



LUXOR[®]

FLEXIBLE HOSES

FLEXIBLE HOSES



Luxor's Flexible hoses are first rate Made in Italy products, reliable and top quality products worldwide renowned.

The excellent mechanical and hygienic features, the easiness of their installation and the good value of this product find a continuously increasing appreciation by installers and merchants. The constant attention given to the market demands, to customers' requirements and to the hygienic and environmental obligations, make Luxor's flexible hoses a clear point of reference in the sanitary-plumbing market.



QUALITY AND COMPLIANCE

Luxor's Company's Quality System and Luxor's flexible hoses are approved and certified by the most important International Institutes.



COMPLIANCE WITH EN 13618

EN 13618 compliant flexible hoses are available in sizes from DN 6 to DN 25 and are the optimum choice for carrying potable and sanitary water in any type of installation.



FLEET OF AUTOMATIC MACHINES

The production process makes use of cutting-edge machinery to ensure precise product execution at every stage.



ALL-ROUND DESIGN

Luxor handles the entire hose production process in-house, from design to assembly, ensuring total control over the quality and efficiency of its products.



CUSTOMISED SOLUTIONS

Luxor works with its customers to create customised flexible hoses, developing tailor-made products that meet market requirements.



CONTROL PROCEDURES

Luxor flexible hoses are subjected to rigorous inspection procedures using high resolution cameras to detect any defects, ensuring accurate verification of product quality.



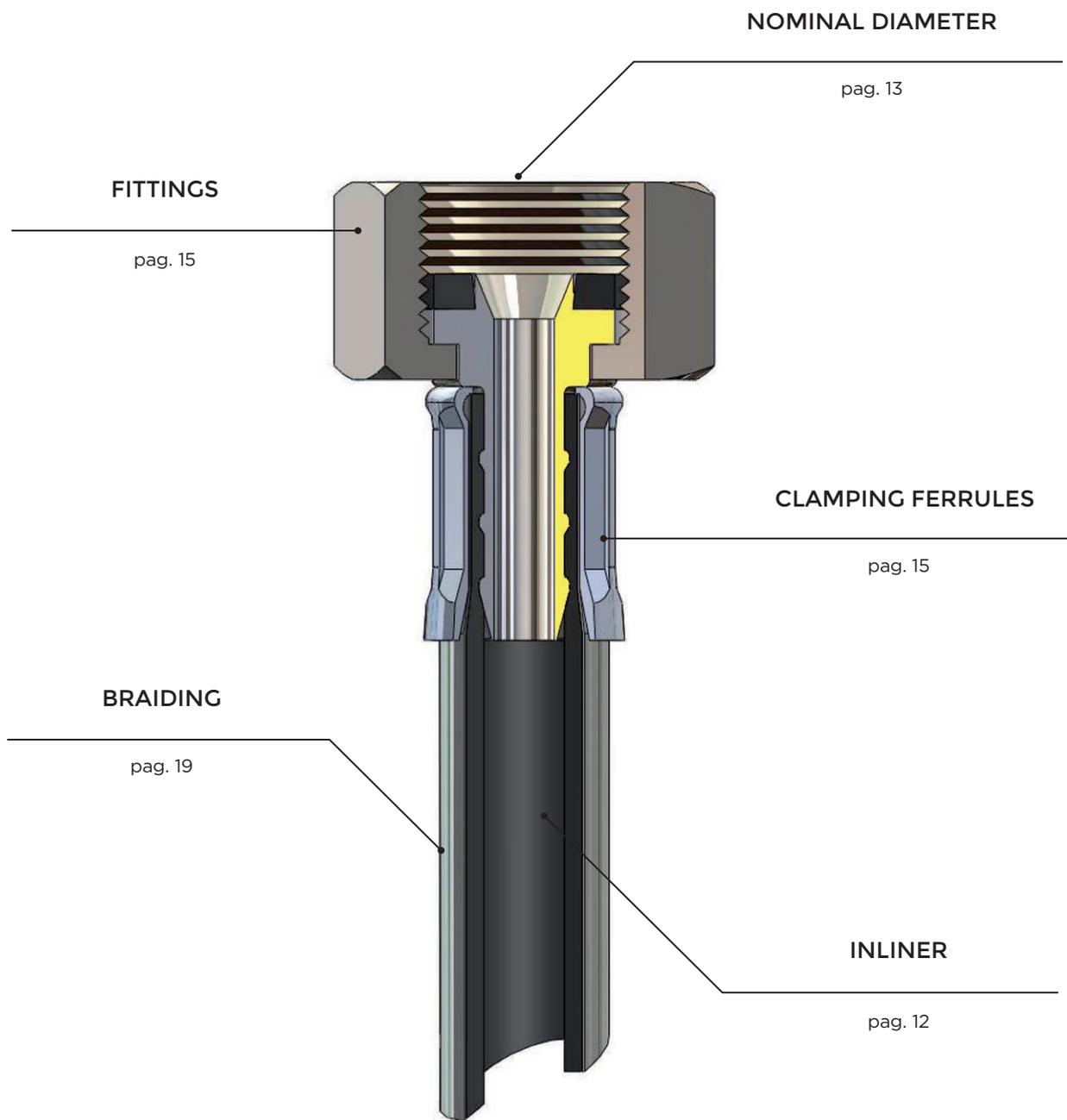
CUSTOMISED FITTINGS

Luxor manufactures customised fittings and offers design services and customised solutions for its customers.



IDENTIFICATION MARK

All Luxor's flexible hoses are clearly and rigorously marked with an identification mark on the clamping ferrules bearing the mark LUX, year of production and the technical-regulation quotes. By marking the hose each producer assumes his responsibility of what is produced: **beware of hoses with no name!**



APPLICATIONS

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APPROVALS

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ASSEMBLY INSTRUCTIONS

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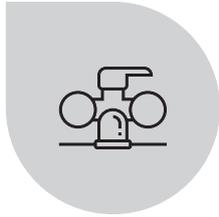
LENGTH INSTRUCTIONS

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APPLICATIONS

Luxor Spa's flexible hoses are the ideal solution for every application, both sanitary and industrial. They are safe and easy to install.

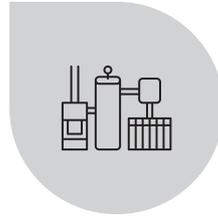
The table below shows some of the most common applications, as well as the availability with silicone, TP, EPDM, PEX and butyl inliner.



traditional taps



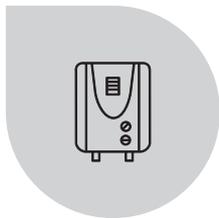
mixers



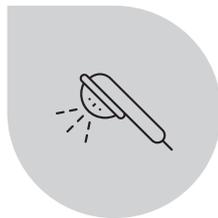
heating systems



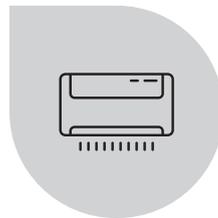
flushing tanks



boilers



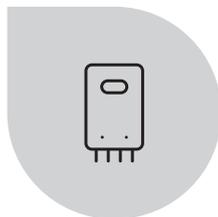
kitchen pull-out shower

conditioning systems /
fan coil

washing machines



mounting columns



water heaters



dishwasher



shower cabins



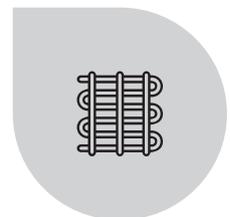
whirlpools



pumps



coffee machines



radiant ceiling panels

| Inliner Range | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|------|-------------------------|--------------------|--------|-------------------------|------------------------|-----------------|----------|---------------------|------------------|---------|-------------|--------------|------------|-----------------|----------|-----------------|-------|------------|------------|--------------------------|-------------|--------|----------------------|------------------------|
| Nominal diameter | | Single-lever mixer taps | Two-handle faucets | Mixers | Pull-out shower faucets | Single-hole mixer taps | Coffee machines | Cisterns | Water installations | Sanitary systems | Boilers | Inlet hoses | Water meters | Whirlpools | Shower cubicles | Fancoils | Heating systems | Pumps | Autoclaves | Heat pumps | Air-conditioning systems | Greenhouses | Risers | Common installations | Radiant ceiling panels |
| | DN6 | • | | • | | | • | | | | | | | | | | | | | | | | | | |
| | DN8 | • | • | • | • | • | • | • | • | • | • | | | | | • | • | | | | • | | | | • |
| | DN10 | | • | | | | | | • | • | • | • | | | | • | • | | | | • | | | | • |
| | DN13 | | | | | | | | • | | • | • | • | • | • | • | • | | | | • | | | | • |
| | DN15 | | | | | | | | | | • | | | | | | • | • | • | • | • | • | • | • | • |
| | DN18 | | | | | | | | | | | | | | | | • | • | • | • | • | • | • | • | • |
| | DN25 | | | | | | | | | | | | | | | | • | • | • | • | • | • | • | • | • |
| | DN32 | | | | | | | | | | | | | | | | • | • | • | | • | • | • | • | • |
| | DN40 | | | | | | | | | | | | | | | | • | • | • | | | • | • | • | • |
| | DN50 | | | | | | | | | | | | | | | | • | • | • | | | • | • | • | • |

INLINER

SILICONE

Silicone, a noble high-quality material, has gained growing recognition on sanitary markets at an international level.

It is the most hygienic material available on the market and guarantees complete purity. Outstanding elasticity and excellent mechanical properties throughout the temperature range exemplify its characteristics.

- ✓ HYGIENIC PURITY
- ✓ RESISTANCE TO HIGH TEMPERATURE



THERMOPLASTIC

As the result of years of R&D of noble and high-performance materials, TP combines the purity and hygiene of PEX and silicone with the outstanding mechanical properties of EPDM.

Flexibility, versatility and usability make Luxor TP hoses a high-quality product certified by the most prominent international institutes. Luxor TP hoses were developed in order to protect the end users' wellbeing and the environment by being hygienically pure and completely recyclable.

- ✓ APPROVALS
- ✓ FLEXIBILITY



EPDM

EPDM rubber is the most widespread inliner material. Available in various compounds, it shows excellent hygienic and mechanical characteristics as well as resistance to oxidation, environmental factors and high temperatures.

- ✓ MECHANICAL RESISTANCE
- ✓ COMPLETE RANGE



PEX

PEX is a thermoplastic material endowed with excellent hygienic properties which does not affect the taste and smell of water throughout the temperature range. PEX hoses have established themselves on the market as a good alternative to EPDM.

- ✓ GOOD HYGIENIC PURITY



BUTYL

Butyl is a material with low oxygen permeability. This feature makes it suitable for all closed circuit applications where oxygen creates corrosion.

- ✓ RESISTANCE TO OXYGEN PERMEABILITY



PE + RT

The corrugated PE-RT is a material designed to offer excellent flexibility, resistance to clogging, and kink-free performance. It is particularly suitable for drinking water applications at temperatures below 70 °C.

- ✓ FLEXIBILITY AND SAFETY IN SMALL SPACES



NOMINAL DIAMETER



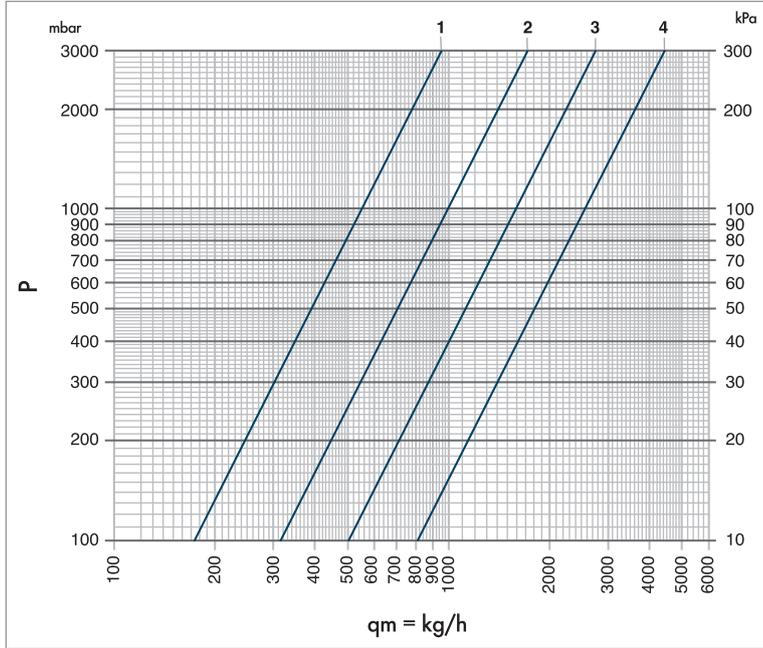
Luxor Spa's range of hoses comprises products which comply with the most prominent international standards and the current European norm EN13618:2017.

The table below shows the most relevant technical features for every nominal diameter, as well as the availability with silicone, TP, EPDM, PEX and butyl inliner.

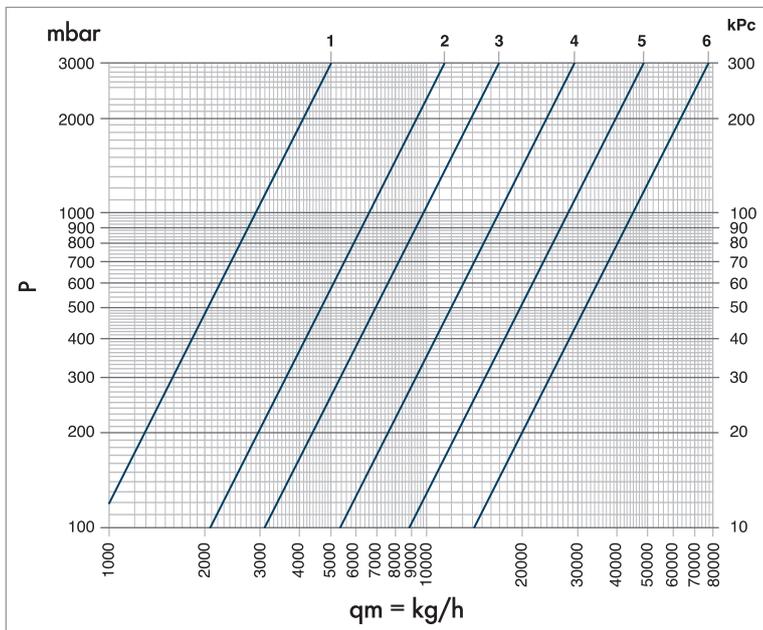
| Inliner Range | Nominal Diameter | Inner ø mm | Outer ø mm | Min bending radius | Inner fittings ø mm | Flow rate at 3 bar | Max working pressure | Max working temperature | Min working temperature | Available Fittings | Available Braittings | Clamping ferrules material |
|---------------|------------------|------------|------------|--------------------|---------------------|--------------------|----------------------|-------------------------|-------------------------|--------------------|----------------------|----------------------------|
| | | | | | | | | | | | | |
| | DN6 | 6,3 | 10 | 40 | 4,7 | 16 l/min | 10 Bar | 70° C | -5° C | | | |
| | DN8 | 8,5 | 12 | 48 | 6,2 | 28 l/min | 10 Bar | 70° C | -5° C | | | |
| | DN8 | 8,5 | 12,3 | 48 | 6,2 | 28 l/min | 10 Bar | 90° C | -20° C | | | |
| | DN8 | 8,8 | 12,4 | 25 | 6,2 | 28 l/min | 10 Bar | 70° C | -5° C | | | |
| | DN10 | 9,4 | 13 | 56 | 7,5 | 46 l/min | 10 Bar | 70° C | -5° C | | | |
| | DN10 | 9,4 | 13,7 | 56 | 7,5 | 46 l/min | 10 Bar | 90° C | -20° C | | | |
| | DN10 | 10 | 14,8 | 30 | 7,5 | 45 l/min | 10 Bar | 70° C | -5° C | | | |
| | DN13 | 12,5 | 18 | 72 | 10 | 74 l/min | 10 Bar | 70° C | -5° C | | | |
| | DN13 | 12,5 | 17,8 | 72 | 10 | 74 l/min | 10 Bar | 90° C | -20° C | | | |
| | DN13 | 12,6 | 18 | 35 | 10 | 60 l/min | 10 Bar | 70° C | -5° C | | | |
| | DN15 | 15 | 20 | 80 | 12,5 | 83 l/min | 10 Bar | 110° C | -5° C | | | |
| | DN15 | 15 | 19,8 | 80 | 12,5 | 83 l/min | 10 Bar | 90° C | -20° C | | | |
| | DN18 | 19 | 26 | 104 | 15,5 | 200 l/min | 10 Bar | 110° C | -5° C | | | |
| | DN18 | 19 | 25,7 | 104 | 15,5 | 200 l/min | 10 Bar | 90° C | -20° C | | | |
| | DN25 | 25,5 | 33 | 132 | 21 | 280 l/min | 10 Bar | 110° C | -5° C | | | |
| | DN25 | 25,5 | 32,8 | 132 | 21 | 280 l/min | 10 Bar | 90° C | -20° C | | | |
| | DN32 | 32 | 42 | 168 | 27 | 490 l/min | 6 Bar | 110° C | -5° C | | | |
| | DN32 | 32 | 41,6 | 168 | 27 | 490 l/min | 6 Bar | 90° C | -20° C | | | |
| | DN40 | 40 | 53 | 212 | 32 | 800 l/min | 6 Bar | 110° C | -5° C | | | |
| | DN50 | 50 | 65 | 275 | 41 | 1300 l/min | 6 Bar | 110° C | -5° C | | | |

FLOW RATE CHARTS

Flow capacity diagram on hoses with straight fittings, length 1400 mm.



| HOSE DIMENSIONS | POS | Kv | Flow l/min con ΔP 3 bar |
|-----------------|-----|------|---------------------------------|
| DN 6 | 1 | 0,55 | 16 |
| DN 8 | 2 | 0,97 | 28 |
| DN 10 | 3 | 1,59 | 46 |
| DN 13 | 4 | 2,56 | 74 |



| HOSE DIMENSIONS | POS | Kv | Flow l/min con ΔP 3 bar |
|-----------------|-----|-----|---------------------------------|
| DN 15 | 1 | 2,9 | 83 |
| DN 18 | 2 | 6,6 | 200 |
| DN 25 | 3 | 9,8 | 280 |
| DN 30 | 4 | 17 | 490 |
| DN 40 | 5 | 28 | 800 |
| DN 50 | 6 | 45 | 1300 |

FITTINGS



MATERIALS

CW617N AND CW614N

The end connectors are produced in brass CW617N and CW614N with low lead content in compliance to the recent rules UNI EN12165 and UNI EN12164.

CW602N, CW724R, CW511L

Which differs from the commonly used brass, since it prevents the brass from dezincification caused by the loss of zinc and the consequent redeposit of copper.

CW724R, CW511L, CW510L

With the main target to constantly improve the hygienic quality of the product and to improve the pureness of the materials, Luxor is engaged to use for particular markets special brass with very low content of lead (<0.2%).

STAINLESS STEEL AISI304

Where high resistance to oxidation and good resistance to mechanical stress is required, the fittings are produced in stainless steel AISI304.

DEOXIDATED PHOSPHOR COPPER

Cu-DHP quality with chemical composition: Cu 99,9% min, whose mechanical qualities, dimensions and tolerances are in compliance to the EN1057 rule and its connected regulations.

STEEL AVP

For particular requirements are also available end connectors in steel AVP.



SEALING GASKETS AND O-RINGS

The water tightness of the end connectors is guaranteed by the use of gaskets and o-rings in EPDM and NBR, materials with high ozone free properties, which preserve their tightening features and mechanical resistance throughout times. The compounds used, thanks to the excellent hygienic properties, are fit for drinking water adduction, and have been approved by the most rigorous Certification Institutes of the hydrosanitary field.

The mechanical, physical and hygienic qualities of the gaskets and o-rings are constantly tested with specific laboratory tests both carried out internally or externally to verify their conformity to the rules requirements.



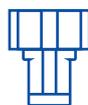
THE CHALLENGE

Though the percentage of lead within the brass alloys for the fittings are low and guaranteed by the European regulation, the new challenge that producers of plumbing material are facing is the total exclusion of lead from the manufactured products.



PROCESSINGS

The fittings, based on the specific markets demands or on product certification requirement, undergo further manufacturing processes such as: normalization (to stress relieve the material and reduce the surface hardness and avoid the occurring of production cracks).



CLAMPING FERRULES

The clamping ferrules of the end connectors are in stainless steel AISI 304 (from DN6 to DN50) and in aluminium (from DN15 to DN50), materials firm and safe, which differing from brass, are not subjects to breakage given by stress corrosion.

TYPE OF FITTINGS

Luxor's main target is that to satisfy the customer during the development process of the new products and give new technical solutions.

| Inliner Range | Nominal Diameter | | | | | | | | |
|---|------------------|--|--|---|--|---|--|--|--|
| <ul style="list-style-type: none"> ● Silicone ● EPDM ● Thermoplastic ● PEX | DN6 | Short male M 8x1 - 18 mm M 10x1 - 18 mm M 11x1 - 20 mm | | Medium male M 8x1 - 44 mm M 10x1 - 44 mm | | Long male M 8x1 - 74 mm M 10x1 - 74 mm | | Smooth Pipe ø 10 mm | |
| | | Safety end Pipe ø 8 mm ø 10 mm | | Female without gasket G 1/4 - G 3/8 - G 1/8 G 1/2 - M 10x1 M 15x1 M 12x1 - 9/16 - 24 unef | | Collar G 1/2 | | Male G 1/8 G 3/8 G 1/2 | |
| | | Swivel Male M 12x1 M 15x1 G 3/8 | | Female with gasket G 3/8 - G 1/2 M 10x1 - M 15x1 9/16 - 24 unef | | | | | |

| Inliner Range | Nominal Diameter | | | | | | | | |
|---|------------------|---|--|--|--|---|--|--|--|
| <ul style="list-style-type: none"> ● Silicone ● EPDM ● Thermoplastic ● Butyl ● PE + RT | DN8 | Short male M 10x1 - 18 mm M 11x1 - 19 mm M 12x1 - 19 mm | | Medium male M 10x1 - 46 mm M 12x1 - 43 mm | | Long male M 10x1 - 74 mm M 12x1 - 75 mm | | Smooth Pipe ø 10 mm ø 15 mm | |
| | | Safety end Pipe ø 10 mm | | Male G 1/4 G 3/8 G 1/2 G 3/4 | | Female without gasket G 1/4 - G 3/8 - G 1/2 G 3/4 - M 15x1 | | Elbow Female without gasket G 1/4 - G 3/8 G 1/2 - G 3/4 | |
| | | Compressor Fitting ø 10 mm ø 12 mm ø 14 mm ø 15 mm | | Swivel Male M 15x1 G 3/8 G 1/2 | | Collar G 1/2 | | Female with o-ring G 3/8 | |
| | | Elbow Female with o-ring G 3/8 | | Female with gasket G 3/8 - G 1/2 G 3/4 - 1/2 NPSM 9/16 - 24 unef | | Elbow Female with gasket G 3/8 - G 1/2 G 3/4 | | Extended Male G 3/8 - 26 mm G 1/2 - 28 mm | |
| | | Push-Fit Fitting ø 8 | | | | | | | |

● Silicone
 ● EPDM
 ● Thermoplastic
 ● PEX
 ● Butyl
 ● PE + RT

The range of Luxor fittings is broader than what is shown in the following tables. Some items may be unavailable or not included in this document. For availability checks or further technical information, please contact our Technical Department.

| Inliner Range | Nominal Diameter | | | | | | |
|--|------------------|--|--|--|--|--|--|
| <ul style="list-style-type: none"> ● EPDM ● Thermoplastic ● Butyl ● PE + RT | DN10 | Short male M 12x1 - 16 mm  | Male G 1/4 G 3/8 G 1/2  | Female without gasket G 3/8 G 1/2 G 3/4  | Elbow Female without gasket G 3/8 G 1/2 G 3/4  | | |
| | | Compressor Fitting ø 10 mm ø 12 mm ø 14 mm ø 15 mm  | Wings Female with or without o-ring G 1/2  | Swivel Male G 3/8 G 1/2  | Brass Push-Fit ø 10 ø 12  | | |
| | | Female with gasket G 3/8 - G 1/2 G 3/4  | Elbow Female with gasket G 1/2 - G 3/4  | Extended Male G 3/8 - 26 mm G 1/2 - 28 mm  | | | |

| Inliner Range | Nominal Diameter | | | | | | |
|---|------------------|---|--|---|---|--|--|
| <ul style="list-style-type: none"> ● Silicone ● EPDM ● Thermoplastic ● Butyl ● PE + RT | DN13 | Male G 3/8 G 1/2 G 3/4  | Female without gasket G 3/8 G 1/2 G 3/4  | Elbow Female without gasket G 1/2 G 3/4 G 1"  | Smooth Pipe ø 15 mm  | | |
| | | Safety end Pipe ø 15 mm  | Compressor Fitting ø 12 mm ø 15 mm  | Brass Push-Fit ø 12  | Female with gasket G 1/2 - G 3/4  | | |
| | | Elbow Female with gasket G 1/2 - G 3/4  | Extended Male G 1/2 - 28 mm  | | | | |

| Inliner Range | Nominal Diameter | | | | | | |
|---|------------------|--|--|--|--|--|--|
| <ul style="list-style-type: none"> ● EPDM ● Butyl | DN15 | Male G 1/2 G 3/4  | Female G 1/2 G 3/4  | Elbow Female G 1/2 G 3/4  | Smooth Pipe ø 15 mm  | | |

| Inliner Range | Nominal Diameter | | | | | | | | |
|--|------------------|-----------------------|---|-------------------------|---|-------------------------------|---|------------------------|---|
| <ul style="list-style-type: none"> ● Silicone ● EPDM ● Butyl | DN18 | Male G 3/4 G 1" |  | Female G 3/4 G 1" |  | Elbow Female G 3/4 G 1" |  | Smooth Pipe ø 22 mm |  |

| Inliner Range | Nominal Diameter | | | | | | | | |
|--|------------------|--------------|---|--|---|----------------------|---|------------------------|---|
| <ul style="list-style-type: none"> ● Silicone ● EPDM ● Butyl | DN25 | Male G 1" |  | Female G 1" G 1" 1/4 G 1" 1/2 |  | Elbow Female G 1" |  | Smooth Pipe ø 28 mm |  |

| Inliner Range | Nominal Diameter | | | | | | |
|--|------------------|------------------|---|--------------------|---|--------------------------|---|
| <ul style="list-style-type: none"> ● Silicone ● EPDM ● Butyl | DN32 | Male G 1" 1/4 |  | Female G 1" 1/4 |  | Elbow Female G 1" 1/4 |  |

| Inliner Range | Nominal Diameter | | | | |
|--|------------------|------------------|---|--------------------|---|
| <ul style="list-style-type: none"> ● EPDM | DN40 | Male G 1" 1/2 |  | Female G 1" 1/2 |  |

| Inliner Range | Nominal Diameter | | | | |
|--|------------------|--------------|---|----------------|---|
| <ul style="list-style-type: none"> ● EPDM | DN50 | Male G 2" |  | Female G 2" |  |

- Silicone
- EPDM
- Thermoplastic
- PEX
- Butyl
- PE + RT

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BRAIDING



MATERIALS

STAINLESS STEEL THREADS AISI 304

The external reinforcing braiding is made using stainless steel threads AISI 304 \varnothing 0,20 mm, \varnothing 0,22 mm, galvanized steel threads \varnothing 0,30 mm and Nylon threads PA 6.6 \varnothing 0,25 mm and \varnothing 0,30 mm. These threads, joined to become plaits are assembled so to cover completely the inner pipe giving to the flexible hose the faculty to sustain the normal working pressure and the possible overpressure which can occur during an ordinary performance of the hydraulic system.

STEEL THREADS

Steel threads have a minimum \varnothing 0,20 mm, a higher dimension of the one normally employed by other producers, so to guarantee a safe and reliable top quality product. Thanks to this excellent covering material, Luxor's flexible hoses have successfully passed the most severe mechanical tests of European and International Certification Institutes of the hydrosanitary field.

NYLON THREADS

The Nylon PA 6.6 threads also assure excellent resistance and good mechanical qualities thanks to the elasticity of material and the good performance at high and low temperature. Flexible hoses with braiding in Nylon PA 6.6 have found a large market in the kitchen mixers with pull-out showers for example, due to their good performance and their resistance to the wear and tear due to the friction rub and to the low noise produced during the normal daily use.

BRAIDING

The braiding percentage of covering can change in accordance to the specific product requests and to the customer's requirements, going from a 97% cover until 80%.

The 97% braiding covers perfectly the inner pipe making the flexible hose mechanically more resistant to the strains and giving a better aesthetic exterior.

The thread dimension, the quality of the material and the covering percentage of the braiding distinguish Luxor's hoses, products with a high quality profile, from those of other producers.

APPROVALS

| Nominal Diameter | | | | | | | | | | | | | | | |
|---|---|----------------------------|----------------------------|--------------------------------------|---|--|---------------------|-------------------------|--------------------------|--|---|----------------|-----------------------|-------------------|----------------|
| DN6 | <table border="1"> <tr> <td rowspan="3"> FF-01-KI013 </td> <td>Nation: Italy </td> </tr> <tr> <td>Certification: DM 174</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | FF-01-KI013 | Nation: Italy | Certification: DM 174 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Australia </td> </tr> <tr> <td>Certification: WATERMARK</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Australia | Certification: WATERMARK | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Denmark </td> </tr> <tr> <td>Certification: VA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Denmark | Certification: VA | Inliner Range: |
| | FF-01-KI013 | | Nation: Italy | | | | | | | | | | | | |
| | | | Certification: DM 174 | | | | | | | | | | | | |
| | | Inliner Range: | | | | | | | | | | | | | |
| | Nation: Australia | | | | | | | | | | | | | | |
| | Certification: WATERMARK | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Denmark | | | | | | | | | | | | | | |
| | Certification: VA | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: France </td> </tr> <tr> <td>Certification: QB</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: France | Certification: QB | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Germany </td> </tr> <tr> <td>Certification: DVGW</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Germany | Certification: DVGW | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Norway </td> </tr> <tr> <td>Certification: SINTEF</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Norway | Certification: SINTEF | Inliner Range: | |
| | | Nation: France | | | | | | | | | | | | | |
| | | Certification: QB | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Germany | | | | | | | | | | | | | | |
| | Certification: DVGW | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Norway | | | | | | | | | | | | | | |
| | Certification: SINTEF | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Holland </td> </tr> <tr> <td>Certification: KIWA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Holland | Certification: KIWA | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Switzerland </td> </tr> <tr> <td>Certification: SVGW</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Switzerland | Certification: SVGW | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Sweden </td> </tr> <tr> <td>Certification: RISE</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Sweden | Certification: RISE | Inliner Range: | |
| | | Nation: Holland | | | | | | | | | | | | | |
| | | Certification: KIWA | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Switzerland | | | | | | | | | | | | | | |
| | Certification: SVGW | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Sweden | | | | | | | | | | | | | | |
| | Certification: RISE | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: USA </td> </tr> <tr> <td>Certification: NSF - IAPMO</td> </tr> <tr> <td>Inliner Range: (NSF - IAPMO) (NSF)</td> </tr> </table> | | Nation: USA | Certification: NSF - IAPMO | Inliner Range: (NSF - IAPMO) (NSF) | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: UE </td> </tr> <tr> <td>Certification: EN 13618</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: UE | Certification: EN 13618 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: UK </td> </tr> <tr> <td>Certification: WRAS</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: UK | Certification: WRAS | Inliner Range: | |
| | | Nation: USA | | | | | | | | | | | | | |
| | | Certification: NSF - IAPMO | | | | | | | | | | | | | |
| | Inliner Range: (NSF - IAPMO) (NSF) | | | | | | | | | | | | | | |
| | Nation: UE | | | | | | | | | | | | | | |
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| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: UK | | | | | | | | | | | | | | |
| | Certification: WRAS | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |

| Nominal Diameter | | | | | | | | | | | | | | | |
|--|---|----------------------------|----------------------------|-----------------------|--|--|---------------------|---------------------------|--------------------------------------|--|---|----------------|-----------------------|-------------------|----------------|
| DN8 | <table border="1"> <tr> <td rowspan="3"> FF-01-KI013 </td> <td>Nation: Italy </td> </tr> <tr> <td>Certification: DM 174</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | FF-01-KI013 | Nation: Italy | Certification: DM 174 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Australia </td> </tr> <tr> <td>Certification: WATERMARK</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Australia | Certification: WATERMARK | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Denmark </td> </tr> <tr> <td>Certification: VA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Denmark | Certification: VA | Inliner Range: |
| | FF-01-KI013 | | Nation: Italy | | | | | | | | | | | | |
| | | | Certification: DM 174 | | | | | | | | | | | | |
| | | Inliner Range: | | | | | | | | | | | | | |
| | Nation: Australia | | | | | | | | | | | | | | |
| | Certification: WATERMARK | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Denmark | | | | | | | | | | | | | | |
| | Certification: VA | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: France </td> </tr> <tr> <td>Certification: QB</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: France | Certification: QB | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Germany </td> </tr> <tr> <td>Certification: DVGW - TÜV</td> </tr> <tr> <td>Inliner Range: (DVGW - TÜV) (DVGW)</td> </tr> </table> | | Nation: Germany | Certification: DVGW - TÜV | Inliner Range: (DVGW - TÜV) (DVGW) | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Norway </td> </tr> <tr> <td>Certification: SINTEF</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Norway | Certification: SINTEF | Inliner Range: | |
| | | Nation: France | | | | | | | | | | | | | |
| | | Certification: QB | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Germany | | | | | | | | | | | | | | |
| | Certification: DVGW - TÜV | | | | | | | | | | | | | | |
| | Inliner Range: (DVGW - TÜV) (DVGW) | | | | | | | | | | | | | | |
| | Nation: Norway | | | | | | | | | | | | | | |
| | Certification: SINTEF | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Holland </td> </tr> <tr> <td>Certification: KIWA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Holland | Certification: KIWA | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Switzerland </td> </tr> <tr> <td>Certification: SVGW</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Switzerland | Certification: SVGW | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Sweden </td> </tr> <tr> <td>Certification: RISE</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Sweden | Certification: RISE | Inliner Range: | |
| | | Nation: Holland | | | | | | | | | | | | | |
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| | Nation: Switzerland | | | | | | | | | | | | | | |
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| | Nation: Sweden | | | | | | | | | | | | | | |
| | Certification: RISE | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: USA </td> </tr> <tr> <td>Certification: NSF - IAPMO</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: USA | Certification: NSF - IAPMO | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: UE </td> </tr> <tr> <td>Certification: EN 13618</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: UE | Certification: EN 13618 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: UK </td> </tr> <tr> <td>Certification: WRAS</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: UK | Certification: WRAS | Inliner Range: | |
| | | Nation: USA | | | | | | | | | | | | | |
| | | Certification: NSF - IAPMO | | | | | | | | | | | | | |
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| | Certification: WRAS | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |

● Silicone
 ● EPDM
 ● Thermoplastic
 ● PEX

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| Nominal Diameter | | | | | | | | | | | | | | | |
|---|---|-----------------------------------|-----------------------------------|------------------------------|---|---|----------------------------|----------------------------------|---------------------------------|--|---|-----------------------|------------------------------|--------------------------|----------------|
| DN10 | <table border="1"> <tr> <td rowspan="3"> <small>FF-01-KI013</small> </td> <td>Nation: Italy </td> </tr> <tr> <td>Certification: DM 174</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | <small>FF-01-KI013</small> | Nation: Italy | Certification: DM 174 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Australia </td> </tr> <tr> <td>Certification: WATERMARK</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Australia | Certification: WATERMARK | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Denmark </td> </tr> <tr> <td>Certification: VA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Denmark | Certification: VA | Inliner Range: |
| | <small>FF-01-KI013</small> | | Nation: Italy | | | | | | | | | | | | |
| | | | Certification: DM 174 | | | | | | | | | | | | |
| | | Inliner Range: | | | | | | | | | | | | | |
| | Nation: Australia | | | | | | | | | | | | | | |
| | Certification: WATERMARK | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Denmark | | | | | | | | | | | | | | |
| | Certification: VA | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: France </td> </tr> <tr> <td>Certification: QB</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: France | Certification: QB | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Germany </td> </tr> <tr> <td>Certification: DVGW - TÜV</td> </tr> <tr> <td>Inliner Range: (TÜV) (DVGW)</td> </tr> </table> | | Nation: Germany | Certification: DVGW - TÜV | Inliner Range: (TÜV) (DVGW) | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Norway </td> </tr> <tr> <td>Certification: SINTEF</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Norway | Certification: SINTEF | Inliner Range: | |
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| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Germany | | | | | | | | | | | | | | |
| | Certification: DVGW - TÜV | | | | | | | | | | | | | | |
| | Inliner Range: (TÜV) (DVGW) | | | | | | | | | | | | | | |
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| | Certification: SINTEF | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Holland </td> </tr> <tr> <td>Certification: KIWA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Holland | Certification: KIWA | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Switzerland </td> </tr> <tr> <td>Certification: SVGW</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Switzerland | Certification: SVGW | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Sweden </td> </tr> <tr> <td>Certification: RISE</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Sweden | Certification: RISE | Inliner Range: | |
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| | Certification: SVGW | | | | | | | | | | | | | | |
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| | Nation: Sweden | | | | | | | | | | | | | | |
| | Certification: RISE | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: USA </td> </tr> <tr> <td>Certification: NSF - IAPMO</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: USA | Certification: NSF - IAPMO | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> EN 13618 </td> <td>Nation: UE </td> </tr> <tr> <td>Certification: EN 13618</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | EN 13618 | Nation: UE | Certification: EN 13618 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: UK </td> </tr> <tr> <td>Certification: WRAS</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: UK | Certification: WRAS | Inliner Range: | |
| | | Nation: USA | | | | | | | | | | | | | |
| | | Certification: NSF - IAPMO | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| EN 13618 | Nation: UE | | | | | | | | | | | | | | |
| | Certification: EN 13618 | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: UK | | | | | | | | | | | | | | |
| | Certification: WRAS | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |

| Nominal Diameter | | | | | | | | | | | | | | | |
|--|--|-----------------------------------|-----------------------------------|------------------------------|---|--|----------------------------|----------------------------------|---|---|--|-----------------------|------------------------------|--------------------------|----------------|
| DN13 | <table border="1"> <tr> <td rowspan="3"> <small>FF-01-KI013</small> </td> <td>Nation: Italy </td> </tr> <tr> <td>Certification: DM 174</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | <small>FF-01-KI013</small> | Nation: Italy | Certification: DM 174 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Australia </td> </tr> <tr> <td>Certification: WATERMARK</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Australia | Certification: WATERMARK | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Denmark </td> </tr> <tr> <td>Certification: VA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Denmark | Certification: VA | Inliner Range: |
| | <small>FF-01-KI013</small> | | Nation: Italy | | | | | | | | | | | | |
| | | | Certification: DM 174 | | | | | | | | | | | | |
| | | Inliner Range: | | | | | | | | | | | | | |
| | Nation: Australia | | | | | | | | | | | | | | |
| | Certification: WATERMARK | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Denmark | | | | | | | | | | | | | | |
| | Certification: VA | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: France </td> </tr> <tr> <td>Certification: QB</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: France | Certification: QB | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Germany </td> </tr> <tr> <td>Certification: DVGW - TÜV</td> </tr> <tr> <td>Inliner Range: (DVGW - TÜV) (TÜV) (DVGW)</td> </tr> </table> | | Nation: Germany | Certification: DVGW - TÜV | Inliner Range: (DVGW - TÜV) (TÜV) (DVGW) | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Norway </td> </tr> <tr> <td>Certification: SINTEF</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Norway | Certification: SINTEF | Inliner Range: | |
| | | Nation: France | | | | | | | | | | | | | |
| | | Certification: QB | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Germany | | | | | | | | | | | | | | |
| | Certification: DVGW - TÜV | | | | | | | | | | | | | | |
| | Inliner Range: (DVGW - TÜV) (TÜV) (DVGW) | | | | | | | | | | | | | | |
| | Nation: Norway | | | | | | | | | | | | | | |
| | Certification: SINTEF | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Holland </td> </tr> <tr> <td>Certification: KIWA</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Holland | Certification: KIWA | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Switzerland </td> </tr> <tr> <td>Certification: SVGW</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Switzerland | Certification: SVGW | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: Sweden </td> </tr> <tr> <td>Certification: RISE</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: Sweden | Certification: RISE | Inliner Range: | |
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| | | Certification: KIWA | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Switzerland | | | | | | | | | | | | | | |
| | Certification: SVGW | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: Sweden | | | | | | | | | | | | | | |
| | Certification: RISE | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: USA </td> </tr> <tr> <td>Certification: NSF - IAPMO</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: USA | Certification: NSF - IAPMO | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> EN 13618 </td> <td>Nation: UE </td> </tr> <tr> <td>Certification: EN 13618</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | EN 13618 | Nation: UE | Certification: EN 13618 | Inliner Range: | <table border="1"> <tr> <td rowspan="3"> </td> <td>Nation: UK </td> </tr> <tr> <td>Certification: WRAS</td> </tr> <tr> <td>Inliner Range: </td> </tr> </table> | | Nation: UK | Certification: WRAS | Inliner Range: | |
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| | | Certification: NSF - IAPMO | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| EN 13618 | Nation: UE | | | | | | | | | | | | | | |
| | Certification: EN 13618 | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |
| | Nation: UK | | | | | | | | | | | | | | |
| | Certification: WRAS | | | | | | | | | | | | | | |
| | Inliner Range: | | | | | | | | | | | | | | |

● Silicone
 ● EPDM
 ● Thermoplastic
 ● PEX

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Nominal Diameter

| | | | | | | |
|------|--|-------------------|--|--------------------|----------|-------------------------|
| DN15 | | Nation: France | | Nation: Germany | EN 13618 | |
| | | Certification: QB | | Certification: TÜV | | Certification: EN 13618 |
| | | Inliner Range: | | Inliner Range: | | Inliner Range: |

Nominal Diameter

| | | | | | | |
|------|--|---------------------|------|-------------------------------------|----------|-------------------------|
| DN18 | | Nation: France | | Nation: Germany | EN 13618 | |
| | | Certification: QB | | Certification: DVGW - TÜV | | Certification: EN 13618 |
| | | Inliner Range: | | Inliner Range: (DVGW - TÜV) (TÜV) | | Inliner Range: |
| | | Nation: UK | | | | |
| | | Certification: WRAS | | | | |
| | | Inliner Range: | | | | |

Nominal Diameter

| | | | | | | |
|------|--|-------------------|------|-------------------------------------|----------|-------------------------|
| DN25 | | Nation: France | | Nation: Germany | EN 13618 | |
| | | Certification: QB | | Certification: DVGW - TÜV | | Certification: EN 13618 |
| | | Inliner Range: | | Inliner Range: (DVGW - TÜV) (TÜV) | | Inliner Range: |

Nominal Diameter

| | | | | |
|------|--|-------------------|------|-------------------------------------|
| DN32 | | Nation: France | | Nation: Germany |
| | | Certification: QB | | Certification: DVGW - TÜV |
| | | Inliner Range: | | Inliner Range: (DVGW - TÜV) (TÜV) |

Nominal Diameter

| | | | | |
|------|--|-------------------|--|--------------------|
| DN40 | | Nation: France | | Nation: Germany |
| | | Certification: QB | | Certification: TÜV |
| | | Inliner Range: | | Inliner Range: |

Nominal Diameter

| | | | | |
|------|--|-------------------|--|--------------------|
| DN50 | | Nation: France | | Nation: Germany |
| | | Certification: QB | | Certification: TÜV |
| | | Inliner Range: | | Inliner Range: |

Silicone EPDM

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