

Operation
and Maintenance Manual

**THREADED AND FLANGED
STUB PIPES WITH
JAW COUPLING**

Cat. no.
3050
3100

Approved for use by

President of Factory, JAFAR S.A.

Failure to comply with the guidelines and instructions in this Operation and Maintenance Manual releases the manufacturer from all obligations, liability and guarantee.

Due to continuous business development, we reserve the right to introduce modifications and structural changes to the presented product.

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1 TECHNICAL DESCRIPTION

1.1 PRODUCT NAME AND FEATURES

The subject of this O&MM is:

The cast iron threaded stub pipe with jaw coupling type 3100 and the cast iron flanged stub pipe with jaw coupling type 3050 used in water supply systems made of steel, cast-iron, asbestos cement and other hard pipes.

1.2 PURPOSE

The cast iron threaded and flanged stub pipes with jaw coupling types 3100 and 3050 are intended for water supply systems, especially for potable water, industrial systems and gas systems made of steel, cast iron or asbestos cement pipes. They may be used both in underground and surface installations, in vertical or horizontal pipelines.

1.3 TECHNICAL SPECIFICATION

The cast iron threaded and flanged stub pipes with jaw couplings are intended for transporting potable or industrial water and other liquids (if approved by the manufacturer).

- operating temperature range: +70°C max.
- line pipe diameter range: see the size table, accordingly for each type
- the connection thread design is acc. to PN-EN 10226-1: 2006 normal product grade [A].
- connection flanges are manufactured in accordance with PN-EN 1092-2: 1999 with the sizes compliant with the nominal pressure values.
- installation length: in accordance with plant documentation

2 DESIGN

2.1 FITTING DESIGN DESCRIPTION

The fittings factory “JAFAR” S.A. supplies cast iron threaded and flanged stub pipes with jaw couplings. The body of the stub pipe is a cast iron casting with jaws, acting as a fitting element, and an element allowing for connection of a discharge pipe with a threaded or flanged connection. A jaw gasket is installed between the stub pipe and the pipe. The stub pipe is installed on the pipeline using a stainless steel band type 3330, acting as a clamping ring for the line pipe. The band is fitted with threaded bars on both ends which are fitted with spherical washers and nuts with standard washers. The spherical washers rest on the stub pipe support and allow for fitting it to the pipe and sealing the opening transporting the medium by tightening the nuts.

After installing the stub pipe on the pipeline it is possible to drill an opening in the pipeline and make an offtake threaded or flanged connection.

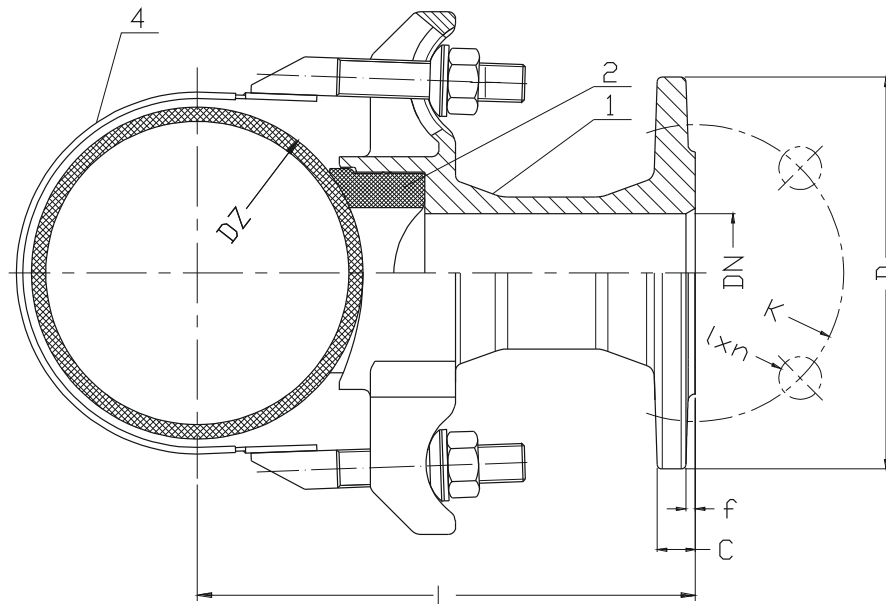
2.2 MATERIALS

List of materials used in the construction of cast iron threaded and flanged stub pipes TYPE 3050 and TYPE 3100

Item	Part name	Material	Reference standard
1	Body	Cast iron, EN-GJS-400-15	PN-EN 1563: 2012
2	Jaw gasket	Rubber: EPDM (or NBR)	PN-ISO 1629: 2005
3	Pipe gasket	Rubber: EPDM (or NBR)	PN-ISO 1629: 2005
4	Complete band TYPE 3330	Stainless steel	PN-EN 10088-1: 2014

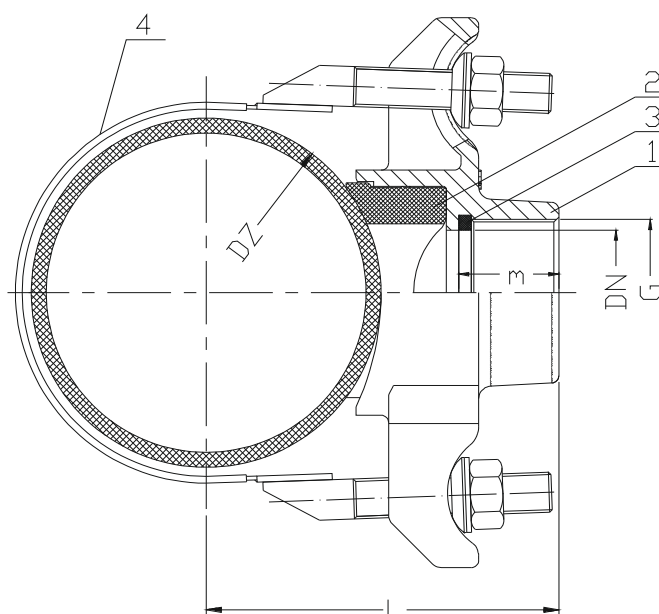
2.3 DIMENSIONS

TYPE 3050



DN	K	Dz	D	l x n	L ₂	C	f	Ilość opasek
[mm]								[szt]
50	125	90-738	165	19x4	140+Dz/2	16	3	1
80	160	125-700	200	19x8	135+Dz/2	17		2
100	180	150-500 500-800	220	19x8				
150	240	300-500 500-900	300	23x8		19		3

TYPE 3100



DN	G	m	Dz	L ₁	Number of bands
[mm]	[inch]	[mm]			[pcs.]
50	2"	40	90-738	85+Dz/2	1

2.4 STANDARDS

PN-EN 1074-1: 2002	Valves for water supply. Fitness for purpose requirements and appropriate verification tests. General requirements.
PN-89/H-02650	Valves and pipelines. Pressures and temperatures for
PN-EN 1074-2: 2002	Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Isolating valves.
PN-EN19: 2005	Industrial fittings. Metal fitting marking.
PN-EN 12266-1: 2012	Industrial valves. Testing of metallic valves. Pressure tests, test procedures and acceptance criteria. Mandatory requirements.
PN-EN ISO 6708: 1998	Definition and selection of the DN /nominal dimension/
PN-EN 10226-1: 2006	Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads.
	Dimensions, tolerances and designation
PN-EN 1563: 2012	Founding. Spheroidal graphite cast irons.
PN-EN 10088-1: 2014	Stainless steels. Grades of stainless steel.
PN-74/H-84032	Spring steel. Grades.
PN-EN 1092-2: 1999	Flanges and their connections. Circular flanges for pipes, valves, fittings and accessories, PN designated. Cast iron flanges.
PN-ISO 1629: 2005	Rubbers and latices. Nomenclature.
PN-EN ISO 4762: 2006	Hexagon socket head cap screws.
PN-EN ISO 4032: 2013	Hexagon regular nuts (style 1). Product grades A and B.
PN-EN ISO 7091: 2003	Plain washers. Normal series. Product grade C
PN-EN ISO 12944-5: 2009	Paints and varnishes. Anti-corrosion protection of steel structures by means of protective painting systems. Protective painting systems.

2.5 ORDERING REGULATIONS

Water supply system fittings are specific purpose industrial fittings, therefore orders must include:

- catalogue number (equivalent to face-to-face length),
 - intended use, e.g. for water supply systems,
- furthermore:
- nominal diameter — acc. to PN-EN ISO 6708: 1998
 - nominal pressure, acc. to PN-89/H-02650;
 - type of body material — acc. to PN-EN 1563: 2012
 - max. operating temperature — acc. to PN-89/H — 02650.

2.6 MANUFACTURE AND ACCEPTANCE

The cast iron threaded and flanged stub pipes with jaw coupling catalogue numbers 3050 and 3100 are accepted and manufactured in accordance with: PN-EN 1074-1: 2002 (Valves for water supply. Fitness for purpose requirements and appropriate verification tests. General requirements) and PN-EN 12266-1:2012 (Industrial valves. Testing of metallic valves). All stub pipes are leak tested (100%). The tests include tightness after clamping on a pipe.

2.7 MARKING

The stub pipe marking meets the following standards: PN-EN-19: 2005, PN-EN-1074-1: 2002.

The threaded and flanged stub pipe bodies feature markings on the front and back walls of the body neck. The marking contains the following data:

:

- stub pipe type (defined by the product reference standard number)
- nominal diameter
- nominal pressure
- body material type
- manufacturer trademark

The location specified in the documentation features the nameplate which contains the following data:

- company name and mark
- product serial number
- sealing temperature rating
- construction mark “B” and/or mark “CE” (as applicable)
- product type.

3 PROTECTION, STORAGE & TRANSPORT

3.1 PROTECTIVE COATINGS

All internal and external cast iron surfaces are protected with epoxy paint, applied electrostatically. The paint is approved for contact with food products.

The thickness of the anti-corrosion coating layer is min. 250 µm.

The casting surface is pre-treated for epoxy coating in accordance with the relevant technical documentation and standard PN-EN ISO 12944-5: 2009.

3.2 PACKAGING

The stub pipes are packed on EURO pallets (1200x800) and protected with heat-shrunk film.

3.3 STORAGE

Store the stub pipes in sheltered rooms.

3.4 TRANSPORT

Transport the stub pipes using sheltered vehicles.

4 ASSEMBLY AND INSTALLATION

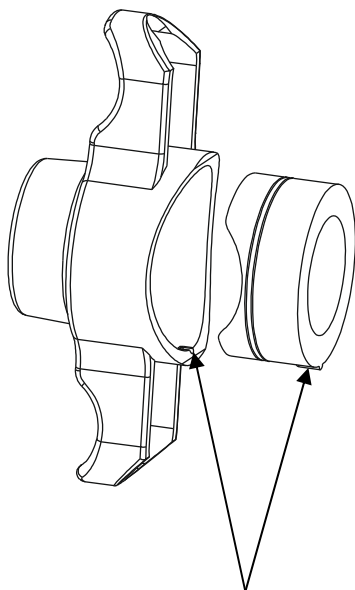
4.1 INSTALLATION GUIDELINES

The cast iron threaded and flanged stub pipes TYPE 3050 and TYPE 3100 are appropriate for installation on the line pipe without the necessity of using additional sealing. Before installing the stub pipe, it is recommended to lubricate the sealing assembly surfaces with industrial grade petroleum jelly to prevent adhesion and possible damage during the removal of rubber components. After installing the stub pipe and clamp on the pipeline correct their positions and evenly tighten the bolts. Following assembly check if the unit is installed correctly. It is now possible to make an opening in the line pipe. The stub pipe installed in the pipeline is its integral part and does not require using additional supports (bearing plates) below it.

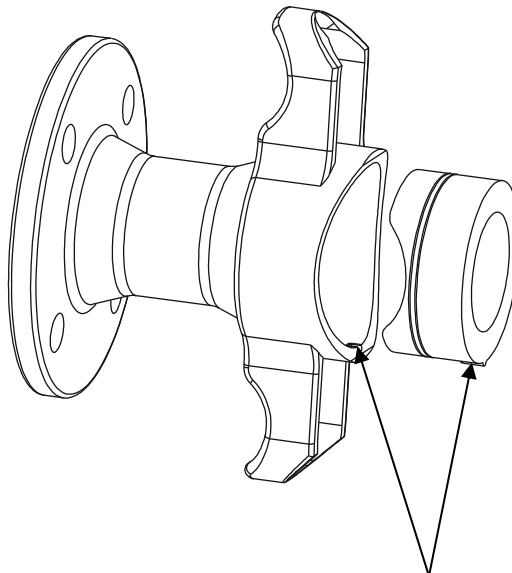
The stub pipe assembled and delivered by the manufacturer is ready for installation. Any dismantling of the sealing components may result in loss of tightness.

In case of the 3050 DN50 and 3100 (threaded) stub pipes, the seal shall be installed in accordance with the positioning element. The correct installation method is presented in the figure below.

Note! If the gasket is installed incorrectly the unit will lose tightness.



Gasket positioning element



Gasket positioning element

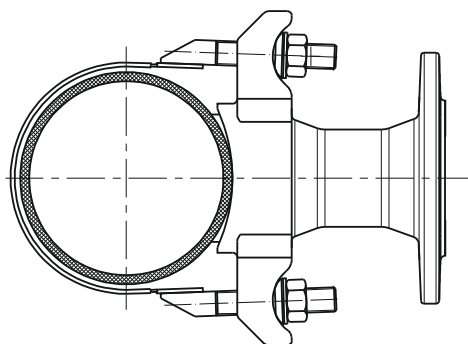
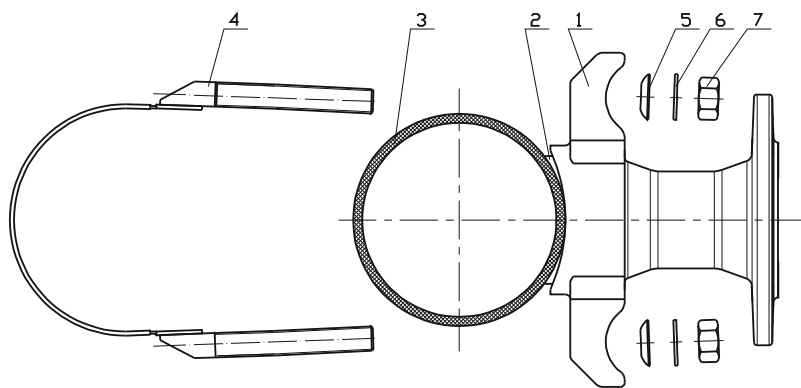
4.2 INSTALLATION INSTRUCTIONS

Before installing the fittings, check the technical and commercial documentation, i.e. application for media and operation parameters of the pipeline, in which they are to be installed. Any change in the operating conditions must be consulted with the fitting manufacturer beforehand.

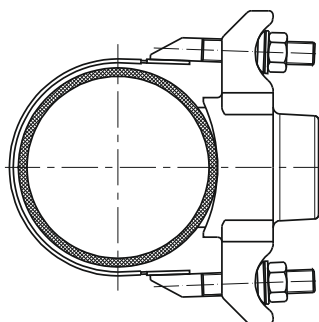
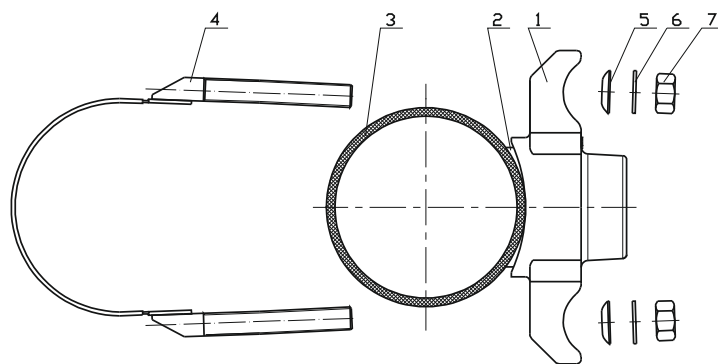
Before attempting to assemble the fitting, remove the main bore plugs, check the inner surfaces of the stub pipe and thoroughly flush with water, if necessary.

The installation of a stub pipe with a band is presented in the diagram below:

Note! If the product is damaged mechanically, do not install it in the pipeline.



TYPE 3100



1.-stub pipe body, 2.-stub pipe gasket, 3.-pipeline, 4.-band, 5-spherical washer, 6-washer,7-nut

4.3 OH&S REGULATIONS

The OH&S guidelines and recommendations concerning installation of pipelines and devices for water supply stations, heat power plants, water treatment plants, sewage treatment plants, pumping stations and other facilities, and the Polish Regulation concerning general OH&S regulations (use of personal protective equipment for hands, legs and head, and safety garments), especially at work with low or high temperature hazard apply to the stub pipes.

Misuse of this product is prohibited.

5 GUARANTEE CONDITIONS

The manufacturer grants guarantee for the product being installed and operated according to this O&MM. The conditions and period of the guarantee is specified in the guarantee sheet.