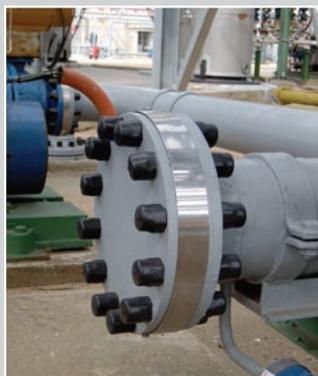


PBS SAFETY SPRAY SHIELDS & FLANGEBELT PROTECTORS



THERMAL INSULATION AND INDUSTRIAL SAFETY



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PBS SAFETY SPRAY SHIELDS

Protect yourself, the environment and your equipment. Use our PBS Safety Spray Shields to prevent injury in the event of a leak or spray-out of hazardous liquids at piping connections (such as flanges, valves, or expansion joints) found in many industries. Our PBS Safety Shields are mostly referred to as flange covers, flange shields, safety shields, flange diapers, flange guards or flange protectors.

Leak detection (environment and personnel) and protection (personnel and equipment) are of high importance.

- Can be tailor made following needs and circumstances.
- Reusable.
- Fast and easy installation.
- No tools needed.
- Easy, light and no maintenance.
- Possibility of pH indicator or clear Teflon® strip.
- First alert acid or other chemical indicator tissue.

Our PBS Safety Spray Shields are made of PTFE coated fiber glass tissue, silicone coated fiber glass tissue or PVC. We also have our stainless steel flange belt protector. PBS Safety Spray Shields apply where spray-out of hazardous chemicals has to be prevented. This can happen due to gasket or packing failure on expansion joints, flanges and valves.



Is available in:

- Plain grey PTFE coated glass fibre tissue.
- With clear Teflon® strip in the middle for visual inspection.
- Fully transparent reinforced Teflon®.
- Anti static black PTFE coated glass fibre tissue.
- Orange acid indicator first alert.

The PBS Safety Shields are available in the following materials:

PVC tissue with drawstrings and Velcro for quick installation. Colour blue. Max. 80°C and suitable for less severe applications.

PTFE (Teflon®) coated glass fibre tissue comes standard in colour grey with drawstrings and Velcro. Suitable for applications up to 270°C and resistant to many chemicals.

All available Teflon® shields can be made with a pH indicator patch that can be replaced as many times wanted.



Orange acid indicator first alert is an indicating type PBS shield that will change colour in those areas in contact with “triggering” agents. The colour change occurs on the inside of the cover but will make a mark on the outside. Reagent concentration will affect the time and colour change. The colour of the untriggered cover is international orange. The fabric is coated with a special formulation of indicators and polymers that will cause it to change colour when contacted by an acid or caustic. (List available on demand)



The PBS Safety Shields are available for:

Flanges

A Flange can be protected with metal or PBS tissue shield. Stock in ASA or DIN is available for fast demand.

Valves

PBS Tissue shields can be tailor made for valves. Many types can be fitted (Butterfly, Globe, Check, Diaphragm, Gate, Ball, Plug, Control, etc.)

Expansion joints

PBS PTFE coated tissue shields can be tailor made for expansion joints. This allows the movement of the expansion joint.

Pipe vent covers

To make pipe ventilation weatherproof, keep out animals or insects.

Many other applications where safety is a priority: Instruments, fittings, pumps, pressure vessels, flow indicators, sight glasses, etc.

Please note that all applications can be made with a clear Teflon® strip, a pH indicator, fully transparent or of full orange indicating tissue. Both PVC and Teflon® are highly UV and weather resistant.

METAL FLANGE PROTECTORS

In industrial pipe installations and any other pipe installations sensitive to atmospheric conditions, flange connections can be subject to corrosion and can require thorough maintenance on a regular basis.

In practice, maintenance of the gap between these flange connections is not always easy. The same applies to the fixing bolts.

In time, the flange bolts on unprotected flanges can be damaged by corrosion. This also affects the other components within the flange that the bolts come into contact with. This problem can be avoided with the use of flange protection. Our equipment contains a leak detection system. The whole unit making it perfectly watertight.

Our equipment is in the shape of a 'belt' made of stainless steel with an elastomer on the inside. Furthermore, the design of the Flange belt is such that it is very quick and easy to fit and dismantle.

The big advantages of our system are:

1. Stops any rust from developing
2. Protects the bolts inside the flange
3. No corrosion can develop on parts where the flanges rest
4. Can be used again and again after dismantling
5. Long life expectancy
6. Can be equipped with distancers for high pressure applications
7. Can be equipped with anti-slip for vertical applications

GENERAL

The "Flange protector" has been designed as a simple product with as few components as possible in order to guarantee a complete sealing of a flange connection.

In order to bring this about a special tensing key has been designed which tightens the guard around the flange. After removing the tensing key there is nothing left than can corrode or perish.

The corrosion problem

In industrial pipeline installations which are subject to the effects of weather, it is usually the flange connection which causes problems for carrying out maintenance effectively.

The interstices of these flange connections are indeed not easy to maintain in practice. Because of this, bolts or stud-bolts are weakened over the course of time due to corrosive wear.



In addition the underlying structures are frequently subject to wear due to the leaking rusty water from these flange connections.

The solution

A flange belt of type "A" or "T" is bound tightly around the flange by means of a special tensing key.

Type "A" consists of an elastomer, the steam diffusion resistance factor of which is > 5000 . The flexible outer jacket is made of 306 Stainless steel.

The assembly is provided with a locating hole, or a connecting nipple, to which the desired connecting pipes etc. can be connected.

Type "T" is designed with a Teflon® inner jacket.

FLANGE GUARDS FOR DIRECT JET PREVENTION

The metal flange guard with distancers and anti slip can be used to prevent the development of high energy / high speed / long range jets (LNG or high pressure natural gas).



FLANGES WITH INSULATION

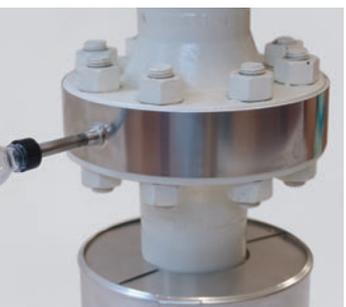
The problem

Flange leakage resulting in the product in the insulation. With non-flammable products, the damage can be substantial; in the case of flammable products with electrically heated pipes, for example, a catastrophe!

The solution

A tightly sealed flange belt with a connecting nipple protects the insulation against any possible leakage from the flange connection.

All materials are based on 306 stainless steel and Teflon® with a temperature range from -269°C to +280°C.



CHILLED PIPELINES

Chilled pipelines, or those situations where it can be assumed that condensation forms on the systems, can be prevented with a flange belt.

The connecting nipple is provided by a transparent sealed Teflon® tube, or a stainless steel nipple with a small glass sampling bottle.

The whole serves as a sealed leak-detection device, with the possibility of adding a coloured marking fluid as a fast, clear indicator.

SPECIAL SITUATIONS

- Flanges in inaccessible places or above passageways.
- Flanges in pipe gullies under the ground.
- Even flanges completely embedded under ground.
- Flanges in enclosed spaces.
- Flanges for gas pipelines.

Numerous situations where a flange connection causes an extra risk to the environment or safety can be protected by a flange belt with a leak-detection device at some safe, accessible point.

For every situation there is a suitable design in 306 stainless steel or Teflon®.



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