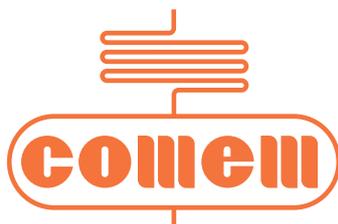


PRD

Pressure Relief Device



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Pressure Relief Device - LPT

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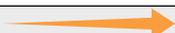
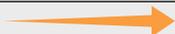
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Pressure Relief Device - T and Q

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How to select the PRD type for your transformer in 3 simple steps

1st Select size		2nd Select protection type			3rd protection material	
Depending on volume of oil tank						
up to 3000 dm ³	50		no protection needed	"T" model		plastic
			guard	"T" model		
			conveyor duct	"M" model		
up to 9000 dm ³	80		no protection needed	"T" model		plastic
			guard	"T" model		
			conveyor duct	"T" model		
up to 25000 dm ³	125		no protection needed	"T" model		plastic
			guard	"T" model		
			conveyor duct	"M" model		
up to 40000 dm ³	125		conveyor duct with internal spring	"LPT" model		aluminium alloy
up to 45000 dm ³	200		no protection needed	"T" model		metallic
			guard	"T" model		

Pressure Relief Device - LPT

COMEM's "LPT" pressure relief device is used to control the pressure inside tanks. It is important in cases where an accidental, sudden and uncontrolled increase in pressure creates the danger of explosion. It is designed to discharge pressure in a very short time (a few thousandths of a second).

It is widely used in oil-cooled electric transformer metal tanks. Sudden and violent short circuits inside these tanks, in fact, instantly generate an enormous amount of gas which cause a substantial increase in internal pressure. If the pressure cannot be externally discharged there is danger that the transformer could explode and potentially cause harm and damage. This danger can be prevented by installing one or more pressure relief devices. It is always good practice to install these pressure relief devices in places where internal pressure values must not exceed specific safety limits.

LPT

The external protection with a perfect seal guarantees that no drop of oil is dispersed into the environment

Total pressure relief completely opening

The pressure relief device is totally opened each time the pressure relief device operates at pressure settings between 20 and 175 kPa.

If pressure generated inside the tank is much higher than the setting, then the further compressed spring allows the closing disk to create even larger discharge areas when it operates.

Operating performance

Nominal operating pressure: the prefixed overpressure value shall be established between the supplier and the purchaser within the standard range of 20 up to 140 kPa, with 10 kPa steps and 175kPa. Tolerances are - 5 kPa to + 7 kPa for 20-90 kPa and ± 10 kPa for 100-175 kPa calibration.



Construction

Our pressure relief device is completely protected against external corrosion and against penetration by foreign bodies between the cover and protective cap. This ensures perfect operating efficiency even for extended periods of time.

“LPT” pressure relief device

These consist of a flanged body and a corrosion-proof aluminium alloy disk. There are two gaskets in the pressure relief device: a specially-shaped upper gasket and a lip seal.

When the pressure relief device is closed, the upper gasket is pressed against the disk. The shape of the gasket creates a perfect seal even if the disk lifts 1-2 mm. The disk also seals against the lip seal gasket as it moves upwards. If, due to internal pressure, the disk rises beyond this amount then the upper seal is no longer maintained while the lip seal remains. When this happens, the surface of the washer condumed by

internal pressure is increased in area equal to the total force applied on the spring.

This causes the total and instant opening of the pressure relief device which consequently discharges excess pressure to the exterior.

When the pressure has been discharged, the disk pushed back by the spring lowers down and closes the valve. As the disk moves downward, it first closes against the side gasket and then against the upper gasket.

The latter, because of its special shape, is pressed down 1-2 mm and the disk moves further down breaking the seal on the lip seal gasket. This releases any pressure that may have been trapped between the two gaskets. Now the pressure relief device is ready to work.

Routine tests

It is necessary to carry out operational tests, with compressed air:

- to check the correct functioning of the device at operating pressure values
- to check the functioning of the optic signal and of the electric contacts.

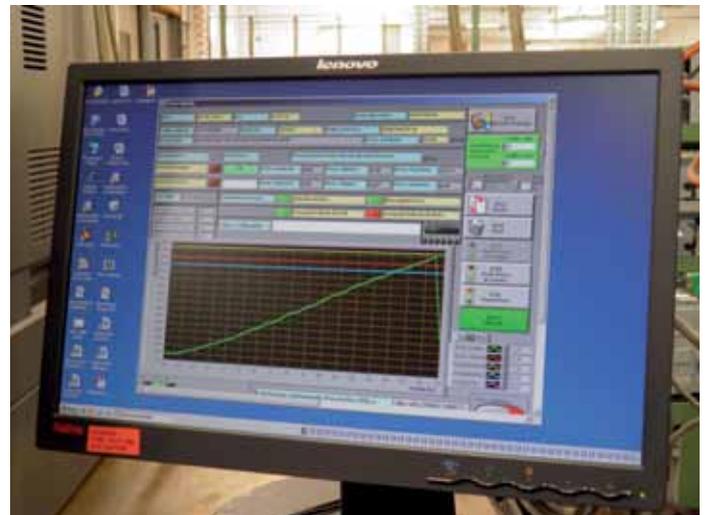
Installation guidelines

Our “LPT” pressure relief device comes in 1 size.

The following table gives guideline values:

Volume of oil tank:	Type of pressure relief device
up to 40000 dm ³	LPT

We recommend using multiple pressure relief devices when oil volumes exceed these levels. Instant pressure relief device opening implies direct contact between the closing disk and the oil. For this reason, the pressure relief device is equipped with a screw to bleed out that may accumulate during oil tank filling procedures. In order to prevent harm to people or property due to violent jets of hot oil evacuating from the pressure relief device, it is good practice for pressure relief device discharges to be guided towards points that are properly designed to receive the hot oil. Environmental protection is also another important issue which should be pursued by everyone. Our protection duct allows the oil that is evacuated by the pressure relief device to be drained.



The system's perfect hydraulic seal guarantees that no drop of oil is dispersed into the environment, but is, rather, collected through a pipe into a tank (pipe and tank are not supplied). The sealing oil duct is made of die-casted aluminium; a terminal flanged tube made of steel can be also provided if you want to weld the pipeline air necessary. O-ring gaskets have been applied for duct sealing.

Detailed assembly instructions are supplied with the equipment.

Pressure Relief Device - LPT



Visual signal that the pressure relief device is open

The pressure relief device is equipped with a visual signal that shows if it was opened when it is open. This signal consists of a red knob that protrudes from the central part of the duct when the pressure relief device is opened. Simply press it down in order to make it go back to its normal position and reset the switches.

Electrical signalling switch

Maximum 3 "pressure relief device open signal" contacts can be mounted upon request. These are fast tripping limit switches with switching contacts contained inside a watertight room IP65. The contacts act together with the visual signal.

Contact diagram

- FIRST SWITCH (terminals 12-14-11)
change-over contact:
 - 14-11 normally open
 - 11-12 normally closed
- SECOND SWITCH (terminals 22-24-21)
change-over contact:
 - 23-21 normally open
 - 21-22 normally closed
- THIRD SWITCH (terminals 32-34-31)
change-over contact:
 - 34-31 normally open
 - 31-32 normally closed

The switches have the following characteristics:

Specifications:

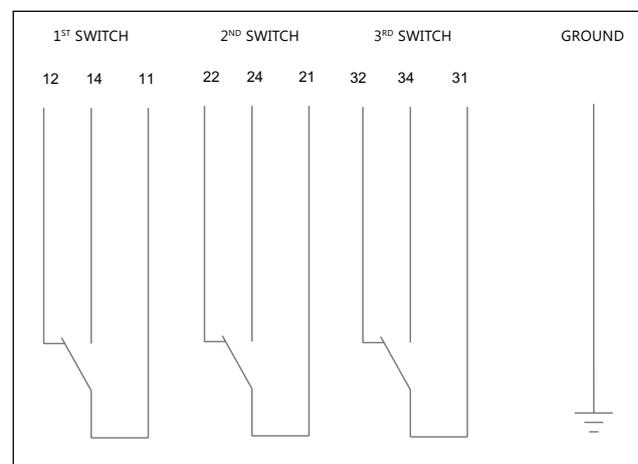
Breaking and making capacity (NO and NC contacts)		
Voltage	Uninterrupted current (making capacity)	Interrupted current (breaking capacity)
24 VDC to 220 VDC	2 A	100 mA L/R<40 ms
230 VAC	2 A	2 A cos φ>0.5

Other characteristics:

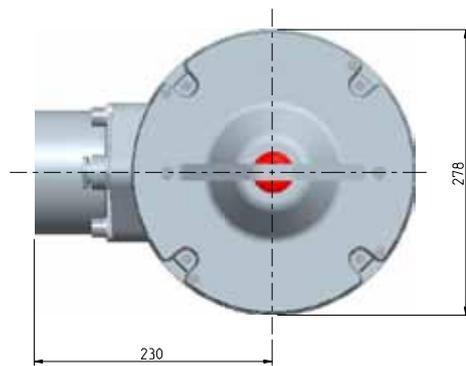
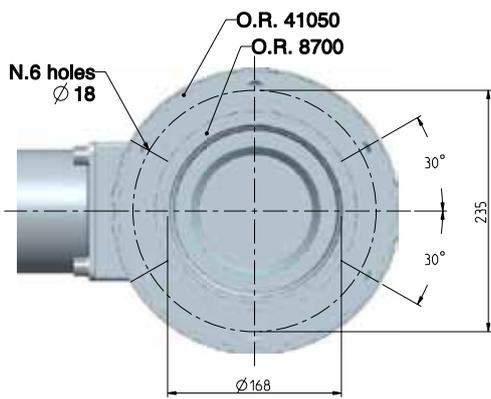
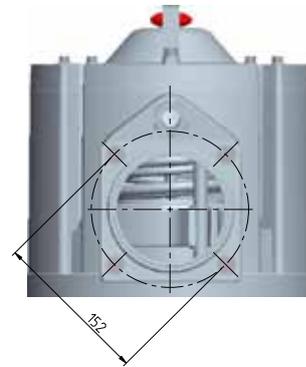
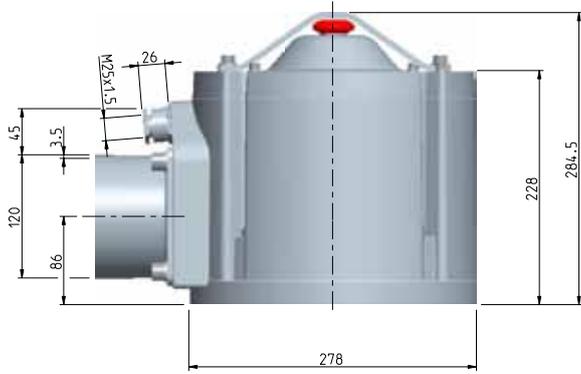
- The pressure relief device is supplied with a "locking system" which allows the pressure relief device to be blocked during the transformer oil leakage test. The locking system has been tested to withstand max 2 bar pressure and can also be used during the transformer transport.
- WARNING!:** the locking system must be removed before powering-up the transformer.
- The pressure relief device is supplied with a M25x1.5 cable gland.
- Colour: RAL 9002.

Outer surface protection

The outer surfaces are protected against weather corrosion. Aluminum alloy components are non-corroding, their surface is protected with a thick layer of paint which offers a high level of protection against atmospheric agents and can resist temperature variations between -40 °C and +100 °C. Standard protection suits moderate salinity areas acc. ISO 12944-5. Special protection for severe climate applications, off-shore, is also available upon request.



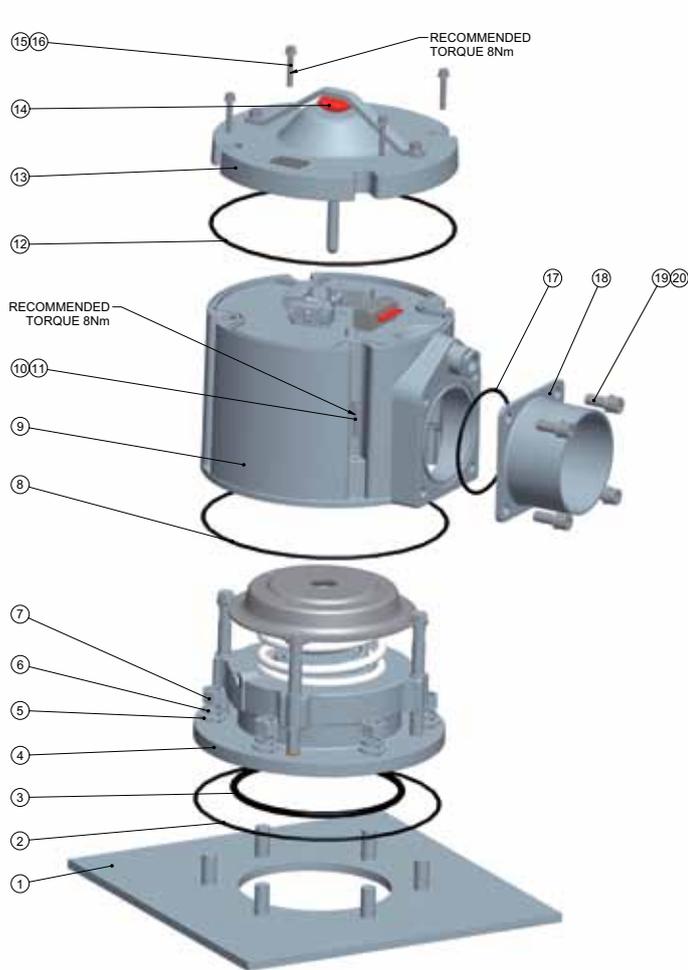
Overall dimensions according to EN 50216-5/A2



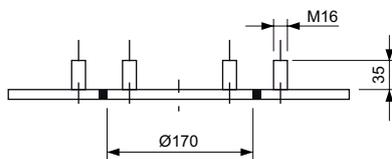
Weight kg 19

Pressure Relief Device - LPT

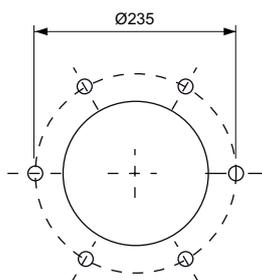
Assembling sequence



Ref.	Q.ty	Code	Description
1	1		Transformer cover
2	1	5GOD041050	Gasket OR 41050
3	1	5GOD008750	Gasket OR 8750
4	1		125x-6 safety valve
5	6		M16 washer (not supplied)
6	6		M16 grower washer (not supplied)
7	6		M16 nut (not supplied)
8	1	5GOD041050	Gasket OR 41050
9	1		LPT type oil duct
10	4	5v50606060	UNI 5931 M6X60 screw
11	4	5400800861	M6 washer (plain+elastic)
12	1	5GOD041100	Gasket OR 41100
13	1		LPT type oil duct cover
14	1		Visual signal
15	4	5V50605035	UNI 5931 M5x35 screw
16	4	5RG0600050	M5 washers (plain+elastic)
17	1	5GOD004475	Gasket OR 4475
18	1	5COV464600	LPT type flange with pipe for duct
19	4	5V50612030	UNI 5931 M12x30 screw
20	4	5RB0600120	M12 washer



A-A



Order sheet

Number of pieces							
Contacts	<input type="checkbox"/> 1		<input type="checkbox"/> 2		<input type="checkbox"/> 3		
Pressure setting kPa	<input type="checkbox"/> 20	<input type="checkbox"/> 30	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 60	<input type="checkbox"/> 70	<input type="checkbox"/> 80
	<input type="checkbox"/> 90	<input type="checkbox"/> 100	<input type="checkbox"/> 110	<input type="checkbox"/> 120	<input type="checkbox"/> 130	<input type="checkbox"/> 140	<input type="checkbox"/> 175
For use in:	Moderate salinity areas acc. to ISO 12944					<input type="checkbox"/>	
	Off-shore areas acc. to ISO 12944					<input type="checkbox"/>	
Gaskets type	Viton <input type="checkbox"/>		silicone oils and/or high temperatures -10 °C up to +150 °C				
	NBR -40°C <input type="checkbox"/>		mineral oils and low temperatures -40 °C up to +120 °C				

Pressure Relief Device - M

M

COMEM "M" pressure relief devices are used to control pressures inside tanks. They are used where accidental, instantaneous and uncontrolled increases in pressure may create the danger of explosion. They are designed to discharge the pressure increases that have taken place to the exterior in a very short time period (a few thousandths of a second).

They are widely used in the metal tanks of oil-cooled electric transformers. Sudden and violent short circuits inside these tanks, in fact, instantly generate an enormous amount of gas with a great increase in interior pressures. If the pressure cannot discharge to the exterior there is danger that the transformer may explode, with all the possible harm and damages this may cause. This danger can be prevented by installing one or more pressure relief device with discharge sizes proportional to the volume of oil contained in the transformer. It is always good practice to install these pressure relief devices in all situations where internal pressure values must not exceed specific safety limits.

They are widely used in large distribution transformers and traction transformers.

Total pressure relief completely opening

Pressure relief device opening is total each time the pressure relief device operates for pressure settings between 20 and 90 kPa. The discharge opening area, for each pressure relief device operation, is equal to that for higher pressure settings even when pressure settings are lower than 20 kPa. If, however, pressures are generated inside the tank that are much higher than the setting then the spring, further compressed, allows the closing disk to create even larger discharge areas when it operates.

Operating performance

Nominal operating pressure: the pre-fixed overpressure value shall be agreed between supplier and purchaser within the standard range from 20 up to 90 kPa, with 10 kPa steps, with a tolerance of - 5 kPa to + 7 kPa. For model 50M the standard operating pressure range comes up to 200kPa, with 10kPa steps.



Construction

Our pressure relief devices are totally protected against external corrosion and against penetration of foreign bodies between cover and protective cap. This ensures perfect operating efficiency even for extended periods of time.

“M” pressure relief device

These consist of a flanged body and a corrosion-proof aluminium alloy disk. A brass rod that holds the spring is applied to the central part of the disk. There are two gaskets in the pressure relief device: a special shaped upper gasket and a lip seal.

When the pressure relief device is closed the upper gasket is pressed against the disk. The shape of the gasket permits a perfect seal even if the disk lifts 1-2 mm. The disk also makes a seal against the lip seal gasket as it moves upwards. If, due to interior pressure, the disk rises beyond this amount then the upper seal is no longer maintained while the lip seal remains.

At this instant the surface of the washer invested by internal pressure is multiplied in area as is the total force applied on the spring. This causes total and instantaneous opening of the pressure relief device which consequently discharges excess pressures to the exterior.

When pressure has been discharged the disk, pushed back by the spring, lowers down and closes the valve. As the disk moves downwards it first closes against the side gasket and then against the upper gasket.

This latter gasket, because of its special shape, is pressed down 1- 2 mm. and the disk moves further down, breaking the seal on the lip seal gasket. This releases any pressure that may have been trapped between the two gaskets. Now the pressure relief device is ready to work.

Routine tests

It is necessary to carry on operational tests, with compressed air:

- to check the correct functioning of the device at operating pressure values
- to check the functioning of the optic signal and of the electric contacts.

Installation guidelines

Our “M” pressure relief devices come in 2 sizes and have different discharge areas. This allows users to select the type that is best suited for the volume of oil contained in the tank. The following table gives guideline values:

Volume of oil tank:	Type of pressure relief device
up to 3000 dm ³	50 M*
up to 25000 dm ³	125 M*

* These guideline sizes are based on experience.

We recommend using multiple pressure relief devices when oil volumes exceed these levels. It is always good practice to use multiple pressure relief device with smaller discharge areas rather than a single pressure relief device with a large area. The reason for this, in the case of transformers, is that it is better to install one pressure relief device above each winding column since these are the points where maximum interior pressures are generated in case of a short circuit. Instantaneous pressure relief device opening implies direct contact between the closing disk and oil. For this reason the pressure relief device are equipped with a screw to bleed out air that may accumulate during oil tank filling procedures.

Oil tightness duct

It is a good practice to prevent harm to persons or property from violent jets of hot oil evacuating from the pressure relief device, for pressure relief device discharges to be ducted towards points properly designed to receive the hot oil. The protection of the environment is also another important target which has to be pursued by everybody. Our protection duct allows to drain the oil evacuated by the pressure relief device. The perfect hydraulic tightness of the system guarantees that not any drop of oil is dispersed in the environment, but collected through a pipe in a tank (pipe and tank are not supplied). The sealing oil duct is made of die-casted aluminium; a terminal flanged tube made of steel is also provided if someone wants to weld the pipeline. O-ring gaskets have been adopted for the duct sealing. Detailed assembling instructions are supplied with the equipment.

Pressure Relief Device - M



Visual signal that the pressure relief device is open

Pressure relief devices are equipped with a visual signal that shows when they have opened. This signal consists of a red knob that protrudes from the central part of the duct when the pressure relief device has opened. Just press it down in order to make it go back to its normal position and reset the switches, too.

Electrical signalling switch

Maximum 3 "pressure relief device open signal" contacts can be mounted on request. These are a fast tripping limit switch with switching contact contained inside a watertight room IP 65. The contacts simultaneously act with the visual signal.

Contact diagram

- FIRST SWITCH (terminals 12-14-11)
change-over contact:
 - 14-11 normally open
 - 11-12 normally closed
- SECOND SWITCH (terminals 22-24-21)
change-over contact:
 - 23-21 normally open
 - 21-22 normally closed
- THIRD SWITCH (terminals 32-34-31)
change-over contact:
 - 34-31 normally open
 - 31-32 normally closed

The switches have the following characteristics:

Specifications:

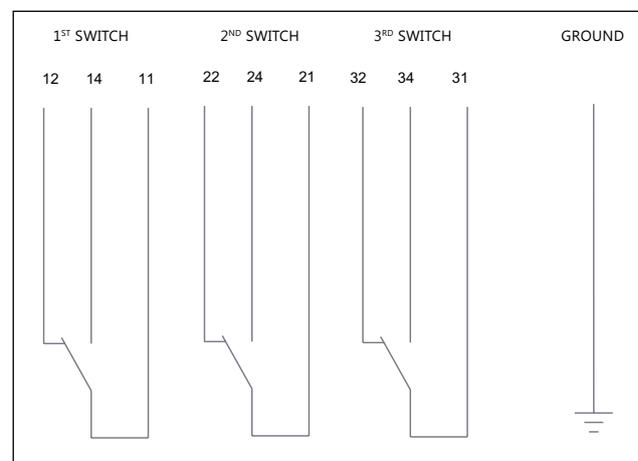
Breaking and making capacity (NO and NC contacts)		
Voltage	Uninterrupted current (making capacity)	Interrupted current (breaking capacity)
24 VDC to 220 VDC	2 A	100 mA L/R < 40 ms
230 VAC	2 A	2 A cos φ > 0.5

Other characteristics:

- The pressure relief device is supplied with a "locking system" which allows the pressure relief device to be blocked during the transformer oil leakage test. The locking system has been tested to withstand max 2 bar pressure and can also be used during the transformer transport.
- WARNING!:** the locking system must be removed before powering-up the transformer.
- The pressure relief device is supplied with a M25x1.5 cable gland.
- Colour: RAL 7001.

Outer surface protection

External surfaces are protected against weather corrosion. Aluminum alloy components are non-corroding and their surfaces are protected with a double layer of paint offering high level protection against all atmospheric agents and resisting temperature variations between -40 °C and +100 °C. Special painting for severe climate applications is also available on request.

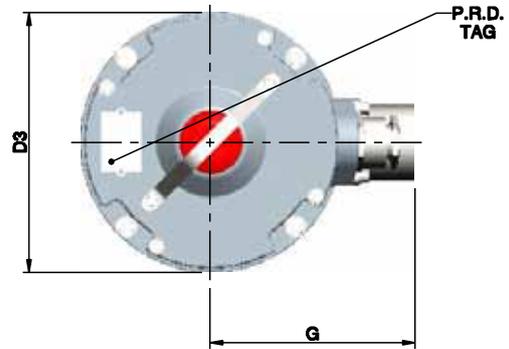
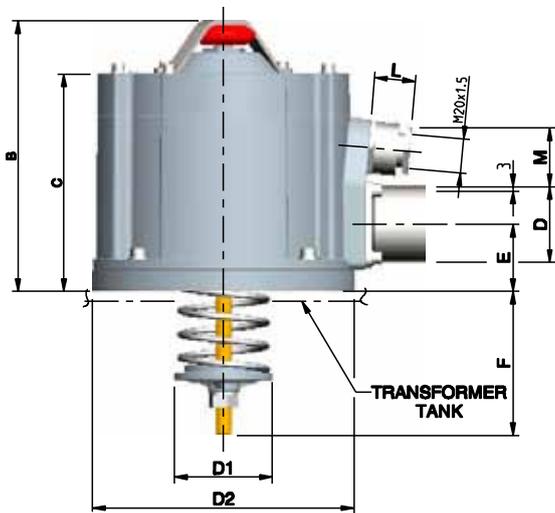




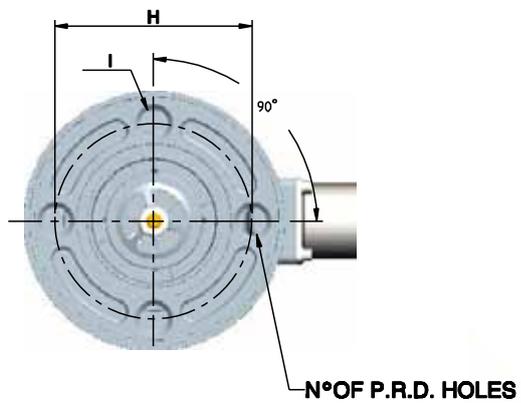
Pressure Relief Device - M

Overall dimensions

Type 50M



50M

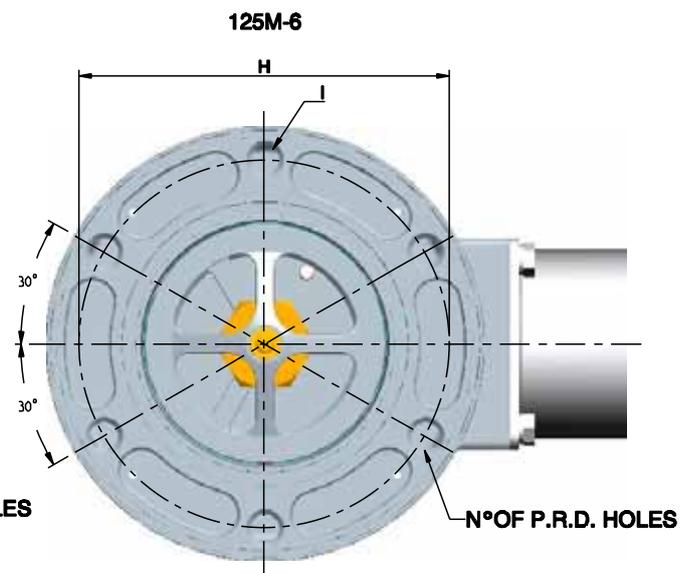
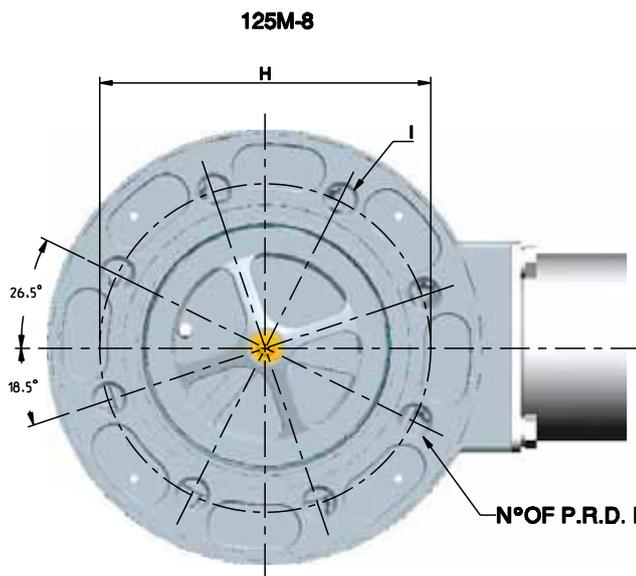
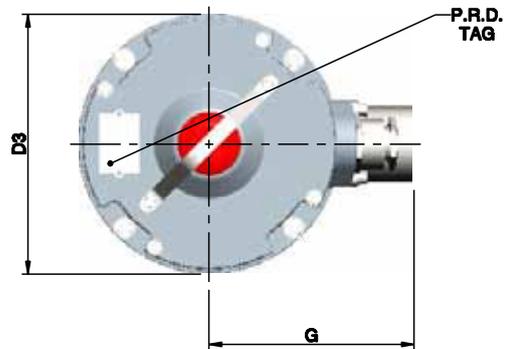
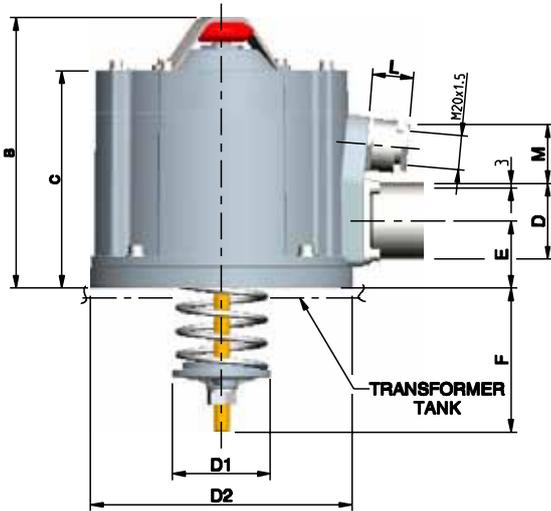


Type	B	C	D	D1	D2	D3	E	F20KPA *	F70KPA *	G	H	I	L	M	kg
50 M	170	139	Ø48.3	Ø62	Ø165	Ø166	41.5	95	60	130	Ø125	Ø18	23	38	2.1

* F = the dimension varies with set pressure

Overall dimensions

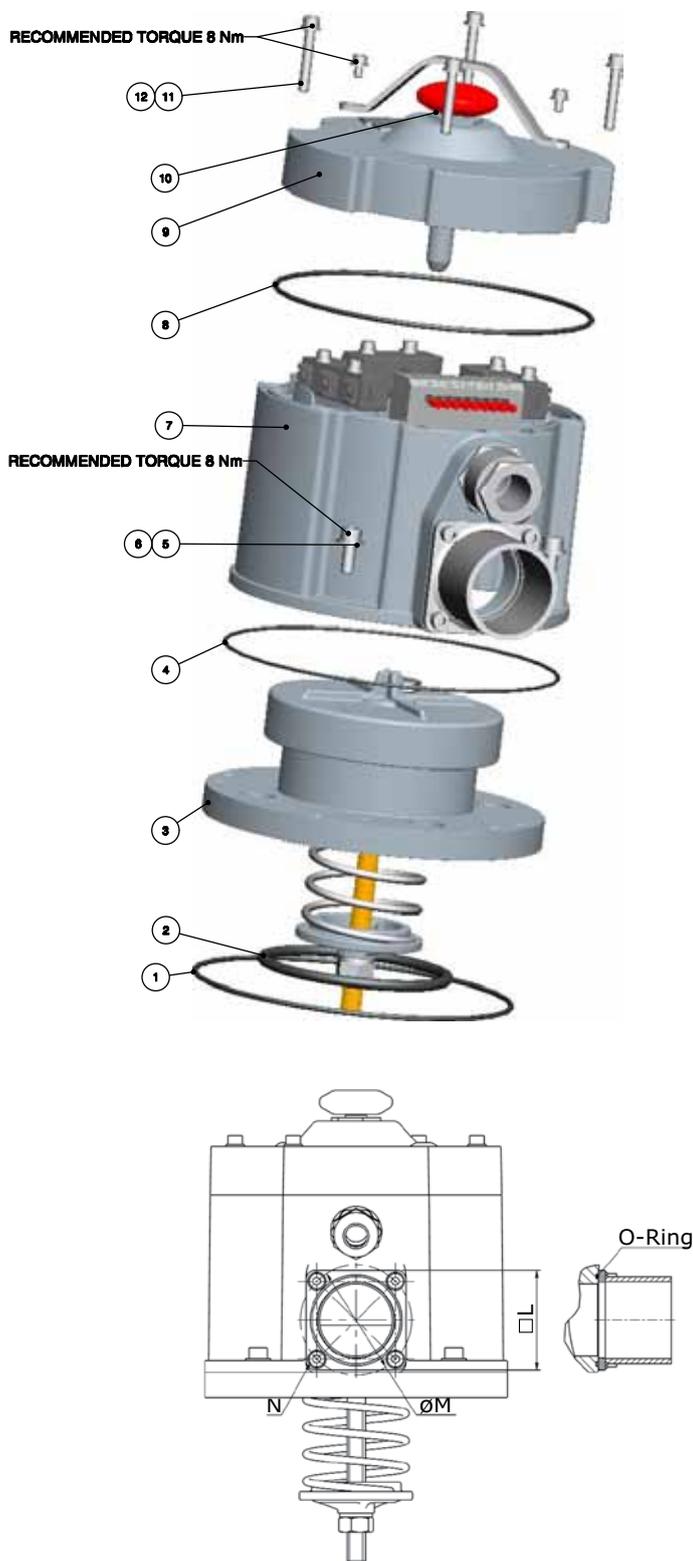
Type 125 M8 and 125 M6



Type	B	C	D	D1	D2	D3	E	F20KPA	F70KPA	G	H	I	No. of holes
125 M-8	278	228	Ø120	Ø153	Ø278	Ø278	86	175	80	230	Ø210	Ø18	8
125 M-6	278	228	Ø120	Ø153	Ø278	Ø278	86	175	80	230	Ø235	Ø18	6

Pressure Relief Device - M

Assembling sequence



Type 50 M

Ref.	Q.ty	Code	Description
1	1	5G0D003600*	GASKET O.R. 3600
2	1	5G0D000183*	GASKET O.R. 6337
3	1	-	50M SAFETY VALVE
4	1	5G0D002637	GASKET O.R. 2637
5	1	5V51106012	UNI 5931 M6X12 FIXING SCREW
6	1	5400800861	WASHER
7	1	-	OIL DUCT 50M
8	1	5G0D003600	GASKET O.R. 3600
9	1	-	OIL DUCT COVER 50M
10	1	-	VISUAL SIGNAL
11	1	5V50605035	UNI 5931 M5X35 FIXING SCREW
12	1	5RG0600050	WASHER

Type 125 M-8

Ref.	Q.ty	Code	Description
1	1	5G0D041050**	GASKET O.R. 41050
2	1	5G0L000227**	GASKET O.R. 8650
3	1	-	125M-8 SAFETY VALVE
4	1	5G0D041050**	GASKET O.R. 41050
5	1	5V50606060	UNI 5931 M6X60 FIXING SCREW
6	1	5400800861	WASHER
7	1	-	OIL DUCT 125M
8	1	5G0D041100	GASKET O.R. 41100
9	1	-	OIL DUCT COVER 125M
10	1	-	VISUAL SIGNAL
11	1	5V50605035	UNI 5931 M5X35 FIXING SCREW
12	1	5RG0600050	WASHER

Type 125 M-6

Ref.	Q.ty	Code	Description
1	1	5G0D041050**	GASKET O.R. 41050
2	1	5G0L000227**	GASKET O.R. 8650
3	1	-	125M-6 SAFETY VALVE
4	1	5G0D041050**	GASKET O.R. 41050
5	1	5V50606060	UNI 5931 M6X60 FIXING SCREW
6	1	5400800861	WASHER
7	1	-	OIL DUCT 125M
8	1	5G0D041100	GASKET O.R. 41100
9	1	-	OIL DUCT COVER 125M
10	1	-	VISUAL SIGNAL
11	1	5V50605035	UNI 5931 M5X35 FIXING SCREW
12	1	5RG0600050	WASHER

* ALTERNATIVE PLANE GASKET CODE 5C0V412501

** ALTERNATIVE PLANE GASKET CODE 5C0V452900

Type	□L	∅M	N	O-Ring
50 M	55	61	4 Screws M5x12	5G0D002187
125 M-8	135	152	4 Screws M12x25	5G0D004475
125 M-6	135	152	4 Screws M12x25	5G0D004475

Order sheet

Number of pieces			
Model	50 M <input type="checkbox"/>	125 M-8 <input type="checkbox"/>	125 M-6 <input type="checkbox"/>
Contacts	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Pressure setting 20±90 kPa Up to 200kPA for 50M only	Value kPa		
For use in:	Moderate salinity areas acc. to ISO 12944		<input type="checkbox"/>
	Off-shore areas acc. to ISO 12944		<input type="checkbox"/>
Gaskets type	Viton <input type="checkbox"/>	silicone oils and/or high temperature -10°C up to + 150°C	
	NBR -40°C <input type="checkbox"/>	mineral oils and low temperature -40°C up to + 120°C	

Pressure Relief Device - T and Q

T and Q

Pressure relief devices reduce the danger of explosion in case of an instantaneous and uncontrolled increase of pressure inside the transformer

COMEM "T" valves are used to control pressures inside tanks. They are used where accidental, instantaneous and uncontrolled increases in pressure may create the danger of explosion. They are designed to discharge the pressure increases that have taken place to the exterior in a very short time period (a few thousandths of a second). They are widely used in the metal tanks of oil-cooled electric transformers. Sudden and violent short circuits inside these tanks, in fact, instantly generate an enormous amount of gas with a great increase in interior pressures. If the pressure cannot discharge to the exterior there is danger that the transformer may explode, with all the possible harm and damages this may cause. This danger can be prevented by installing one or more valves with discharge sizes proportional to the volume of oil contained in the transformer. It is always good practice to install these valves in all situations where internal pressure values must not exceed specific safety limits.

Total valve opening

Valve opening is total each time the valve operates for pressure settings between 20 and 90 kPa.

The discharge opening area, for each valve operation, is equal to that for higher pressure settings even when pressure settings are lower than 20 kPa. If, however, pressures are generated inside the tank that are much higher than the setting then the spring, further compressed, allows the closing disk to create even larger discharge areas when operates.

Operating performance

Nominal operating pressure: the pre-fixed overpressure value shall be agreed between supplier and purchaser within the standard range from 20 up to 90 kPa, with 10 kPa steps, with a tolerance of - 5 kPa to + 7 kPa.

Routine tests

It is necessary to carry on operational tests, with compressed air:

- to check the correct functioning of the device at the operating pressure value
- to check the functioning of the optic signal and of the electric contacts.



Construction

Our valves are totally protected against external corrosion and against penetration of foreign bodies between cover and protective cap. This ensures perfect operating efficiency even for extended periods of time.

These consist of a flanged body and a corrosion-proof aluminium alloy disk. A brass rod that holds the spring is applied to the central part of the disk. There are two gaskets in the valve: a special shaped upper gasket and a lip seal.

When the valve is closed the upper gasket is pressed against the disk. The shape of the gasket permits a perfect seal even if the disk lifts 1-2 mm. The disk also makes a seal against the lip seal gasket as it moves upwards. If, due to interior pressure, the disk rises beyond this amount then the upper seal is no longer maintained while the lip seal remains. At this instant the surface of the washer invested by internal pressure is multiplied in area as is the total force applied on the spring.

This causes total and instantaneous opening of the valve which consequently discharges excess pressures to the exterior. When pressure has been discharged the disk, pushed back by the spring, lowers down and closes the valve. As the disk moves downwards it first closes against the side gasket and then against the upper gasket.

This latter gasket, because of its special shape, is pressed down 1-2 mm. and the disk moves further down, breaking the seal on the lip seal gasket. This releases any pressure that may have been trapped between the two gaskets. Now the valve is ready to intervene again.

Installation guidelines

Our valves come in 4 sizes and have different discharge areas. This allows users to select the type that is best suited for the volume of oil contained in the tank. The following table gives guideline values:

Volume of oil tank:	Type of valve
up to 3000 dm ³	50 T*
up to 9000 dm ³	80 T*
up to 25000 dm ³	125 T*
up to 45000 dm ³	200 T*

* These guideline sizes are based on experience.

Pressure settings

Standard pressure settings, for each type of valve, may vary from 20 to 90 kPa (approximately 0.2-0.9 Atm.).

Valves with non-standard pressure settings are manufactured on request. For model 50T the standard operating pressure range comes up to 200kPa, with 10kPa steps.

Guard against jets of hot oil

It is good practice, to prevent harm to persons or property from violent jets of hot oil evacuating from the valve, for valve discharges to be directed towards points properly designed to receive the discharge. Our valves are furnished with a plastic protective cap for this purpose. This cap, which does not offer any impediment to the discharge, permits you to direct the discharge flow towards the point you desire. The protection of the environment is one of the main aim which has to be pursued by any industry.

In order to do this COMEM has developed a new duct for safety devices type "T 50", "T 80" and "T 125". This duct allows to collect the oil drained from the valve following to an internal overpressure of the transformer.

The perfect hydraulic tightness of the system guarantees that not any drop of oil is dispersed in the environment, but carried through a pipe and then collected in a tank (not supplied).

The oil duct is made of unpainted stainless steel and it is solely supplied along with the safety device.

Detailed assembling instructions are supplied with the equipment. Please feel free to contact our Sales Dept and ask for a copy of the working test film.

Pressure Relief Device - T and Q



Electrical signalling switch

A "valve open signal" contact may be mounted on request. This is a fast tripping limit switch with switching contact contained inside a watertight casing. This contact is installed so that it acts simultaneous with the visual signal.

This switch has the following characteristics:

Specifications:

Breaking and making capacity (NO and NC contacts)

Voltage	Uninterrupted current (making capacity)	Interrupted current (breaking capacity)
24 VDC to 220 VDC	2 A	100 mA L/R < 40 ms
230 VAC	2 A	2 A $\cos \varphi > 0.5$

Visual signal that the valve is open

Valves are equipped with a visual signal that shows when they have opened. This signal consists of a rod that protrudes from the central part of the protective cap when the valve has opened. Just press it down in order to make it go back to its normal position.

External surface protection

External surfaces are protected against weather corrosion. Aluminum alloy components are non-corroding and their surfaces are protected with a double layer of paint offering high level protection against all atmospheric agents and resisting temperature variations between $-40\text{ }^{\circ}\text{C}$ and $+100\text{ }^{\circ}\text{C}$. The plastic protection cap and stainless steel screws offer further assurance of proper valve operation.

Contact diagram

FIRST SWITCH (terminals 13-14-21-22)

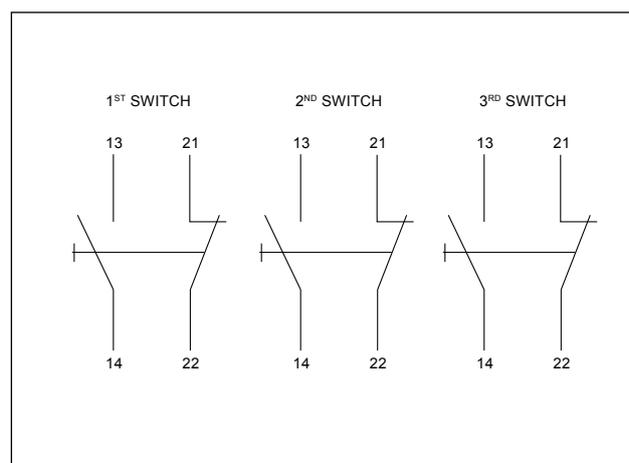
- 13-14 normally open
- 21-22 normally closed

SECOND SWITCH (terminals 13-14-21-22)

- 13-14 normally open
- 21-22 normally closed

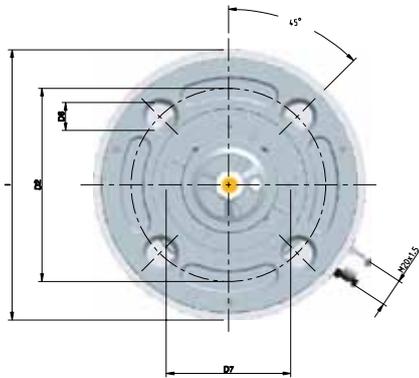
THIRD SWITCH (terminals 13-14-21-22)

- 13-14 normally open
- 21-22 normally closed

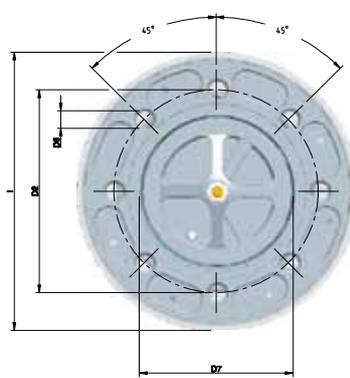


Overall dimensions

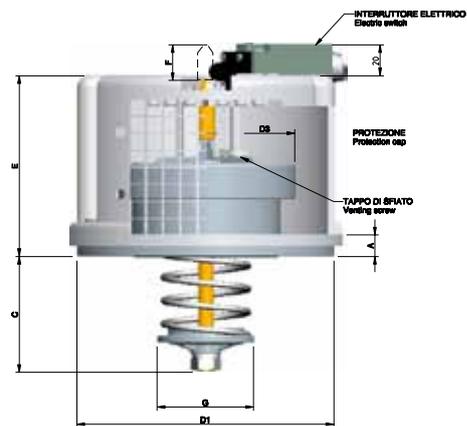
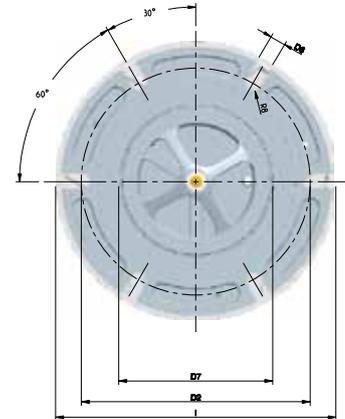
Type 50T - 80 T



Type 125 T



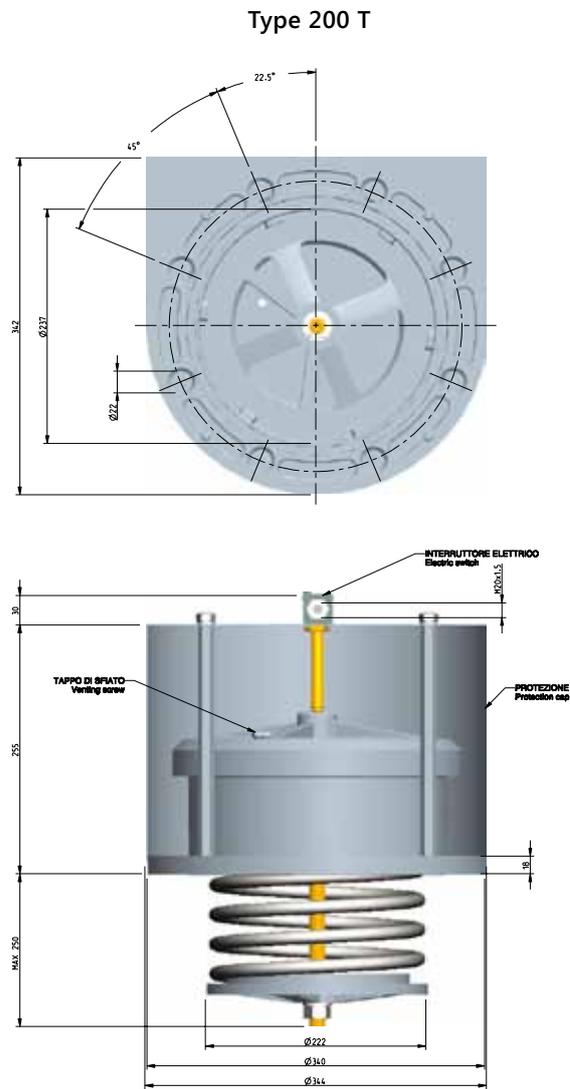
Type 125 Q



Type	G	A	D	D1	D2	D3	D4	D5	D6	D7	B	C20KPA	C70KPA	E	I	FMAX	O-ring	kg
50 T	62	14	50	165	125	116	85	99	18	80	4	85	45	130	175	16	6337	2.1
80 T	100	16	80	200	160	150	117	131	18	109.5	4	90	50	140	210	32	199	3.8
125 T	153	16	125	278	210	206	164	182	18	158	5	175	80	210	288	62	227	6.7

Pressure Relief Device - T and Q

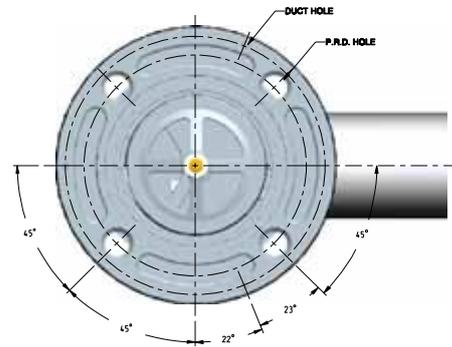
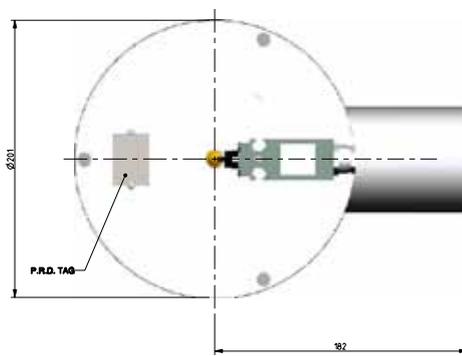
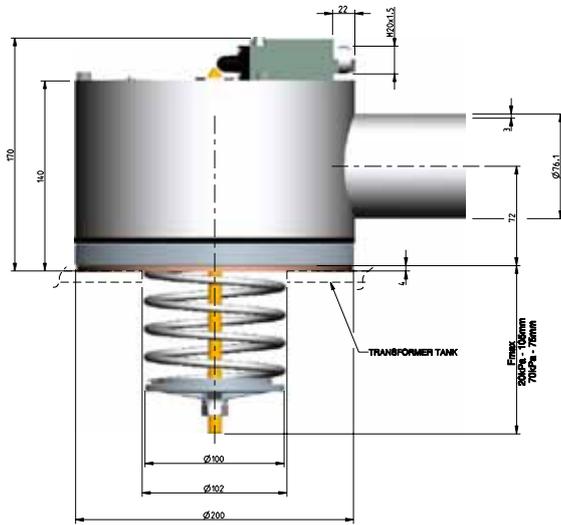
Overall dimensions



Weight kg 9.8

* These dimension varies with set pressure

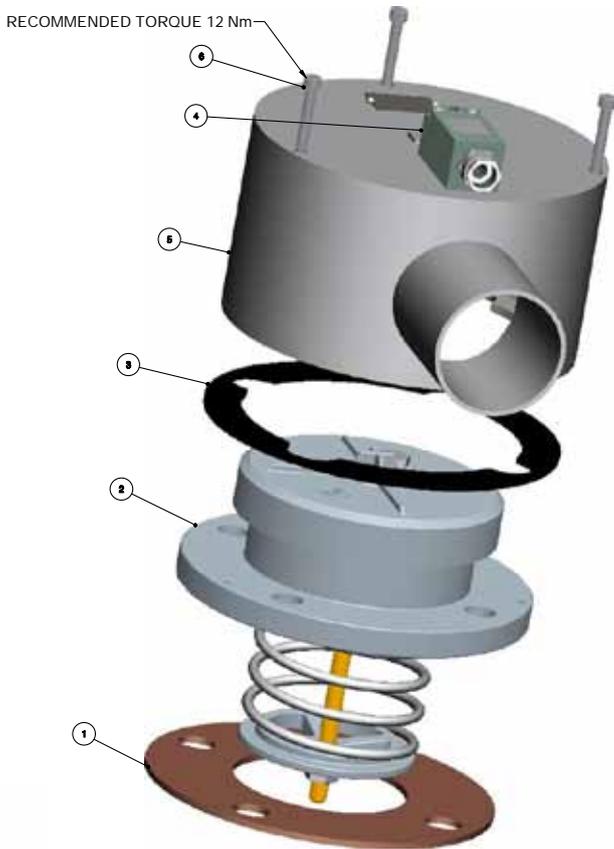
Type 80 T - Stainless steel guard



Weight kg 4.7

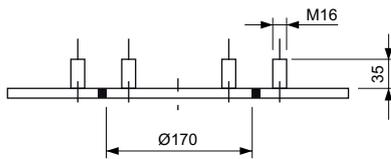
Pressure Relief Device - T and Q

Assembling sequence

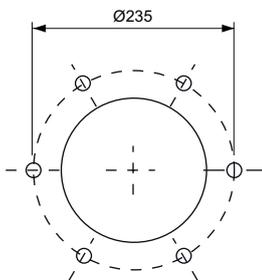


Type 80 T

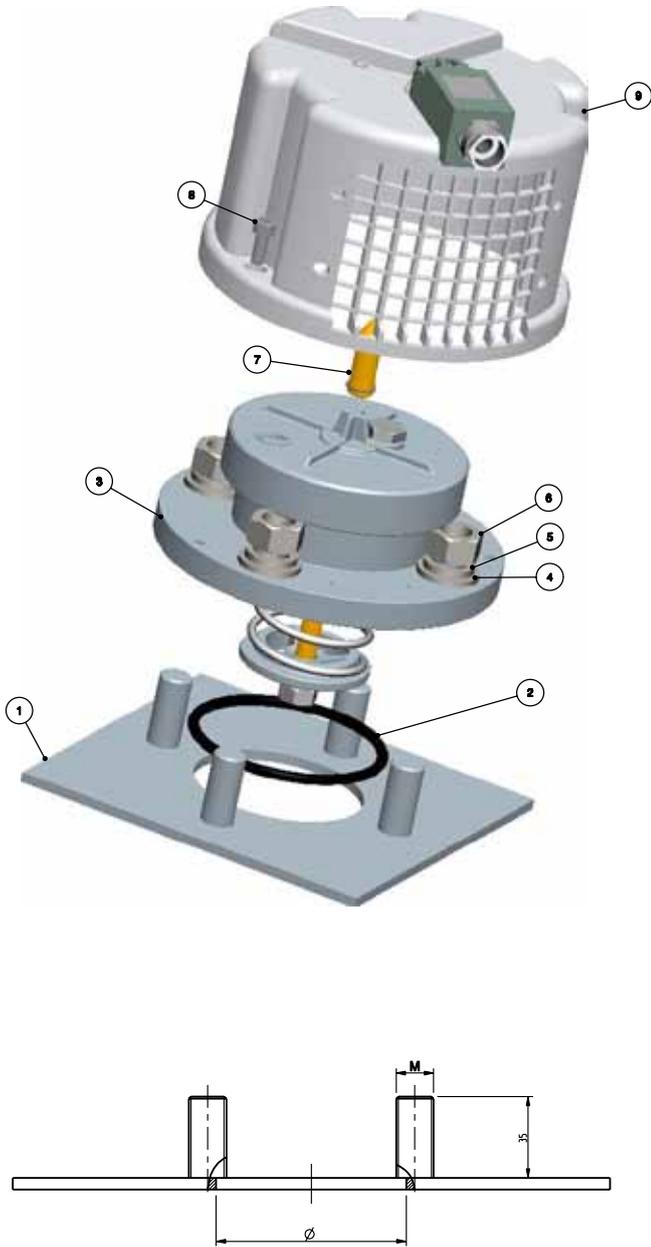
Ref.	Q.ty	Code	Description
1	1	5COV412601	80T GASKET FOR TANK COVER
2	1	-	80T SAFETY VALVE
3	1	5COV451500	80T GASKET FOR DUCT
4	1	5COV451400	VISUAL SIGNAL
5	1	-	80T OIL DUCT
6	3	5V50606130	UNI 5931 M6X110 FIXING SCREW



A-A



Assembling sequence



Type	Ø Reccomended	M
50T	80	M16
80T	109.5	M16
125T	158	M16
125Q	150	M14

Type 50 T

Ref.	Q.ty	Code	Description
1	1	-	Transformer cover
2	1	-	Gasket O.R. 183
3	1	5GOD000183	P.R.D. 50T
4	4	-	M16 washer (not supplied)
5	4	-	M16 groover washer (not supplied)
6	4	-	M16 nut (not supplied)
7	1	5COV409105	Visual signal
8	3	54VC006010	Screw M6x10 UNI 5931
9	1	5COV432900	Protection cover

Type 80 T

Ref.	Q.ty	Code	Description
1	1	-	Transformer cover
2	1	5GOD000199	Gasket O.R. 199
3	1	-	P.R.D. 80T
4	4	-	M16 washer (not supplied)
5	4	-	M16 groover washer (not supplied)
6	4	-	M16 nut (not supplied)
7	1	5COV409106	Visual signal
8	3	54VC006016	Screw M6x16 UNI 5931
9	1	5COV433300	Protection cover

Type 125 T

Ref.	Q.ty	Code	Description
1	1	-	Transformer cover
2	1	5GOL000227	Gasket O.R. 227 (125T)
3	1	-	P.R.D. 125T
4	4	5RA0000160	M16 washer (not supplied)
5	4	-	M16 groover washer (not supplied)
6	4	-	M16 nut (not supplied)
7	1	5COV409107	Visual signal
8	3	54VC006016	Screw M6x16 UNI 5931
9	1	5COV433100	Protection cover

Type 125 Q

Ref.	Q.ty	Code	Description
1	1	-	Transformer cover
2	1	5GPO020184	Flat gasket 200x180x4
3	1	-	P.R.D. 125Q
4	4	-	M14 washer (not supplied)
5	4	-	M14 groover washer (not supplied)
6	4	-	M14 nut (not supplied)
7	1	5COV458600	Visual signal
8	3	54VC006016	Screw M6x16 UNI 5931
9	1	5COV433100	Protection cover

Pressure Relief Device - T and Q

Order sheet

Number of pieces				
Model	50 T <input type="checkbox"/>	80 T <input type="checkbox"/>	125 T <input type="checkbox"/>	200 T <input type="checkbox"/>
Guard (plastic) (metallic) for 200T model only	with <input type="checkbox"/>		without <input type="checkbox"/>	
Valve with conveyor duct Stainless steel		80 T <input type="checkbox"/>		
Contacts*	with <input type="checkbox"/>		without <input type="checkbox"/>	
		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3		
* If there are electric contacts, the guard is always supplied.				
Pressure setting 20±90 kPa Up to 200kPa for 50T only	Value kPa			
For use in:	Moderate salinity areas acc. to ISO 12944			<input type="checkbox"/>
	Off-shore areas acc. to ISO 12944			<input type="checkbox"/>
Gaskets type	Viton <input type="checkbox"/>	silicone oils and/or high temperature -10°C up to + 150°C		
	NBR -40°C <input type="checkbox"/>	mineral oils and low temperature -40°C up to + 120°C		

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