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## FORAS JA300

# FORAS JA300 Self-Priming Centrifugal Electric Pump User Manual

Model: **JA300** | Brand: **FORAS**

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the FORAS JA300 self-priming centrifugal electric pump. Please read this manual thoroughly before installation and use to ensure proper functioning and to prevent damage or injury.

The FORAS JA300 is designed for pumping clean water, even when mixed with air, without solid particles or non-aggressive chemical liquids. It is suitable for domestic water supply, small-scale irrigation, and increasing water pressure in conjunction with pressure tanks.



Figure 1: FORAS JA300 Self-Priming Centrifugal Electric Pump.

## 2. SAFETY INFORMATION

**WARNING: Failure to follow these safety instructions may result in electric shock, fire, serious injury, or death.**

- Ensure all electrical connections are performed by a qualified electrician and comply with local regulations.
- Always disconnect the pump from the power supply before performing any installation, maintenance, or repair work.
- Install the pump in an enclosed space or a location protected from atmospheric influences (rain, direct sunlight, frost).
- Do not operate the pump with flammable or explosive liquids.
- Ensure the pump is properly grounded to prevent electric shock.
- Keep children and unauthorized personnel away from the pump during operation.
- The pump is designed for clean water only. Pumping liquids with solid particles or aggressive chemicals can damage the pump and void the warranty.

### **3. INSTALLATION AND SETUP**

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#### **3.1 Unpacking and Inspection**

Carefully remove the pump from its packaging. Inspect the pump for any signs of damage that may have occurred during transit. Report any damage to the supplier immediately.

#### **3.2 Mounting Location**

Select a stable, level surface for mounting the pump. The location must be protected from weather elements and have adequate ventilation. Ensure sufficient space around the pump for maintenance and access.

#### **3.3 Plumbing Connections**

- The suction connection (inlet) is 1.5 inches (32 mm).
- The discharge connection (outlet) is 1 inch (25 mm).
- Use appropriate fittings and sealants to ensure watertight connections. Avoid overtightening.
- Install a foot valve with a strainer on the end of the suction line if drawing water from a well or tank to prevent debris entry and maintain prime.
- For optimal performance, keep suction lift as short as possible.

#### **3.4 Electrical Connection**

- The pump requires a 230 V AC, 50 Hz power supply.
- Ensure the electrical circuit is protected by an appropriate circuit breaker or fuse.
- Connect the pump to a properly grounded electrical outlet.
- The motor includes integrated thermal protection.

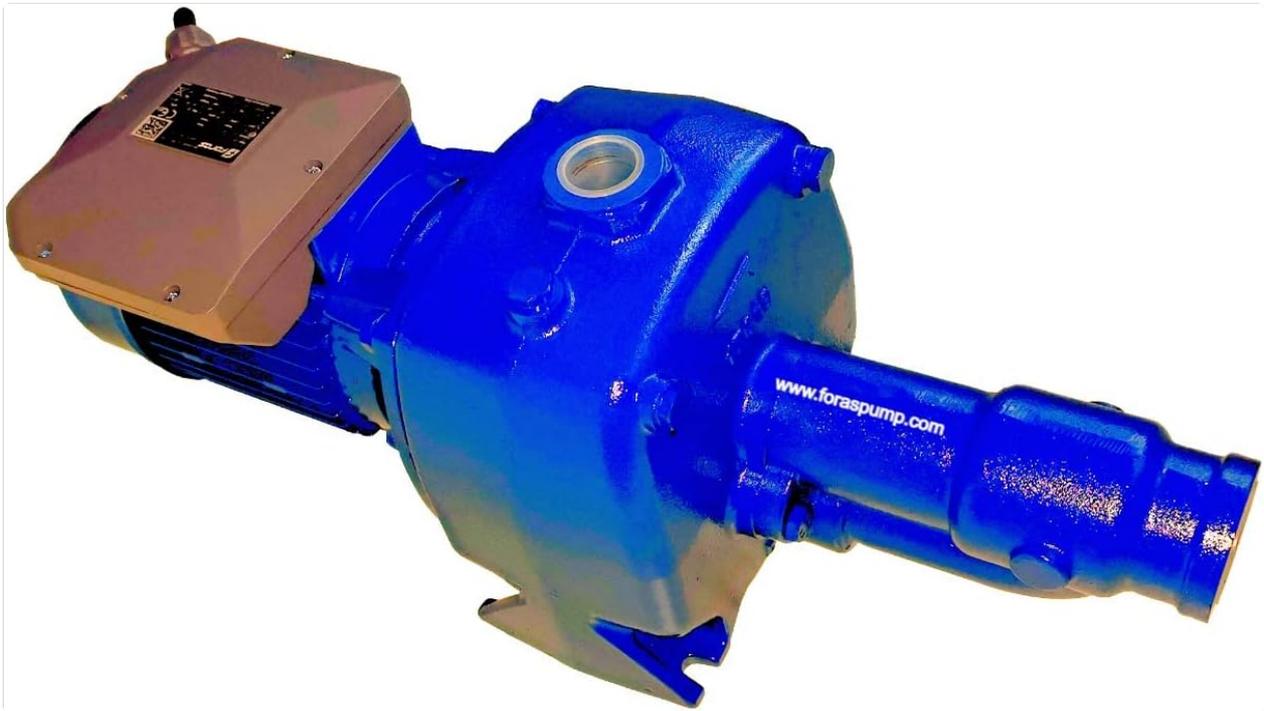


Figure 2: Side view of the FORAS JA300 pump, showing connections.

## 4. OPERATING INSTRUCTIONS

### 4.1 Priming the Pump

As a self-priming pump, the JA300 can handle some air in the suction line. However, for initial startup or after the pump has been drained, it is recommended to fill the pump casing with water through the priming port (usually a plug on top of the pump casing) before starting. This ensures faster priming and protects the mechanical seal.

- Remove the priming plug.
- Fill the pump casing completely with clean water.
- Replace the priming plug securely.

### 4.2 Starting the Pump

Once primed and all connections are secure, connect the pump to the power supply. The pump will start automatically if connected to a pressure switch system, or manually if controlled by a switch. Allow the pump to run for a few minutes to ensure stable operation and check for leaks.

### 4.3 Operating Conditions

- The pump is designed for continuous operation.
- The maximum water temperature for operation is 50 °C.
- Do not run the pump dry, as this can cause severe damage to the mechanical seal and other components.

## 5. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your FORAS JA300 pump.

- **Regular Inspection:** Periodically check all connections for leaks. Inspect the power cable for any damage.

- **Cleaning:** Keep the pump exterior clean and free from debris. Ensure the motor's cooling fins are not obstructed.
- **Winterization:** In areas subject to freezing temperatures, drain the pump completely to prevent damage from ice expansion. Disconnect the power, open drain plugs, and remove priming plugs to allow all water to escape.
- **Professional Service:** For internal component inspection or repair, it is recommended to contact a qualified service technician.

## 6. TROUBLESHOOTING

This section provides solutions to common issues. For problems not listed here, contact customer support.

Problem		Possible Cause	Solution
Pump does not start.	No power supply. Thermal overload activated. Motor fault.	Check power connection and circuit breaker. Allow motor to cool down; check for obstructions. Contact qualified technician.	
Pump runs but no water is delivered.	Pump not primed. Air leak in suction line. Suction line blocked. Foot valve stuck or clogged.	Re-prime the pump. Check all suction connections for tightness. Clear any blockages in the suction line. Inspect and clean foot valve.	
Reduced flow or pressure.	Partial blockage. Air in the system. Worn impeller.	Check for and clear blockages. Ensure proper priming and no air leaks. Contact qualified technician for inspection.	
Pump is noisy.	Cavitation (running dry or insufficient water). Bearing wear. Foreign object in pump.	Ensure adequate water supply and proper priming. Contact qualified technician. Disconnect power and inspect pump casing.	

## 7. TECHNICAL SPECIFICATIONS



Figure 3: Rating plate of the FORAS JA300 pump, showing electrical and performance data.

General Data	
Model	JA300
Brand	FORAS (PENTAX INDUSTRIES S.p.A.)
Type	Self-Priming Centrifugal Electric Pump
Application	Clean water supply, pressure boosting, irrigation
Liquid Temperature Range	0 to 50 °C
Dimensions (L x W x H)	59.6 x 22 x 24 cm
Weight	33 kg

Performance Data	
Max Flow Rate	140 L/min (8.4 m <sup>3</sup> /h)
Max Head	64.5 m
Suction Connection (Inlet)	DNA 1.5" (32 mm)
Discharge Connection (Outlet)	DNM 1" (25 mm)

Electrical Data	
Voltage	230 V AC
Frequency	50 Hz
Nominal Current	11.8 A
Power Absorbed (P1)	2650 W
Power Output (P2)	2200 W (2.2 kW)
Motor Type	Asynchronous with integrated thermal protection
Insulation Class	F

**Electrical Data**

Protection Index

IP44

**Materials**

Pump Body

Cathaphoresis Cast Iron / Grey Cast Iron

Motor Support

Grey Cast Iron

Impeller

Noryl

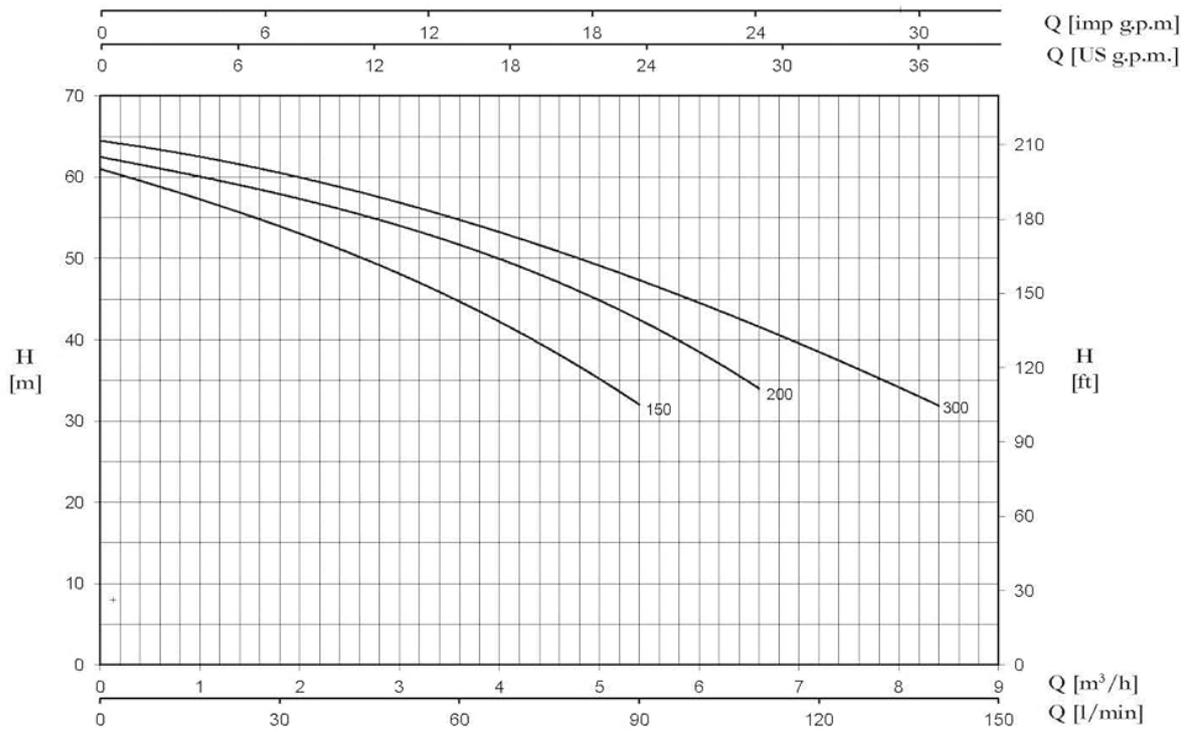
Drive Shaft

AISI 303 Stainless Steel

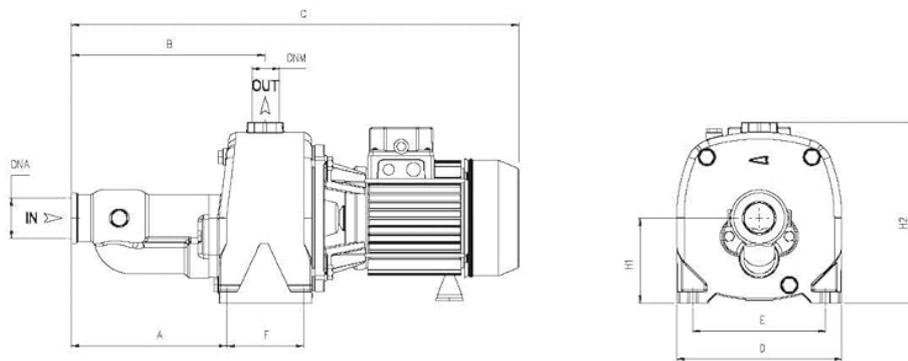
Mechanical Seal

Ceramic - Graphite (NBR)

# JA 150-300



TYPE		P2		P1 (kW)		AMPERE		Q (m³/h - l/min)								
1~	3~	(HP)	(kW)	1~	3~	1x230V 50 Hz	3x400V 50 Hz	0	1,2	1,8	3	4,2	5,4	6,6	7,8	8,4
								0	20	30	50	70	90	110	130	140
								H (m)								
JA 150	JA 150T	1,5	1,1	1,74	1,68	7,9	3,3	61	56,5	54	48	41	32	-	-	-
JA 200	JA 200T	2	1,5	2,22	2,1	10,3	3,9	62,5	59,5	58	54	49	42,5	34	-	-
JA 300	JA 300T	3	2,2	2,65	2,5	11,8	4,9	64,5	62	60,5	57	52,5	47	42	35	32



TYPE	DIMENSIONS (mm)										M L M			Kg
	A	B	C	D	E	F	H1	H2	DNA	DNM	I	L	M	
JA 150	204	257	596	220	177	105	112	240	1" 1/2 G	1" G	610	235	275	30
JA 200	204	257	596	220	177	105	112	240	1" 1/2 G	1" G	610	235	275	30,5
JA 300	204	257	596	220	177	105	112	240	1" 1/2 G	1" G	610	235	275	31,5

Figure 4: Performance curve and dimensional drawing for JA series pumps, including JA300.

## 8. WARRANTY AND SUPPORT

The FORAS JA300 pump is manufactured by PENTAX INDUSTRIES S.p.A. in Italy and comes with a factory

guarantee, ensuring European quality and reliability.

For warranty claims, technical assistance, or spare parts inquiries, please contact your authorized dealer or the manufacturer directly. Information regarding spare parts availability is not provided in this manual.

Always provide the model number (JA300) and serial number (found on the rating plate) when contacting support.