



Volzhskiy Zavod
Promyshlennoy Armatury

Stainless steel repair clamp econom



PRODUCT PASSPORT

TU (Technical specifications) 25.99.29-002-21203517-2017

2022

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1. General information

The repair clamp econom is used to eliminate leaks in pipelines that transport various liquids, including drinking water, as well as for connecting pipe joints.

Diameter (outer pipe diameter): from 44 mm to 1000 mm.

Manufactured clamp lengths: 150mm, 200mm, 250 mm, 300mm, 330mm, 400mm. Other clamp lengths can be manufactured upon the customer's request.

Normal operating pressure: with the 44-150mm DN clamp – 16 bar, from 175-500mm – 10 bar, >500 – 6 bar.

Operating temperature range: NBR rubber from -20 C° to +80 C°, EPDM rubber from -20 C°, to +140 C°

2. Product components

The steel repair clamp econom consists of a bandage, a clamping unit, a rubber seal, and an insert (Figure No. 1).

The binding is made of stainless steel used in food production (08X18H10 or AISI 304) using resistance spot welding according to GOST 15878-79. The cast weld area is at least 4 mm wide. Other material can also be used upon the customer's request.

The clamping unit consists of two tubes and several ties, including bushings, washers, nuts, and studs. The stud used is partially threaded and has a 23° bend to obtain the required clamping load. All details are made of galvanized metal. Studs, nuts, washers can also be manufactured from A2 stainless steel.

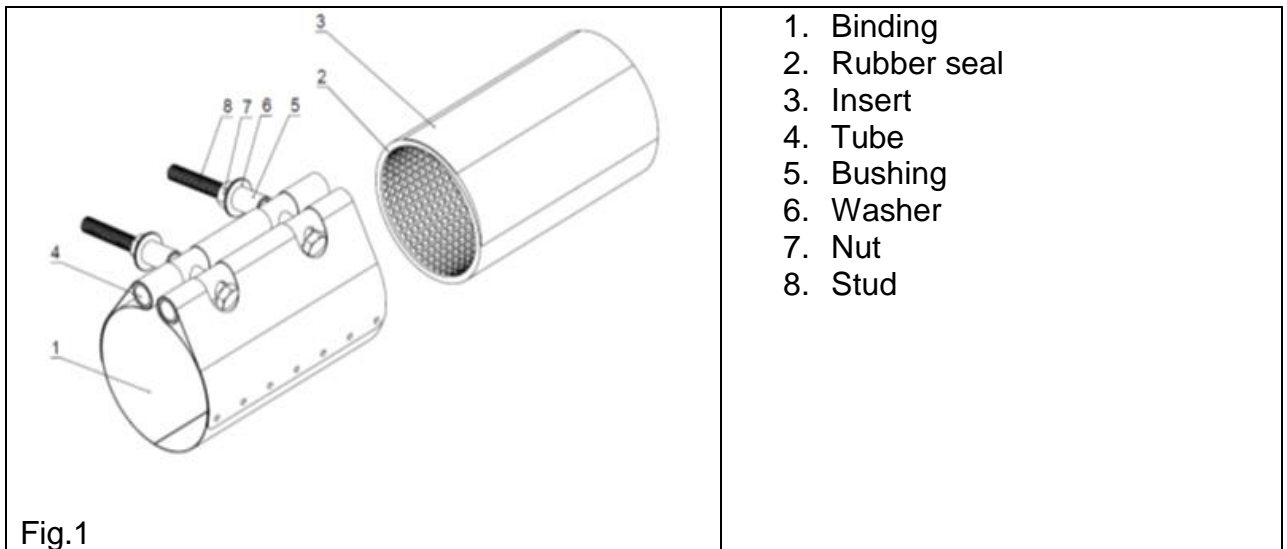
The thin-end rubber seal with a “wafer” inner surface is made of ethylene-propylene rubber (EPDM) or nitrile butadiene rubber (NBR). The medium with which the clamp may be used depends on the material of the seal. Please visit the manufacturer's website www.vzpa.ru for more information about the table of acceptable substances. The coupling is manufactured according to the current technical documentation of the manufacturer TU 25.99.29-002-21203517-2017, certificate of conformity No. 0741028.

3. Field of use

The steel repair clamp eliminates leaks in pipelines in the following cases: transversal cracks on cast-iron pipes with an axial deviation of up to 2°, the formation of large holes on steel and cast-iron pipes. With the repair clamp, you can connect PE steel, cast iron, and polyethylene pipes of the same diameter.

4. Package set

Binding - 1 pc., rubber seal - 1 pc., insert - 1 pc., tube - 2 pcs., ties. The number of ties is determined by the length of the clamp: if it's an L=150, 200 long clamp - 2 pcs., L=250, 300, 330 - 3 pcs., L=400 - 4 pcs. The tie consists of a stud, a washer, a bushing, and two nuts.



5. Instructions on use

1. The clamp must be at least 145 mm longer than the length of the crack on the pipe. For polyethylene pipes, it must be at least 50% longer.
2. The clamp must be at least three times longer than the damage.
3. If you connect PE pipes of the same diameter or pipe valves and polyethylene pipes, the distance between the connected ends should not exceed 5 mm.
4. The maximum allowable deviation of the axes of pipelines is 2°. The maximum alignment deviation should not exceed 3 mm.

Please keep in mind that a clamp is only a repair tool. The pipeline may start leaking again because if the integrity of the pipeline was damaged, the pipeline is more corrodible and its strength properties are downgraded. It is recommended to do an overhaul repair or replace the pipeline.

6. Product storage and transportation

The repair clamp econom is delivered both pre-assembled and unassembled and packed in corrugated cardboard boxes. Storage conditions of the product must comply with groups 1, 2 of GOST 15150-69. Use a covered vehicle during transportation and, if needed, additionally pack the product to avoid any significant deformation of the factory box and the clamp body.

7. Installation instructions

1. Prior to installation, make sure that you have selected the correct clamp in terms of diameter. Clean the pipe and remove dirt and corrosion from the pipe surface. Put marks on the pipe where the ends of the clamp will be placed. Once assembled, use these marks to ensure that the clamp is installed in the correct position. Lubricate the spot on the pipe with soapy water where the clamp will be attached. Do not use greasy lubricants.
2. Unscrew the nuts from one end of the studs (the one with the long thread) and remove the washers and bushings from them. Take the rubber seal with the insert out of the binding.
3. Wrap the pipe tightly around the entire circumference with a rubber seal (it may consist of several parts).

4. Fix the position of the rubber seal and the insert with adhesive tape, helically wrapping it at least 3 times.

5. Put the binding over the insert with a rubber seal in such a way that the seal and the insert don't go beyond the edges of the binding.

6. Pull the binding loops by hand and insert the studs into the holes of the binding axles.

7. Put bushings, washers, and nuts on the studs (Fig.1) and evenly tighten the nuts with a wrench. Tighten until the desired result, based on the operating pressure in the pipeline. Maximum torque: for M12 studs - 78 Nm, for M14 - 123 Nm, for M16 - 180 Nm (according to the datasheet 37.001.131-89). When mounting the clamp on a plastic pipe, reduce the torque by 50% to avoid the seal being "pulled out". Wait 20 minutes and then tighten again achieving the same torque. In case you didn't use a torque wrench, simply tighten the nuts a little bit more. Once assembled, please test the leaking under the pressure of the installed clamp. If the repaired pipeline is placed in the ground, consolidate the soil around the clamp and cover it with sand to avoid subsidence at the spot where the repair works have been carried out.

8. Disposal

The product is disposed of by disassembling it and sending it to the manufacturing plant or organizations that recycle rubber, non-ferrous and ferrous metals.

9. Manufacturer's warranty

The product that has been stored, installed, and operated according to this Product Passport has a 24-month warranty period from the date of its purchase. The expected service period is 10 years.

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