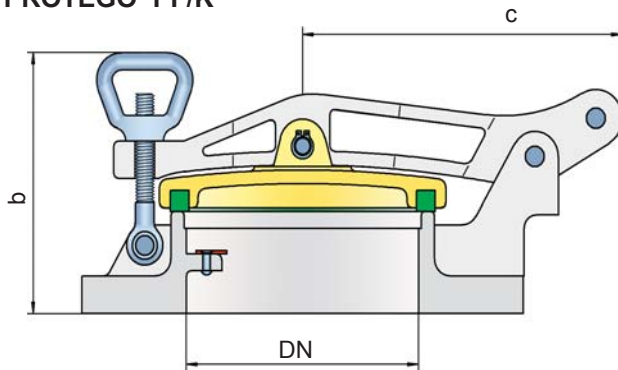




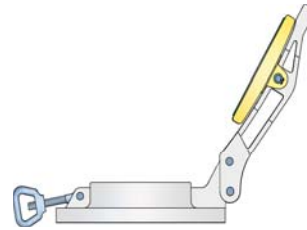
Gauge Hatch with flange

PROTEGO® PF/K, PF/TK and PS/KF

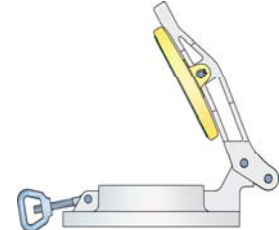
PROTEGO® PF/K



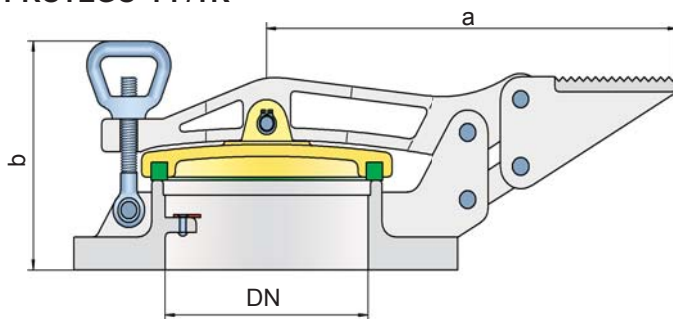
Design "A"
remaining open



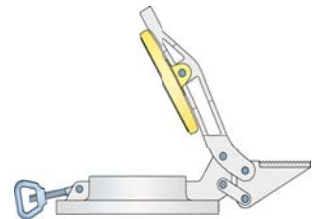
Design "B"
automatic cover closing



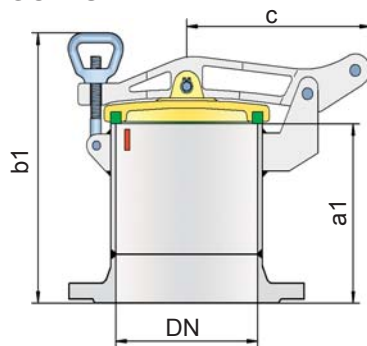
PROTEGO® PF/TK



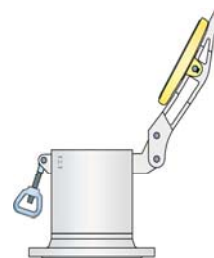
Pedal-operated version
automatic cover closing



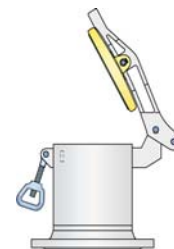
PROTEGO® PS/KF



Design "A"
remaining open



Design "B"
automatic cover closing



Function and Description

PROTEGO® gauge hatches types PF/K, PF/TK and PS/KF are used as lockable gauge nozzles which are only opened for gauging or sampling. Otherwise they are tightly closed.

The gauge hatches PROTEGO® PF/K, PF/TK and PS/KF mainly consist of housing, cover and bracket. As a standard the housing has stainless steel gauge marks.

In the pedal-operated version PROTEGO® PF/TK the gauging nozzle pedal is connected to both the housing and the bracket.

Design Types and Specifications

Depending on the intended use the following designs are available:

Gauge hatch with flange **PF/K** design A and B
 „A“ : remaining open
 „B“ : automatic cover closing

Gauge hatch with flange and pedal **PF/TK** automatic cover closing

Gauge hatch with flange nozzle **PS/KF** design A and B
 „A“ : remaining open
 „B“ : automatic cover closing

Gauge hatches for welding to the tank are available as types PROTEGO® PS/K and PS/TK. A separate data sheet is available.

Table 1: Dimensions Dimensions in mm / inches

	100 / 4"	150 / 6"	200 / 8"
DN	100 / 4"	150 / 6"	200 / 8"
a	260 / 10.24	305 / 12.01	335 / 13.19
b	150 / 5.91	155 / 6.10	175 / 6.89
c	160 / 6.30	205 / 8.07	235 / 9.25
a1	225 / 8.86	265 / 10.43	300 / 11.81
b1	315 / 12.40	360 / 14.17	405 / 15.94

The nominal size depends on the dimensions of the gauging and sampling device.

Table 2: Material selection

Design	A	B	C	D
Housing	Ductile Iron*	Stainless Steel	Aluminium	Steel
Cover	Ductile Iron*	Stainless Steel	Aluminium Stainless Steel**	Steel

The combination of steel and aluminium in explosive environments is prohibited due to ignition danger.

* only for PF/K and PF/TK

** only for PF/TK-100

Flange Connection Type

The flange connection is to EN 1092-1, Form A or DIN 2501, Form B, PN 16; DN 200 PN10. Optionally, the connecting flange can be made according to any international standard.

Necessary Data for Specification

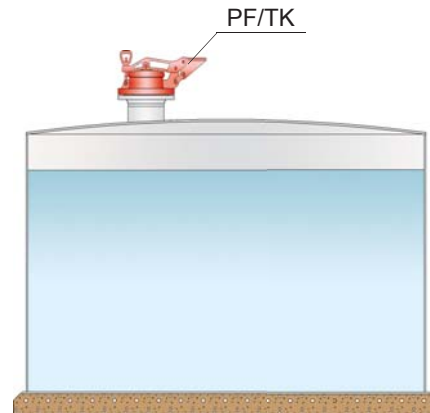
Stored product

Tank material

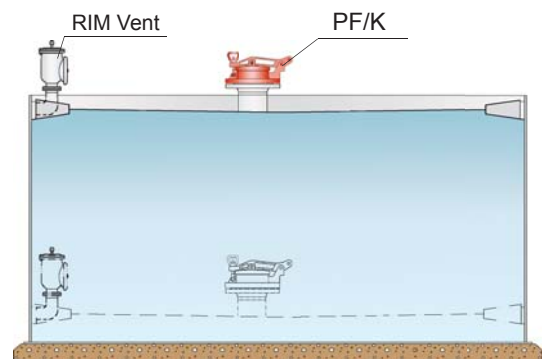
Tank nozzle DN (mm or inches)

Application Examples

Gauge Hatches can for instance be used in combination with the manual gauge devices type PROTEGO® H/P or with the gauging and sampling device PROTEGO® VP/HK.



Gauge Hatches can be applied on tanks with floating roof.

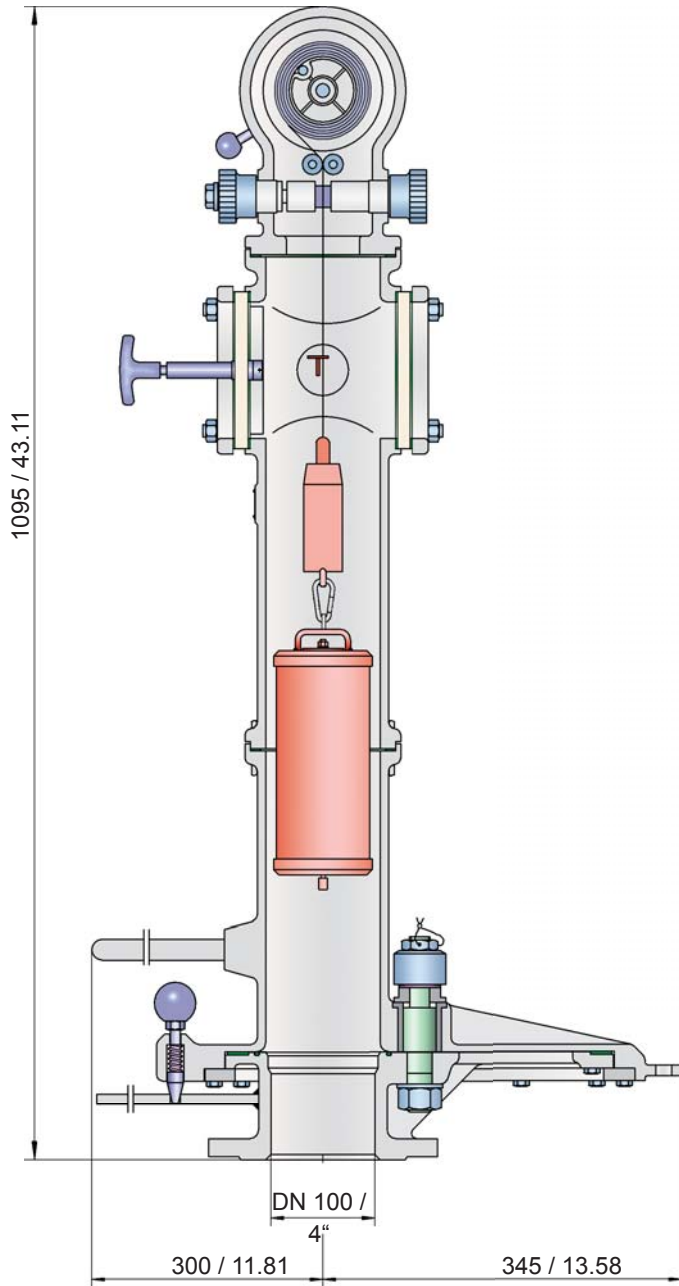


for safety and environment



Sampling Device, gastight with accessories

PROTEGO® VP/G-II-100 and PG/H



Function and Description

The gastight Gauging and Sampling Device PROTEGO® VP/G-II-100 in combination with a Sampling Pot PROTEGO® PG/H allows for sampling of the stored product without opening the tank to the atmosphere.

This device consists of the rotary table with connecting nozzle DN 100 or ANSI 4", the operating button with crank for the measuring tape as well as the inspection glass top for monitoring the sampling level.

The rotary table has to be turned through 180° by a rotary table axis from resting position into operating position or the other way round. In resting position (figure 1) – measuring tape is wound up – the sampling pot can be mounted or removed.

Sampling takes place in operating position (figure 2). Where the measuring tape is manually lowered to the required position and rewound with the crank.

The devices are designed and tested according to the European Standards EN 1127-1, EN 13463-1 and EN 13463-5 as device according to European Directive 94/9/EG. EC-Type Examination Certificates issued by a European notified body are available. The scope applies to atmospheric conditions. That is a max. acceptable operating pressure of 1,05 bar and a max. acceptable operating temperature of 60 °C.

Parts of this device being located in zone 0 comply with the requirements of non-electrical devices in ignition protection type c (protection by safe construction) of device group II, category 1G. They comply to the requirements for application in explosion group IIA and IIB and temperature category T1 to T6. Parts being located in zone 1 comply to device group II, category 2G.

Figure 1
Removal of the pot
in resting position

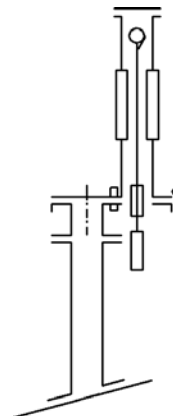
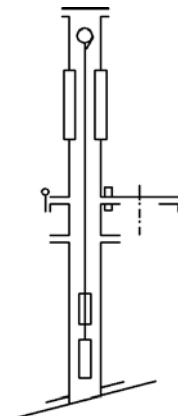
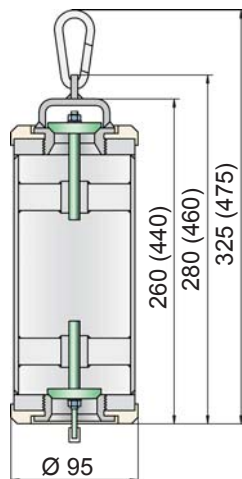


Figure 2
Sampling in
operating position



Sampling pot
PROTEGO® PG/H
capacity:
1 liter / 0.22 gal (UK)
(2 liters / 0.44 gal (UK)
capacity =
measures in brackets)



Dimensions in mm / inches

Flange Connection Type

Table 3: Flange connection type DN2

EN 1092-1, Form B1 or DIN 2501, Form C, PN 16	EN or DIN
ANSI 150 lbs RFSF	ANSI

Necessary Data for Specification

Stored medium

Service temperature (°C or °F)

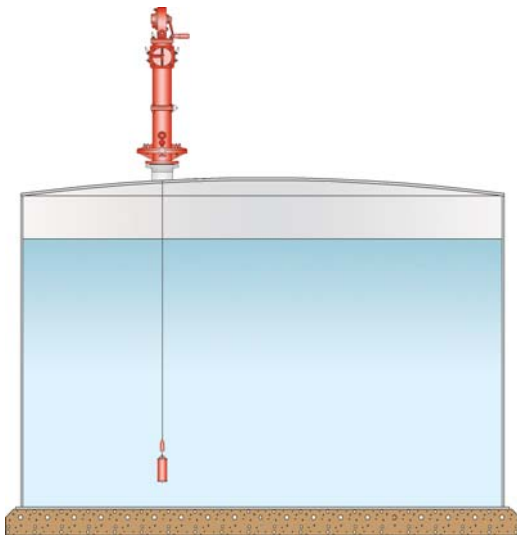
Operating pressure (bar or psi)

Tank material

Tank nozzle DN1 (mm or inches)

Application Example

Gastight sampling on a tank meaning sampling without direct contact between gas zone and atmosphere.



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