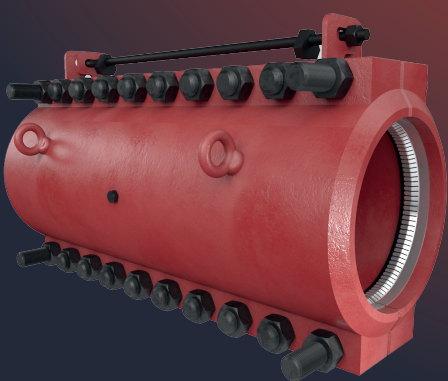




NOTRON PIPELINE

SPLIT REPAIR CLAMP

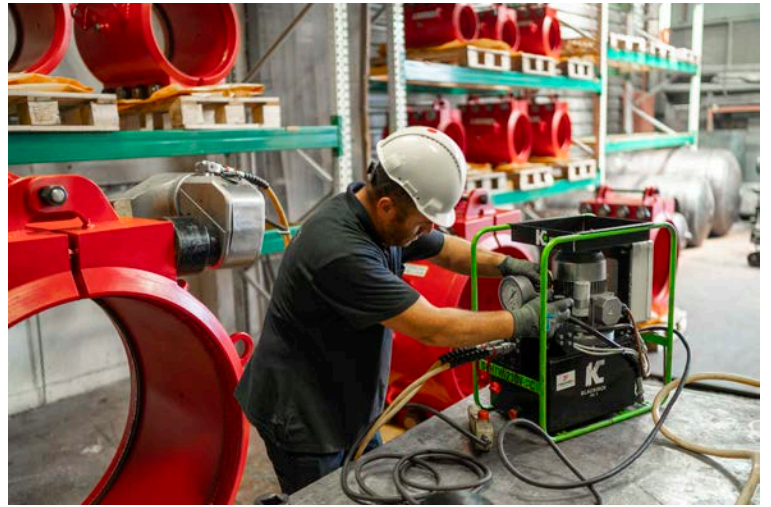


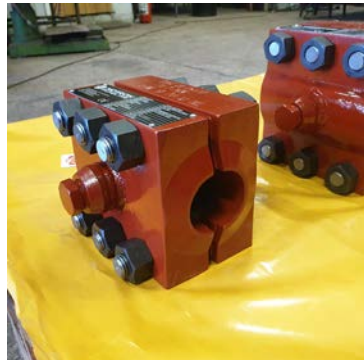
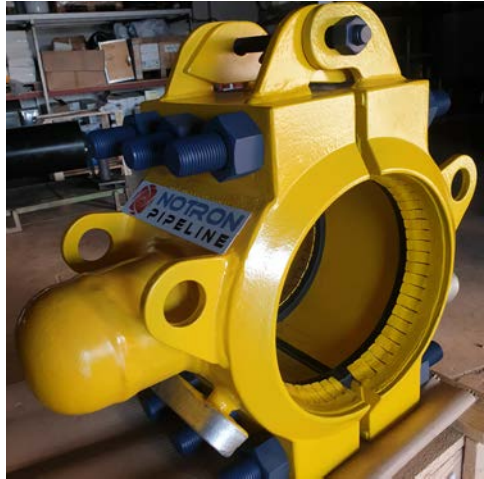
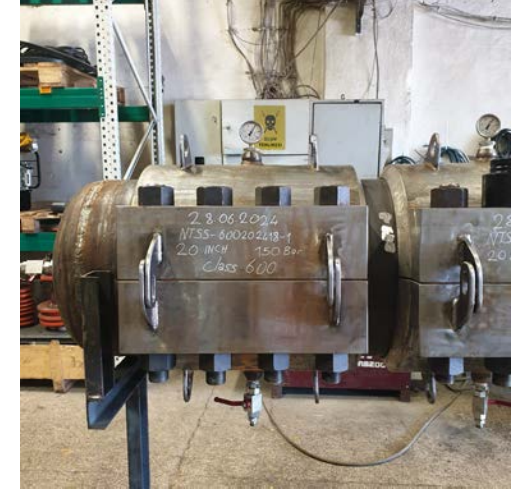
+90 541 358 5121

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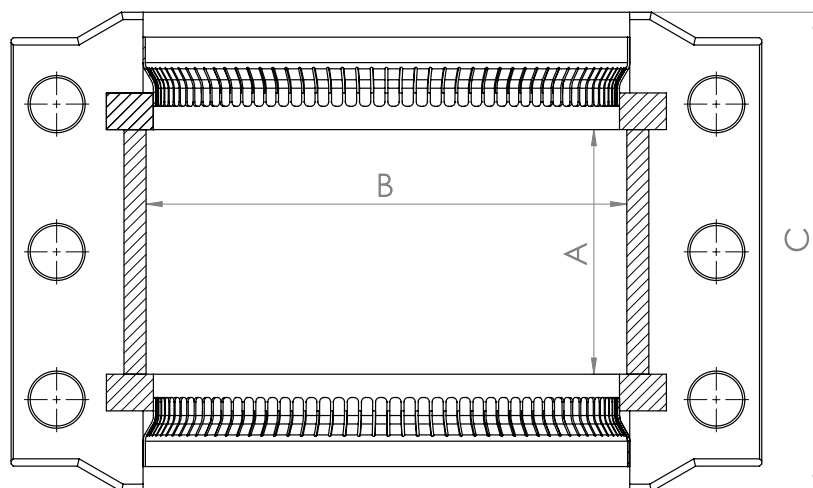


Established in 2008, our company started to design and produce equipment for oil and natural gas pipelines in the energy sector. It is the only company in Turkey that can respond to "PIG" production and design. With this capability, we compete with international companies in the Blue Stream and Baku-Ceyhan pipeline projects.

With our engineer staff, we able to produce innovative solutions. Alternative to our PIG design and manufacturing for oil – gas pipelines, we also manufacture pipeline coupling elements connection equipment with high quality standards.

Additionally, we produce high quality Electronic Utility Markers, which are used globally for marking critical infrastructure locations such as telecommunication, fiber-optic, power transmission lines/cables, water or sanitary pipes, natural gas pipes underground. As Notron Pipeline, we continue to produce higher quality products in line with the demands of the energy sector, telecommunication infrastructure sector and maintenance services.



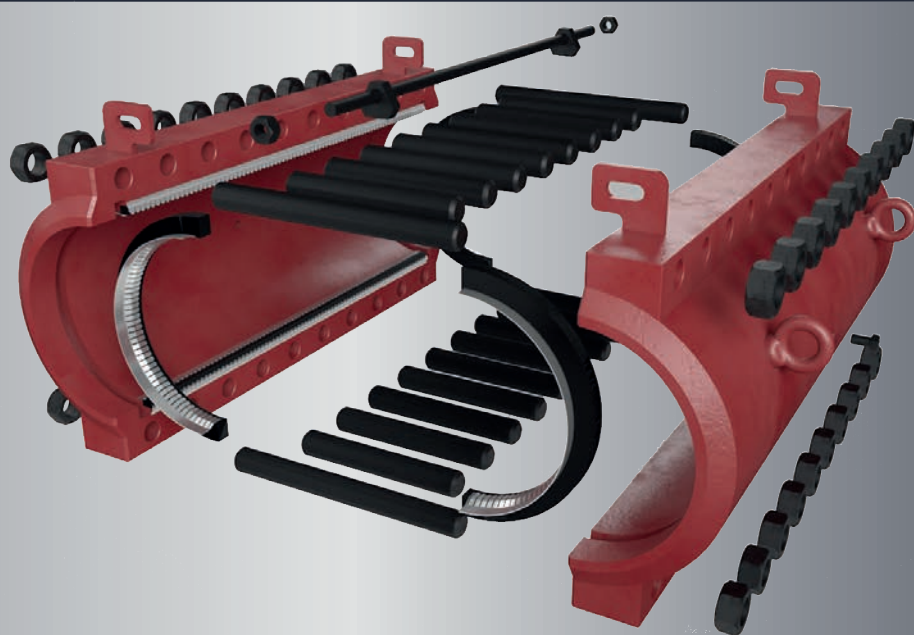


NOTRON Split Repair Clamp can be used to seal leaks or strengthen due to corrosion or damage on onshore and subsea pipelines that are used for high pressure natural gas, crude oil or water. All of our products are designed for quick, easy and safe to installation. The fitting bolts are tightened to the required torque values to ensure leak is sealed while the pipeline is inline. Clamps can be removed and stored for future use, and may require reconditioning. The clamps can be welded permanently to the pipe during flow.

All products are tested according to standards of 1.5 times the required pressure. To avoid damage of packing steel girder rings are mounted. Clamps are available for different working pressures, please contact us for requests and stock info.

**STANDART LENGTH
NOTRON SPLIT REPAIR SLEEVE
SPECIFICATIONS
CLASS400 1000MAOP**

API Pipe Sizes	Inside Diameter "B"	Inside Length "A"	Overall Length "C"	Approx. Weight KG
1-1/2	2-7/8	5-1/2	9	23
2	3-1/8	5-3/4	9	24
2-1/2	3-3/8	5-1/4	8-1/2	30
3	4	6	10	39
4	5	5	9	50
6	7-1/8	5	10	92
8	9-1/8	5	10	106
10	11-1/4	5-1/2	11	195
12	13-1/4	8	14	272
14	14-1/2	8	14	330
16	16-1/2	8	14	361
18	18-1/2	8	14	390
20	20-1/2	8	14	415
22	22-1/2	8	14	490
24	24-1/2	8	14	510
26	26-1/2	8	14	515
28	28-1/2	8	14	530
30	30-1/2	8	14	832
32	32-1/2	8	14	860
34	34-1/2	8	14	905
36	36-1/2	8	14	975
38	38-1/2	8	14	990
40	40-1/2	8	14	1010
42	42-1/2	8	14	1065
48	48-1/2	8	16	1430



● Design Features and Methods

● Safety

According to ASME Section VIII Div.1, the clamps are fully compensating pressure vessels that have undergone hydrostatic testing up to 1.5 times the rated working pressure. Depending on size and customer needs, all clamps include a 1/2" or 1" NPT vent port.

● Design and Industry Standards

According to ASME Section VIII Div.1, the clamps are fully compensating pressure vessels that have undergone hydrostatic testing up to 1.5 times the rated working pressure. Depending on size and customer needs, all clamps include a 1/2" or 1" NPT vent port.

● Installation and Maintenance

All split repair sleeves are easily field repairable, including complete seal replacement, and are made to be installed using the most widely used equipment.

Economy

The newest technology is used in the design of Split Repair Sleeve Clamps, which optimizes materials and design processes and reduces weight.

● Suitable for chemical & corrosive environments

This kind of split repair sleeve is intended for usage in hydrocarbon-containing hydrogen sulfide (H₂S) environments. The body material will adhere to NACE MR0175 for chemical and corrosive services.

● Certification & Testing

- Non destructive testing (NDT)
- 100 % ultrasonic testing of vent plug welds
- Hydrostatic test report 3rd Party

Standard Body Material

- ASTM A350 Gr. LF2
- ASTM A216 Gr. WCC
- ASTM A516 Gr. 70
- Standard bolting is ASTM A193 Gr. B7with ASTM A194 Gr. 2H nuts

● Split Repair Sleeve Material Specifications

ANSI pressure classes 400, 600, 900 and 1500

Design based on: ASME Sec. VIII, API 6H , ANSI B31.4, B31.8 and Split Sleeve Software 3S)

Design control and stress analysis with Finite Element Package

Body materials: A216 WCC, A352 LCC, A516 Gr.70 (Suitable for corrosive services)

Stud material: A193 Gr. B7 Nut material: A 194 Gr. 2H

Coating: Red Epoxy Polyamide, standard or Marine epoxy The split repair sleeves will be fitted with the best NBR or VITON elastomer seal, which is precisely compatible with the line fluid and room temperature.

NBR temperature range is from - 20 °C to + 80 °C

HNBR temperature range is from - 20 °C to + 150 °C

VITON temperature range is from - 20 °C to + 200 °C

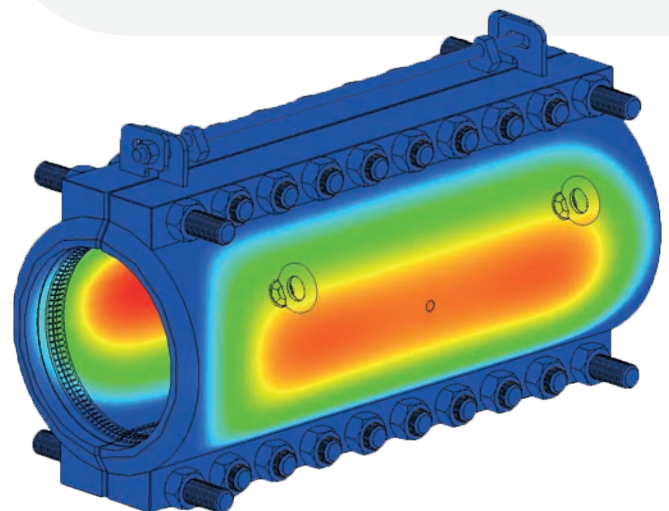
Gaskets do not require special tools for replacement.

Girder rings can be installed upon clients request.

Double Row Sealing design is also available. The split sleeves will be fitted with the best NBR or VITON elastomer seal, which is precisely compatible with the line fluid and room temperature.

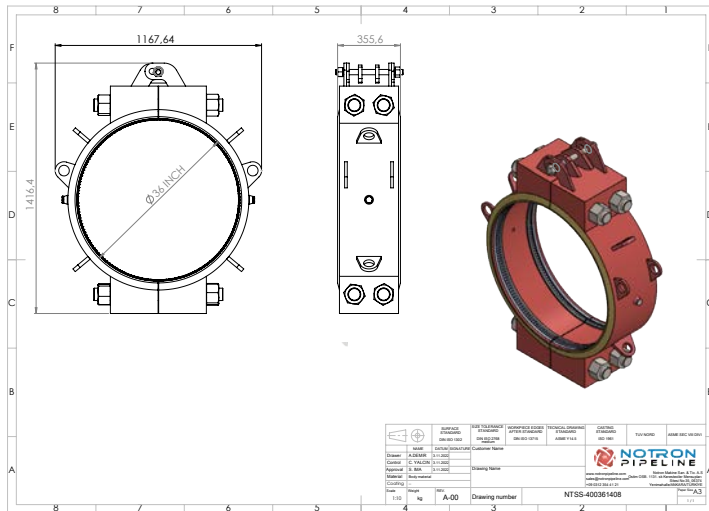
● Weldable split repair sleeves

After installation, all clamps can be fully prepped for welding (welding process is provided). When the sleeves are being welded to the pipe, heat insulators that run parallel to the seals shield them from heat. Longer clamps are available upon

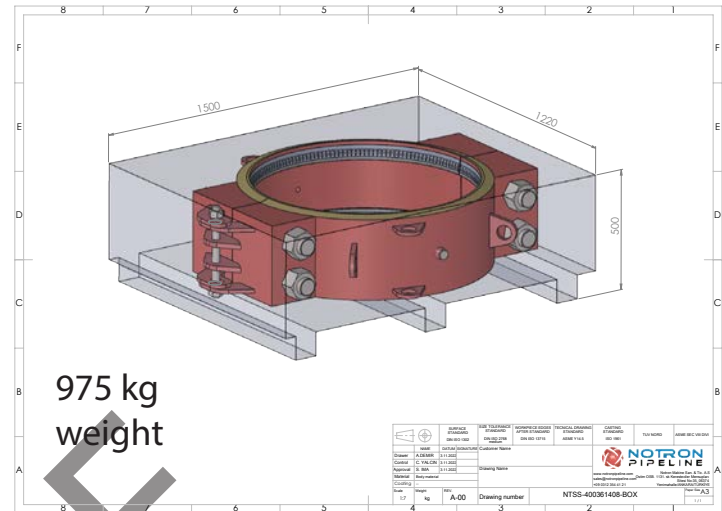


NOTRON PIPELINE SAMPLE

TECHNICAL DRAWING



PACKING DIMENSIONS



975 kg weight

TECHNICAL SPECIFICATIONS

PRODUCT CODE : NTSS-400361408
CLAMP TYPE : SPLIT REPAIR SLEEVE
PIPE SIZE : 36"
TOTAL LENGTH : 14"
BETWEEN SEALS : 8"
CLASS : #400
MAOP : 1000
BODY : ASTM SA 216 GR WCC
BOLTS : ASTM A 193 Gr. B7
NUTS : ASTM A 194 Gr. 2H
SEALS MATERIAL: VITON
TEMP. RANGE : 18°F TO 400°F
ANODES : -
HINGES : YES
LIFTING LUGS : YES
BODY COATING : EPOXY COATING RED 100 MIC.
DESING : ASME Sec. VIII DIV. 1,API6H
VENT PLUG : 1" NPT
LIFTING HOOK : 4 PCS (P355 NL2)
HINGE ASSEMBLY: 1 SET

TESTING

100% MPI of vent plug and hinge weld. (Fillet)
100% U.T of Body Control. (Fillet)
TEST PRESSURE; Hydrotest Strenght Pressure,
Desing press.(64,7bar)x1,5(minimum 2hours)(OPTION-

CERTIFICATION

HEAT NUMBER; HEAT NUMBER (3.1) SHALL BE PUCHED ON STIFFENER/SHELL
STRENGT TEST; HYDROSTATIC TEST (OPTIONAL)
WELDING TEST; (MAGNETIC,ULTRASONIC,ETC)
METARIAL TEST;
CE CERTIFICATION;

SPECIAL NOTES

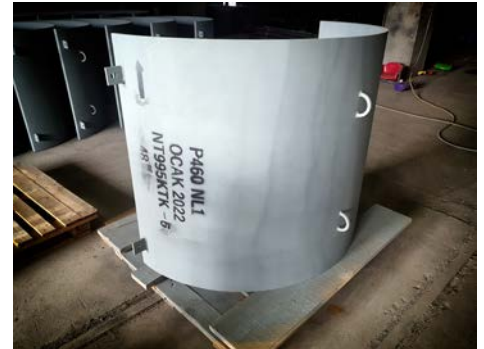
The repair clamp will ve shipped in a wooden case
The products have a 2-year warranty





NOTRON PIPELINE

HALF PIPE SLEEVE



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www.notronpipeline.com

Ostim OSB 1131. Cad. No: 35 Ostim Yenimahalle / ANKARA / TURKEY

The purpose of NOTRON Half Pipe Sleeves is to strengthen pipes that are corroded, dented, or broken. They are made specifically for each application to fit the pipeline's outside diameter. For pressure containment, the sleeve can be welded circumferentially (Type B) or left unwelded (Type A), but it must be welded longitudinally.

Half Pipe Sleeves are made to meet or exceed ASME PCC-2, ASME B31.4, and ASME B31.8 specifications. Customers can give NOTRON the design factor (class location) and design pressure of the pipeline, and NOTRON will determine the necessary thickness, or they can select the wall thickness and material yield strength.

To help with the longitudinal butt welds, 0.063" (1.6 mm) thick backing strips are included with every half pipe sleeve. Customers can select between a normal (non-grooved diagram A) or grooved (diagram B) Half Pipe Sleeve to hold the backing strips because each one is custom made.

Standard Body Materials:

- A-516 Gr.70
- P355 NL1-NL2
- P490 NL1

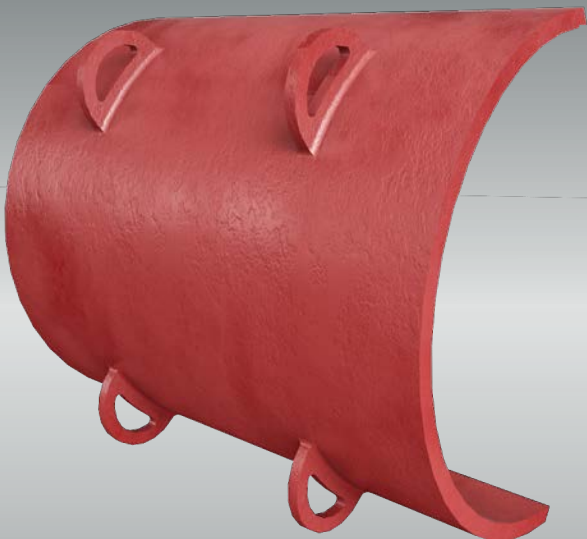


Diagram A

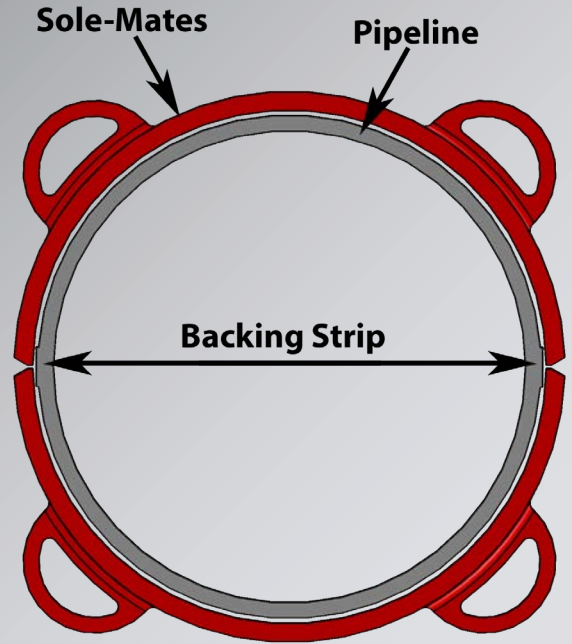
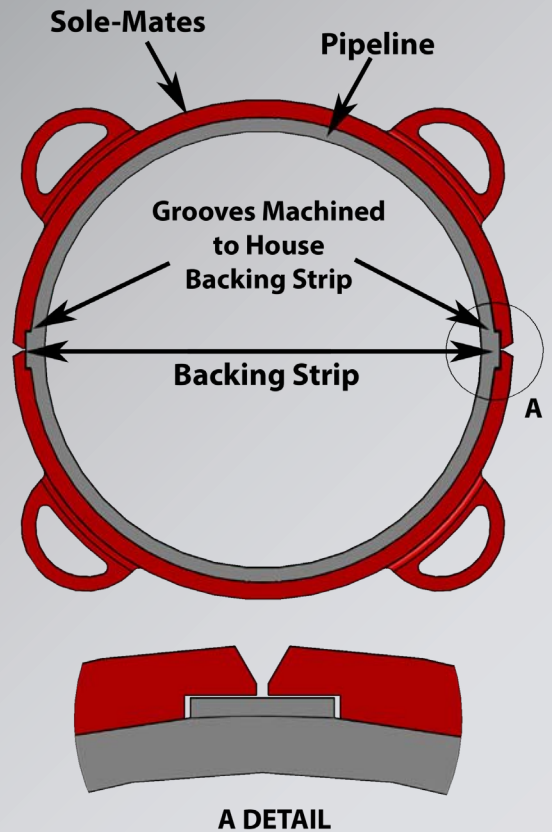


Diagram B





NOTRON PIPELINE

Flange Repair Collar



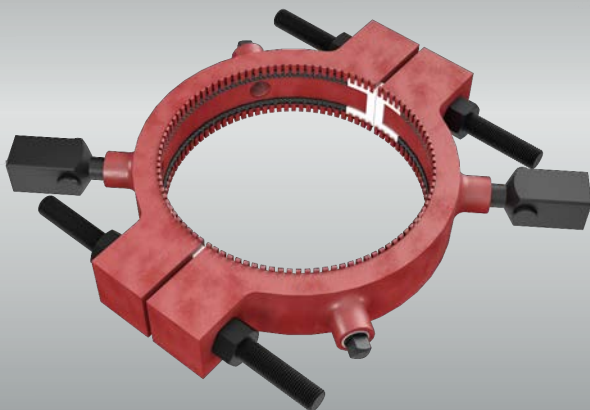
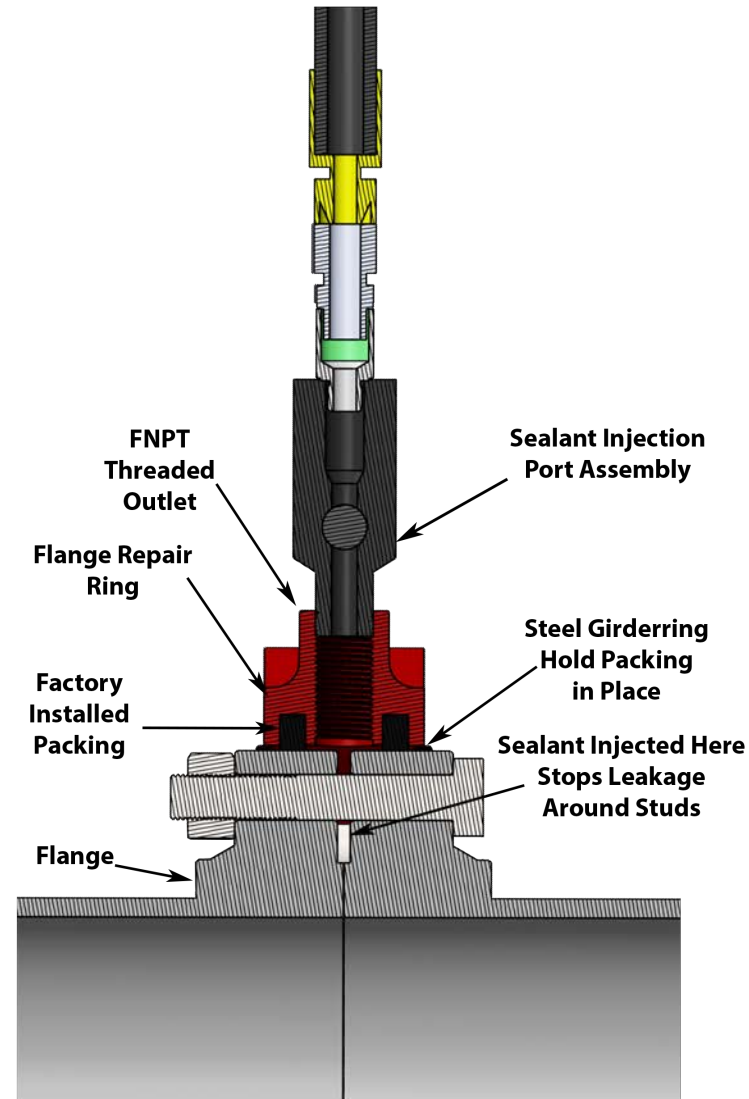
The NOTRON Flange Repair Collar covers the leaking gasket on the outside diameter of the flange set. By doing this, expensive shutdowns can be avoided while the pipeline is still operational. Flange repair collars are made using materials that have been permitted by the pressure vessel code, such as SA-A516 Gr. 70, SA-A193 Gr. B7, and SA-194 Gr. 2H, in compliance with ASME Section VIII. On request, additional materials are available.

Once the Flange Repair Collar is torqued to the proper specification, the leak will follow the path with the least resistance to the flange bolts. NOTRON resolves this issue by injecting sealant through ports into the gaps between the rough injection flange bolts. NOTRON provides a variety of packaging materials and sealing solutions to assure compatibility with pipeline contents. Important: Because of the nature of sealants and/or the specific application, a leak may resurface over time. As such, the NOTRON Flange-Repair Collar should be regarded as a temporary repair. If a leak develops, more sealant may need to be injected into the NOTRON Flange Repair Collar.

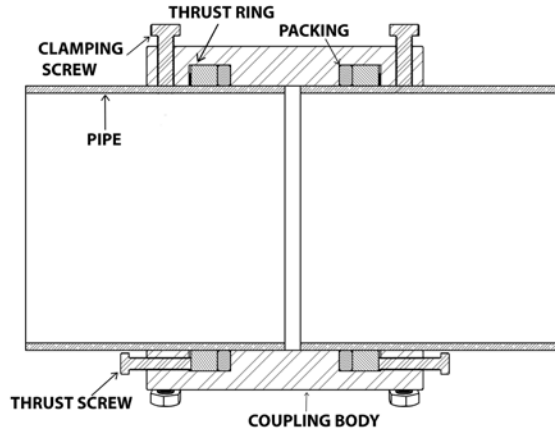
Materials: A216 ST52

The Flange Repair Collar is normally available in conventional ASME B16.5 flange sizes 1/2" through 24", 150#, and 300# classes. Custom Flange Repair Collars can be created for practically any application outside of this range.

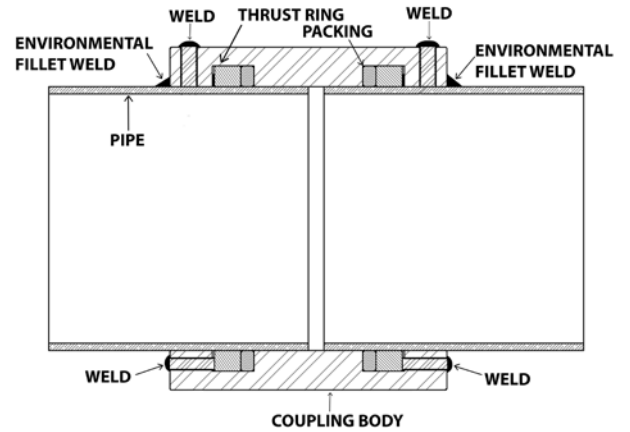
Flange Repair Collars can be withdrawn on the next scheduled turn-around, reconditioned, and returned to customer stock to be ready for the next emergency.



BEFORE WELD-



AFTER WELDING



A safe and efficient method of joining pipes that include crude oil, gasoline, LNG, jet fuel, asphalt, steam, chemical processes, and other items is NOTRON Weld-On Steel Pipe Coupling, which allows flow to be restored right away.

Pipe ends don't need to be specially prepared. For installation cut the pipe and slide on the Weld-On Steel Pipe Coupling. Leakproof seals are engaged and the pipe is linked once the clamping and thrust screws are fully torqued.

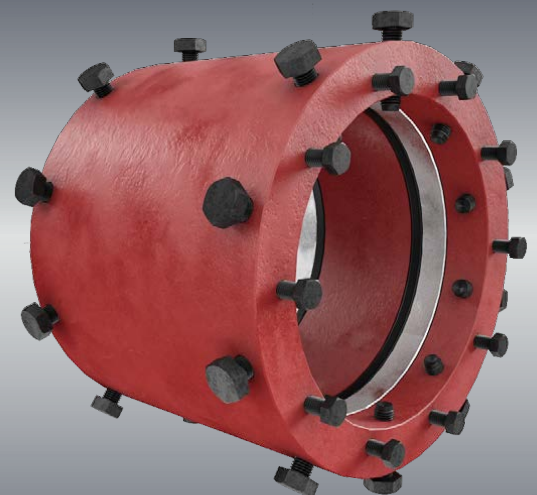
Depending on the MAOP of the Pipe Not Anchored or Pipe Anchored rating that must be met, Weld-On Steel Pipe Coupling can either be welded or leave with the its screws torqued. For suggested anchored and unanchored pressures as well as welding requirements, consult the chart in the installation instructions. The pipeline may be under pressure if welding is necessary.

Pipes are joined using Weld-On Steel Pipe Coupling without the need for specific pipe end preparation. Standard diameters ranging from 1-1/2" to 48" are offered. To meet customer specifications, unique lengths, pressures, diameters, and sizes can be created. Depending on the temperature and the material passing through the line, different packing and sealing materials are available, although Buna-N is the standard.

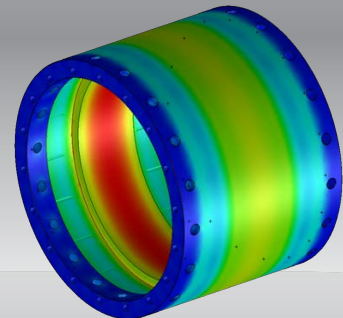
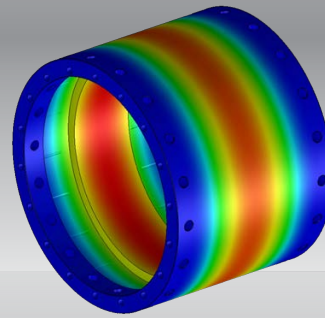
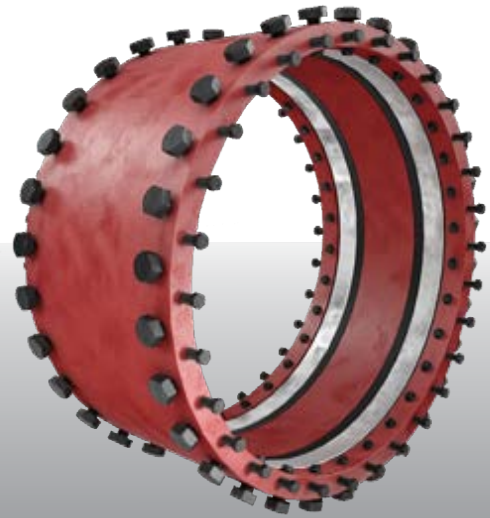
Common Weld-On Steel Pipe Coupling has a single row of clamping screws. More rows of clamping screws or a NOTRON Clamp-Ring may be utilized in situations where high end-pull loads are a problem and welding is not practical.

NOTRON PIPELINE MAXIMUM ALLOWABLE OPERATING PRESSURE - MAOP

API Pipe Sizes	out Dimension	Length Between Packing	Approx Overall Length	Pipe Anchored or welded	Pipe Not Anchored	Approx Wt. Lbs.
1-1/2	3-1/4	2	6-13/16	2000	2000	12
2	3-3/4	2	6-13/16	2000	2000	13
2-1/2	4-1/2	2	6-13/16	2000	1848	14
3	5	2	6-13/16	2000	1247	16
4	6	3-1/8	8-1/2	2000	1131	30
6	8-1/2	3-5/8	9	2000	696	60
8	11	3-3/4	10	2000	513	105
10	13	4-1/8	10-1/2	1500	396	120
12	14-7/8	4-1/8	10-1/2	1200	328	140
14	16-1/2	4-5/8	14	1200	311	225
16	18-1/2	4-5/8	14	1200	238	250
18	21	5-9/16	16	1200	251	395
20	23-1/2	5-9/16	16	1200	203	520
22	25	5-9/16	16	1200	252	475
24	27-1/8	5-9/16	16	1200	212	540
26	29	5-9/16	16	1000	180	555
28	31-1/8	5-9/16	16	1000	155	635
30	33-1/8	5-9/16	16	1000	135	665
32	35-1/4	5-9/16	16	1000	159	740
34	37-3/8	5-9/16	16	1000	140	815
36	39-1/2	5-9/16	16	1000	125	895
38	41-3/8	5-9/16	16	900	126	905
40	43-1/4	5-9/16	16	800	114	915
42	45-3/4	5-9/16	16	960	103	1115
46	49-1/8	5-9/16	16	650	101	1000
48	51-1/8	5-9/16	16	600	92	1045



- **PIPE NOT ANCHORED:** A joint where the ends of the pipe may move in response to internal or external influences, including ground movement, undersea currents, temperature expansion and contraction, internal pressure, or any combination of these. The working pressure for "Pipe Not Anchored" is based on the wall thickness of Schedule 80 pipe and heavier for sizes 1-1/2" through 3". For sizes 4" and larger, it is based on the wall thickness of Schedule 40 or 1/2", whichever is less.
- When exposed to these similar stresses, a pipe-anchored junction prevents the pipe ends from moving. It can be regarded as an anchored junction if the NOTRON Weld-on Steel Pipe Coupling is welded or an appropriate NOTRO Clamp-Ring is utilized.
- Before deploying Weld-on Steel Pipe Coupling clamps, the findings of the analysis conducted in the NOTRON Engineering department are tested, and every option is assessed. Our production departments put it into production once the testing yield positive findings. Following production, actual testing are conducted once again and made ready for your usage.



Standard Body Material

- A350 / A516
- ASTM A106 Gr. C
- ASTM A105/A350 Gr. LF2

Options

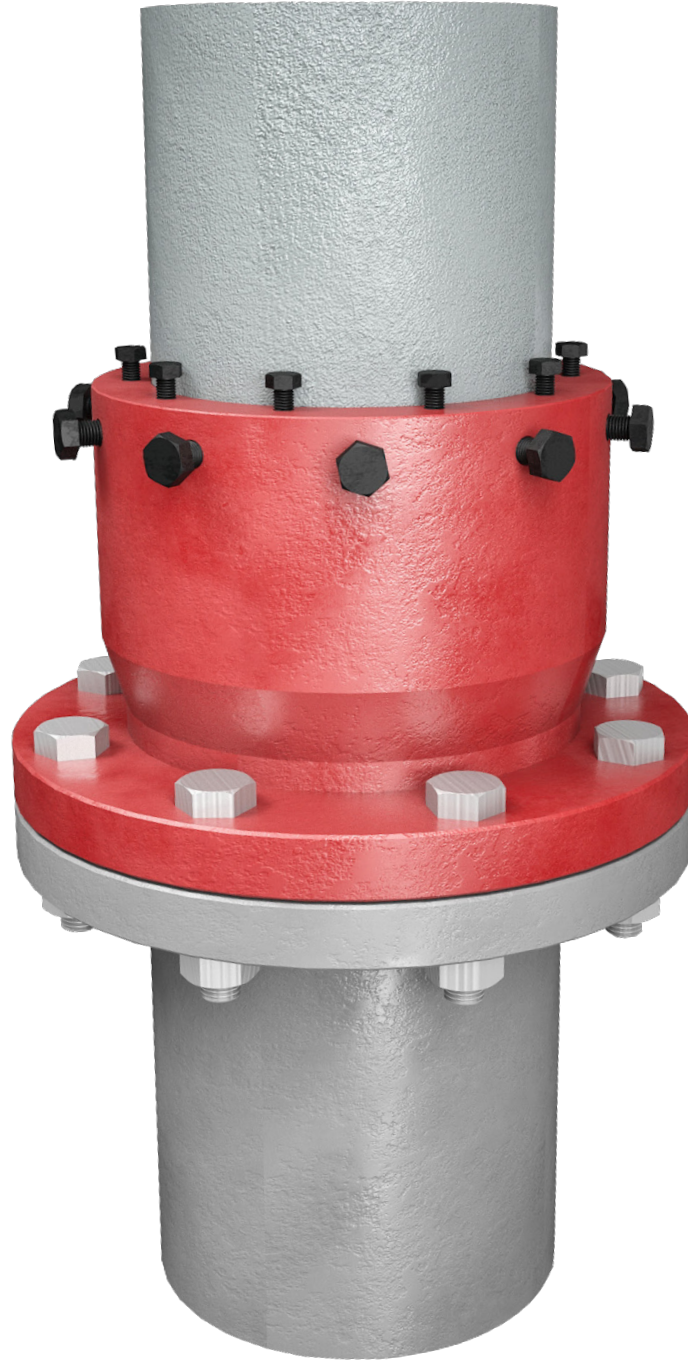
- Marine epoxy paint for corrosion protection
- NACE MR0175/ISO 15156 compliant mate-



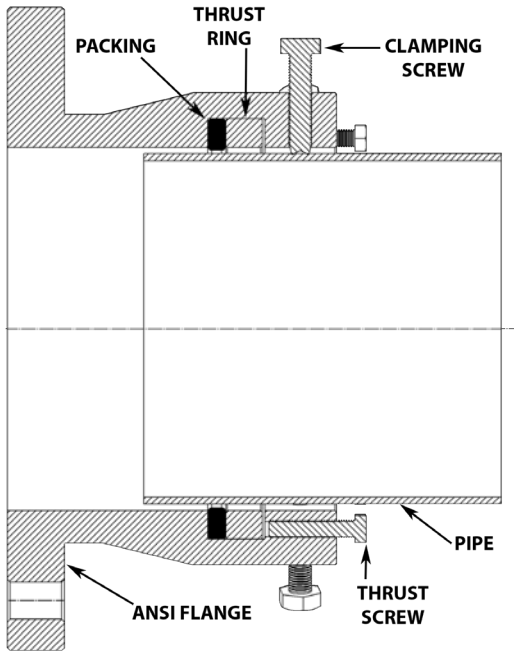


NOTRON PIPELINE

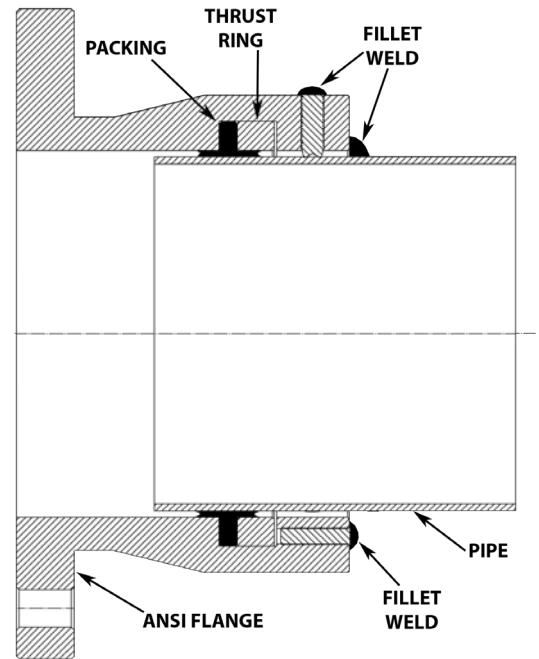
FLANGE COUPLING



BEFORE WELDING



AFTER WELDING



Unless the customer specifies otherwise, the NOTRON Flange Coupling is a mechanical fitting that doesn't need to be welded. In weld-hazardous locations, they are especially helpful for creating tie-in connections for prefabricated expansion and rework projects. For many applications, including difficult-to-reach areas like overhead pipelines, conduits, tunnels, tight manifolds, or dangerous sites, NOTRON Flanges are simple and secure to install. Applications involving thin walls require specific installation guidelines. For more information, get in touch with NOTRON. Standard sizes for NOTRON Flanges range from 1.5" to 48"; ASME classes 150 through 600 are offered. On request, special sizes and pressures can be obtained.

NOTRON MAXIMUM WORKING PRESSURE -20° F TO 100° F

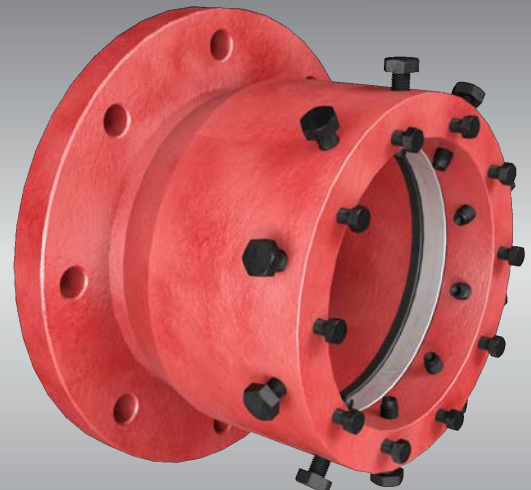
API PIPE SIZE	PIPE ANCHORED				PIPE NOT ANCHORED			
	ANSI 150	ANSI 300	ANSI 400	ANSI 600	ANSI 150	ANSI 300	ANSI 400	ANSI 600
1.5"	285	740	990	1480	285	740	990	1480
2"	285	740	990	1480	285	740	990	1480
3"	285	740	990	1480	285	740	990	1247
4"	285	740	990	1480	285	740	990	1131
6"	285	740	990	1480	285	696	696	696
8"	285	740	990	1480	285	513	513	513
10"	285	740	990	1480	285	396	396	396
12"	285	740	990	1480	285	328	328	375
14"	285	740	990	1480	285	311	311	350
16"	285	740	990	1480	238	238	238	268
18"	285	740	990	1480	251	251	251	282
20"	285	740	990	1480	203	203	203	229
24"	285	740	990	1480	212	212	212	247

Standard body materials:

- A350 / ST52 / A216
- ASTM A106 Gr. C
- ASTM A105
- ASTM A350 Gr. LF2

Options:

- Marine epoxy paint for corrosion protection
- NACE MR0175 / ISO 15156 compliant materials





NOTRON
PIPELINE

Rise Weld-on Repair Coupling



For fast Installation

The Rise Weld-on Repair Coupling is socket welded to the new replacement riser on the surface before being lowered into water. A diver cuts the old riser, inserts the new fitting over the cut pipe, and tightens the clamping and force screws to create a leak-proof seal without welding.

Weld-on Repair for NOTRON Rise Couplings make it easier to replace underwater risers on or off-shore gas and oil lines without the need for underwater welding. To establish a seal for high pressure and to withstand excessive end-pull, this fitting incorporates extra clamping and force screws.

Applications involving thin walls require specific installation guidelines.

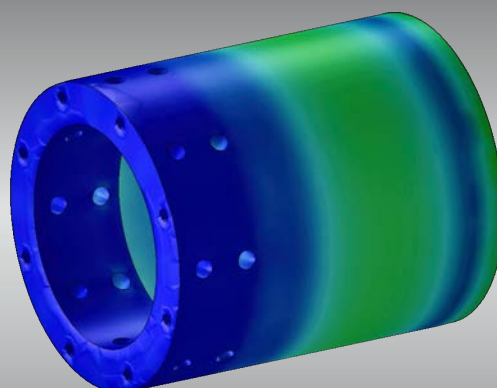
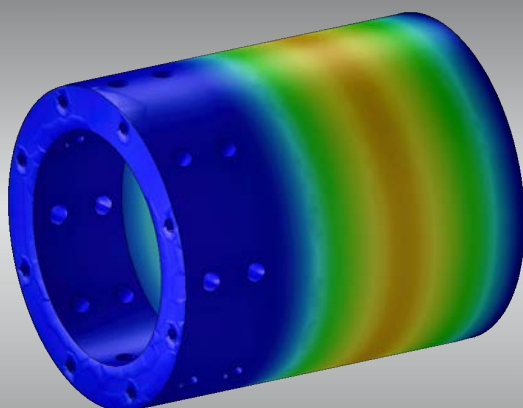
Standard sizes 1 1/2" through 48" are available. On request, special lengths, pressures, diameters, and sizes are available.

Buna-N packaging is common. Other packings, such as silicone and Viton, might be requested.

- Standard body materials:
 - ASTM A106 Gr. C or ASTM A105/A350 Gr. LF2
 - ST52
- Options:
 - Marine epoxy paint for corrosion protection
 - NACE MR0175/ISO 15156 compliant materials

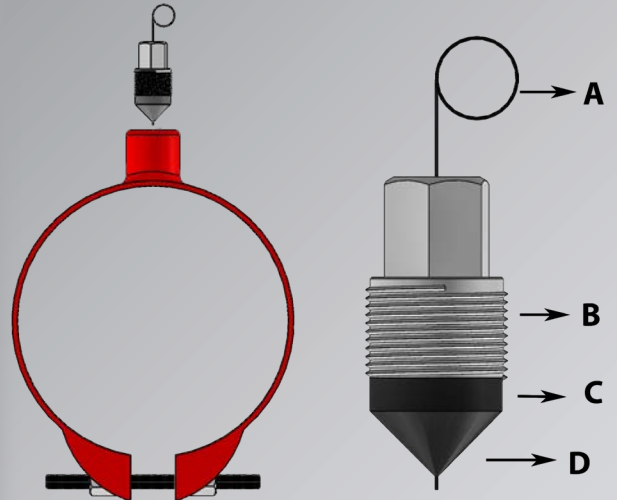
NOTRON PIPELINE RISER WELD-ENDS TABLE

API Pipe Sizes	O.D.	Approx. Over-all length	Pipe Anchored Or Welded	Pipe Not Anchored	Approx. Wt. Lbs.
2"	3 3/4"	10 3/4"	2000 Psi	2000 Psi	20 lbs.
2 1/2"	4 1/2"	10 3/4"	2000 Psi	2000 Psi	28 lbs.
3"	5"	10 3/4"	2000 Psi	2000 Psi	30 lbs.
4"	6"	10 3/4"	2000 Psi	2000 Psi	40 lbs.
6"	8 1/2"	10 3/4"	2000 Psi	1522 Psi	65 lbs.
8"	10 3/4"	18"	2000 Psi	1437 Psi	160 lbs.
10"	13"	18"	1500 Psi	694 Psi	205 lbs.
12"	14 7/8"	18"	1200 Psi	575 Psi	225 lbs.

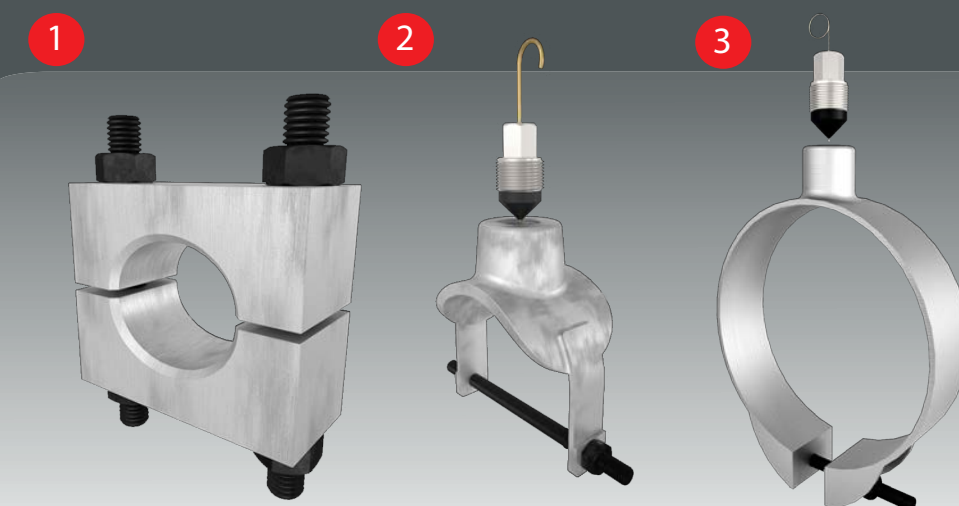


- Using the NOTRON Pinhole Repair Clamp to stop high pressure pithole leaks is easy and reasonable because it is lightweight and manageable. The Smith+Clamp is the tool you want to use in dark areas or on submerged lines because of its unique pilot pin, which allows you to find pit-hole leaks even if they are invisible. By applying pressure directly to the sealing cone instead of using draw bolts, the force screw lessens the risk of caving in corroded pipe. As long as the pipeline is operational, this product is usable.
- Available in standard sizes 0.5" through 48"; 2000 maop. Custom sizes available upon request.
Material: Stainless Steel 304/316. Carbon steel 516
- Sample (1) - 0.5"-1.5" are split style with a PTFE gasket and mild carbon steel body with 193 B7 studs.
- Sample (2) - 2" & 3" are saddle style.
- Sample (3) - Sizes 4" and larger are band clamp style
- The maximum allowable working (maop) pressure of a NOTRON Smith-Clamp is based on a 1/8" diameter pit-hole. Larger holes, up to 1/2" diameter, can be sealed at reduced pres-

TECHNICAL

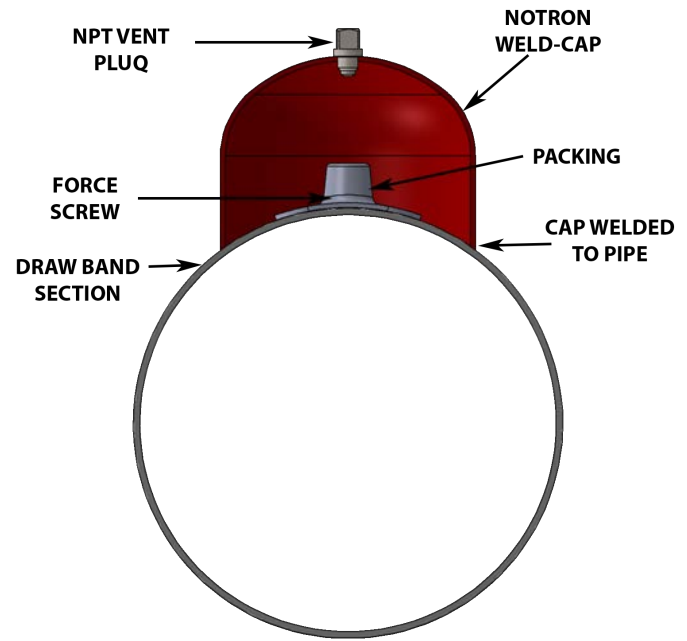


- A.** Pilot pin (1/16" diam. stainless steel wire). Goes down through center of force screw and cone, locates hole, guides cone point (D) to trouble spot.
- B.** Steel packing force-screw. Turned with wrench, it forces point of cone into leaking hole. Additional wrenching pressure attens cone into a disc shape.
- C.** Thrust washer. Permits force-screw (B) to turn without rotating cone.
- D.** Pointed cone. Serves as leak packing. Pressure rating up to 2000 maop working pressure, depending upon leak area and temperature.



Use with the Pinhole Repair Clamp for a permanent

For a secure and long-lasting welded pipe repair while the line is operating, the NOTRON Weld Cap is utilized in conjunction with the NOTRON Pinhole Repair Clamp. The Weld-Cap satisfies the most recent DOT and pressure vessel pipe specifications and is made to withstand operating pressures of up to 2000 maop. Standard pipe sizes range from 4" to 48". On request, special sizes are available.

**Standard Body Materials:,**

- ASTM A105
- ASTM A216
- ASTM A516 Gr. 70
- ASTM A234 Gr. WPC





NOTRON PIPELINE

TAP + ENCLOSURE - DOMED WELD TAP + ENCLOSURE - DOMED SPLIT BOLT

NTTE-600181812

Supply and Delivery of TAP + Enclosure Domed Split Bolt

on 18"

NTTE-900242014

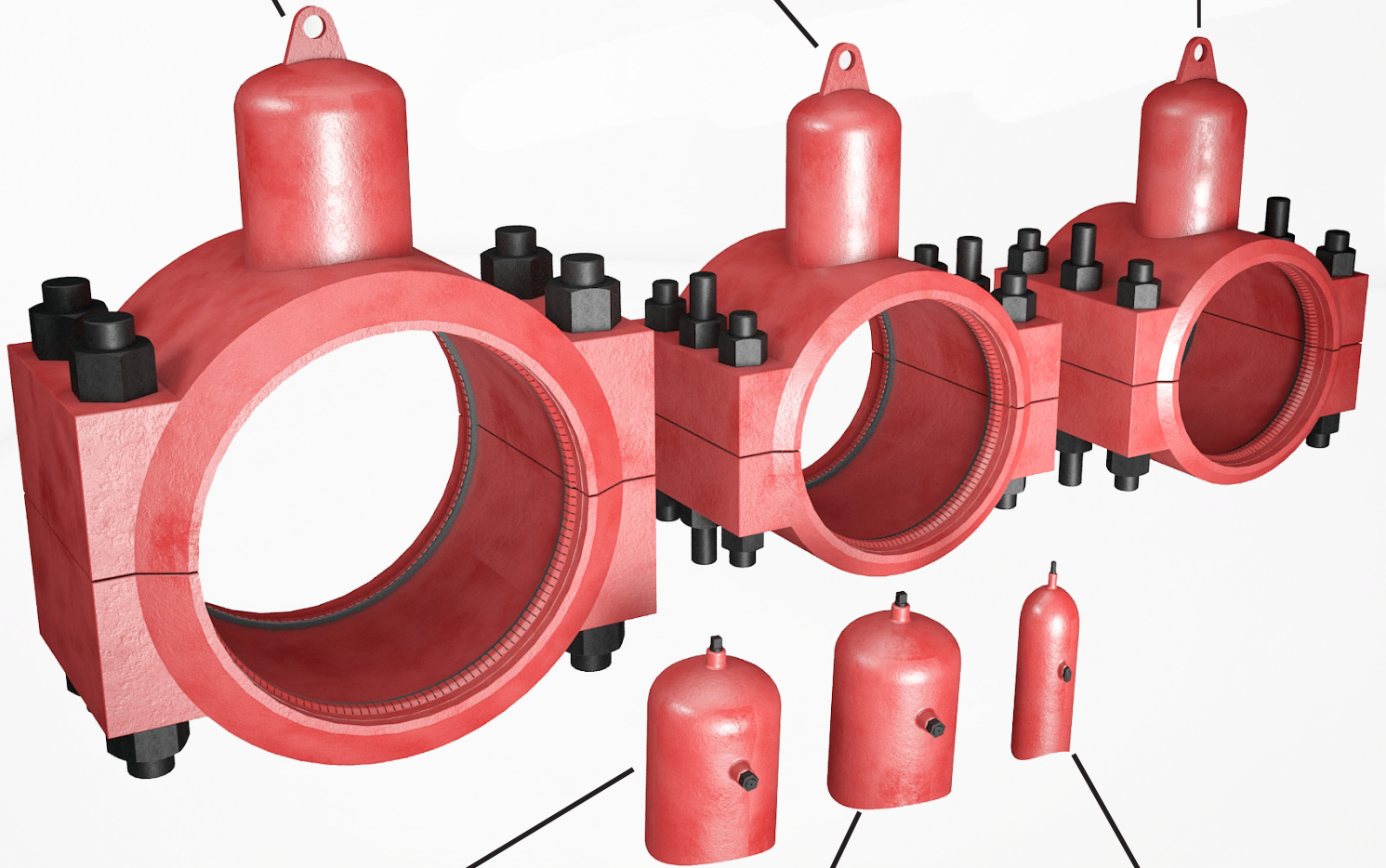
Supply and Delivery of TAP + Enclosure Domed Split Bolt

on 24"

NTTE-600161812

Supply and Delivery of TAP + Enclosure Domed Split Bolt

on 16"



NTWD-600181208

Supply and Delivery of TAP + Enclosure -Domed Weld on 18"

NTWD-600061004

Supply and Delivery of TAP + Enclosure -Domed Weld on 6"

NTWD-600161208

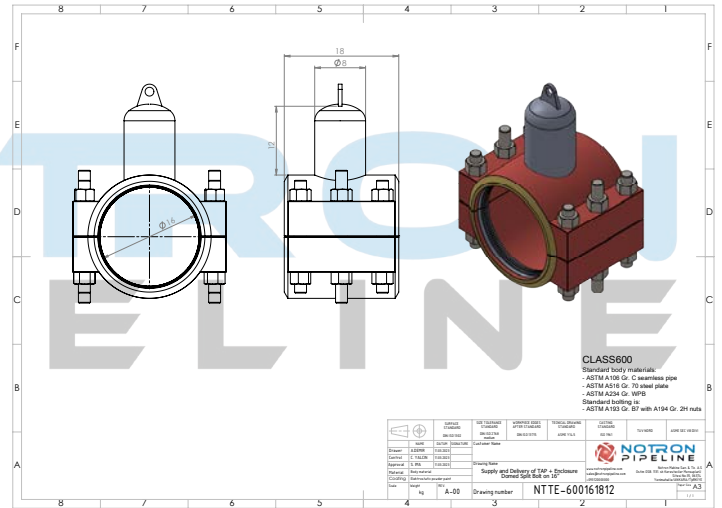
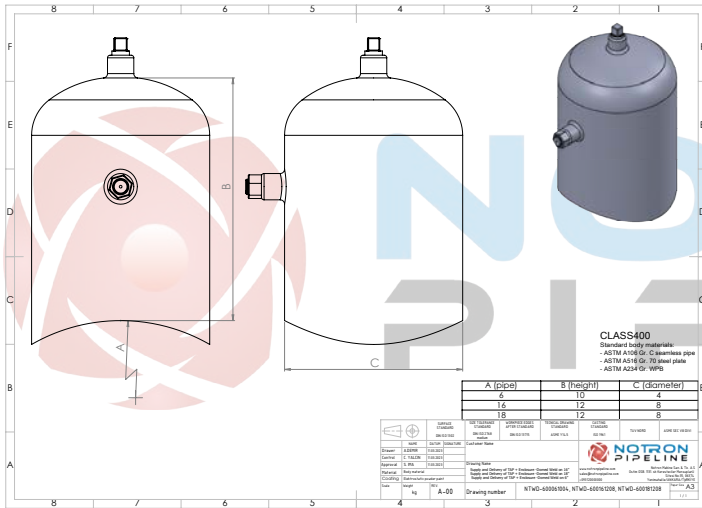
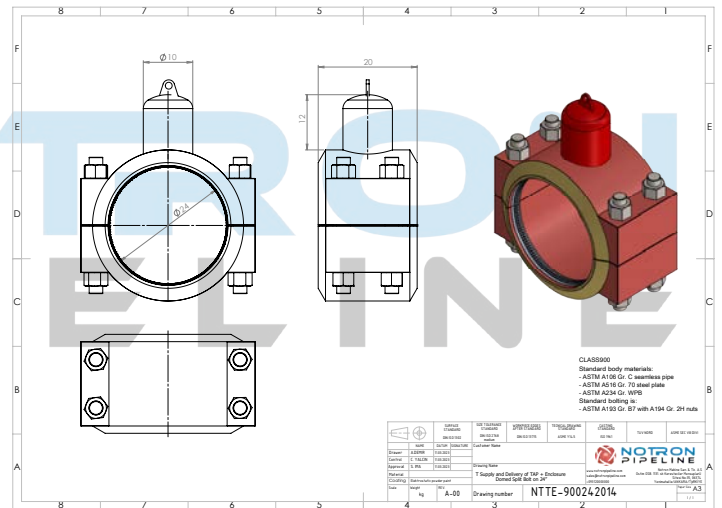
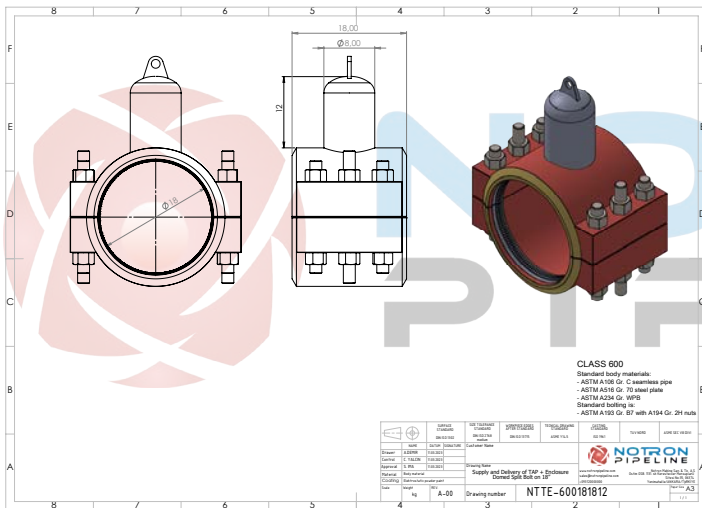
Supply and Delivery of TAP + Enclosure -Domed Weld on 16"

+90 541 358 5121

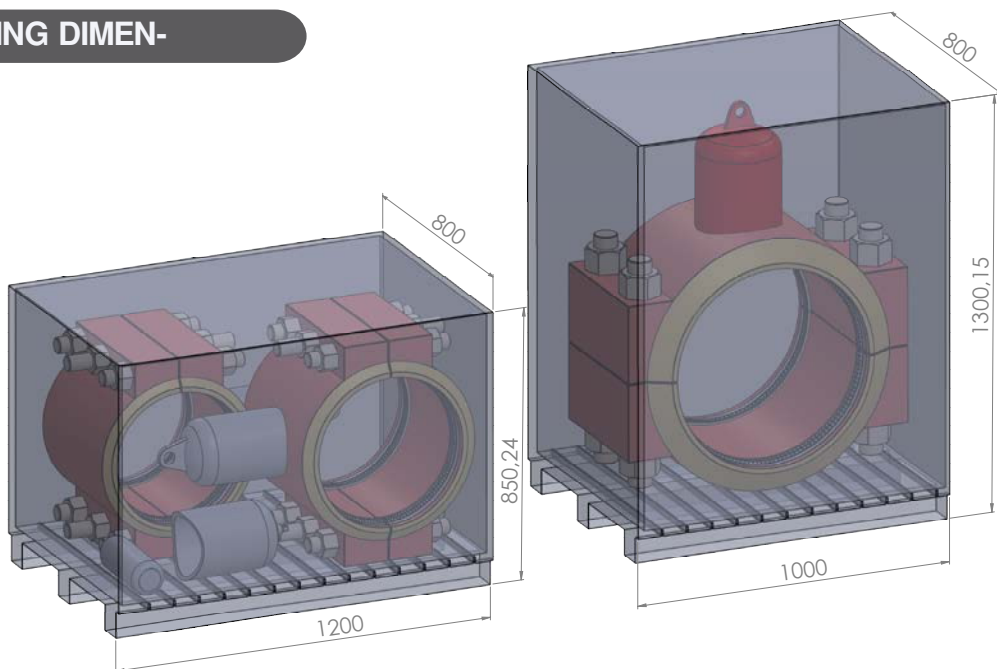
✉ sales@notronpipeline.com

🌐 www.notronpipeline.com

📍 Ostim OSB 1131. Cad. No: 35 Ostim Yenimahalle / ANKARA / TURKEY



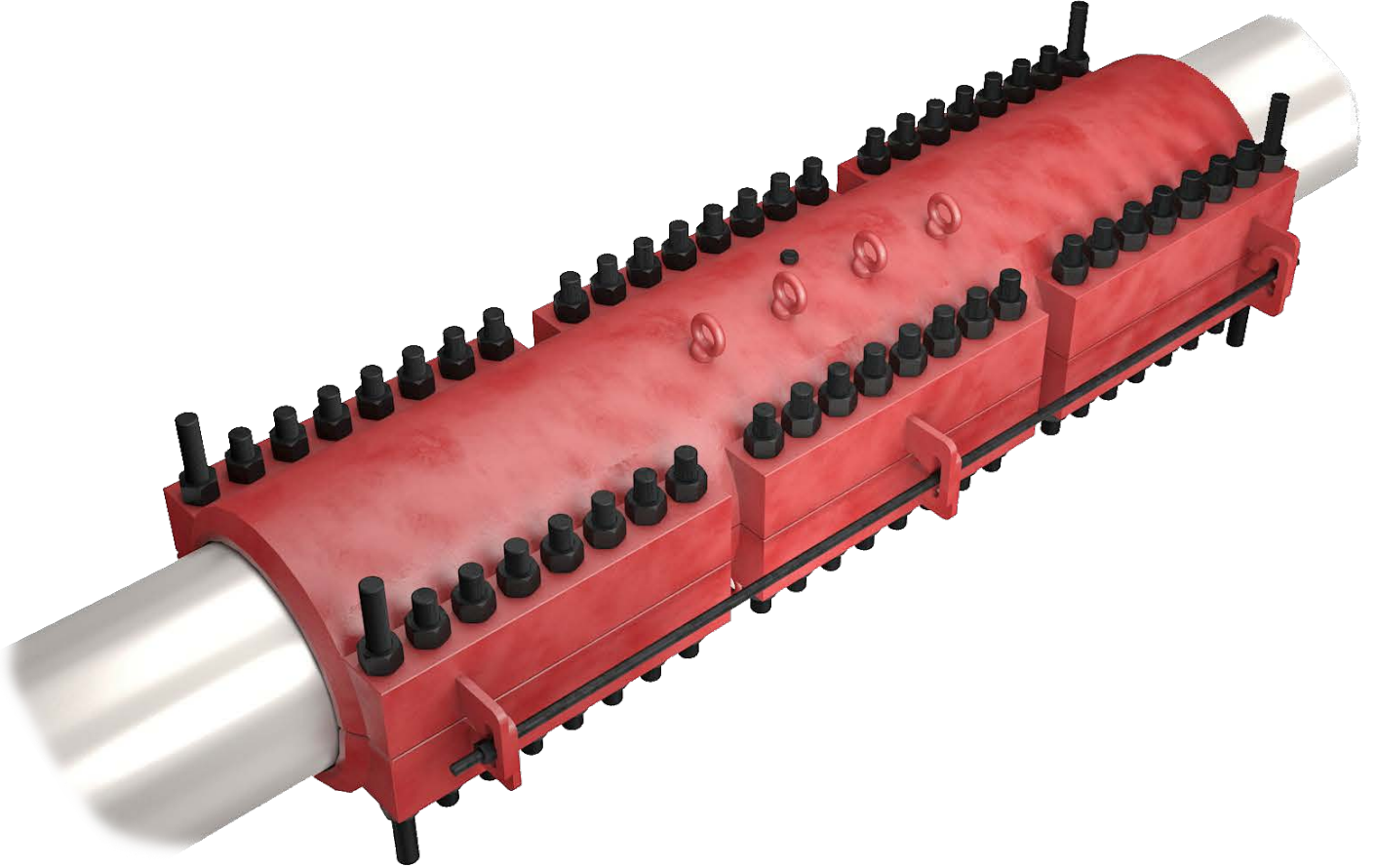
PACKING DIMEN-

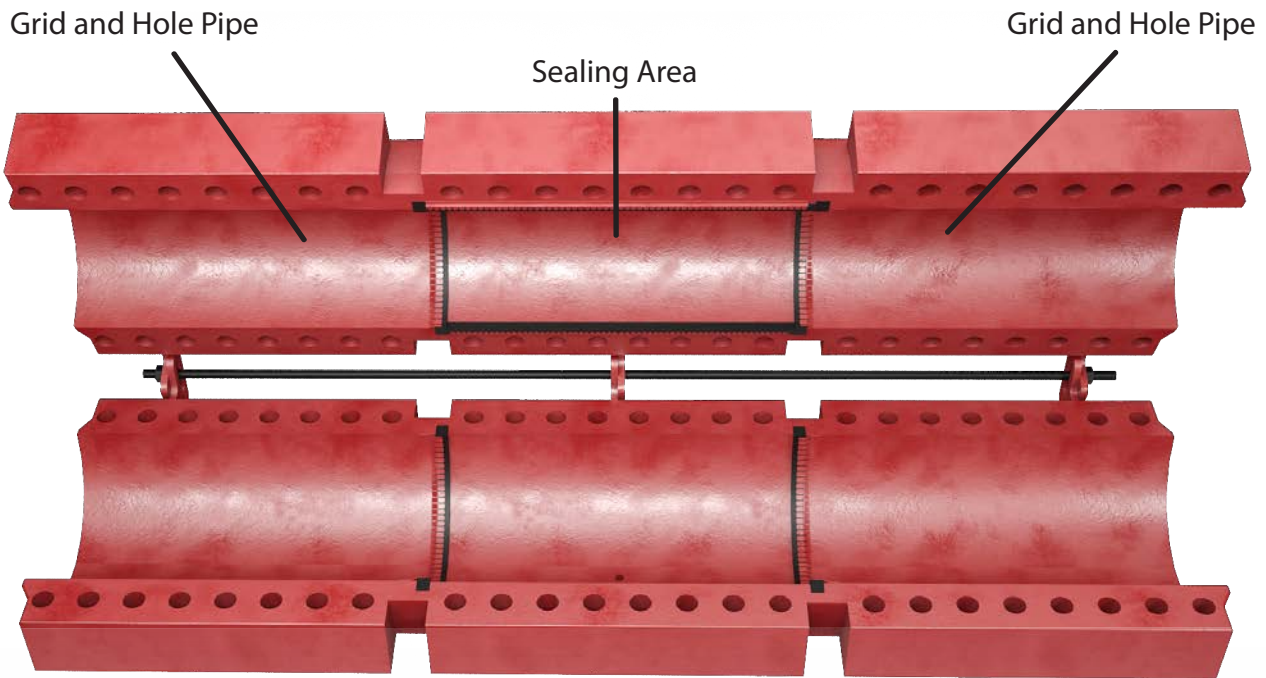




NOTRON PIPELINE

Rupture Repair Clamp





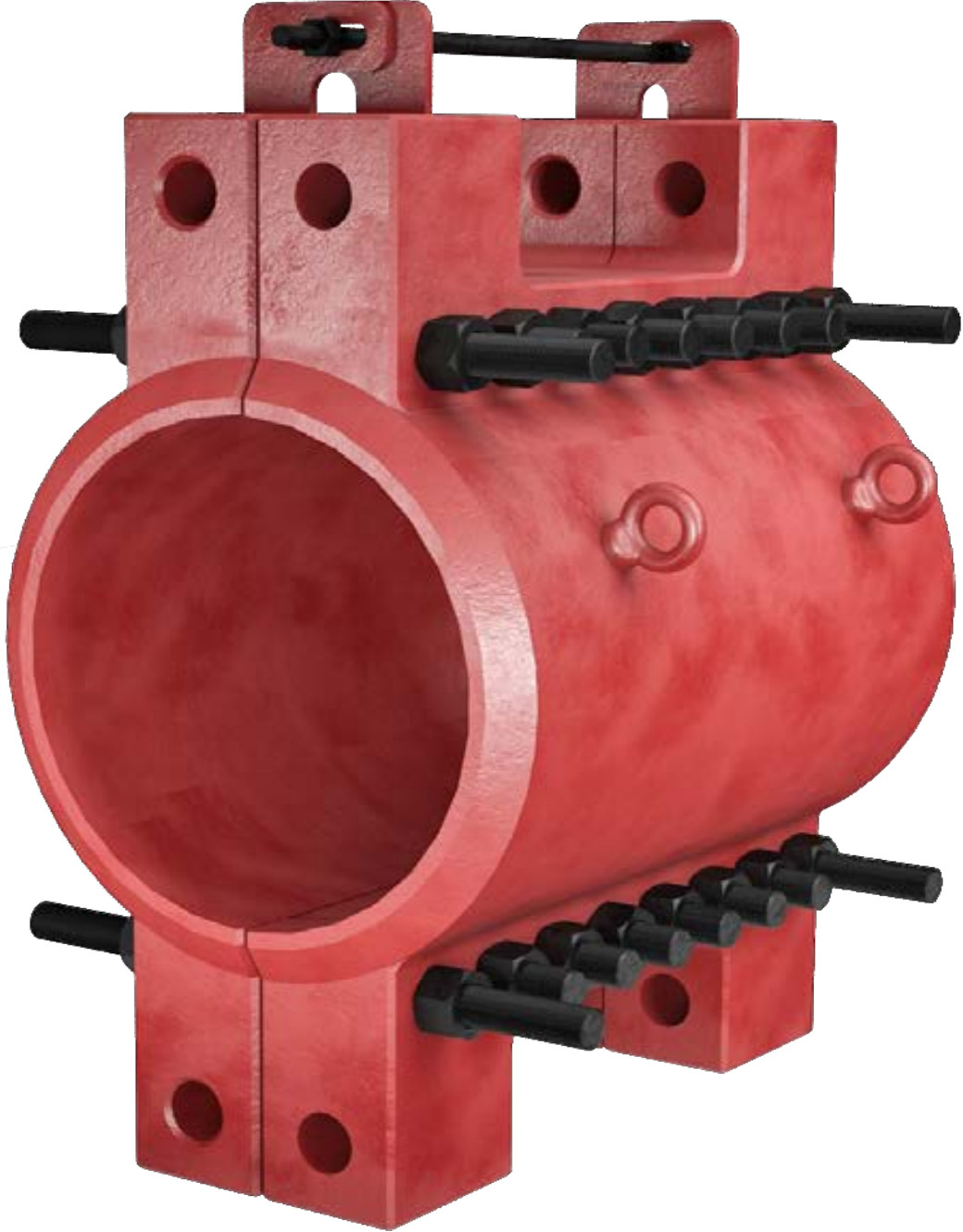
The purpose of a NOTRON Rupture Repair Clamp is to counteract the exceptional axial strains and remarkable end-pull that are frequently found in offshore installations by gripping the outside wall of a pipe. The remarkable gripping ability of a rupture repair clamp reduces the risk of collapsing in damaged pipe. Steel Girder Rings ensure a gastight, liquid-tight seal by holding the packing firmly in place during installation. You can get Rupture Repair Clamps in any size, length, and working pressure. They can be made for applications that need welding or ones that don't. If not welded, the sleeve might be repaired and put to new usage. The Rupture Repair Clamp is made in accordance with ASME code section VIII and complies with API 6H/6X.

- Standard body materials:
 - ASTM A106 Gr. C
 - ASTM A216 Gr. WCC
 - ASTM A516 Gr. 70
 - Standard bolting is ASTM A193 Br. B7 with ASTM A194
- Options:
 - Marine epoxy paint for corrosion protection
 - Hinges for ease of installation and handling
 - Vents per customer specifications
 - Anodes for cathodic protection
 - NACE MR0175 / ISO 15156 compliant materials
 - ASME 31.3

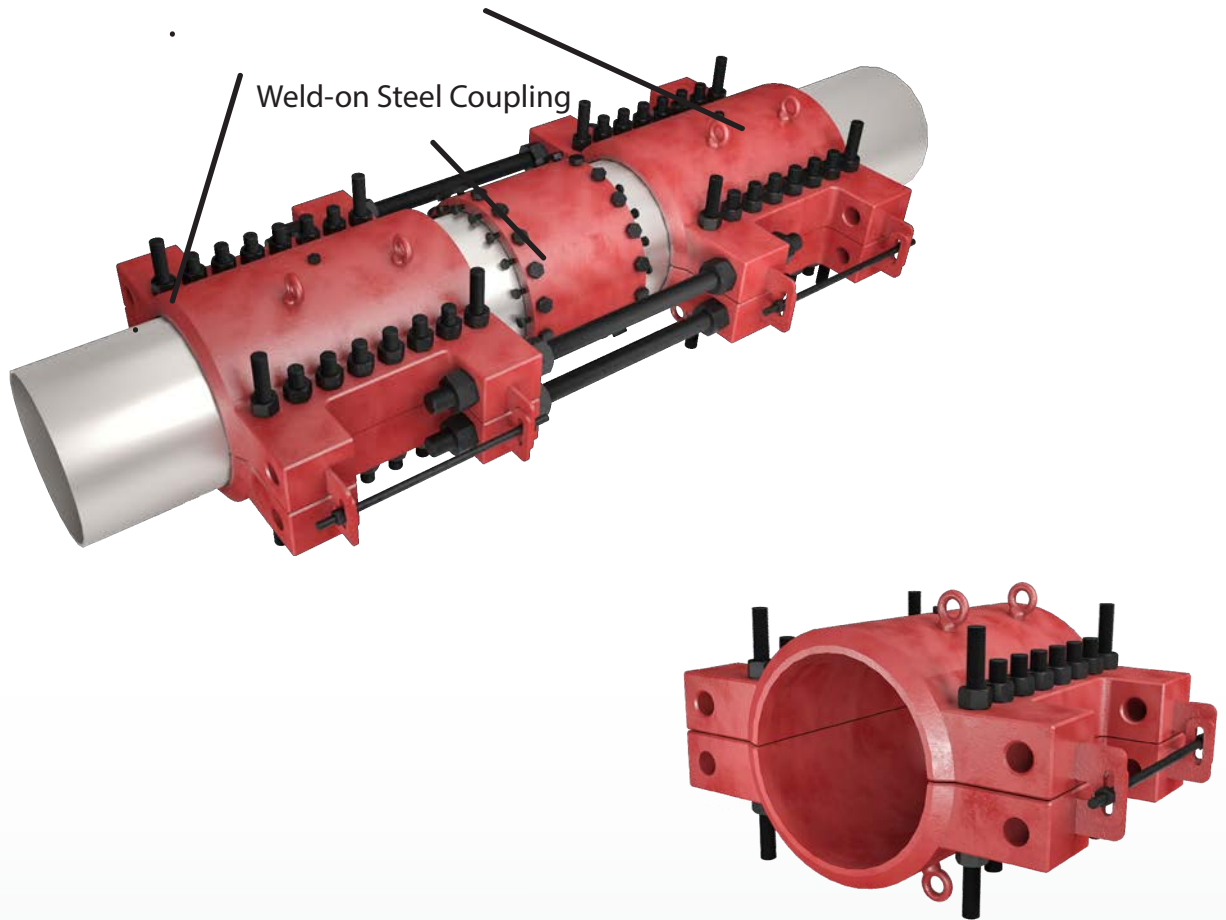


NOTRON PIPELINE

Clamp Barrel/Collar



Clamp Barrel/Collar are installed to provide additional structural support to counteract excessive end-pull or compression loading.



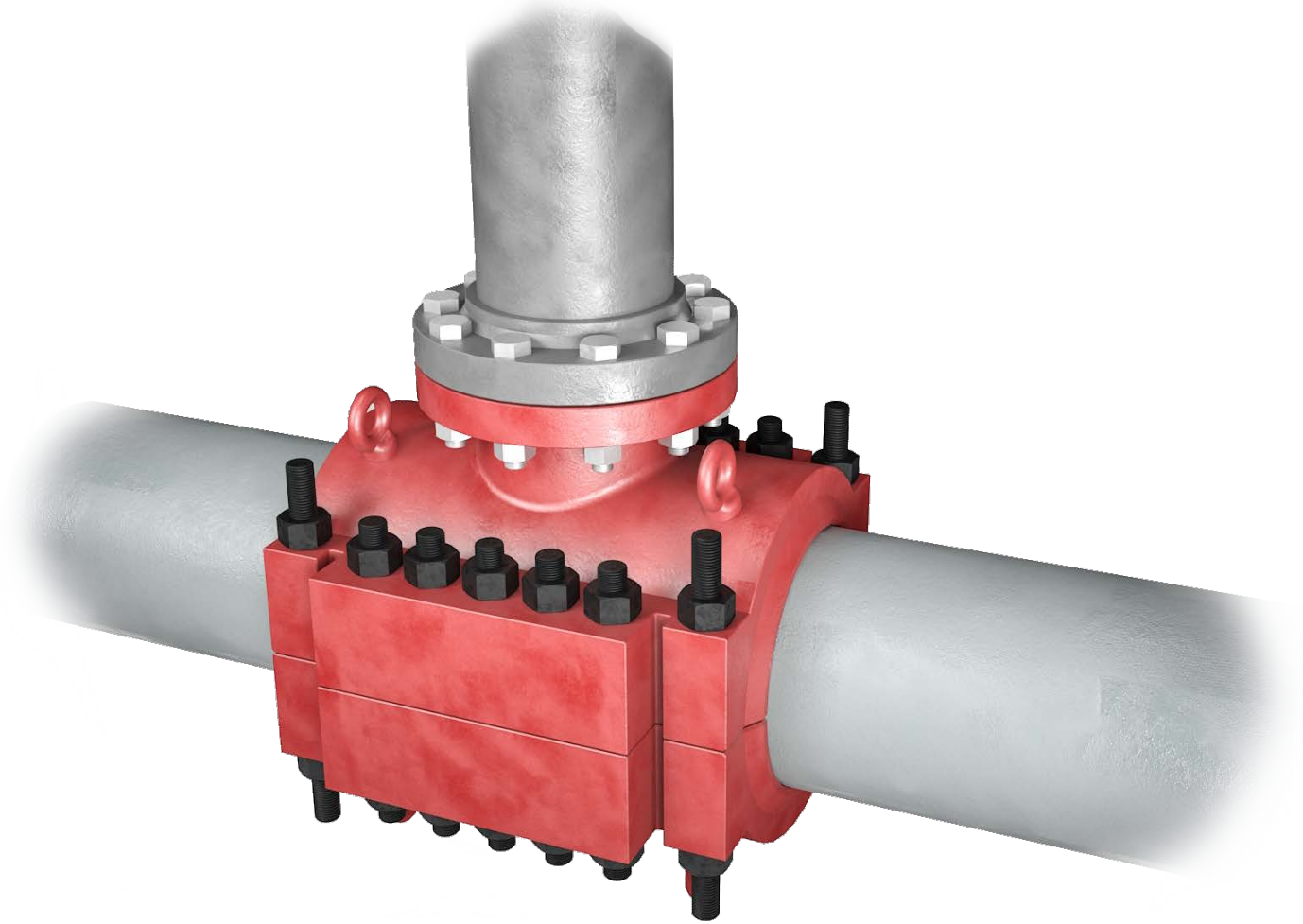
When there is significant end-pull or compression loading, the NOTRON Clamp Barrel/Collar is utilized in conjunction with NOTRON Split Repair Sleeves, NOTRON Weld-on Steel Couplings, or other fittings. They have been meticulously developed to minimize the risk of caving in or distorting the pipe, and they are built to attain incredible gripping force. Any combination of internal, external, and hydrostatic forces can be accommodated in the design of the NOTRON Clamp Barrel/Collar. They can be reconditioned and used again, and they can be utilized either permanently or temporarily. The thru bolts needed to join the two pieces are included in the complete set of NOTRON Clamp Barrel/Collars that are sold.

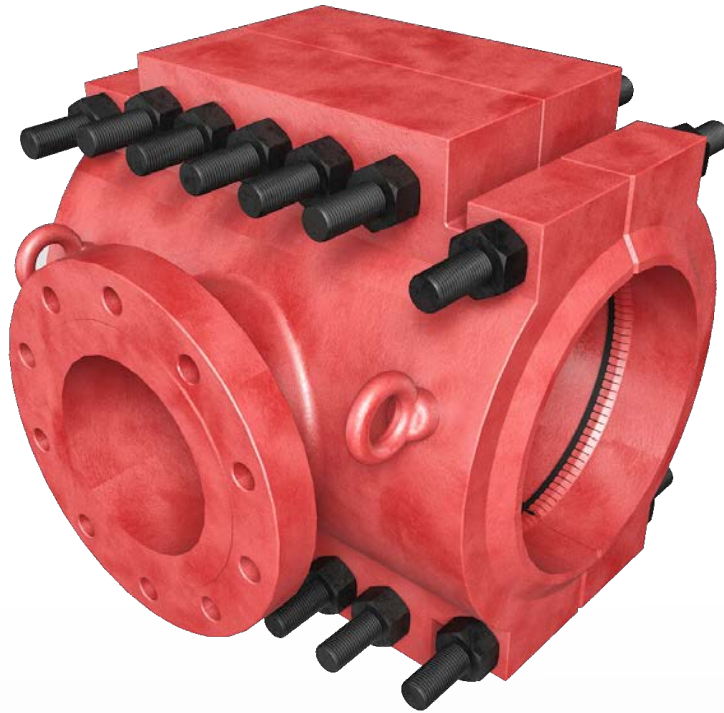
- Standard body materials are:
 - ASTM A106 Gr. C seamless pipe
 - ASTM A216
 - ASTM A516 Gr. 70 steel plate.
- Standard bolting is:
 - ASTM A193 Gr. B7 with A194 Gr.
- Options:
 - Marine epoxy paint for corrosion protection
 - Hinges for ease of installation
 - Anodes
 - NACE MR0175 / ISO 15156 compliant materials



NOTRON PIPELINE

HOT TAPPING-SADDLE





NOTRON Hot Tapping-Saddles are designed to ASME code section VIII and meets the intent of API 6H/6X to make branch connections on existing pipelines OR for plugging operations without welding. They are easily installed by simply tightening the side bolts. Steel GirderRings hold seals in place to protect from damage and displacement during installation. When conditions are favorable, NOTRON Hot Tapping-Saddles can be permanently welded to the pipeline. NOTRON Hot Tapping-Saddles when used for plugging operations are designed to include clamping areas to restrict movement of the fitting when setting the plug. Installation is quick; bolt it on, assemble tapping equipment, perform a hydrotest and proceed with the plugging operation. This product can be reclaimed, reconditioned and used again if it hasn't been welded to the pipeline. Branches are available in any range of sizes and pressures. Threaded, welded or flanged outlets are available.

Buna-N packing is standard. Viton, Silicone and other packings are available upon request

• Standard body materials:

- ASTM A106 Gr. C
- ASTM A216 Gr. WCC
- ASTM A516 Gr. 70

• Options:

- Marine epoxy paint for corrosion protection
- Hinges for ease of installation
- NACE MR0175 / ISO 15156 compliant materials



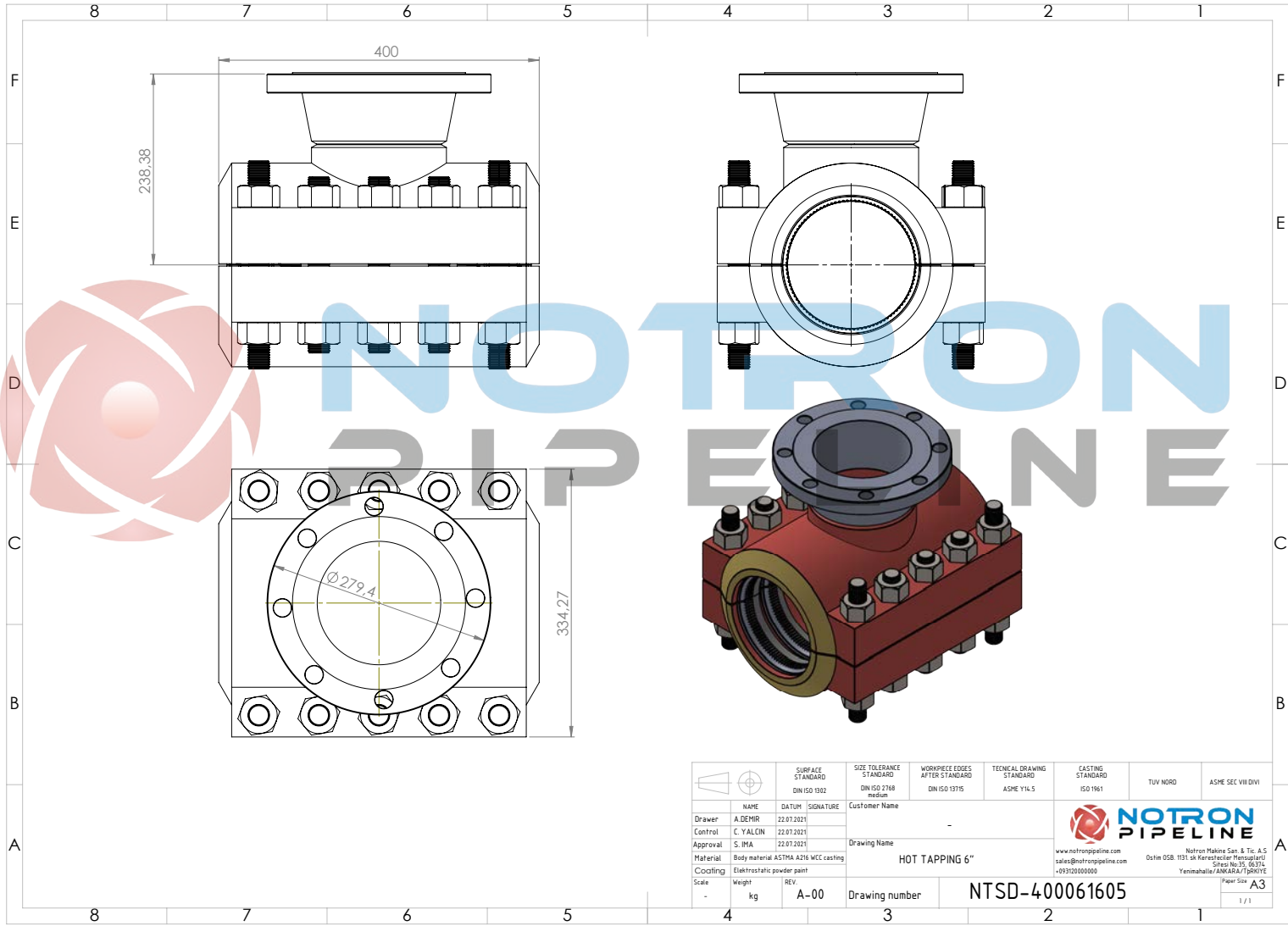
NOTRON PIPELINE

6"x6" Hot Tapping Saddle - Split Tee



- Standard body materials:
 - ASTM A216 Gr. WCC / A516 / P460
- Options:
 - Marine epoxy paint for corrosion protection
 - With Bolts (ASTM A193 Grade B7 with ASTM A194 Grade 2H Nuts)
 - With Double Oring
 - Approx. Body weight: 100 kg
 - Approx. Bolts Weight: 26kg
 - Approx. Total: 126 kg





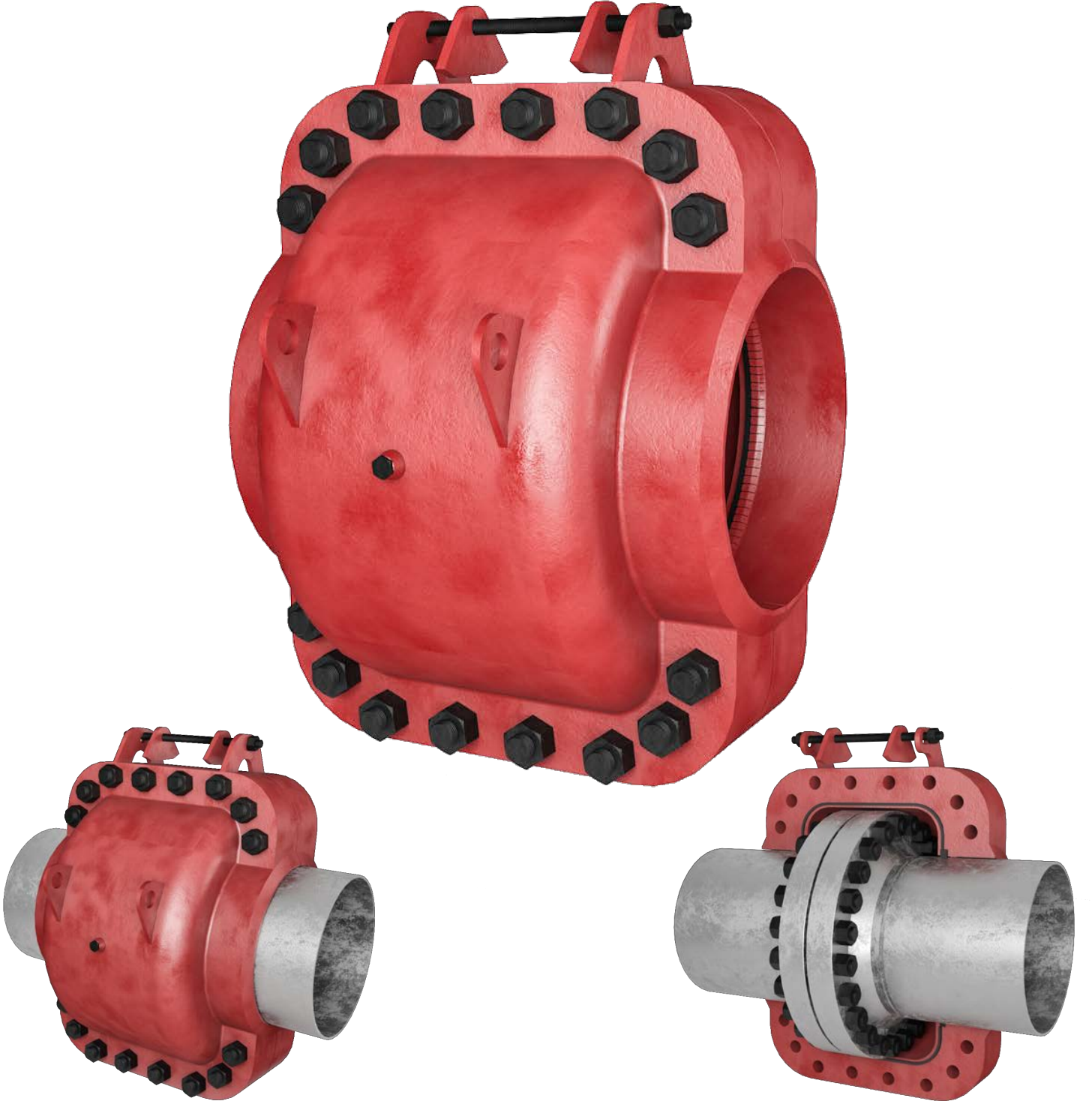
The Notron In order to create branch connections on existing pipelines or to perform plugging operations without the need for welding, Hot Tapping-Saddles are made in accordance with ASME code section VIII and API 6H/6X. All you have to do is tighten the side bolts to install them. Seals are held in place during installation by steel girder rings, which guard against displacement and damage. Hot Tapping-Saddles can be permanently welded to the pipeline under the right circumstances.

When utilized for plugging operations, hot tapping saddles are made with clamping regions to limit fitting movement while the plug is being placed. It is easy to install; just bolt it on, put the tapping apparatus together, do a hydrotest, and then plug it in. If this product hasn't been welded to the pipeline, it can be recovered, refurbished, and utilized once more. There are branches in every size and pressure range. There are outlets that are threaded, welded, or flanged.



NOTRON PIPELINE

Encapsulating Flange Repair Clamp

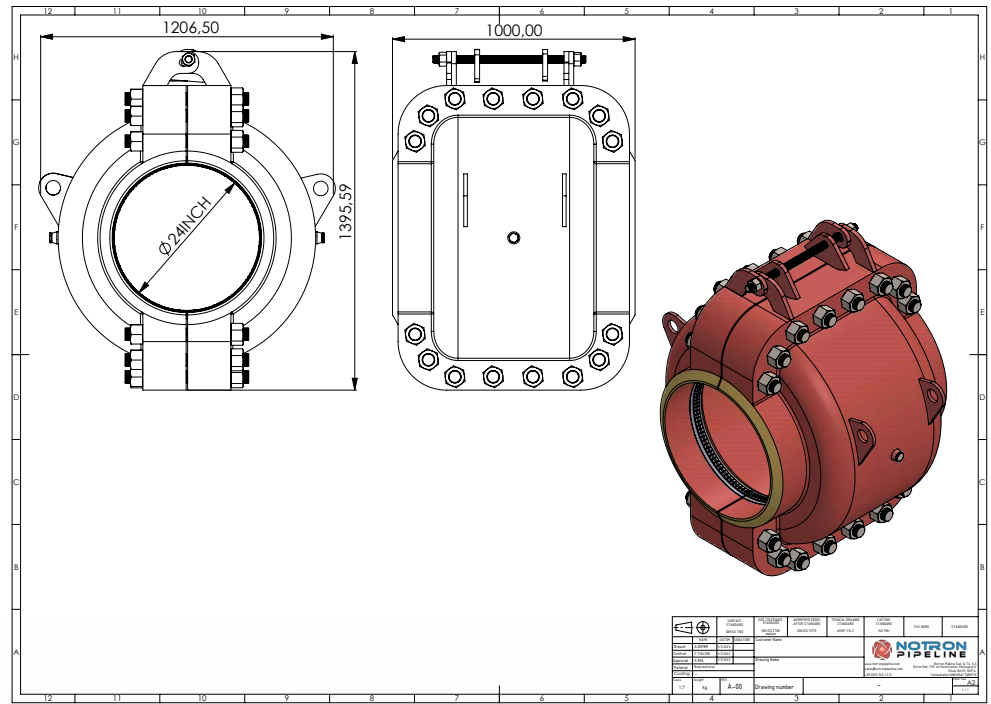


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By completely enclosing a flange set and sealing the pipe beyond the flange welds, the NOTRON Encapsulating Flange Repair Clamp stops leaks. For both onshore and offshore applications, it can accommodate a large range of flange types and classes. It is simple to install, safe, and, if desired, can be welded while the line is operating. ASME Section VIII and API 6H were used in the design of the NOTRON Flange Repair Split-Sleeve, which has been hydrostatically tested to 1.5 times its operating pressure. Where appropriate, bolt-induced bending stresses are incorporated into the design. The seal material is held in place during installation by a steel girder ring. Both temporary and permanent repairs can be made with the Encapsulating Flange Repair Clamp. The fitting can be repaired by NOTRON and put back into customer stock if it isn't welded on the line..

Buna-N packing is standard. Viton, Silicone, Kevlar, Hycar and other materials are available upon request.

- Standard body materials are:
 - ASTM A106 Gr. C seamless pipe
 - ASTM A516 Gr. 70 steel plate.
 - ASTM A216
- Standard bolting is:
 - ASTM A193 Gr. B7 with A194 Gr.
- Options:
 - Marine epoxy paint for corrosion protection
 - Hinges for ease of installation
 - NACE MR0175 / ISO 15156 compliant materials
 - Sling Closure Assembly
 - ASME 31.3