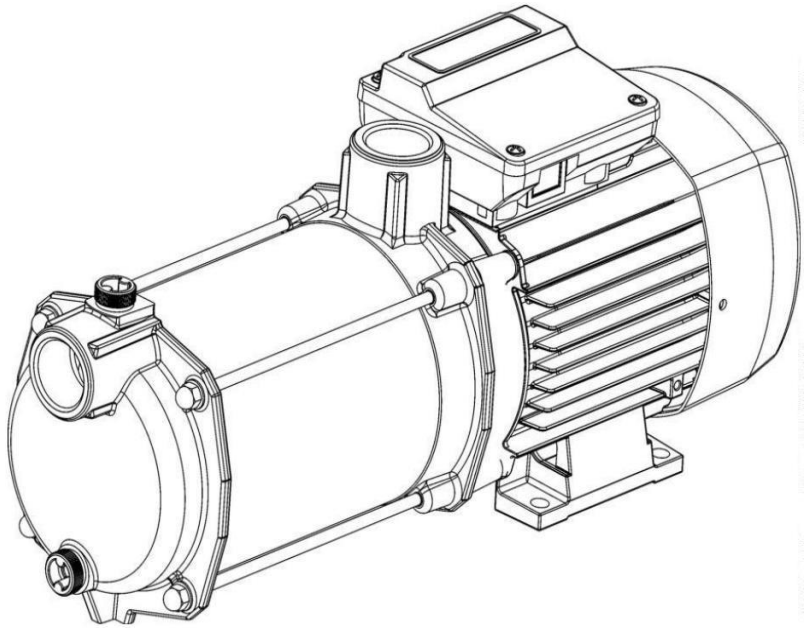
PRISMA
ASPRI



EN Instruction manual
(Translation from the original Spanish)

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 and EN 61000-6-3
- Directive 2014/35/EU (Low voltage): Standard EN 60335-1 and EN 60335-2-41
- Directive 2009/125/EC (ecological design): Regulation (EU) 2019/1781 electrical motors and variable speed drives. Standard EN 60034-30.
- 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.

UKCA CERTIFICATE OF CONFORMITY

EVIDENCE OF CONFORMITY

- 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 4th 2021



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Girona - Spain

Damage prevention and safety instructions

(See figure 4)

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 3mm 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 older than 8 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.

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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 multistage centrifugal pumps having more than one impeller assembled in-line. The same flow passes through each impeller but the pressure increases each time, i.e. more impellers, more pressure.

The ASPRI models are manufactured to include a recirculation system with automatic valve achieving suction lifts of up to nine meters. By using a foot valve on the suction pipe the pump will rapidly self-prime when operated.

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

These pumps are designed for indoor use.

Make sure that pump is never submerged and that it rests in a dry and well aired room.

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. Ensure that the pump mount rests squarely on the base before fixing.

3.2. Suction pipe assembly

The suction pipe, if longer than 7 meters, 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.

The end of the suction pipe must always remain at least 30 cm below the water level. (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.

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

If a foot valve has not been installed it is recommended to fit a check valve to prevent accidental draining down of the system.

3.4. Electrical connection

The electrical installation must have a multi-pole isolator with minimum 3 mm contact openings, The protection of the system will be based on a differential switch (Δfn = 30 mA)

The power cable must correspond at least to the type H05 RN-F (according to 60245 IEC 57) 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.

Pump models 15 and 25: Single-phase motors have thermal protection.

The rest of the pump models with single phase motor and all 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 with water through the self priming plug opening. If a foot valve has been installed, also fill the suction pipe.

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.

In the ASPRI models, the self-priming time can take several minutes.

5. MAINTENANCE

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

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

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.

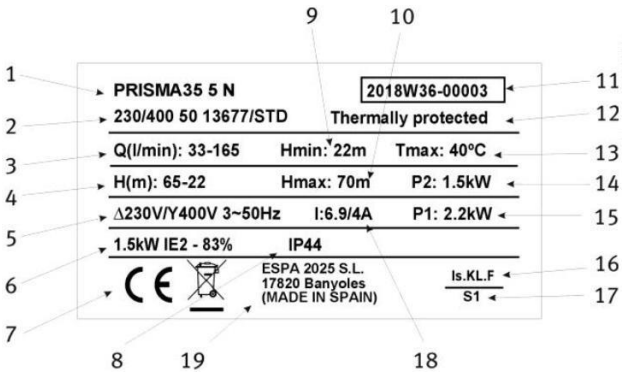
The Official Technical Services list is in www.espa.com.

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

8. POSSIBLE FAULTS, CAUSES AND SOLUTIONS

1) The motor does not start.
2) Motor operates but there is no pressure.
3) Motor over-heating.
4) Pump does not deliver rated capacity.
5) Motor starts and stops automatically.
6) Shaft rotates with difficulty.

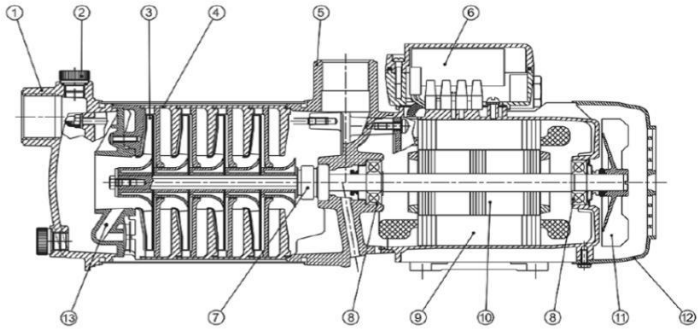
1	2	3	4	5	6	POSSIBLE PROBLEM	SOLUTIONS
X				X	X	Pump blocked	Disconnect it and take it to the official Technical Service
			X			Foot valve clogged	Clean it or replaced by new one
	X		X			Total head higher than expected	Verify geometric head and loss of head
X		X		X		Wrong tension	Check that the tension is the same as that on the name plate
	X		X			Water level in well or tank has come down	Verify suction head
X						Fuse or thermal relay disconnected	Change fuse or thermal relay
	X		X			Impellers are worn out	Disconnect pump and take it to your Service Dealer
	X					Foot valve not submerged	Be sure suction pipe is submerged
	X					Pump was not primed	Fill pump body with water
		X		X		Room not properly aired	Provide good ventilation
	X					Air entry	Seal unions and joints properly

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.

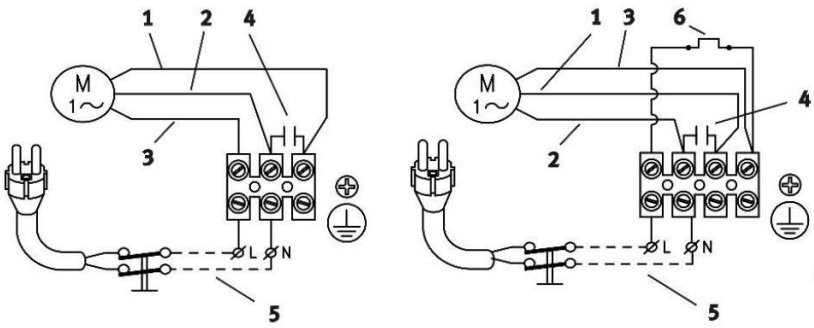
EN List of main components



	EN
1 -	Suction cover
2 -	Priming plug
3 -	Impeller
4 -	Diffuser
5 -	Delivery body
6 -	Capacitor
7 -	Mechanical seal
8 -	Bearing
9 -	Stator
10 -	Motor shaft
11 -	Fan
12 -	Fan cover
13 - *	Valve

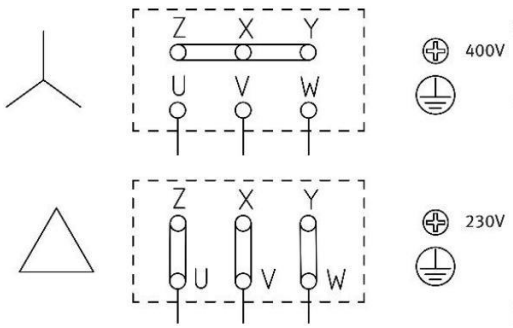
Fig.1

SINGLE PHASE SUPPLY



1. RED 2. WHITE 3. BLACK 4. CAPACITOR 5. LINE 6. MOTOR RELAY

THREE PHASE SUPPLY



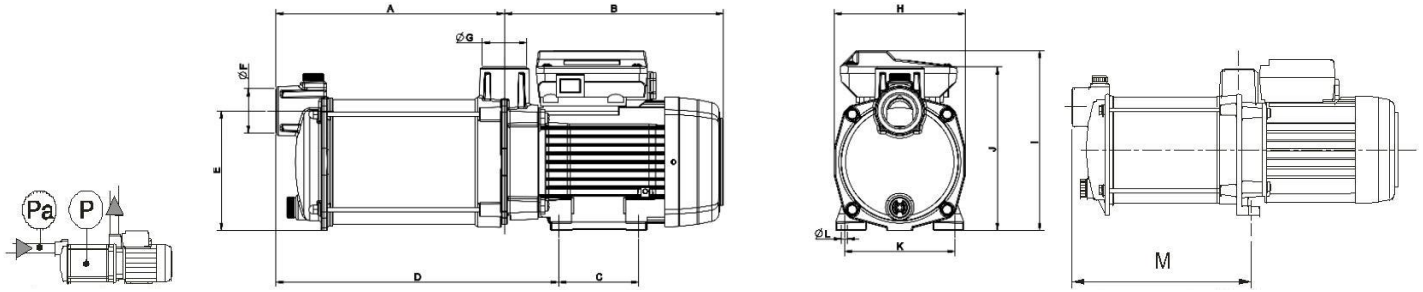


Fig. 2

PRISMA/ASPRI 50 Hz	Q max. [l/min]	H max. [m]	P max. [MPa]	Pa max. [MPa]	A 1~ 230V	A 3~ 400V	C µF	P1 [kW]	IP	dBa ±1	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F	G	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	⚖ [kg]
15 2/2M	66	22	0,6	0,38	2	1	12	0,45	55	<70	163	202	74	213	110	1"	1"	121	162	151	102	8	-	8,3
15 3/3M	66	34	0,6	0,26	2,8	1,2	12	0,6	55	<70	187	202	74	237	110	1"	1"	121	162	151	102	8	-	9,2
15 4/4M	66	44	0,6	0,16	3,6	1,3	12	0,8	55	<70	211	202	74	261	110	1"	1"	121	162	151	102	8	-	10
15 5/5M	66	55	0,6	0,05	4,1	1,9	12	0,95	55	<70	235	202	74	285	110	1"	1"	121	162	151	102	8	-	11
25 2/2M	116	25	1,2	0,95	4,3	1,6	16	0,9	55	<70	175,5	218	82	226	127	1"	1"	138	185	173	118	8	-	12,5
25 3/3M	116	35	1,2	0,85	5,5	2,2	16	1,2	55	<70	202	218	82	252,5	127	1"	1"	138	185	173	118	8	-	13,5
25 4/4M	116	48	1,2	0,72	6,8	2,5	16	1,5	55	<70	228,5	218	82	279	127	1"	1"	138	185	173	118	8	-	14,6
25 5/5M	116	58	1,2	0,62	7,4	2,3	25	1,7	55	71	255	240,5	82	328	127	1"	1"	138	212	196	118	8	-	17,2
25 6/6M	116	70	1,2	0,5	9,8	3,9	30	2,2	55	72	281	286	-	-	142	1"	1"	154	212	196	138	10	304	20
35 3/3M N	165	43	1,2	0,77	6,7	2,6	25	1,5	55	<70	221,1	281,5	-	-	147	1 ¼"	1 ¼"	158	212	207	120	12	187,3	18,5
35 4/4M N	165	57	1,2	0,63	8,4	3,1	25	1,8	55	<70	246,6	281,5	-	-	147	1 ¼"	1 ¼"	158	212	207	120	12	211,8	20,5
35 5/5M N	165	70	1,2	0,5	10,2	4	30	2,3	55	<70	271,1	281,5	-	-	147	1 ¼"	1 ¼"	158	212	207	120	12	236,3	23,5
35 6 N	165	84	1,2	0,36	-	4,8	-	2,7	55	71	295,6	281,5	-	-	147	1 ¼"	1 ¼"	158	212	207	120	12	260,8	23,7
45 3/3M N	216	39	1,2	0,81	7,9	3	25	1,8	55	73	245,9	281,5	-	-	152	1 ½"	1 ¼"	158	218	207	120	12	211,6	22,6
45 4/4M N	216	52	1,2	0,68	10	4	30	2,2	55	73	276,6	281,5	-	-	152	1 ½"	1 ¼"	158	218	207	120	12	242,3	23,7
45 5 N	216	63	1,2	0,57	-	5	-	2,8	55	74	307,3	281,5	-	-	152	1 ½"	1 ¼"	158	218	207	120	12	273	25,3

PRISMA/ASPRI 60 Hz	Q max. [l/min]	H max. [m]	P max. [MPa]	Pa max. [MPa]	A 1~ 115v	A 1~ 220V	A 3~ 380V	C [µf] 115v	C [µf] 220V	P1 [kW]	IP	dBa ±1	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F	G	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	⚖ [kg]
15 1/1M	70	18	0,6	0,42	4,4	2	0,8	30	12	0,4	55	<70	139	202	74	189	110	1"	1"	121	162	151	102	-	-	8,3
15 2/2M	70	35	0,6	0,25	5,8	3,2	1,2	30	12	0,7	55	<70	163	202	74	213	110	1"	1"	121	162	151	102	-	-	9,2
15 3/3M	70	50	0,6	0,1	8,5	4,7	1,5	30	12	0,9	55	<70	187	202	74	237	110	1"	1"	121	162	151	102	-	-	10
25 2/2M	125	34	1,2	0,86	11,5	6	2	30	16	1,2	55	<70	176	218	82	226	127	1"	1"	138	185	173	118	8	-	13,5
25 3/3M	125	50	1,2	0,7	16,5	8,6	2,8	60	25	1,8	55	71	202	286	-	225	142	1"	1"	154	212	196	138	8	225	17,2
25 4/4M	125	68	1,2	0,52	-	12	3,7	-	30	2,4	55	72	229	286	-	252	142	1"	1"	154	212	196	138	10	252	20
35 1/1M N	165	24	1,2	0,96	-	5,2	1,9	-	25	1,1	55	70	176	281,5	-	-	147	1 ¼"	1 ¼"	158	212	207	120	12	162,8	18,1
35 2/2M N	165	44	1,2	0,76	-	8,1	3	-	25	1,8	55	70	205	281,5	-	-	147	1 ¼"	1 ¼"	158	212	207	120	12	162,8	20,1
35 3/3M N	165	65	1,2	0,55	-	11,5	4,1	-	30	2,5	55	70	233	281,5	-	-	147	1 ¼"	1 ¼"	158	212	207	120	12	187,3	23,1
35 4 N	165	79	1,2	0,41	-	-	5	-	-	3	55	71	246,6	281,5	-	-	147	1 ¼"	1 ½"	158	212	207	120	12	211,8	23,3
45 1/1M N	266	19	1,2	1,01	-	5,6	2	-	25	1,2	55	73	186	297,5	-	-	147	1 ½"	1 ¼"	161	218	207	140	17,5	150,2	22,2
45 2/2M N	266	36	1,2	0,84	-	10,5	3,4	-	30	2,2	55	73	216,5	297,5	-	-	147	1 ½"	1 ¼"	161	218	207	140	17,5	180,9	23,3
45 3 N	266	54	1,2	0,66	-	-	4,7	-	-	2,9	55	74	247	297,5	-	-	147	1 ½"	1 ¼"	161	218	207	140	17,5	211,6	24,9

ESPA

Fig.3

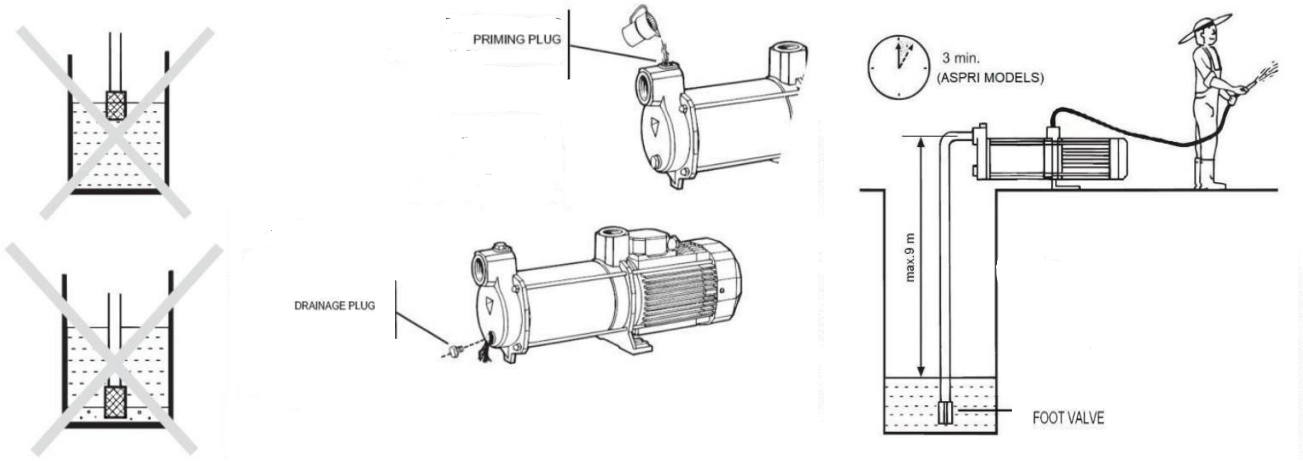
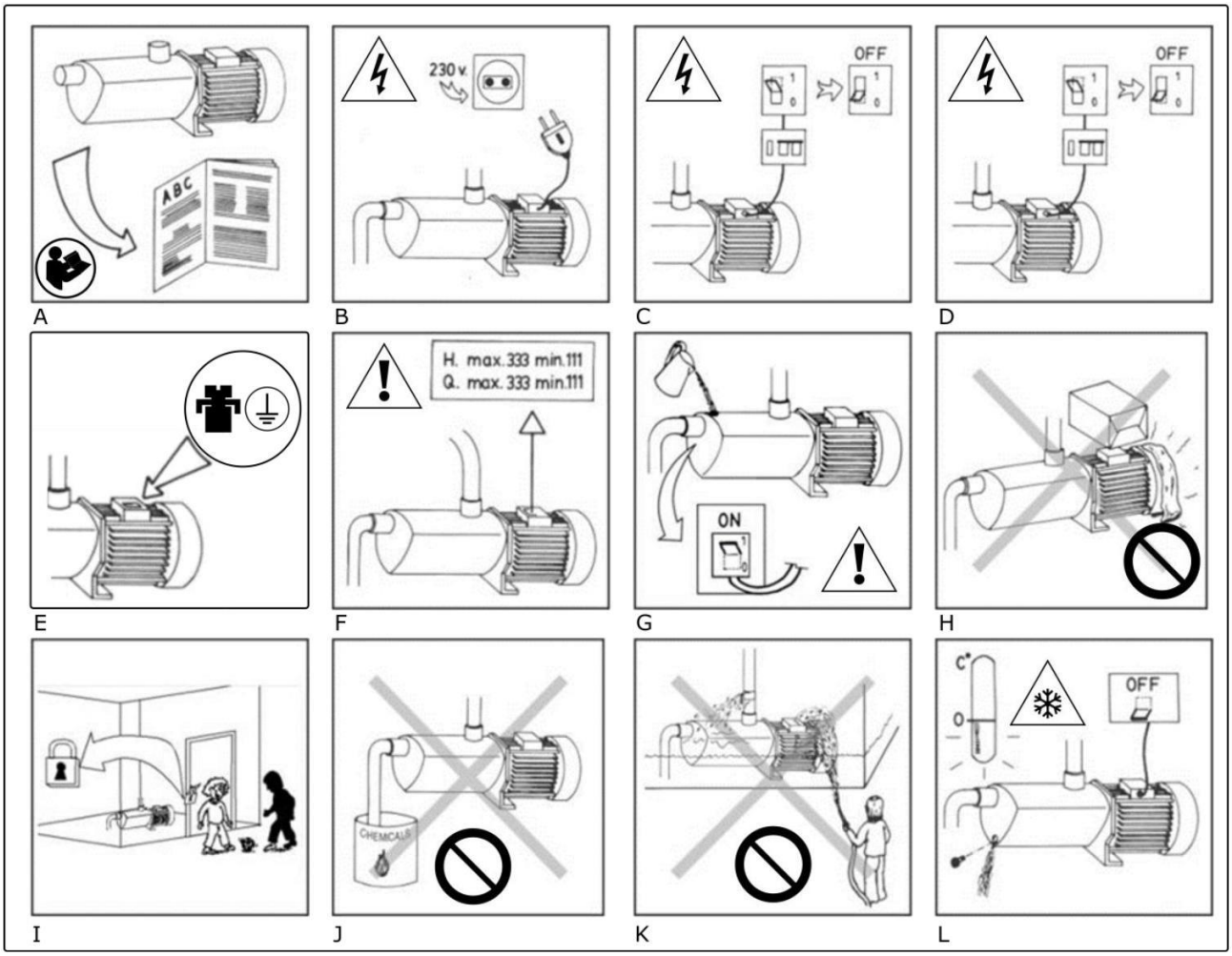

PRIMING PLUG
DRAINAGE PLUG
3 min.
(ASPRI MODELS)
max.9 m
FOOT VALVE

Fig.4


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

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