

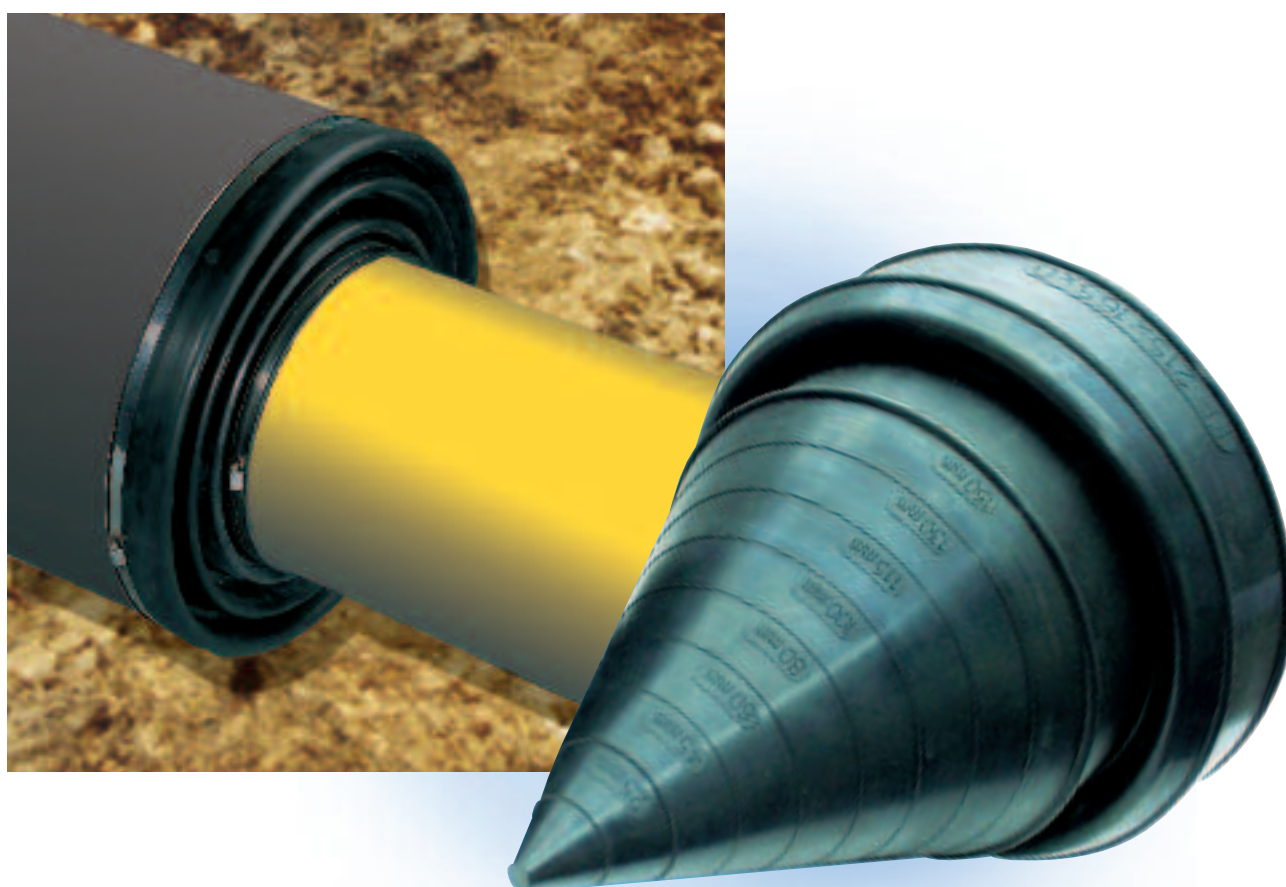
General information

Technical data

Installation instruction

PSI Casing End Seals

For Carrier Pipe End Seal

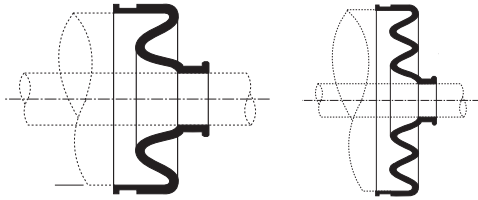


PSI Casing End Seals

Available program



Type DU for new installation

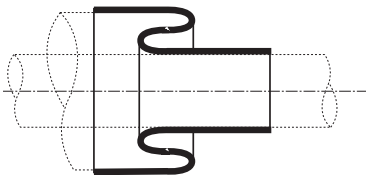


DU seals are only used for new installations. Their special folded design compensates the eccentric position of pipes relative to each other. Special types for pipe eccentricities of > 80 mm are available at an extra charge.

DU seals are injection moulded parts made of EPDM (ethylene-propylene diene rubber). Our product range is continuously expanded. For available sizes and types please refer to the current price list. For sizes not available in DU types we recommend to use a KG casing end seal.

KG casing end seals are only used for new installations. This type is available in almost any size. The conical design of the KG seal compensates the eccentric position of the pipes relative to each other to a certain degree. Special types are available for pipe eccentricities of > 80 mm at an extra charge.

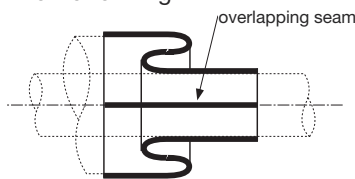
Type KG for new installation



The KG casing end seal is made of an elastomeric polymerizate: NEOPREN (Chloroprene CR). For available sizes and types please refer to the current price list.

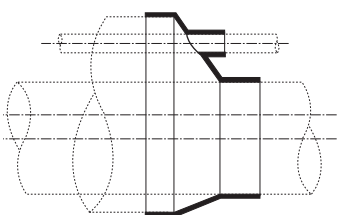
The design and material of KO casing end seals corresponds to KG seals. KO seals, however, are open and are suitable for retro-fitting already installed pipelines. This seal is placed over both pipe ends and secured in place by means of a bonding agent (cold vulcanisation).

Type KO for retrofitting



The bonding process is quite simple and similar to tyre patching. Apply bonding agent to both sides and let it dry, then repeat this process. Now press the parts together with maximum pressure. For available sizes and types please refer to the current price list. The bonding agent is included in the price.

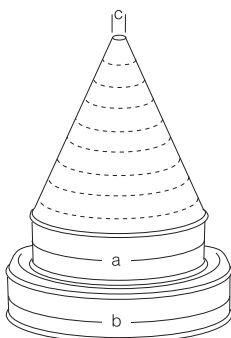
Type STM seamless version



Seamless STM casing end seals will be especially manufactured to meet your requirements. There are universally applicable and available in almost any size.

This seal has the special advantage of being able to bridge extreme eccentricities. In addition, several openings can be provided (e.g. for cable ducts). STM casing end seals are made of "Rottolin" plastic material. For these seals we also offer support elements which prevent that the conical part of the seal is damaged when buried.

Type KT for new installation



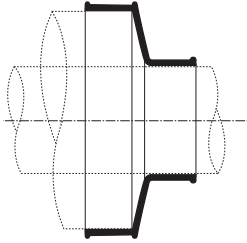
Important ordering details:

1. Carrier pipe O.D.
2. Casing O.D.
3. Position of carrier pipe relative to casing
(concentric, eccentric; add drawing if possible)
4. Skid height of insulator
5. Casing I.D.
6. For type STM please specify number and type of cable ducts and add drawing.

HA for House Connections



Type HA



HA casing end seals are only used for the new installation of small pipes for house connections.

HA seals are made of the same material as DU seals.

For available sizes and types please refer to the current price list.

PSI-Casing End Seal Type KT



PSI-casing end seals type KT are used to prevent the ingress of moisture and soil into the annular space between carrier pipe and casing sleeves.

The characteristic of these seals:

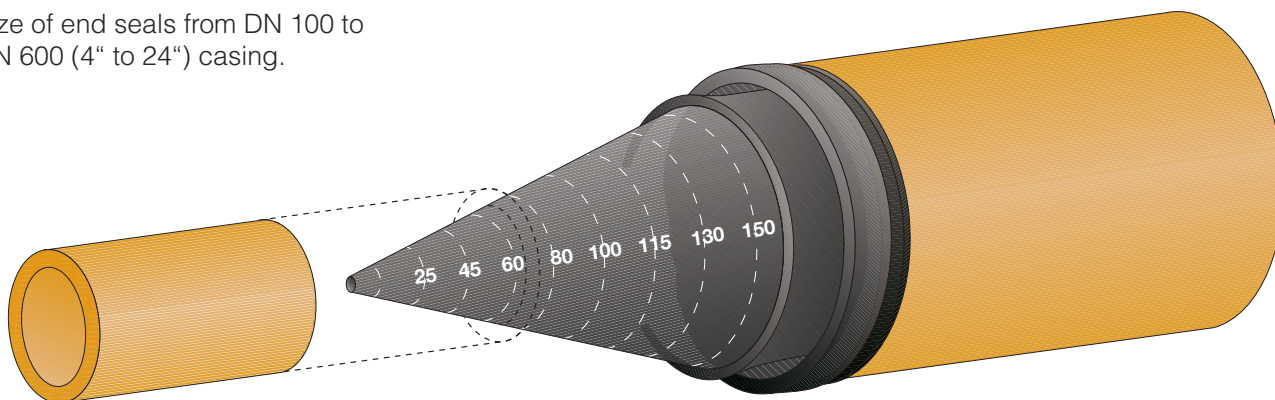
- low storage costs, because there are only five sizes of sleeves from DN 100 to DN 600
- 3-4 mm thick high-quality EPDM-rubber
- different sizes are printed on the sleeves to simplify the cutting of the right size
- straps for clamping applicable for all diameters

Tip for mounting

To fit the end seals on the carrier pipe you simply cut the seals at the closed end just less than the external diameter of the carrier pipe. Please note the printed sizes on the end seals! Push the end seal over the outside of the casing pipe and the carrier pipe and fasten it with the included steel straps.

Because of the flexibility of the material the end seals are suitable for casing pipes up to 10% bigger diameters and as a consequence of the cone shape they are suitable for every diameter of carrier pipes.

Size of end seals from DN 100 to DN 600 (4" to 24") casing.



| Nominal width DN | mm | Product-No. |
|-------------------------|-------------|-------------|
| KT-end seal 100/125-0 | 110/135-10 | 3-012-05504 |
| KT-end seal 150/200-0 | 165/215-10 | 3-012-05505 |
| KT-end seal 250/300-50 | 270/320-50 | 3-012-05506 |
| KT-end seal 350/400-80 | 350/402-80 | 3-012-05507 |
| KT-end seal 500/600-150 | 508/610-150 | 3-012-05508 |

PSI Casing End Seals

General Information



A safe and economic system for sealing the annular space between carrier pipe and casing



Type STM



Type DU

For safety reasons carrier pipes are installed inside casing sleeves wherever pipes are being laid under roads, railways or rivers. It is important that the annular space is kept dry in order to reduce the risk of corrosion.

Our various types of casing end seals constitute a safe, clean and cost-effective solution for new installation or retrofitting.

Casing end seals are installed easily and rapidly. They are pulled over the outer edge of the casing and the carrier pipe, and are secured in place by stainless steel straps and clamps.

All casing end seals are made of materials that are highly resistant to ageing and have excellent mechanical strength. We are constantly adding new types to our large range of casing end seals. Should the types we offer not be suitable for your application, please do not hesitate to contact us. We will then make your special „problem“ a part of our development work.

Casing end seals, however, are not suitable in cases where water exerts pressure. We recommend to use LINK-SEALS instead.

Every casing end seal is supplied in a ready-to-install condition including suitable fastening straps and clamps.

Technical changes reserved.

PSI End Seal Type FW

General Information



PSI FW-type end seals were specially developed to provide a pressure-tight seal between pipes carrying media and casing pipes. The seals consist of high-quality Rottolin and, thanks to their being 9-11 mm thick, are particularly dimensionally stable and pressure tight up to 0.5 bar. As a result of their exceptional flexibility, they can accommodate axial and radial movements between the casing and inner pipe. To guarantee the integrity of the seal, the annular gap should not exceed 70 mm. A special, permanently elastic sealant-adhesive is sprayed from a cartridge on to the underside of the collar of the seal, which is then secured over the casing and carrier pipe by means of stainless steel straps.

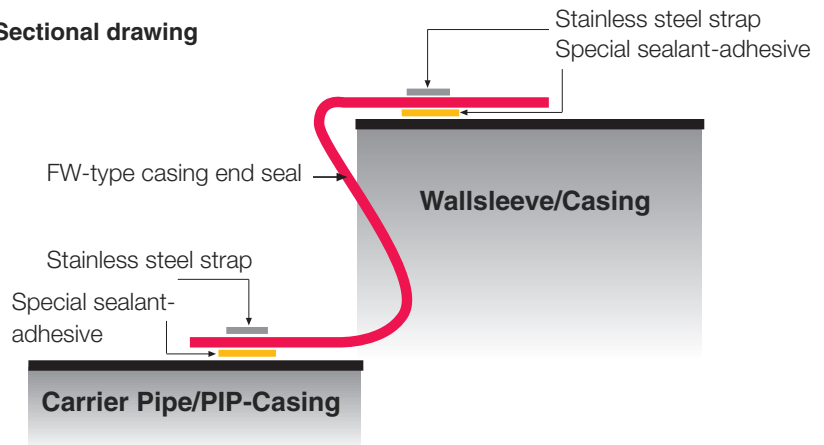
Before backfilling, the seal must be covered with an expanding-type padding.



Technical data:

| | |
|--|----------------------|
| Material: | Rottolin |
| Material thickness: | 9 -11 mm |
| Colour: | Red |
| Shore hardness: | approx. 50o |
| Tensile strength: | 11 N/mm ₂ |
| Breaking elongation: | 400 % |
| Initial tear resistance: | 27 N/mm |
| Max. continuous operating temperature: | 55°C |

Sectional drawing



Installation Instruction



Pull small end of the seal over the carrier pipe.

If required, the small end of a KG seal can be enlarged by cutting off the desired length. However, the opening should always be 5 % smaller than the actual diameter of the carrier pipe because the rubber material expands and the resulting pressure ensures that the seal fits closely around the pipe.

Pull the large end of the seal over the casing as far as possible.

In case of KG and KO seals pull the small seal end on the carrier pipe in the direction of the casing until this end protrudes about 50 mm from the edge of the casing. The tapered seal then takes on an „s“-shape and lies protected within the casing.

The fitting position of DU and STM seals is determined by their design.

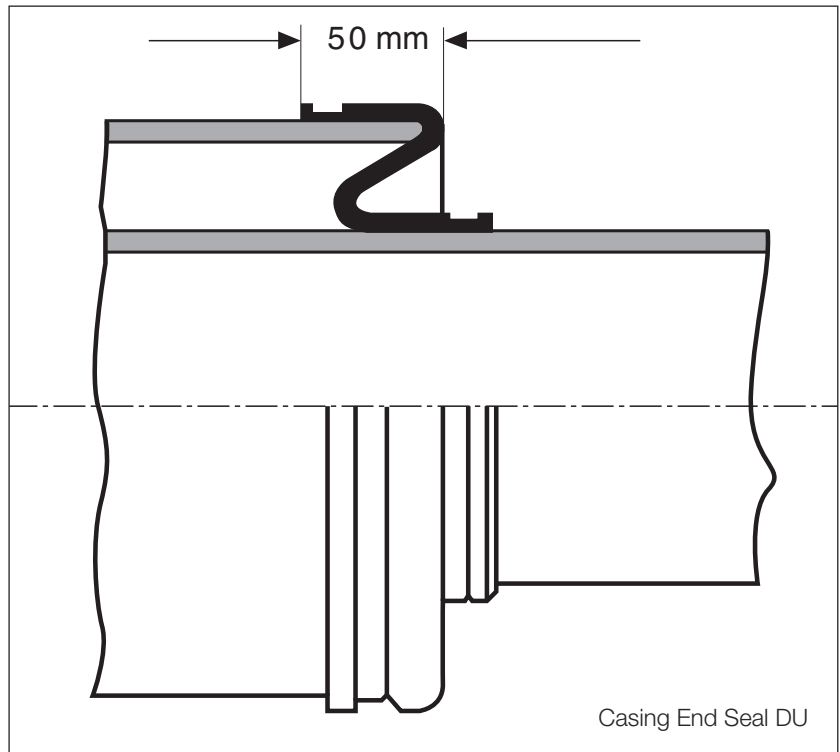
Place the stainless steel straps around the large and small ends.

Pull the free end of the strap at least 50 mm through the square opening in the clamp and then fold it. The folded end must be placed under the fastening strap. Tighten the clamp as far as possible using a screw driver.

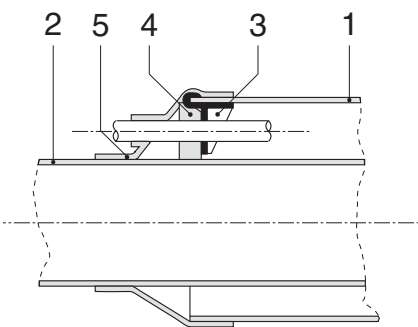
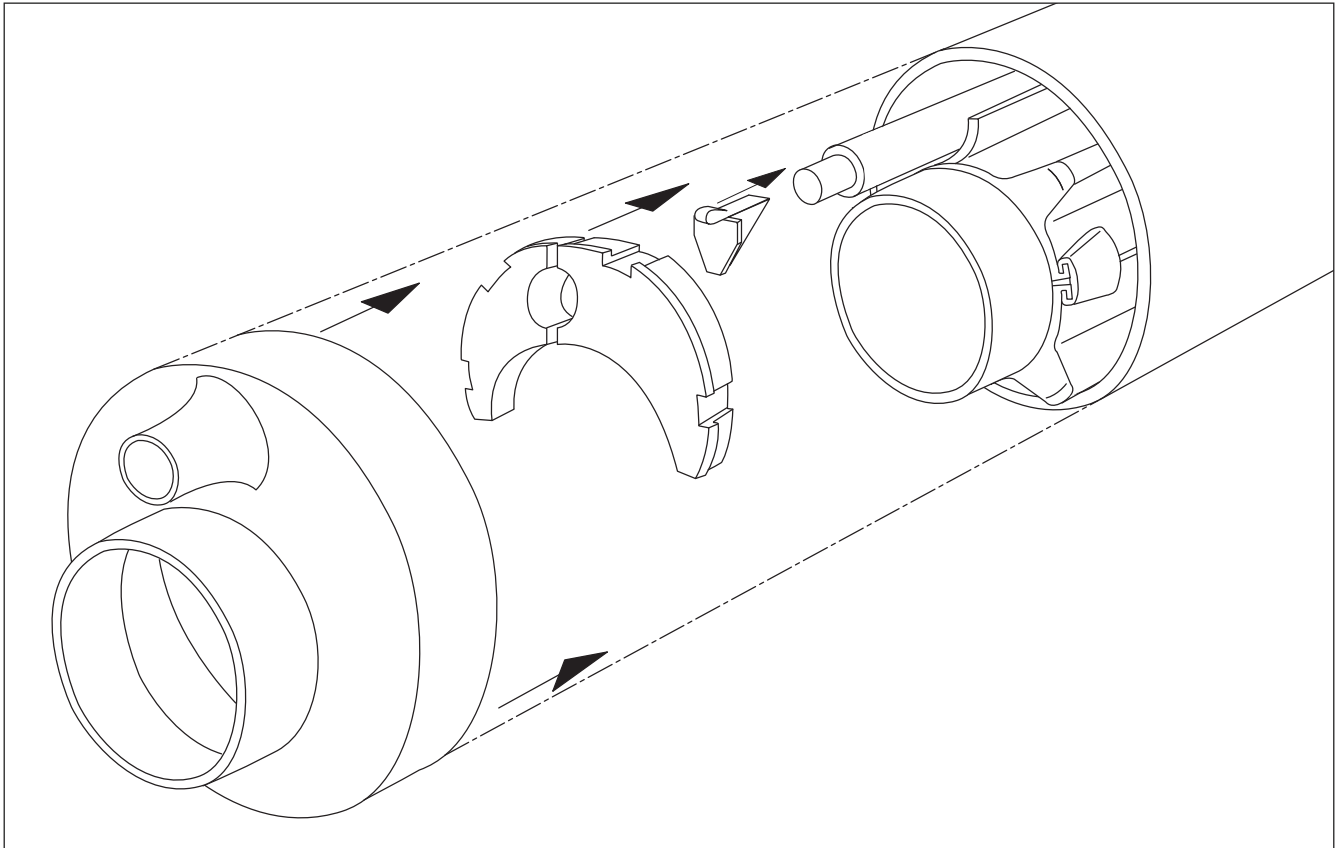
For casing end seals type DU and STM the installation procedure is the same.

The moulded form is indicating the installation situation.

Care should be taken when backfilling as the seals should be remain firm on the pipe. Also ensure that no sharp rocks or stones can puncture the rubber.




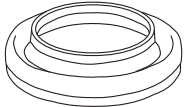
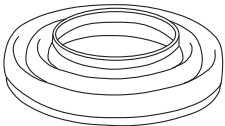
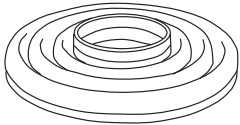
PSI Support Elements for Type STM Installation Instruction



- Attach plastic support (3) with clip element to casing wall (1).
- Slide foam segments (4) onto carrier pipe (2) and insert into casing; the raised edge outside, peripheral recesses are fitted into the plastic support; the semi-circular recesses are fitted around the cable duct.
- Pull seal (5) over support segment.

PSI Casing End Seals Order Form



| | pcs. | Dimension | | Part no. | Cost per item | Total |
|---|---------|-----------|-------------|-------------|---------------|-------|
| | | [inch] | OD-Ø [mm] | | | |
|     | | 1,5 x 3 | 41 x 92 | 1-012-05411 | | |
| | | 1,5 x 4 | 41 x 112 | 1-012-05412 | | |
| | | 1,75 x 3 | 51 x 92 | 1-012-05416 | | |
| | | 1,75 x 4 | 51 x 112 | 1-012-05417 | | |
| | | 2 x 3 | 64 x 92 | 1-012-05420 | | |
| | | 2 x 4 | 60 x 110 | 3-012-00015 | | |
| | | 2 x 4 | 64 x 112 | 1-012-05421 | | |
| | | 2 x 6 | 60 x 160 | 3-012-00018 | | |
| | | 2,5 x 6 | 80 x 160 | 3-012-00023 | | |
| | | 3 x 5 | 89 x 133 | 3-012-00025 | | |
| | | 3 x 6 | 92 x 165 | 3-012-00027 | | |
| | | 3 x 8 | 92 x 225 | 3-012-00029 | | |
| | | 3 x 10 | 92 x 275 | 3-012-00032 | | |
| | | 3 x 12 | 88 x 315 | 3-012-00033 | | |
| | | 4 x 5 | 118 x 140 | 3-012-00034 | | |
| | | 4 x 6 | 110 x 160 | 3-012-00035 | | |
| | | 4 x 8 | 112 x 225 | 3-012-00036 | | |
| | | 4 x 10 | 112 x 275 | 3-012-00037 | | |
| | | 4 x 12 | 108 x 315 | 3-012-00039 | | |
| | | 5 x 8 | 134 x 219 | 3-012-00042 | | |
| | | 5 x 10 | 145 x 275 | 3-012-00045 | | |
| | | 5 x 12 | 130 x 315 | 3-012-00047 | | |
| | | 6 x 8 | 160 x 219 | 3-012-00049 | | |
| | | 6 x 10 | 162 x 275 | 3-012-00050 | | |
| | | 6 x 12 | 162 x 330 | 3-012-00052 | | |
| | | 6 x 14 | 168 x 355 | 3-012-00054 | | |
| | | 6 x 16 | 160 x 406 | 3-012-00055 | | |
| | | 8 x 10 | 225 x 280 | 3-012-00057 | | |
| | | 8 x 12 | 200 x 315 | 3-012-00058 | | |
| | | 8 x 14 | 230 x 355 | 3-012-00060 | | |
| | | 8 x 16 | 225 x 410 | 3-012-00061 | | |
| | | 8 x 18 | 225 x 462 | 3-012-00062 | | |
| | | 8 x 20 | 200 x 500 | 3-012-00059 | | |
| | 10 x 12 | 260 x 330 | 3-012-00064 | | | |
| | 10 x 14 | 250 x 356 | 3-012-00066 | | | |
| | 10 x 14 | 280 x 360 | 3-012-00065 | | | |
| | 10 x 16 | 280 x 410 | 3-012-00067 | | | |
| | 10 x 18 | 273 x 457 | 3-012-00068 | | | |
| | 10 x 20 | 273 x 508 | 3-012-00069 | | | |
| | 10 x 22 | 275 x 556 | 3-012-00070 | | | |
| | 12 x 16 | 320 x 410 | 3-012-00071 | | | |
| | 12 x 18 | 325 x 457 | 3-012-00072 | | | |
| | 12 x 20 | 324 x 508 | 3-012-00073 | | | |
| | 12 x 22 | 315 x 556 | 3-012-00074 | | | |
| | 14 x 18 | 355 x 462 | 1-012-05469 | | | |
| | 14 x 20 | 360 x 513 | 3-012-00078 | | | |
| | 14 x 22 | 355 x 558 | 3-012-00080 | | | |

PSI Casing End Seals Order Form



| Description | pcs. | Dimension | | Part no. | Cost per item | Total |
|-------------|---------|-----------|-------------|-------------|---------------|-------|
| | | [inch] | OD-Ø [mm] | | | |
| | | 16 x 20 | 406 x 508 | 3-012-00082 | | |
| | | 16 x 22 | 410 x 558 | 3-012-00083 | | |
| | | 16 x 24 | 400 x 609 | 3-012-00084 | | |
| | | 18 x 22 | 450 x 558 | 3-012-00085 | | |
| | | 18 x 24 | 450 x 610 | 3-012-00086 | | |
| | | 20 x 24 | 508 x 610 | 3-012-00088 | | |
| | | 20 x 26 | 510 x 660 | 1-012-05479 | | |
| | | 20 x 28 | 500 x 710 | 3-012-00087 | | |
| | | 22 x 26 | 560 x 660 | 1-012-05481 | | |
| | | 22 x 32 | 555 x 810 | 3-012-00095 | | |
| | | 24 x 28 | 610 x 710 | 3-012-00098 | | |
| | | 24 x 30 | 610 x 760 | 1-012-05485 | | |
| | | 24 x 32 | 600 x 812 | 3-012-00100 | | |
| | | 26 x 30 | 668 x 760 | 3-012-00104 | | |
| | | 26 x 32 | 660 x 815 | 1-012-05488 | | |
| | | 28 x 32 | 710 x 810 | 3-012-00107 | | |
| | | 30 x 34 | 760 x 862 | 3-012-00109 | | |
| | | 30 x 36 | 765 x 915 | 1-012-05490 | | |
| | 30 x 38 | 762 x 965 | 3-012-00111 | | | |

| Nominal width DN | pcs. | mm | Part no. | Cost per item | Total |
|-------------------------|------|-------------|-------------|---------------|-------|
| KT-end seal 100/125-0 | | 110/135-10 | 3-012-05504 | | |
| KT-end seal 150/200-0 | | 165/215-10 | 3-012-05505 | | |
| KT-end seal 250/300-50 | | 270/320-50 | 3-012-05506 | | |
| KT-end seal 350-400-80 | | 350/402-80 | 3-012-05507 | | |
| KT-end seal 500-600-150 | | 508/610-150 | 3-012-05508 | | |

| Description | pcs. | mm | Part no. | Cost per item | Total |
|-------------------|------|----|----------|---------------|-------|
| Special end seals | | | | | |

Prices acc. to valid pricelist

From

Date / Signed