



www.rhinoxusa.com

HEAVY-DUTY

EXTREME PRESSURE

INTEGRATED PIPE CONNECTIONS





Rhinox.

IT'S WHAT INSIDE
THAT'S COUNT.

American Pacific Manufacturing Inc. is the world's leading fittings manufacturer and export trading company. We offer top quality stainless steel pipes, plumbing fittings, double press v-profile press fittings, triple press v-profile fittings, thin-walled grooved stainless steel pipes and fittings.

For many years, RHINOX has constantly adhered to the business development philosophy of "making innovative improvement and gaining trust on quality" to produce high quality, easy-installation and highly practical high tech products by means of advanced production equipment and strict quality control system, so as to offer considerate services for the majority of users.

Companies adhere to the "quality, quality to create a healthy life" without quality everything means nothing that is why company strives to exceed itself each and every day. The products are universally used in the scope of building water supply and drainage, fire water, solar, gas, fire protection, air conditioning, hvac and other projects.

American Pacific



Rhinox is known internationally for its history of successful products and is valued as THE ORIGINAL - in the double sense of the word.

Rhinox system is authentic, unadulterated, unique, as creative as it is original in functionality, easy to use and due to the high quality standards, absolutely outstanding.

Every Rhinox fitting is a quality product that is manufactured to the highest standards of precision, functionality and attention to detail.



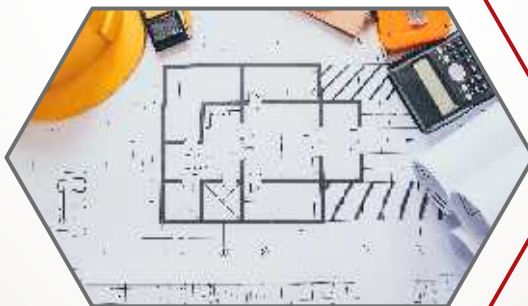
Precision

Innovation



Every year, Rhinox launches new product lines, which not only feature functionality but also further developments.

Rhinox is unique and is internationally recognized and protected by its clear design.



Design

Sustainability



The Rhinox system consists of high-quality steel and can be remelted and reprocessed at any time.

YOUR PARTNER FOR PLUMBING AND HEATING SYSTEMS

The right solution for all applications
and Certified products.
A complete range able to meet all
demands and needs.

APPLICATIONS



Sanitary Water



Drinking Water



Heating



Cooling



Gas



Solar



Fire Prevention



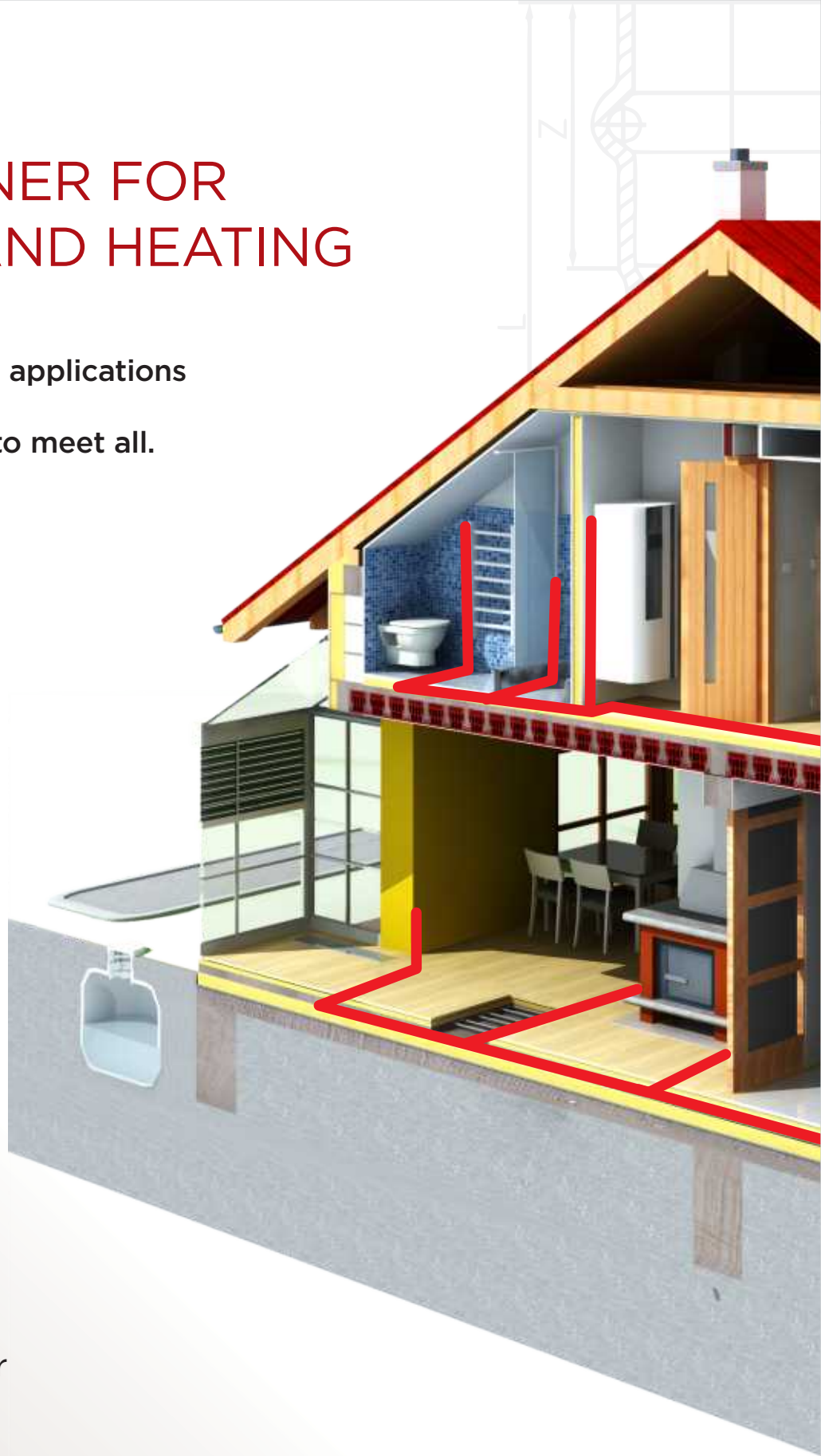
Compressed Air



Sprinkler



Other Applications



The winner is the one who makes life easier for people and intercepts the change in advance. This is called Innovation.



Rhinox Stainless Tubes

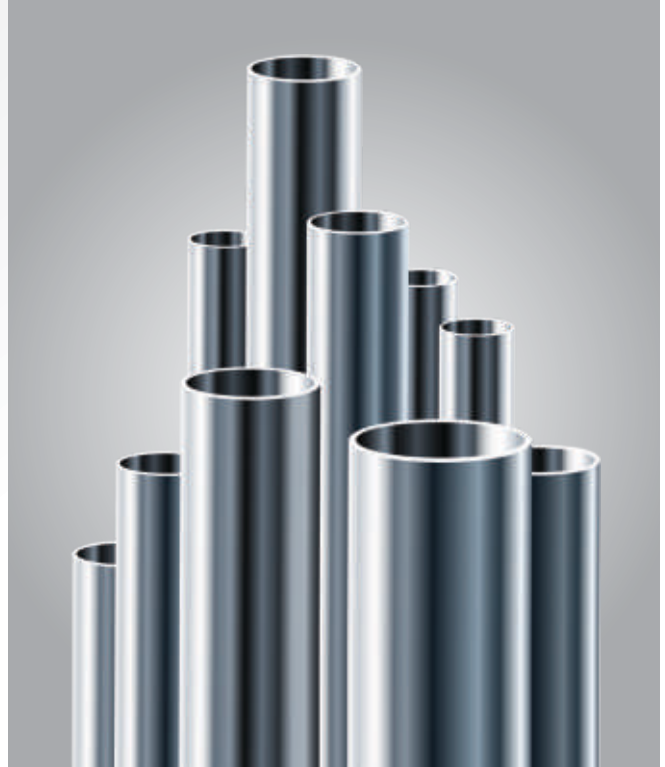
Rhinox Stainless tube is 316L grade (EN 1.4404) complying with DIN EN 10088, fabricated according to DIN EN 10312 and DVGW - W 541 and is supplied as straight 3 metre & 6 metre lengths with outside diameters in the range 15mm - 108mm. Rhinox Stainless tubes combine low carbon, at less than 0.03%, with 16%-18% chromium, 10% nickle and more than 2% molybdenum content improved corrosion resistance. Low carbon, austenitic stainless steel is roll formed and then longitudinally plasma-inert gas-welded to precisely form the tubes. Rhinox Stainless tubes are bright annealed and solution heat treated, resulting in an attractive, hygienic and highly durable product.



Nominal Size	Outside Diameter (mm)	Wall Thickness	Dry Weight kg/m	Wet Weight kg/m	Volume l/m	Tube Length mm	6m Tube Mass kg
DN15	15	1.0	0.351	0.484	0.133	6000	2.11
DN20	22	1.2	0.625	0.928	0.302	6000	3.75
DN25	28	1.2	0.805	1.321	0.515	6000	4.83
DN32	35	1.5	1.258	2.062	0.804	6000	7.55
DN40	42	1.5	1.521	2.718	1.195	6000	9.13
DN50	54	1.5	1.972	4.015	2.043	6000	11.83
DN65	76.1	2.0	3.711	7.794	4.083	6000	22.27
DN100	108	2.0	5.308	13.81	8.495	6000	31.85

Rhinox Heat Preserved Tubes

The supply of hot water must be delivered through the tube with the help of warming device, which the traditional tube do not have, so the heat preservation treatment is needed at the construction site which bring trouble to the construction. Rhinox's PE foam coated and heat preserved stainless steel tube is made from the mother coil of its best stainless steel pipe, and cover with shaped foam coated and low density LDPE. For this kind of tube , its outside layer is the protective layer, foam coated layer in the middle, stainless steel tube inside, which short for stainless foam coated and heat preserved tube. Because the heat preserved layer is integrated with the stainless steel tube it has a sophisticated technique, good shape, and shallow tube hole, furthermore, the construction is very convenient, which is fit for hot water tube and heat preserved tube.



Coated tubes:

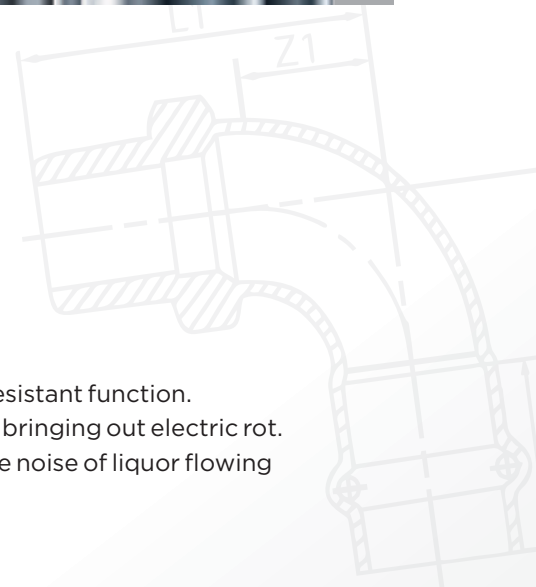
Stainless steel tube

The Application scale of LDPE foam coated tube:

- ◆ Heat preserved tubing for cool water , hot water, and cooling - heating room
- ◆ Tubing for refrigerating and air conditioning
- ◆ Tubing for draining and ventilation
- ◆ Tubing for mechanical

Characteristics:

- ◆ Good heat preserved which reduces thermal energy consumption, good heat resistant function.
- ◆ Good insulation performance which avoids contacting with different metal and bringing out electric rot.
- ◆ Heat preserved , cool preserved, wet resistant , and dew resistant and reduce the noise of liquor flowing
- ◆ Prevent the grow of wall carcinoma, cement aging and raise of ceramic
- ◆ Resistant to corrosion and resistance to acids and bases.



Rhinox Advantage



Material Quality

Rhinox is manufactured from high-grade (EN 1.4404-316L) stainless steel, making it a superior choice for water delivery systems.

Improved Water Delivery

Because stainless steel is resistant to corrosion, rust, chemical leaching and other types of post contamination, it delivers fresher, cleaner water to homes and commercial buildings.

Sustainability

Rhinox stainless steel pipe limits environmental impact as compared to alternative pipe materials. It's corrosion resistance minimizes the potential for product loss.

Stainless steel is not a petroleum product. There is also less energy loss within stainless steel pipe due to its smooth, low friction interior, and stainless steel pipe is 100% recoverable either through recycling or reuse.

Savings

The Rhinox system of stainless steel pipe and fittings, combined with six edge press connection process, provides an economical choice for a wide range of pipe installation applications. The Rhinox system offers reduced unit weight, installation time, and energy requirements as well as superior life-cycle costs.

Reliability

Our patented Rhinox triple press connection system creates a secure joint. Rhinox connections have been tested to be secure at pressures in excess of 400 psi, well above typical operating pressures in the 100 to 200 psi range. With our joining method, the pipe connections will not separate with temperature fluctuations or trapped air vibrations within a pipe network.

Durability

Stainless steel pipes have a low interior surface friction, remain stable at extreme temperatures, and are not affected by sunlight or ultra violet rays. This means that under typical conditions the performance of Rhinox stainless steel pipe systems will easily exceed facilities with a 100 year lifespan.

Ease of installation

The Rhinox USA metal pipe connection technology system is simple, fast, and easy to learn. This results in a substantial reduction in construction time, reducing overall project cost.

Easy maintenance and modification

Once installed, Rhinox USA stainless steel pipe connections are easy to modify. Unlike methods for traditional piping systems, connections can be made and separated numerous times without damaging the pipe, seal or fitting.

High performance seals

Rhinox stainless steel pipes utilize an organic silicone rubber compression seal in pipe joints and fittings. The seal is suitable for operation in temperatures up to 400°F. The anticipated life of the seal is dependent upon the operating temperature. Test results indicate that a 180°F operating temperature should result in a 100 year seal life expectancy.

Versatility

Rhinox USA distributes a patented piping and fixture system that is manufactured to the highest standards. It is used widely in water pipes, gas pipelines, central air-conditioning systems, and solar water heating installations.



RHINOX Stainless Steel Press Fittings

RHINOX Stainless steel system press fittings

The RHINOX stainless steel installation system comprises of premium RHINOX system press fittings provided with a black EPDM sealing ring (ethylene-propylene-diene) rubber. All RHINOX press couplings are manufactured from the material coded 1.4404 / AISI 316L and 1.4408 (fittings with threaded end). The material coded 1.4404 / AISI 316L contains an increased molybdenum content of $\geq 2.3\%$ molybdenum and a reduced carbon content, below the standard value of 1.4401. This has created a material that is not only equal in quality, but also possesses significantly greater

resistance to corrosion.

The RHINOX press system has been tested to comply with industry standards DVGW GW 541 and W 534 and certified by DVGW, the large European certification institutes.

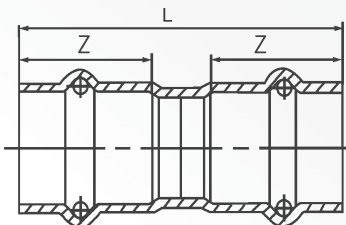
RHINOX stainless steel press fittings in the 12 mm to 54 mm range are long-profile. The larger diameter material is designed with a short profile and can be fitted with an M-profile press tool only.

APPLICATION RANGE	SIZE/PRESSURE /MARKING	SIZE/PRESSURE /MARKING	TOOLS
<ul style="list-style-type: none"> • Drinking water • Heating • Treated water • Cooling water • Dry compressed air • Industry • Sprinkler* • Fire extinguishing systems 	d = 12 - 108 mm maximum 16 bar	EPDM Colour: black Max. permanent temperature: -30 °C up to 120 °C	d = 12 - 54 mm Choice of press tools and tongs or chains

Rhinox Stainless Press Fittings

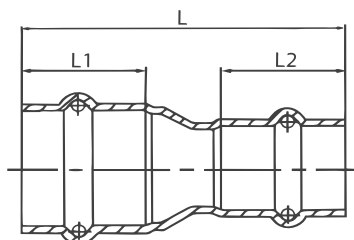
Straight Coupling

DESCRIPTION	SIZE (MM)
Straight Coupling	15
Straight Coupling	22
Straight Coupling	28
Straight Coupling	35
Straight Coupling	42
Straight Coupling	54



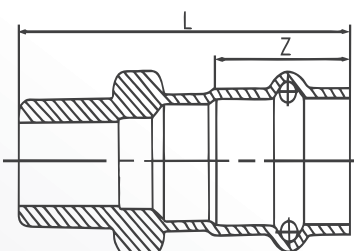
Reducer Coupling with Plain End

DESCRIPTION	SIZE (MM)
Reducer Coupling with Plain End	42 x 35
Reducer Coupling with Plain End	54 x 28
Reducer Coupling with Plain End	54 x 35
Reducer Coupling with Plain End	54 x 42
Reducer Coupling with Plain End	22 x 15
Reducer Coupling with Plain End	22 x 18
Reducer Coupling with Plain End	28 x 15
Reducer Coupling with Plain End	28 x 22
Reducer Coupling with Plain End	35 x 22
Reducer Coupling with Plain End	35 x 28
Reducer Coupling with Plain End	42 x 22



Male Thread Adapter

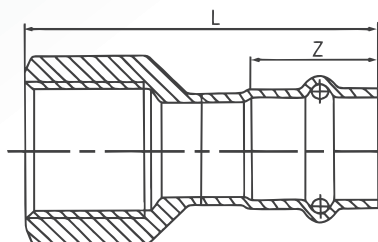
DESCRIPTION	SIZE (MM)
Male Thread Adapter	15 x 1/2
Male Thread Adapter	54 x 2
Male Thread Adapter	42 x 11/2
Male Thread Adapter	35 x 11/4
Male Thread Adapter	22 x 1/2
Male Thread Adapter	22 x 3/4
Male Thread Adapter	28 x 1



Rhinox Stainless Press Fittings

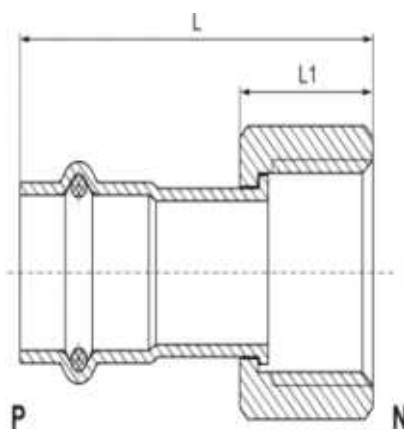
Female Thread Adapter

DESCRIPTION	SIZE (MM)
Female Thread Adapter	15 x 1/2
Female Thread Adapter	15 x 3/4
Female Thread Adapter	22 x 1/2
Female Thread Adapter	54 x 2
Female Thread Adapter	42 x 1 1/2
Female Thread Adapter	54 x 2
Female Thread Adapter	35 x 1 1/4
Female Thread Adapter	28 x 1
Female Thread Adapter	28 x 3/4
Female Thread Adapter	22 x 1
Female Thread Adapter	22 x 3/4



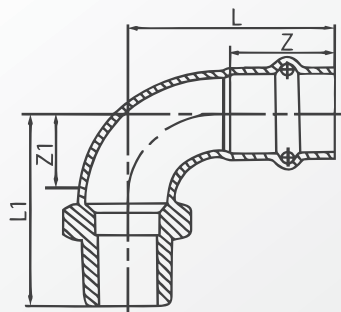
Union Adapter

DESCRIPTION	SIZE (MM)
Union Adaptor	22 x 1
Union Adaptor	28 x 1
Union Adaptor	22 x 1/2
Union Adaptor	22 x 3/4
Union Adaptor	28 x 1 1/4
Union Adaptor	54 x 2
Union Adaptor	54 x 2 3/8
Union Adaptor	35 x 1 1/4
Union Adaptor	42 x 1 1/2
Union Adaptor	42 x 2
Union Adaptor	42 x 1 3/4
Union Adaptor	15 x 1/2
Union Adaptor	15 x 3/4
Union Adaptor	35 x 1 1/2



Male Elbow

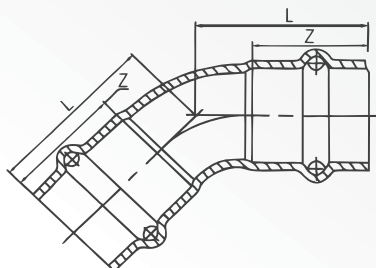
DESCRIPTION	SIZE (MM)
Male Elbow	15 x 1/2
Male Elbow	22 x 3/4
Male Elbow	28 x 1
Male Elbow	35 x 1 1/4
Male Elbow	42 x 1 1/2
Male Elbow	54 x 2



Rhinox Stainless Press Fittings

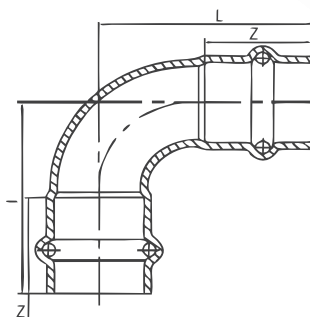
45 Degree Elbow

DESCRIPTION	SIZE (MM)
45 Degree Elbow	54
45 Degree Elbow	42
45 Degree Elbow	35
45 Degree Elbow	28
45 Degree Elbow	22
45 Degree Elbow	15



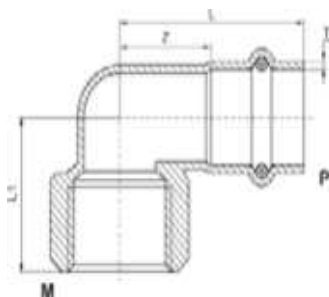
Equal Elbow

DESCRIPTION	SIZE (MM)
Equal Elbow	15
Equal Elbow	22
Equal Elbow	28
Equal Elbow	35
Equal Elbow	42
Equal Elbow	54



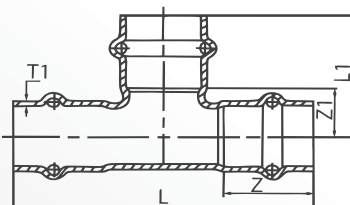
Female Thread Tangent Elbow

DESCRIPTION	SIZE (MM)
Female Thread Tangent Elbow	22 x 3/4
Female Thread Tangent Elbow	22 x 1/2
Female Thread Tangent Elbow	15 x 3/4
Female Thread Tangent Elbow	15 x 1/2



TEE

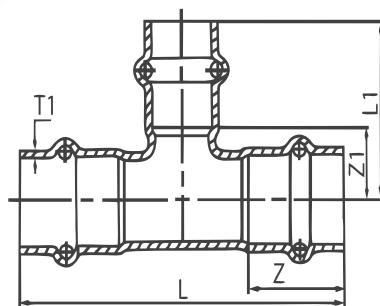
DESCRIPTION	SIZE (MM)
TEE	54
TEE	42
TEE	35
TEE	28
TEE	22
TEE	15



Rhinox Stainless Press Fittings

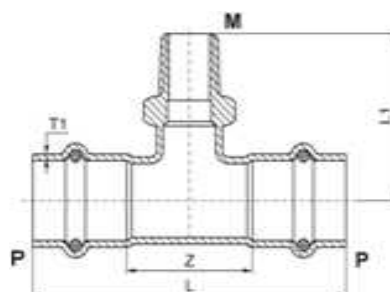
TEE Reducing

DESCRIPTION	SIZE (MM)
TEE Reducing	42 x 35 x 42
TEE Reducing	54 x 22 x 54
TEE Reducing	54 x 28 x 54
TEE Reducing	54 x 35 x 54
TEE Reducing	54 x 42 x 54
TEE Reducing	42 x 28 x 42
TEE Reducing	28 x 22 x 28
TEE Reducing	28 x 15 x 28
TEE Reducing	28 x 22 x 22
TEE Reducing	22 x 15 x 22
TEE Reducing	35 x 15 x 35
TEE Reducing	35 x 22 x 35
TEE Reducing	35 x 28 x 35
TEE Reducing	42 x 22 x 42



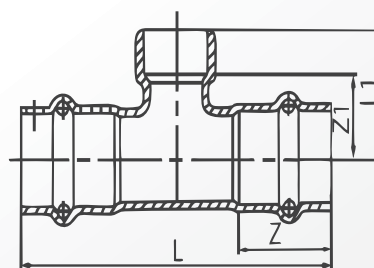
TEE (Male Threaded)

DESCRIPTION	SIZE (MM)
TEE (Male Threaded)	15 x 1/2 x 15
TEE (Male Threaded)	22 x 1/2 x 22
TEE (Male Threaded)	22 x 3/4 x 22
TEE (Male Threaded)	28 x 1 x 28
TEE (Male Threaded)	35 x 1 1/4 x 35
TEE (Male Threaded)	54 x 1 x 54



TEE (Female Threaded)

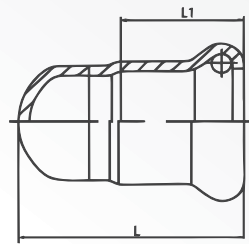
DESCRIPTION	SIZE (MM)
TEE (Female Threaded)	54 x 1/2 x 54
TEE (Female Threaded)	42 x 1/2 x 42
TEE (Female Threaded)	15 x 1/2 x 15
TEE (Female Threaded)	28 x 1 x 28
TEE (Female Threaded)	22 x 1/2 x 22
TEE (Female Threaded)	22 x 3/4 x 22
TEE (Female Threaded)	35 x 1/2 x 35
TEE (Female Threaded)	28 x 3/4 x 28
TEE (Female Threaded)	28 x 1/2 x 28



Rhinox Stainless Press Fittings

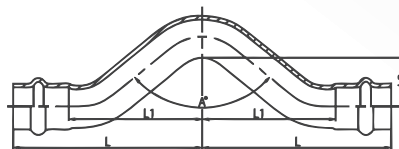
END CAP

DESCRIPTION	SIZE (MM)
End Cap	42
End Cap	35
End Cap	28
End Cap	54
End Cap	22
End Cap	15



Cross Over

DESCRIPTION	SIZE (MM)
Cross Over	15
Cross Over	22
Cross Over	28



AMPress Pipes

DESCRIPTION	SIZE (MM)
AMPress-pipe (Stainless Steel-316)	42 x 1.5
AMPress-pipe (Stainless Steel-316)	35 x 1.5
AMPress-pipe (Stainless Steel-316)	28 x 1.2
AMPress-pipe (Stainless Steel-316)	22 x 1.2
AMPress-pipe (Stainless Steel-316)	15 x 1.2
AMPress-pipe (Stainless Steel-316)	54 x 1.5



Guidelines, Tool Use & Preparation



Cutting: Pipes are cut to length with approved burr-free cutters. Oxy acetylene torches and abrasive cut-off wheels are not suitable. Pipes are cut at right angles to their axis, using a pipe cutter or fine-tooth saw. Measured lengths must take into account the depth of insertion into the fitting.



Deburring: Make sure that the internal and external tube end is free from burrs or sharp edges by using a deburring tool to prevent damage to the O-ring. Then wipe the tube end clean to avoid damaging the O-ring on tube insertion.



Marking the insertion depth: The tube must be fully inserted into the fitting until it reaches the tube stop in order to make a perfect joint. Marking insertion depth will ensure that any tube movement is detected, which is especially important if the joints are to be pressed at a later time.



Assemble fitting on tube: To assemble the joint, the tube must be inserted into the fitting up to the tube stop. (Use the mark on the tube which was made earlier as reference). The pressing operation should only be undertaken when the tube reaches the tube stop.



Press tool & jaw: Press tools are to be equipped with v-shaped profile jaw attachments or a pressing jaw which corresponds to the diameter of the fitting being pressed. Retract the lock pin, position the jaw in the tool head and fully engage the lock pin.



Press joint: Initiate the pressing procedure by pressing the start button for approximately 3 seconds. The pressing procedure will run automatically and should not be interrupted prematurely. This ensures a permanent joint that is sealed and has the required tensional and axial force locking properties. After completing the pressing process, the pressing tool can be removed from the pressed connection by opening the press jaw.



Cut
Deburr
Mark
Inspect
Join
Press
Check
Done...



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