

INSTALLATION, SERVICE AND MAINTENANCE INSTRUCTIONS

CENTRIFUGAL PUMP

ESTAMPINOX EFI



01.020.32.0030



01.020.32.0023



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Original Instructions

01.020.30.08EN

(B) 2021/10

EC Declaration of Conformity



INOXPA S.A.U.

Telers, 60
17820 - Banyoles (Spain)

hereby declare under our sole responsibility that the

Machine: **CENTRIFUGAL PUMP**

Model: **ESTAMPINOX EFI**

Type: **ESTAMPINOX EFI 0, ESTAMPINOX EFI 1,
ESTAMPINOX EFI 2, ESTAMPINOX EFI 3**

Serial number: **IXXXXXXXXXX to IXXXXXXXXXX
XXXXXXXXXXIINXXX to XXXXXXXXXXXXIINXXX**

fulfils all the relevant provisions of the following directive:

Machinery Directive 2006/42/EC

and with the following harmonized standards:

**EN ISO 12100:2010
EN 809:1998+A1:2009/AC:2010
EN 12162:2001+A1:2009
EN 60204-1:2018**

The technical file has been prepared by the signer of this document.

A handwritten signature in black ink, appearing to read "Dr. Reyero Brunet".

David Reyero Brunet
Technical Office Manager
25th October 2021



Document: 01.020.30.09EN

Revision: (0) 2021/10

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XXXXXXXXXXIINXXX to XXXXXXXXXXXXIINXXX**

fulfils all the relevant provisions of these regulations:

Supply of Machinery (Safety) Regulations 2008

and with the following designated standards:

EN ISO 12100:2010
EN 809:1998+A1:2009/AC:2010
EN 12162:2001+A1:2009
EN 60204-1:2018

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2. Generalities

2.1. INSTRUCTIONS MANUAL

This manual contains information regarding the reception, installation, operation, assembly, disassembly and maintenance of the ESTAMPINOX EFI pump.

Carefully read the instruction prior to starting the pump, familiarize yourself with the installation, operation and correct use of the filter and strictly follow the instructions. These instructions should be kept in a safe location near the installation area.

The information published in the instruction manual is based on updated data.

INOXPA reserves the right to modify this instruction manual without prior notice.

2.2. COMPLIANCE WITH THE INSTRUCTIONS

Not following the instructions may impose a risk for the operators, the environment and the machine, and may result in the loss of the right to claim damages.

This non-compliance may result in the following risks:

- failure of important machine/plant functions,
- failure of specific maintenance and repair procedures,
- possible electrical, mechanical and chemical hazards,
- risk to the environment due to the type of substances released.

2.3. WARRANTY

The conditions of the warranty are specified in the General Sales Condition that has been delivered at the time of placing your order.



The machine may not undergo any modification without prior approval from the manufacturer.

For your safety, only use original spare parts and accessories.

The usage of other parts will relieve the manufacturer of any liability.

Changing the service conditions can only be carried out with prior written authorization from INOXPA.

The non-compliance of the prescribed indications in this manual means misuse of this gear on the technical side and the personal safety and this, exempt INOXPA of all responsibility in case of accidents and personal injuries and/or property damage. Also, excluded from the warranty all breakdowns caused by improper use of the gear.

Please do not hesitate to contact us in case of doubts or if further explanations are required regarding specific data (adjustments, assembly, disassembly, etc.)

3. Safety

3.1. WARNING SYMBOLS



Safety hazard for people in general and/or for equipment



Electric hazard

ATTENTION

Important instruction for the protection of the equipment and its functions

3.2. GENERAL SAFETY INSTRUCTIONS



Read the instruction manual carefully before installing and starting the pump. Contact INOXPA in case of doubt.

3.2.1. During the installation



The [Technical Specifications of chapter 9](#) should always be observed.

Never start the pump before connecting it to the lines.

Check for proper specifications of the motors, especially if its working conditions create an explosions hazard.



During the installations, all the electric work should be carried out by authorized personnel.

3.2.2. During operation



The [Technical Specification of chapter 9](#) should always be observed. Under no circumstances can the specified limit values be exceeded.

NEVER touch the pump or the pipework during operation if the pump is being used for transferring hot liquids or during cleaning.

The pump contains moving parts. Never place your fingers inside the pump during operation.

NEVER operate with the suction and discharge valves closed.

NEVER spray water directly on the electrical motor. The standard motor protection is IP-55: protection against dust and water spray.

3.2.3. During maintenance



The [Technical Specifications of chapter 9](#) shall always be observed.

NEVER disassemble the pump until the pipes have been emptied. Remember that liquid will remain inside the pump's pump casing (if does not have a purge). Bear in mind that the pumped liquid may be hazardous or extremely hot. Consult the regulations in effect in each country for these cases.

Do not leave loose parts on the floor.



ALWAYS disconnect the electrical power to the pumps prior to carrying out any maintenance.

Remove the fuses and disconnect the cable from the motor's terminals.

All electrical work must be carried out by authorized personnel.

4. General Information

4.1. DESCRIPTION

ESTAMPINOX EFI centrifugal pumps have designed to pump water and compatible liquids with AISI 316L stainless steel.

ESTAMPINOX EFI is a close-coupled centrifugal pump. It is made of a cold-formed stainless steel casing, open impeller manufactured with stainless steel cold-formed plate or investment casting according to model, mechanical seal, pump cover, lantern and shaft. ESTAMPINOX EFI centrifugal pump is provided with an internal single mechanical seal.

The motor is IEC standard, B34 flange (B35 for frame 132), protection IP55, class F-insulation, three-phase 220-240/380-420 a 50 Hz.

4.2. APPLICATION

ESTAMPINOX EFI is designed to cater for the needs of auxiliary services in the food-processing, chemical, pharmaceutical and wine-making industries.

For each type of the pump, the hydraulic performance is given by the choice of impeller diameters and speeds. The characteristic curves also show the power requirements. The intended use of the pump is defined by its characteristic curve and operating limits provided in the chapter [9. Technical Specifications](#).

ATTENTION



The range of application for each type of pump is limited. The pump was selected for a given set of pumping conditions when the order was placed. INOXPA shall not be liable for any damage resulting from the incompleteness of the information provided by the purchaser (nature of the fluid, rpm, etc.).

5. Installation

5.1. RECEPTION OF THE PUMP



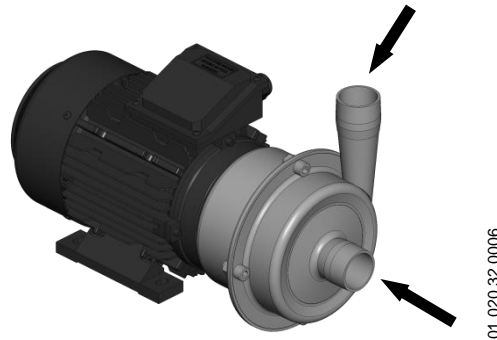
INOXPA cannot be held responsible for the damage sustained by the equipment during transport or unpacking. Please visually check that the packaging is not damaged.

The pump package includes the following documents:

- shipping documents,
- installation, service and maintenance instructions manual,
- instructions and service manual of the motor¹.

Unpack the pump and check the following:

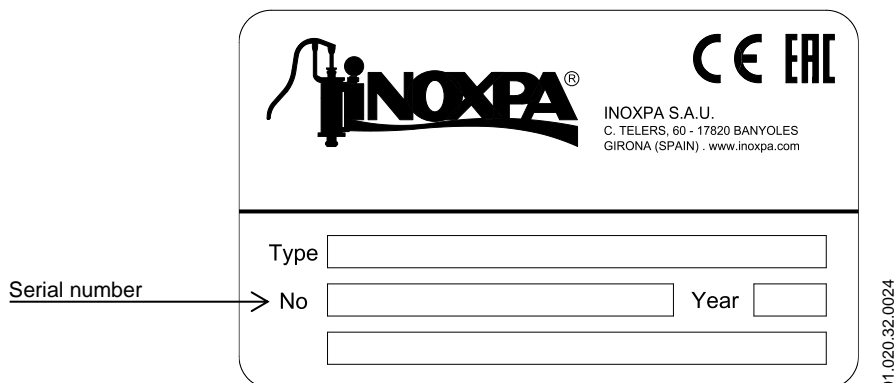
- The suction and discharge connections of the pump, removing any rest of packaging materials,



- The pump and the motor are not damaged,
- If the equipment is not in good condition and/or any part is missing, the carrier should report accordingly as soon as possible.

5.2. IDENTIFICATION OF THE PUMP

Each pump has a nameplate with the basic data required to identify the model.



¹ If the pump has been supplied with a motor from INOXPA

5.3. TRANSPORT AND STORAGE

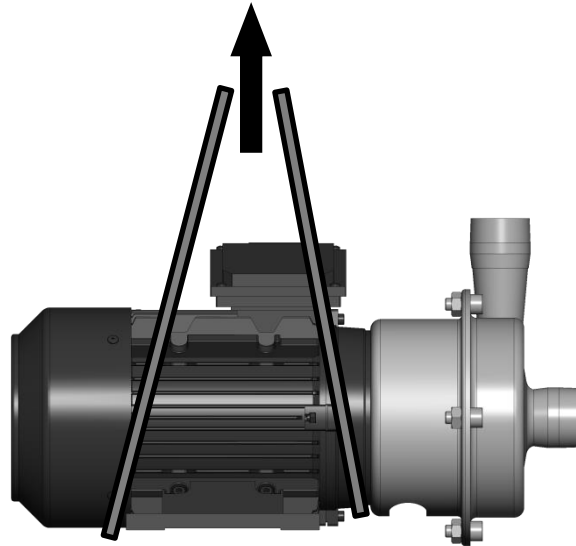
ATTENTION



The ESTAMPINOX EFI pumps are often too heavy to be stored manually.
Use an appropriate means of transport.
Use the points which are indicated in the drawing for lifting the pump.
Only authorized personnel should transport the pump.
Do not work or walk under heavy loads.

Lift the pump as indicated below:

- Always use two support points placed as far apart as possible.



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ATTENTION



Always remove the motor shroud before hoisting.

- Secure the supports so that they will not move.

See chapter [9. Technical Specifications](#) to consult dimensions and weights.

ATTENTION



During the transport, disassembly or assembly of the pump, there is a risk of loss of stability and that the pump could fall down and cause damages to the operators. Make sure that the pump is properly supported.

5.4. LOCATION

Place the pump in a position that allows enough space around it to provide access to the pump as well as to the motor. See chapter [9. Technical Specifications](#) to consult dimensions and weights.

ATTENTION



Install the pump to allow proper ventilation.
If the pump is installed outdoors, it should be covered by a roof. Its location should allow easy access for inspection or maintenance operations.

5.4.1. Excessive temperatures

Depending on the fluid to be pumped, high temperatures can be reached inside and around the pump.



Over 68°C the operator should take protective measures and place warning notices advising of the danger which exists if the pumped is touched.

The type of protection selected should not isolate the pump entirely. It should allow for the bearings to be cooled more efficiently and for the bearings to be lubricated.

5.5. PIPES

- As a general rule, install the suction and discharge lines in straight sections, with the minimum possible number of elbows and fittings in order to reduce any pressure losses that may be caused by friction.
- Make sure that the pump's ports are properly aligned with the pipework and have a diameter similar to that of the pump connections.
- Place the pump as close as possible to the suction tank and whenever possible below the liquid level, or even below the tank level in order to achieve the largest possible static head for suction.
- Install support brackets for the lines as close as possible to the pump's suction and discharge ports in order to avoid vibrations and stress on the pump.

5.5.1. Shut-off valves

The pump may be isolated for maintenance. To accomplish this, shut-off valves must be installed and connected to the pump's suction and discharge connections.



ATTENTION

These valves must ALWAYS be open during the operation of the pump.

5.6. ELECTRICAL INSTALLATION



Only qualified personnel can connect the electric motors.

Take the necessary measures to prevent damage to cables and connections.

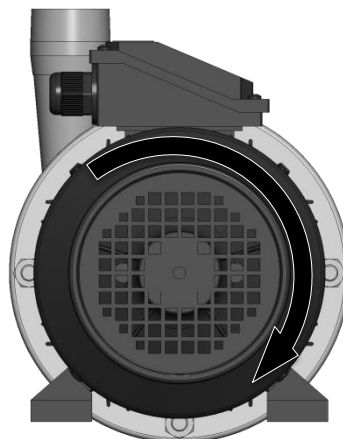


Electrical equipment, terminals and components of the control systems may still carry current when they are disconnected. Contacting them may impose a hazard to operators or cause irreparable material damage.

Before handling the pump, make sure that the motor is stopped.

- Connect the motor in accordance with the instructions supplied by the motor manufacturer, in accordance with the current national legislation and in compliance with EN 60204-1.
- Check the direction of rotation (see the signalling label on the pump).
- Start and stop the pump motor momentarily. Make sure that the direction of rotation is correct. If the pump rotates in the wrong direction it could cause serious damage.

See from the rear of the motor



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ATTENTION

See indicator label on the pump.

ALWAYS check the direction of rotation of the motor with liquid inside the pump.

6. Start-up



Prior to starting the pump, carefully read the instructions in chapter 5. [Installation](#).

Carefully read chapter 9. [Technical Specifications](#). INOXPA will not be liable for improper use of the equipment.



NEVER touch the pump or the lines if hot liquids are being pumped.

6.1. CHECKS BEFORE STARTING THE PUMP

- Completely open the shut-off valves on the suction and discharge lines.
- If liquid does not flow towards the pump, fill it with the liquid to be pumped.



ATTENTION

The pump must never turn dry.

- Check that the power supply matches the rating indicated on the motor plate.
- Check that the direction of rotation of the motor is the right one.

6.2. CHECKS WHEN STARTING THE PUMP

- Check that the pump is not making any strange noises.
- Check if the absolute inlet pressure is sufficient to prevent cavitation in the pump.
- Control the discharge pressure.
- Check for leaks in the sealing areas.



ATTENTION

Shut-off valves on the suction pipe must not be used to regulate the flow. All shut-off valves must be fully open during operation.

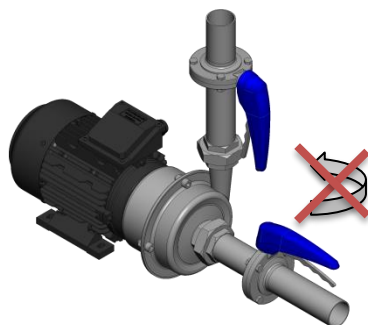


ATTENTION

Control the motor consumption to prevent an electrical overload.

Reduce the flow rate and the electrical power consumed by the motor:

- by regulating the pump's discharge flow
- by decreasing the motor speed



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Use special protection when the sound pressure in the operation area exceeds 85 db(A).



If the pump has not incorporated a pressure by-pass you should mount a relief valve or any other device that limits the pressure to 7 bar.

7. Troubleshooting

The following table provides solutions to problems that might arise during the operation of the pump. The pump is assumed to have been properly installed and be suitable for the relevant application.

Please contact INOXPA if technical assistance is required.

Motor overload							
↓	The pump does not provide enough flow or pressure						
↓	↓	No pressure on the discharge side					
↓	↓	↓	Uneven discharge flow / pressure				
↓	↓	↓	↓	Noise and vibration			
↓	↓	↓	↓	The pump gets clogged			
↓	↓	↓	↓	Overheated pump			
↓	↓	↓	↓	Excessive wear			
↓	↓	↓	↓	The mechanical seal leaks			
↓	↓	↓	↓	PROBABLE CAUSES		SOLUTIONS	
				Wrong direction of rotation		Reverse the direction of rotation	
				NPSH is not high enough		Raise the suction tank Lower the pump Reduce the vapour pressure Widen the diameter of the suction pipe Shorten and simplify the suction line	
				Pump not drained		Drain or fill	
				Cavitation		Increase suction pressure	
				Air is suctioned by the pump		Check the suction pipe and all its connections	
				Clogged suction pipe		Check the suction pipe and all its filters, if any	
				Discharge pressure too high		If necessary, reduce load losses, e.g. by increasing the pipe diameter	
				Flow too high		Reduce the flow by means of a diaphragm. Partially close the discharge valve. Trim the impeller Decrease speed	
				Fluid viscosity too high		Reduce the viscosity, e.g. by heating the fluid	
				Fluid temperature too high		Reduce the temperature by cooling the fluid	
				Mechanical seal damaged or worn out		Replace the seal	
				O-rings unsuitable for the fluid		Fit suitable O-rings. Consult the manufacturer.	
				The impeller scrapes		Lower the temperature Reduce the suction pressure Adjust the impeller / cover play	
				Tension in the lines		Connect the pipes to the pump without tension	
				Foreign matter in the liquid		Install a filter in the suction pipe	
				Mechanical seal spring tension is too low		Adjust as indicated in this manual	

8. Maintenance

8.1. GENERAL CONSIDERATIONS

This pump, just like any other machine, requires maintenance. The instructions contained in this manual cover the identification and replacement of spare parts. The instructions are aimed at maintenance personnel and those responsible for the supply of spare parts.



Carefully read chapter 9. [Technical Specifications](#).

Maintenance work can only be carried out by qualified personnel that are trained and equipped with the necessary resources to carry out this work.

All parts or materials that are replaced must be properly disposed of/recycled in accordance with the current directives applicable in each area.



ALWAYS disconnect the pump before beginning any maintenance work.

8.2. CHECK THE MECHANICAL SEAL

Periodically check that there are no leaks around the shaft. If leakage is detected through the mechanical seal, replace it following the instructions in the chapter 8.6. [Disassembly and assembly of the pump](#).

8.3. MAINTENANCE OF THE SEALS

SEALS REPLACEMENT	
Preventive maintenance	Replace after twelve (12) months. We also recommend replacing the gaskets during seal or pump shaft replacement.
Maintenance after a leak	Replace at the end of the process. If the impeller nut gasket fails, the threaded hole on the impeller and the threads on the end shaft have to be cleaned.
Scheduled maintenance	Regularly check that there are no leaks and that the pump is operating correctly. Keep a record of the pump. Use statistics to plan inspections.
Lubrication	During assembly, use soapy water when fitting the different gaskets to allow them to slide better.

The period between each preventive maintenance service will vary depending on the operating condition of the pump: temperatures, flow, number of operating hours, cleaning solutions used, etc.

8.4. TIGHTENING TORQUE

If not stated otherwise, the torques listed in the following table should be applied to the nuts and bolts of this pump.

Size	Nm	lbf-ft
M6	10	7
M8	21	16
M10	42	31
M12	74	55
M16	112	83

8.5. STORAGE

Before being stored the pump must be completely emptied of liquids. Avoid, as far as possible, the exposure of the parts to excessively damp atmospheres.

8.6. DISSASSEMBLY AND ASSEMBLY OF THE PUMP

The assembly and disassembly of the pumps should be done by qualified personnel. Make sure that the personnel read carefully this instruction manual and, in particular, those instructions which refer to the work they will perform.

ATTENTION



Incorrect assembly or disassembly may cause damage to the pump's operation and lead to high repair costs and a long period of downtime.

INOXPA is not responsible for accidents or damages caused by a failure to comply with the instructions in this manual.

Preparation

Provide for a clean working environment so some parts, including the mechanical seal, require very careful handling and others have close tolerances.

Check that the parts which are used are not damaged during transport. When doing this, you need to inspect the adjustment edge, the butted faces, the tight fit, burrs, etc.

After each disassembly, carefully clean the parts and check for any damage. Replace all damaged parts.

Tools

Use the proper tools for assembly and disassembly operations. Use them correctly.

Cleaning

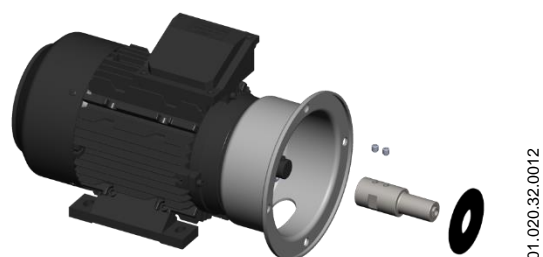
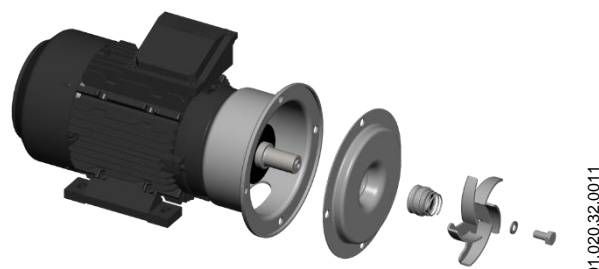
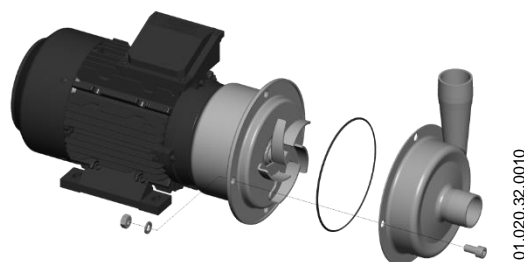
Before disassembling the pump, clean it outside and inside.



NEVER clean the pump by hand when it is running.

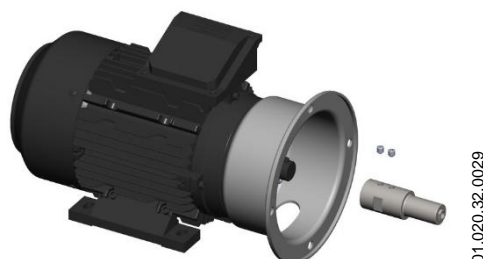
8.6.1. Disassembly of the pump and single mechanical seal

1. Remove the screws, nuts and washers (51, 53 and 54A) and disassembly the pump casing (01).
2. Check the condition of the O-ring (80) on the pump casing and replace it if damaged.
3. Place an open-end wrench on the flat sides of the shaft (05) to prevent it from rotating. For ESTAMPINOX EFI 3 pump place a pin into the shaft hole (05).
4. Pull out the impeller (02) disassembling the screw (52A) and washer (53). For the EFI-3, quit the blind nut (45) and washer (35).
5. Remove the rotating part of the seal (08) sliding in front of the shaft (05).
6. Remove the pump cover (03) from the lantern (04).
7. Manually remove the stationary part of the seal (08) which is located in the pump cover (03).
8. Remove the splash ring (82).
9. Loosen the studs (55) from the shaft (05) and take them off from the motor (93).



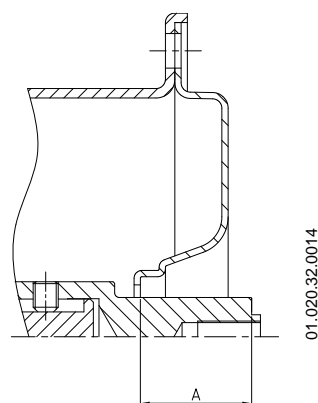
8.6.2. Assembly of the pump and single mechanical seal

1. Place the shaft (05) on the motor (93).
2. Fix the shaft (05) with the studs (55) to the motor (93) leaving it to gauge the impeller (02) with the pump cover (03).

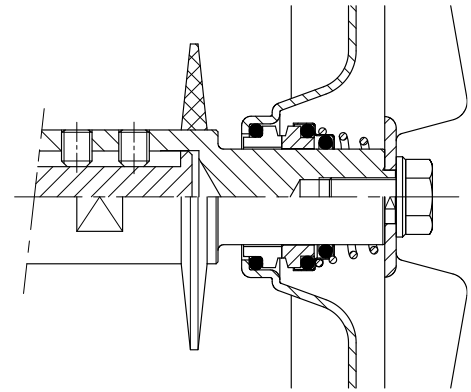


3. Hold the pump cover (03) on the lantern (04) with the hand and gauge the assembly position according to the distance A.

Pump model	A (mm)
EFI - 0 / 1	33
EFI - 2 / 3	35



4. Now, tighten the studs (55) strongly that fix the shaft (05) to the motor (93) from the bottom lantern window (04).
5. Take off the pump cover (03).
6. Place the splash ring (82) in the shaft (05).
7. Fit the stationary part of the mechanical seal (08) on the pump cover (03).
8. Put the pump cover (03) on the lantern (04).
9. Fit the rotating part of the mechanical seal (08) in the shaft (05) and place the impeller (02).
10. Fix the impeller (02) with the screw (52A) and washer (53).
For the EFI-3, fix it with the washer (35) and blind nut (54B).



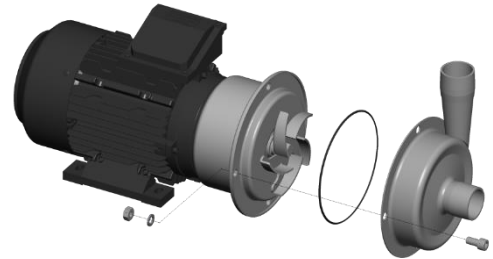
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ATTENTION



When installing the new seal, use soapy water when fitting the different parts and seals to allow them to slide better. Apply to the stationary as well as the rotating parts.

11. Mount the O-ring (80) on the pump cover (03) taking care that it is not twisted.
12. Put the pump casing (01) and secure it on the lantern (04) by the screws, nuts and washers (51, 53A and 54).



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9. Technical Specifications

Maximum operating pressure	600 kPa (6 bar)
Temperature range	-10°C to 120°C
Maximum speed	3500 rpm (50 Hz)
Sound level	60 – 80 dB(A)

Materials

Parts in contact with the product	1.4404 (AISI 316L)
Other stainless steel parts	1.4301 (AISI 304)
Seals in contact with the product	EPDM (standard)
Other materials for the seal	consult with INOXPA
Surface finish	matt

Mechanical seal

Type of seal:	single inside seal
Stationary parts material	graphite (C) (standard)
Rotary parts material	ceramic (Cer) (standard)
Seal material	EPDM (standard)

Motor

Type	three-phase asynchronous motor, flange B34 (B35 for motor frame 132), 2 or 4 poles, IP55 protection, class F insulation
Power	0,37 to 7,5 kW
Voltage and frequency	220-240 V Δ / 380-420 V Y, ≤ 4 kW 380-420 V Δ / 660-690 V Y, ≥ 5,5 kW

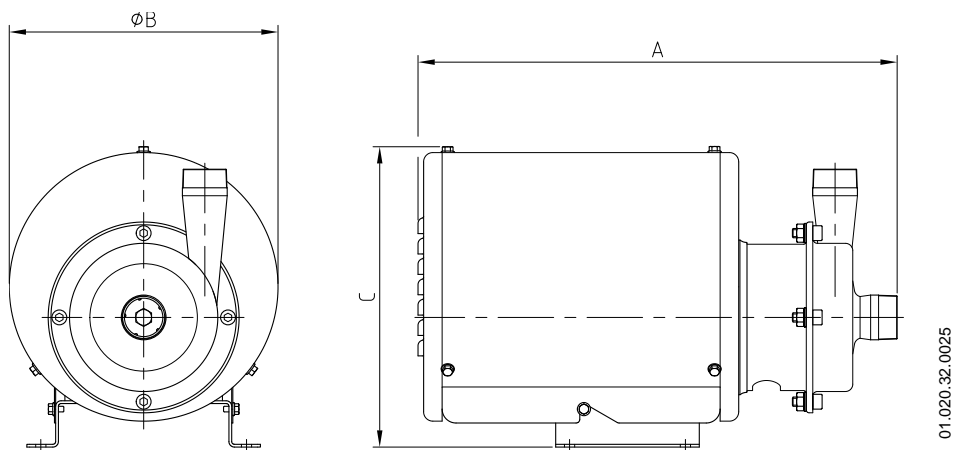
9.1. WEIGHT WITH SHROUD

Weight (kg)										
IEC	71		80		90	100	112	132		
kW	0,25	0,37	0,55	0,75	1,1	2,2	2,2	4	5,5	7,5
EFI 0	11	11								
EFI 1			17	18						
EFI 2					24	26				
EFI 3							39	44	48	78

9.2. WEIGHT WITHOUT SHROUD

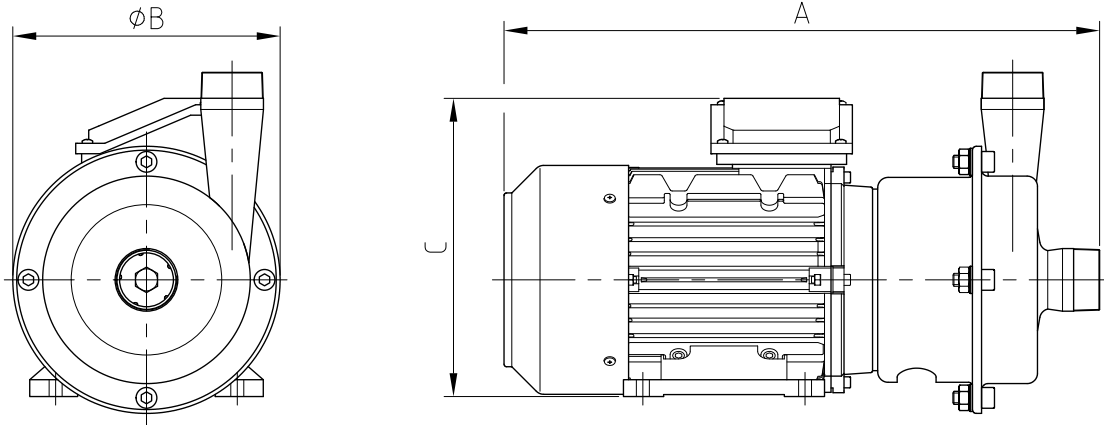
Weight (kg)										
IEC	71		80		90	100	112	132		
Kw	0,25	0,37	0,55	0,75	1,1	2,2	2,2	4	5,5	7,5
EFI 0	8	8								
EFI 1			12	13						
EFI 2					19	21				
EFI 3							32	37	41	67

9.3. DIMENSIONS WITH SHROUD



Pump type	Motor	Dimensions (mm)		
	IEC	A	ØB	C
EFI 0	71	430	230	260
EFI 1	80	500	290	315
EFI 2	90	517	290	335
EFI 3	100	600	350	375
	112	600	350	390
	132	730	400	425

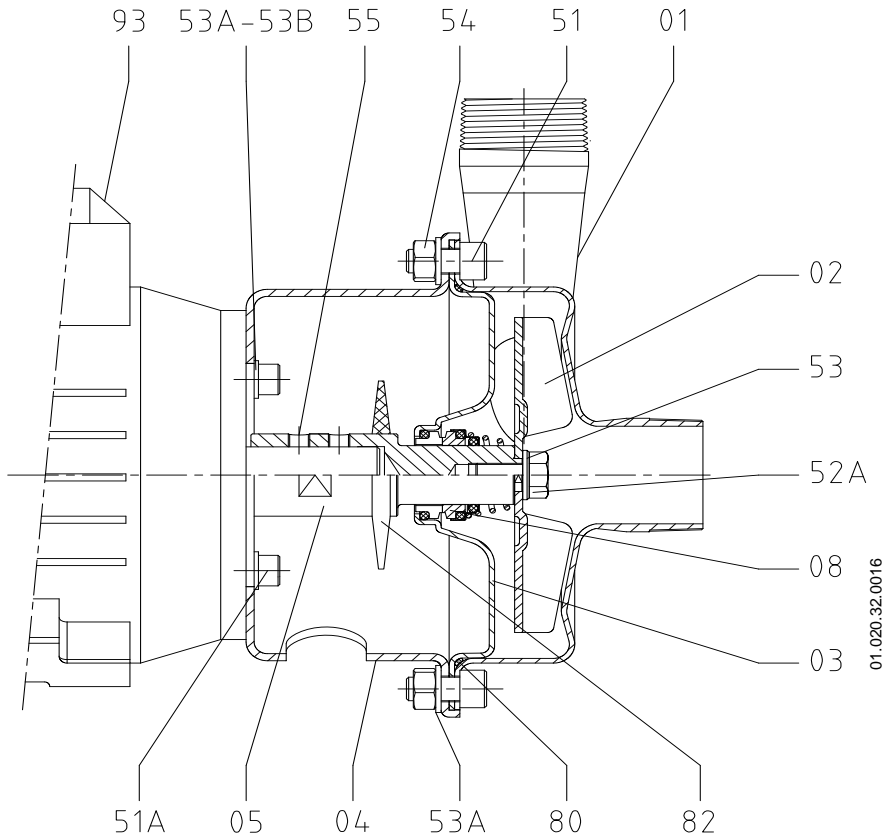
9.4. DIMENSIONS WITHOUT SHROUD



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Pump type	Motor			Dimensions (mm)		
	IEC	kW	rpm	A	ϕB	C
EFI 0	71	-	-	370	140	190
EFI-1	80	-	-	405	165	220
EFI 2	90L	2,2	2 900	475	200	240
	90S	1,1	1 450	450	200	240
EFI 3	100	-	-	520	250	265
	112	-	-	535	250	295
	132	-	-	600	250	335

9.5. EXPLODED DRAWING OF ESTAMPINOX EFI 0/1/2 PUMP

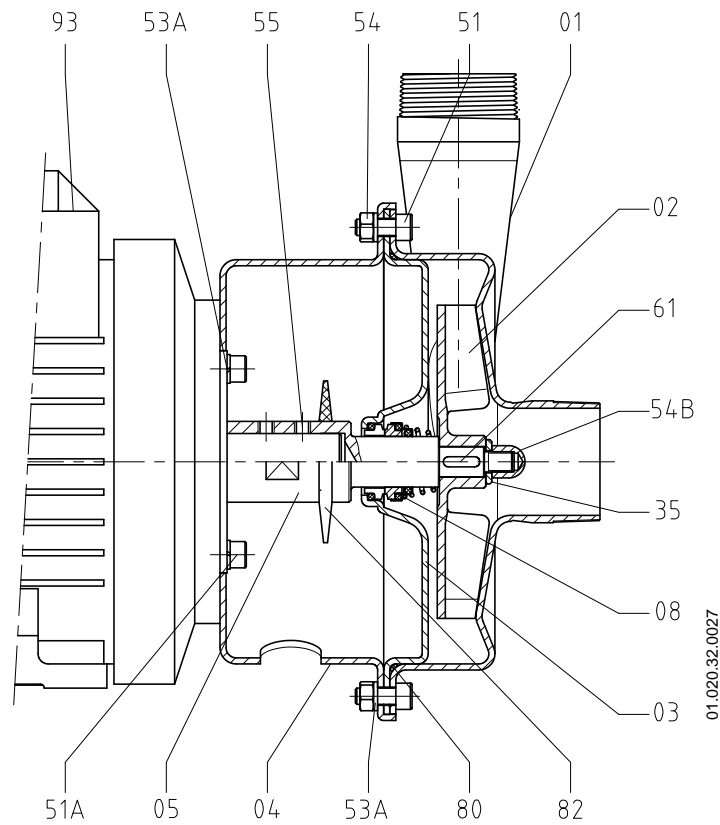


9.6. PARTS LIST OF ESTAMPINOX EFI 0/1/2 PUMP

Position	Description	Quantity			Material
		EFI 0	EFI 1	EFI2	
01	Pump casing	1	1	1	1.4404 (AISI 316L)
02	Impeller	1	1	1	1.4404 (AISI 316L)
03	Pump cover	1	1	1	1.4404 (AISI 316L)
04	Lantern	1	1	1	1.4301 (AISI 304)
05	Shaft	1	1	1	1.4404 (AISI 316L)
08	Mechanical seal*	1	1	1	-
51	Allen screw	4	4	4	A2
51A	Allen screw	4	4	4	A2
52A	Hexagonal screw	1	1	1	A4
53	Flat washer*	1	1	1	A4
53A	Grower washer*	8	4	4	A2
53B	Grower washer*	-	4	4	A2
54	Hexagonal nut	4	4	4	A2
55	Stud	1	2	2	A2
80	O-ring*	1	1	1	EPDM
82	Splash ring*	1	1	1	EPDM
93	Motor	1	1	1	-

* Recommended spare parts

9.7. EXPLODED DRAWING OF ESTAMPINOX EFI 3 PUMP WITH MOTOR SIZE 100/112

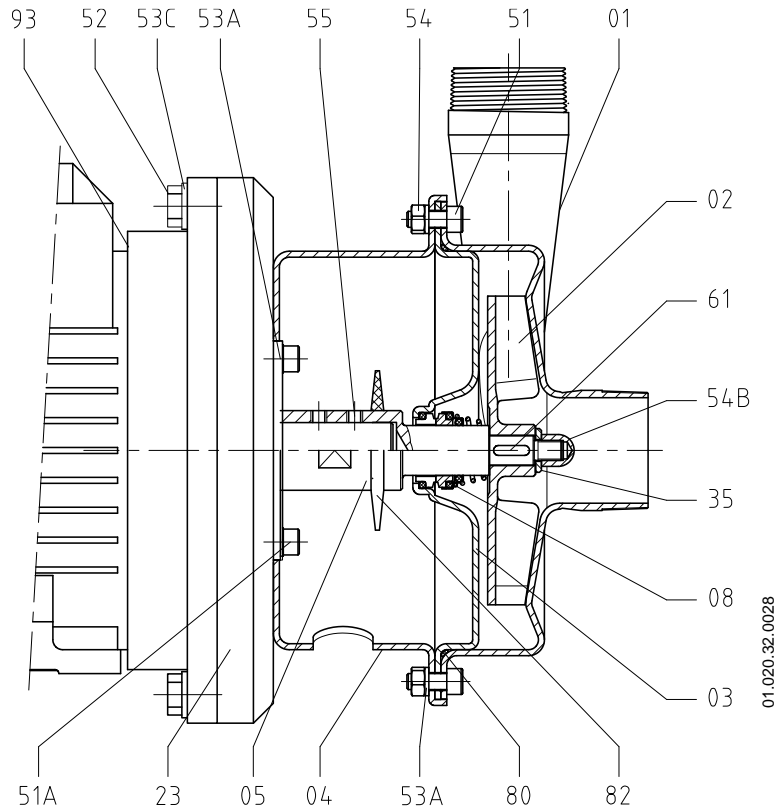


9.8. PARTS LIST OF ESTAMPINOX EFI 3 PUMP WITH MOTOR SIZE 100/112

Position	Description	Quantity	Material
01	Pump casing	1	1.4404 (AISI 316L)
02	Impeller	1	1.4404 (AISI 316L)
03	Pump cover	1	1.4404 (AISI 316L)
04	Lantern	1	1.4301 (AISI 304)
05	Shaft	1	1.4404 (AISI 316L)
08	Mechanical seal*	1	-
35	Impeller washer*	1	A4
51	Allen screw	8	A2
51A	Allen screw	4	A2
53A	Grower washer*	12	A2
54	Hexagonal nut	8	A2
54B	Blind nut	1	A4
55	Stud	2	A2
61	Key	1	1.4404 (AISI 316L)
80	O-ring*	1	EPDM
82	Splash ring	1	EPDM
93	Motor	1	-

* Recommended spare parts

9.9. EXPLODED DRAWING OF ESTAMPINOX EFI 3 PUMP WITH MOTOR SIZE 132

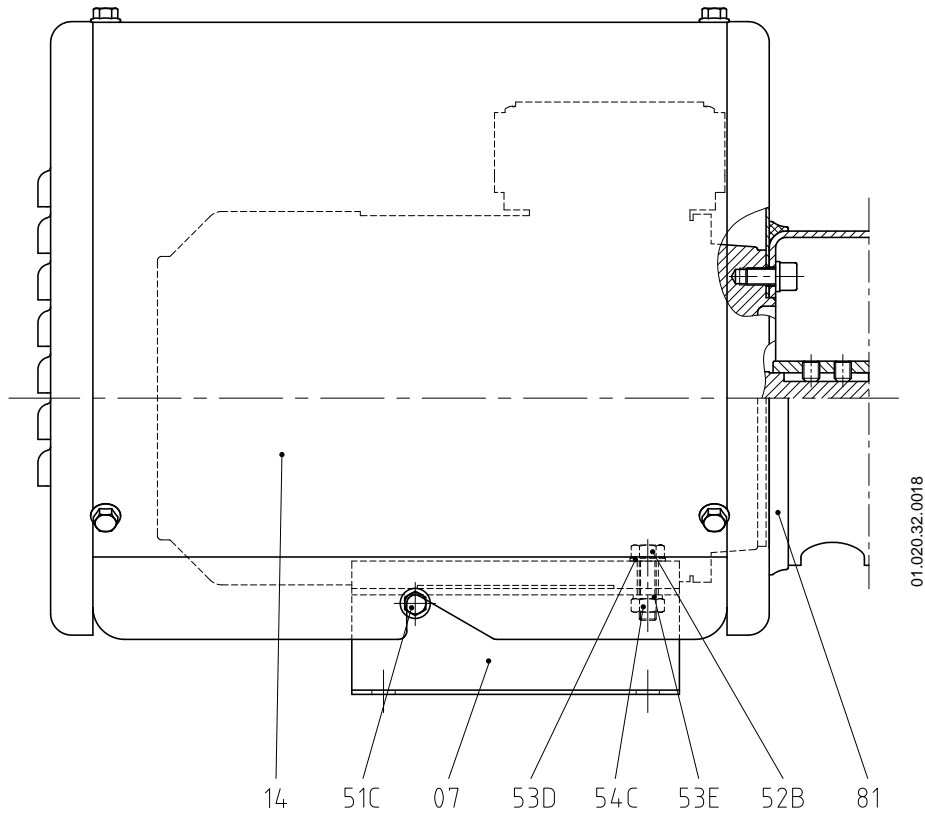


9.10. PARTS LIST OF ESTAMPINOX EFI 3 PUMP WITH MOTOR SIZE 132

Position	Description	Quantity	Material
01	Pump casing	1	1.4404 (AISI 316L)
02	Impeller	1	1.4404 (AISI 316L)
03	Pump cover	1	1.4404 (AISI 316L)
04	Lantern	1	1.4301 (AISI 304)
05	Shaft	1	1.4404 (AISI 316L)
08	Mechanical seal*	1	-
23	Counterflange	1	LM4
35	Impeller washer	1	A4
51	Allen screw	8	A2
51A	Allen screw	4	A2
52	Hexagonal screw	4	A4
53A	Grower washer*	12	A2
53C	Flat washer*	4	A2
54	Hexagonal nut	8	A2
54B	Blind nut	1	A4
55	Stud	2	A2
61	Key	1	1.4404 (AISI 316L)
80	O-ring*	1	EPDM
82	Splash ring	1	EPDM
93	Motor	1	-

* Recommended spare parts

9.11. EXPLODED DRAWING OF ESTAMPINOX EFI PUMP WITH SHROUD



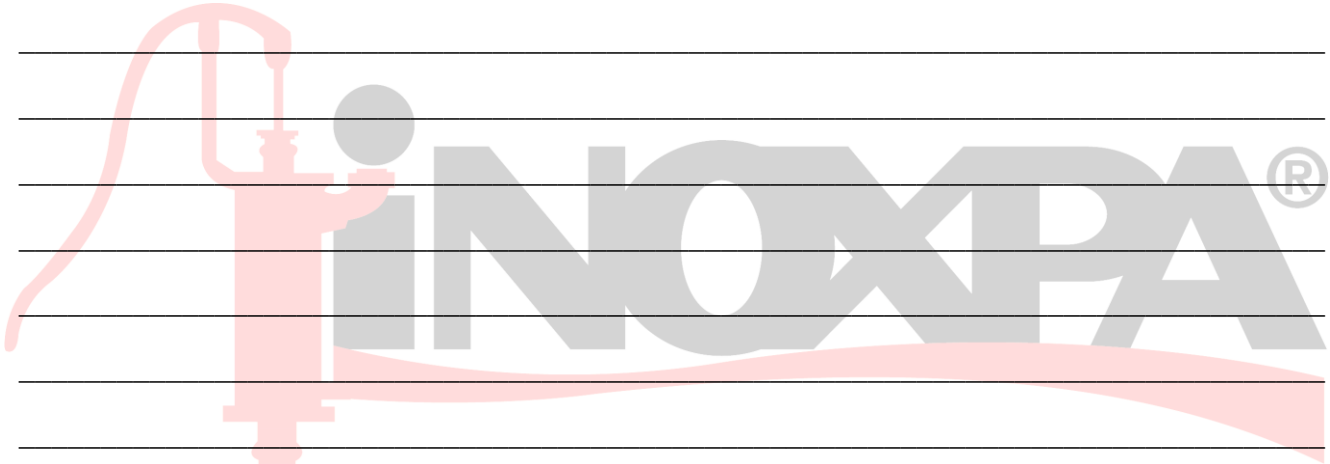
9.12. PARTS LIST OF ESTAMPINOX EFI PUMP WITH SHROUD

Position	Description	Quantity	Material
07	Leg	2	1.4301 (AISI 304)
14	Shroud	1	1.4301 (AISI 304)
51C	Screw with flange	2	A2
52B	Hexagonal screw	4	A2
53D	Flat washer*	4	A2
53E	Grower washer*	4	A2
54C	Hexagonal nut	4	A2
81	Lantern joint	1	EPDM

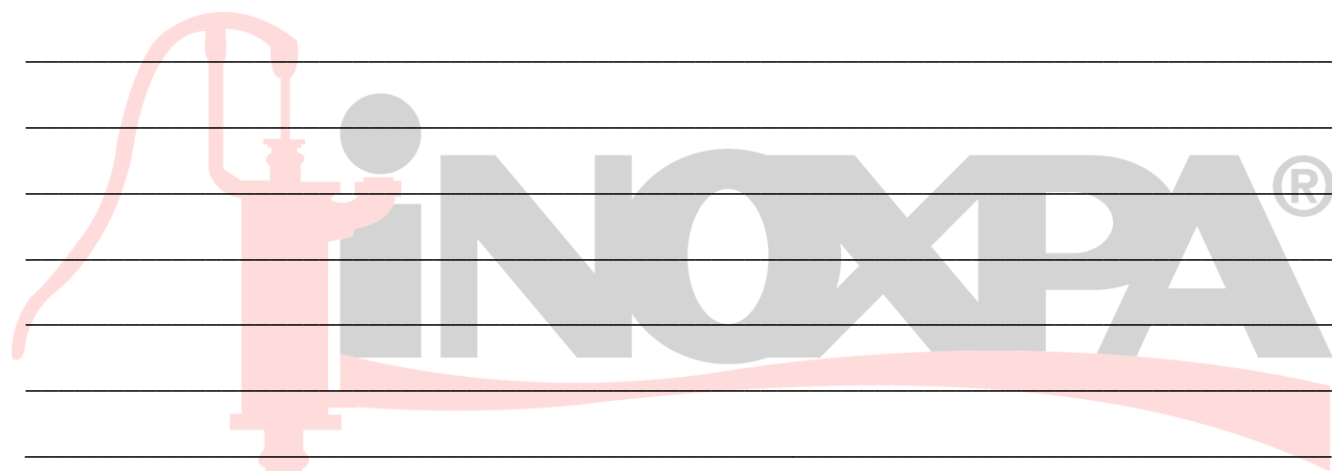
* Recommended spare parts

NOTES

Lined area for notes with horizontal ruling lines.



NOTES



How to contact INOXPA S.A.U.:

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