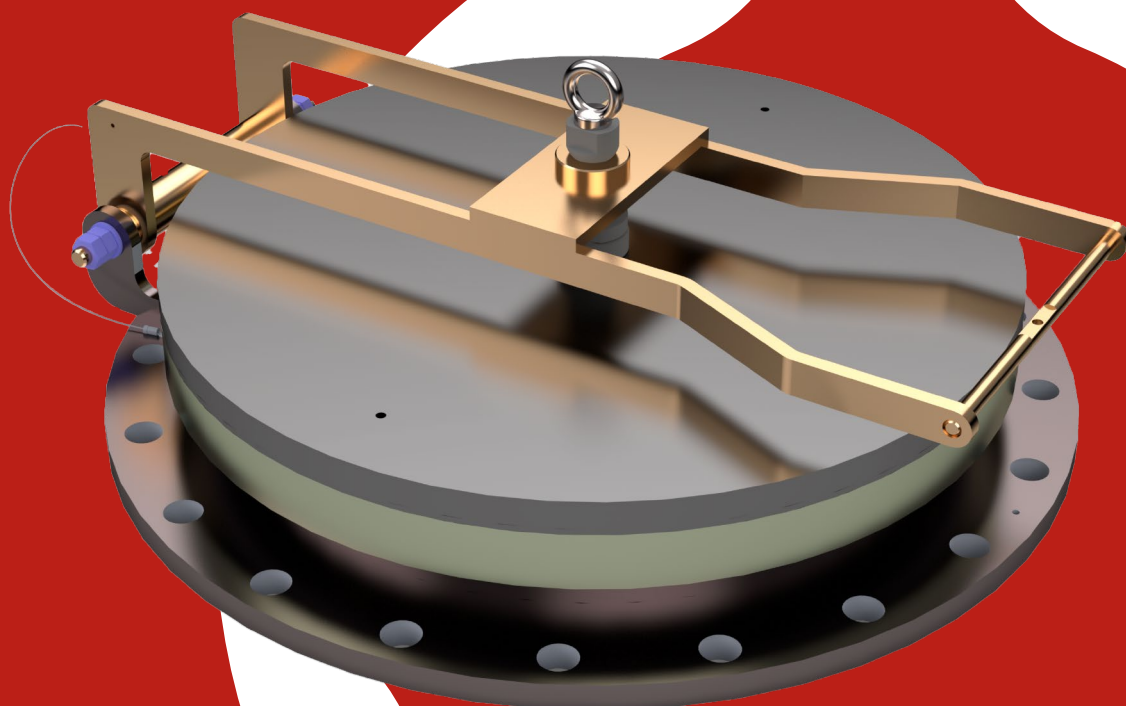


2000

Emergency Valve



Production, R+D+I, Evolution

ValNac, Safety Valves, was established in Spain in 1976. The main target was to assist the petrochemical and chemical industries emerging in Spain at that time. Right from the start ValNac, Safety Valves, has been designing and producing safety valves according to most recognized international standards and norms: API, ASME, ASTM and the European directives 2014/68/UE and 2014/34/UE. Our production process is accredited by an ISO 9001-2016 certification.

Our know how and capacity to adapt to the constantly changing demands of the market, made possible the introduction of new products designed for new applications on the market, like THERMOSOLAR PLANTS, where ValNac, Safety Valves has supplied safety valves to more than 31 complete plants all over the world, while at the same time continuously supplying to all main players of the Spanish petrochemical, chemical and refining industries.

Production capacity

ValNac, Safety Valves have their discharge coefficients approved in laboratory tests, in order to guarantee and assure that correct values are being used for every sizing process.

In our Technical sales department we count with a modern software which allows us to verify all the possibilities, and to assure strict fulfillment of all international standards.

ValNac, Safety Valves has established representation agreements with the most important O.E.M. companies in the safety sector of the industry, consolidating us as one of the main companies by product range; design and consulting in new plants or in new process.

Our continuous growth, shows a clear trend, which confirms the integration of our workers to provide first class service to our customers and partners.

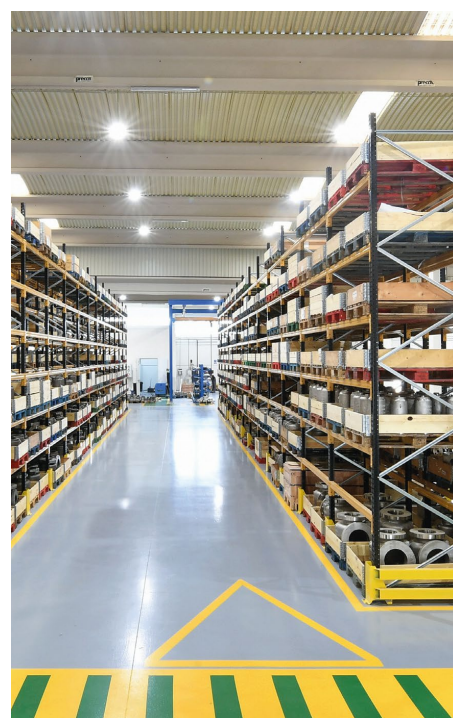
Factory & Location

Our facilities in Rubí (Barcelona - Spain), with more than 3.000 Sq m are fully prepared for our production activities: machining with modern CNC, assembling and testing. We also have long term agreements with approved workshops, which provides us with flexibility and fast feedback to customers demands, with full quality guarantee which has always been our main target.

Strategic alliances

Nowadays ValNac, Safety Valves starts an internationalization process, establishing representation agreements in different countries and continents all over the world, with specialized companies that will provide added value in our service towards the end user.

ValNac, Safety Valves Making safety since 1976!



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General Features

Product Introduction

The emergency valve, model “PH”, is a safety device intended for installation on storage tanks with the finality of assure a quick evacuation of large volume of fluid inside the tank in the event of an overpressure due to fire condition.

Another purpose is that due to its peculiar design and size, it can be used as a manhole cover, allowing access to the interior of the container. That allows easily to do maintenance and inspection of the interior of the tank.

Design

The emergency valve “PH” is designed in such a way that its opening occurs when the fluid contained in the tank creates a pressure higher than its set pressure value. When the overpressure causes more force on the valve disc than the weight of the valve, the disc will rise, allowing fluid leakage and, consequently, relief of overpressure. The valve will be closed again, once the pressure inside the tank has stabilized.

The emergency valve basically consists of a flanged body to install the valve to the tank. A weight controlled floating disc, attached by a link to the manual opening lever, which in turn is attached to the body by a hinge. The sealing of the seal between the cover and the body is produced by means of a diaphragm or oring.

The quality of the materials and the sealing elastomer are defined according to the pressure, temperature and chemical characteristics of the product stored in the tank to which the valve is to protect.

Because the cover is electrically isolated from the valve body by the sealing diaphragm and by the hinge friction bushes, which are made of PTFE, a ground cable is installed that electrically joins the two parts, allowing the static electricity that could accumulate the cover due to its insulation, passes to the body and form it to the tank through the fixing bolts, thus eliminating the risk of electrostatic discharges in installations with potentially explosive atmospheres.

Codes and Standars

European Directive:	2014/34/UE (ATEX)
Quality System:	EN ISO 9001:2015
Materials:	ASME/ASTM & EN

Sizes and Ratings

ASME B16.34:	
Sizes:	16" / 20" / 24"
Rating:	150#
EN 1092-1:	
Sizes:	DN400 / DN500 / DN600
Rating:	PN10
API 650:	
Sizes:	16" / 20" / 24"
Rating:	-

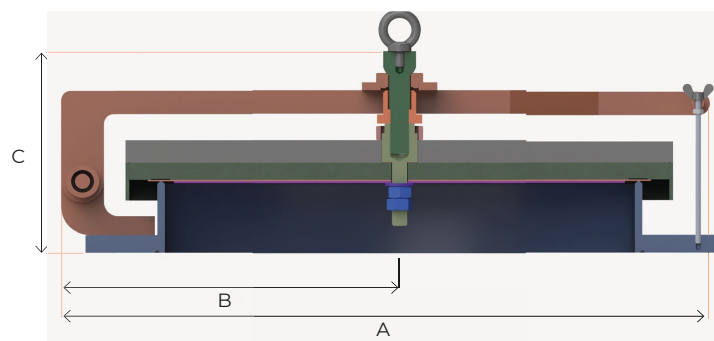
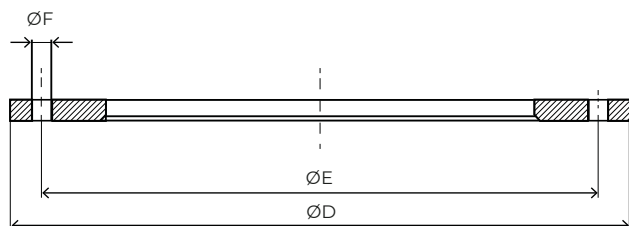
Different rating than the standard can be supplied.



Dimension

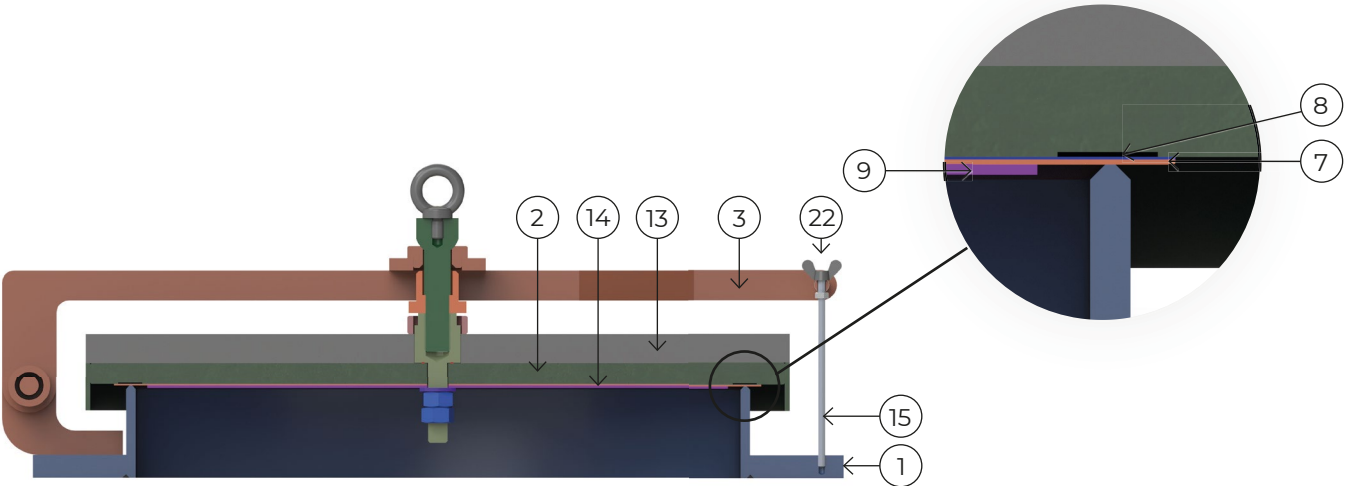
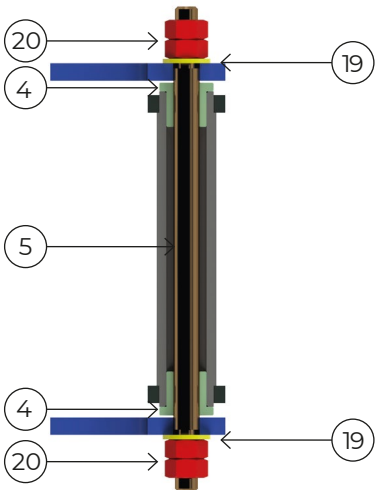
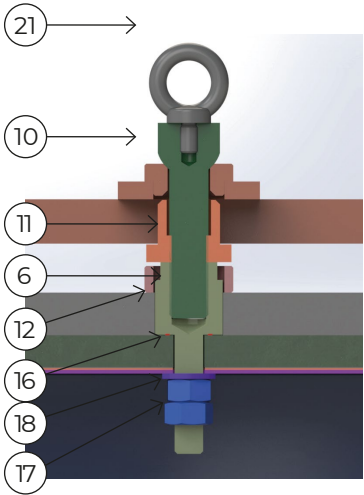
	SET PRESSURE (mmwg)	A	B	C
16" / DN400	50	595	307,5	170
	100 ÷ 400	595	307,5	195
	450 ÷ 500	570	285	195
20" / DN500	50 ÷ 250	712	360,5	182
	300 ÷ 450	765	360	212
	500 ÷ 550	765	360	225
24" / DN600	50 ÷ 300	818	409	180
	300 ÷ 500	818	409	210
	550	818	409	220

		RATING	ØD (mm)	ØE (mm)	ØF (mm)	N° OF HOLES
16" / DN400	API 650	-	535	464	19	12
	ASME B16.5	150#	600	650	28,5	16
	EN 1092-1	PN-10	570	515	26	16
20" / DN500	API 650	-	663	597	19	16
	ASME B16.5	150#	703	635	32	20
	EN 1092-1	PN-10	673	620	26	20
24" / DN600	API 650	-	765	699	19	20
	ASME B16.5	150#	818	749,3	35	20
	EN 1092-1	PN-10	783	725	30	20



Bill of materials

ITEM	DESCRIPTION	MATERIAL
1	BODY	AISI 316
2	BONNET	AISI 316
3	LEVER	AISI 316
4	SLEEVE	PTFE
5	LEVER STUD	AISI 316
6	STEM	AISI 316
7	MAIN GASKET	PTFE
8	STEEL SHEET	AISI 316
9	MAIN GASKET DISC	AISI 316
10	LEVER SHAFT	AISI 316
11	WEIGHT SHAFT	AISI 316
12	SLEEVE	AISI 316
13	WEIGHT	AISI 316 / C.S.
14	WEIGHT	AISI 316 / C.S.
15	THREADED BAR	AISI 316
16	GASKET	COMPR. FIBERS
17	NUT	A4 S.S.
18	WASER	A4 S.S.
19	WASER	A4 S.S.
20	NUT	A4 S.S.
21	LIFTING EYE BOLT	A4 S.S.
22	WING NUT	A4 S.S.



Definitions (EN ISO 4126-1)

- **Blowdown:** The difference between the set and re-seating pressures, normally stated as a percentage on the set pressure of a safety valve except for pressures of less than 3 bar when it is expressed to operate.
- **Built-up back pressure:** The pressure existing at the outlet of the safety valve caused by flow through the valve and the discharge system.
- **Coefficient of discharge:** The value of actual flowing capacity (from tests).
- **Cold differential test pressure:** The inlet static pressure at which a safety valve is set to initiate to open on the test bench. This test pressure includes corrections for service conditions, as back pressure and/or temperature.
- **Flow area:** The minimum cross-sectional flow area (but not the curtain area) between inlet and nozzle which is used to calculate the theoretical flow to discharge.
- **Flow diameter:** The diameter corresponding to the flow area.
- **Lift:** The actual travel of the valve disc starting from the closed position.
- **Maximum allowable pressure:** The maximum pressure for which the equipment is designed as specified by the manufacturer.
- **Overpressure:** A pressure increase over the set pressure, at which the safety valve achieves the lift specified by the manufacturer, usually expressed as a percentage of the set pressure.
- **Pressure:** The pressure unit used in this standard is the bar (1 bar = 105 Pa). It is quoted as gauge (relative to atmospheric pressure) or absolute as appropriate.
- **Relieving pressure:** The pressure used for the sizing of the safety valve which is greater than or equal to the set pressure plus the overpressure.
- **Re-seating pressure:** The value of the inlet static pressure at which the disc re-establishes contact with the seat or at which the lift becomes zero.
- **Safety valve:** Valve which automatically, without the assistance of any energy other than that of the fluid concerned, discharges a quantity of the fluid so as to prevent a predetermined safe pressure being exceeded and which is designed to re-close and prevent further flow or fluid after nominal pressure conditions of service have been restored.
- **Set pressure:** The predetermined pressure at which a safety valve under operating conditions initiates to open.
- **Superimposed back pressure:** The pressure existing at the outlet of the safety valve at the time when the device is required to operate.

The safety valve is an automatic direct action accessory whose function is to relieve excessive overpressures in the recipients and installations that protects. Its main characteristics, allowing is its sudden fluid discharge with complete and fast opening (pop).

Automatic valve opening is produced because of the additional push provided by the overpressure of the fluid itself helping to overcome spring resistance. Once the installation has recovered its normal service condition, the valve closes again.

The data contained in this catalogue are indicative. Válvulas Nacional, S. A., reserves the right to change this catalogue without notice. Always check the specification sheets.





Making safety since 1976



**MOD-6400
ASME UV**

SAFETY
VALVE



**MOD-5100
ASME UV**

SAFETY
VALVE



MOD-3-50

SAFETY
VALVE



MOD-3-51

SAFETY
VALVE



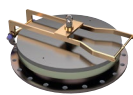
MOD-5500

SAFETY
VALVE



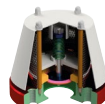
**PILOT
OPERATED**

SAFETY
VALVE



MOD-2000

EMERGENCY
VALVE



MOD-3400

BREATHER
VALVE



VALVE
SILENCER