

# MICRA HS

3" HIGH SPEED MULTISTAGE SUBMERSIBLE ELECTRIC PUMP





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## 3" HIGH SPEED MULTISTAGE SUBMERSIBLE ELECTRIC PUMP



ACTIVE DRIVER PLUS included

### TECHNICAL DATA

**Operating range:** from 1 to 5 m<sup>3</sup>/h

**Maximum head:** up to 150 meters

**Pumped liquid:** clean, free of solids and abrasive particles, non-viscous, non-aggressive, chemically neutral, similar to water properties

**Liquid temperature range:** from 0°C to +35°C

**Maximum permitted sand quantity:** 50 g/m<sup>3</sup>

**Discharge port diameter:** 1" GAS

**Power supply voltage to inverter:** 230V +10% / -20% single-phase

**Power supply voltage to pump unit:** 230V three-phase

**Maximum starts per hour:** 20/h

**Rotational speed:** 7.600 giri/min (130Hz)

**Installation:** boreholes  $\geq$  3" diameter and tanks in vertical position. In case of horizontal installation, ensure a minimum load applied to the thrust bearings

**Power supply cable:** 1,4m removable cable (shielded cable extension up to 30m, 60m, 90m are available as accessories)

### APPLICATIONS

High-speed electric borehole pumps for 3" wells or larger.

These units have a very extensive range of applications for lifting and distribution in domestic and industrial water systems, filling of pressure vessels and tanks, pressure booster and irrigation systems.

### CONSTRUCTION FEATURES OF THE PUMP

Multi-stage centrifugal pump type. Pump and motor connected with rigid coupling. Noryl impellers and self-lubricating polyacetyl diffusers. Pump shell, shaft, coupling, filter and cableguard in stainless steel. Base support and delivery head in brass with incorporated non-return valve.

### CONSTRUCTION FEATURES OF THE MOTOR

Asynchronous submersible two-pole motor, made of stainless steel AISI304 with brass supports. Squirrel cage rotor mounted on Kingsbury thrust bearing. Cooling of the thrust bearing kit and bushings is provided by water, this prevents any risk of contamination. Stainless steel canned stator, filled with thermosetting resin with high insulation property and better thermal dissipation capability.

### CONSTRUCTION FEATURES OF THE INVERTER

Active Driver PLUS is an inverter for electric pumps that keeps the pressure constant even in case of flow variations by adjusting the rotational speed of the pump. The inverter is equipped with an internal pressure switch and a flow sensor which ensure the continuous monitoring of system conditions.

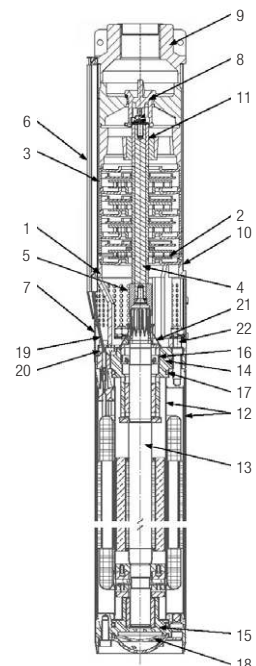
MICRA HS is supplied with ACTIVE DRIVER 2.2, pre-set to drive the pump at the operation frequency of 130 Hz.

### MATERIALS

N°	PART*	MATERIALS
<b>PUMP</b>		
1	BASE SUPPORT	BRASS OT58
2	IMPELLER	NORYL GFN2
3	DIFFUSER	POLYACETYL
4	SHAFT	AISI 430F
5	COUPLING	AISI 316L
6	CABLE SHEATH	AISI 430
7	STRAINER	AISI 430
8	VALVE	POLYACETYL
9	DELIVERY BODY	BRASS OT58
10	PUMP LINER	AISI 304
11	BUSHES	PUR

\* In contact with the liquid.

N°	PART*	MATERIALS
<b>MOTOR</b>		
12	INTERNAL AND OUTER LINER	AISI 304
13	SHAFT	AISI 431
14	UPPER SUPPORT	BRASS OT58
15	LOWER SUPPORT	BRASS OT58
16	LIP SEAL	NBR
17	GASKETS	NBR
18	BELLOW SEAL	EPDM
19	CABLE	EPDM
20	CONNECTOR PLUG	AISI 304
21	SAND GUARD	NBR
22	SCREWS	AISI 304



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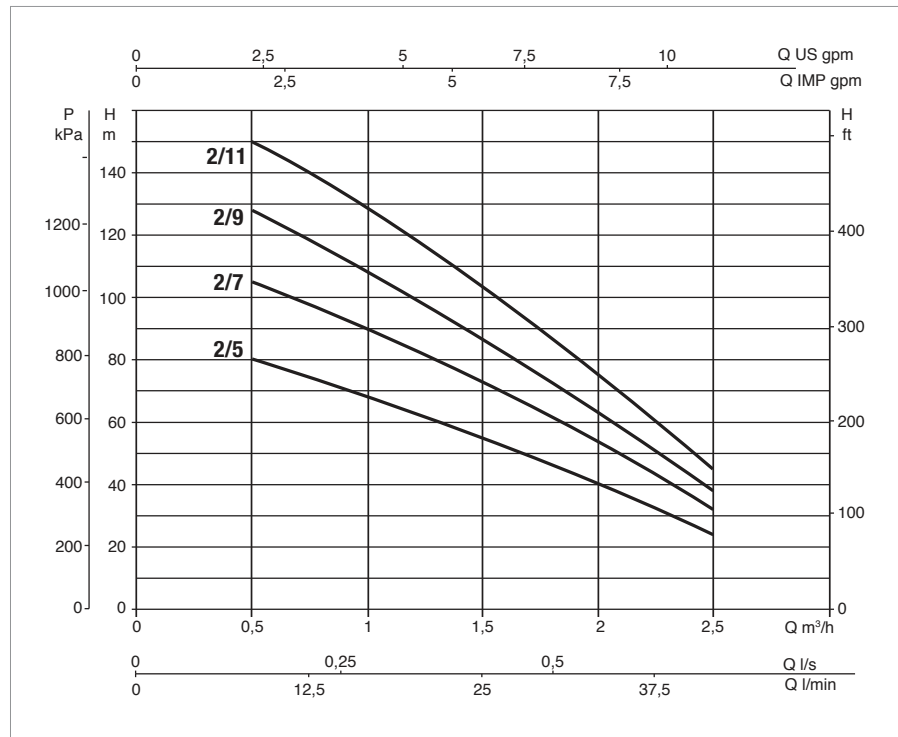
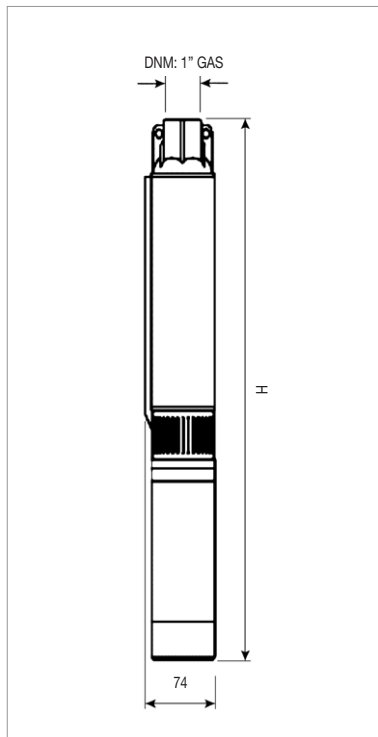
## 3" HIGH SPEED MULTISTAGE SUBMERSIBLE ELECTRIC PUMP

### ELECTRICAL DATA AND PERFORMANCE AT 130 Hz

MODEL	ELECTRICAL DATA				HYDRAULIC DATA					
	INVERTER POWER INPUT	ELECTRIC PUMP POWER INPUT	P1 MAX kW	In MAX A	Q=m³/h	0,5	1	1.5	2	2.5
					Q=l/min	8	17	25	33	42
MICRA HS 2/5	1x230 V ~	3x230 V ~	1,1	4,7	H (m)	80	68	55	40	24
MICRA HS 2/7	1x230 V ~	3x230 V ~	1,4	5,5		105	90	73	55	32
MICRA HS 2/9	1x230 V ~	3x230 V ~	1,7	6,3		128	108	87	62	38
MICRA HS 2/11	1x230 V ~	3x230 V ~	2,0	7,1		150	130	102	75	45

### DIMENSIONAL DATA

MODEL	Ø	H	DNM G	PACK DIMENSIONS (mm)		
				L/A	L/B	H
MICRA HS 2/5	74	640	1"	320	1300	275
MICRA HS 2/7	74	680	1"	320	1300	275
MICRA HS 2/9	74	720	1"	320	1300	275
MICRA HS 2/11	74	760	1"	320	1300	275



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# MICRA HS

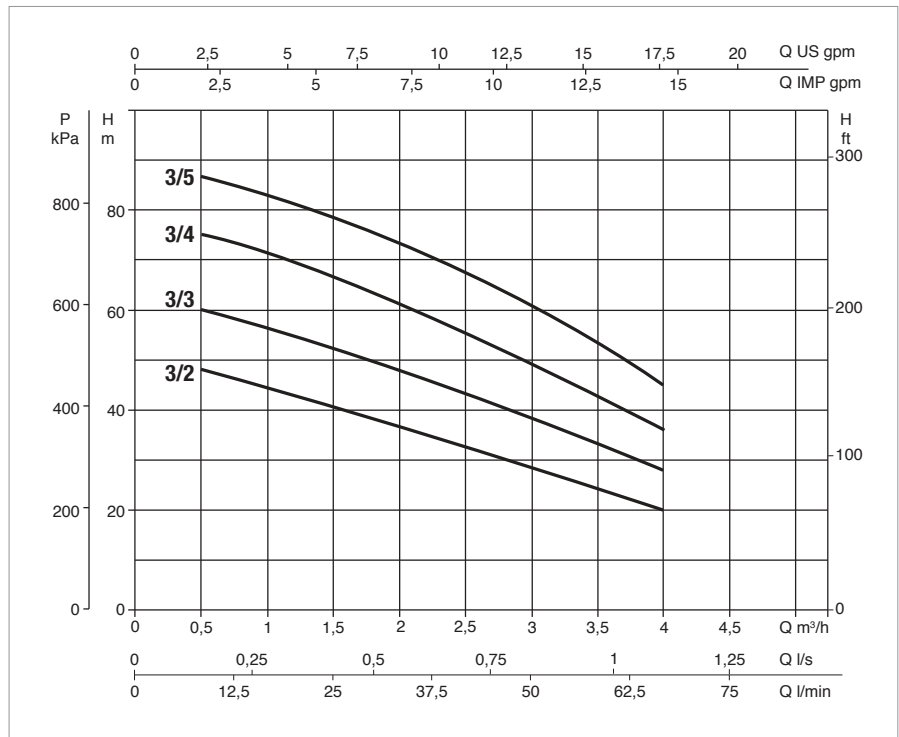
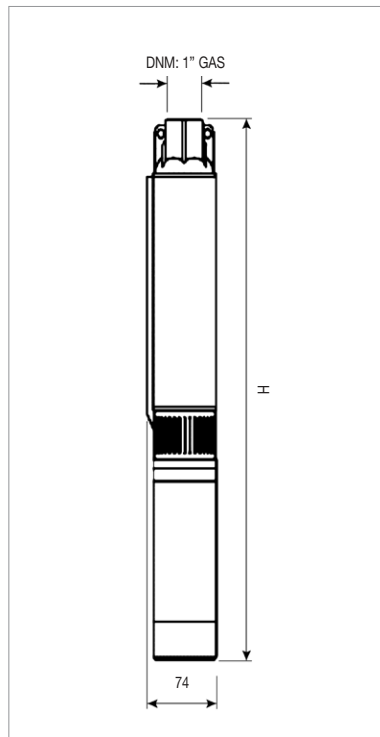
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### ELECTRICAL DATA AND PERFORMANCE AT 130 Hz

MODEL	ELECTRICAL DATA				HYDRAULIC DATA								
	INVERTER POWER INPUT	ELECTRIC PUMP POWER INPUT	P1 MAX kW	In MAX A	Q=m³/h	0,5	1	1.5	2	2.5	3	3.5	4
					Q=l/min	8	17	25	33	42	50	58	67
MICRA HS 3/2	1x230 V ~	3x230 V ~	1,0	4,3	H (m)			40	37	33	29	24	20
MICRA HS 3/3	1x230 V ~	3x230 V ~	1,3	5,1				52	48	43	38	34	28
MICRA HS 3/4	1x230 V ~	3x230 V ~	1,6	6,0				65	61	56	50	44	36
MICRA HS 3/5	1x230 V ~	3x230 V ~	1,9	6,8				78	74	68	61	54	45

### DIMENSIONAL DATA

MODEL	Ø	H	DNM G	PACK DIMENSIONS (mm)		
				L/A	L/B	H
MICRA HS 3/2	74	580	1"	320	1300	275
MICRA HS 3/3	74	600	1"	320	1300	275
MICRA HS 3/4	74	620	1"	320	1300	275
MICRA HS 3/5	74	640	1"	320	1300	275



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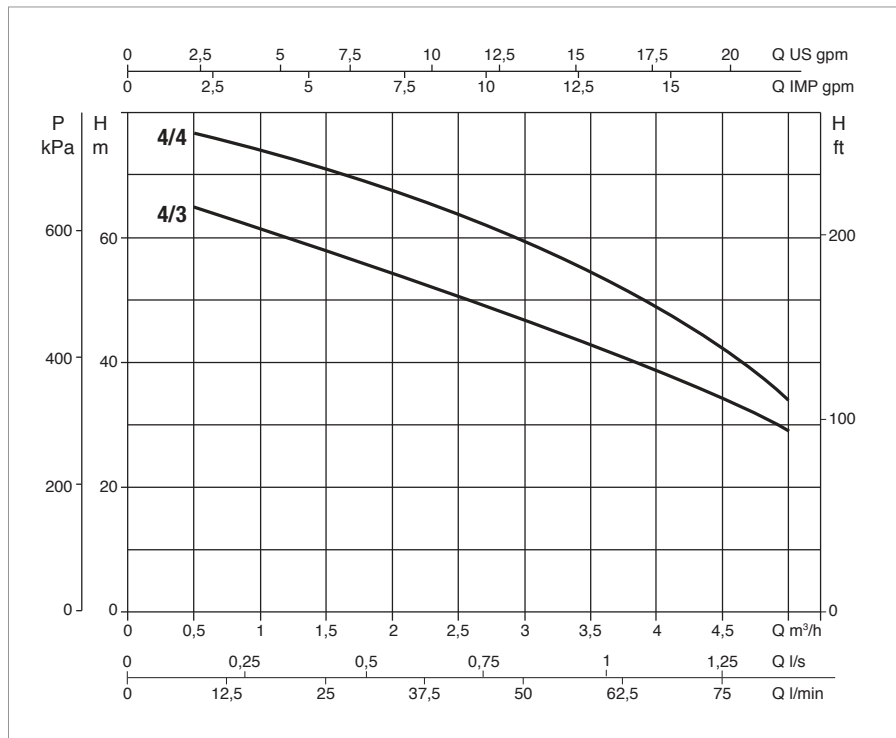
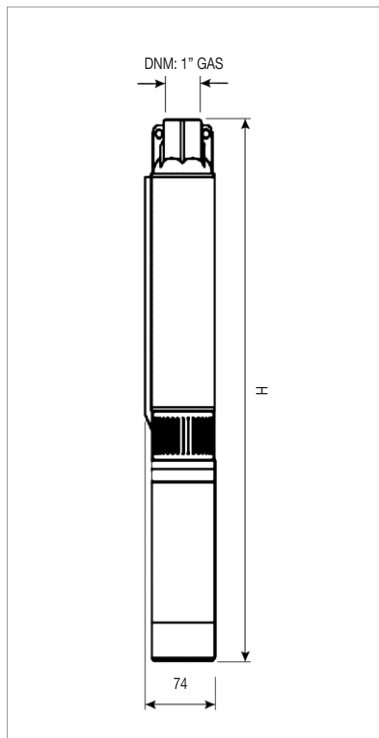
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### ELECTRICAL DATA AND PERFORMANCE AT 130 Hz

MODEL	ELECTRICAL DATA				HYDRAULIC DATA											
	INVERTER POWER INPUT	ELECTRIC PUMP POWER INPUT	P1 MAX kW	In MAX A	Q=m³/h	0,5	1	1.5	2	2.5	3	3.5	4	4.5	5	
					Q=l/min	8	17	25	33	42	50	58	67	75	84	
MICRA HS 4/3	1x230 V ~	3x230 V ~	1,6	5,9	H (m)					50	46	42	39	35	29	
MICRA HS 4/4	1x230 V ~	3x230 V ~	1,9	6,7						63	59	55	49	43	34	

### DIMENSIONAL DATA

MODEL	Ø	H	DNM G	PACK DIMENSIONS (mm)		
				L/A	L/B	H
MICRA HS 4/3	74	600	1"	320	1300	275
MICRA HS 4/4	74	620	1"	320	1300	275



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



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PUMPS SELECTOR



## On-line product selection



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