

# Type N 1600

- Shuttle tanker execution

*Pressure Relief Valve*

**In-line weightloaded pressure relief valve, particularly for mast riser systems. IMO approved solution with approved end-of-line protection, either flame screen or flame arrester (recommendation: type VFA). Ensures constant inert gas pressure above IG Code requirement without manual interference or monitoring.**



*Type N 1600*

The valve can either be manually operated or remote controlled and has 3 functions - positively closed during voyage, automatic mode during loading at very low pressure and forced open. As opposed to a butterfly valve, the type N valve automatically controls and maintains positive inert gas pressure in the cargo tanks when loading at reduced rates or topping off. To avoid oil mist on deck during loading of volatile crude, the mast riser valve and flame screen dimensions provide reduced vapor velocities and, thus, eliminate a problem experienced particularly in the North Sea with shuttle tankers. Type N in combination with flame screen type VFA (4 drain port execution type for condensate collection) and high velocity vents type HS-IMO2 (non-hammering) is the most flexible and safe venting system for shuttle tankers. For added flexibility, each tank should be equipped with a gas-freeing cover type GFC enabling individual gas-freeing of any one tank. Many existing shuttle tankers have been upgraded to this system.

#### Features of type N 1600:

- Manually operated or remote actuator controlled
- Positively closed mode
- Automatic mode
- Forced open mode
- Available in multiple sizes
- IMO approved solution with flame screen or flame arrester protection
- Automatic control of IG pressure - no need for sophisticated monitoring system or crew attendance.
- Only one moving part
- Simple, rigid design
- Easy maintenance

*Options: See specification*

# In-line pressure relief valve for IG systems/shuttle tankers

**Specifications**

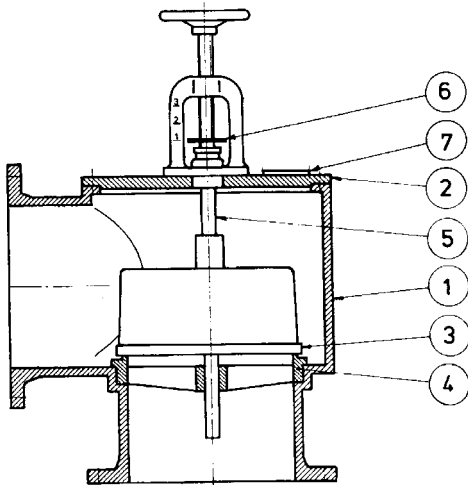
**Type:** N 1600  
**Dimensions:** See drawing 1600  
**Settings:** To fit application  
**Accuracy**  $\pm 2\%$   
**Ice layer:** Not applicable  
**Pressure drop in excess of set-point:** Yes  
**Valve type:** Modulating  
**Materials:** Standard: fabricated steel

**Nominal sizes**

ND50 - 500  
**Options**  
 Proximity switches, remote control,  
 3-mode operation

**Certification**

Approved for all installations provided used with a government certified flame screen or arrester at the outlet to atmosphere according to IMO MSC/Circ. 677. All Pres Vac product are approved by the leading classification societies and by relevant flag state administrations. Upon request certified copies of certificates will be furnished.



Item	Description
1	Valve body
2	Cover
3	Valve disc
4	Valve seat
5	Spindle
6	Indicator
7	Instructions plate

Type N 1600 (shown with multiple function feature)

Available with any connection and in any material requested. Please ask for detail drawing and performance data sheets for any specific model and type.

# Type N

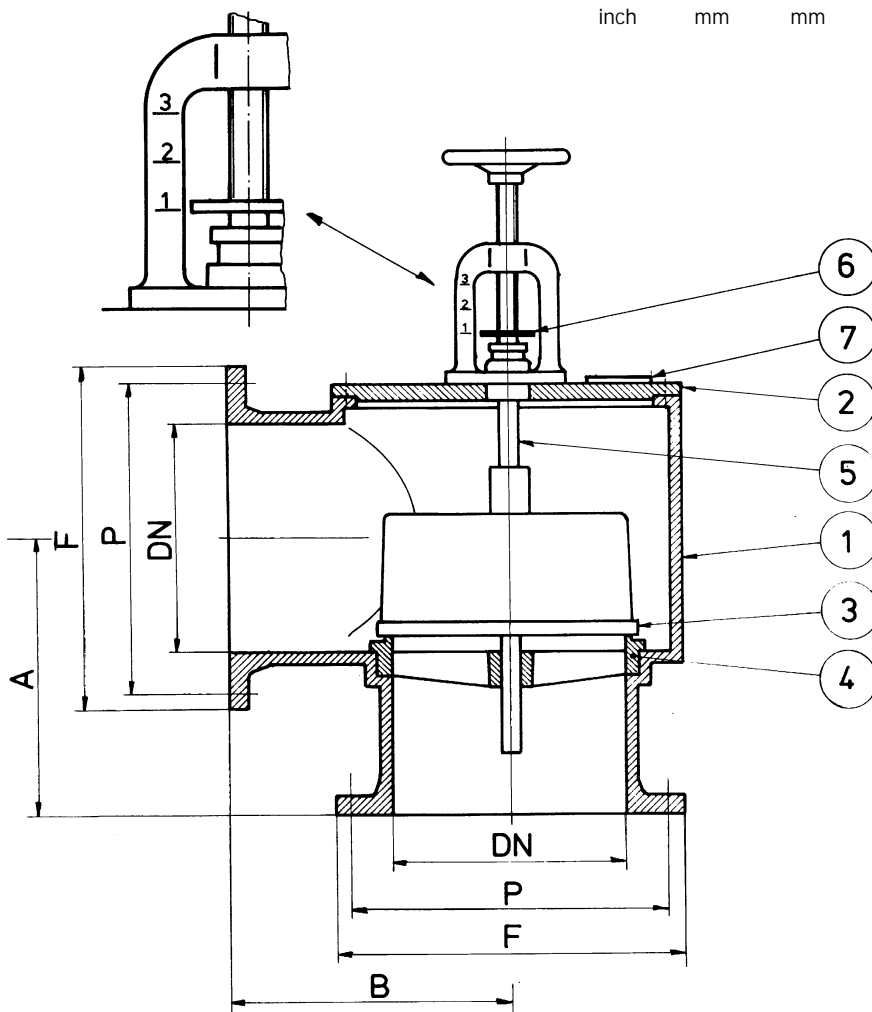
## Weightloaded pressure relief valve

drwg. no.:	1600
date:	910325
model:	-
drw. rev.:	4
drwg.:	HHR
scale:	-
material:	-

This drawing is for guidance only. Other sizes, materials, flange standards, settings, and versions are available. Request a specific quotation or approval drawing before implementing data.

20	500	550	550	670	620	20xø26
16	400	460	460	565	515	16xø26
14	350	410	410	505	160	16xø22

DN	DN	A	B	F	P-mm	Holes
inch	mm	mm	mm	mm		drilling



Remarks:  
 Wording on plate 7:  
 1. Positively closed  
 2. Automatic mode  
 3. Fixed open

### Parts list

Item	Description	Spec. 1
1	Valve body	Fabricated steel
2	Cover	Fabricated steel
3	Valve disc	Bronze
4	Valve seat	Bronze
5	Spindle	Stainless steel
6	Indicator	Stainless steel
7	Instructions plate	Bronze