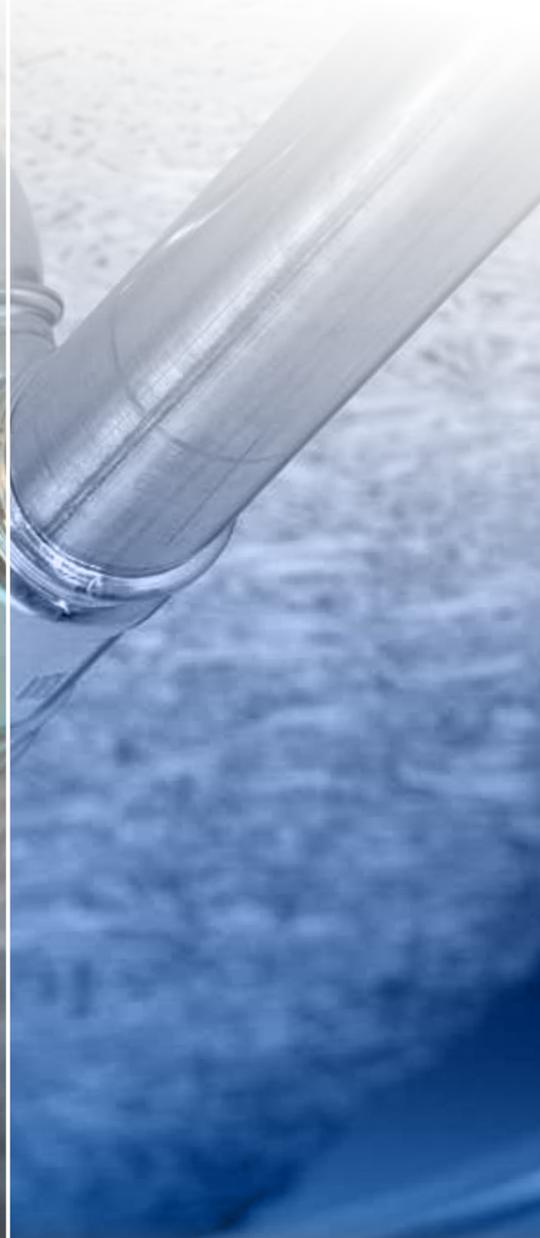


CONNECT + CONTROL

PEGLER 
Valve technology



PRESS-FIT SYSTEM FOR SPRINKLER

CONNECT WITH CONFIDENCE

***XP*ress**





CONNECT WITH CONFIDENCE

With a wealth of expertise and the broadest range of solutions and systems on the market, Pegler Yorkshire's **Connect** products mean you'll complete your installation as seamlessly, efficiently and effectively as possible.

TOTAL FUNCTIONALITY, COMPLETE EFFICIENCY

Pegler Yorkshire's range of **Connect** solutions offer innovatively designed, efficient and reliable products and systems that reduce installation time and cost without compromising quality, aesthetics or reliability.

Our **Tectite**, **Henco** and **XPress** product ranges are designed to perform faultlessly in a variety of applications and environments – so you can always be sure to connect with confidence whatever your challenge.

GLOBAL EXPERIENCE, COMBINED EXPERTISE

With over 100 years of manufacturing and innovation combined with extensive industry knowledge and worldwide market experience, Pegler Yorkshire offers the most advanced and complete **Connect & Control** systems on a global scale.

As one of Britain's largest and most respected manufacturers and suppliers of products for the plumbing and heating industries, Pegler Yorkshire is confident we can provide you with all the connection, control and support your project needs.

For more information visit
www.pegleryorkshire.co.uk/





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Pegler Yorkshire is pleased to be associated with several influential industry organisations:



Association of Plumbing and Heating Contractors



The Bathroom Manufacturers Association



The UK Copper Board



Heating and Ventilating Contractors Association

Brass

The Brass Page for specifiers, designers, engineers and manufacturers



British Plumbing Employers Council



British Electrotechnical Allied Manufacturers Association



Construction Products Association



The Copper Development Association



Scottish and Northern Ireland Plumbing Employers Federation



Builders Merchants Federation



Institute of Plumbing



The UK District Energy Association



The Chartered Institution of Building Services Engineers



British Automatic Fire Sprinkler Association



Bundesverband Technischer Brandschutz e.V.



European Fire Sprinkler Network

1.0 PRODUCT RANGE OVERVIEW

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THE COMPLETE RANGE

Your lightweight, easy and fast to install, cost-saving alternative for wet and dry sprinkler installations.

INTRODUCTION TO XPRESS SPRINKLER SYSTEMS

With the growing importance of the fire safety and security market on one hand and the lack of time on the building site on the other, making the XPress system available for sprinkler installations was an obvious choice.



By obtaining the VdS approval in the beginning of 2008 for both carbon and stainless steel, this was the start to evolve the XPress system into XPress Sprinkler. Many approvals, such as FM, FG, SBSC, LPCB, UL/cUL and CNBOP, have followed since and will continue to follow.

XPress Sprinkler is available in sizes DN20-DN100 (22-108mm), either in carbon or stainless steel and has been tested and certified for use in wet and dry fixed waterbased fire fighting systems. The system can operate at working pressures of up to 16 bar, depending on the dimensions and relevant approvals.

ADVANTAGES OF XPRESS

In the building installation market the advantages of press systems over traditional solutions such as threading, soldering and welding have long been recognized. The same advantages apply for XPress in sprinkler installations:

- + Performance guaranteed
- + Reliable
- + Easy & clean
- + Safe
- + Speed

Apart from these advantages, the aesthetics of an XPress installation (compared to for example black steel) are often a reason for architects and designers to prescribe our system for in-sight/exposed installations.

PERFORMANCE GUARANTEED

Manufacturing all fittings in a state-of-the-art factory guarantees consistent quality and supply. High-tech manufacturing, using laser welding technology, ensures that all welded fittings are tested 100%. This leak test is entirely integrated and automated in the laser welding process. All straight connectors with a threaded end and reducers are made out of one piece, eliminating the risk of leakage and short build-in dimensions.

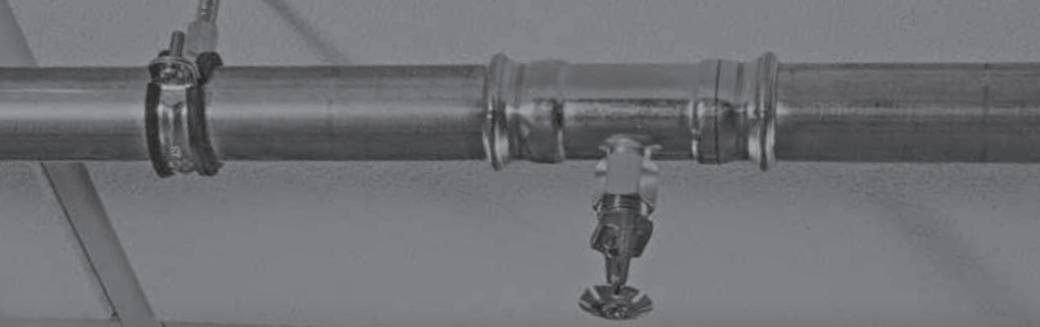
Performance in flow is obvious, with the extremely smooth surface of tubes and fittings, flow rates are much better than those in traditional solutions.

RELIABLE LEAK BEFORE PRESS (LBP) FEATURE

In XPress Sprinkler systems, the quality of the connection is mainly determined by the tool and not the operator, therefore reducing the risk of installation mistakes. All fittings are equipped with a Leak Before Pressed (LBP) function, to reduce this risk even further.



The LBP function is achieved either by a special 'O' ring or by the specific design of the fitting. This LBP function ensures that fittings, which have not been pressed, will leak during the initial pressure test. The installer can immediately see which fitting he forgot to press and correct this. Once pressed, the system is guaranteed water and air tight.



EASY AND CLEAN

XPress Sprinkler is an extremely user friendly solution:

- + No need to thread the tubes
- + No lubrication needed for installation
- + Easy tube insertion of the tube in the fitting due to the special design of fittings
- + Short radius bends which ensure a compact installation

The above features make sure that less skills for installation are required and that installation can take place in a more pleasant environment.

Moreover, the light weight of the precision steel tubes ensures improved labour conditions and as such brings a healthier way of working.



SAFE

The installation of the XPress Sprinkler system does not require a heat source (as for example with welding or soldering) or other potentially heavy and dangerous tools. This feature makes XPress Sprinkler an ideal solution for retrofit or renovation projects, since you can ensure a minimum of disturbances during installation.

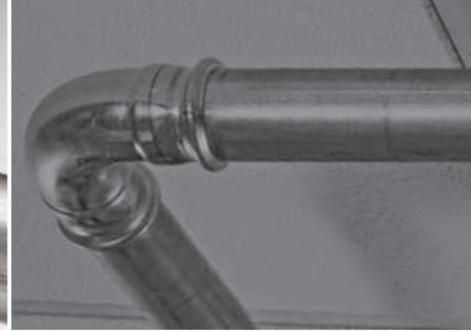


SPEED

Reduced labour time is probably the most important advantage of the XPress Sprinkler system, not only resulting in reduced costs but also important in times when it is difficult to find sufficiently skilled people to work on the projects.

The advantages of the Xpress Sprinkler system can be experienced across all type of sprinkler systems, but are particularly noticeable on branch distribution systems owing to the higher number of joints.

XPress Sprinkler, an imPRESSive solution!

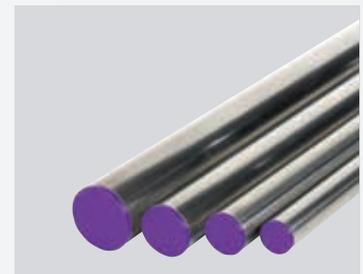


PRODUCT OVERVIEW

Your lightweight, easy and fast to install, cost-saving alternative for wet and dry sprinkler installations.

XPRESS SPRINKLER SYSTEM – GALVANISED STEEL

The fittings incorporate a black EPDM (Ethylene Propylene Diene Monomer) 'O' ring and a unique "Leak Before Press" (LBP) design. LBP has been developed as a final check to the system to provide instant identification of joints that have been assembled correctly but mistakenly left unpressed. This feature saves time, money and potentially expensive call backs.



You can recognise the XPress Sprinkler range by the laser marking on the fitting which makes it easy for you to identify the fitting used. Information such as material, approvals and dimensions are all permanently marked onto the fitting.

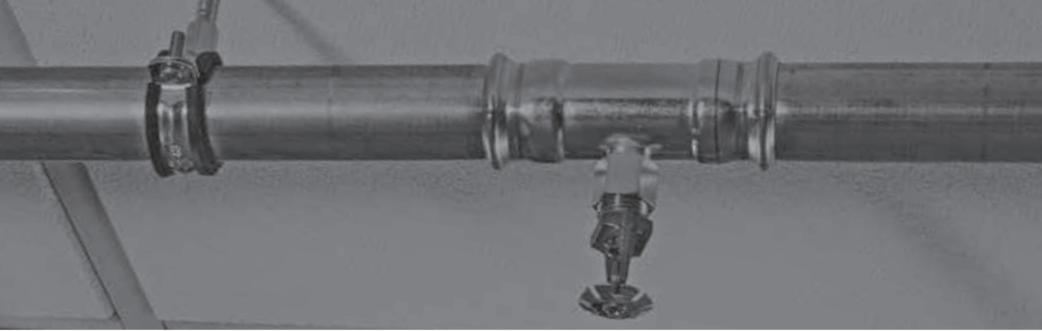
The XPress Sprinkler range is a complete system, where the combination of tube, fitting and tools is combined into a certified sprinkler system.

FEATURES

- ✚ Installed cost savings with joints made in a fraction of the time
- ✚ Clean heat-free jointing, no hot works permits required
- ✚ Leak before press design
- ✚ Light weight, easier to manual handling on site
- ✚ Low scrap value, less desirable to thieves

| Lasering marking | Packaging label |
|-------------------|-------------------------|
| XPress | Type C... |
| Galvanised | Dimension |
| Approvals | Description: ...C-Pr |
| Dimension | EAN Nr. |
| Traceability code | Art Nr Pegler Yorkshire |
| | Approvals |
| | Number of pieces |





XPRESS SPRINKLER SYSTEM – STAINLESS STEEL

The fittings incorporate a black EPDM (Ethylene Propylene Diene Monomer) ‘O’ ring and a unique “Leak Before Press” (LBP) design. LBP has been developed as a final check to the system to provide instant identification of joints that have been assembled correctly but mistakenly left unpressed. This feature saves time, money and potentially expensive call backs.

You can recognise the XPress Sprinkler range by the laser marking on the fitting which makes it easy for you to identify the fitting used. Information such as material, approvals and dimensions are all permanently marked onto the fitting.

The XPress Sprinkler range is a complete system, where the combination of tube, fitting and tools are combined into a certified sprinkler system.

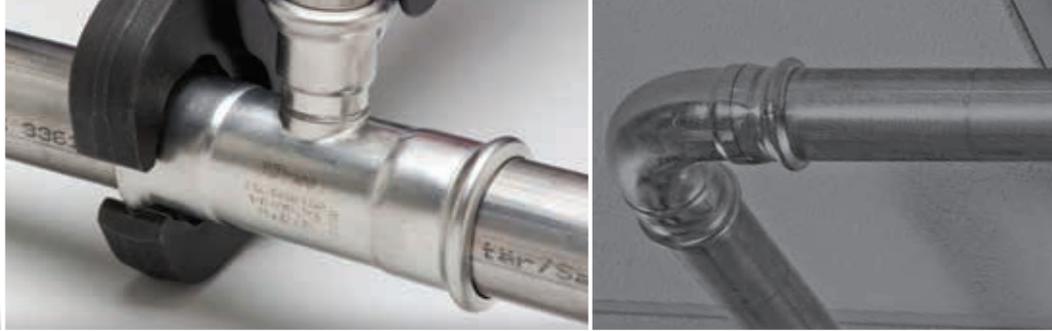


FEATURES

- + Installed cost savings with joints made in a fraction of the time
- + Clean heat-free jointing, no hot works permits required
- + Leak before press design
- + Light weight, easier to manual handling on site
- + Long system life with guarantee of up to 30 Years

| Laser marking | Packaging label |
|-------------------|-------------------------|
| XPress | Type R... |
| 316L | Dimension |
| Approvals | Description: ...S-PR |
| Dimension | EAN Nr. |
| Traceability code | Art Nr Pegler Yorkshire |
| | Approvals |
| | Number of pieces |





STANDARDS APPROVALS

It is Pegler Yorkshire policy to provide a range of products and services which meet, or exceed, the requirements of our customers in respect of quality, cost and delivery.

STANDARDS AND APPROVALS

Current and future standards

We at Pegler Yorkshire are dedicated to designing, developing and manufacturing products of the highest quality. It is on this basis that you can trust the XPress range to achieve all relevant British, European and International standards.

Over recent years, tube and fittings for plumbing and heating systems have been subject to a gradual harmonisation of standards. Today, a further harmonisation is taking place that is set to incorporate copper and copper alloy press-fit fittings within pr EN 1254 under Part 7.

It is a sign of our standing in the industry that we at Pegler Yorkshire are helping to draft this and other new European standards, assisted by our fellow members on the various European standards committees. So, you can rest assured that whatever developments arise, our products will always meet the latest standards.

Sprinkler systems must be designed and installed in accordance with guideline CEA 4001 (VdS) and/or local regulations. Here the following steps must be carried out.

- + Planning
- + Installation
- + Maintenance

| Product Approvals | | |
|-------------------|------------------------|-------------------------|
| Approval | XPress Stainless steel | XPress Galvanised steel |
| LPCB | ✓ | ✓ |
| UL/cUL | ✓ | ✓ |
| FM | ✓ | ✓ |
| VdS | ✓ | ✓ |

LPCB CERTIFICATE



The XPress Sprinkler system has been tested and certified in accordance with the LPCB guidelines (TS1599 draft 5) for both the Galvanised and stainless steel system for use in fixed sprinkler systems for above ground applications. These guidelines refer to the XPress Sprinkler system with a working pressure of as stated in working pressures table page 11 in the dimensions DN20 up to DN50 (22-54mm). Except where correct fittings are used to connect the system to other ISO 65 or EN 10255 medium weight piping systems, XPress system components shall not be used in conjunction with other press piping systems. The

connection of other non-system components is only admissible via detachable metal connections. It is not allowed to insert additives or anticorrosive agents in the extinguishing water unless previously released by Pegler Yorkshire. Painting of the installation is allowed as long as the painting is done after installation and the paint used is water based. For XPress Sprinkler installations according to LPCB allowed hazard classes range from LH up to OH3.

XPress Sprinkler Stainless LPCB

The XPress Sprinkler Stainless system has a LPCB certification for fittings and tubes according the LPCB approval standard TS1599 for the application in wet sprinkler systems with a maximum pressure of 16 bar. XPress Sprinkler stainless also allowed to be used in embedded installations. The approval refers to the XPress Sprinkler system in the dimensions DN20 to DN50 (22-54mm). According LPCB the system is certified for using XPress stainless steel tubes with material code 1.4401 (AISI 316). XPress Sprinkler Stainless is WRAS approved in combination with 1.4401 tubes.

XPress Sprinkler Galvanised LPCB

The XPress Sprinkler Galvanised system has a LPCB certification for fittings and tubes according the LPCB approval standard TS1599 for the application in wet sprinkler systems with a maximum working pressure of 16 bar. The approval refers to the XPress Sprinkler system in the dimensions DN20 to DN50 (22-54mm). According LPCB the system is certified for using XPress Galvanised Sendzimir tubes. When installing XPress Galvanised to a potable water network, care should be taken to use a WRAS approved water back flow preventer. Installations made by XPress Sprinkler should be inspected regularly on corrosion.

Assembly, installation and maintenance of LPCB approved sprinkler installations

The assembly, installation and maintenance of the XPress Sprinkler system may only be performed by trained technical personnel who are qualified to work on sprinkler systems. For example, the guideline LPC Rules for Automatic Sprinkler Installation, incorporating BS EN12845 contains the requirements for the assembly and maintenance of a fixed sprinkler system. The company performing the installation must comply at all times with the guidelines. When installing XPress Sprinkler, the installer must always ensure that adequate (meeting the requirements of the building regulations and LPC Sprinkler Rules) fire stopping is undertaken following the routing of the pipes. When installing



XPress Stainless embedded in concrete, no specific limitations apply on isolation (thermal or acoustic) other than those prescribed in the XPress Technical Manual. During the installations special care should be taken to ensure the concrete fully surrounds the piping and to avoid any empty spaces between concrete and piping. It is of great importance to use a concrete mixture which doesn't contain chlorides or other substances which could negatively influence the stainless steel. Pressure testing of the installation has to be done before embedding the pipes and fittings in concrete. Any faults disclosed, such as permanent deformations, ruptures or leakages shall be corrected, and the pressure test must be repeated.

UL/cUL CERTIFICATE

The XPress Sprinkler system has been tested and certified in accordance with the UL/cUL guidelines (VIZM/VIZY) for both the galvanized and stainless steel system for use in fixed sprinkler systems for above ground applications. These guidelines refer to the XPress Sprinkler system with a working pressure as stated in table on page 11 in the dimensions DN20 up to DN80 (22-88,9 mm) for XPress Sprinkler Galvanized and DN20 up to DN100 (22-108 mm) for XPress Sprinkler Stainless. Per NFPA13, steel water distribution piping of DN25 (28 mm) minimum diameter shall be used. Based on this, DN20 (22 mm) is limited to use in trim and drain applications. Fittings are to be UL Listed for use with a maximum ambient temperature of 65,6°C (150°F) and cUL listed for use with a maximum ambient temperature of 48,9°C (120°F). Only the use of battery operated Novopress tools is allowed within the UL/cUL certificate. The use is limited to the connection of the system components among each other. No limitations on hazard classes apply, when using XPress Sprinkler, when installing according to NFPA13. The UL/cUL Listing requires use of a C-factor of 120 for XPress Sprinkler Galvanized pipe.



the galvanized and stainless steel system for use in fixed sprinkler systems for above ground applications. These guidelines refer to the XPress Sprinkler system with a working pressure as stated in table on page 11 in the dimensions DN20 up to DN80 (22-88,9 mm) for XPress Sprinkler Galvanized and DN20 up to DN100 (22-108 mm) for XPress Sprinkler Stainless. Per NFPA13, steel water distribution piping of DN25 (28 mm) minimum diameter shall be used. Based on this, DN20 (22 mm) is limited to use in trim and drain applications. Fittings are to be UL Listed for use with a maximum ambient temperature of 65,6°C (150°F) and cUL listed for use with a maximum ambient temperature of 48,9°C (120°F). Only the use of battery operated Novopress tools is allowed within the UL/cUL certificate. The use is limited to the connection of the system components among each other. No limitations on hazard classes apply, when using XPress Sprinkler, when installing according to NFPA13. The UL/cUL Listing requires use of a C-factor of 120 for XPress Sprinkler Galvanized pipe.

| Maximum weight and hanger spacing for straight unions and connectors | | | |
|--|----------------|------------------|-------------------|
| DN | Outside ø (mm) | Max. weight (kg) | Max. support (cm) |
| 20 | 22 | 5,4 | 61 |
| 25 | 28 | 8,2 | 61 |
| 32 | 35 | 8,2 | 61 |
| 40 | 42 | 8,2 | 61 |
| 50 | 54 | 13,6 | 61 |

Maximum weight and hanger spacing for straight unions and connectors

According to the UL Listings, straight unions and threaded connectors are intended for the sole use of connecting to fire equipment, i.e. backflows, pressure reliefs, drain valves, etc., items typically removed for maintenance or replaced throughout the life of the system. The maximum weight and hanger spacing of these components is found in the table left:

According to the UL/cUL Listing, tees with threaded outlets are for the sole use of joining sprinkler heads and flexible drops. Threaded steel pipe shall not be joined to these fittings, with exception to the Tee piece with 2" outlet which have to fulfill the hangers requirements as stated in table left.

XPress Sprinkler Galvanized UL/cUL

The XPress Sprinkler Galvanized system has a UL/cUL certification for fittings and tubes according the UL/cUL approval standards under the category VIZM/VIZY for the application in wet sprinkler systems with a maximum pressure of 175 psi (12,1 bar). The approval refers to the XPress Sprinkler system in the dimensions DN20 to DN80 (22-88,9 mm). According UL/cUL the system is certified for using XPress Galvanized Sendzimir tubes.

XPress Sprinkler Stainless UL/cUL

The XPress Sprinkler Stainless system has a UL/cUL certification for fittings and tubes according UL/cUL approval standards under the category VIZM/VIZY for application in wet and dry sprinkler system with a maximum pressure of 175 psi (12,1 bar). The approval refers to the XPress Sprinkler system in the dimensions DN20 to DN100 (22-108 mm). According UL/cUL the system is certified for using XPress stainless steel tubes with material code 1.4401 (AISI 316).

Assembly and Installation of UL/cUL approved sprinkler installations

The assembly and installation of the XPress Sprinkler system may only be performed by trained technical personnel who are qualified to work on sprinkler systems. When making a transition from traditional thick wall tubes to the XPress Sprinkler system in the dimensions DN20 to DN100 (22-108 mm), it is mandatory to use a transition from press to a listed grooved coupling (product group C 1442 and R 2748). When installing the transition coupling from press to grooved, always make sure to use the complete insertion depth, as stated in table on page 10. The installer must verify that the XPress grooved fitting dimensions are within the groove specification for the coupling.



GUARANTEES

<FM> CERTIFICATE



XPress Sprinkler Stainless <FM>

The XPress Sprinkler Stainless system has an FM certification for fittings and tubes according to FM approval standard 1630 and 1920 for application in wet and dry sprinkler systems with a maximum pressure of 175 psi (12.1 bar). The approval refers to the XPress Sprinkler system in the dimensions DN20 to DN100 (22-108mm). According to FM the system is certified for using XPress stainless steel tubes with material code 1.4401 (AISI 316), 1.4520 (AISI 439) and 1.4521 (AISI 444). No limitations on hazard classes apply, when using XPress Sprinkler stainless, when installing according to FM standards.

XPress Sprinkler Galvanised <FM>

The XPress Sprinkler Galvanised system has a FM certification for fittings and tubes according to the FM approval standards 1630 and 1920 for the application in wet sprinkler systems with a maximum pressure of 175 psi (12.1 bar). The approval refers to the XPress Sprinkler system in the dimensions DN20 to DN50 (22-54mm). According to FM the system is certified for using XPress Galvanised Sendzimir tubes. No limitations on hazard classes apply, when using XPress Sprinkler Galvanised, when installing according to FM standards.

Assembly and installation of approved sprinkler installations

The assembly and installation of the XPress Sprinkler system may only be performed by trained technical personnel who are qualified to work on sprinkler systems. When making a transition from traditional thick wall tubes to the XPress Sprinkler system in the dimensions DN20 to DN100 (22-108 mm), it is mandatory to use a transition from press to grooved coupling (product group C. 1442 and R. 2748).

When installing the transition coupling from press to grooved, always make sure to use the complete insertion depth.

| Minimum insertion depth transition coupling | | |
|---|----------------------------|----------------------|
| DN | Outside \varnothing (mm) | Insertion depth (mm) |
| 25 | 28 | 46 |
| 32 | 35 | 52 |
| 40 | 42 | 60 |
| 50 | 54 | 70 |
| 65 | 76.1 | 54 |
| 80 | 88.9 | 64 |
| 100 | 108 | 74 |

VdS CERTIFICATE



The XPress Sprinkler system has been tested and certified in accordance with the VdS guidelines for both the Galvanised and stainless steel system for use in fixed sprinkler systems behind the alarm valve. These guidelines refer to the XPress Sprinkler system with a working pressure of as stated in table on page 9 in the dimensions DN20 up to DN100 (22-108mm), for all products within in the XPress Sprinkler range.

The use is limited to the connection of the system components amongst each other. The connection of other non-system components is only admissible via detachable metal connections. It is not allowed to insert additives in the extinguishing water. Exceptions are anticorrosive agents according to the manufacturer release and previous agreement with VdS Schadenverhütung. The admissible hanger spacings for copper pipes according to VdS CEA4001 do apply.

XPress Sprinkler Stainless VdS

[XPress Sprinkler Stainless G4080037](#)

- [XPress Sprinkler Stainless fitting](#)
- [XPress Sprinkler Stainless tube](#)
- [Press tools](#)

The XPress Sprinkler stainless system may be used in fixed wet and dry sprinkler systems in the hazard classes LH up to partially OH4 (theatres, concert halls, movie theatres). The approval applies to the dimensional range with a diameter DN20 to DN100 (22-108mm) with an operating pressure as stated in table 20. The XPress stainless fittings are made of 1.4404 (AISI 316L) stainless steel, the tubes are made of 1.4401 (AISI 316) stainless steel. The application is limited to installation behind the alarm valve.

XPress Sprinkler Galvanised VdS

VdS is a system approval, meaning that the approval is only valid when all components are combined:

[XPress Sprinkler Galvanised G4080007](#)

- [XPress Sprinkler Galvanised fitting](#)
- [XPress Sprinkler Galvanised tube](#)
- [Press tools](#)

The XPress Sprinkler Galvanised system may be used in fixed wet sprinkler systems in the hazard classes LH up to partially OH4 (exhibition halls, theatres, concert halls, movie theatres). The approval applies to the dimensional range with a diameter DN20 up to DN100 (22-108mm) with a maximum operating pressure as mentioned in table 20. XPress Sprinkler Galvanised fittings are made of zinc-plated unalloyed steel, combined with a carbon-steel tube produced specifically for the XPress Sprinkler Galvanised system which inner and outer surface is Galvanised (Sendzimir tube). The application is limited to installations behind the alarm valve in branch and distribution lines and should be inspected regularly on corrosion.



Assembly and installation of VdS approved sprinkler installations

The assembly and installation of the XPress Sprinkler system may only be performed by trained technical personnel who are qualified to work on sprinkler systems. For example, the guideline CEA 4001 (VdS) contains the requirements for the assembly of a fixed sprinkler system. The company performing the installation must comply at all times with the guidelines.

ISO



ISO is achieved through the continuous improvement of our Quality Management System in line with the requirements of BS EN ISO 9001: 2008.

All of the bodies involved in the acceptance test for the system must be included in the entire process from project planning to the acceptance test itself. Depending on the approvals, different working pressures apply. Please check the table below for the applicable pressures when installing under VdS, FM, UL/cUL or LPCB.

GUARANTEES

10 YEAR GUARANTEE

XPress Carbon Sprinkler is guaranteed against all manufacturing defects for 10 years when installed as a system using the respective XPress Carbon Sprinkler tube and fittings.

25 YEAR GUARANTEE

The XPress stainless Sprinkler ranges are guaranteed against all manufacturing defects for 25 years when installed as a system using respective XPress stainless Sprinkler tube and fittings.

| XPress Sprinkler system fittings and tube | Guarantee Period (Years) | | |
|---|--------------------------|----|----|
| | 5 | 10 | 25 |
| XPress Stainless steel fittings | | | ✓ |
| XPress Stainless steel fittings | | | ✓ |
| XPress Galvanised fittings | | ✓ | |
| XPress Galvanised fittings tube | | ✓ | |

To qualify for guarantees, all products must be installed in accordance with our instructions on specified applications

| Working pressures XPress Sprinkler | | | | | | | | | |
|------------------------------------|----------------|----------------|-----------------------|----------------|-----------------------|----------------|-----------------------|----------------|---------------|
| DN | Outside Ø (mm) | VdS | | FM | | UL | | LPCB | |
| | | Wet Galvanised | Wet and dry Stainless | Wet Galvanised | Wet and dry Stainless | Wet Galvanised | Wet and dry Stainless | Wet Galvanised | Wet Stainless |
| 20 | 22 | 16 bar | 16 bar | 175psi | 175psi | 175psi | 175psi | 16 bar | 16 bar |
| 25 | 28 | 16 bar | 16 bar | 175psi | 175psi | 175psi | 175psi | 16 bar | 16 bar |
| 32 | 35 | 16 bar | 16 bar | 175psi | 175psi | 175psi | 175psi | 16 bar | 16 bar |
| 40 | 42 | 16 bar | 16 bar | 175psi | 175psi | 175psi | 175psi | 16 bar | 16 bar |
| 50 | 54 | 16 bar | 16 bar | 175psi | 175psi | 175psi | 175psi | 16 bar | 16 bar |
| 65 | 76.1 | 12.5 bar | 16 bar | - | 175psi | 175psi | 175psi | - | - |
| 80 | 88.9 | 10 bar | 12.5 bar | - | 175psi | 175psi | 175psi | - | - |
| 100 | 108 | 10 bar | 10 bar | - | 175psi | - | 175psi | - | - |



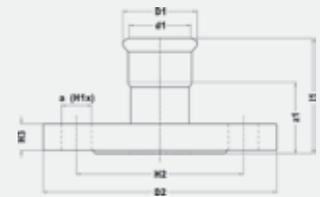
SC645 Galvanised Sprinkler Tube



| Size | d1 | DN1 | Code |
|-----------------------|-------|-------|-------|
| 22mm x 1.5mm x 6.0m | 22.0 | DN20 | 25094 |
| 28mm x 1.5mm x 6.0m | 28.0 | DN25 | 25095 |
| 35mm x 1.5mm x 6.0m | 35.0 | DN32 | 25096 |
| 42mm x 1.5mm x 6.0m | 42.0 | DN40 | 25097 |
| 54mm x 1.5mm x 6.0m | 54.0 | DN50 | 25098 |
| 76.1mm x 2.0mm x 6.0m | 76.1 | DN65 | 25099 |
| 88.9mm x 2.0mm x 6.0m | 88.9 | DN80 | 25100 |
| 108mm x 2.0mm x 6.0m | 108.0 | DN100 | 25101 |

SC1FMF Flanged Connect

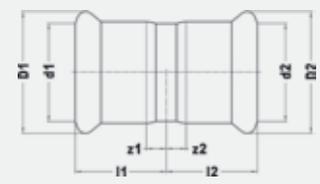
Connection: Press x Flange



| Size | l1 | d1 | D1 | es1 | z1 | D2 | DN1 | DN2 | Code |
|------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|
| 76.1mm x DN65 (2 1/2") | 111.7 | 76.1 | 94.5 | 55.0 | 56.7 | 185.0 | DN65 | DN65 | 20659 |
| 88.9mm x DN80 (3") | 117.7 | 88.9 | 109.5 | 63.0 | 54.7 | 200.0 | DN80 | DN80 | 20660 |
| 108mm x DN65 (4") | 113.7 | 108.0 | 132.6 | 77.0 | 36.7 | 220.0 | DN100 | DN100 | 20661 |

SC1 Straight coupling

Connection: Press x press



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | DN1 | DN2 | Code |
|--------|------|-------|-------|------|-----|------|-------|-------|------|-----|-------|-------|-------|
| 22mm | 27.5 | 22.0 | 31.6 | 21.0 | 6.5 | 27.5 | 22.0 | 31.6 | 21.0 | 6.5 | DN20 | DN20 | 20138 |
| 28mm | 29.9 | 28.0 | 37.5 | 23.0 | 6.9 | 29.0 | 28.0 | 37.5 | 23.0 | 6.9 | DN25 | DN25 | 20139 |
| 35mm | 33.0 | 35.0 | 44.6 | 26.0 | 7.0 | 33.0 | 35.0 | 44.6 | 26.0 | 7.0 | DN32 | DN32 | 20140 |
| 42mm | 38.0 | 42.0 | 53.6 | 30.0 | 8.0 | 38.0 | 42.0 | 53.6 | 30.0 | 8.0 | DN40 | DN40 | 20141 |
| 54mm | 43.0 | 54.0 | 65.3 | 35.0 | 8.0 | 43.0 | 54.0 | 65.3 | 35.0 | 8.0 | DN50 | DN50 | 20142 |
| 66.7mm | 59.6 | 66.7 | 83.0 | 50.0 | 9.6 | 59.6 | 66.7 | 83.0 | 50.0 | 9.6 | DN65 | DN65 | 20662 |
| 76.1mm | 63.2 | 76.1 | 94.5 | 55.0 | 8.2 | 63.2 | 76.1 | 94.5 | 55.0 | 8.2 | DN65 | DN65 | 20620 |
| 88.9mm | 71.6 | 88.9 | 109.5 | 63.0 | 8.6 | 71.6 | 88.9 | 109.5 | 63.0 | 8.6 | DN80 | DN80 | 20621 |
| 108mm | 85.5 | 108.0 | 132.6 | 77.0 | 8.5 | 85.5 | 108.0 | 132.6 | 77.0 | 8.5 | DN100 | DN100 | 20622 |

Vds 22 - 108mm, LPCB and FM 22-54mm, UL/cUL 22 - 88.9mm

FEATURES

+ Installed cost savings with joints made in a fraction of the time

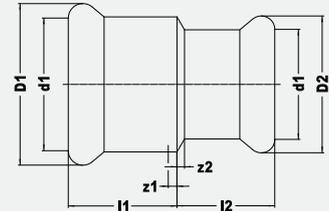
+ Clean heat-free jointing, no hot works permits required

+ Leak before press design

+ Low scrap value, less desirable to thieves

SC1R Straight reduced coupling

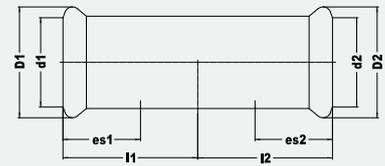
Connection: Press x Press



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | DN1 | DN2 | Code |
|-----------|------|------|------|------|-----|------|------|------|------|-----|------|------|-------|
| 28 x 22mm | 25.0 | 28.0 | 37.4 | 23.0 | 2.0 | 22.5 | 22.0 | 31.5 | 21.0 | 1.5 | DN25 | DN20 | 20154 |

SC1 Slip Straight coupling slip pattern

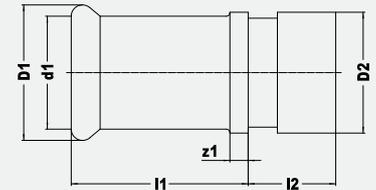
Connection: Press x Press



| Size | l1 | d1 | D1 | es1 | l2 | d2 | D2 | es2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|
| 22mm | 42.0 | 22.0 | 31.6 | 25.0 | 42.0 | 22.0 | 31.6 | 25.0 | DN20 | DN20 | 20146 |
| 28mm | 46.0 | 28.0 | 37.5 | 30.0 | 46.0 | 28.0 | 37.5 | 30.0 | DN25 | DN25 | 20147 |
| 35mm | 51.5 | 35.0 | 44.6 | 30.0 | 51.5 | 35.0 | 44.6 | 30.0 | DN32 | DN32 | 20148 |
| 42mm | 60.6 | 42.0 | 53.6 | 40.0 | 60.6 | 42.0 | 53.6 | 40.0 | DN40 | DN40 | 20149 |
| 54mm | 70.0 | 54.0 | 65.3 | 40.0 | 70.0 | 54.0 | 65.3 | 40.0 | DN50 | DN50 | 20150 |
| 76.1mm | 115.2 | 76.1 | 94.5 | 60.0 | 115.2 | 76.1 | 94.5 | 60.0 | DN65 | DN65 | 20623 |
| 88.9mm | 130.6 | 88.9 | 109.5 | 70.0 | 130.6 | 88.9 | 109.5 | 70.0 | DN80 | DN80 | 20624 |
| 108mm | 150.5 | 108.0 | 132.6 | 80.0 | 150.5 | 108.0 | 132.6 | 80.0 | DN100 | DN100 | 20625 |

SC1V Transition for grooved coupling

Connection: Press x Groove

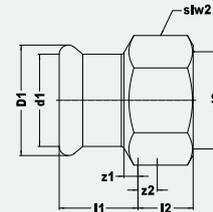


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | DN1 | DN2 | Code |
|---------------|------|-------|-------|------|------|------|-------|-------|-------|-------|
| 28 x 34mm | 48.5 | 28.0 | 37.5 | 23.0 | 25.5 | 24.0 | 33.7 | DN25 | DN25 | 20187 |
| 35 x 42mm | 54.0 | 35.0 | 44.6 | 26.0 | 28.0 | 24.0 | 42.4 | DN32 | DN40 | 20188 |
| 42 x 48mm | 61.0 | 42.0 | 53.6 | 30.0 | 31.0 | 24.0 | 48.3 | DN40 | DN40 | 20189 |
| 54 x 60mm | 72.5 | 54.0 | 65.3 | 35.0 | 37.5 | 24.0 | 60.3 | DN50 | DN50 | 20190 |
| 76.1 x 76.1mm | 56.0 | 76.1 | 94.5 | 55.0 | 1.0 | 24.0 | 76.1 | DN65 | DN65 | 20731 |
| 88.9 x 88.9mm | 76.0 | 88.9 | 109.5 | 63.0 | 13.0 | 24.0 | 88.9 | DN80 | DN780 | 20732 |
| 108 x 114mm | 84.0 | 108.0 | 132.6 | 77.0 | 7.0 | 26.0 | 114.0 | DN100 | DN100 | 20733 |



SC2 Straight female connector

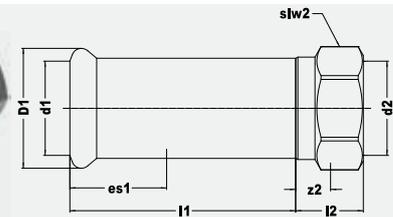
Press-fit x BSP parallel female thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|-----|------|-----|------|------|------|---------------|-------|
| 22mm x 1/2" | 22.1 | 22.0 | 31.6 | 21.0 | 1.1 | 14.4 | 0.0 | 32.0 | 37.0 | DN20 | 1/2" (DN15) | 20245 |
| 22mm x 3/4" | 23.0 | 22.0 | 31.5 | 21.0 | 2.0 | 20.0 | 3.7 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 20240 |
| 28mm x 1/2" | 24.0 | 28.0 | 37.4 | 23.0 | 1.0 | 14.2 | 0.5 | 41.0 | 47.4 | DN25 | 1/2" (DN15) | 20244 |
| 28mm x 3/4" | 24.0 | 28.0 | 37.5 | 23.0 | 1.0 | 16.5 | 0.2 | 38.0 | 43.9 | DN25 | 3/4" (DN20) | 20246 |
| 28mm x 1" | 26.0 | 28.0 | 37.4 | 23.0 | 3.0 | 23.0 | 4.0 | 41.0 | 47.4 | DN25 | 1" (DN25) | 20241 |
| 35mm x 1/2" | 30.0 | 35.0 | 44.4 | 26.0 | 4.0 | 12.0 | 1.3 | 46.0 | 53.1 | DN32 | 1/2" (DN15) | 20365 |
| 35mm x 3/4" | 28.4 | 35.0 | 44.4 | 26.0 | 2.4 | 14.6 | 2.8 | 46.0 | 53.1 | DN32 | 3/4" (DN20) | 20366 |
| 35mm x 1" | 33.0 | 35.0 | 44.4 | 26.0 | 7.0 | 13.0 | 0.0 | 46.0 | 53.1 | DN32 | 1" (DN25) | 20367 |
| 35mm x 1 1/4" | 28.3 | 35.0 | 44.4 | 26.0 | 2.3 | 21.7 | 6.7 | 46.0 | 53.1 | DN32 | 1 1/4" (DN32) | 20247 |
| 42mm x 1 1/2" | 32.0 | 42.0 | 53.5 | 30.0 | 2.0 | 22.0 | 6.0 | 54.0 | 62.4 | DN40 | 1 1/2" (DN40) | 20209 |
| 54mm x 2" | 36.9 | 54.0 | 65.2 | 35.0 | 1.9 | 26.0 | 8.0 | 67.0 | 77.4 | DN50 | 2" (DN50) | 20210 |

SC2LC Slip long connector

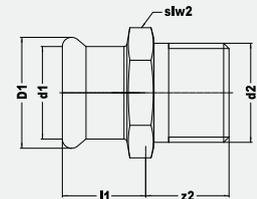
Connection: Press x BSP parallel female thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|-------------|------|------|------|------|------|------|------|------|------|------|-------------|-------|
| 22mm x 1/2" | 92.0 | 22.0 | 31.6 | 21.0 | 71.0 | 22.0 | 15.0 | 28.0 | 32.3 | DN20 | 1/2" (DN15) | 20323 |
| 22mm x 3/4" | 97.0 | 22.0 | 31.6 | 21.0 | 76.0 | 27.0 | 16.5 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 20324 |
| 28mm x 1/2" | 94.0 | 28.0 | 37.5 | 23.0 | 71.0 | 24.0 | 15.0 | 32.0 | 37.0 | DN25 | 1/2" (DN15) | 20325 |
| 28mm x 3/4" | 93.0 | 28.0 | 37.5 | 23.0 | 70.0 | 23.0 | 16.5 | 32.0 | 37.0 | DN25 | 3/4" (DN20) | 20326 |

SC3 Straight male connector.

Connection: Press x BSP taper male thread



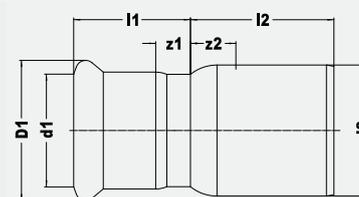
| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|--------------------|------|------|-------|------|-----|------|------|------|-------|------|---------------|-------|
| 22mm x 1/2" | 21.0 | 22.0 | 31.6 | 21.0 | 0.0 | 22.0 | 22.0 | 32.0 | 37.0 | DN20 | 1/2" (DN15) | 20242 |
| 22mm x 3/4" | 21.0 | 22.0 | 31.6 | 21.0 | 0.0 | 23.0 | 23.0 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 20231 |
| 22mm x 1" | 21.0 | 22.0 | 31.6 | 21.0 | 0.0 | 29.0 | 29.0 | 34.0 | 39.3 | DN20 | 1" (DN25) | 20243 |
| 28mm x 3/4" | 23.0 | 28.0 | 37.5 | 23.0 | 0.0 | 23.0 | 23.0 | 38.0 | 43.9 | DN25 | 3/4" (DN20) | 20236 |
| 28mm x 1" | 23.0 | 28.0 | 37.5 | 23.0 | 0.0 | 25.0 | 25.0 | 41.0 | 47.3 | DN25 | 1" (DN25) | 20232 |
| 35mm x 1 1/4" | 26.0 | 35.0 | 44.6 | 26.0 | 0.0 | 29.0 | 29.0 | 46.0 | 53.1 | DN32 | 1 1/4" (DN32) | 20233 |
| 42mm x 1 1/2" | 30.0 | 42.0 | 53.6 | 30.0 | 0.0 | 29.0 | 29.0 | 55.5 | 63.5 | DN40 | 1 1/2" (DN40) | 20234 |
| 54mm x 2" | 35.0 | 54.0 | 65.3 | 35.0 | 0.0 | 34.0 | 34.0 | 70.0 | 80.8 | DN50 | 2" (DN50) | 20235 |
| 76.1mm x 2 1/2"*** | 55.0 | 76.1 | 94.5 | 55.0 | 0.0 | 63.9 | 63.9 | 80.0 | 92.4 | DN65 | 2 1/2" (DN65) | 20713 |
| 88.9mm x 3"*** | 63.0 | 88.9 | 109.5 | 63.0 | 0.0 | 68.5 | 68.5 | 95.0 | 109.7 | DN80 | 3" (DN80) | 20714 |

Vds 22 - 108mm, LPCB and FM 22-54mm, UL/cUL 22 - 88.9mm *Not LPCB. **Not UL/cUL Listed



SC6 Reducer

Connection: Male XPress

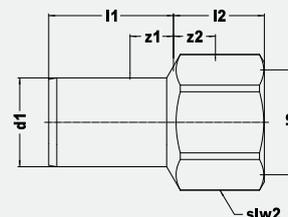


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|--------------|------|------|-------|------|------|-------|-------|------|------|------|-------|-------|
| 28 x 18mm | 29.5 | 18.0 | 26.5 | 20.0 | 9.5 | 36.0 | 28.0 | 23.0 | 13.0 | DN15 | DN25 | 20218 |
| 28 x 22mm | 32.6 | 22.0 | 31.6 | 21.0 | 11.6 | 32.9 | 28.0 | 23.0 | 9.9 | DN20 | DN25 | 20219 |
| 35 x 22mm | 30.4 | 22.0 | 31.6 | 21.0 | 9.4 | 41.1 | 35.0 | 26.0 | 15.1 | DN20 | DN32 | 20220 |
| 35 x 28mm | 36.0 | 28.0 | 37.5 | 23.0 | 13.0 | 34.0 | 35.0 | 26.0 | 8.0 | DN25 | DN32 | 20221 |
| 42 x 22mm* | 32.3 | 22.0 | 31.6 | 21.0 | 11.3 | 50.7 | 42.0 | 30.0 | 20.7 | DN20 | DN40 | 20248 |
| 42 x 28mm | 32.3 | 28.0 | 37.5 | 23.0 | 9.3 | 50.7 | 54.0 | 35.0 | 15.7 | DN25 | DN50 | 20212 |
| 42 x 35mm | 38.7 | 35.0 | 44.6 | 26.0 | 12.7 | 41.3 | 42.0 | 30.0 | 11.3 | DN32 | DN40 | 20222 |
| 54 x 22mm* | 34.3 | 22.0 | 31.6 | 21.0 | 13.3 | 62.7 | 54.0 | 35.0 | 27.7 | DN20 | DN50 | 20223 |
| 54 x 28mm* | 33.1 | 28.0 | 37.5 | 23.0 | 10.1 | 58.4 | 54.0 | 35.0 | 23.4 | DN25 | DN50 | 20224 |
| 54 x 35mm | 38.1 | 35.0 | 44.6 | 26.0 | 12.1 | 56.9 | 54.0 | 35.0 | 21.9 | DN32 | DN50 | 20226 |
| 54 x 42mm | 44.4 | 42.0 | 53.6 | 30.0 | 14.4 | 51.6 | 54.0 | 35.0 | 16.6 | DN40 | DN50 | 20225 |
| 22 x 15mm | 29.4 | 15 | 23.4 | 20.0 | 9.4 | 31.6 | 22.0 | 21.0 | 10.6 | DN12 | DN20 | 20215 |
| 76.1 x 42mm | 49.6 | 42.0 | 53.6 | 30.0 | 19.6 | 96.7 | 76.1 | 55.0 | 41.7 | DN40 | DN65 | 20715 |
| 76.1 x 54mm | 54.5 | 54.0 | 65.3 | 35.0 | 19.5 | 85.8 | 76.1 | 55.0 | 30.8 | DN50 | DN65 | 20639 |
| 88.9 x 54mm | 54.3 | 54.0 | 65.3 | 35.0 | 19.3 | 101.0 | 88.9 | 63.0 | 38.0 | DN50 | DN80 | 20640 |
| 88.9 x 76mm | 68.0 | 76.1 | 94.5 | 55.0 | 13.0 | 90.0 | 88.9 | 63.0 | 27.0 | DN65 | DN80 | 20641 |
| 108 x 76.1mm | 68.0 | 76.1 | 94.5 | 55.0 | 13.0 | 120.0 | 108.0 | 77.0 | 43.0 | DN65 | DN100 | 20642 |
| 108 x 88.9mm | 76.6 | 88.9 | 109.5 | 63.0 | 13.6 | 109.8 | 108.0 | 77.0 | 32.8 | DN80 | DN100 | 20643 |

SC7

Female adaptor

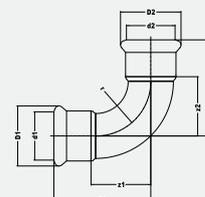
Connection: Male x PSP parallel female thread



| Size | l1 | d1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|-------------|------|------|------|-----|------|-----|------|------|------|-------------|-------|
| 22mm x 1/2" | 29.0 | 22.0 | 21.0 | 8.0 | 21.0 | 6.0 | 24.0 | 27.7 | DN20 | 1/2" (DN15) | 20256 |
| 22mm x 3/4" | 29.0 | 22.0 | 21.0 | 8.0 | 24.0 | 7.7 | 30.0 | 34.7 | DN20 | 3/4" (DN20) | 20257 |

SC12 Elbow

Connection: Press x Press

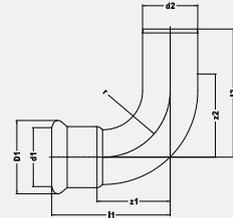


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 22mm | 51.0 | 22.0 | 31.6 | 21.0 | 30.0 | 51.0 | 22.0 | 31.6 | 21.0 | 30.0 | DN20 | DN20 | 20157 |
| 28mm | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | DN25 | DN25 | 20158 |
| 35mm | 71.5 | 35.0 | 44.6 | 26.0 | 45.5 | 71.5 | 35.0 | 44.6 | 26.0 | 45.5 | DN32 | DN32 | 20159 |
| 42mm | 86.6 | 42.0 | 53.6 | 30.0 | 56.6 | 86.6 | 42.0 | 53.6 | 30.0 | 56.6 | DN40 | DN40 | 20160 |
| 54mm | 105.0 | 54.0 | 65.3 | 35.0 | 70.0 | 105.0 | 54.0 | 65.3 | 35.0 | 70.0 | DN50 | DN50 | 20161 |
| 76.1mm | 155.2 | 76.1 | 94.5 | 55.0 | 100.2 | 155.2 | 76.1 | 94.5 | 55.0 | 100.2 | DN65 | DN65 | 20626 |
| 88.9mm | 178.6 | 88.9 | 109.5 | 63.0 | 115.6 | 178.6 | 88.9 | 109.5 | 63.0 | 115.6 | DN80 | DN80 | 20627 |
| 108mm | 215.5 | 108.0 | 132.6 | 77.0 | 138.5 | 215.5 | 108.0 | 132.6 | 77.0 | 138.5 | DN100 | DN100 | 20628 |



SC12S Street elbow 90°

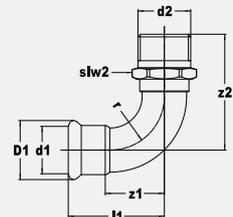
Connection: Press x Male



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|
| 22mm | 51.0 | 22.0 | 31.6 | 20.0 | 30.0 | 58.1 | 22.0 | 21.0 | 37.1 | DN20 | DN20 | 20165 |
| 28mm | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | 65.5 | 28.0 | 23.0 | 42.5 | DN25 | DN25 | 20166 |
| 35mm | 71.5 | 35.0 | 44.6 | 26.0 | 45.5 | 75.9 | 35.0 | 26.0 | 49.9 | DN32 | DN32 | 20167 |
| 42mm | 86.6 | 42.0 | 53.6 | 30.0 | 56.6 | 92.5 | 42.0 | 30.0 | 62.5 | DN40 | DN40 | 20168 |
| 54mm | 104.6 | 54.0 | 65.3 | 35.0 | 69.6 | 110.6 | 54.0 | 35.0 | 75.6 | DN50 | DN50 | 20169 |
| 76.1mm | 155.2 | 76.1 | 94.5 | 55.0 | 100.2 | 168.0 | 76.1 | 55.0 | 113.0 | DN65 | DN65 | 20629 |
| 88.9mm | 178.6 | 88.9 | 109.5 | 63.0 | 115.6 | 193.0 | 88.9 | 63.0 | 130.0 | DN80 | DN80 | 20630 |
| 108mm | 215.5 | 108.0 | 132.6 | 77.0 | 138.5 | 233.0 | 108.0 | 77.0 | 156.0 | DN100 | DN100 | 20631 |

SC13 Male elbow 90°

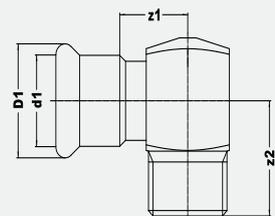
Press fit x male BSP taper thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|---------------|-------|------|------|------|------|-------|-------|------|------|------|---------------|-------|
| 22mm x 3/4" | 51.0 | 22.0 | 31.6 | 21.0 | 30.0 | 61.5 | 61.5 | 30.0 | 34.7 | DN20 | 3/4" (DN20) | 20201 |
| 28mm x 1" | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | 73.5 | 73.5 | 36.0 | 41.6 | DN25 | 1" (DN25) | 20202 |
| 35mm x 1 1/4" | 71.5 | 35.0 | 44.6 | 26.0 | 45.5 | 85.5 | 85.5 | 46.0 | 53.1 | DN32 | 1 1/4" (DN32) | 20206 |
| 42mm x 1 1/2" | 86.5 | 42.0 | 53.6 | 30.0 | 56.5 | 95.5 | 95.5 | 50.0 | 57.8 | DN40 | 1 1/2" (DN40) | 20204 |
| 54mm x 2" | 105.0 | 54.0 | 65.3 | 35.0 | 70.0 | 115.5 | 115.5 | 60.0 | 69.3 | DN50 | 2" (DN50) | 20205 |

SC13A Angle adaptor 90°

Press x male BSP taper thread



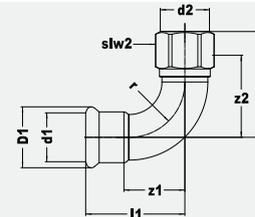
| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|-------------|------|------|------|------|------|------|------|------|------|------|-------------|-------|
| 22mm x 3/4" | 44.5 | 22.0 | 31.6 | 21.0 | 23.5 | 32.0 | 32.0 | 28.0 | 32.3 | DN20 | 3/4" (DN20) | 20208 |

Vds 22 - 108mm, LPCB and FM 22-54mm, UL/cUL 22 - 88.9mm



SC14 Elbow 90°

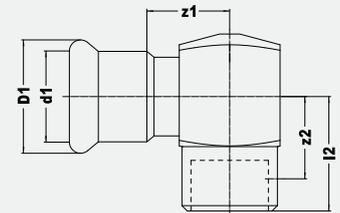
Press x BSP parallel female thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|-------------|------|------|------|------|------|------|------|------|------|------|-------------|-------|
| 22mm x 1/2" | 51.0 | 22.0 | 31.6 | 21.0 | 30.0 | 59.0 | 44.0 | 27.0 | 31.2 | DN20 | 1/2" (DN15) | 20345 |
| 22mm x 3/4" | 51.0 | 22.0 | 31.6 | 21.0 | 30.0 | 29.0 | 42.7 | 30.0 | 34.7 | DN20 | 3/4" (DN20) | 20346 |
| 28mm x 1/2" | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | 65.0 | 50.0 | 32.0 | 37.0 | DN25 | 1/2" (DN15) | 20347 |
| 28mm x 3/4" | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | 65.0 | 48.7 | 32.0 | 37.0 | DN25 | 3/4" (DN20) | 20348 |
| 28mm x 1" | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | 69.5 | 50.5 | 41.0 | 47.4 | DN25 | 1" (DN25) | 20349 |
| 35mm x 1/2" | 71.5 | 35.0 | 44.6 | 26.0 | 45.5 | 74.5 | 54.5 | 41.0 | 47.4 | DN32 | 1/2" (DN15) | 20350 |
| 35mm x 3/4" | 71.5 | 35.0 | 44.6 | 26.0 | 45.5 | 74.5 | 53.5 | 41.0 | 47.4 | DN32 | 3/4" (DN20) | 20351 |
| 35mm x 1" | 71.5 | 35.0 | 44.6 | 26.0 | 45.5 | 74.5 | 55.5 | 41.0 | 47.4 | DN32 | 1" (DN25) | 20352 |

SC14A Angle adaptor 90°

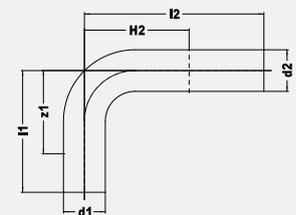
Press x BSP parallel female thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|-------------|------|------|------|------|------|------|------|------|------|------|-------------|-------|
| 22mm x 1/2" | 44.5 | 22.0 | 31.6 | 21.0 | 23.5 | 31.0 | 16.0 | 28.0 | 32.3 | DN20 | 1/2" (DN15) | 20355 |
| 28mm x 1/2" | 50.5 | 28.0 | 37.5 | 23.0 | 27.5 | 35.0 | 20.0 | 36.0 | 41.6 | DN25 | 1/2" (DN15) | 20356 |
| 35mm x 1/2" | 56.5 | 35.0 | 44.6 | 26.0 | 30.5 | 35.0 | 20.0 | 42.0 | 48.5 | DN32 | 1/2" (DN15) | 20357 |

SC19S Bend 90°

Male x male



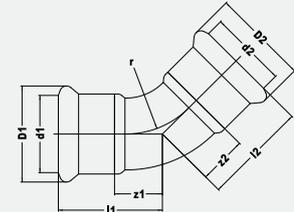
| Size | l1 | d1 | es1 | z1 | l2 | d2 | es2 | DN1 | DN2 | Code |
|------|-------|------|------|-------|-------|------|------|------|------|-------|
| 22mm | 73.5 | 22.0 | 21.0 | 52.5 | 121.5 | 22.0 | 21.0 | DN20 | DN20 | 20370 |
| 28mm | 83.5 | 28.0 | 23.0 | 60.5 | 121.5 | 28.0 | 23.0 | DN25 | DN25 | 20371 |
| 35mm | 121.5 | 35.0 | 26.0 | 95.5 | 201.5 | 35.0 | 26.0 | DN32 | DN32 | 20372 |
| 42mm | 151.5 | 42.0 | 30.0 | 121.5 | 251.5 | 42.0 | 30.0 | DN40 | DN40 | 20373 |
| 54mm | 201.5 | 54.0 | 35.0 | 166.5 | 301.5 | 54.0 | 35.0 | DN50 | DN50 | 20374 |



SC21

Obtuse elbow

Press x Press

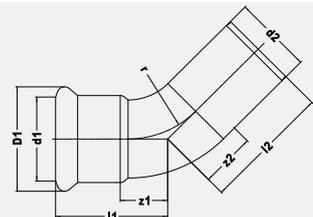


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|-------|
| 22mm | 35.2 | 22.0 | 31.6 | 21.0 | 14.2 | 35.2 | 22.0 | 31.6 | 21.0 | 14.2 | DN20 | DN20 | 20172 |
| 28mm | 40.1 | 28.0 | 37.5 | 23.0 | 17.1 | 40.1 | 28.0 | 37.5 | 23.0 | 17.1 | DN25 | DN25 | 20173 |
| 35mm | 46.4 | 35.0 | 44.6 | 26.0 | 20.4 | 46.4 | 35.0 | 44.6 | 26.0 | 20.4 | DN32 | DN32 | 20174 |
| 42mm | 56.1 | 42.0 | 53.6 | 30.0 | 26.1 | 56.1 | 42.0 | 53.6 | 30.0 | 26.1 | DN40 | DN40 | 20175 |
| 54mm | 66.9 | 54.0 | 65.3 | 35.0 | 31.9 | 66.9 | 54.0 | 65.3 | 35.0 | 31.9 | DN50 | DN50 | 20176 |
| 76.1mm | 101.3 | 76.1 | 94.5 | 55.0 | 46.3 | 101.3 | 76.1 | 94.5 | 55.0 | 46.3 | DN65 | DN65 | 20632 |
| 88.9mm | 116.0 | 88.9 | 109.5 | 63.0 | 53.0 | 116.0 | 88.9 | 109.5 | 63.0 | 53.0 | DN80 | DN80 | 20633 |
| 108mm | 139.4 | 108.0 | 132.6 | 77.0 | 62.4 | 139.4 | 108.0 | 132.6 | 77.0 | 62.4 | DN100 | DN100 | 20634 |

SC21S

Obtuse street elbow

Press x male

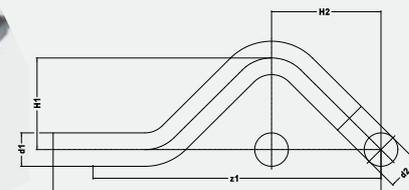


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|------|-------|-------|------|------|-------|-------|-------|
| 22mm | 35.2 | 22.0 | 31.6 | 21.0 | 14.2 | 42.3 | 22.0 | 21.0 | 21.3 | DN20 | DN20 | 20179 |
| 28mm | 40.1 | 28.0 | 37.5 | 23.0 | 17.1 | 45.6 | 28.0 | 23.0 | 22.6 | DN25 | DN25 | 20180 |
| 35mm | 46.4 | 35.0 | 44.6 | 26.0 | 20.4 | 51.3 | 35.0 | 26.0 | 25.3 | DN32 | DN32 | 20181 |
| 42mm | 56.1 | 42.0 | 53.6 | 30.0 | 26.1 | 62.6 | 42.0 | 30.0 | 32.6 | DN40 | DN40 | 20182 |
| 54mm | 66.9 | 54.0 | 65.3 | 35.0 | 31.9 | 72.5 | 54.0 | 35.0 | 37.5 | DN50 | DN50 | 20183 |
| 76.1mm | 101.3 | 76.1 | 94.5 | 55.0 | 46.3 | 114.1 | 76.1 | 55.0 | 59.1 | DN65 | DN65 | 20635 |
| 88.9mm | 116.0 | 88.9 | 109.5 | 63.0 | 53.0 | 130.3 | 88.9 | 63.0 | 67.3 | DN80 | DN80 | 20636 |
| 108mm | 139.4 | 108.0 | 132.6 | 77.0 | 62.4 | 156.9 | 108.0 | 77.0 | 79.9 | DN100 | DN100 | 20637 |

SC22S

Crossover

Male x male

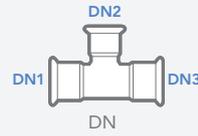
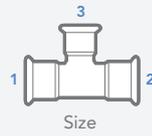


| Size | l1 | d1 | es1 | z1 | d2 | es2 | DN1 | DN2 | Code |
|------|-------|------|------|-------|------|------|------|------|-------|
| 22mm | 178.0 | 22.0 | 21.0 | 157.0 | 22.0 | 21.0 | DN20 | DN20 | 20195 |
| 28mm | 210.0 | 28.0 | 23.0 | 187.0 | 28.0 | 23.0 | DN25 | DN25 | 20196 |

Vds 22 - 108mm, LPCB and FM 22-54mm, UL/cUL 22 - 88.9mm

Tee sizes are listed using the UK specification

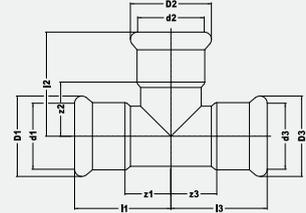
(See page 46)



SC24

Equal tee

Press all ends

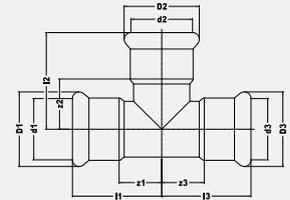


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | DN3 | Code |
|--------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|-------|-------|
| 22mm | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | 48.5 | 22.0 | 31.6 | 21.0 | 27.5 | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | DN20 | DN20 | DN20 | 20251 |
| 28mm | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | 53.5 | 28.0 | 37.5 | 23.0 | 30.5 | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | DN25 | DN25 | DN25 | 20252 |
| 35mm | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 60.0 | 35.0 | 44.6 | 26.0 | 34.0 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | DN32 | DN32 | DN32 | 20253 |
| 42mm | 60.5 | 42.0 | 53.6 | 30.0 | 30.5 | 67.0 | 42.0 | 53.6 | 30.0 | 37.0 | 60.5 | 42.0 | 53.6 | 30.0 | 30.5 | DN40 | DN40 | DN40 | 20254 |
| 54mm | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 77.5 | 54.0 | 65.3 | 35.0 | 42.5 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | DN50 | DN50 | 20255 |
| 76.1mm | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | 110.0 | 76.1 | 94.5 | 55.0 | 55.0 | 115.0 | 76.1 | 94.5 | 60.0 | 60.0 | DN65 | DN65 | DN65 | 20644 |
| 88.9mm | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 128.0 | 88.9 | 109.5 | 63.0 | 65.0 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | DN80 | DN80 | 20645 |
| 108mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 153.0 | 108.0 | 132.6 | 77.0 | 76.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN100 | DN100 | 20646 |

SC25

Tee, reduced branch

Press all ends



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | DN3 | Code |
|--------------------|-------|-------|-------|------|------|-------|------|------|------|------|-------|-------|-------|------|------|-------|------|-------|-------|
| 28 x 28 x 22mm | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | 51.5 | 22.0 | 31.6 | 21.0 | 30.5 | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | DN25 | DN20 | DN25 | 20264 |
| 35 x 35 x 22mm | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 55.0 | 22.0 | 31.6 | 21.0 | 34.0 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | DN32 | DN20 | DN32 | 20267 |
| 35 x 35 x 28mm | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 57.0 | 28.0 | 37.5 | 23.0 | 34.0 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | DN32 | DN25 | DN32 | 20268 |
| 42 x 42 x 22mm | 60.2 | 42.0 | 53.6 | 30.0 | 30.2 | 57.5 | 22.0 | 31.6 | 21.0 | 36.5 | 60.2 | 42.0 | 53.6 | 30.0 | 30.2 | DN40 | DN20 | DN40 | 20269 |
| 42 x 42 x 28mm | 60.2 | 42.0 | 53.6 | 30.0 | 30.2 | 59.5 | 28.0 | 37.5 | 23.0 | 36.5 | 60.2 | 42.0 | 53.6 | 30.0 | 30.2 | DN40 | DN25 | DN40 | 20270 |
| 42 x 42 x 35mm | 60.2 | 42.0 | 53.6 | 30.0 | 30.2 | 63.1 | 35.0 | 44.6 | 26.0 | 37.1 | 60.2 | 42.0 | 53.6 | 30.0 | 30.2 | DN40 | DN32 | DN40 | 20271 |
| 54 x 54 x 22mm | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 63.5 | 22.0 | 31.6 | 21.0 | 42.5 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | DN20 | DN50 | 20272 |
| 54 x 54 x 28mm | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 65.5 | 28.0 | 37.5 | 23.0 | 42.5 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | DN25 | DN50 | 20273 |
| 54 x 54 x 35mm | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 69.0 | 35.0 | 44.6 | 26.0 | 43.0 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | DN32 | DN50 | 20274 |
| 54 x 54 x 42mm | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 73.0 | 42.0 | 53.6 | 30.0 | 43.0 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | DN40 | DN50 | 20275 |
| 76.1 x 76.1 x 22mm | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | 68.0 | 22.0 | 31.6 | 21.0 | 47.0 | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | DN65 | DN20 | DN65 | 20686 |
| 76.1 x 76.1 x 28mm | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | 85.0 | 28.0 | 37.5 | 23.0 | 62.0 | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | DN65 | DN25 | DN65 | 20687 |
| 76.1 x 76.1 x 35mm | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | 87.0 | 35.0 | 44.6 | 26.0 | 61.0 | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | DN65 | DN32 | DN65 | 20688 |
| 76.1 x 76.1 x 42mm | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | 97.0 | 42.0 | 53.6 | 30.0 | 67.0 | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | DN65 | DN40 | DN65 | 20689 |
| 76.1 x 76.1 x 54mm | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | 110.0 | 54.0 | 65.3 | 35.0 | 75.0 | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | DN65 | DN50 | DN65 | 20647 |
| 88.9 x 88.9 x 22mm | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 76.0 | 22.0 | 31.6 | 21.0 | 55.0 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | DN20 | DN80 | 20690 |
| 88.9 x 88.9 x 28mm | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 92.0 | 28.0 | 37.5 | 23.0 | 69.0 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | DN25 | DN80 | 20691 |
| 88.9 x 88.9 x 35mm | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 97.0 | 35.0 | 44.6 | 26.0 | 71.0 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | DN32 | DN80 | 20692 |
| 88.9 x 88.9 x 42mm | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 105.0 | 42.0 | 53.6 | 30.0 | 75.0 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | DN40 | DN80 | 20693 |
| 88.9 x 88.9 x 54mm | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 117.0 | 54.0 | 65.3 | 35.0 | 82.0 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | DN50 | DN80 | 20694 |
| 88.9 x 88.9 x 76mm | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 117.0 | 76.1 | 94.5 | 55.0 | 62.0 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | DN65 | DN80 | 20648 |
| 108 x 108 x 22mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 85.0 | 22.0 | 31.6 | 21.0 | 64.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN20 | DN100 | 20695 |



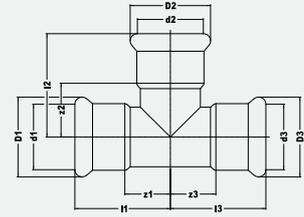
SC25 Tee, reduced branch (cont.)

| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | DN3 | Code |
|--------------------|-------|-------|-------|------|------|-------|------|------|------|------|-------|-------|-------|------|------|-------|------|-------|-------|
| 108 x 108 x 28mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 102.0 | 28.0 | 37.5 | 23.0 | 79.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN25 | DN100 | 20696 |
| 108 x 108 x 35mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 107.0 | 35.0 | 44.6 | 26.0 | 81.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN32 | DN100 | 20697 |
| 108 x 108 x 42mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 115.0 | 42.0 | 53.6 | 30.0 | 85.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN40 | DN100 | 20698 |
| 108 x 108 x 54mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 128.0 | 54.0 | 65.3 | 35.0 | 93.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN50 | DN100 | 20699 |
| 108 x 108 x 76.1mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 128.0 | 76.1 | 94.5 | 55.0 | 73.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN65 | DN100 | 20700 |
| 108 x 108 x 89.1mm | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 137.0 | 76.1 | 94.5 | 55.0 | 82.0 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | DN65 | DN100 | 20649 |

SC28

Tee, both ends reduced

Press on all ends

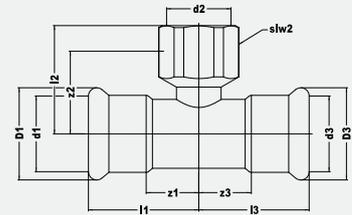


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | DN3 | Code |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 22 x 22 x 28mm | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | 52.0 | 28.0 | 37.5 | 23.0 | 29.0 | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | DN20 | DN25 | DN20 | 20712 |

SC30

Female branch tee

Press x BSP parallel female branch

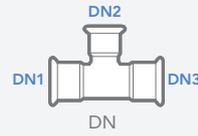
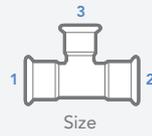


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | Code |
|--------------------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|-------|-------------|-------|-------|
| 22x22mm x 1/2" | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | 39.0 | 24.0 | 24.0 | 27.7 | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | DN20 | 1/2" (DN15) | DN20 | 20283 |
| 22x22mm x 3/4" | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | 41.0 | 24.7 | 30.0 | 34.7 | 39.5 | 22.0 | 31.6 | 21.0 | 18.5 | DN20 | 3/4" (DN20) | DN20 | 20288 |
| 28x28mm x 1/2" | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | 42.0 | 27.0 | 24.0 | 27.7 | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | DN25 | 1/2" (DN15) | DN25 | 20284 |
| 28x28mm x 3/4" | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | 44.0 | 27.7 | 30.0 | 34.7 | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | DN25 | 3/4" (DN20) | DN25 | 20289 |
| 28 x 28mm x 1" | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | 48.0 | 25.0 | 41.0 | 47.4 | 45.0 | 28.0 | 37.5 | 23.0 | 22.0 | DN25 | 1" (DN25) | DN25 | 20279 |
| 35x35mm x 1/2" | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 45.5 | 30.5 | 24.0 | 27.7 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | DN32 | 1/2" (DN15) | DN32 | 20285 |
| 35x35mm x 3/4" | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 47.5 | 31.2 | 30.0 | 34.7 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | DN32 | 3/4" (DN20) | DN32 | 20290 |
| 35 x 35mm x 1" | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 51.5 | 28.5 | 41.0 | 47.4 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | DN32 | 1" (DN25) | DN32 | 20280 |
| 42 x 42mm x 1/2" | 60.7 | 42.0 | 53.6 | 30.0 | 30.7 | 48.0 | 33.0 | 24.0 | 27.7 | 60.7 | 42.0 | 53.6 | 30.0 | 30.7 | DN40 | 1/2" (DN15) | DN40 | 20286 |
| 42x42mm x 3/4" | 60.7 | 42.0 | 53.6 | 30.0 | 30.7 | 50.0 | 33.7 | 30.0 | 34.7 | 60.7 | 42.0 | 53.6 | 30.0 | 30.7 | DN40 | 3/4" (DN20) | DN40 | 20291 |
| 42 x 42mm x 1" | 60.7 | 42.0 | 53.6 | 30.0 | 30.7 | 54.0 | 31.0 | 41.0 | 47.4 | 60.7 | 42.0 | 53.6 | 30.0 | 30.7 | DN40 | 1" (DN25) | DN40 | 20294 |
| 54x54mm x 1/2" | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 54.0 | 39.0 | 24.0 | 27.7 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | 1/2" (DN15) | DN50 | 20287 |
| 54x54mm x 3/4" | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 56.0 | 39.7 | 30.0 | 34.7 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | 3/4" (DN20) | DN50 | 20292 |
| 54 x 54mm x 1" | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 60.0 | 37.0 | 41.0 | 47.4 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | DN50 | 1" (DN25) | DN50 | 20293 |
| 76.1x76.1mm x 3/4" | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | 82.0 | 65.5 | 30.0 | 34.7 | 115.0 | 76.1 | 94.5 | 55.0 | 60.0 | DN65 | 3/4" (DN20) | DN65 | 20650 |
| 88.9x88.9mm x 3/4" | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | 84.0 | 67.5 | 30.0 | 34.7 | 130.0 | 88.9 | 109.5 | 63.0 | 67.0 | DN80 | 3/4" (DN20) | DN80 | 20651 |
| 108x108mm x 3/4" | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | 94.0 | 77.5 | 30.0 | 34.7 | 155.0 | 108.0 | 132.6 | 77.0 | 78.0 | DN100 | 3/4" (DN20) | DN100 | 20652 |

Vds 22 - 108mm, LPCB and FM 22-54mm, UL/cUL 22 - 88.9mm

Tee sizes are listed using the UK specification

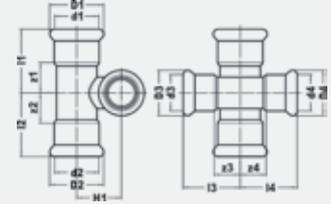
(See page 46)



SC50

Cross

Press on all ends

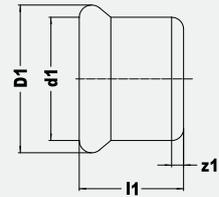


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | l4 | d4 | D4 | es4 | z4 | DN1 | DN2 | DN3 | DN4 | Code |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 35mm | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 60.0 | 35.0 | 44.6 | 26.0 | 34.0 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 60.0 | 35.0 | 44.7 | 26.0 | 25.5 | DN32 | DN32 | DN32 | DN32 | 20327 |
| 42mm | 60.5 | 42.0 | 53.6 | 30.0 | 30.5 | 67.0 | 42.0 | 53.6 | 30.0 | 37.0 | 60.5 | 42.0 | 53.6 | 30.0 | 30.5 | 67.0 | 42.0 | 53.7 | 30.0 | 30.5 | DN40 | DN40 | DN40 | DN40 | 20328 |
| 54mm | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 77.5 | 54.0 | 65.3 | 35.0 | 42.5 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 77.5 | 54.0 | 65.4 | 35.0 | 36.0 | DN50 | DN50 | DN50 | DN50 | 20329 |
| 35 x 28mm | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 57.0 | 28.0 | 37.5 | 23.0 | 34.0 | 51.5 | 35.0 | 44.6 | 26.0 | 25.5 | 57.0 | 28.0 | 37.6 | 23.0 | 34.0 | DN32 | DN25 | DN32 | DN25 | 20334 |
| 42 x 28mm | 60.5 | 42.0 | 53.6 | 30.0 | 30.5 | 59.5 | 28.0 | 37.5 | 23.0 | 36.5 | 60.5 | 42.0 | 53.6 | 30.0 | 30.5 | 59.5 | 28.0 | 37.6 | 23.0 | 36.5 | DN40 | DN25 | DN40 | DN25 | 20335 |
| 54 x 28mm | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 65.5 | 28.0 | 37.5 | 23.0 | 42.5 | 71.0 | 54.0 | 65.3 | 35.0 | 36.0 | 65.5 | 28.0 | 37.6 | 23.0 | 42.5 | DN50 | DN25 | DN50 | DN25 | 20336 |

SC61

Stop end

Press



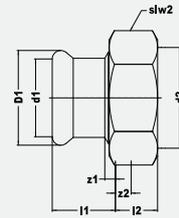
| Size | l1 | d1 | D1 | es1 | z1 | DN1 | Code |
|--------|------|-------|-------|------|------|-------|-------|
| 22mm | 24.2 | 22.0 | 31.6 | 21.0 | 3.2 | DN20 | 20297 |
| 28mm | 26.2 | 28.0 | 37.5 | 23.0 | 3.2 | DN25 | 20298 |
| 35mm | 29.2 | 35.0 | 44.6 | 26.0 | 3.2 | DN32 | 20299 |
| 42mm | 36.6 | 42.0 | 53.6 | 30.0 | 6.6 | DN40 | 20300 |
| 54mm | 41.6 | 54.0 | 65.3 | 35.0 | 6.6 | DN50 | 20301 |
| 76.1mm | 63.7 | 76.1 | 94.5 | 55.0 | 8.7 | DN65 | 20656 |
| 88.9mm | 72.1 | 88.9 | 109.5 | 63.0 | 9.1 | DN80 | 20657 |
| 108mm | 96.5 | 108.0 | 132.6 | 77.0 | 19.5 | DN100 | 20658 |



SC68FF

Half union

Press x BSP female union end

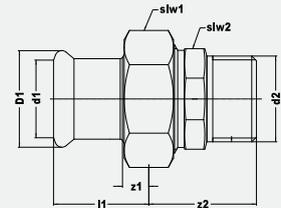


| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|------|------|-----|------|------|------|---------------|-------|
| 22mm x 1" | 30.0 | 22.0 | 31.6 | 21.0 | 9.0 | 10.2 | 2.0 | 36.0 | 41.6 | DN20 | 1" (DN25) | 20337 |
| 28mm x 1 1/2" | 31.0 | 28.0 | 37.5 | 23.0 | 8.0 | 10.2 | 2.0 | 46.0 | 53.1 | DN25 | 1 1/4" (DN32) | 20338 |
| 35mm x 1 1/2" | 34.0 | 35.0 | 44.6 | 26.0 | 8.0 | 11.1 | 2.0 | 52.0 | 60.1 | DN32 | 1 1/2" (DN40) | 20339 |
| 42mm x 1 3/4" | 41.0 | 42.0 | 53.6 | 30.0 | 11.0 | 11.1 | 2.0 | 52.0 | 60.1 | DN40 | 1 3/4" (DN40) | 20340 |
| 54mm x 2 3/8" | 47.0 | 54.0 | 65.3 | 35.0 | 12.0 | 11.2 | 3.0 | 75.0 | 86.6 | DN50 | 2 3/8" (DN50) | 20341 |

SC69

Straight male union

Press x BSP taper male thread

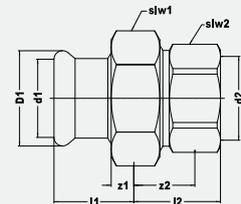


| Size | l1 | d1 | D1 | es1 | z1 | slw1 | sks1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|-------|
| 22mm x 3/4" | 30.0 | 22.0 | 31.5 | 21.0 | 9.0 | 36.0 | 41.6 | 40.0 | 40.0 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 20307 |
| 28mm x 1" | 31.0 | 28.0 | 37.4 | 23.0 | 8.0 | 46.0 | 53.1 | 43.7 | 43.7 | 39.0 | 45.0 | DN25 | 1" (DN25) | 20309 |
| 35mm x 1 1/4" | 34.0 | 35.0 | 44.4 | 26.0 | 8.0 | 52.0 | 60.1 | 47.8 | 47.8 | 49.0 | 56.6 | DN32 | 1 1/4" (DN32) | 20310 |
| 42mm x 1 1/2" | 41.0 | 42.0 | 53.5 | 30.0 | 11.0 | 58.0 | 67.0 | 47.0 | 47.0 | 51.0 | 58.9 | DN40 | 1 1/2" (DN40) | 20311 |
| 54mm x 2" | 47.0 | 54.0 | 65.2 | 35.0 | 12.0 | 75.0 | 86.6 | 53.0 | 53.0 | 65.0 | 75.1 | DN50 | 2" (DN50) | 20312 |

SC69F

Straight female union connector

Press x BSP parallel female thread



| Size | l1 | d1 | D1 | es1 | z1 | slw1 | sks1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|-------|
| 18mm x 1/2" | 29.0 | 18.0 | 26.3 | 20.0 | 9.0 | 30.0 | 34.6 | 29.5 | 14.5 | 27.0 | 31.2 | DN15 | 1/2" (DN15) | 20315 |
| 22mm x 3/4" | 30.0 | 22.0 | 31.5 | 21.0 | 9.0 | 36.0 | 41.6 | 33.0 | 16.7 | 34.0 | 39.3 | DN20 | 3/4" (DN20) | 20317 |
| 28mm x 1" | 31.0 | 28.0 | 37.4 | 23.0 | 8.0 | 46.0 | 53.1 | 34.0 | 15.0 | 42.0 | 48.5 | DN25 | 1" (DN25) | 20319 |
| 35mm x 1 1/4" | 34.0 | 35.0 | 44.4 | 26.0 | 8.0 | 52.0 | 60.0 | 41.5 | 20.1 | 5.0 | 57.8 | DN32 | 1 1/4" (DN32) | 20320 |
| 42mm x 1 1/2" | 41.0 | 42.0 | 53.5 | 30.0 | 11.0 | 58.0 | 67.0 | 41.5 | 20.1 | 55.0 | 63.5 | DN40 | 1 1/2" (DN40) | 20321 |
| 54mm x 2" | 47.0 | 54.0 | 65.2 | 35.0 | 12.0 | 75.0 | 86.6 | 45.5 | 19.8 | 70.0 | 80.9 | DN50 | 2" (DN50) | 20322 |

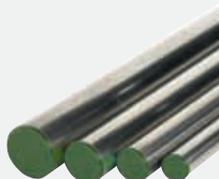
STAINLESS STEEL SPRINKLER SYSTEM



SS600

Stainless Steel 316 System tube 1.4401

6 metre lengths



| Size | d1 | DN1 | Code |
|-------------------|------|------|-------|
| 22 x 1.2mm x 6.0m | 22.0 | DN20 | 25052 |
| 28 x 1.2mm x 6.0m | 28.0 | DN25 | 25053 |
| 35 x 1.5mm x 6.0m | 35.0 | DN32 | 25054 |
| 42 x 1.5mm x 6.0m | 42.0 | DN40 | 25055 |
| 54 x 1.5mm x 6.0m | 54.0 | DN50 | 25056 |

SS620

Stainless Steel 316 System tube 1.4401

6 metre lengths



| Size | d1 | DN1 | Code |
|---------------------|-------|-------|-------|
| 76.1 x 2.0mm x 6.0m | 76.1 | DN65 | 25026 |
| 88.9 x 2.0mm x 6.0m | 88.9 | DN80 | 25028 |
| 108 x 2.0mm x 6.0m | 108.0 | DN100 | 25030 |

SS630

Stainless Steel 444 System tube 1.4521

6 metre lengths



| Size | d1 | DN1 | Code |
|-------------------|------|------|-------|
| 22 x 1.2mm x 6.0m | 22.0 | DN20 | 25072 |
| 28 x 1.2mm x 6.0m | 28.0 | DN25 | 25073 |
| 35 x 1.5mm x 6.0m | 35.0 | DN32 | 25074 |
| 42 x 1.5mm x 6.0m | 42.0 | DN40 | 25075 |
| 54 x 1.5mm x 6.0m | 54.0 | DN50 | 25076 |

SS640

Stainless Steel 439 System tube 1.4520

6 metre lengths

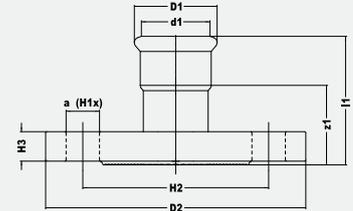


| Size | d1 | DN1 | Code |
|-------------------|------|------|-------|
| 22 x 1.2mm x 6.0m | 22.0 | DN20 | 25067 |
| 28 x 1.2mm x 6.0m | 28.0 | DN25 | 25068 |
| 35 x 1.5mm x 6.0m | 35.0 | DN32 | 25069 |
| 42 x 1.5mm x 6.0m | 42.0 | DN40 | 25070 |
| 54 x 1.5mm x 6.0m | 54.0 | DN50 | 25071 |



SS1FMF Female metric flange PN16

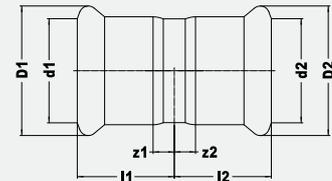
Press fit x steel flange to EN1092-1:1997 (BS4504)



| Size | l1 | d1 | D1 | es1 | z1 | D2 | DN1 | DN2 | Code |
|------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|
| 22mm | 59.0 | 22.0 | 31.7 | 21.0 | 38.0 | 105.0 | DN20 | DN20 | 11570 |
| 28mm | 65.0 | 28.0 | 37.5 | 23.0 | 42.0 | 115.0 | DN25 | DN25 | 11571 |
| 35mm | 69.0 | 35.0 | 44.6 | 26.0 | 43.0 | 140.0 | DN32 | DN32 | 11572 |
| 42mm x DN40 (1 1/2") | 77.0 | 42.0 | 53.6 | 30.0 | 47.0 | 150.0 | DN40 | DN40 | 11680 |
| 54mm x DN50 (2") | 87.0 | 54.0 | 65.3 | 35.0 | 52.0 | 165.0 | DN50 | DN50 | 11681 |
| 76.1mm x DN65 (2 1/2") | 126.0 | 76.1 | 94.3 | 55.0 | 71.0 | 185.0 | DN65 | DN65 | 20412 |
| 88.9mm x DN80 (3") | 147.0 | 88.9 | 109.1 | 63.0 | 84.0 | 200.0 | DN80 | DN80 | 20413 |
| 108mm x DN100 (4") | 167.0 | 108.0 | 132.7 | 77.0 | 90.0 | 220.0 | DN100 | DN100 | 20414 |

SS1 Straight coupling

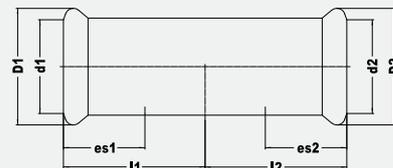
Press X Press fit



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | DN1 | DN2 | Code |
|--------|------|-------|-------|------|------|------|-------|-------|------|------|-------|-------|-------|
| 22mm | 26.0 | 22.0 | 31.7 | 21.0 | 5.0 | 26.0 | 22.0 | 31.7 | 21.0 | 5.0 | DN20 | DN20 | 11696 |
| 28mm | 27.9 | 28.0 | 37.5 | 23.0 | 4.9 | 27.9 | 28.0 | 37.5 | 23.0 | 4.9 | DN25 | DN25 | 11697 |
| 35mm | 30.8 | 35.0 | 44.6 | 26.0 | 4.8 | 30.8 | 35.0 | 44.6 | 26.0 | 4.8 | DN32 | DN32 | 11698 |
| 42mm | 36.2 | 42.0 | 53.6 | 30.0 | 6.2 | 36.2 | 42.0 | 53.6 | 30.0 | 6.2 | DN40 | DN40 | 11699 |
| 54mm | 41.1 | 54.0 | 65.3 | 35.0 | 6.1 | 41.1 | 54.0 | 65.3 | 35.0 | 6.1 | DN50 | DN50 | 11700 |
| 76.1mm | 71.0 | 76.1 | 94.3 | 55.0 | 16.0 | 71.0 | 76.1 | 94.3 | 55.0 | 16.0 | DN65 | DN65 | 20415 |
| 88.9mm | 81.5 | 88.9 | 109.1 | 63.0 | 18.5 | 81.5 | 88.9 | 109.1 | 63.0 | 18.5 | DN80 | DN80 | 20416 |
| 108mm | 96.0 | 108.0 | 132.7 | 77.0 | 19.0 | 96.0 | 108.0 | 132.7 | 77.0 | 19.0 | DN100 | DN100 | 20417 |

SS1Slip Straight coupling slip pattern

Press fit X Press-fit (without tube stop)



| Size | l1 | d1 | D1 | es1 | l2 | d2 | D2 | es2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|
| 22mm | 42.0 | 22.0 | 31.7 | 25.0 | 42.0 | 22.0 | 31.7 | 25.0 | DN20 | DN20 | 11729 |
| 28mm | 45.6 | 28.0 | 37.5 | 30.0 | 45.6 | 28.0 | 37.5 | 30.0 | DN25 | DN25 | 11731 |
| 35mm | 50.8 | 35.0 | 44.6 | 30.0 | 50.8 | 35.0 | 44.6 | 30.0 | DN32 | DN32 | 11732 |
| 42mm | 59.7 | 42.0 | 53.6 | 40.0 | 59.7 | 42.0 | 53.6 | 40.0 | DN40 | DN40 | 11733 |
| 54mm | 70.0 | 54.0 | 65.3 | 40.0 | 70.0 | 54.0 | 65.3 | 40.0 | DN50 | DN50 | 11734 |
| 76.1mm | 115.0 | 76.1 | 94.3 | 60.0 | 115.0 | 76.1 | 94.3 | 60.0 | DN65 | DN65 | 20428 |
| 88.9mm | 129.0 | 88.9 | 109.1 | 70.0 | 129.0 | 88.9 | 109.1 | 70.0 | DN80 | DN80 | 20429 |
| 108mm | 152.5 | 108.0 | 132.7 | 80.0 | 152.2 | 108.0 | 132.7 | 80.0 | DN100 | DN100 | 20430 |

Vds, UL/cUL and FM 22 - 108mm, LPCB 22 - 54mm

FEATURES

✚ Installed cost savings with joints made in a fraction of the time

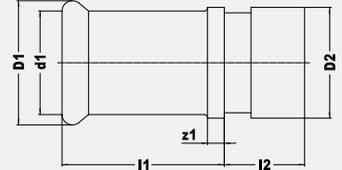
✚ Clean heat-free jointing, no hot works permits required

✚ Leak before press design

✚ Long system life with guarantee of up to 30 Years.

SS1V Transition for grooved couplings

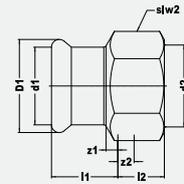
X Press fit x groove



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | DN1 | DN2 | Code |
|---------------|------|-------|-------|------|------|-------|------|-------|-------|-------|
| 28 x 34mm | 48.5 | 28.0 | 37.5 | 23.0 | 25.5 | 24.0 | 33.7 | DN25 | DN25 | 11675 |
| 35 x 42mm | 54.0 | 35.0 | 44.6 | 26.0 | 28.0 | 24.0 | 42.4 | DN32 | DN40 | 11676 |
| 42 x 48mm | 61.0 | 42.0 | 53.6 | 30.0 | 31.0 | 24.0 | 48.3 | DN40 | DN40 | 11677 |
| 54 x 60mm | 72.5 | 54.0 | 65.3 | 35.0 | 37.5 | 24.0 | 60.3 | DN50 | DN50 | 11678 |
| 76.1 x 76.1mm | 76.0 | 76.1 | 94.3 | 55.0 | 21.0 | 24.0 | 76.1 | DN65 | DN65 | 20461 |
| 88.9 x 88.9mm | 86.0 | 88.9 | 109.1 | 63.0 | 23.0 | 24.0 | 88.9 | DN80 | DN80 | 20462 |
| 108 x 114mm | 84.0 | 108.0 | 132.7 | 77.0 | 26.0 | 114.0 | | DN100 | DN100 | 20463 |

SS2 Straight female connector

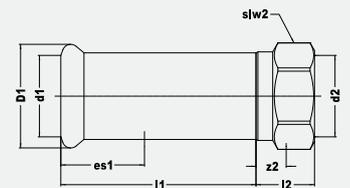
Press-fit x BSP parallel female thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|------|------|------|------|------|------|---------------|-------|
| 22mm x 1/2" | 21.2 | 22.0 | 31.5 | 21.0 | 0.2 | 15.3 | 5.3 | 32.0 | 37.0 | DN20 | 1/2" (DN15) | 11646 |
| 22mm x 3/4" | 23.0 | 22.0 | 31.5 | 21.0 | 2.0 | 16.5 | 5.5 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 11647 |
| 22mm x 1" | 24.1 | 22.0 | 31.5 | 21.0 | 3.1 | 19.5 | 6.5 | 38.0 | 43.9 | DN20 | 1" (DN25) | 11649 |
| 28mm x 1/2" | 26.0 | 28.0 | 37.4 | 23.0 | 3.0 | 12.2 | 1.3 | 38.0 | 43.9 | DN25 | 1/2" (DN15) | 11631 |
| 28mm x 3/4" | 23.4 | 28.0 | 37.4 | 23.0 | 23.0 | 0.4 | 16.6 | 5.6 | 38.0 | DN25 | 3/4" (DN20) | 11650 |
| 28mm x 1" | 25.1 | 28.0 | 37.4 | 23.0 | 2.1 | 19.5 | 5.5 | 38.0 | 43.9 | DN25 | 1" (DN25) | 11648 |
| 28mm x 1 1/4" | 25.3 | 28.0 | 37.4 | 23.0 | 2.3 | 21.7 | 6.7 | 46.0 | 53.1 | DN25 | 1 1/4" (DN32) | 11651 |
| 35mm x 1" | 26.5 | 35.0 | 44.4 | 26.0 | 0.5 | 19.5 | 6.5 | 46.0 | 53.1 | DN32 | 1" (DN25) | 11652 |
| 35mm x 1 1/4" | 28.3 | 35.0 | 44.4 | 26.0 | 2.3 | 21.7 | 6.7 | 46.0 | 53.1 | DN32 | 1 1/4" (DN32) | 11653 |
| 35mm x 1 1/2" | 28.0 | 35.0 | 44.4 | 26.0 | 2.0 | 22.0 | 8.0 | 54.0 | 62.4 | DN32 | 1 1/2" (DN40) | 11632 |
| 42mm x 1 1/4" | 30.0 | 42.0 | 53.5 | 30.0 | 0.0 | 22.0 | 0.0 | 54.0 | 62.4 | DN40 | 1 1/4" (DN32) | 11655 |
| 42mm x 1 1/2" | 32.0 | 42.0 | 53.5 | 30.0 | 2.0 | 22.0 | 8.0 | 54.0 | 62.4 | DN40 | 1 1/2" (DN40) | 11654 |
| 54mm x 1 1/2" | 35.7 | 54.0 | 65.1 | 35.0 | 0.7 | 22.2 | 8.2 | 67.0 | 77.4 | DN50 | 1 1/2" (DN40) | 11633 |
| 54mm x 2" | 36.9 | 54.0 | 65.1 | 35.0 | 1.9 | 26.0 | 8.0 | 67.0 | 77.4 | DN50 | 2" (DN50) | 11657 |

SS2LC Slip long connector

Press fit x BSP parallel female thread



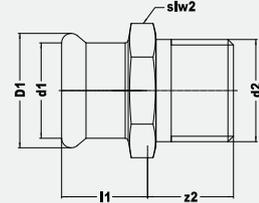
| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|-------------|------|------|------|------|------|------|------|------|------|------|-------------|-------|
| 22mm x 1/2" | 70.0 | 22.0 | 31.7 | 21.0 | 68.0 | 19.0 | 15.0 | 28.0 | 32.3 | DN20 | 1/2" (DN15) | 11590 |
| 22mm x 3/4" | 70.0 | 22.0 | 31.7 | 21.0 | 73.0 | 24.0 | 16.5 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 11591 |
| 28mm x 1/2" | 70.0 | 28.0 | 37.5 | 23.0 | 68.0 | 21.0 | 15.0 | 34.0 | 39.3 | DN25 | 1/2" (DN15) | 11592 |
| 28mm x 3/4" | 70.0 | 28.0 | 37.5 | 23.0 | 68.0 | 21.0 | 16.5 | 34.0 | 39.3 | DN25 | 3/4" (DN20) | 11593 |



SS3

Straight male connector

Press fit x BSP taper male thread

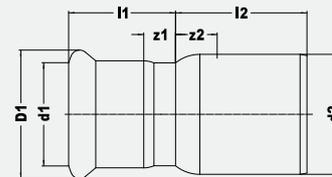


| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|--------------------|------|------|-------|------|-----|------|------|------|-------|------|---------------|-------|
| 22mm x 1/2" | 21.0 | 22.0 | 31.7 | 21.0 | 0.0 | 21.0 | 21.0 | 32.0 | 37.0 | DN20 | 1/2" (DN15) | 11662 |
| 22mm x 3/4" | 21.0 | 22.0 | 31.7 | 21.0 | 0.0 | 22.3 | 22.3 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 11664 |
| 22mm x 1" | 21.0 | 22.0 | 31.7 | 21.0 | 0.0 | 27.5 | 27.5 | 34.0 | 39.0 | DN20 | 1" (DN25) | 11663 |
| 28mm x 3/4" | 23.0 | 28.0 | 37.5 | 23.0 | 0.0 | 22.2 | 22.2 | 38.0 | 44.0 | DN25 | 3/4" (DN20) | 11642 |
| 28mm x 1" | 23.0 | 28.0 | 37.5 | 23.0 | 0.0 | 25.0 | 25.0 | 38.0 | 44.0 | DN25 | 1" (DN25) | 11665 |
| 28mm x 1 1/4" | 23.0 | 28.0 | 37.5 | 23.0 | 0.0 | 28.5 | 28.5 | 43.0 | 50.0 | DN25 | 1 1/4" (DN32) | 11666 |
| 35mm x 1" | 26.0 | 35.0 | 44.6 | 26.0 | 0.0 | 26.7 | 26.7 | 54.0 | 52.0 | DN32 | 1" (DN25) | 11667 |
| 35mm x 1 1/4" | 26.0 | 35.0 | 44.6 | 26.0 | 0.0 | 29.0 | 29.0 | 54.0 | 52.0 | DN32 | 1 1/4" (DN32) | 11670 |
| 35mm x 1 1/2" | 26.0 | 35.0 | 44.6 | 26.0 | 0.0 | 30.0 | 30.0 | 49.0 | 57.0 | DN32 | 1 1/2" (DN40) | 11645 |
| 42mm x 1 1/4" | 30.0 | 42.0 | 53.6 | 30.0 | 0.0 | 29.0 | 29.0 | 54.0 | 62.0 | DN40 | 1 1/4" (DN32) | 11668 |
| 42mm x 1 1/2" | 30.0 | 42.0 | 53.6 | 30.0 | 0.0 | 29.0 | 29.0 | 54.0 | 62.0 | DN40 | 1 1/2" (DN40) | 11671 |
| 54mm x 1 1/2" | 35.0 | 54.0 | 65.3 | 35.0 | 0.0 | 29.6 | 29.6 | 67.0 | 77.0 | DN50 | 1 1/2" (DN40) | 11656 |
| 54mm x 2" | 35.0 | 54.0 | 65.3 | 35.0 | 0.0 | 33.9 | 33.9 | 67.0 | 77.0 | DN50 | 2" (DN50) | 11674 |
| 76.1mm x 2 1/2"*** | 55.5 | 76.1 | 94.3 | 55.5 | 0.0 | 75.0 | 75.0 | 80.0 | 92.0 | DN65 | 2 1/2" (DN65) | 20458 |
| 88.9mm x 3"*** | 63.0 | 88.9 | 109.1 | 63.0 | 0.0 | 74.0 | 74.0 | 95.0 | 109.0 | DN80 | 3" (DN80) | 20459 |

SS6

Reducer

X Press x male end



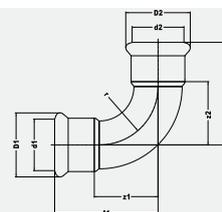
| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|--------------|------|------|-------|------|------|-------|-------|------|------|------|-------|-------|
| 28 x 22mm | 28.6 | 22.0 | 31.7 | 21.0 | 7.6 | 33.9 | 28.0 | 23.0 | 10.9 | DN20 | DN25 | 11717 |
| 35 x 22mm | 29.1 | 22.0 | 31.7 | 21.0 | 8.1 | 42.4 | 35.0 | 26.0 | 16.4 | DN20 | DN32 | 11719 |
| 35 x 28mm | 31.0 | 28.0 | 37.5 | 23.0 | 8.0 | 38.0 | 35.0 | 26.0 | 12.0 | DN25 | DN32 | 11720 |
| 42 x 22mm* | 32.5 | 22.0 | 31.7 | 21.0 | 11.5 | 53.0 | 42.0 | 30.0 | 23.0 | DN20 | DN40 | 11659 |
| 42 x 28mm | 30.7 | 28.0 | 37.5 | 23.0 | 7.7 | 50.8 | 42.0 | 30.0 | 20.8 | DN25 | DN40 | 11722 |
| 42 x 35mm | 34.1 | 35.0 | 44.6 | 26.0 | 8.1 | 42.4 | 42.0 | 30.0 | 12.4 | DN32 | DN40 | 11723 |
| 54 x 22mm* | 33.1 | 22.0 | 31.7 | 21.0 | 12.1 | 66.4 | 54.0 | 35.0 | 31.4 | DN20 | DN50 | 11724 |
| 54 x 28mm* | 34.3 | 28.0 | 37.5 | 23.0 | 11.3 | 62.4 | 54.0 | 35.0 | 27.4 | DN25 | DN50 | 11725 |
| 54 x 35mm | 33.6 | 35.0 | 44.6 | 26.0 | 7.6 | 59.9 | 54.0 | 35.0 | 24.9 | DN32 | DN50 | 11726 |
| 54 x 42mm | 40.0 | 42.0 | 53.6 | 30.0 | 10.0 | 55.0 | 54.0 | 35.0 | 20.0 | DN40 | DN50 | 11727 |
| 76.1 x 42mm | 79.0 | 42.0 | 53.6 | 30.0 | 49.0 | 72.0 | 76.1 | 55.0 | 17.0 | DN40 | DN65 | 20460 |
| 76.1 x 54mm | 42.0 | 54.0 | 65.3 | 35.0 | 7.0 | 98.0 | 76.1 | 55.0 | 43.0 | DN50 | DN65 | 20422 |
| 88.9 x 54mm | 42.0 | 54.0 | 65.3 | 35.0 | 7.0 | 114.0 | 88.9 | 63.0 | 51.0 | DN50 | DN80 | 20423 |
| 88.9 x 76mm | 68.0 | 76.1 | 94.3 | 55.0 | 13.0 | 88.0 | 88.9 | 63.0 | 25.0 | DN65 | DN80 | 20424 |
| 108 x 54mm | 66.0 | 54.0 | 65.3 | 35.0 | 31.0 | 138.0 | 108.0 | 77.0 | 61.0 | DN50 | DN100 | 20425 |
| 108 x 76.1mm | 69.0 | 76.1 | 94.3 | 55.0 | 14.0 | 127.0 | 108.0 | 77.0 | 50.0 | DN65 | DN100 | 20426 |
| 108 x 88.9mm | 77.0 | 88.9 | 109.1 | 63.0 | 14.0 | 113.0 | 108.0 | 77.0 | 36.0 | DN80 | DN100 | 20427 |

Vds, UL/cUL and FM 22 - 108mm, LPCB 22 - 54mm. *Not LPCB approved. **Not UL/CUL Listed



SS12 Elbow 90°

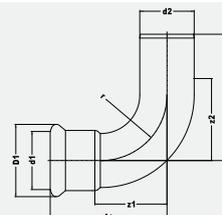
Press X Press



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 22mm | 51.0 | 22.0 | 31.7 | 21.0 | 30.0 | 51.0 | 22.0 | 31.7 | 21.0 | 30.0 | DN20 | DN20 | 11622 |
| 28mm | 60.0 | 28.0 | 37.5 | 23.0 | 37.0 | 60.0 | 28.0 | 37.5 | 23.0 | 37.0 | DN25 | DN25 | 11623 |
| 35mm | 70.8 | 35.0 | 44.6 | 26.0 | 44.8 | 70.8 | 35.0 | 44.6 | 26.0 | 44.8 | DN32 | DN32 | 11624 |
| 42mm | 86.3 | 42.0 | 53.6 | 30.0 | 56.3 | 86.3 | 42.0 | 53.6 | 30.0 | 56.3 | DN40 | DN40 | 11625 |
| 54mm | 104.6 | 54.0 | 65.3 | 35.0 | 69.6 | 104.6 | 54.0 | 65.3 | 35.0 | 69.6 | DN50 | DN50 | 11626 |
| 76.1mm | 150.0 | 76.1 | 94.3 | 55.0 | 95.0 | 150.0 | 76.1 | 94.3 | 55.0 | 95.0 | DN65 | DN65 | 20406 |
| 88.9mm | 174.0 | 88.9 | 109.1 | 63.0 | 111.0 | 174.0 | 88.9 | 109.1 | 63.0 | 111.0 | DN80 | DN80 | 20407 |
| 108mm | 215.0 | 108.0 | 132.7 | 77.0 | 138.0 | 215.0 | 108.0 | 132.7 | 77.0 | 138.0 | DN100 | DN100 | 20408 |

SS12S Street elbow 90°

Press x male end for insertion into a fitting

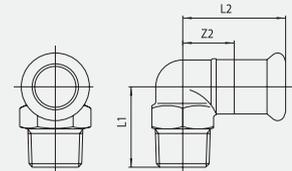


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|
| 22mm | 51.0 | 22.0 | 31.7 | 21.0 | 30.0 | 60.0 | 22.0 | 21.0 | 39.0 | DN20 | DN20 | 11636 |
| 28mm | 60.1 | 28.0 | 37.5 | 23.0 | 37.1 | 65.5 | 28.0 | 23.0 | 42.5 | DN25 | DN25 | 11637 |
| 35mm | 70.8 | 35.0 | 44.6 | 26.0 | 44.8 | 75.9 | 35.0 | 26.0 | 49.9 | DN32 | DN32 | 11638 |
| 42mm | 86.3 | 42.0 | 53.6 | 30.0 | 56.3 | 92.5 | 42.0 | 30.0 | 62.5 | DN40 | DN40 | 11639 |
| 54mm | 104.6 | 54.0 | 65.3 | 35.0 | 69.6 | 110.6 | 54.0 | 35.0 | 75.6 | DN50 | DN50 | 11640 |
| 76.1mm | 150.0 | 76.1 | 94.3 | 55.0 | 95.0 | 165.0 | 76.1 | 55.0 | 110.0 | DN65 | DN65 | 20409 |
| 88.9mm | 175.0 | 88.9 | 109.1 | 63.0 | 112.0 | 190.0 | 88.9 | 63.0 | 127.0 | DN80 | DN80 | 20410 |
| 108mm | 216.0 | 108.0 | 132.7 | 77.0 | 139.0 | 238.0 | 108.0 | 77.0 | 161.0 | DN100 | DN100 | 20411 |



SS13 Male elbow

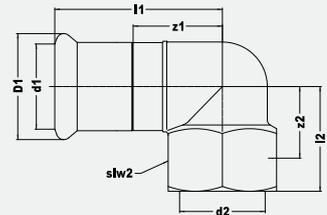
Press x BSP taper male thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|------|------|------|------|------|------|---------------|-------|
| 18mm x 1/2" | 43.5 | 18.0 | 26.5 | 20.0 | 23.5 | 31.5 | 31.5 | 24.0 | 27.7 | DN15 | 1/2" (DN15) | 11688 |
| 22mm x 3/4" | 48.5 | 22.0 | 31.7 | 21.0 | 27.5 | 38.5 | 38.5 | 30.0 | 34.7 | DN20 | 3/4" (DN20) | 11689 |
| 28mm x 1" | 53.0 | 28.0 | 37.5 | 23.0 | 30.0 | 46.0 | 46.0 | 34.0 | 39.3 | DN25 | 1" (DN25) | 11690 |
| 35mm x 1 1/4" | 60.0 | 35.0 | 44.6 | 26.0 | 34.0 | 52.0 | 52.0 | 43.0 | 49.7 | DN32 | 1 1/4" (DN32) | 11691 |
| 42mm x 1 1/2" | 69.0 | 42.0 | 53.6 | 30.0 | 39.0 | 58.0 | 58.0 | 49.0 | 56.6 | DN40 | 1 1/2" (DN40) | 11692 |
| 54mm x 2" | 82.0 | 54.0 | 65.3 | 35.0 | 47.0 | 68.0 | 68.0 | 62.0 | 71.6 | DN50 | - | 11693 |

SS14 Female elbow

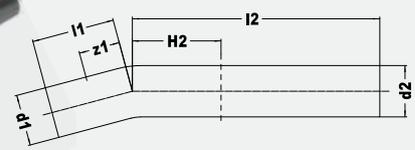
Press fit x BSP parallel female thread



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|------|------|------|------|------|------|---------------|-------|
| 22mm x 1/2" | 45.2 | 22.0 | 31.7 | 21.0 | 24.2 | 31.0 | 16.0 | 24.0 | 27.7 | DN20 | 1/2" (DN15) | 11683 |
| 22mm x 3/4" | 48.5 | 22.0 | 31.7 | 21.0 | 27.5 | 33.0 | 16.7 | 30.0 | 34.7 | DN20 | 3/4" (DN20) | 11684 |
| 28mm x 1/2" | 47.8 | 28.0 | 37.5 | 23.0 | 24.8 | 35.0 | 20.0 | 24.0 | 27.7 | DN25 | 1/2" (DN15) | 11600 |
| 28mm x 3/4" | 50.8 | 28.0 | 37.5 | 23.0 | 27.8 | 35.0 | 18.7 | 30.0 | 34.7 | DN25 | 3/4" (DN20) | 11601 |
| 28mm x 1" | 54.5 | 28.0 | 37.5 | 23.0 | 31.5 | 37.0 | 24.0 | 38.0 | 43.9 | DN25 | 1" (DN25) | 11685 |
| 35mm x 1/2" | 56.2 | 35.0 | 44.6 | 26.0 | 30.2 | 35.0 | 20.0 | 24.0 | 27.7 | DN32 | 1/2" (DN15) | 11602 |
| 35mm x 3/4" | 57.6 | 35.0 | 44.6 | 26.0 | 31.6 | 37.0 | 20.7 | 30.0 | 34.7 | DN32 | 3/4" (DN20) | 11603 |
| 35mm x 1" | 58.0 | 35.0 | 44.6 | 26.0 | 32.0 | 40.5 | 27.5 | 38.0 | 43.9 | DN32 | 1" (DN25) | 11669 |
| 35mm x 1 1/4" | 62.0 | 35.0 | 44.6 | 26.0 | 36.0 | 42.2 | 27.2 | 46.0 | 53.1 | DN32 | 1 1/4" (DN32) | 11686 |

SS19S 15° bend

Male x male



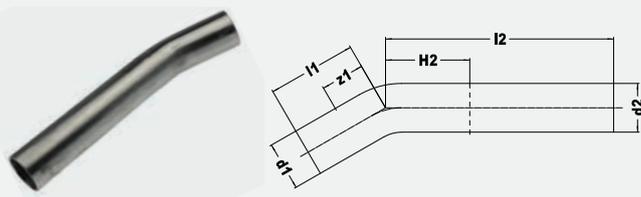
| Size | l1 | d1 | es1 | z1 | l2 | d2 | DN1 | DN2 | Code |
|------|-------|------|------|------|-------|------|------|------|-------|
| 28mm | 45.0 | 28.0 | 23.0 | 22.0 | 134.0 | 28.0 | DN25 | DN25 | 11550 |
| 35mm | 73.0 | 35.0 | 26.0 | 47.0 | 222.0 | 35.0 | DN32 | DN32 | 11551 |
| 42mm | 89.0 | 42.0 | 30.0 | 59.0 | 280.0 | 42.0 | DN40 | DN40 | 11552 |
| 54mm | 122.0 | 54.0 | 35.0 | 87.0 | 337.0 | 54.0 | DN50 | DN50 | 11553 |

Vds, UL/cUL and FM 22 - 108mm, LPCB 22 - 54mm



SS19S 30° bend

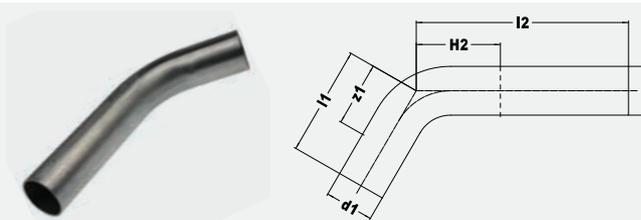
Male x male



| Size | l1 | d1 | es1 | z1 | l2 | d2 | DN1 | DN2 | Code |
|------|-------|------|------|------|-------|------|------|------|-------|
| 28mm | 51.0 | 28.0 | 23.0 | 28.0 | 130.0 | 28.0 | DN25 | DN25 | 11554 |
| 35mm | 73.0 | 35.0 | 26.0 | 47.0 | 214.0 | 35.0 | DN32 | DN32 | 11795 |
| 42mm | 99.0 | 42.0 | 30.0 | 69.0 | 272.0 | 42.0 | DN40 | DN40 | 11796 |
| 54mm | 134.0 | 54.0 | 35.0 | 99.0 | 326.0 | 54.0 | DN50 | DN50 | 11797 |

SS19S 60° bend

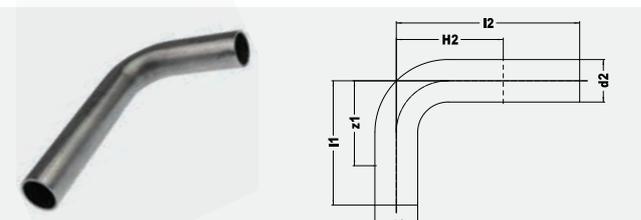
Male x male



| Size | l1 | d1 | es1 | z1 | l2 | d2 | DN1 | DN2 | Code |
|------|-------|------|------|-------|-------|------|------|------|-------|
| 28mm | 63.0 | 28.0 | 23.0 | 40.0 | 121.0 | 28.0 | DN25 | DN25 | 11555 |
| 35mm | 97.0 | 35.0 | 26.0 | 71.0 | 203.0 | 35.0 | DN32 | DN32 | 11556 |
| 42mm | 102.0 | 42.0 | 30.0 | 72.0 | 256.0 | 42.0 | DN40 | DN40 | 11557 |
| 54mm | 162.0 | 54.0 | 35.0 | 127.0 | 306.0 | 54.0 | DN50 | DN50 | 11558 |

SS19S 90° bend

Male x male

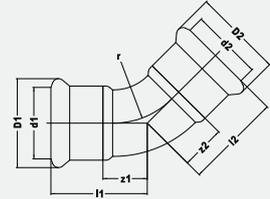


| Size | l1 | d1 | es1 | z1 | l2 | d2 | es2 | DN1 | DN2 | Code |
|------|-------|------|------|-------|-------|------|------|------|------|-------|
| 22mm | 72.0 | 22.0 | 21.0 | 51.0 | 120.0 | 22.0 | 21.0 | DN20 | DN20 | 11561 |
| 28mm | 82.0 | 28.0 | 23.0 | 59.0 | 120.0 | 28.0 | 23.0 | DN25 | DN25 | 11562 |
| 35mm | 120.0 | 35.0 | 26.0 | 94.0 | 200.0 | 35.0 | 26.0 | DN32 | DN32 | 11563 |
| 42mm | 150.0 | 42.0 | 30.0 | 120.0 | 250.0 | 42.0 | 30.0 | DN40 | DN40 | 11564 |
| 54mm | 200.0 | 54.0 | 35.0 | 165.0 | 300.0 | 54.0 | 35.0 | DN50 | DN50 | 11565 |



SS21 Obtuse elbow

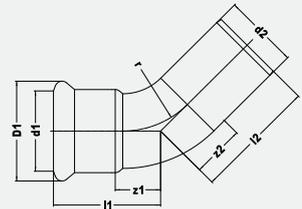
Press fit X Press



| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|-------|
| 22mm | 35.2 | 22.0 | 31.7 | 21.0 | 14.2 | 35.2 | 22.0 | 31.7 | 21.0 | 35.2 | DN20 | DN20 | 11606 |
| 28mm | 40.2 | 28.0 | 37.5 | 23.0 | 17.2 | 40.2 | 28.0 | 37.5 | 23.0 | 40.2 | DN25 | DN25 | 11607 |
| 35mm | 46.5 | 35.0 | 44.6 | 26.0 | 20.5 | 46.5 | 35.0 | 44.6 | 26.0 | 46.5 | DN32 | DN32 | 11608 |
| 42mm | 56.3 | 42.0 | 53.6 | 30.0 | 26.3 | 56.3 | 42.0 | 53.6 | 30.0 | 56.3 | DN40 | DN40 | 11609 |
| 54mm | 66.9 | 54.0 | 65.3 | 35.0 | 31.9 | 66.9 | 54.0 | 65.3 | 35.0 | 66.9 | DN50 | DN50 | 11610 |
| 76.1mm | 98.0 | 76.1 | 94.3 | 55.0 | 43.0 | 98.0 | 76.1 | 94.3 | 55.0 | 43.0 | DN65 | DN65 | 20400 |
| 88.9mm | 112.0 | 88.9 | 109.1 | 63.0 | 49.0 | 112.0 | 88.9 | 109.1 | 63.0 | 49.0 | DN80 | DN80 | 20401 |
| 108mm | 138.0 | 108.0 | 132.7 | 77.0 | 61.0 | 138.0 | 108.0 | 132.7 | 77.0 | 61.0 | DN100 | DN100 | 20402 |

SS21S Obtuse street elbow

Press fit x male

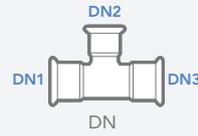
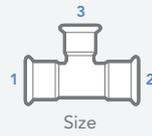


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | es2 | z2 | DN1 | DN2 | Code |
|--------|-------|-------|-------|------|------|-------|-------|------|------|-------|-------|-------|
| 22mm | 34.9 | 22.0 | 31.7 | 21.0 | 13.9 | 42.3 | 22.0 | 21.0 | 21.3 | DN20 | DN20 | 11613 |
| 28mm | 39.9 | 28.0 | 37.5 | 23.0 | 16.9 | 45.6 | 28.0 | 23.0 | 22.6 | DN25 | DN25 | 11614 |
| 35mm | 46.2 | 35.0 | 44.6 | 26.0 | 20.2 | 51.3 | 35.0 | 26.0 | 25.3 | DN32 | DN32 | 11615 |
| 42mm | 56.4 | 42.0 | 53.6 | 30.0 | 36.4 | 62.6 | 42.0 | 30.0 | 32.6 | DN40 | DN40 | 11616 |
| 54mm | 64.8 | 54.0 | 65.3 | 35.0 | 29.8 | 72.5 | 54.0 | 35.0 | 37.5 | DN50 | DN50 | 11617 |
| 76.1mm | 98.0 | 76.1 | 94.3 | 55.0 | 43.0 | 117.0 | 76.1 | 55.0 | 62.0 | DN65 | DN65 | 20403 |
| 88.9mm | 112.0 | 88.9 | 109.1 | 63.0 | 49.0 | 131.0 | 88.9 | 63.0 | 68.0 | DN80 | DN80 | 20404 |
| 108mm | 138.0 | 108.0 | 132.7 | 77.0 | 61.0 | 154.0 | 108.0 | 77.0 | 77.0 | DN100 | DN100 | 20405 |

Vds, UL/cUL and FM 22 - 108mm, LPCB 22 - 54mm.

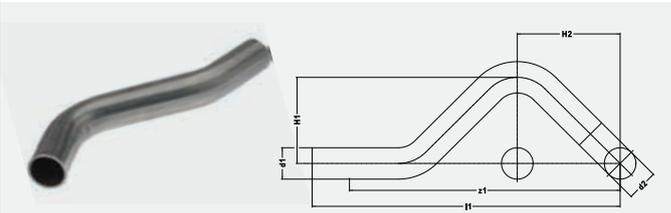
Tee sizes are listed using the UK specification

(See page XX)



SS22S Crossover

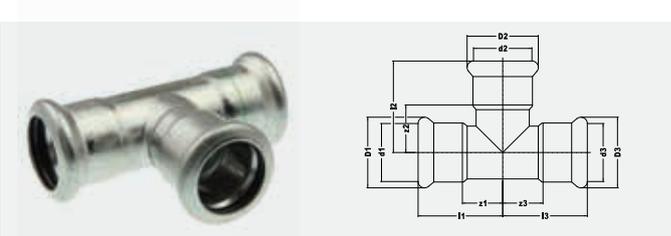
Male x male



| Size | l1 | d1 | es1 | z1 | d2 | DN1 | DN2 | Code |
|------|-------|------|------|-------|------|------|------|-------|
| 22mm | 178.0 | 22.0 | 21.0 | 157.0 | 22.0 | DN20 | DN20 | 11618 |
| 28mm | 210.0 | 28.0 | 23.0 | 187.0 | 28.0 | DN25 | DN25 | 11619 |

SS24 Equal tee

Press fit on all end

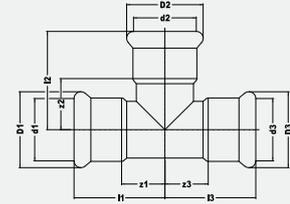


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | DN3 | Code |
|--------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| 22mm | 39.5 | 22.0 | 31.7 | 21.0 | 18.5 | 43.5 | 22.0 | 31.7 | 21.0 | 22.5 | 39.5 | 22.0 | 31.7 | 21.0 | 18.5 | DN20 | DN20 | DN20 | 11740 |
| 28mm | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | 48.5 | 28.0 | 37.5 | 23.0 | 25.5 | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | DN25 | DN25 | DN25 | 11744 |
| 35mm | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | 55.0 | 35.0 | 44.6 | 26.0 | 29.0 | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | DN32 | DN32 | DN32 | 11749 |
| 42mm | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | 61.5 | 42.0 | 53.6 | 30.0 | 31.5 | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | DN40 | DN40 | DN40 | 11753 |
| 54mm | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 72.4 | 54.0 | 65.3 | 35.0 | 37.4 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | DN50 | DN50 | 11758 |
| 76.1mm | 116.0 | 76.1 | 94.3 | 55.0 | 116.0 | 116.0 | 76.1 | 94.3 | 55.0 | 116.0 | 116.0 | 76.1 | 94.3 | 55.0 | 116.0 | DN65 | DN65 | DN65 | 20431 |
| 88.9mm | 231.0 | 88.9 | 109.1 | 63.0 | 231.0 | 231.0 | 88.9 | 109.1 | 63.0 | 231.0 | 231.0 | 88.9 | 95.0 | 63.0 | 231.0 | DN80 | DN80 | DN80 | 20432 |
| 108mm | 156.0 | 108.0 | 132.7 | 77.0 | 156.0 | 156.0 | 108.0 | 132.7 | 77.0 | 156.0 | 156.0 | 108.0 | 132.7 | 77.0 | 156.0 | DN100 | DN100 | DN100 | 20433 |



SS25 Tee, reduced branch

Press fit on all ends

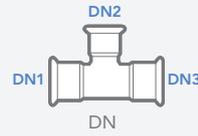
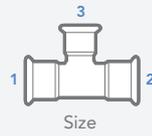


| Size | l1 | d1 | D1 | es1 | z1 | l2 | d2 | D2 | es2 | z2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | DN3 | Code |
|------------------|-------|-------|-------|------|------|-------|------|-------|------|------|-------|-------|-------|------|------|-------|------|-------|-------|
| 28 x 28 x 22mm | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | 46.5 | 22.0 | 31.7 | 21.0 | 25.5 | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | DN25 | DN20 | DN25 | 11743 |
| 35 x 35 x 22mm | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | 50.0 | 22.0 | 31.7 | 21.0 | 29.0 | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | DN32 | DN20 | DN32 | 11747 |
| 35 x 35 x 28mm | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | 52.0 | 28.0 | 37.5 | 23.0 | 29.0 | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | DN32 | DN25 | DN32 | 11748 |
| 42 x 42 x 22mm | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | 52.5 | 22.0 | 31.7 | 21.0 | 31.5 | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | DN40 | DN20 | DN40 | 11750 |
| 42 x 42 x 28mm | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | 54.5 | 28.0 | 37.5 | 23.0 | 31.5 | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | DN40 | DN25 | DN40 | 11751 |
| 42 x 42 x 35mm | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | 57.5 | 35.0 | 44.6 | 26.0 | 31.5 | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | DN40 | DN32 | DN40 | 11752 |
| 54 x 54 x 22mm | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 58.5 | 22.0 | 31.7 | 21.0 | 37.5 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | DN20 | DN50 | 11754 |
| 54 x 54 x 28mm | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 60.5 | 28.0 | 37.5 | 23.0 | 37.5 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | DN25 | DN50 | 11755 |
| 54 x 54 x 35mm | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 63.5 | 35.0 | 44.6 | 26.0 | 37.5 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | DN32 | DN50 | 11756 |
| 54 x 54 x 42mm | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 57.5 | 42.0 | 53.6 | 30.0 | 27.5 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | DN40 | DN50 | 11757 |
| 76.1x76.1x22mm | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | 68.0 | 22.0 | 31.7 | 21.0 | 45.0 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | DN65 | DN20 | DN65 | 20434 |
| 76.1x76.1x28mm | 116.0 | 76.1 | 94.3 | 55.5 | 61.0 | 71.0 | 28.0 | 37.5 | 23.0 | 74.0 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | DN65 | DN25 | DN65 | 20435 |
| 76.1x76.1x35mm | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | 75.0 | 35.0 | 44.6 | 26.0 | 48.0 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | DN65 | DN32 | DN65 | 20436 |
| 76.1x76.1x42mm | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | 79.0 | 42.0 | 53.6 | 30.0 | 47.0 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | DN65 | DN40 | DN65 | 20437 |
| 76.1x76.1x54mm | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | 80.0 | 54.0 | 65.3 | 35.0 | 43.0 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | DN65 | DN50 | DN65 | 20438 |
| 88.9x88.9x22mm | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 76.0 | 22.0 | 31.7 | 21.0 | 53.0 | 131.0 | 88.9 | 95.0 | 63.0 | 68.0 | DN80 | DN20 | DN80 | 20439 |
| 88.9x88.9x28mm | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 76.0 | 28.0 | 37.5 | 23.0 | 52.0 | 131.0 | 88.9 | 95.0 | 63.0 | 68.0 | DN80 | DN25 | DN80 | 20440 |
| 88.9x88.9x35mm | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 83.0 | 35.0 | 44.6 | 26.0 | 56.0 | 131.0 | 88.9 | 95.0 | 63.0 | 68.0 | DN80 | DN32 | DN80 | 20441 |
| 88.9x88.9x42mm | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 85.0 | 42.0 | 53.6 | 30.0 | 53.0 | 131.0 | 88.9 | 95.0 | 63.0 | 68.0 | DN80 | DN40 | DN80 | 20442 |
| 88.9x88.9x54mm | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 93.0 | 54.0 | 65.3 | 35.0 | 56.0 | 131.0 | 88.9 | 95.0 | 63.0 | 68.0 | DN80 | DN50 | DN80 | 20443 |
| 88.9x88.9x76.1mm | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | 131.0 | 88.9 | 95.0 | 63.0 | 68.0 | DN80 | DN65 | DN80 | 20444 |
| 108x108x22mm | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 85.0 | 22.0 | 31.7 | 21.0 | 62.0 | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | DN100 | DN20 | DN100 | 20445 |
| 108x108x28mm | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 88.0 | 28.0 | 37.5 | 23.0 | 64.0 | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | DN100 | DN25 | DN100 | 20446 |
| 108x108x35mm | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 94.0 | 35.0 | 44.6 | 26.0 | 67.0 | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | DN100 | DN32 | DN100 | 20447 |
| 108x108x42mm | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 96.0 | 42.0 | 53.6 | 30.0 | 64.0 | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | DN100 | DN40 | DN100 | 20448 |
| 108x108x54mm | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 102.0 | 54.0 | 65.3 | 35.0 | 65.0 | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | DN100 | DN50 | DN100 | 20449 |
| 108x108x76.1mm | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 125.0 | 76.1 | 94.3 | 55.0 | 70.0 | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | DN100 | DN65 | DN100 | 20450 |
| 108x108x88.9mm | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 135.0 | 88.9 | 109.1 | 63.0 | 72.0 | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | DN100 | DN80 | DN100 | 20451 |

Vds, UL/cUL and FM 22 - 108mm, LPCB 22 - 54mm.

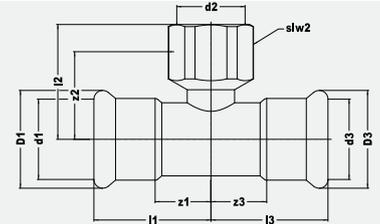
Tee sizes are listed using the UK specification

(See page XX)



SS30 Female branch tee

Press x BSP parallel female branch

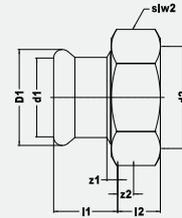


| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | l3 | d3 | D3 | es3 | z3 | DN1 | DN2 | DN3 | Code |
|------------------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|-------|-------------|-------|-------|
| 22 x 22mm x 1/2" | 39.5 | 22.0 | 31.7 | 21.0 | 18.5 | 37.0 | 27.0 | 24.0 | 27.7 | 39.5 | 22.0 | 31.7 | 21.0 | 18.5 | DN20 | 1/2" (DN15) | DN20 | 11762 |
| 22 x 22mm x 3/4" | 39.5 | 22.0 | 31.7 | 21.0 | 18.5 | 39.0 | 28.0 | 30.0 | 34.7 | 39.5 | 22.0 | 31.7 | 21.0 | 18.5 | DN20 | 3/4" (DN20) | DN20 | 11763 |
| 28 x 28mm x 1/2" | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | 40.0 | 30.0 | 24.0 | 27.7 | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | DN25 | 1/2" (DN15) | DN25 | 11765 |
| 28 x 28mm x 3/4" | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | 42.0 | 31.0 | 30.0 | 34.7 | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | DN25 | 3/4" (DN20) | DN25 | 11766 |
| 28 x 28mm x 1" | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | 46.3 | 33.3 | 38.0 | 43.9 | 44.5 | 28.0 | 37.5 | 23.0 | 21.5 | DN25 | 1" (DN25) | DN25 | 11627 |
| 35 x 35mm x 1/2" | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | 43.5 | 33.5 | 24.0 | 27.7 | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | DN32 | 1/2" (DN15) | DN32 | 11767 |
| 35 x 35mm x 3/4" | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | 45.5 | 34.5 | 30.0 | 34.7 | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | DN32 | 3/4" (DN20) | DN32 | 11768 |
| 35 x 35mm x 1" | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | 49.8 | 36.8 | 38.0 | 43.9 | 51.0 | 35.0 | 44.6 | 26.0 | 25.0 | DN32 | 1" (DN25) | DN32 | 11628 |
| 42 x 42mm x 1/2" | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | 46.0 | 36.0 | 24.0 | 27.7 | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | DN40 | 1/2" (DN15) | DN40 | 11769 |
| 42 x 42mm x 3/4" | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | 48.0 | 37.0 | 30.0 | 34.7 | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | DN40 | 3/4" (DN20) | DN40 | 11770 |
| 42 x 42mm x 1" | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | 52.3 | 39.3 | 38.0 | 43.9 | 59.7 | 42.0 | 53.6 | 30.0 | 29.7 | DN40 | 1" (DN25) | DN40 | 11629 |
| 54 x 54mm x 1/2" | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 52.0 | 42.0 | 24.0 | 27.7 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | 1/2" (DN15) | DN50 | 11771 |
| 54 x 54mm x 3/4" | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 54.0 | 43.0 | 30.0 | 34.7 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | 3/4" (DN20) | DN50 | 11773 |
| 54 x 54mm x 1" | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 58.3 | 45.3 | 38.0 | 43.9 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | 1" (DN25) | DN50 | 11630 |
| 54 x 54mm x 2" | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | 64.7 | 46.7 | 67.0 | 77.4 | 70.6 | 54.0 | 65.3 | 35.0 | 35.6 | DN50 | 2" (DN50) | DN50 | 11772 |
| 76.1x76.1mmx3/4" | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | 68.0 | 55.0 | 30.0 | 34.7 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | DN65 | 3/4" (DN20) | DN65 | 20452 |
| 76.1x76.1mmx2" | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | 81.0 | 59.0 | 65.0 | 75.1 | 116.0 | 76.1 | 94.3 | 55.0 | 61.0 | DN65 | 2" (DN50) | DN65 | 20453 |
| 88.9x88.9mmx3/4" | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 87.0 | 74.0 | 30.0 | 34.7 | 131.0 | 88.9 | 95.0 | 63.0 | 68.0 | DN80 | 3/4" (DN20) | DN80 | 20454 |
| 88.9x88.9mmx2" | 131.0 | 88.9 | 109.1 | 63.0 | 68.0 | 88.0 | 66.0 | 65.0 | 75.1 | 131.0 | 88.9 | 95.5 | 63.0 | 68.0 | DN80 | 2" (DN50) | DN80 | 20455 |
| 108x108mmx3/4" | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 86.0 | 73.0 | 30.0 | 34.7 | 156.0 | 108.0 | 134.0 | 77.0 | 79.0 | DN100 | 3/4" (DN20) | DN100 | 20456 |
| 1089x108mmx2" | 156.0 | 108.0 | 132.7 | 77.0 | 79.0 | 98.0 | 76.0 | 65.0 | 75.1 | 156.0 | 108.0 | 134.0 | 77.0 | 79.0 | DN100 | 2" (DN50) | DN100 | 20457 |



SS68FF Flat faced union adaptor

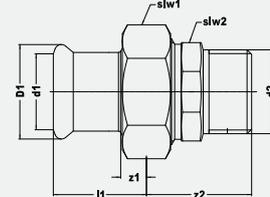
Press x BSP female union end



| Size | l1 | d1 | D1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|-------------|------|------|------|------|------|------|-----|------|------|------|---------------|-------|
| 22mm x 1" | 30.0 | 22.0 | 31.7 | 21.0 | 9.0 | 10.2 | 2.0 | 37.0 | 42.7 | DN20 | 1" (DN25) | 11891 |
| 28mm x 1¼" | 31.0 | 28.0 | 37.5 | 23.0 | 8.0 | 10.2 | 2.0 | 46.0 | 53.1 | DN25 | 1 1/4" (DN32) | 11892 |
| 35mm x 1½" | 34.0 | 35.0 | 44.6 | 26.0 | 8.0 | 11.1 | 2.0 | 52.0 | 60.1 | DN32 | 1 1/2" (DN40) | 11893 |
| 42mm x 1¾" | 41.0 | 42.0 | 53.6 | 30.0 | 11.0 | 11.2 | 2.0 | 58.0 | 67.0 | DN40 | 1 3/4" (DN40) | 11894 |
| 54mm x 2 ¾" | 46.8 | 54.0 | 65.3 | 35.0 | 11.8 | 11.2 | 3.0 | 75.0 | 86.6 | DN50 | 2 3/8" (DN50) | 11895 |

SS69 Straight male union connector

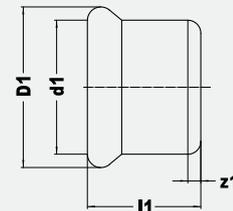
BSP taper male thread



| Size | l1 | d1 | D1 | es1 | z1 | slw1 | sks1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|-------|
| 22mm x ½" | 30.0 | 22.0 | 31.5 | 21.0 | 9.0 | 37.0 | 42.7 | 33.0 | 33.0 | 25.0 | 28.9 | DN20 | 1/2" (DN15) | 11721 |
| 22mm x ¾" | 30.0 | 22.0 | 31.5 | 21.0 | 9.0 | 37.0 | 42.7 | 28.5 | 28.5 | 32.0 | 37.0 | DN20 | 3/4" (DN20) | 11779 |
| 22mm x 1" | 30.0 | 22.0 | 31.5 | 21.0 | 9.0 | 37.0 | 42.7 | 41.8 | 41.8 | 39.0 | 45.0 | DN20 | 1" (DN25) | 11764 |
| 28mm x 1" | 31.0 | 28.0 | 37.4 | 23.0 | 8.0 | 46.0 | 53.1 | 41.8 | 41.8 | 39.0 | 45.0 | DN25 | 1" (DN25) | 11781 |
| 35mm x 1¼" | 34.0 | 35.0 | 44.4 | 26.0 | 8.0 | 52.0 | 60.1 | 44.2 | 44.2 | 49.0 | 56.6 | DN32 | 1 1/4" (DN32) | 11782 |
| 42mm x 1½" | 41.0 | 42.0 | 53.6 | 30.0 | 11.0 | 58.0 | 67.0 | 44.4 | 44.4 | 51.0 | 58.9 | DN40 | 1 1/2" (DN40) | 11783 |
| 54mm x 2" | 47.0 | 54.0 | 65.1 | 35.0 | 12.0 | 75.0 | 86.6 | 53.0 | 53.0 | 65.0 | 75.1 | DN50 | - | 11784 |

SS61 Stop end

Press



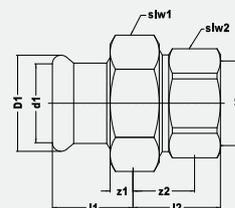
| Size | l1 | d1 | D1 | es1 | z1 | DN1 | Code |
|--------|-------|-------|-------|------|------|-------|-------|
| 22mm | 24.1 | 22.0 | 31.7 | 21.0 | 3.1 | DN20 | 11703 |
| 28mm | 26.1 | 28.0 | 37.5 | 23.0 | 3.1 | DN25 | 11704 |
| 35mm | 29.1 | 35.0 | 44.6 | 26.0 | 3.1 | DN32 | 11705 |
| 42mm | 36.6 | 42.0 | 53.6 | 30.0 | 6.6 | DN40 | 11706 |
| 54mm | 41.5 | 54.0 | 65.3 | 35.0 | 6.5 | DN50 | 11707 |
| 76.1mm | 95.0 | 76.1 | 94.3 | 55.0 | 40.0 | DN65 | 20418 |
| 88.9mm | 107.0 | 88.9 | 109.1 | 63.0 | 44.0 | DN80 | 20419 |
| 108mm | 127.0 | 108.0 | 132.7 | 77.0 | 50.0 | DN100 | 20420 |

Vds, UL/cUL and FM 22 - 108mm, LPCB 22 - 54mm. †Not <FM> approved.



SS69F Straight female union connector

Press x BSP parallel female thread

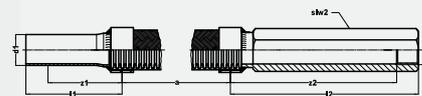


| Size | l1 | d1 | D1 | es1 | z1 | slw1 | sks1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|-------|
| 22mm x 3/4" | 30.0 | 22.0 | 31.5 | 21.0 | 9.0 | 37.0 | 42.7 | 33.0 | 22.0 | 30.0 | 34.7 | DN20 | 3/4" (DN20) | 11789 |
| 22mm x 1" | 30.0 | 22.0 | 31.5 | 21.0 | 9.0 | 37.0 | 42.7 | 35.8 | 22.8 | 38.0 | 43.9 | DN20 | 1" (DN25) | 11798 |
| 28mm x 1" | 31.0 | 28.0 | 37.4 | 23.0 | 8.0 | 46.0 | 53.1 | 34.0 | 21.0 | 38.0 | 43.9 | DN25 | 1" (DN25) | 11791 |
| 35mm x 1 1/4" | 34.0 | 35.0 | 44.4 | 26.0 | 8.0 | 52.0 | 60.1 | 39.0 | 24.0 | 46.0 | 53.1 | DN32 | 1 1/4" (DN32) | 11792 |
| 42mm x 1 1/2" | 41.0 | 42.0 | 53.5 | 30.0 | 11.0 | 58.0 | 67.0 | 41.0 | 27.0 | 54.0 | 62.4 | DN40 | 1 1/2" (DN40) | 11793 |
| 54mm x 2" | 47.0 | 54.0 | 65.1 | 35.0 | 12.0 | 75.0 | 86.6 | 44.0 | 26.0 | 67.0 | 77.4 | DN50 | 2" (DN50) | 11794 |

SS80 Straight flexible hose



All flexible hoses are supplied including universal mounting bracket, square pipe 700mm, moveable sprinkler clamp (closed), multiclips x 2 with BSP parallel female thread

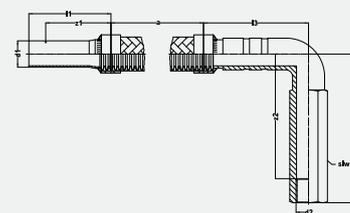


| Size | l1 | d1 | es1 | z1 | l2 | z2 | slw2 | sks2 | DN1 | DN2 | Code |
|--------------|------|------|------|------|-------|-------|------|------|------|-------------|-------|
| 22 x 1000mm† | 60.0 | 22.0 | 21.0 | 39.0 | 125.0 | 110.0 | 27.0 | 31.2 | DN20 | 1/2" (DN15) | 11575 |
| 22 x 1500mm† | 60.0 | 22.0 | 21.0 | 39.0 | 125.0 | 110.0 | 27.0 | 31.2 | DN20 | 1/2" (DN15) | 11576 |
| 22 x 2000mm† | 60.0 | 22.0 | 21.0 | 39.0 | 125.0 | 110.0 | 27.0 | 31.2 | DN20 | 1/2" (DN15) | 11577 |
| 28 x 1000mm | 68.0 | 28.0 | 23.0 | 45.0 | 125.0 | 110.0 | 27.0 | 31.2 | DN25 | 1/2" (DN15) | 11578 |
| 28 x 1500mm | 68.0 | 28.0 | 23.0 | 45.0 | 125.0 | 110.0 | 27.0 | 31.2 | DN25 | 1/2" (DN15) | 11579 |
| 28 x 2000mm | 68.0 | 28.0 | 23.0 | 45.0 | 125.0 | 110.0 | 27.0 | 31.2 | DN25 | 1/2" (DN15) | 11580 |

SS82 Bent flexible hose 90°



All flexible hoses are supplied including universal mounting bracket, square pipe 700mm, moveable sprinkler clamp (closed), multiclips x 2 with BSP parallel female thread



| Size | l1 | d1 | es1 | z1 | l2 | z2 | slw2 | sks2 | l3 | DN1 | DN2 | Code |
|--------------|------|------|------|------|-------|-------|------|------|------|------|-------------|-------|
| 22 x 800mm† | 60.0 | 22.0 | 21.0 | 39.0 | 145.0 | 130.0 | 27.0 | 31.2 | 79.0 | DN20 | 1/2" (DN15) | 11581 |
| 22 x 1000mm† | 60.0 | 22.0 | 21.0 | 39.0 | 145.0 | 130.0 | 27.0 | 31.2 | 79.0 | DN20 | 1/2" (DN15) | 11582 |
| 22 x 1500mm† | 60.0 | 22.0 | 21.0 | 39.0 | 145.0 | 130.0 | 27.0 | 31.2 | 79.0 | DN20 | 1/2" (DN15) | 11583 |
| 28 x 800mm | 68.0 | 28.0 | 23.0 | 45.0 | 145.0 | 130.0 | 27.0 | 31.2 | 79.0 | DN25 | 1/2" (DN15) | 11584 |
| 28 x 1000mm | 68.0 | 28.0 | 23.0 | 45.0 | 145.0 | 130.0 | 27.0 | 31.2 | 79.0 | DN25 | 1/2" (DN15) | 11585 |
| 28 x 1500mm | 68.0 | 28.0 | 23.0 | 45.0 | 145.0 | 130.0 | 27.0 | 31.2 | 79.0 | DN25 | 1/2" (DN15) | 11586 |



SS100

Replacement O Rings

For use on XPress
Connection: Black EPDM



| Size | Code |
|--------|-------|
| 22mm | 27002 |
| 28mm | 27003 |
| 35mm | 27004 |
| 42mm | 27005 |
| 54mm | 27006 |
| 76.1mm | 27007 |
| 88.9mm | 27008 |
| 108mm | 27009 |

TX100

Replacement 'O' ring

For use with Tectite only



| Size | Code |
|------|-------|
| 35mm | 46147 |
| 42mm | 46148 |

TS61 Stop end

Connection: Push-fit



| Size | Code |
|------|-------|
| 22mm | 25874 |
| 28mm | 25876 |
| 35mm | 25878 |
| 42mm | 25880 |
| 54mm | 25882 |

TS106

Replacement grab ring for Tectite 316



| Size | Code |
|------|-------|
| 35mm | 46183 |
| 42mm | 46184 |
| 54mm | 46185 |

SS111 Depth gauge

Suitable for carbon and stainless steel



| Size | Code |
|--------------|-------|
| 12mm - 108mm | 39174 |

DC

Disconnecting clip



| Size | Code |
|------|-------|
| 22mm | 46107 |
| 28mm | 46108 |

S120

Deburring tool



| Size | Code |
|-----------|-------|
| 15 - 54mm | 39168 |

DTX

Disconnecting tool



| Size | Code |
|-----------|-------|
| 35 - 54mm | 46145 |

2.0 PRODUCT DETAILS

PRESS-FIT POWER TOOLS



Pegler Yorkshire recommends the preferred XPress branded tooling for jointing XPress fitting Systems utilising the XPress Slings, Jaws and Tools. New and improved, they provide greater performance whilst being lighter and easier to handle. Incorporating an 'X' symbol, they provide an instant visual aid indicating the joint has been pressed using the preferred XPress tooling. The maintenance of tooling is critical to the joint integrity, therefore the installer should ensure the tools are maintained in accordance with the manufacturer's instructions and serviced by a recommended tool-hire service centre.

S226 ACO202



| Power | Charging Time | Piston Force: | Piston Stroke: | Code |
|---|------------------|--|----------------|--|
| Battery 18v Li-Ion 1.5/3.0Ah | 60 min | Max. 32kN | 40mm | 39201 |
| Tube/Pipe: Copper | Tube/Pipe: Steel | Tool Dimensions | | Other |
| 15-54mm | 15-54mm | 408 x 80 x 125mm 3.3Kg X | | Visible electronic sensor for jaw locking bolt. Contains electronic log book for analysis |
| Compatible with XPress Systems: | | Contains: | | |
| Copper, Carbon Steel, Stainless Steel, Copper Gas, Stainless Steel Gas and Solar, Sprinkler | | S226 ACO202: 1x Battery, Battery Charger, Carry Case 557 x 422 x 132mm Total Weight: 7.9Kg | | |

S303 ECO301



| Power | Piston Force: | Piston Stroke: | Code |
|---|------------------|---|--|
| Mains 110v, 560W | Max. 45kN | 45mm | 39199 |
| Tube/Pipe: Copper | Tube/Pipe: Steel | Tool Dimensions | Other |
| 15-108mm | 15-108mm | 420 x 85 x 110mm 5.0Kg | Fast pressing cycle for quick installation. Microprocessor driven for constant optimisation of pressing performance |
| Compatible with XPress Systems: | | Contains: | |
| Copper, Carbon Steel, Stainless Steel, Copper Gas, Stainless Steel Gas and Solar, Sprinkler ≤ 54mm Carbon Steel and Sprinkler ≤ 54mm Stainless Steel. | | S303 ECO301 Carry Case 639 x 466 x 151mm Total Weight: 12.3Kg | |

S400 ACO401

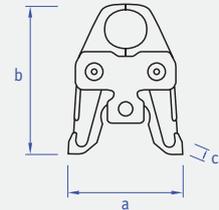


| Power | Piston Force: | Piston Stroke: | Code |
|---|------------------|---|---|
| Battery 18v Li-Ion | Max. 100kN | 60mm | 39267 |
| Tube/Pipe: Copper | Tube/Pipe: Steel | Tool Dimensions | Other |
| Not Compatible | 76.1 - 108mm | 660 x 100 x 250mm 13.0Kg | Microprocessor driven for constant optimisation of pressing performance |
| Compatible with XPress Systems: | | Contains: | |
| Sprinkler; Carbon Steel and Sprinkler; Stainless Steel in sizes 76.1 – 108mm. | | S400 ACO401 Carry Case 630 x 130 x 465mm Total Weight: 25Kg | |



S227 ECOTEC Jaws

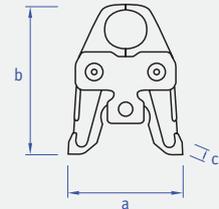
Compatibility: ■ +



| Size | a | b | c | Kg | Code |
|------|-------|-----|------|-----|-------|
| 22mm | 146.8 | 110 | 39.3 | 2.0 | 39181 |
| 28mm | 146.8 | 110 | 39.3 | 2.0 | 39183 |

S327 ECO301 Jaws

Compatibility: ◆

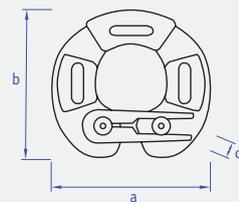


| Size | a | b | c | Kg | Code |
|------|-------|-----|------|-----|-------|
| 22mm | 153.6 | 127 | 39.3 | 2.0 | 39206 |
| 28mm | 153.6 | 127 | 39.3 | 2.0 | 39207 |

S410 HP Snap on Sling 35mm

Not suitable for copper

Compatibility: ■ ◆ +



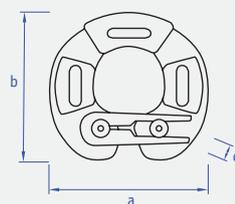
| Size | a | b | c | Kg | Code |
|------|-----|-----|----|-----|-------|
| 35mm | 112 | 100 | 41 | 1.5 | 39268 |
| 42mm | 125 | 120 | 41 | 1.7 | 39269 |
| 54mm | 125 | 122 | 41 | 2.0 | 39271 |



S411-HP401 SNAP on Sling

Carbon and stainless only

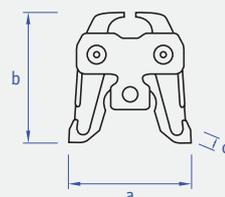
Compatibility: ●



| Size | a | b | c | Kg | Code |
|----------|-----|-----|-----|-----|-------|
| 76.1mm | 290 | 400 | 100 | 7.8 | 39273 |
| 88.9mmmm | 290 | 400 | 100 | 8.4 | 39277 |
| 108mm | 290 | 400 | 100 | 9.4 | 39279 |

S229 ZB203 Adaptor

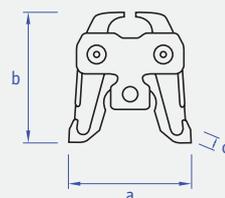
Compatibility: ■



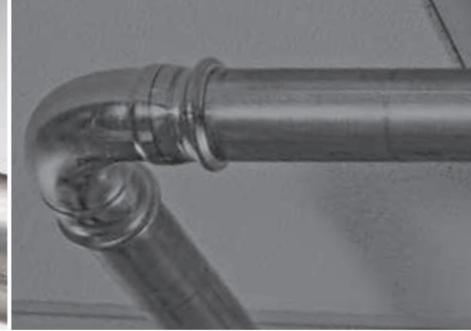
| Size | a | b | c | Kg | Code |
|-----------|-------|-------|------|-----|-------|
| 35 - 54mm | 141.6 | 124.1 | 32.5 | 0.6 | 39190 |

S329 ZB303 Adaptor

Compatibility: ◆



| Size | a | b | c | Kg | Code |
|-----------|-------|-------|------|-----|-------|
| 35 - 54mm | 144.3 | 128.5 | 39.3 | 1.2 | 39227 |



APPLICATIONS

FIXED FIRE SPRINKLER SYSTEMS

Fixed sprinkler systems are permanently installed fire suppressing and fire protection systems, which independently detect and report a fire and automatically start the suppressing process.

INSTALLATION

The installation of the XPress Sprinkler system in sprinkler systems is carried out in accordance with appropriate guidelines e.g. VdS-CEA 4001, EN 12845 or , ANSI/NFPA 13 "Installation of Sprinkler Systems", ANSI/NFPA 14 "Installation of Standpipe and Hose Systems" or ANSI/NFPA 15 "Water Spray Fixed Systems for Fire Protection). Depending on the material installed (stainless or Galvanised steel) and the applicable approval, the system can either be used in wet or dry fixed sprinkler systems. XPress Galvanised Sprinkler system tube can only be used in a sprinkler installation and should not be used in general plumbing application. XPress Sprinkler Galvanised is only suitable for use in fixed wet sprinkler systems, where XPress Sprinkler Stainless can be used in both wet and dry fixed sprinkler systems depending on the approval

With different approvals under which the XPress Sprinkler system is installed, also different hazard classes may apply. For more detailed information on applicable hazard classes, please contact Pegler Yorkshire directly.

When the XPress Sprinkler system is used, it should also be ensured that no loads can fall onto the tube network under normal conditions or in the case of a fire; for example ventilation ducts and cable trays should not be installed above the sprinkler tubes. If due to building constraints loads could fall onto the tube network this can be solved by securing the sprinkler tube on both sides of the load with sprinkler certified components.





CONNECT + **CONTROL**



PIPE SUPPORTS

Pipe supports shall be fixed directly to the building or, if necessary, to machines, storage racks or other structures. They shall not be used to support any other installations. They shall be of the adjustable type in order to secure an even load-bearing capability. Supports shall completely surround the pipe and shall not be welded to the pipe or fittings.

Distribution pipes and risers shall have a suitable number of fixed points to take account of axial forces. No part of any support shall be made of combustible material. Nails shall not be used. Supports for stainless steel pipes shall be provided with a suitable lining with sufficient electrical resistance, in order to prevent contact corrosion (for example steel Munsen

ring and/or clip with an elastomeric or fabric material).

Make sure to use the appropriate hangers for sprinkler applications which are also suitable for the outside diameters of XPress Sprinkler and that no hangers are mounted on the fittings. Where a reducer is installed, a pipe hanger shall be used adjacent to the reducer on the larger pipe.

Depending on your type of system and the approval which applies to your fixed sprinkler system, different fastener distances apply. In VdS sprinkler applications the fastener distances for steel press systems are based on the values used for copper tube, where FM and LPCB have specific fastener distances prescribed for XPress.

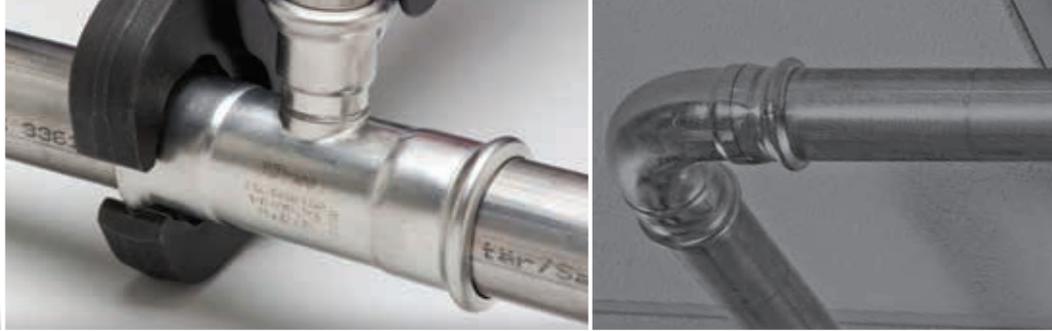
Always follow the valid local guidelines and please make sure to follow these fastener distances correctly. Make sure to use the appropriate hangers for sprinkler applications which are also suitable for the outside diameters of XPress Sprinkler and that no hangers are mounted on the fittings.

Additional requirements for spacing and location of supports for XPress Sprinkler are:

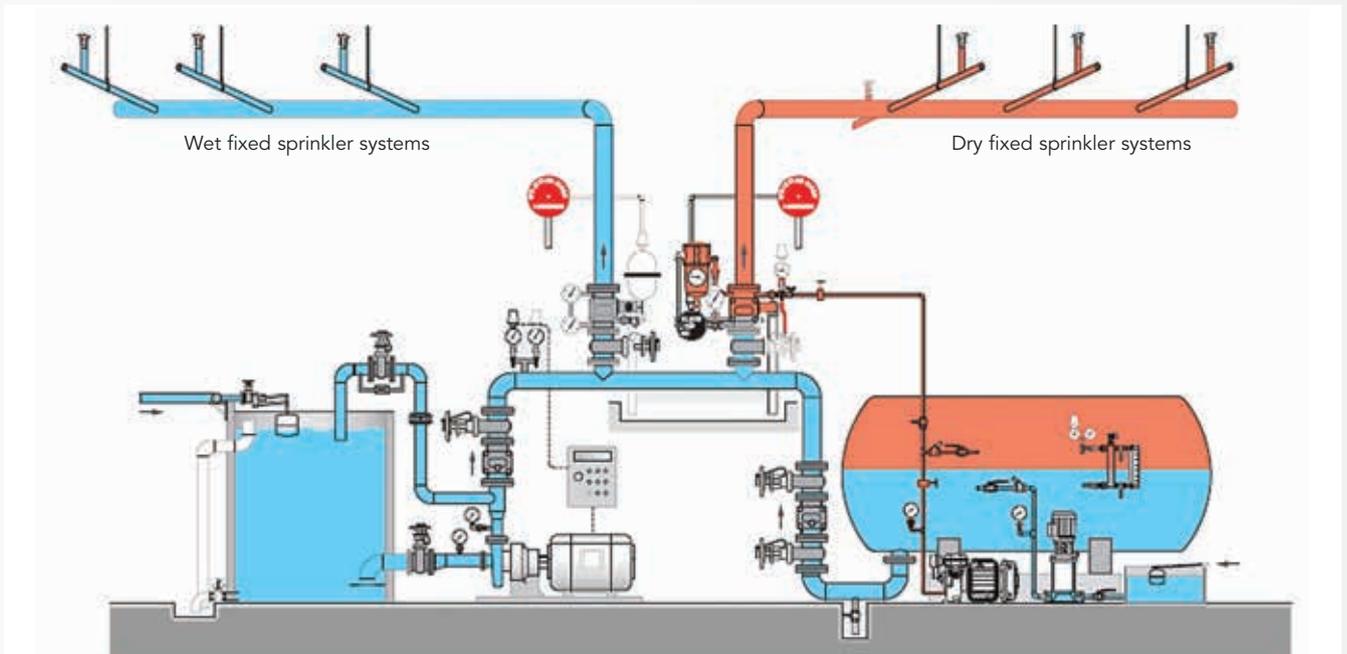
- + There shall be at least one support within 1 m of each joint;
- + There shall be at least one support on each pipe section.
- + The distance from any terminal sprinkler to a support shall not exceed - 0.9 m for DN25/28 mm diameter piping; - 1.2 m for piping greater than DN25/28 mm diameter.
- + The distance from any upright sprinkler to a support shall not be less than 0.15 m.
- + Vertical pipes shall have additional supports in the following cases: pipes more than 2 m long; pipes more than 1m long feeding single sprinklers.
- + Pipes that are at a low level or otherwise vulnerable to mechanical impact shall be separately supported except for the following cases: - horizontal pipes less than 0.45 m long feeding individual sprinklers; - drop or rise pipes less than 0.6 m long feeding individual sprinklers

FASTENER DISTANCES FOR XPRESS SPRINKLER TUBES

| DN | Tube dimension | Fastener distances (m) | | | |
|-----|----------------|------------------------|-----------|------|------------|
| | | CEA 4001 (vdS) | FM/UL/cUL | LPCB | DIN 1988-2 |
| 20 | 22 | 2.00 | 3.66 | 2.50 | 2.00 |
| 25 | 28 | 2.00 | 3.66 | 2.50 | 2.25 |
| 32 | 35 | 2.00 | 3.66 | 3.50 | 2.75 |
| 40 | 42 | 2.00 | 3.66 | 3.50 | 3.00 |
| 50 | 54 | 2.00 | 3.66 | 3.50 | 3.50 |
| 65 | 76.1 | 2.00 | 3.66 | - | 4.25 |
| 80 | 88.9 | 2.00 | 3.66 | - | 4.75 |
| 100 | 108 | 2.00 | 3.66 | - | 5.00 |



APPLICATIONS



CORROSIVE ENVIRONMENT

XPress Sprinkler stainless is the preferred solution when looking to sprinkler installations which are installed in an aggressive environment such as for example paper factories or where high standards apply on hygiene such as pharma and food and beverage. Combined with the ship building approvals Germanischer Lloyd, RINA and Det Norske Veritas XPress Sprinkler stainless is also a very suitable solution for sprinkler installations on ships.





XPRESS FLEXIBLE HOSES

The lining up of sprinklers using rigid piping in suspended ceiling systems can be very time consuming and costly. The use of XPress flexible hoses for sprinkler installations enables a quick and easy connection of sprinkler heads within a circular area defined by the hose length. With the flexible sprinkler hoses it is possible to mount sprinklers in suspended ceilings systems without any problems, resulting in significant time and cost savings.

The supplied mounting brackets ensure a reliable and secure attachment of the sprinkler hose to the ceiling system substructure.

The XPress flexible hoses are part of the XPress Sprinkler VdS and FM (only DN25) approval for fixed sprinkler installations. Pegler Yorkshire can offer you 2 versions, either with a straight end or an angle of 90°. Available dimensions are DN20 and DN25 in the lengths 800, 1000, 1500 and 2000mm.

Application

The XPress flexible hoses are suitable to be installed in:

- + I-beam lay-in ceiling systems with mineral fibre panels and metal cassettes (main and ancillary profiles)
- + Clamping profile ceiling systems
- + Plasterboard ceiling systems
- + Suspension-mounted standard sprinklers
- + Hidden or recessed sprinklers

The special feature of these hoses is the straight pipe which is 100% compatible to the XPress Sprinkler system. The straight pipe end assures an easy connection from the flexible hose to the XPress Sprinkler systems. Where with threaded connections the whole hose needs to be rotated, with the straight pipe end you only need to position the pipe end in the fitting and you are ready for pressing.

Advantages

The XPress flexible hoses are suitable to be installed in:

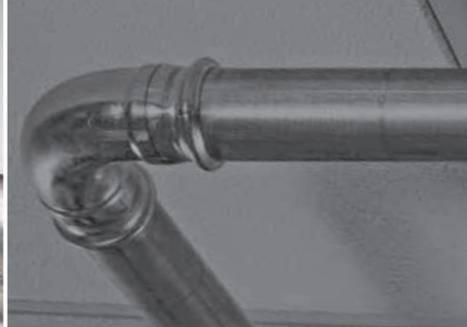
- + Simple and quick installation with the flexible sprinkler hose using standard tooling
- + Entire sprinkler hose is made of stainless steel
- + Easy bypass of other parts and building components
- + No rotation of complete hose during installation because of straight pipe end
- + Flexibility of positioning the sprinkler mounting system across the ceiling panel
- + No bending or lifting of ceiling elements as sprinkler hose is fixed on ceiling substructure
- + Where leaks on rigid piping systems can only be detected when the ceiling panels have already been installed, leaks on sprinkler systems equipped with flexible hose are already detected in building shells. Expensive water damage can thus be prevented
- + The sprinkler system does not need to be reinstalled for renovation or conversion. Hoses and brackets can be dismantled and remounted at the new location without emptying the complete installation, within the circular area defined by the hose length
- + Easy vertical positioning due to scaling on sprinkler sleeve



FLEXIBLE SPRINKLER HOSES SUITABLE FOR XPRESS SPRINKLER; FLEXIBLE, SIMPLE, SECURE AND COST SAVING

| Length (mm) | Sprinkler discharge | Sprinkler connection | Pipe conn. (mm) | Press. loss* (bar) | Equiv. pipe length* (m) |
|-------------|---------------------|----------------------|-----------------|--------------------|-------------------------|
| 1000 | straight | Rp 1/2" | Ø22 | 0.9 | 8 |
| 1500 | straight | Rp 1/2" | Ø22 | 1.3 | 12 |
| 2000 | straight | Rp 1/2" | Ø22 | 1.7 | 14 |
| 1000 | straight | Rp 1/2" | Ø28 | 0.5 | 8 |
| 1500 | straight | Rp 1/2" | Ø28 | 0.8 | 11 |
| 2000 | straight | Rp 1/2" | Ø28 | 1.0 | 12 |
| 800 | 90° angle | Rp 1/2" | Ø22 | 0.8 | 8 |
| 1000 | 90° angle | Rp 1/2" | Ø22 | 0.9 | 8 |
| 1500 | 90° angle | Rp 1/2" | Ø22 | 1.3 | 12 |
| 800 | 90° angle | Rp 1/2" | Ø28 | 0.5 | 8 |
| 1000 | 90° angle | Rp 1/2" | Ø28 | 0.5 | 8 |
| 1500 | 90° angle | Rp 1/2" | Ø28 | 0.8 | 11 |

*Pressure losses and equivalent pipe lengths correspond with VdS specifications



TECHNICAL SPECIFICATION



O RING

The XPress Sprinkler fittings are supplied with an EPDM Leak Before Pressed O-ring in the dimensions DN20-DN50 (22-54 mm) with the following data:

Technical data of the XPress LBP EPDM O-ring

| | |
|--|------------------------------------|
| Material | EPDM |
| Colour | Black |
| Coating | Silicone-free |
| Min./max. temperature (°C) | -35°C up to +135°C |
| Max. short-term operating temperature (°C) | 150°C |
| Max. operating pressure (bar) | 16 bar |
| Fields of operation | Wet and dry tube sprinkler systems |

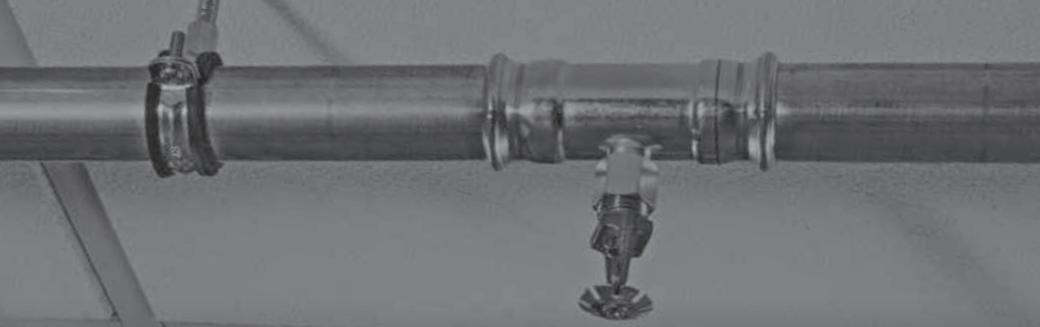
Dimensions and technical data for the XPress LBP EPDM O-ring

For the dimensions DN65-DN100 (76.1-108mm) all fittings are supplied with a standard EPDM O-ring:

Technical data of the XPress EPDM O-ring

| | |
|--|------------------------------------|
| Material | EPDM |
| Colour | Black |
| Coating | Silicone-free |
| Min./max. temperature (°C) | -35°C until +135°C |
| Max. short-term operating temperature (°C) | 150°C |
| Max. operating pressure (bar) | 16 bar |
| Fields of operation | Wet and dry tube sprinkler systems |

Technical data XPress EPDM O-ring



XPRESS SPRINKLER TUBE

Dimensions

| Dimensions of XPress Sprinkler Galvanised tube | | | | | | |
|--|-----|----------------|---------------------|----------------|-------------|----------------|
| Model | DN | Outside ø (mm) | Wall thickness (mm) | Wall thickness | Weight (kg) | Capacity (l/m) |
| XC22 | 20 | 22 | 1.5 | ± 0.15 | 0.761 | 0.284 |
| XC28 | 25 | 28 | 1.5 | ± 0.15 | 0.980 | 0.491 |
| XC35 | 32 | 35 | 1.5 | ± 0.15 | 1.241 | 0.804 |
| XC42 | 40 | 42 | 1.5 | ± 0.15 | 1.542 | 1.195 |
| XC54 | 50 | 54 | 1.5 | ± 0.15 | 1.999 | 2.043 |
| XC76 | 65 | 76.1 | 2.0 | ± 0.20 | 3.503 | 4.083 |
| XC89 | 80 | 88.9 | 2.0 | ± 0.20 | 4.412 | 5.661 |
| XC108 | 100 | 108 | 2.0 | ± 0.20 | 5.382 | 8.495 |

Dimensions of XPress Sprinkler Galvanised tube

| Dimensions of XPress Sprinkler Stainless tube | | | | | | |
|---|-------------------|---------------------|----------------|----------------|-------------|----------------|
| Model | DN Outside ø (mm) | Wall thickness (mm) | Wall thickness | tolerance (mm) | Weight (kg) | Capacity (l/m) |
| XS22 | 20 | 22 | 1.2 | ± 0.10 | 0.624 | 0.302 |
| XS28 | 25 | 28 | 1.2 | ± 0.10 | 0.790 | 0.515 |
| XS35 | 32 | 35 | 1.5 | ± 0.10 | 1.240 | 0.804 |
| XS42 | 40 | 42 | 1.5 | ± 0.10 | 1.503 | 1.195 |
| XS54 | 50 | 54 | 1.5 | ± 0.10 | 1.972 | 2.043 |
| XS76 | 65 | 76.1 | 2.0 | ± 0.15 | 3.550 | 4.548 |
| XS89 | 80 | 88.9 | 2.0 | ± 0.15 | 4.150 | 5.661 |
| XS108 | 100 | 108 | 2.0 | ± 0.15 | 5.050 | 8.495 |

Dimensions of XPress Sprinkler Stainless tube

The model designation, which is marked on the product, identifies the manufacturer, tube type, size and wall thickness of the pipe and is identified by the product code as follows:

+ X: XPress

+ C: Galvanised tube

+ S: Stainless steel tube

+ 22/28/35/42/54/76/89/108: outside diameter, wall thickness and nominal size according to the tables above.



TECHNICAL SPECIFICATION

TUBE

Material specifications of XPress Sprinkler Galvanised tube

| | |
|---------------------------------|--|
| Material | Unalloyed ULC ('Ultra Light Carbon') C-steel, E190 part no. 1.0031 according EN 10305-3 |
| Specifications | EN10305-3 |
| Approvals | VdS, FM, FG, CNBOP, SBSC, LPCB, SETSCO, UL, cUL |
| Type of tubing | HF welded |
| Welding deterioration reduction | 100% EDDY CURRENT tested according to EN10893-2:2011 |
| Weld slag removal | Outside weld flat, insight raising max. 0.5 mm, for dimensions >54 mm 0.8 mm |
| Tolerances | According to EN10305-3 |
| Finishing | Zinc coating of at least 15-27m ² (275g/m ²) steel grade ZNT275. The tube welding seam is subsequently Galvanised on the outside. |
| Surface finish | Silver-coloured |
| Marking | XPress Sprinkler Galvanised DN[]/[size x wall thickness] LPCB VdS G4080007 [working pressure VdS] bar <FM> [working pressure FM] psi C(UL)US Listed 4NB1 [working pressure UL] psi CRR UL [CRR UL] CRR cUL [CRR cUL] DNV GL NDE [batch number or production date] [supplier code] [max. every 60 cm the model designation repeated] |
| Smallest bending radius | 3.5 x external diameter of the tube (max. 28 mm) |
| Supply mode | Tubes, length of 6 m +0/-50 mm, with protective caps |
| Heat expansion coefficient | 0.0108 mm/m with Δ T= 1K |
| Max. operating pressure | 16 bar |

Technical data of the XPress Sprinkler Galvanised tube

Material specifications of XPress Sprinkler Stainless tube

| Material | 1.4401 | 1.4521 | 1.4520 |
|---------------------------------|---|---|--|
| Specifications | X5CrNiMo 17 12 2 Material no. 1.4401 according to DIN-EN 10088-2 | X2CrMoTi 18 2 Material no. 1.4521 according to DIN-EN 10088-2 | X2CrTi17 Material no. 1.4520 according to DIN-EN 10088-2 |
| | EN 10312 – DVGW worksheet GW541 (2004) Table 2 | EN 10312 – DVGW worksheet GW541 (2004) Table 2 | EN 10296-2 |
| Approvals | DVGW, SVGW, ETA, ÖVGW, BYGGFORSK, STF, PZH, SITAC, CSTBat, WRAS, VdS, FM, FG, CNBOP, SBSC, SETSCO, LPCB, DNV, GL, LR, UL, cUL | DVGW, SVGW, ETA, FM, ÖVGW, FG, LPCB, DNV, GL, LR, | FM, FG, LPCB, |
| Type of tubing | TIG or laser welded | Laser welded | Laser welded |
| Welding deterioration reduction | 100% EDDY CURRENT tested according to EN10093-2:2011 | 100% EDDY CURRENT tested according to EN10093-2:2011 | 100% EDDY CURRENT tested according to EN10093-2:2011 |
| Weld slag removal | Outside | Outside | Outside |
| Tolerances | According to EN 10312 table 2 | According to EN 10312 table 2 | According to EN 10296-2 |
| Finishing | Annealed under a protective atmosphere W2R | Annealed under a protective atmosphere W2R | Annealed under a protective atmosphere W2R |
| Surface finish | Matt silver-coloured | Matt silver-coloured | Matt silver-coloured |



CONNECT + CONTROL

| | | | |
|----------------------------|--|---|---|
| Marking | XPress stainless DN[]/[size x wall thickness] mm, Stainless steel/Edelstahl – Sanitary/Sanitär – GAS 1.4401/AISI316 W2R EN10312 DVGW GW541 Reg.nr. DW-7301BM5610 SVGW ÖVGW W1.397 WRAS ETA BYGGFORSK STF PZH SJTAC 0168/04 CSTBat 116-1482 LPCB VdS G4080037 [working pressure VdS] bar <FM> [working pressure FM] psi C(UL)US Listed 4NB1 [working pressure UL] psi DNV GL NDE KELIT [batch number or production date] [supplier code] [max. every 60 cm the model designation repeated] | XPress stainless DN[]/[size x wall thickness] mm Edelstahl/ Stainless steel 1.4521/AISI444 W2R EN10312 DVGW GW541 Reg.nr. DW-7301BP5610 SVGW ÖVGW ETA LPCB <FM> [working pressure FM] psi DNV GL NDE KELIT Tectite 316 [batch number or production date] [supplier code] [max. every 60 cm the model designation repeated] | XPress stainless DN[]/[size x wall thickness] mm Stainless steel/Edelstahl 1.4520/AISI439 Heating/Compressed air - Heizung/Druckluft LPCB <FM> [working pressure FM] psi NDE [batch number or production date] [supplier code] [max. every 60 cm the model designation repeated] |
| Smallest bending radius | 3.5 x external diameter of the tube (max. 28 mm) | 3.5 x external diameter of the tube (max. 28 mm) | 3.5 x external diameter of the tube (max. 28 mm) |
| Supply mode | Tubes, length of 6 m +0/-50 mm, with protective caps | Tubes, length of 6 m +0/-50 mm, with protective caps | Tubes, length of 6 m +0/-50 mm, with protective caps |
| Heat expansion coefficient | 0.0160 mm/m with $\Delta T= 1K$ | 0.0104 mm/m with $\Delta T= 1K$ | 0.0104 mm/m with $\Delta T= 1K$ |
| Max. operating pressure | 16 bar | 16 bar | 16 bar |

Technical data of the XPress Sprinkler Stainless tube (1.4401/1.4520/1.4521)

XPRESS FLEXIBLE HOSES TECHNICAL DATA

| Technical data XPress flexible hoses | |
|--------------------------------------|---|
| Sprinkler hose | Type RS 339L92, DN20 / DN25, flexible design with braiding, completely made of stainless steel, welded fittings |
| Sprinkler connection (straight) | Stainless steel bend pipe thread as per DIN EN 10226 (ISO 7/1), Rp. ½" (SW 27). Scaling for simple vertical alignment. Application when space is limited. Installation height (x) only 170 mm above lower edge of suspended ceiling |
| Sprinkler connection (90° design) | Stainless steel bend pipe thread as per DIN EN 10226 (ISO 7/1), Rp. ½" (SW 27). Scaling for simple vertical alignment. Application when space is limited. Installation height (x) only 170 mm above lower edge of suspended ceiling |
| Connection to water supply | Stainless steel straight pipe end with diameter of 22 or 28 mm to be connected with XPress Sprinkler fittings |
| Nominal length | 800, 1000, 1500 and 2000 mm |
| Max. operating pressure | 16 bar, 100% leak tightness tested |

Technical data flexible hoses



TECHNICAL SPECIFICATION

XPRESS SYSTEM TUBE

XPress Sprinkler tubes are available in the dimensions DN20 to DN100 (22-108mm). Entry of dirt during transportation or storage is prevented by caps at both ends of the tube and utilizing the correct packaging for distribution.

Fire behaviour

XPress Sprinkler tubes are classified as non-combustible red tubes of building material class A, DIN 4102, part 1.

XPRESS SPRINKLER SYSTEM – GALVANISED STEEL TUBE

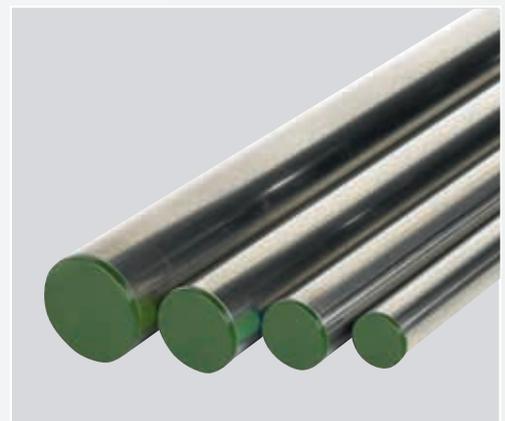
The XPress Sprinkler Galvanised tubes (SC645) for wet sprinkler systems are thin-walled precision steel tubes. The tubes are made from cold rolled steel that is Galvanised using the Sendzimir process. During this process zinc is brought onto the metal strip, running through a zinc bath, covering both sides simultaneously. The tube is protected both on the inside and outside with a zinc layer. The thickness of this layer is 15-27µm (275 g/m²).

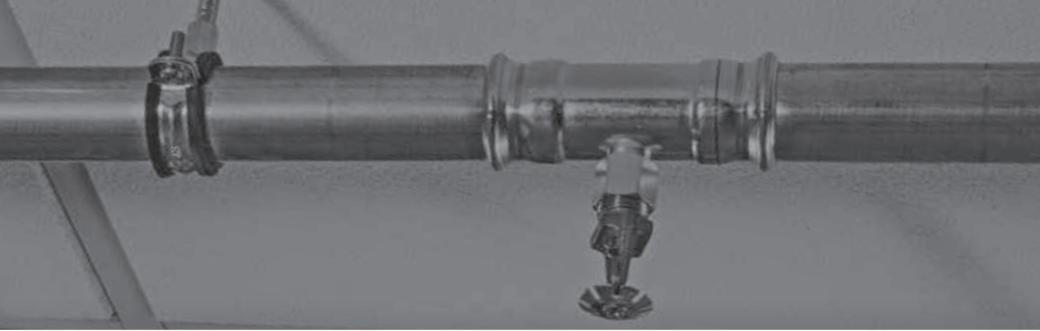
After welding the welding seam zinc is reapplied sealing the seam. With the Sendzimir process a good adhesion of the zinc layer and corrosion resistance are achieved.

XPress Galvanised Sprinkler system tube can only be used in a sprinkler installation and should not be used in a general plumbing application.

XPRESS 316 SYSTEM – STAINLESS STEEL TUBE

The XPress Sprinkler Stainless tubes (SS600, SS620, SS630, SS640) are suitable for wet and dry sprinkler systems and are thin-walled precision steel tubes. The outer and inner surfaces of the tubes are blank, free of discolouration and are supplied free of manufacturing residue that could otherwise cause corrosion. The strict size tolerances and welding seam quality are checked on both the outside and inside.





THREADED COUPLINGS

The XPress Sprinkler product range also comprises articles with internal and external thread for connection with other threaded parts of a tube network (for example sprinklers, valves, mountings). Internal and external threads are produced in accordance with DIN 2999/ISO 7/1.

PTFE may be used as sealing material for the carbon steel threads. Only industry standard chloride free sealants should be used to seal the thread connections in the case of stainless steel fittings. Teflon® thread sealing band cannot be used in conjunction with stainless steel due to water-soluble chloride ions contained therein. For threaded connections we recommend that the pressed connections are not be subjected to a load.

CONNECTORS

Male connectors

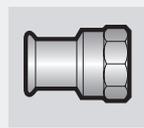


XPress male connectors have threads to BS 21/

ISO 7/EN 10226-1. Inert jointing compounds or PTFE tape should be applied to taper threads and good quality jointing washers should be used with parallel threaded fittings. PTFE tape should not be used in conjunction with stainless steel threads due to the water soluble chloride ions it contains.

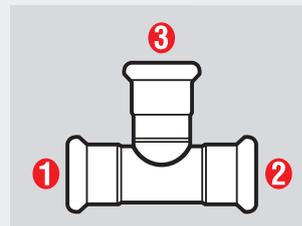
Female connectors

XPress female threaded connectors have internal



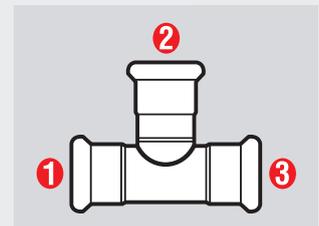
parallel threads to ISO 7/EN 10226-1.

TEE SPECIFICATION



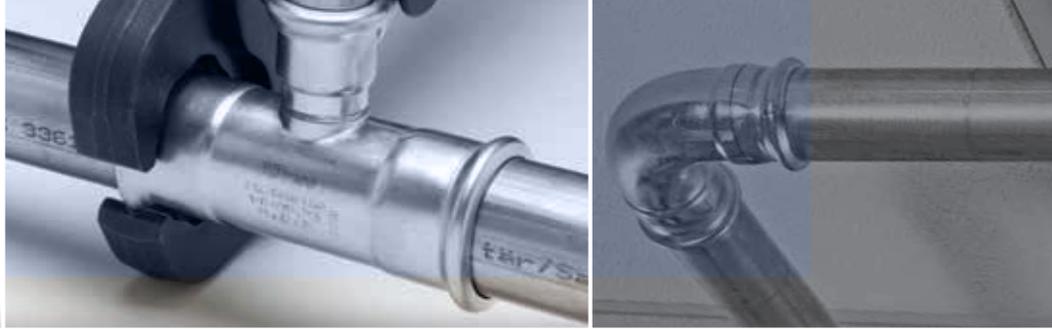
UK specification

First quote the ends on the run (larger end first) and then the branches.



European specification

Quote the larger end first, then the branch, followed by the remaining end.



SYSTEM DESIGN CONSIDERATIONS

When looking at more traditional connection methods, the products used in sprinkler installations are often approved as a product only. The XPress Sprinkler range is a complete system, where the combination of tube, fitting and tools are combined into a certified sprinkler system. XPress Galvanised Sprinkler system tube can only be used in a sprinkler installations and should not be used in a general plumbing application. The components of which our XPress Sprinkler system consist are:

- ✚ XPress Sprinkler fittings either in carbon or stainless steel in the dimensions 22-108mm
- ✚ XPress Sprinkler tubes, which can be Sendzimir tube in combination with our carbon steel fittings, but also 3 different grades of stainless steel for our stainless steel fittings, depending on relevant approvals
- ✚ XPress Sprinkler press tools, either battery or mains operated
- ✚ Accessories such as our flexible hoses, especially adapted for an optimal combination with our XPress Sprinkler fittings and installation tools

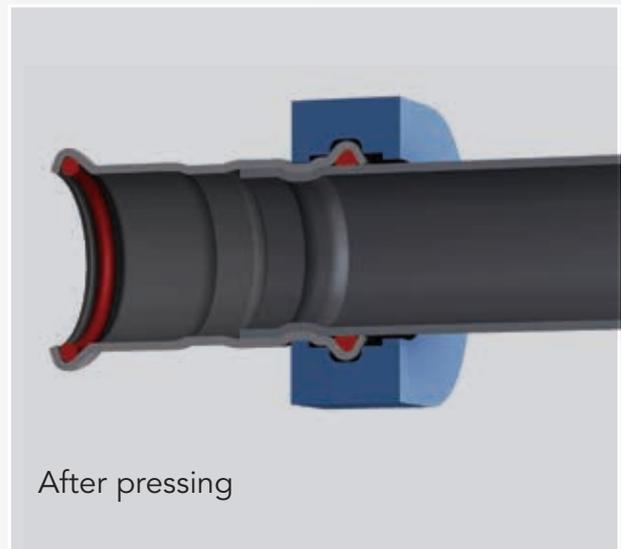
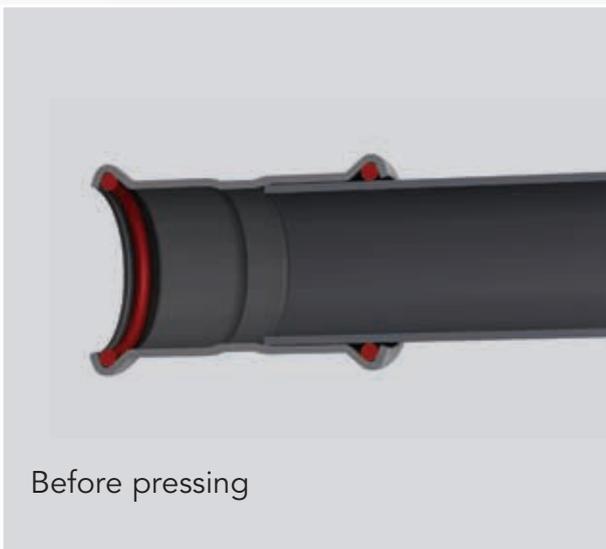
XPress Sprinkler fittings

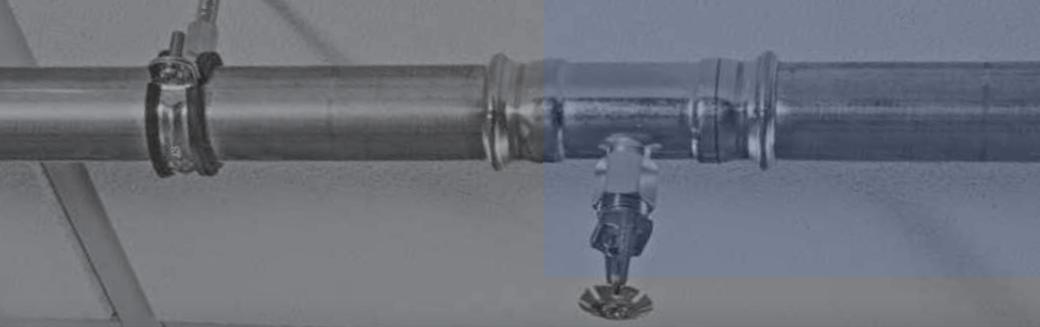
The XPress Sprinkler fittings are available either in carbon or in stainless steel. The carbon steel fittings are manufactured from unalloyed steel (material 1.0034/St 34-2) and are protected against corrosion by means of a zinc layer (8-15 μm) which is applied by electroplating.

The stainless steel fittings are manufactured from stainless steel (material 1.4404 /AISI 316L). XPress Sprinkler fittings are equipped with an EPDM O-ring as standard in the dimensions DN20 to DN100 (22-108 mm).

All XPress fittings are equipped with LBP functionality as standard to reduce the risk of installation errors.

The joint between the tube and the fitting is created by pressure using a press tool. The fitting sleeve is deformed and adapts to the surface of the tube, which is then pressed in turn against the sealing rings on the surface of the fitting. This process ensures the sealing effect and prevents the tube from slipping out.



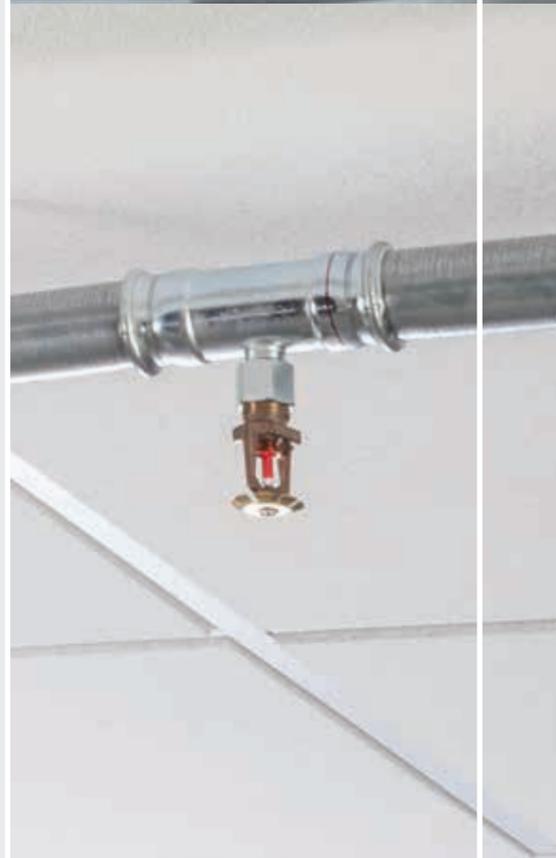


CONNECT + CONTROL



XPress 'Leak Before Press'

Thanks to the special grooves in the 'O' ring the Leak Before Pressed 'O' ring (LBP) ensures optimum control of the system during pressure testing (such as for example described in the CEA 4001, no. 17.1.1). Unpressed joints will leak water resulting in pressure loss and are afterwards easy to detect. During the pressing procedure the 'O' ring deforms, closing the special grooves, and the connection between the tube and fittings is sealed, ensuring a water tight joint.





INSTALLATION INSTRUCTIONS

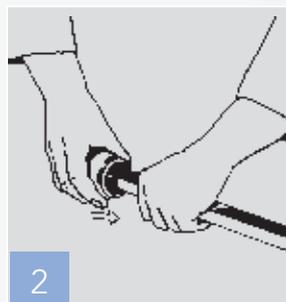
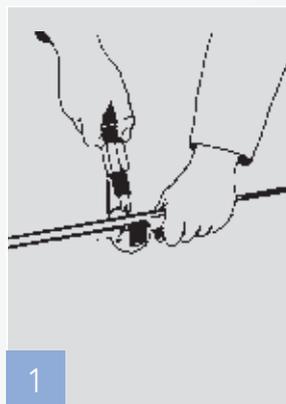
Making a press connection is very easy, especially due to the light weight of fittings and tube and the machine controlled process which is taking place during the connection of tube and fitting. To always ensure an optimal connection between tube and fitting it is mandatory to follow up the installation instructions which are illustrated below, and which are also supplied on each bag of fittings.

TRANSPORT AND STORAGE

During transport and storage of XPress Sprinkler tubes and press fittings it is important to avoid damage and soiling. The best storage temperature for fittings and tubes is between 10°C and 25°C and they should be stored in a dry area (maximum humidity 65%). The storage of tubes should be horizontal, separated by wooden blocks. Don't stack the bundles too high to prevent tubes from getting oval (the maximum height should not exceed 6 bundles, when stacking stack in 2x2/3x3, etc.). Please make sure not to mix tube materials (carbon and stainless steel) in storage.

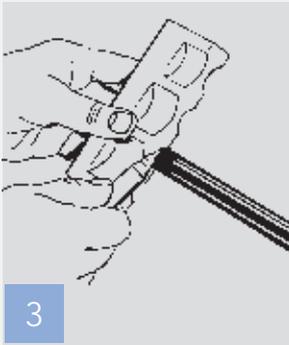
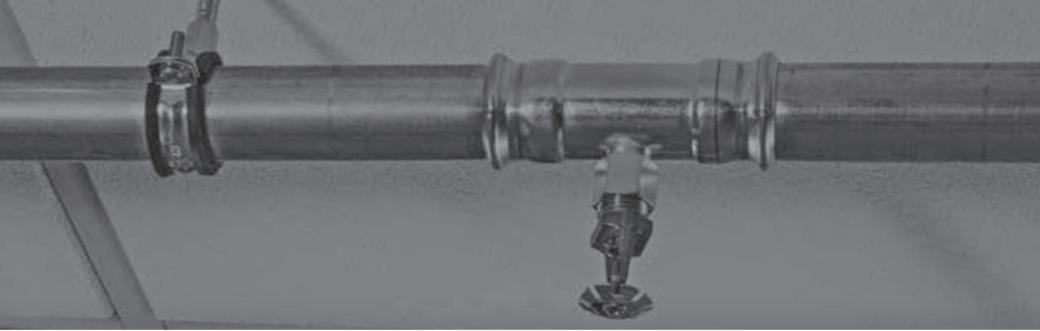
CUTTING THE TUBE TO SIZE

After the measurements have been taken, the XPress Sprinkler tube can be cut to size with a tube cutter, a fine-toothed handsaw or a mechanical saw with motor suitable for the tube material. The tube should always be cut completely. Never partially cut the tube and then break it (this could cause corrosion). **Do not use oil cooled saws, abrasive wheels or flame cutting.**



DEBURRING THE TUBE

The tube ends should be carefully deburred on the inside and outside after cutting to length to prevent damages to the sealing ring when the tube is inserted into the press fitting. Deburring can be carried out both on the inside and outside either using a manual or an electric deburring tool. Burrs sticking to the tube must be removed.



INSERTION DEPTH MARKING

Mark the insertion depth on the tube in order to guarantee a safe and proper connection with a suitable marking tool as supplied by Pegler Yorkshire. Reliable pressing with the corresponding tensile strengths can only be achieved by a proper installation. The pressing operation behind the crimp is of crucial importance for the tensile strength. The marking on the tube must remain visible (but close to the fitting) after the connection is pressed to identify any movement before or after pressing.



CHECK THE FITTING AND TUBE

Before assembly, the fitting must be checked to ensure the correct position and presence of the 'O' rings. The tube, fitting and 'O' ring should be examined for foreign material (e.g. dirt, burrs), which should be removed if present.



ASSEMBLY OF FITTING AND TUBE

Insert the tube into the press fitting up to the marked insertion depth while being rotated slightly and pushed in an axial direction at the same time. The marking for the insertion depth must still be visible. In case of fittings without a stop the fittings should be inserted at least as far as the marked insertion depth. Rough and careless insertion of the tube into the press fitting may result in damage to the 'O' ring and is therefore not permitted. When assembly is more difficult due to permitted tolerances in sizes, a lubricant such as water or soap may be used, but never use oil or grease. **Under no circumstances may oils or grease be used as lubricants**



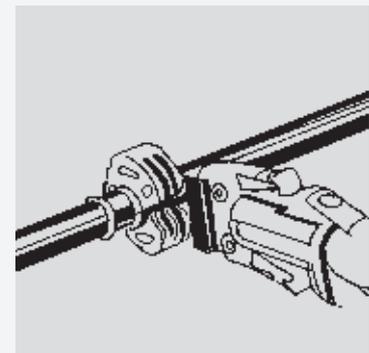
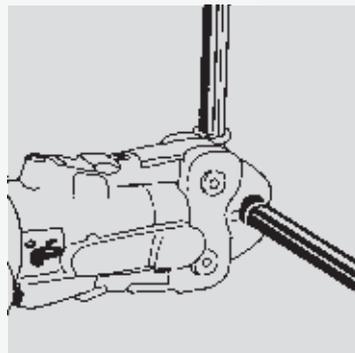
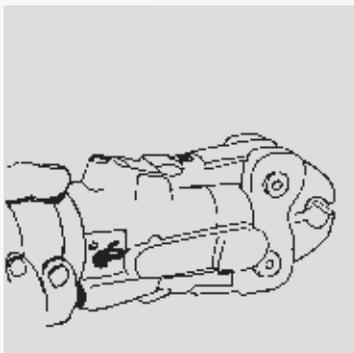


INSTALLATION INSTRUCTIONS

TRANSPORT AND STORAGE

During transport and storage of XPress Sprinkler tubes and press fittings it is important to avoid damage and soiling. The best storage temperature for fittings and tubes is between 10°C and 25°C and they should be stored in a dry area (maximum humidity 65%). The storage of tubes should be horizontal, separated by wooden blocks. Don't stack the bundles too high to prevent tubes from getting oval (the maximum height should not exceed 6 bundles, when stacking stack in 2x2/3x3, etc.). Please make sure not to mix tube materials (carbon and stainless steel) in storage.

PRESSING

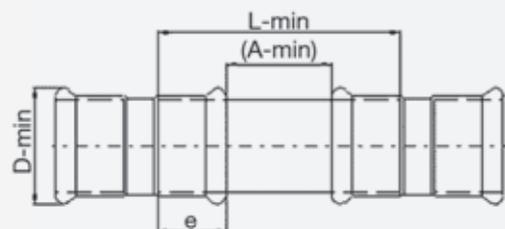


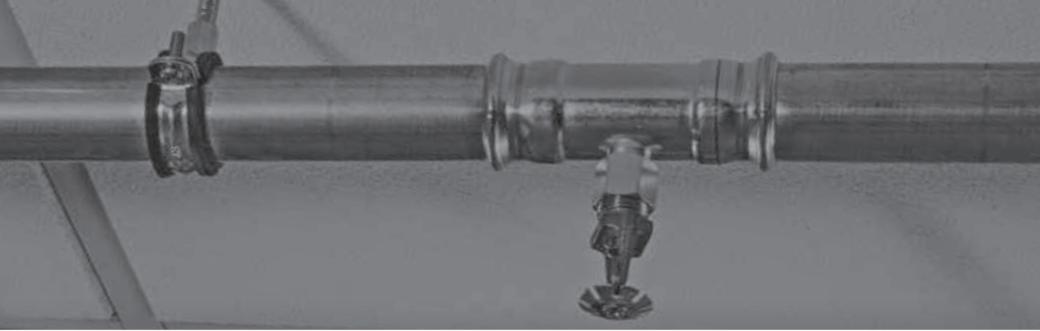
Before starting to press, the press jaws and slings must be checked for dirt, which must be removed if present. Furthermore, it must be ensured that the press machine is in good condition and that the instructions for operating the device, maintenance and the manufacturers' instructions have been followed. Also make sure that you use the correct press jaws and slings for the XPress Sprinkler application. In order to create a proper pressed connection, the groove of the press tool must enclose the press fitting 'O' ring bead. Once the pressing has started, always complete the press cycle and under no circumstances interrupt the process.

It is not allowed to press a fitting twice or more

MINIMUM DISTANCE BETWEEN FITTINGS

The XPress fittings are all equipped with the M-profile. To ensure a proper mounting of the press jaws and slings there should always be a minimum clearance available between the fittings. Before the final pressing operation is carried out for the different tube connections, the minimum clearances must be checked against the table below.





| Minimum distance between pressings | | | | | | | |
|------------------------------------|----------------------------|---------|--------------------------------------|---------|------------------------------|---------|-----------|
| DN | Insertion depth | | Minimum distance between 2 pressings | | Minimum tube length required | | |
| | Outside \varnothing (mm) | e (mm) | A-min (mm) | | 2 x e + A-min (mm) L-min | | |
| | | C-steel | St. steel | C-steel | St. steel | C-steel | St. steel |
| 20 | 22 | 21 | 21 | 10 | 10 | 52 | 52 |
| 25 | 28 | 23 | 23 | 10 | 10 | 56 | 56 |
| 32 | 35 | 26 | 26 | 10 | 10 | 62 | 62 |
| 40 | 42 | 30 | 30 | 20 | 20 | 80 | 80 |
| 50 | 54 | 35 | 35 | 20 | 20 | 90 | 90 |
| 65 | 76.1 | 55 | 55 | 40 | 40 | 165 | 165 |
| 80 | 88.9 | 63 | 63 | 50 | 50 | 186 | 186 |
| 100 | 108 | 77 | 77 | 50 | 50 | 234 | 234 |

AVAILABLE SPACE NEEDED FOR PRESS TOOL

Using a press tool including the press jaws and slings can be limited due to the available space for the press tool. To make sure that there is enough space available for the press tool, please make sure to follow the minimum distances in the table below. The table below lists the important minimum distances and the space requirement for an installation in order to guarantee correct processing.

The sizes refer to the general installation geometries and are shown schematically in illustrations A, B and C.

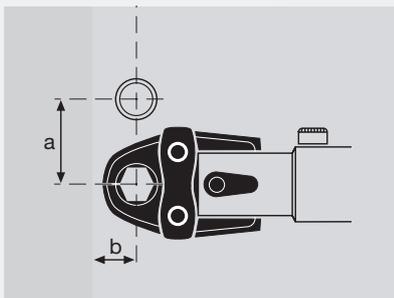


Figure A

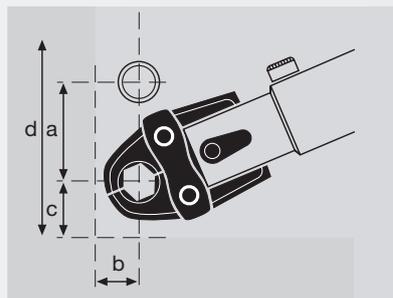


Figure B

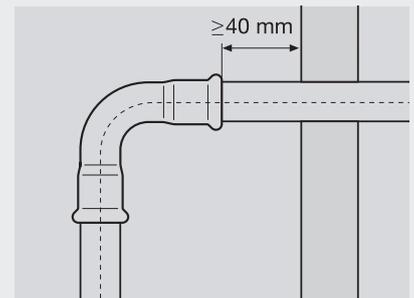
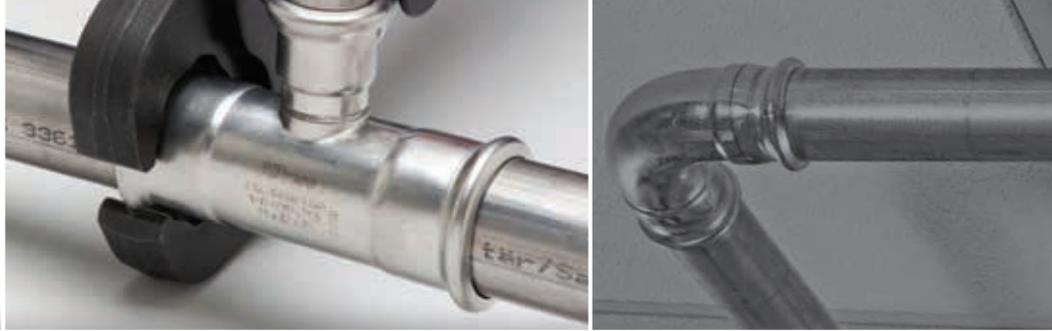


Figure C

| Space needed for installation (*press slings) | | | | | | | | |
|---|-----------------------------|-----|----------|-----|----------|-----|----------|-----------------|
| DN | External \varnothing (mm) | a | Figure A | | Figure B | | Figure C | |
| | | | b | a | b | c | d | Tube depth (mm) |
| 20 | 22 | 65 | 25 | 80 | 31 | 35 | 150 | 40 |
| 25 | 28 | 75 | 25 | 80 | 31 | 35 | 150 | 60 |
| 32 | 35 | 115 | 75 | 115 | 75 | 75 | 265 | 70 |
| 40 | 42 | 120 | 75 | 115 | 75 | 75 | 265 | 70 |
| 50 | 54 | 250 | 85 | 120 | 85 | 85 | 290 | 70 |
| 65 | 76.1 | 250 | 170 | 200 | 170 | 190 | 390 | 80 |
| 80 | 88.9 | 250 | 170 | 250 | 170 | 210 | 460 | 90 |
| 100 | 108 | 250 | 170 | 250 | 170 | 210 | 460 | 10 |



INSTALLATION INSTRUCTIONS

BENDING

Depending on the system, it may be necessary to bend the tube during installation. For this, commercially available manual, hydraulic or electric bending tools with the corresponding bending segments are used. The suitability of the bending tool is defined by the manufacturer. XPress Sprinkler tubes for sprinkler installations are cold pliable in the sizes 22 and 28mm.

The minimum bending radius is as follows:

| | |
|---------------------------------|--------------------------------------|
| Carbon and stainless steel tube | $r_{min} = 3.5 \times d$ (max. 28mm) |
| XPress flexible hoses | 22mm = 70mm |
| | 28mm = 85mm |

Due to the danger of corrosion the tube must not be bent when it is warm

GENERAL INSTRUCTIONS FOR USE

Flushing the network

After completion of the installation work the entire sprinkler system has to be thoroughly rinsed through with filtered (drinking) water. Flushing of the system is necessary in order to guarantee that it is working correctly and to prevent contamination within the system. After the system has been rinsed through it has to be drained off. The sprinklers then have to be attached after the removal of all the materials required for flushing the network.

Filling and bleeding the tube network

After flushing of the tube network has been carried out, the network should be filled with filtered drinking water and completely bled.

Pressure testing

The tubes belonging to the sprinkler system must be subjected to a pressure test according to valid guidelines, for example CEA 4001, no. 17.1.1. (VdS). In general testing should last at least two hours at a the test pressure (measured at the alarm valves) corresponding to 1,5 times the maximum operating pressure - but at least 15 bar - must be maintained. The pressure loss, for example due to temperature changes, should be monitored for 24 h. Dry sprinkler systems shall also be tested pneumatically to a pressure of not less than 2.5 bars for not less than 24 hours. Every leakage which occurs and results in a pressure drop of more than 0.15 bar for the 24 h, shall be corrected. Any faults disclosed, such as permanent deformations, ruptures or leakages shall be corrected, and the pressure test must be repeated.

Flow loss

Every fluid that flows through a tubing system experiences continuous and local flow resistances that are apparent from the pressure drop in the system. There is a difference between the continuous and the local pressure drop. The continuous pressure drop is mainly caused by the flow resistance in straight tube sections, which in turn essentially results from the friction between the fluid and the tube wall. Local pressure drops, on the contrary, are those flow resistances that are caused by turbulence, for instance where there is a change of internal tube diameter, a tube branch, in an elbow, etc.

Continuous pressure drop

To calculate the total pressure drop resulting from the flow of fluids in a straight section of the tubing system, first determine the pressure drop over a unit of length and then multiply the total length with this value. This value can be determined analytically using the Hazen-Williams formula.

$$p = \frac{6.05 \times 10^5}{C^{1.85} \times d_i^{4.87}} \times Q^{1.85}$$

- p = pressure loss in the tube [bar/m]
- Q = flow through the tube [l/min]
- d_i = mean internal diameter of the tube [mm]
- C = constant for type and condition of the tube
C=140 for XPress Sprinkler tube

The pressure loss due to velocity may be ignored.

Local pressure drops

Local pressure drop is, as mentioned in the introduction of this section, the resistance to flow that results from changes in the flow direction and cross-sectional area, flow splitting over several channels, etc. There are in general two possibilities to calculate these flow resistances: the direct analytical method and the method using equivalent lengths.



EQUIVALENT LENGTH METHOD

This is a calculation method that solves the calculation problem as a function of a particular local resistance and gives the equivalent length of a straight piece of tube with the same diameter that would have the same pressure drop. In order to use this method of calculation all length-equivalent values for each fitting type in the table

below are to be added to the actual length of the supply network. The total calculation of the equivalent length is multiplied by continuous pressure drop [bar/m]. This will show the overall resistance in the circuit. This method is not as accurate as the direct analytical method but has the advantage that the calculation can be carried out faster.

| OD | DN | ζ Direct analytical method / equivalent length (m) | | | | | | | | | | | | | |
|------|-----|---|------|---|------|---|------|---|------|--|------|---|------|---|------|
| | |  | |  | |  | |  | |  | |  | |  | |
| | | ζ | (m) | ζ | (m) | ζ | (m) | ζ | (m) | ζ | (m) | ζ | (m) | ζ | (m) |
| 22 | 20 | 0,44 | 0,35 | 0,38 | 0,30 | 0,15 | 0,12 | 1,05 | 0,84 | 0,11 | 0,08 | 0,73 | 0,59 | 1,29 | 1,04 |
| 28 | 25 | 0,35 | 0,38 | 0,28 | 0,32 | 0,13 | 0,28 | 0,93 | 1,01 | 0,05 | 0,06 | 0,65 | 0,72 | 0,82 | 0,92 |
| 35 | 32 | 0,31 | 0,43 | 0,29 | 0,40 | 0,08 | 0,11 | 0,93 | 1,34 | 0,03 | 0,04 | 0,53 | 0,79 | 1,47 | 2,19 |
| 42 | 40 | 0,25 | 0,48 | 0,22 | 0,42 | 0,11 | 0,20 | 1,20 | 2,27 | 0,06 | 0,11 | 0,46 | 0,85 | - | - |
| 54 | 50 | 0,30 | 0,79 | 0,19 | 0,49 | 0,09 | 0,24 | 1,15 | 3,06 | 0,06 | 0,14 | 0,36 | 1,43 | - | - |
| 76,1 | 65 | 0,25 | 1,04 | 0,15 | 0,62 | 0,08 | 0,31 | 1,07 | 4,42 | 0,04 | 0,17 | 0,32 | 1,68 | - | - |
| 88,9 | 80 | 0,24 | 1,22 | 0,13 | 0,66 | 0,07 | 0,36 | 1,06 | 5,38 | 0,04 | 0,20 | 0,27 | 2,10 | - | - |
| 108 | 100 | 0,23 | 1,51 | 0,12 | 0,76 | 0,07 | 0,43 | 1,05 | 6,90 | 0,03 | 0,20 | - | - | - | - |

DIRECT ANALYTICAL METHOD

The local pressure drop can be calculated with the following mathematical equation:

$$\Delta p_l = \sum \zeta \times v^2 \times \gamma / 2 \times 10^{-5} \text{ [bar]}$$

- v = flow velocity of the fluid [m/s]
- γ = specific density of the fluid [kg/m³]
- ζ = local flow resistance coefficient

The table below gives the [ζ] values for every type of fitting. We can assume that [ζ] is velocity independent for those velocities that occur in domestic installations or in other normal applications; this is supported by the fact that the change of [ζ] as a function of the Reynolds number in these velocity ranges is only minimal. Once the [ζ] value is known, one can read off directly the corresponding local pressure drop.



PRESS-FIT TOOLING

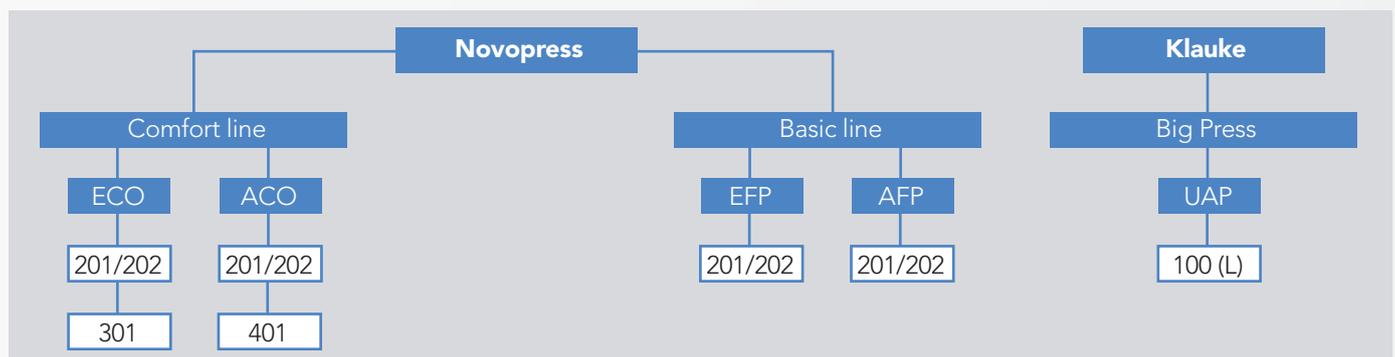
XPRESS SPRINKLER TOOLS

An important part of the XPress Sprinkler range is the press tools which are used to make a press joint. The tools which we prescribe for the XPress Sprinkler range consist of a press machine and the accompanying press jaws or slings.

Depending on the outside diameter of the tube, you should choose the corresponding press jaws or slings to ensure a completely tight joint. Only tools made by Novopress for the dimensions DN20 to DN100 (22-108mm) or Klauke for stainless steel in the dimensions DN65 to DN100 (76.1-108mm) (suitable for M-Profile) are

permitted to be used in combination with the XPress Sprinkler system. Other brands of machines and press jaws or slings are currently not permitted due to the certification of our sprinkler range.

SPRINKLER APPROVED MACHINES NOVOPRESS AND KLAUKE



RANGE OF APPROVED NOVOPRESS PRESS MACHINES

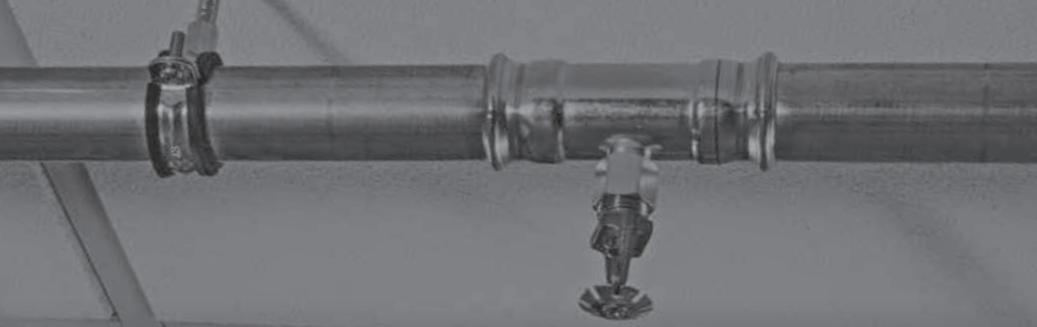
| Novopress ACO 202 DN20-50 (22-54mm) | |
|-------------------------------------|------------------|
| Power supply | 18V/ 3.0Ah |
| Power | 400W |
| Piston force | 32kN |
| Piston stroke | 40mm |
| Dimensions L x W x H | 410 x 80 x 125mm |
| Weight | 3.3kg |



Pegler Yorkshire has passed the different certification tests for XPress Sprinkler with a wide range of machines from Novopress. Depending on the dimensions to be installed and the worksite, different machines can be used. The Novopress ACO 202 is the preferred work site machine for the dimensions DN20 to DN50 (22-54mm).

- ✚ Suitable for dimensions from DN20 to DN50 (22-54mm)
- ✚ ACO is battery operated with Li-Ion technology
- ✚ The low weight and ergonomic shape render even narrow press areas readily accessible

- ✚ Convenience features, such as the electronically controlled press procedure with automatic return and electronic retaining bolt securing device, guarantee perfect pressing
- ✚ The diagnostic function enables optimum fault analysis for targeted servicing
- ✚ Short press cycles, irrespective of the nominal widths, guarantee fast and economical working procedures



CONNECT + CONTROL

Novopress ECO 301 DN20-50 (22-54mm)



| | |
|----------------------|------------------|
| Power supply | 220 - 240V/50Hz |
| Power | 560W |
| Piston force | 45kN |
| Piston stroke | 45mm |
| Dimensions L x W x H | 420 x 85 x 110mm |
| Weight | 5.0kg |

The Novopress ECO 301 is the preferred workshop machine for the dimension DN20 to DN50 (22-54mm).

- + Compact dimensions, suitable for dimensions from DN20 to DN50 (22-54mm)
- + ECO 301 is mains operated
- + Control and monitoring of the entire press cycle is carried out by a microprocessor which ensures optimum press performance at all times over the entire period of use

- + The simple operation and ergonomic design render even narrow press areas readily accessible
- + Fast and economical. Short press cycles of approx. 12 seconds irrespective of the nominal widths
- + The electronic retaining bolt securing device and automatic return after completion of the press cycle are tried and tested standards

Novopress ACO401 DN65-100 (76.1-108mm)



| | |
|----------------------|-------------------|
| Power supply | 18V/3.0Ah |
| Power | 400W |
| Piston force | 100kN |
| Piston stroke | 60mm |
| Dimensions L x W x H | 660 x 100 x 250mm |
| Weight | 13.0kg |

When pressing sprinkler installations in the dimension DN65 to DN100 (76.1-108 mm) the machine of choice is the Novopress ACO401.

The ACO401 press machine is a perfect solution for fire sprinkler systems, potable water, ship building and industrial purposes. The dimensions DN65 to DN100 (76.1-108mm) can be pressed in a safe and reliable way by using the special HP401 slings.

- + Control and monitoring of the entire press cycle is carried out by a microprocessor which ensures optimum press performance at all times over the entire period of use

- + The simple hand operation of the machine allows the installer work at locations that are difficult to access (e.g. ceilings)
- + Automatic processing including the return after completion of the press cycle is a proven standard
- + Press cycles of ca. 25 seconds, independent of nominal diameter enable fast and economical performance
- + The cylinder including sling adaptor can be turned 180° and enables installation at difficult access locations

Other approved Novopress machines for the dimensions DN20 to DN50 (22-54mm):

- + Novopress ECO 201 and 202
- + Novopress ACO 201
- + Novopress EFP 2, 201 and 202
- + Novopress AFP 201 and 202



PRESS-FIT TOOLING

APPROVED NOVOPRESS JAWS AND SLINGS

Depending on the outside diameter of the tube the pressing should be executed with a press jaw or a press sling. In the dimensions 22 and 28mm a regular press jaw from Novopress can be used. When going to bigger dimensions the pressing should be done by means of a press sling (starting from 35mm). Depending on the type of machine different slings can be used, which are specific HP versions. These special XPress Power Slings are especially designed for the XPress Sprinkler system.

| Novopress jaws and slings | | | |
|--|--------------|--------------|--------------------|
| | | DN/dimension | Nominal width (mm) |
|  | Press jaws | 20 | 22 |
| | | 25 | 28 |
| | Press slings | 32 | 35 |
| | | 40 | 42 |
| | | 50 | 54 |
| | | 65 | 76.1 |
| | | 80 | 88.9 |
| | | 100 | 108 |

Overview of Novopress press jaws and press slings

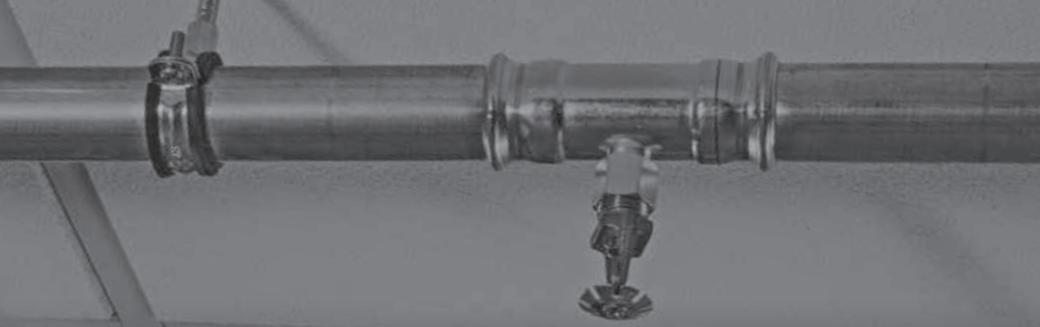
Special care should be taken in the combination of press machine and press sling. Always make sure to use the appropriate adapter. In the table below you can find the different combinations approved of machine and press jaw and sling.

| Pressing tools ECO 201/202, ACO 201/202, EFP 2/201/202 & AFP 201/202 | | | |
|--|--------------|--------------------|-------------|
| | DN/dimension | Nominal width (mm) | Adapter |
| ECOTEC jaw | 20 | 22 | - |
| ECOTEC jaw | 25 | 28 | - |
| Press sling 35 | 32 | 35 | ZB201/ZB203 |
| Snap on HP 35 | 32 | 35 | ZB 203 |
| Snap on HP 42 | 40 | 42 | ZB 203 |
| Snap on HP 54 | 50 | 54 | ZB 203 |

Pressing with ECO 201/202, ACO 201/202, EFP 2/201/202 and AFP 201/202 press tools

| Pressing tool ECO 301 | | | |
|-----------------------|--------------|--------------------|---------|
| | DN/dimension | Nominal width (mm) | Adapter |
| ECO 301 jaw | 20 | 22 | - |
| ECO 301 jaw | 25 | 28 | - |
| Press sling 35 | 32 | 35 | ZB 302 |
| XPress power sling | 40 | 42 | ZB 302 |
| XPress power sling | 50 | 54 | ZB 302 |
| Snap on HP 35 | 32 | 35 | ZB 303 |
| Snap on HP 42 | 40 | 42 | ZB 303 |
| Snap on HP 54 | 50 | 54 | ZB 303 |

Pressing with ECO 301



| Pressing tool ACO 401 | | |
|-------------------------|--------------|--------------------|
| | DN/dimension | Nominal width (mm) |
| Press sling HP 401 76.1 | 65 | 76.1 |
| Press sling HP 401 88.9 | 80 | 88.9 |
| Press sling HP 401 108 | 100 | 108 |

Pressing with ACO 401

RANGE OF APPROVED KLAUKE PRESS MACHINES (ONLY FOR STAINLESS STEEL)

For stainless steel installation in the dimensions DN65 to DN100 (76.1-108mm) it is also allowed to use the Klauke UAP100 in combination with Klauke slings

| Press slings UAP 100 DN65-100 (76.1-108mm) | | | |
|---|-------------|--------------|--------------------|
| | Press sling | DN/dimension | Nominal width (mm) |
|  | KSP 3 | 65 | 76.1 |
| | KSP 3 | 80 | 88.9 |
| | KSP 3 | 100 | 108 |

Overview of Klauke press slings

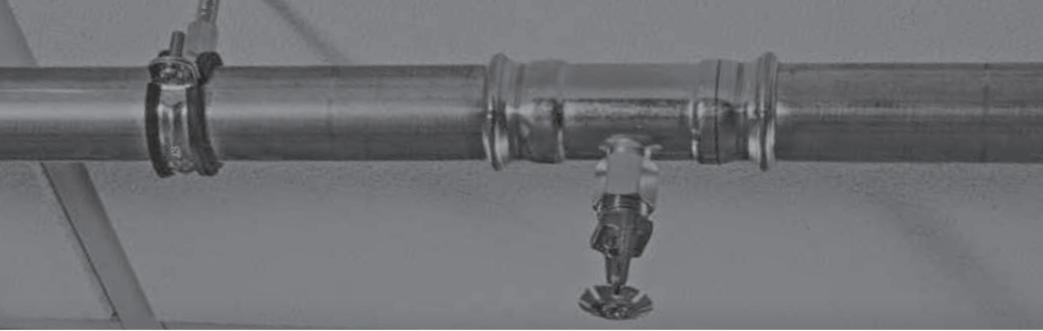
If the press tools are correctly used, reliable pressing with the XPress Sprinkler system is guaranteed. Regular maintenance and lubrication of the press jaws, slings, adapters and tools is required. Please see the Novopress and Klauke instructions for use and maintenance.

For information on tooling for the XPress Sprinkler system, please contact the Pegler Yorkshire helpdesk on 0800 156 0050

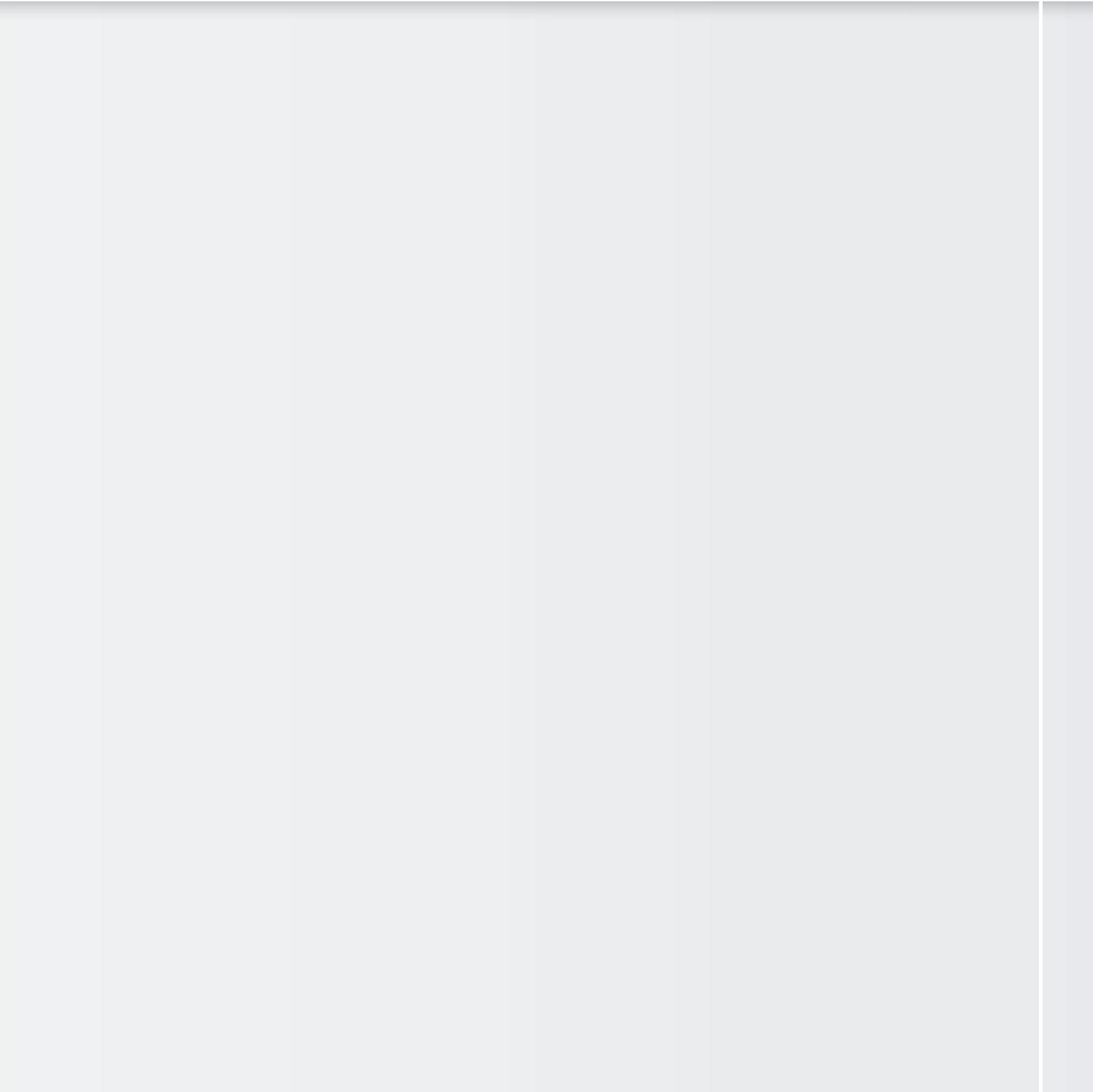
XPress



NOTES



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