



RHINOXPRESS

YOUR SINGLE SOURCE SOLUTION FOR PRESS TECHNOLOGY



PRESS FITTINGS | BALL VALVES | GATES, GLOBES, CHECKS AND STRAINERS | FLANGES

PRODUCT CATALOG





Brand & Company

stands for a strong brand and the innovative company behind it. The globally operating company based in Washington is considered to be the world's leading system provider and the driving force behind technological advances in the field of pipe press connections without welding processes. What drives RHINOX is the passion for innovation and technology. With the "AMERICAN PRECISION" brand promise, RHINOX offers high-quality product and service solutions for your customers and partners.

The System

RHINOX is the leading, purely metallic, press connection system for the fields of application in Cold Water, Hot Water, Treatment of Water, Gases, Medical gases, Petroleum, Chemical & other Pipeline Systems. The high-performance press fittings are developed for extremely high pressures and temperatures as well as a quick and secure press connection with hand-held tools and without welding. The specially developed press tools always guarantee the same quality of every single press connection in existing or new systems. A perfect connection in a few seconds.

Own Research & Development

In-house research and development are at the heart of the company and decisive for the sustainable success of RHINOX. An experienced team of specialists works daily on the new and further development of the product portfolio of high-performance press fittings and press tools. The entire development and manufacturing process is subject to RHINOX and thus ensures a quality and technological lead.





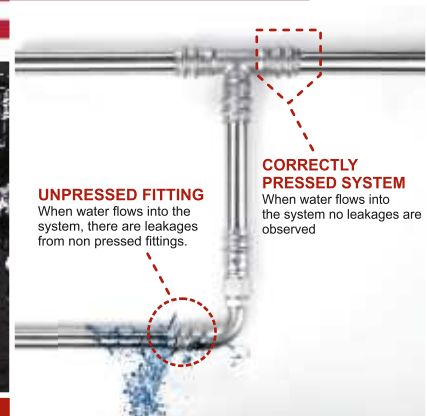
FIRST TIME IN **THE WORLD PATENT TECHNOLOGY**

Welcome to the
World of
Water Solution

The Secure, long life,
live proof crimp joint



SMART
QUICK. STRONG. DURABLE



UNPRESSED FITTING
When water flows into the
system, there are leakages
from non pressed fittings.

**CORRECTLY
PRESSED SYSTEM**
When water flows into
the system no leakages are
observed



HOT WATER



AIR / GAS



WATER



DOUBLE O-RING

TRIPLE PRESS

316L STAINLESS STEEL

PLUMBING

Rhinox Integrated Plumbing System

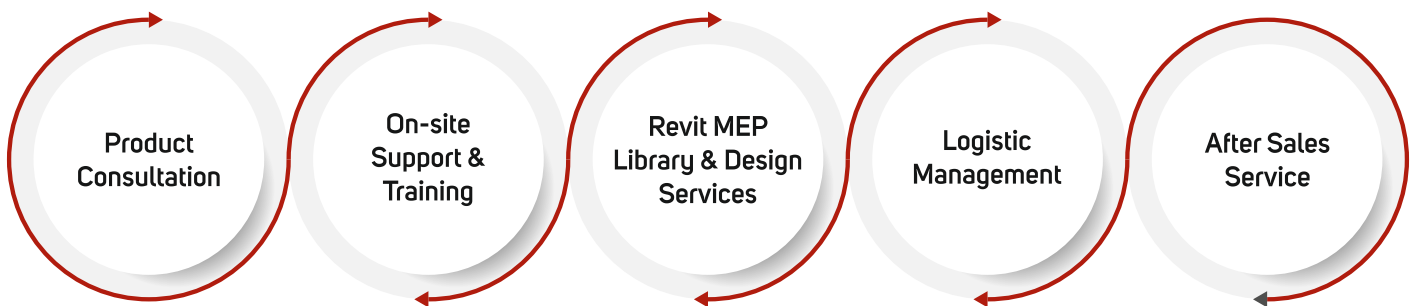
The Perfect Solution Always & Everywhere

The Rhinox integrated plumbing offers stainless steel pipe and fittings that deliver quality and value on every level. The Rhinox system is easy to install, reliable, cost effective and versatile. The natural advantages of stainless steel, low-friction pipe wall, high heat tolerance, UV and corrosion resistance along with our exclusive, and superior, joining method, make Rhinox stainless steel a top quality product.

Stainless steel plumbing integrated system designed for customer's benefit, we know the right technology needs to

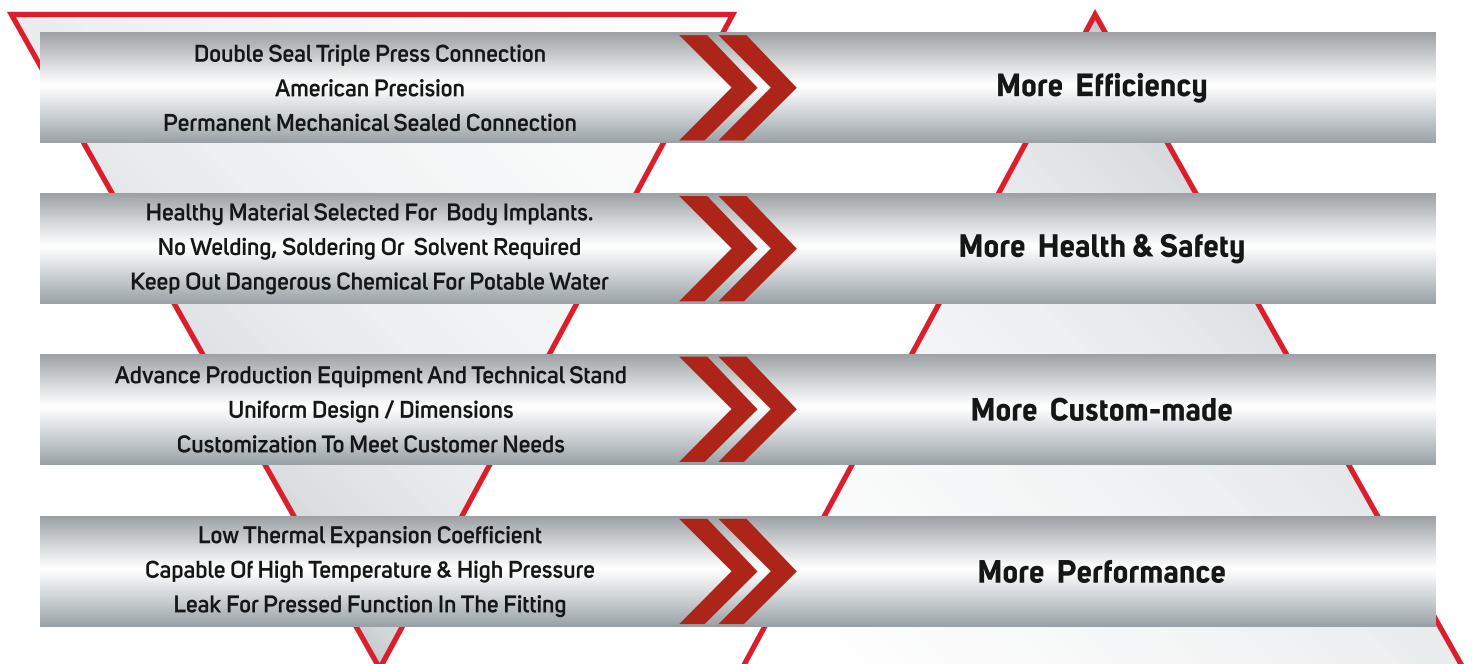
be chosen for every applications across a very broad range of uses including residential, commercial and industrial installations. Stainless steel pipe systems can be found in medical facilities, food production facilities and in energy production applications, to name a few examples. Because of its versatility, it is expected that stainless steel pipe installations will continue to grow well into the future. Rhinox plumbing systems offers high quality & durability combined with complete program which adds up to low LCC (Life Cycle Cost) for customer's benefit.

Value Added Services



Rhinox Offers

Customer Benefits





Benefits of Rhinox Plumbing System

Rhinox press fittings and pipes system delivers the ability to plumb an entire potable water system from meter to fixture with the specially designed mechanical tools. This revolutionary system provides a faster, safer, and more reliable installation for long-term performance and satisfaction.



Professional Manufacturer

Throughout Rhinox history, our engineering teams have developed high-quality products, processes, and services designed to meet the evolving needs of our customers.



Efficient Water Delivery

The surface of stainless steel has a layer of chromium oxide that forms a protective barrier, preventing the metal from oxidizing with the water.



Quality At 360°

Our quality process includes suppliers, products, manufacturing steps, materials, logistic and assistance service. We have ISO9001: 2015 certification and quality, more than a process, is our attitude.



Stainless Passion And Innovation

Passion and experience for renovation is our vision and it guides us in every choice. Dedicated and committed to the research, design and manufacturing of Stainless steel heavy fittings and rigid tubes.



Sustainability

Stainless steel pipe is the most environmentally friendly material in the industry as it is 100% recyclable and can be reused or repurposed.



Fully certified

Extensive third party certification have allowed the Rhinox Press fittings system (pipes + fittings) to obtain compliance with the strictest international certifications, offers peace of mind to the client, specifier and installer.



Economical

The Rhinox system offers heavy unit weight, reduced installation cost and energy requirements as well as superior Life-cycle costs than other applications in the market.



Reliability in every joint

Each Rhinox stainless steel double O-RING press-fit joint is safely interlocked with the connecting pipes to ensure each joint is held together securely.



Technical Support

During the critical step of product development, we work closely with you, in order to create a high-quality solution, by using our internal design team.

The Devolvement of VV Press Connection Technology

Any kind of connection system of development and application , should be based on the connection technology . Pipe connection parts is the most vulnerable in the pipeline system , most easy to cause accident , which cause direct economic loss and indirect loss. Therefore , the stainless steel pipe connection technology in the water supply system , gas system on mechanical properties, corrosion resistance and service life of the study , is to ensure that the necessary for pipeline safety via .

There is always much discussion about which profile is better, "M" or "V". At times and for general plumbing installations, the performance criteria are similar, if not the same for these profiles. However, there are differences in the higher end performance for each profile.

Let's begin with history; The first press system was developed back in the 1950's, was patented in 1962 and was the "M" profile. At the time, the system was granted a 50 year patent protection making it difficult for any competitors. Many years later, in 1989, the "V" profile was developed and released in the market.



Rhinox Achievement

The company through the long time of engineering application and , found that single press - fitting type , double press fitting type and pressure pipe fittings belong to a single ring. Some weaknesses found in the practical application of the following :

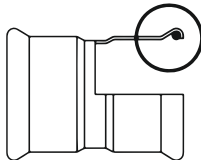
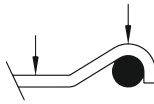
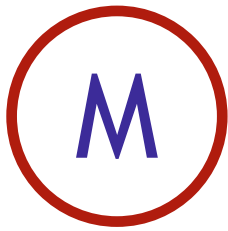
- 1 . Reliable sealing property of rubber ring is not enough.
2. Tensile strength is not enough
3. A single rubber ring in hot water anti - aging performance
4. Installation workers Makes Mistakes at site .

Then improve the development of Triple - press technology of stainless steel pipe fittings . Proved by the experimental data , and R&D , tripple - press connection technology in stainless steel pipe connection technology is in a leading position . Stainless steel pipe triple - press connection

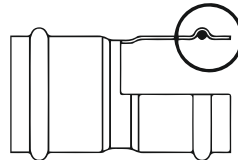
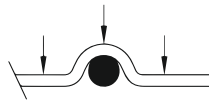
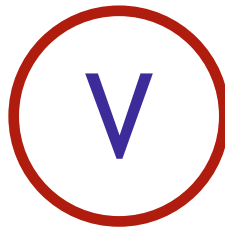
technology is aimed at the existing stainless steel pipe connection in the form of a new generation of technology upgrade products , the existing domestic and foreign stainless steel pipe connection form due to one reason or another , are unable to achieve zero leakage , long life of the user ' s requirements .

American Pacific, Rhinox after four years of exploration , crucial technology , experiment , testing , etc . , to overcome the production of technical problems , conformity of tool problems , such as sealing performance problems , finally in July 2014 formally developed stainless steel pipe fitting triple - press connectivity products. The products will be a revolution in the stainless steel pipe connection technology , solves the existing problem of shortage of all kinds of safety and reliability .

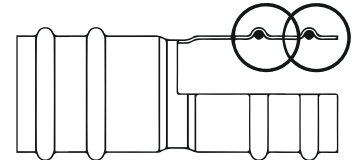
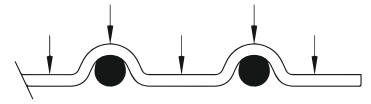
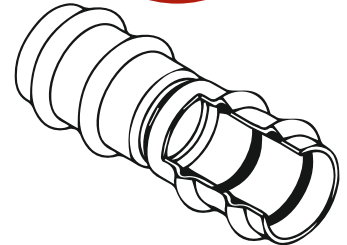
PAST



PRESENT



FUTURE



There is difference in the press profile and the way the force is applied to the fittings when being pressed. As you will see in the above images, the "M" profile fitting allows for 2 press points, while the "V" Profile fitting allows for 3 and "VV" Profile allows for only 5 press points. This has a dramatic effect upon the overall security and pressure rating of the actual joint.

All manufacturers of press fittings use the same raw materials and are certified to the same standards. The

biggest difference is the profile of the fittings and the tooling used. Based on all of this information, if you are looking for the maximum safety in any installation, "VV" Profile fittings is most reliable connection.

So, the next time you have a project and decide to use Stainless Press, ensure you use the right product that is fit for purpose and offers you the greatest security for your workmanship. For expert advice on any installation, please refer to our technical department.



VV Profile EN 1.4404 Press Fit System

Rhinox products are manufactured using unique and modern machinery; the completely automated factory guarantees the customer safe and high- quality product. Rhinox offers installers a complete solution with great flexibility. The Rhinox VV press system consists of fittings, pipes, O-Rings and Tools.

Fittings Material Description

- VV Profile
- En 1.4404 Grade Stainless steel
- Wall thickness 1.50 mm
- Metric Sizing 15 – 54
- Marking: laser etched
- Double O-Ring Fitted

Tube Material Description

- En 1.4404 Stainless steel
- Longitudinal Welded, Rolled seam
- 320 Grit Polished
- En 10312 Compliant Tube
- Marking: laser etched and Color Printing

Rhinox Press Ring Seals

- Do not contain any softening agents or other fillers, which lead to embrittlement
- Have a slow aging process.
- Are stable in high temperatures.
- Maintain a low compression set value even at higher temps.
- Have a low oxygen permeation rate; this is critical in avoiding corrosion effects due to the intrusion of oxygen

	EPDM (Black) Fitted as Standard	FKM Fitted on (Red) Supplied Fitted When Requested	NBR (Yellow) Supplied Fitted When Requested
Material	Ethylene, Propylene, Diene, Monomer, Rubber	Fluorocarbon (Viton)	Hydrogenated, Acrylonitrile, Butadiene
Operating Temperature	-20°C to +110°C	-20°C to +200°C	-20°C to +70°C

Pressure Rating

- Rhinox VV Press-Fit Systems working pressure range is from full vacuum to 300 Psi (20.7 Bar) depending on your installation parameters.
- Refer to our manuals for pressure clarification.

Press Tools

- Rhinox Designed special Jaws for VV Press-fittings. The Tools can be used Ridgid and Novopress.
- All tools and their capabilities are listed on our Manual chart.
- Rhinox can assist with correct tool selection.



VV PRESS FITTINGS

Product Discription

INSERTION MARK : A witness mark made by installer prior to installation allows for visual verification that the pipe has been fully inserted for proper installation.

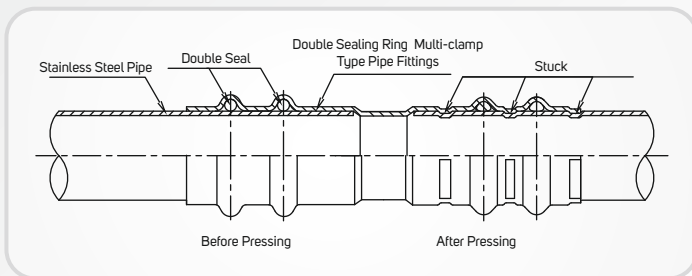
VV-PROFILE PRESS JOINT : Seal is compressed to provide a leak-free connection for all water, gas and air related applications.

PIPE STOP : An internal pipe stop locates pipe position to ensure positive joining.



POSITIVE MECHANICAL INTERLOCK :
The Rhinox recomend "Ridgid & Novopress" tool to engages the entire circumference of the fitting to ensure a secure attachment of pipe to fitting.

PRE-LUBRICATED O-RING : A patented innovatively designed o-ring which is available in:
Black = EPDM
Yellow = HNBR
Green = FPM



4th GENERATION PIPE-FIT CONNECTION

The double O-Ring bead creates a mechanical connection between pipes & fittings. The O-Ring is pressed permanently into the pipe. During the pressing, pressure is applied on fittings for 5 angles which result in a robust formation of the O-Ring bead and an extremely secure connection.



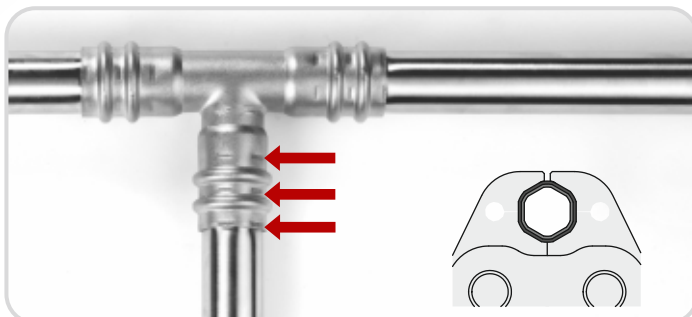
TENSILE STRENGTH

There are three positions of the crimping grooves at the connection part between the stainless steel pipe and the fitting, which increases the pull-out resistance of the connection part and is three times that of the ordinary connection. Stainless steel to water pipe tensile strength is greater than 520N / mm, and has good ductility and toughness.



PRESSING JAW GUIDE

The Unique design VV press fitting has 2 V-shaped slot in which 2 O-Ring installation. The Unique "2 U-shaped slot" Jaws which guide on the fittings ensure that the pressing Jaw is positioned exactly right during pressing. It also prevents any risk of the joint slipping or being pressed in the wrong place.



THREE HEXAGONAL CLAMPING JOINTS

After clamping, the connection parts of the pipes and tubes form the most stable hexagonal shape, so that the connection position is tightly matched after mechanical compression, forming a high strength pull-resistant performance and sealing performance, which ensures the connection position to be safe, reliable and zero water leakage to the greatest extent, long life.



MINIMAL LINIAR EXPANSION

The special composition of Rhinox plumbing system the high thickness of pipe & fitting prevents linear expansion of the pipe in response to temperature fluctuations. This means fewer fastening points are required during installation than with conventional stainless steel plumbing.



JEWELS LIKE FITTINGS

Just like jewels, each item produced by Rhinox VV press is subjected to an ultrasonic cleaning treatment. At the end of this process, fittings are bright, completely cleaned, sterilized and ready to be used even for very particular applications.

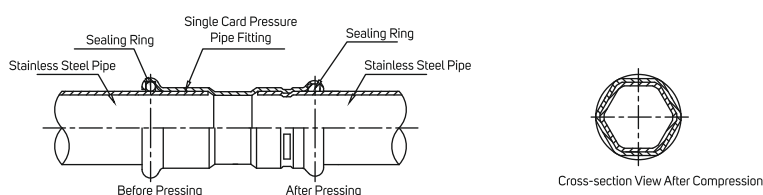
Evolution of Fittings Generation According to Different Countries

Comparison of anatomical figures of various connection forms of stainless steel pipes / fittings.



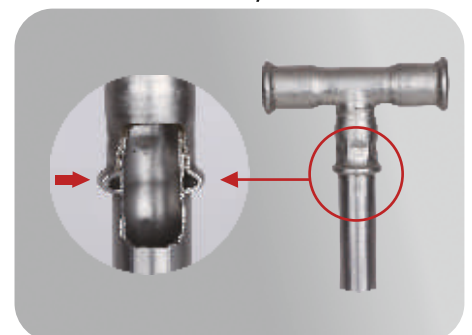
Reviewing the process of using stainless steel water pipes at home and abroad. The connection forms of stainless steel pipes and fittings are also constantly updated. From Europeans's single sealed single O-Ring Press type, double sealed single O-ring to Southeast Asia single sealed and double O-ring (Rubber & Metal) type, and American derived triple sealed double O-Ring type so on. The connection of stainless steel pipes and fittings with high strength, long life and zero water transfer rate has always been the ultimate goal we are pursuing. In USA, Rhinox has started the fourth generation revolution of stainless steel pipe connection forms...

THE FIRST GENERATION OF STAINLESS STEEL PIPE CONNECTION TYPE SINGLE SEAL SINGLE CLAMPING TYPE

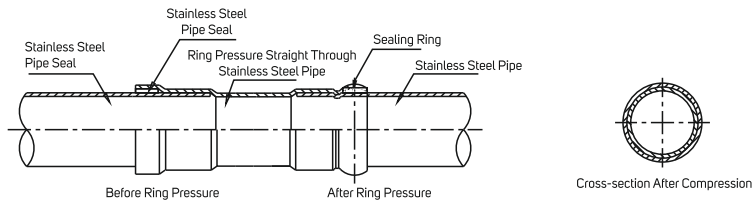


Single seal, single clamping type, pre-pressing, easy installation after compression, insufficient tensile strength, tightness and aging resistance.

GENERATION-1, GERMANY

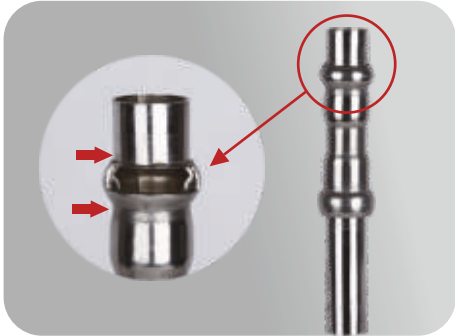


STAINLESS STEEL PIPE SECOND GENERATION CONNECTION TYPE SINGLE SEAL RING PRESSURE TYPE

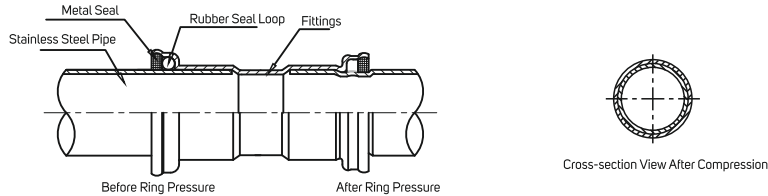


The installation is convenient, the installation requires higher environment than the first generation, and the tensile strength is higher than that of the first generation. Due to the use of a flat seal ring and aerosol, the sealing performance and aging resistance are reduced.

GENERATION-2, TAIWAN

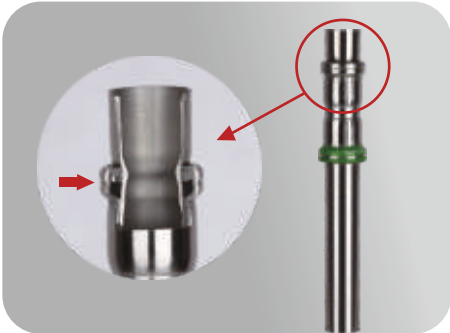


THE THIRD GENERATION OF STAINLESS STEEL PIPE CONNECTION TYPE SINGLE SEAL REINFORCED CLAMPING TYPE (PLUS METAL RING)

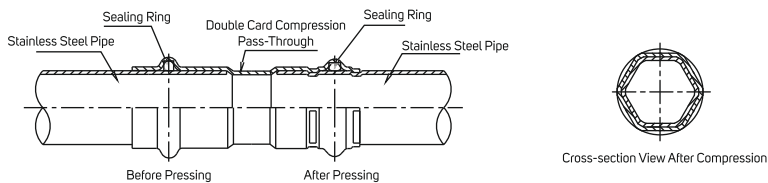


Convenient installation, which enhances the pull-out strength after connection, and does not solve the defects of aging resistance and insufficient sealing of a single seal ring.

GENERATION-3, SOUTH KOREA

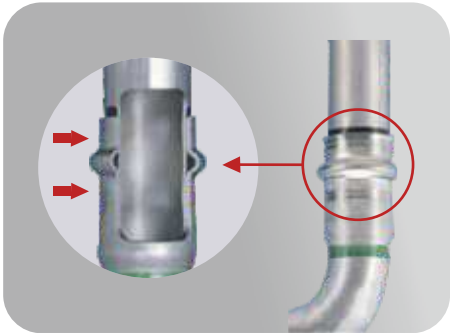


THE 4TH GENERATION OF STAINLESS STEEL PIPE CONNECTION TYPE

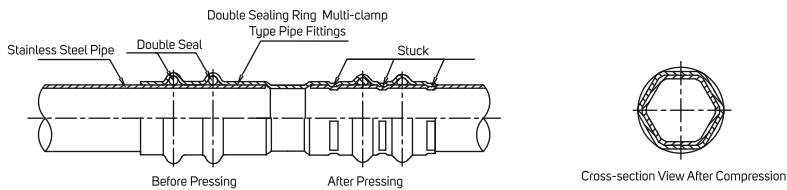


The installation is convenient, the tensile strength after connection is enhanced, and the defects of aging resistance and insufficient sealing of a single seal ring are not solved.

GENERATION-4, GERMANY

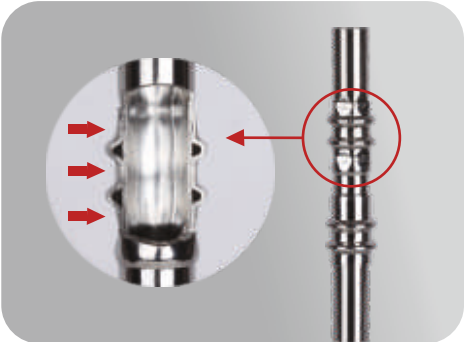


THE 5TH GENERATION OF STAINLESS STEEL PIPE CONNECTION TYPE



Convenient installation, completely solves the hidden danger of insufficient pull strength. The pull strength is three times that of the single card compression type. The design of the double seal ring truly achieves zero water leakage and long life.

GENERATION-5, UNITED STATE OF AMERICA



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 does not have. So the heat preservation treatment is needed at the construction site which brings 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 covered 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 is 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.

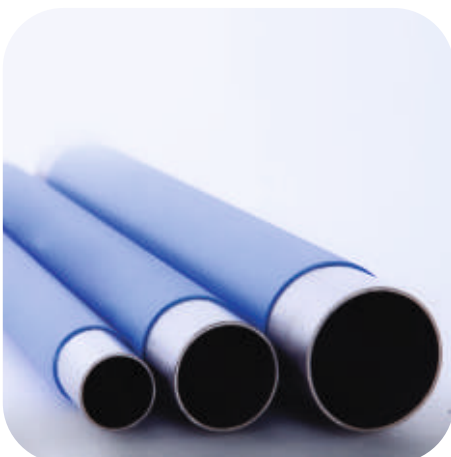
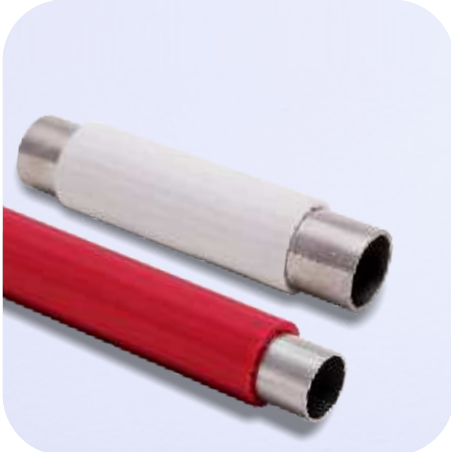
Coated tubes: Stainless steel tube

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, dew resistant and reduce the noise of liquor flow
- Prevent the growth of wall carcinoma, cement aging and raise of ceramic
- Resistant to corrosion and resistance to acids and bases.



Our Competencies of Stainless Steel Tube

Tube Production

Stainless steel tubes are manufactured at the highest level using autogenous (fusion) longitudinal gas tungsten welding processes. This process is characterized by the very narrow weld seam, the smaller heat-affected zone and the low weld seam height.

Inseam smoothing

With the latest equipment, mechanical smoothing of the weld root is optimally integrated into the production process. We hold a leading position in this area.

Deburring

After the pipes have been sawn to size, the burrs are removed from the cut edges by machine. This ensures perfect function without the risk of injury.

Grind

A defined appearance is created by the subsequent grinding of the pipes. This creates aesthetically pleasing surfaces and a consistent grinding pattern.

Industry know-how and material knowledge

We offer know-how and our extensive material knowledge as an experienced and well-connected manufacturer in direct dialogue. We provide advice to our customers from the early development phases.

Maximum process security

Production-related quality controls are well above the norm - and this goes from the worker self-inspection to the acceptance by the quality department.

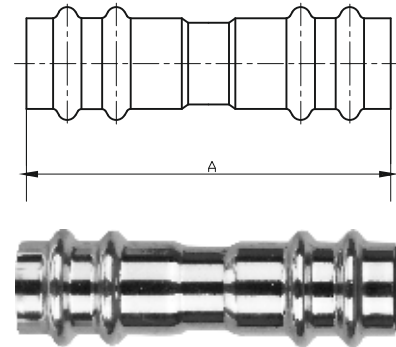


Nominal Size	Outside Diameter (mm)	Wall Thickness	Dry Weight kg/m	Wet Weight kg/m	Volume l/m	Tube Length mm	6m Tube Mass kg
DN15	15	1.0	0.351	0.484	0.133	6000	2.11
DN20	22	1.2	0.625	0.928	0.302	6000	3.75
DN25	28	1.2	0.805	1.321	0.515	6000	4.83
DN32	35	1.5	1.258	2.062	0.804	6000	7.55
DN40	42	1.5	1.521	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

Products

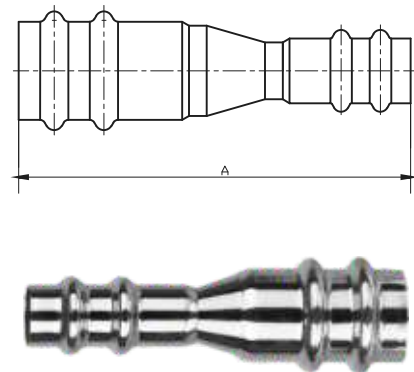
Straight Coupling

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



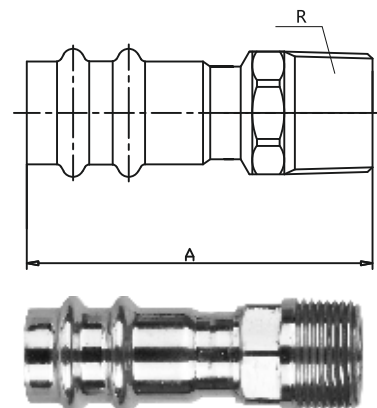
Reducer Coupling with Plain End

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



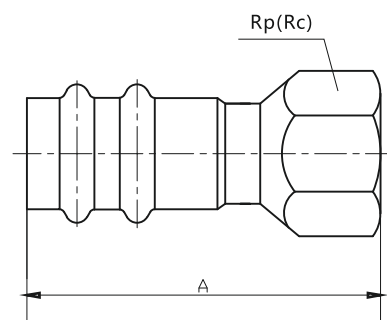
Male Thread Adapter

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



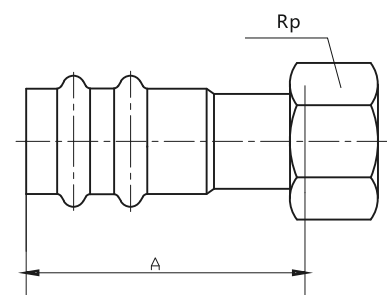
Female Thread Adapter

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



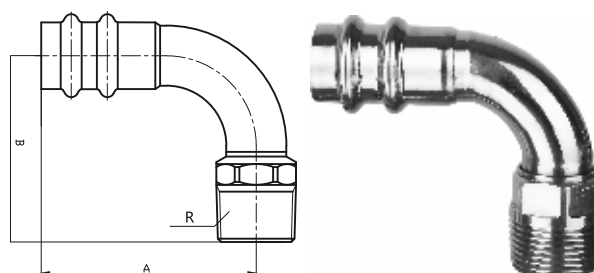
Union Adapter

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



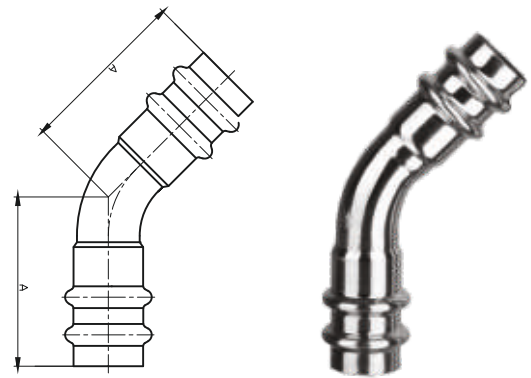
Male Elbow

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



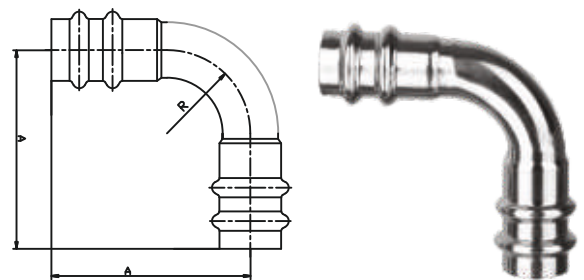
45 Degree Elbow

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



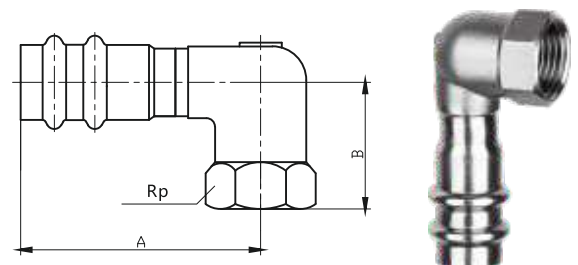
Equal Elbow

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



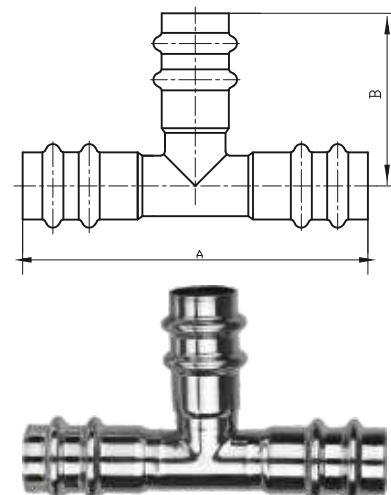
Female Thread Tangent Elbow

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



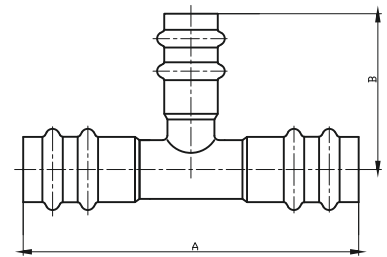
TEE

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



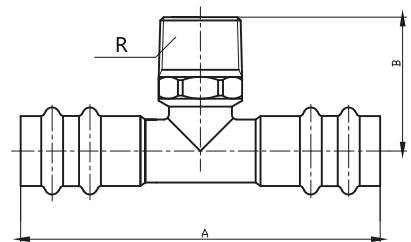
TEE Reducing

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



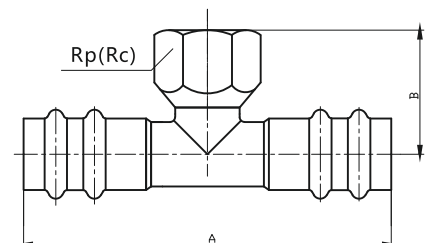
TEE (Male Threaded)

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



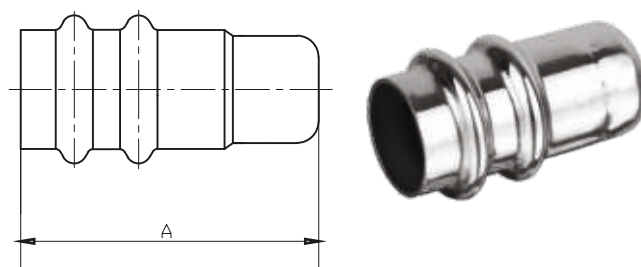
TEE (Female Threaded)

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



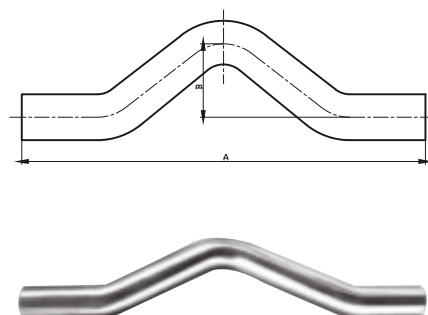
End Cap

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



IMPORTANT NOTES



1. When Using a Pressing Tool

- Ensure foreign substance, such as soil and sand, does not go into the operating part of the tool.
- Fit the jaw and cylinder correctly and insert all types of pin all the way.
- Protect the tool from shock and do not attempt to disassemble the tool arbitrarily.
- Power tools should get regular inspection every six months.



2. When Using a Rechargeable Gun

- Battery life can be shortened when the gun is used at a temperature below 0°C.
- After pressing, charge the battery immediately when red LED lamp flickers consistently.
- If the red LED light flickers three times and warning alarm rings three times at the same time, send the gun to a A/S center immediately.
- After about 50 times of pressing, stop using the gun and cool it down for 15 minutes.
- Lubricate locking pin and roller regularly with a small amount of oil. (Example : WD-50)
- You can extend the battery life by charging the battery frequently, instead of doing full charge or full discharge.
- Do not disassemble the battery from the gun arbitrarily. It can cause the battery to explode when the battery's safety and protective device gets damaged.



3. When Using a Pump

- Screw off the oil cap about two rounds.
- Replace hydraulic oil every three months. (Do not use nonstandard hydraulic oil)
- Do not control pressure control valve arbitrarily. (Abnormal pressing can cause leakage.)
- After you press ON button, wait until you hear a clicking sound, which indicates that pressing is complete. Do not press OFF button repeatedly while you wait for the clicking sound. (It can cause malfunction.)



4. When Conducting Hydraulic Test (Leakage Test)

- Test must be done using drinking water.
- After the test, completely remove the water from the pipe. If water get contaminated with foreign substance and dust caused during pipe installation remains inside the pipe, it can result in pipe corrosion. If water remains, it can also lead to freezing and bursting during winter time.
- Make sure that lagging material does not get wet. When the hydraulic test is done on the part where lagging material is used, corrosion can happen when lagging material is wet.
- Flush water out sufficiently after the pipe installation.
- Flush contaminated water out sufficiently with drinking water and discharge water completely.



5. Free Water Testing at Site (When using ground water)

- Water treatment: Conduct water quality test in advance. When the test result shows that the water quality does not meet the standard, perform proper chemical treatment. Additional care is needed when water having the high TDS (Total Dissolve Solids) and during the time of high temperature and humidity (from May to August) due to increased possibility.
- Draining and flushing: Water must be completely drained as soon as possible after hydraulic test. It is also crucial to perform sufficient flushing using drinking water.

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.



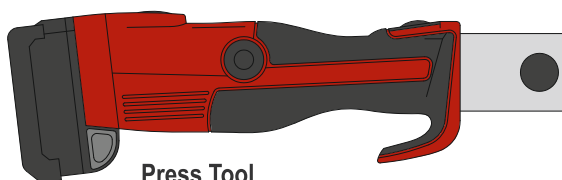
Marking the insertion depth: The tube must be fully inserted into the fitting until it reaches the tube stop in order to make a perfect joint. Marking insertion depth will ensure that any tube movement is detected, which is especially important if the joints are to be pressed at a later time.



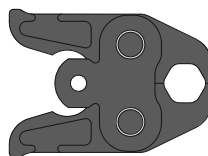
Assemble fitting on tube: To assemble the joint, the tube must be inserted into the fitting up to the tube stop. (Use the mark on the tube which was made earlier as reference). The pressing operation should only be undertaken when the tube reaches the tube stop.

Strength of Press Fitting

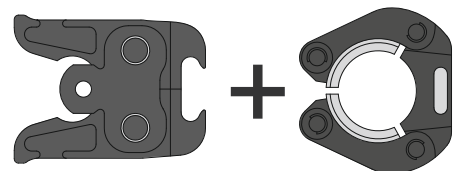
The press connection is made by inserting the pipe into the press fitting as far as the marked insertion depth. The connection is created by pressing, using an approved pressing tool. The longitudinal and compression closing character of the connection is clearly illustrated in under figures. Press fittings in dimensions 12-35 mm must be pressed with jaws, 42-108 mm must be pressed with pressing collars/chains. During the pressing process a deformation takes place on two planes. The first plane creates a permanent connection and provides mechanical strength through the mechanical deformation of the press fitting and the pipe. On the second plane the seal ring is deformed in its cross section and through its elastic properties, creates the permanently tight joint.



Press Tool

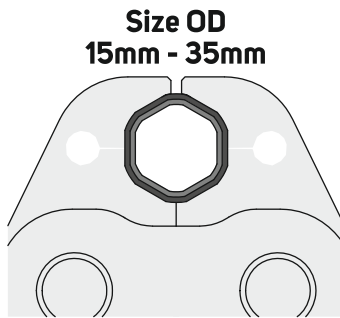


Press Jaw

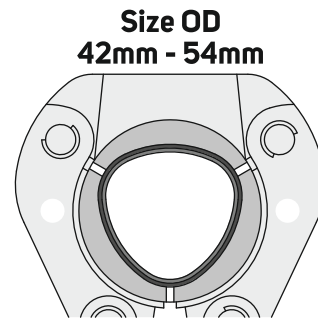


Adaptor Jaw + Press Collar

Above: Press Tools are fitted with an interchangeable jaw or, adaptor jaw and collar combination depending on the fitting material, system diameter and fitting press profile to be pressed. All must match for the press to be successful.



Profile



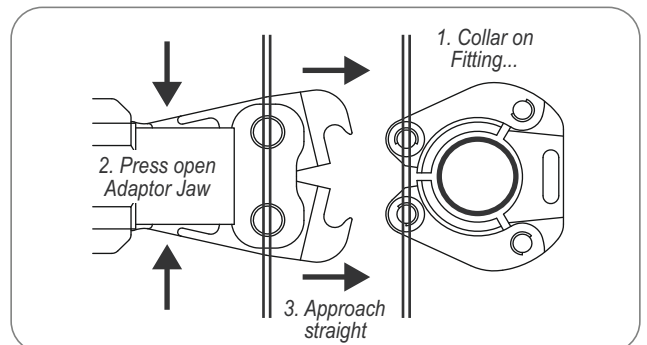
Press tool & jaw: Press tools are to be equipped with vv-shaped profile jaw attachments or a pressing jaw which corresponds to the diameter of the fitting being pressed. Retract the lock pin, position the jaw in the tool head and fully engage the lock pin.



Attach press collar: Use the VV-shaped profile pressing collar which corresponds to the diameter of the fitting being pressed. Open the jaw and position the jaw around the fitting.



Position press jaw: Squeezing the two ends together to open the jaw. Position the jaw over the fitting, creating a perfect fit with the internal channel of the jaw around the toroidal seat of the fitting. Release the jaw and check for alignment.



Connect press tool: Retract the lock pin, engage the adaptor and fully engage the lock pin.



Press joint: Initiate the pressing procedure by pressing the start button for approximately 3seconds. 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



Press joint: Squeeze the trigger to initiate the press cycle, holding it down for the full duration of the press cycle. The cycle must not be interrupted, and the tool will alert you (by beeping or the LED coming on) if the joint is unsuccessful. Press the reset button if the hydraulic ram is interrupted mid-cycle to manually override the automatic reset function.



CUT



DEBURR



JOIN



MARK



INSPECT



PRESS



CHECK

DONE...



Corporate Office

AMERICAN PACIFIC MFG INC.

260th Ste 212, Seattle, Washington USA 98030

Tel: + 120 69285372, Fax: +120 608901080

Email: contact@rhinoxusa.com