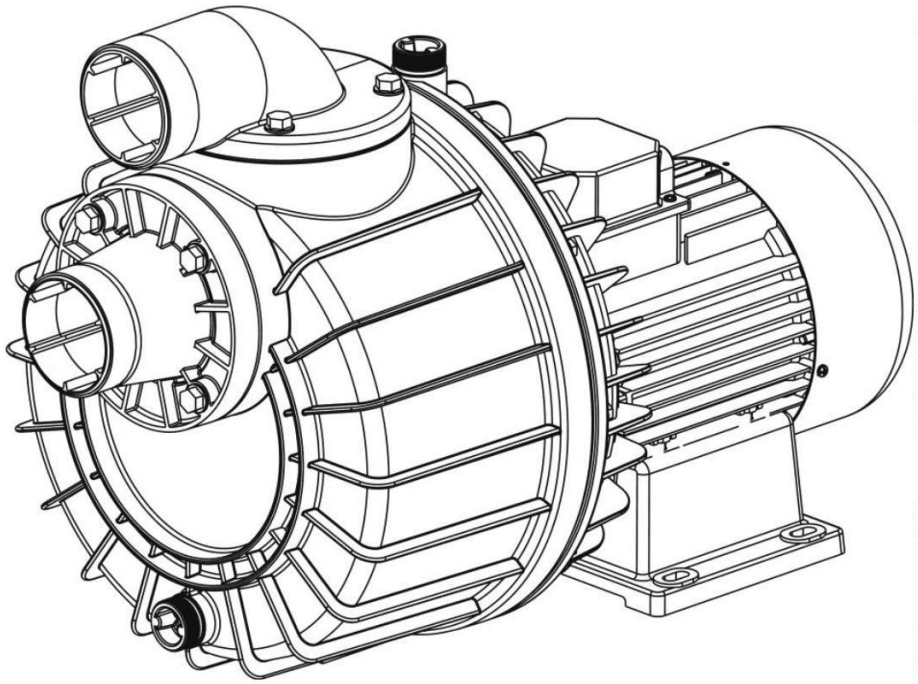
NADORSELF



EN Instruction manual
(Translation from the original Spanish)

EN: EVIDENCE OF CONFORMITY

We declare, under our responsibility, that the products in this manual comply with the following directives and standards:

- Directive 2006/42/EC (Machine Security):
Standard EN 809 and EN 60204-1
- Directive EMC 2014/30/EU (Electromagnetic compatibility):
Standard EN 61000-6-1 y EN 61000-6-3
- Directive 2014/35/EU (Low voltage):
Standard EN 60335-1 and EN 60335-2-41
- Directive 2000/14/EC (noise emission):
EN-ISO 3744
- Directive 2009/125/EC (ecological design):
Regulation (EU) 2019/1781 electrical motors and variable speed drives. Standard EN 60034-30.
Regulation 547/2012 for Hydraulic pumps. Standard EN 16480
- Directive 2012/19/EU (on waste electrical and electronic equipment (WEEE)): Standard EN 50419:2006 about marking of electrical and electronic equipment.
- Directive 2011/65/UE (Restriction of hazardous sustances): Standard EN 50581.
- Standard EN 16713-2

UKCA CERTIFICATE OF CONFORMITY

EVIDENCE OF CONFORMITY

We declare, under our responsibility, that the products in this manual comply with the following directives and standards:

- Supply of Machinery (Safety) Regulations 2008: Standard BS 809 and BS 60204-1
- Electromagnetic Compatibility Regulations 2016: Standard BS 61000-6-1 and BS 61000-6-3.
- Electrical Equipment (Safety) Regulations 2016: Standard BS 60335-1 and BS 60335-2-41.
- The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019: Standard BS 60034-30.
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
2012. Standard BS 50581.

Banyoles, January 11th 2021

Josep Unyó (Technical Manager)
ESPA 2025, SL
Ctra. de Mieres, s/n – 17820 Banyoles
Girona - Spain

Damage prevention and safety instructions (See figure 5)

A	Warning! Observe limitations of use.
B	The name plate voltage must be the same as the mains voltage.
C	Connect the pump to the mains via an omnipolar switch with at least a 3 mm opening between contacts.
D	Install a high-sensitivity differential switch (0.03A) as extra protection against lethal electric shocks.
E	Connect the pump to the ground.
F	Use pump only within performance limits indicated on the name plate.
G	Remember to prime pump.
H	Check for motor self-ventilation.
I	This apparatus may be used by children 8 years or older and persons with reduced physical, sensory or mental capacities, or lacking experience and knowledge, if they are supervised or receive adequate training on the safe use of the apparatus and understand the dangers. Children should not be allowed to play with the apparatus. Children should not perform the ordinary cleaning and maintenance tasks without supervision.
J	Be careful with hazardous liquids and environments.
K	Caution! Look out for accidental leaks. Do not expose pump to bad weather.
L	Caution! Avoid icing. Cut out power supply before servicing pump.

Contents

Safety precautions

This symbol  together with one of the following words “Danger” or “Warning” indicates the risk level deriving from failure to observe the prescribed safety precautions:

DANGER risk of electric shock Warns that failure to observe the pre cautions involves a risk of electric shock.

DANGER Warns that failure to observe the pre cautions involves a risk of damage to persons and/or things.

WARNING Warns that failure to observe the pre cautions involves the risk of damaging the pump and/or the facility

1. GENERAL INFORMATION

Please observe the following instructions to achieve the best pump performance possible and a trouble free installation.

Read these instructions before installing the pump.

Save them for future reference.

These are single-stage, direct-suction centrifugal pumps specially designed for recirculation of large water flows in swimming pools for applications in counterflow current installations.

These pumps are designed to operate with clean water, free from particles in suspension and with a maximum temperature of 40ºC.

Correct pump operation is assured providing the instructions on electrical connection, installation and use are strictly adhered to.

Failure to adhere to the instructions can result in premature failure of the pump and voiding of the warranty.

2. HANDLING

The pumps are supplied suitably packaged to prevent damage in transit. Before unpacking, check that the packaging has not been damaged or deformed,

Lift and handle the product with care and with the right tools.

3. INSTALLATION

The installation of these electric pumps is only permitted in swimming pools or ponds that comply with standards IEC 60364-7-702 and/or the national regulations of the country in which the product is to be installed.

3.1. Fixing

The pump should be installed on a solid, horizontal base, secured by screws or bolts and using the existing holes in the mount.

The pump should be protected from possible flooding and receive dry ventilation.

For correct pump ventilation, leave a space of at least 10cm between the ventilator cover and any other element that might obstruct air circulation. (Fig.4)

3.2. Suction pipe assembly

The suction pipe must be of the same or greater diameter than the pump inlet and installed in an upward inclination to prevent trapped air pockets forming.

If the pump is required to perform a suction lift, to avoid unnecessary losses of head on the discharge side, the pump should be installed as close as possible to the water. It is not advisable to install the pump at more than 3m geometrical height from the water level. (Fig.4)

The non-return valve must be fitted correctly in the suction inlet. The latter must be positioned with the suction connector pivot and ALWAYS oriented with the larger metal ring against the suction inlet of the pump body (Fig.3).

3.3. Discharge pipe assembly

It is recommended to use pipes with a diameter equal or greater than the pump outlet. This will reduce loss of head caused by friction in longer pipe runs.

For tubes made of plastic materials the threaded joints must be made watertight using only “TEFLON” tape. No adhesives or similar products should be used.

For interior screw threads, when screwing in the respective tubes never exceed the length of the interior screw threads. Only new or clean connectors should be used.

Pipework must be supported and their weight must not rest on the pump.

3.4. Electrical connection

The electrical installation must have a multi-pole isolator with minimum 3mm contact openings,

The protection of the system will be based on a differential switch (Δfn = 30mA).

The power cable must correspond at least to the type H07 RN-F (according to 60245 IEC 66) and having terminals.

The connection and its dimensioning must be performed by a qualified installer according to the needs of the facility and following the regulations in force in each country.

Single-phase motors have thermal protection incorporated.

All of three phase motor pumps do not incorporate this protection. They must be connected to a motor-protective circuit breaker that can be adjusted manually. Set the circuit breaker according to the current given in the rating plate plus 10%.

Follow instructions given on fig.1 for correct electrical connection.

3.5. Pre-start checks

Ensure the voltage and frequency of the supply corresponds to the values indicated on the electrical data label.

Ensure that the pump shaft is rotating freely.

Fill the pump body through the hole on the upper part of the pump body. Once finished, ensure that the cover is properly secured. Check all joints and connections for leaks.

THIS PUMP MUST NEVER BE DRY RUN.

4. STARTING

Ensure all valves in the pipework are open.

Connect power supply. There will be a delay before water appears at the end of the discharge pipe.

Viewings from the fan ensure that the rotation of the motor is clockwise. On three phase pumps the motor may rotate anticlockwise. If this is happening, the flow will be lower than expected. To rectify this situation the two supply phases need to be reversed.

Ensure that the absorbed current is the same or lower than the maximum shown on the name plate. Adjust the thermal relay if is necessary.

If the pump fails to operate refer to the possible faults, causes and solutions list for assistance.

5. MAINTENANCE

Under normal conditions these pumps require no special or planned maintenance.

Clean the pump with a damp cloth without using harsh products.

We recommend that in cold weather, when there's risk of freezing, to completely drain the pipes and pump body by removing the drain plug.

If the pump is not to be operated for a long period it is recommended to remove it from the installation, drain down and store in a dry, well ventilated place.

ATTENTION: In the event of faults or damage occurring to the pump, repairs should only be carried out by an authorised service agent.

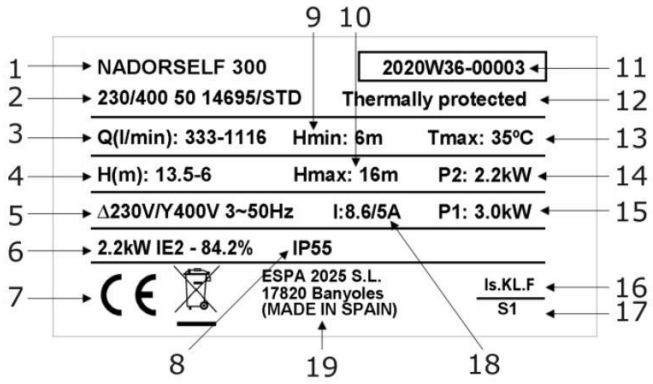
The Official Technical Services list is in www.espa.com.

6. DISPOSING OF THE PRODUCT

When the pump is eventually disposed of, please note that it contains no toxic or polluting material. All main components are material identified to allow selective disposal.

This product or parts of it must be disposed of in an environmentally sound way, use the waste collection service. If this is not possible, contact the nearest ESPA service workshop.

7. PLATE SHOWING CHARACTERISTICS



	DESCRIPTION		DESCRIPTION
1	Item reference	10	Maximum pressure
2	Voltage + frequency + item specifications	11	Year and week of manufacture + Pump serial number
3	Flow	12	Thermal protection incorporated indicator
4	Pressure	13	Max. liquid temperature
5	Nominal voltage, no. stages, alternate current symbol and frequency	14	Motor max. nominal output (P2)
6	Energy efficiency index (Three-phase model)	15	Electric pump unit absorbed power(P1)
6	Capacitor (Single-phase model)	16	Designated motor insulation
7	EC mark	17	Continuous operation symbol
8	Humidity protection level	18	Maximum nominal intensity at nominal voltage
9	Minimum working pressure	19	Name and address of vendor responsible for the product

8. POSSIBLE FAULTS, CAUSES AND SOLUTIONS

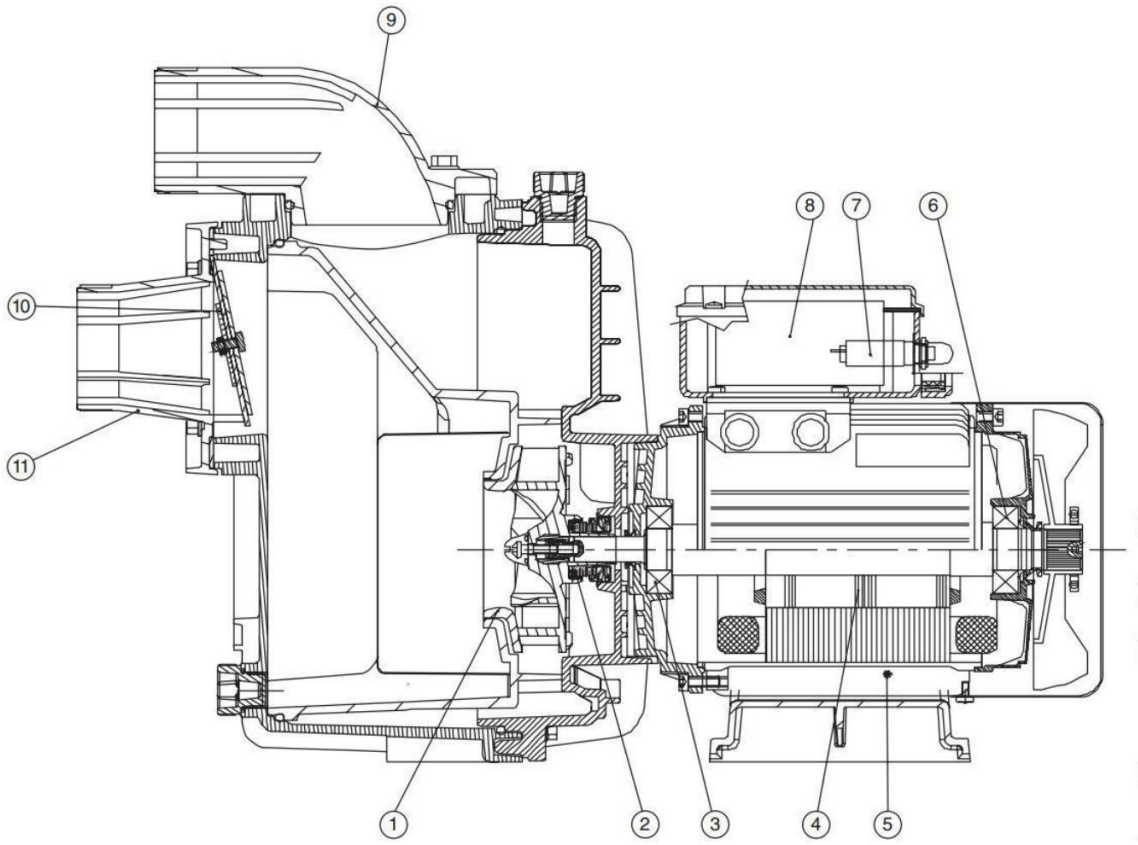
1) Pump does not prime.
2) Pump supplies scant flow.
3) Pump noisy.
4) Pump does not start.
5) Motor makes sound but does no start.

1	2	3	4	5	POSSIBLE PROBLEM	SOLUTIONS
X	X				Air entry trough suction line	Verify condition of connectors and gaskets of suction line
X	X				Motor turning direction reversed	Reverse 2 phases of the supply
X					Defective mechanical seal	Change mechanical seal
X	X				Excessive suction height	Excessive suction height
X	X		X		Incorrect voltage	Verify the voltage specified on the nameplate and that of the mains
X					Suctioning out of water	Set suction in correct position
	X	X			Diameter of suction line smaller than required	Correctly dimension suction line
		X			Incorrect pump attachment	Attach pump correctly
			X		Thermal relay tripped	Reset thermal relay
			X		Lack of power	Reset the fuses
				X	Motor blocked	Remove the motor and call the Technical Service

9. TECHNICAL DATA

Liquid temperature:..... 4ºC - 40ºC
Ambient temperature: ..... 0ºC - 40ºC
Storage temperature:..... -10ºC - 50ºC
Ambient relative humidity, max.: 95%
Motor class I.
Other data see Figure 2.

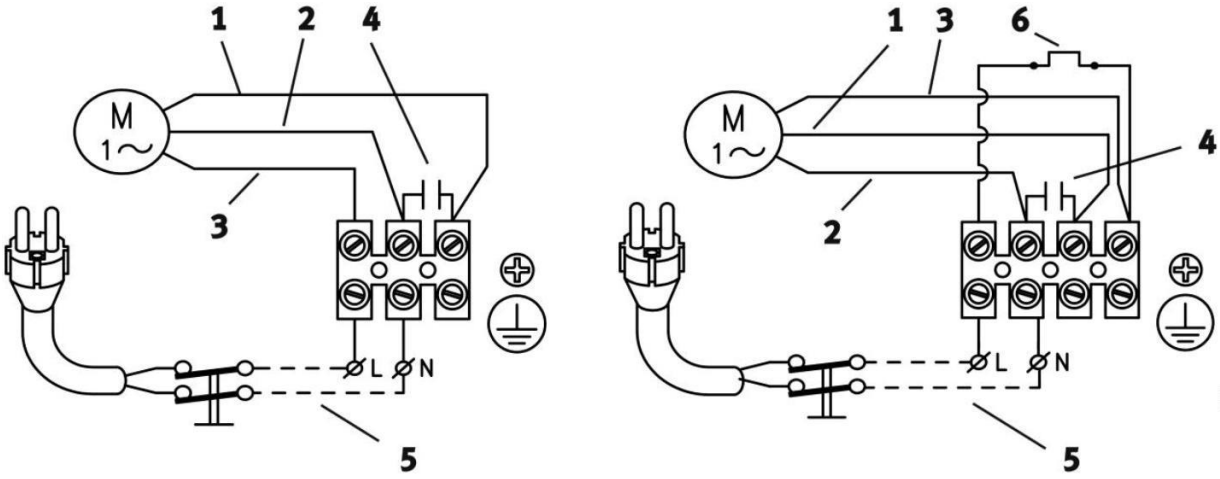
EN List of main components



	EN
1	Impeller
2	Mechanical seal
3	Anti-friction bearing
4	Motor shaft
5	Stator
6	Anti-friction bearing
7	Thermal protection
8	Capacitor
9	Discharge connector
10	Non-return valve
11	Suction connector

Fig.1

SINGLE PHASE SUPPLY



1. Red 2. White 3. Black 4. Capacitor 5. Line 6. Motor relay

THREE PHASE SUPPLY

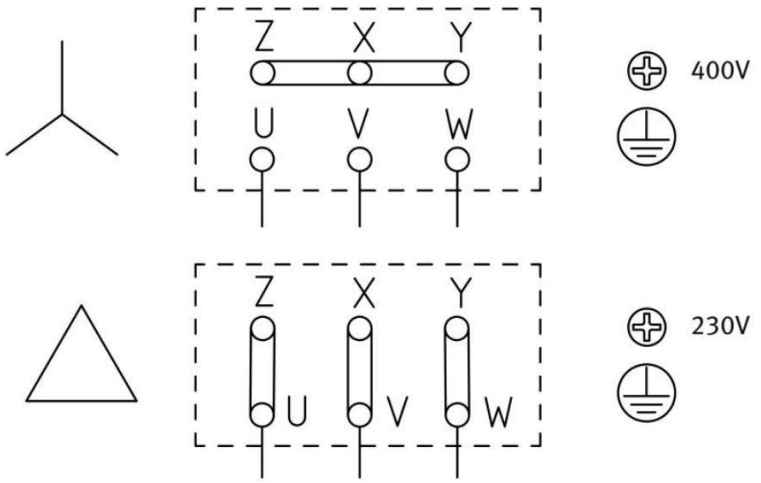
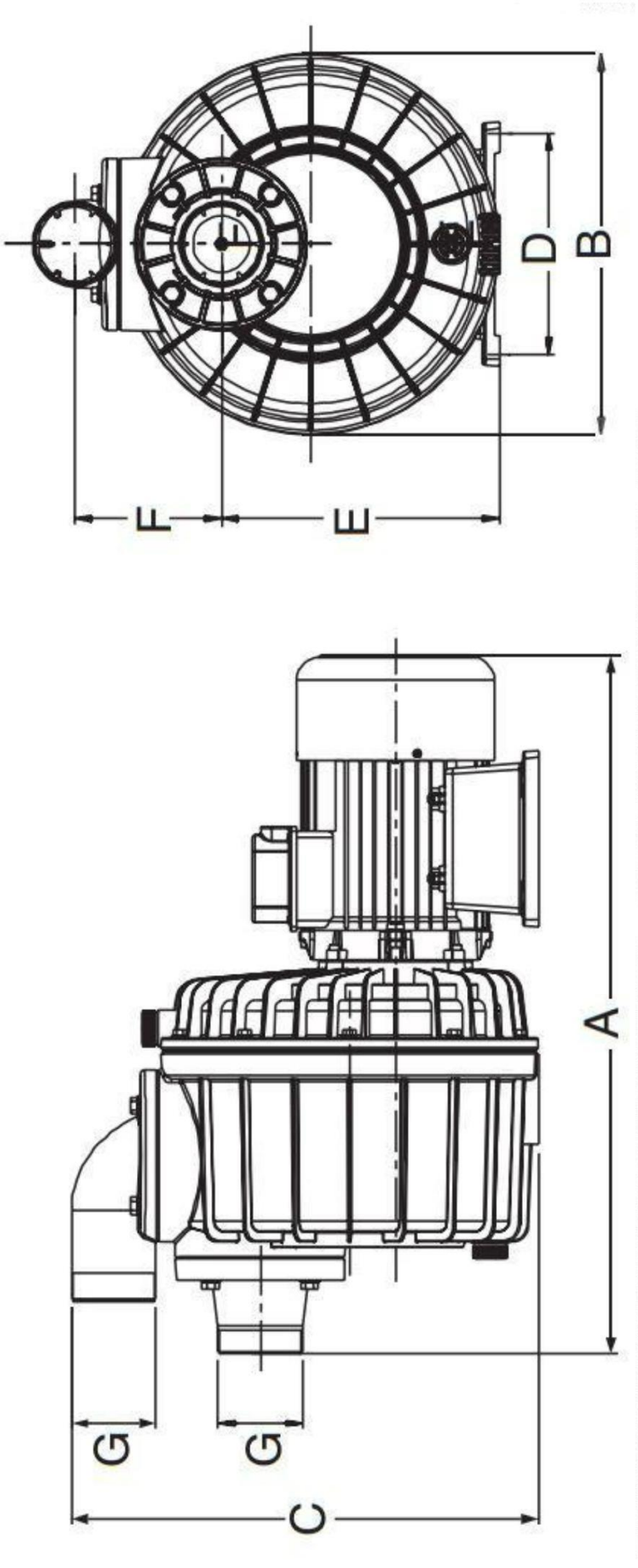
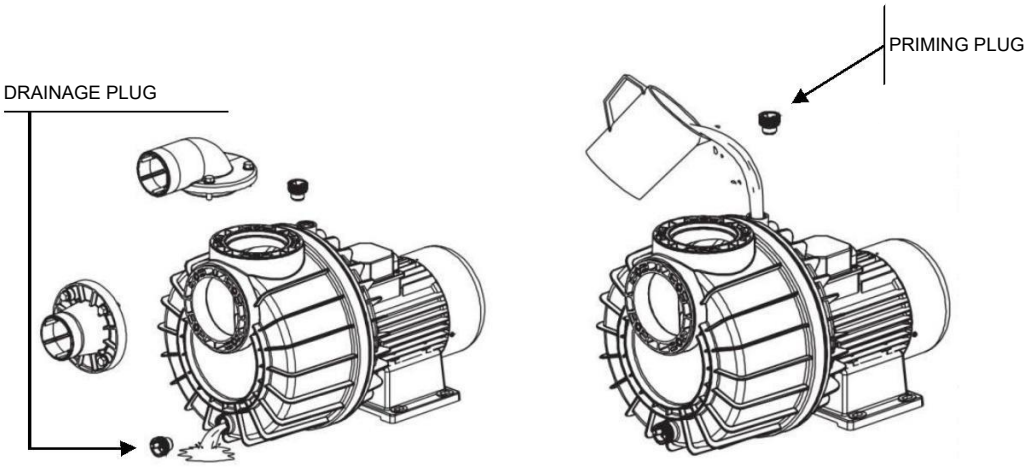


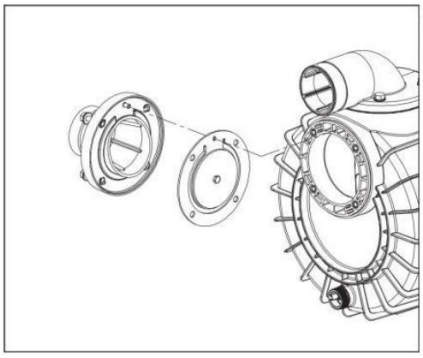
Fig. 2



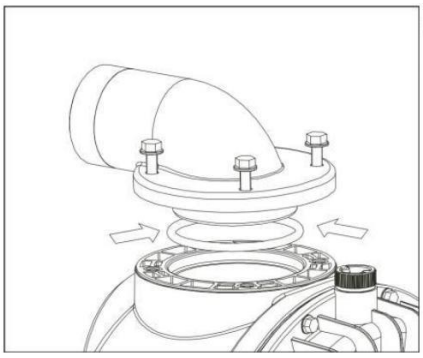
	230V 50 Hz	230/400V 50Hz	Q max. [l/min]	H max. [m]	A 1~ 230V	A 3~ 400V	C µF	P1 [kW]	IP	η(%)	Lpf	L_{WA} (m)	L_{WA} (g)	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	kg [kg]
NADORSELF 200	√	√	1000	13	10,2	4,1	40	2,2	55	60	67	78	80	615	335	414,6	195	247	130	G 2 1/2" B ISO228	23,4
NADORSELF 300	√	√	1250	15,5	13,4	5	60	3,0	55	63	69	82	85	615	335	414,6	195	247	130	G 2 1/2" B ISO228	23,7
NADORSELF 400	-	√	1400	19	-	6,8	-	3,8	55	65	70	83	85	615	335	414,6	195	247	130	G 2 1/2" B ISO228	24,4

Fig.3

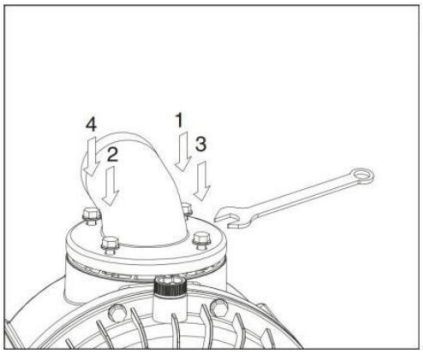




Place the check valve through the suction opening of the pump body and make sure that the valve's larger metal ring is correctly positioned.



Fit the delivery branch and its seal to the pump body.



Secure the delivery branch by tightening the screws in the order indicated.

Fig.4

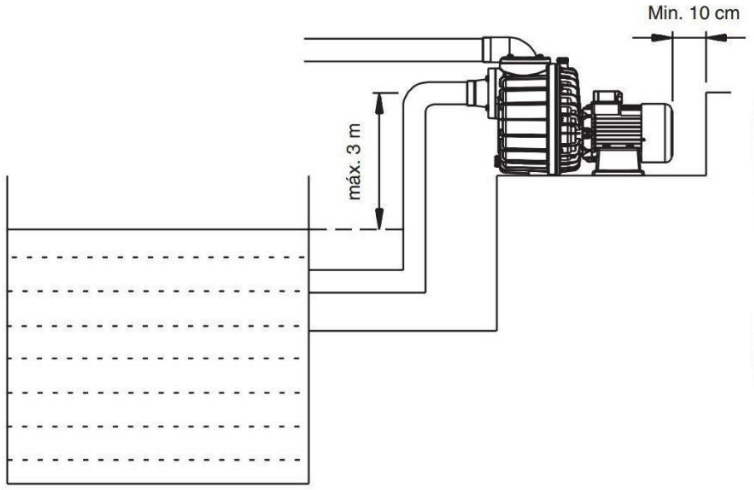
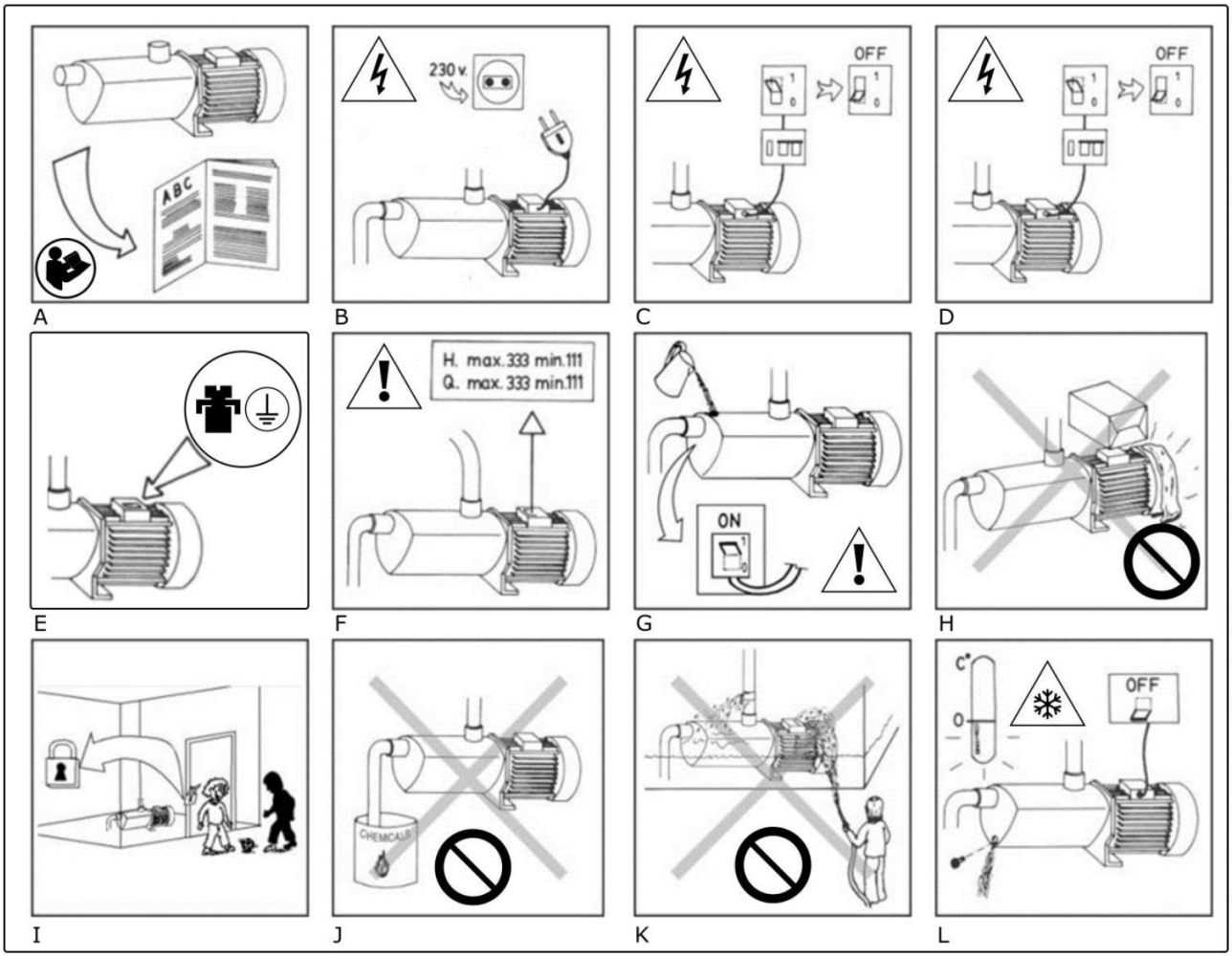

Min. 10 cm
máx. 3 m

Fig.5


A
B
230 v.
C
OFF
D
OFF
E
F
H. max.333 min.111
Q. max.333 min.111
G
ON
H
I
J
CHEMICALS
K
L
OFF

ESPA 2025, S.L.

C/ Mieres, s/n – 17820 BANYOLES
GIRONA – SPAIN

www.espa.com