Pressure Range

The valve are designed for max. working pressure 40 bar g (580 psig)

Features

Three functions in one valve. The OFV valve combines the functions of an overflow valve, a check valve and a stop valve

COFV are angle-way over flow valves, which have ajustable opening pressure and cover the differential pressure range 2 - 8 bar (29 -116 psi).

The valve can be closed manually, during plant service and have back seating, enabling the spindle seal to be replaced with the valve still under pressure. The valves are especially designed to prevent fluttering due to low velocity. In consequence it is possible to apply the valves with wide fluctuations in capacity demands and maximum performance to part load. A flexible O-ring provides perfect sealing over the seat.

Installation

The valve is designed to resist very high internal pressure, but as to the pipe system in general, hydraulic pressure caused by thermal expansions in entrapped refrigerants should be avoided.



Castle Stop check valves - Type CSCA 15-125 Castle Check valves - Type CCHV 15-125



Technical Data

Introduction

Refrigerants

Applicable to all common non flammable refrigerants including R717 and non corrosive gases/liquids dependent on sealing material compatibility.

Temperature range

Standard version: -46 / +150°C

Pressure Range

The valve are designed for max. working pressure 40 bar g (580 psig)

Features

The valve Designed to open at a very low differential pressure of 0.04 bar (0.58 psig) Designed with a built-in damping chamber preventing valve flutter, due to low refrigerant velocity and low density.

Easy to disassemble for inspection and service Internal back seating enables replacement of

the spindle seal whilst the valve is active in under pressure

Optimal flow characteristics ensuring quick opening to the fully open position.

Housing

Made of special, cold resistant steel.

Valve cone

The valve cone can be turned on the spindle, thus there will be no friction between the cone and the seat, when the valve is opened and closed.

Spindle

Made of polished stainless steel so that PTFE and Graphite gaskets are not damaged.

Sealing

Spindle sealing is done with PTFE and Graphite gaskets assuring 100% sealing.







Check Valves for Ammonia & Fluorinated Refrigerants-CNRVA

Type CNRVA 15 TO 65

■ Shut Off Valves ■ Regulating Valves ■ Strainers ■ Solenoid Valves ■ Level Controllers



Castle Check Valves for industrial refrigeration, type CNRVA



Introduction

Check valve type CNRVA can be used in liquid, suction, and hot gas lines in refrigeration and air conditioning plant with ammonia. CNRVA can also be used in refrigerating systems with fluorinated refrigerants.

When the CNRVA is used in liquid lines where cold thick oil or impurities may be present, it is recommended that the standard spring be replaced by a special spring.

Features

Valve housing made of special, cold resistant steel. Ensures correct direction of flow. Available for 40 bar(580psig) working pressure.

Large range of flanges with connections

Dimensions in accordance with standards

DIN, ANSI, SOC, SA and FPT.

Fitted with damping piston that makes the valves suitable for installatio in lines where pulsation can occur, e.g. in the discharge line from the compressor.

Gaskets

Do not 'contain asbestos.

Valve Cone

 $The \ valve \ cone \ has a \ teflon \ tightening \ ring. \ Teflon \ tightening \ ring \ renders \ perfect \ sealing \ at \ a \ minimum \ closing \ force.$

Technical data

Refrigerants

Can be used for all normal, non-flammable refrigerants, including R 717, and noncorrosive gases / liquids - assuming seals of the correct material are used. For further information please see installation instruction for CNRVA.

Temperature range

-46°C/+150°C

Pressure range

The valve is designed for Max. working pressure: 40 bar g (580 psig).



Castle Liquid Level Indicator for industrial refrigeration

Liquid Level Indicator

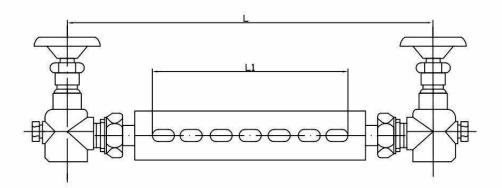
Application: These level indicators are used to display the level of ammonia gas in the system.

Material of construction: Valves are made of steel with a ball for protection incase of failure. The glass is fused to the metal at high temperatures.

Temperature:-40/+125°C

Pressure: Level indicators will work for a max working pressure of 40 Bar.





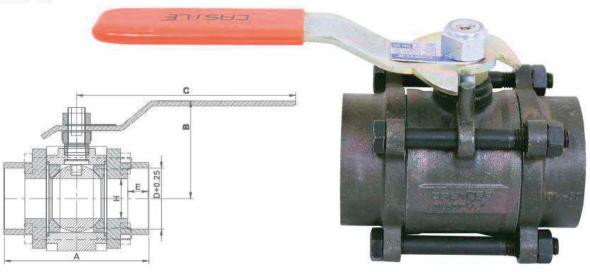
L(mm)	L1(mm)
300	120
450	270
600	420
800	620
1000	820
1100	920
1200	1020



Castle Ball Valves for industrial refrigeration

Ball Valves

DN-15 To DN-125



Application

Petroleum, Petrochemical, Chemical, Refrigeration, air-conditioning and engineering industries. Valves are compatible with Ammonia, CFC, HCFC, Oil, Air, Chemicals, Gas, Acids, Alkalies etc. amongst many other media.

Installation

The three piece design makes the Series C-44 valve the most easily maintainable valve in its type. By removing three body connector bolts and loosening the fourth, the body can be swung away using the fourth bolt as a fulcrum, to carry, out any maintenance on the valve. This feature allows the valve to be online and considerably reduces down time.

Safe Working Pressure: 40 Bar

Temp:-46/+125°C

MATERIA	L SPECIFICATIONS
Name of Part	Carbon Steel valve
Body	ASTM-A352
Body Connector	L.C.C.
Ball	AISI 304 Gr. CF 8
Seat	Virgin PTFE
Stem	Stainless Steel AISI 304
Body Seal	Virgin PTFE
Gland Pancking	DEST COMMON SILVA DECE
Stem Seal	35% Carbon filled PTFE

Model	SCREWED	SOCKE	T-WELD EN	ID (IN MM,	UNLESS SE	PECIFIED)		Weight
DN	INCH	Α	В	С	D+0.25	E	Н	Kg
DN15 (1/2")	1/2" - 5/8"	64	45	122	21.8	9.7	11.2	0.6
DN20 (3/4")	7/8"	75	54	122	27.4	12.7	14.2	1
DN25 (1")	1.1/8"	94	75	148	34.1	12.7	22	1.7
DN32 (1.1/4")	1.3/8"	109	73	182	42.7	12.7	25	2.5
DN40 (1.5")	1.5/8"	118	73	182	49	12.7	32	3.7
DN50 (2")	2.1/8"	127	83	182	61	12.7	38	5
DN65 (2.5")	2.5/8"	145	260	230	77.5	15.9	50	8.5
DN80 (3")	3.1/8"	172	280	230	91	20	63	11.5
DN100 (4")	4.1.8"	185	295	230	117.5	25	72	18
DN125 (5")	5.1/8"	230	295	230	142	25	96	25



Castle Liquid Level Controller and Castle Liquid Level Switch for industrial refrigeration

Liquid Level Controller



Application

While primarily designed for Ammonia, this control is also suitable for R-22 and other non-corrosive liquids that have a specific gravity of 0.5 or more.

The controller is ideal for the control of the operating level of liquid in liquid refrigerant accumulators and separators. Although this is normally done with a solenoid valve, the controller can activate an alarm or a pump or similar device.

Construction

Mechanical Float:

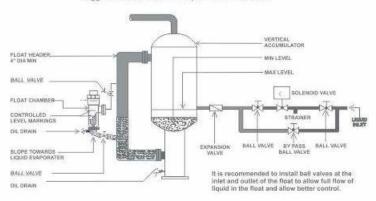
Light deep drawn body, drawn in one piece. Ball & Stem are made from SS. Electronic control box made from ABS in an international size 96X96 housing.

This device consists of two separate units, the float chamber and the electronic controller. The float chamber consists of a housing, float ball, float coil and coil enclosure. The float ball is located inside the housing and moves an attached magnetic stem up or down in an enclosing tube from the top and is protected by the coil enclosure. The construction permits all high voltage connections and wiring to be made at a remote or non-hazardous location.

Gravity equalisation of the liquid level lin the float chamber is a function of the liquid. For fluids having a high viscosity the response time will be slower. The level controller should not be used on water applications.

Safe Working Pressure: 300 psi

Suggested installation for Liquid Level Controller



Liquid Level Switch



Application

While primarily designed for Ammonia, this control is also suitable for R-22 and other non-corrosive liquids that have a specific gravity of 0.5 or more.

The controller is ideal for the control of the operating level of liquid in liquid refrigerant accumulators and separators. Although this is normally done with a solenoid valve, the controller can activate an alarm or a pump or similar device.

Construction

Mechanical Float:

Light deep drawn body, drawn in one piece. Ball & Stem are made from SS.

This device consists of one float chamber with a magnetic operated switch in the top housing. The float chamber consists of a housing, float ball and magnet. The float ball is located inside the housing and moves an attached magnetic stem up or down in an enclosing tube from the top and is protected by the enclosure.

Gravity equalisation of the liquid level lin the float chamber is a function of the liquid. For fluids having a high viscosity the response time will be slower. The level controller should not be used on water applications.

Safe Working Pressure: 300 psi

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Castle Solenoid Valves and Strainers for industrial refrigeration

Solenoid Valves



Application

These valves are for Ammonia duty. The MSVA are pilot operated valves whilst the MDSVA are direct operated solenoid valves.

They are used in many applications such as cold stores, freezers, chilling applications etc.

Installation

These valves must be installed in horizontal positions with the coil housing no more than 45 degrees from the vertical position.

Construction

The valve is made up from various metals. Whilst stainless steel is used for components like stems, plungers, the main body is made from LCC

Safe Working Pressure: 300 psi

Туре	Flanged Connection	Port Size	MOPD PSI		inal Lic onia P					Coil Rating	
			AC	1	2	3	4	5	Type	Volt-Hz	Watts
MDSVA 12	1/2"	0.140	250	8.0	11.2	13.5	16	17.5		230AC 50/60	
MSVA 12	1/2"	0.450	275	68	91	110	131	143	SVC-1		18
MSVA 20	3/4"	0.600	275	75	97	122	145	167			
MSVA 25	1"	0.950	300	119	169	221	241	266		00,00	
MSVA 32	1.1/4"	1.075	300	125	174	225	249	277	SVC-2		
MSVA 40	1.1/2"	1.260	300	275	390	500	550	625			

Strainers



Application

These strainers are specially designed to be installed in conjunction with solenoid valves.

Their mesh is selected so that no particles enter and disrupt the operation of the solenoid valve. For smooth operation of solenoid valves these strainers are mandatory.

Installation

For best results, the strainer is installed right at the inlet of the solenoid valve or as close to it as possible for larger sizes.

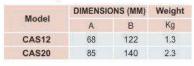
Features

 $retains \, contaminants \, eg. \, Slag, weld \, beads, pipe \, fittings. \\ pressure \, drop \, in significant$

Construction

The material of construction for the body is CI whist for the mesh it is stainless steel.

Safe Working Pressure: 300 psi



Marshar	DIMENSIONS (MM)									Weight	
Model	Α	В	С	D	E	F	G	H	PCD	BOLT SIZE	Kg
CAS25	190	136	42	150		47	58.8	4	80	M12X40	7
CAS32	190	154	42	150		47	58.8	4	80	M12X40	7



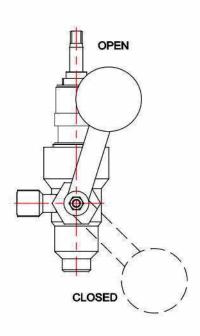


Castle Purge Valves with Counterweights for industrial refrigeration

Purge valves with counterweights

DN 15-20





Design characteristics

Purge valves with counterweights are valves with a normal primary closing system and a secondary closing system operated by the counterweight falling. The normal closing system is designed to provide a seal for a long period. The secondary closing system is a quick but provisional closing, see below the design working pressures.

Secondary closing

	pressure against which the counterweight falling will seal the valve	increase in pressure resistance after closing
DN 15	Max 7.5 BAR	25 BAR
DN 20	Max 7.5 BAR	25 BAR

Adjusting the counterweight

Full opening of the secondary closing system should occur when the counterweight is positioned near "1 o'clock when facing the counterweight side of the valve.

The counterweight position(conical fixing) must be oriented depending on the purge valve fitting position.

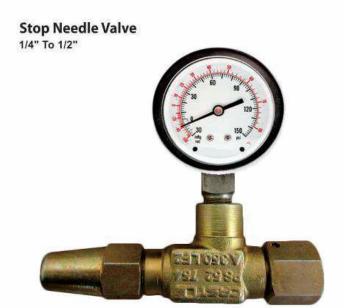
The counterweight should fall down by itself.

Operation

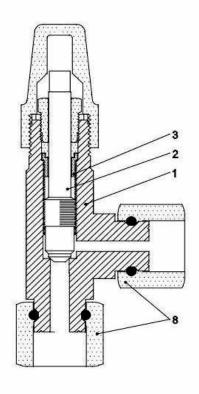
If the primary valve is open, the counterweight is in the high poisition, the purge valve is open. To close the purge valve, let the counterweight fall. The primary closing system can then be operated manually. The cap should be replaced after closing the primary valve.

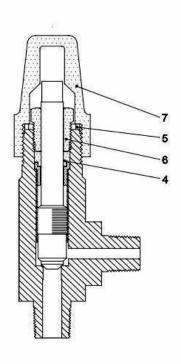


Castle Stop Needle Valves for industrial refrigeration, Type-CSNVA-ST









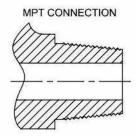
Material Specification

NO.	PART	MATERIAL	GRADE	QTY.
1	HOUSING	STEEL	ASTM A350 LF2, LCC	1
2	SPINDLE	STAINLESS STEEL	S.S.303	1
3	LOCKING RING	STEEL	AISI 1213	1
4	SEALING RING	PTFE	PTFE	1
5	SEALING CAP GASKET	NYLON		1
6	GLAND NUT	STEEL	AISI 1213	1
7	SEAL CAP	STEEL		1
8	FEMALE NUT	STEEL	AISI 1213	2

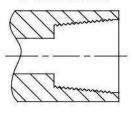


Castle Stop Needle Valves for industrial refrigeration, Type-CSNVA-ST

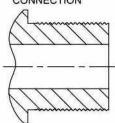
Stop Needle Valve Connections



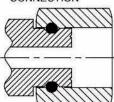
FPT CONNECTION



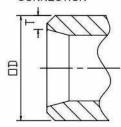
G 1/2" EXTERNAL CONNECTION



G 1/2" INTERNAL CONNECTION



1/2" WELDING CONNECTION



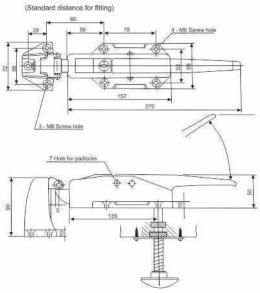
- 1/2" MPT X 1/2" MPT
- 1/2" MPT X 3/8" FPT
- 1/4" FPT X 1/4" FPT
- 3/8" FPT X 3/8" FPT
- 1/4" FPT X 1/4" MPT
- 3/8" FPT X 3/8" MPT
- 3/8" FPT X 1/2" MPT
- 7/16 UNF X 1/4" MPT
- 1/2" EXTERNAL X 1/2" EXTERNAL
- G-1/2" X G-1/2" MANOMETER CONNECTION
- G1/2" EXTERNAL X W1/2" L50 EXTERNAL
- G1/2" EXTERNAL X W1/2" L100 EXTERNAL
- G1/2" EXTERNAL X W1/2" L125 EXTERNAL
- G1/2" EXTERNAL X W1/2" L150 EXTERNAL
- 1/4" FPT X 1/4" MPT L100



Castle Door Latech set with Internal safety release

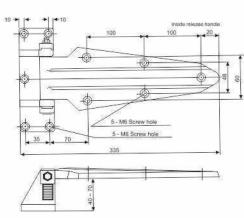






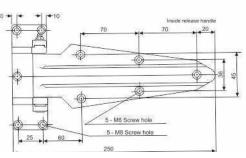
Door hinges CS-1470





Door hinges CS-1450







WARRANTY.

LIMITED WARRANTY AND LIMITATION OF LIABILITY.



All Castle products manufactured by PVR Controls, are under warranty against defects in workmanship and materials for a period of one year from date of shipment from factory. This warranty is in force only when products are properly installed, filed assembled, maintained and operated in use and service as specifically stated in Castle catalogues for normal refrigeration applications unless otherwise approved in writing by PVR Controls.

Defective products or parts therefore returned to the factory with transportation charges prepaid and found to be defective by factory inspection, will be replaced or repaired at PVR Controls's option, free of charge, Ex-factory. Warranty does not cover products that have been altered or repaired in the field or damaged in transit or have suffered accidents, misuse or abuse. Products disabled by dirt or other foreign substance will not be considered defective. This warranty does not cover ant cosmetic issue, such as scratches, dents, marring, fading of colours or discoloration. Repair or change in parts or replacement of parts or products does not extend the warranty.

The express warranty ser forth above constitutes the only warranty applicable to PVR Controls products and is in lieu of all other warranties, expressed or implied. No employee, agent, dealer or any other person is authorised to give any warranties on behalf of PVR Controls nor to assume for PVR Controls any other liability in connection with any of its products.

LIMITATION OF LIABILITY.

PVR Controls's total liability for any and all losses and damages arising out of any cause whatsoever shall in no event exceed the purchase price of the products or parts in respect of which such cause arises, whether such cause be based on theories of contract, negligence, strict liability, trot or otherwise.

In no event is PVR Controls responsible for any consequential or punitive damages or losses of any nature whatsoever. PVR Controls shall not be liable for and buyer assumes any liability for all personal injury and property damage connected with the handling, transportation, possession, further manufacture, other use or resale of the products, whether used alone or in combination with any other products or materials. PVR Controls makes NO other warranty expressed or implied and makes no warranty of merchantability or fitness for any particular purpose.

From time to time buyers might call to ask PVR Controls for technical advice based upon limited facts disclosed to PVR Controls. If PVR Controls furnishes technical advice to the buyer, whether or not at buyer's request, with respect to application, further manufacture or use of the products or parts. PVR Controls shall not be liable for such technical advice or any such advice provided to buyer by any third party and buyer assumes all risk of such advice and results thereof.

NOTICE TO USERS OF PRODUCTS.

The Limited Warranty stated above is a factory warranty to the first purchase of PVR Controls products. Since many users have purchased these products from PVR Controls distributors, the user must within thirty (30) days after user's discovery of what the user believes is a defect, notify in writing and return the product to the distributor from whom he purchased the product/part. The distributor may or may not at the buyer to give such written notice within thirty (30) days shall be deemed an absolute and unconditional waiver of buyers claim for such defects. Acceptance of any alleged defective product/parts by PVR Controls's distributors for replacement or repairs under the terms of PVR Controls's limited warranty in no way determines PVR Controls's obligations under this Limited Warranty.

Because of a policy of continuous products improvement, PVR Controls reserves the right to change designs, materials or specifications without notice.

Applicable Law.

All disputes are subject to Mumbai jurisdiction.

CASTLE























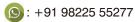
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