

50 Hz



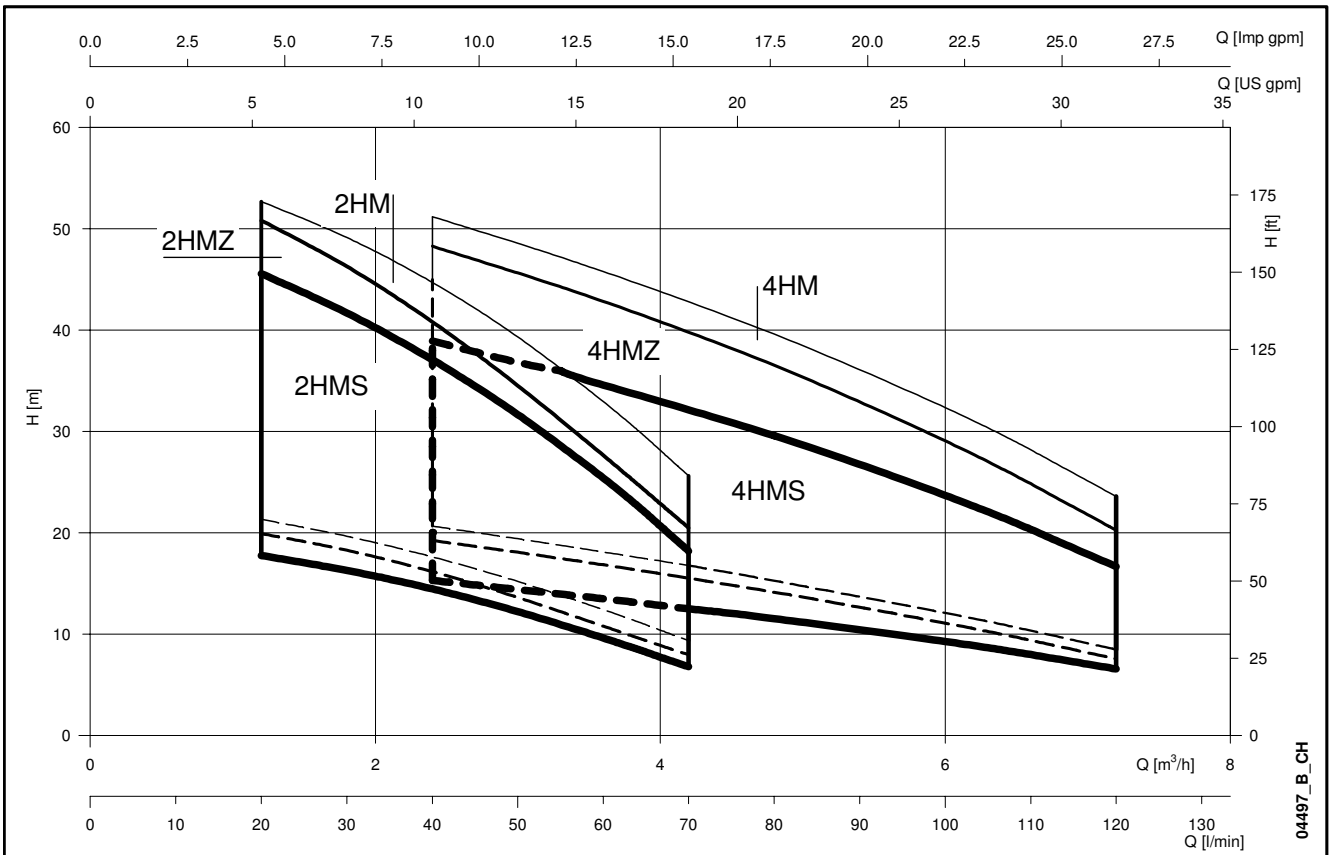
HM - HMZ - HMS Series

THREADED HORIZONTAL MULTISTAGE CENTRIFUGAL ELECTRIC PUMPS
EQUIPPED WITH IE2/IE3 MOTORS COMPLYING WITH REGULATION (EC) no. 640/2009

Cod. 191003891 Rev.E Ed.08/2012

 **LOWARA**
a xylem brand

**HM - HMZ - HMS SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz**



04497_B_CH

Threaded horizontal multistage centrifugal electric pumps

HM-HMZ-HMS Series

MARKET SECTORS

INDUSTRIAL, CIVIL, AGRICULTURAL.

APPLICATIONS

- Pumping of water for domestic (HM) and industrial use (HMS). Special version (HMZ) particularly suitable for critical application in suction.
- Small irrigation systems. The HMS series pump can handle water (containing additives) having moderate chemical aggressiveness, but free of suspended solids.
- Composition of pressure booster units for various purposes.
- Pumping of liquids compatible with AISI 316L stainless steel (1.4404) for HMS version.



- Liquid end made entirely of stainless steel for HMS**
- Silent operation**
- High performance and reliability**
- Standard supplied IE2/IE3 motors are compliant with Regulation (EC) no. 640/2009.**

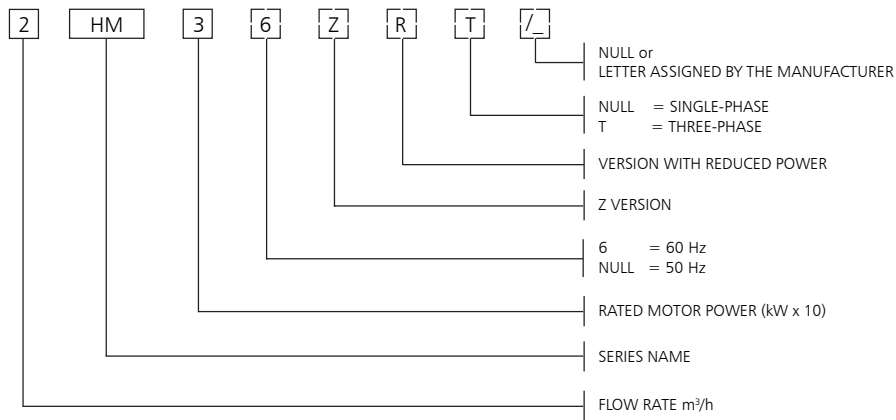
SPECIFICATIONS PUMP

- **Delivery:**
2HM-4HM: up to 120 l/min (7,2 m³/h).
2HMS-4HMS: up to 120 l/min (7,2 m³/h).
- **Head:**
2HM-4HM: up to 60,7 m.
2HMS-4HMS: up to 51,2 m.
- **Maximum operating pressure:**
800 kPa (8 bar, PN 8).
- **Continuous duty.**
- **Temperature of pumped liquid:**
HM-HMZ: -10°C to +60°C.
HMS: -10°C to +90°C for household use (EN 60335-1).
-10°C to +110°C for industrial/commercial use.

MOTOR

- Asynchronous, squirrel cage rotor, close construction, external ventilation.
- **Protection class:**
IP55 (motor), IPX5 (electric pump).
- **Class 155 (F) Insulation.**
- According to EN 60034-1.
- **Standard voltage:**
 - **Single-phase** versions:
220-240 V 50 Hz, 2 poles, with automatic reset overload protection.
 - **Three-phase** versions:
220-240/380-415 V 50 Hz, 2 poles, the overload protection must be provided and installed by the user.

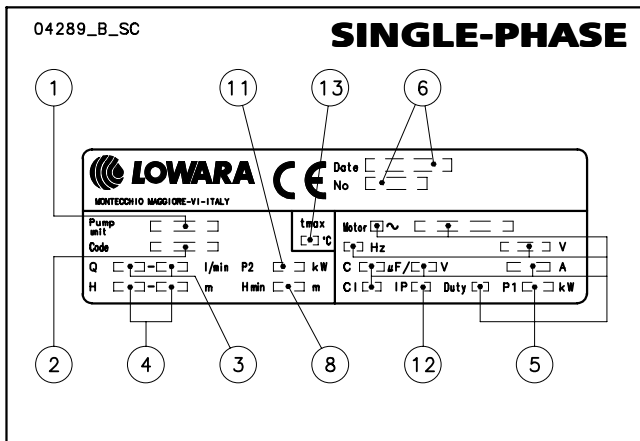
HM-HMZ-HMS SERIES IDENTIFICATION CODE



EXAMPLE : 2HM3T

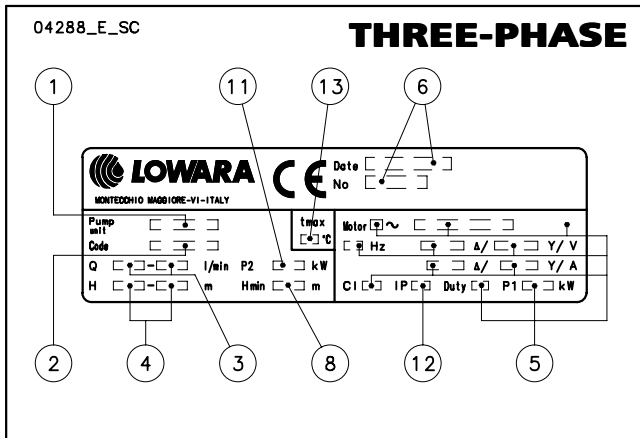
HM electric pump series, flow rate 2 m³/h
 rated motor power 0,3 kW, 50 Hz, three-phase.

RATING PLATE



LEGEND

- 1 - Electric pump type
- 2 - Code
- 3 - Delivery range
- 4 - Head range
- 5 - Electrical data
- 6 - Serial number (date + sequential number)
- 8 - Minimum head
- 11 - Rated power
- 12 - Electric pump protection class
- 13 - Maximum temperature of pumped liquid



HM SERIES HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		Q = DELIVERY										
			l/min	0	20	30	40	50	60	70	80	100	120
	kw	HP	m ³ /h	0	1,2	1,8	2,4	3	3,6	4,2	4,8	6	7,2
	H = TOTAL HEAD METRES COLUMN OF WATER												
2HM3(T)	0,3	0,4	23,8	21,4	19,7	17,6	15,2	12,5	9,4				
2HM4(T)	0,45	0,6	35,4	32	29,5	26,5	23	19	14,5				
2HM5(T)	0,55	0,75	45,4	41,1	38,0	34,2	30,0	25,1	19,6				
2HM7(T)	0,75	1	57,9	52,7	49,2	44,7	39,4	32,3	25,6				
4HM4(T)	0,45	0,6	25,1			20,7	19,4	18,1	16,8	15	12,1	8,5	
4HM5(T)	0,55	0,75	35,2			29,0	27,1	25,3	23,3	21,4	17,2	12,3	
4HM7(T)	0,75	1	48,1			40,2	38,2	36,1	33,8	31,2	25,1	17,6	
4HM9(T)	0,9	1,2	60,7			51,2	48,6	45,9	42,9	39,7	32,4	23,6	

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HM SERIES ELECTRICAL DATA AT 50 Hz, 2 POLES

PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT* 220-240 V	CAPACITOR μF / 450 V	PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT* 220-240 V	INPUT CURRENT* 380-415 V
		kw	A				kw	A	A
2HM3	SM63HM/1035	0,51	2,34	10	2HM3T	SM63HM/303	0,47	1,80	1,04
2HM4	SM63HM/1045	0,66	2,92	14	2HM4T	SM63HM/304	0,67	2,56	1,48
2HM5	SM63HM/1055	0,85	3,72	16	2HM5T	SM63HM/305	0,87	2,94	1,70
2HM7	SM71HM/1075	1,13	5,09	20	2HM7T	SM80HM/307PE	1,04	3,22	1,86
4HM4	SM63HM/1045	0,62	2,77	14	4HM4T	SM63HM/304	0,62	2,51	1,45
4HM5	SM63HM/1055	0,86	3,76	16	4HM5T	SM63HM/305	0,88	2,96	1,71
4HM7	SM71HM/1095	1,29	5,74	25	4HM7T	SM80HM/311PE	1,16	3,88	2,24
4HM9	SM71HM/1095	1,45	6,49	25	4HM9T	SM80HM/311PE	1,34	4,23	2,44

*Maximum value in specified range.

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HMZ SERIES HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		Q = DELIVERY										
			l/min	0	20	30	40	50	60	70	80	100	120
	kw	HP	m ³ /h	0	1,2	1,8	2,4	3	3,6	4,2	4,8	6	7,2
	H = TOTAL HEAD METRES COLUMN OF WATER												
2HM3Z(T)	0,3	0,4	22,2	20	18,2	16,1	13,7	10,9	7,9				
2HM4Z(T)	0,45	0,6	34	30	27,3	24,2	20,7	16,7	12,2				
2HM5Z(T)	0,55	0,75	45,5	40	36,3	32,1	27,3	22,1	16,5				
2HM7Z(T)	0,75	1	57	50,8	46,2	40,8	34,6	27,8	20,5				
4HM4Z(T)	0,45	0,6	23,6			19,3	18,1	16,9	15,6	14,2	11,1	7,6	
4HM5Z(T)	0,55	0,75	35			28,6	26,9	25	23,1	21	16,6	11,5	
4HM7Z(T)	0,75	1	47,5			39,9	37,8	35,6	33,2	30,5	24,4	16,9	
4HM9Z(T)	0,9	1,2	58,4			48,3	45,6	42,8	39,8	36,5	29,1	20,3	

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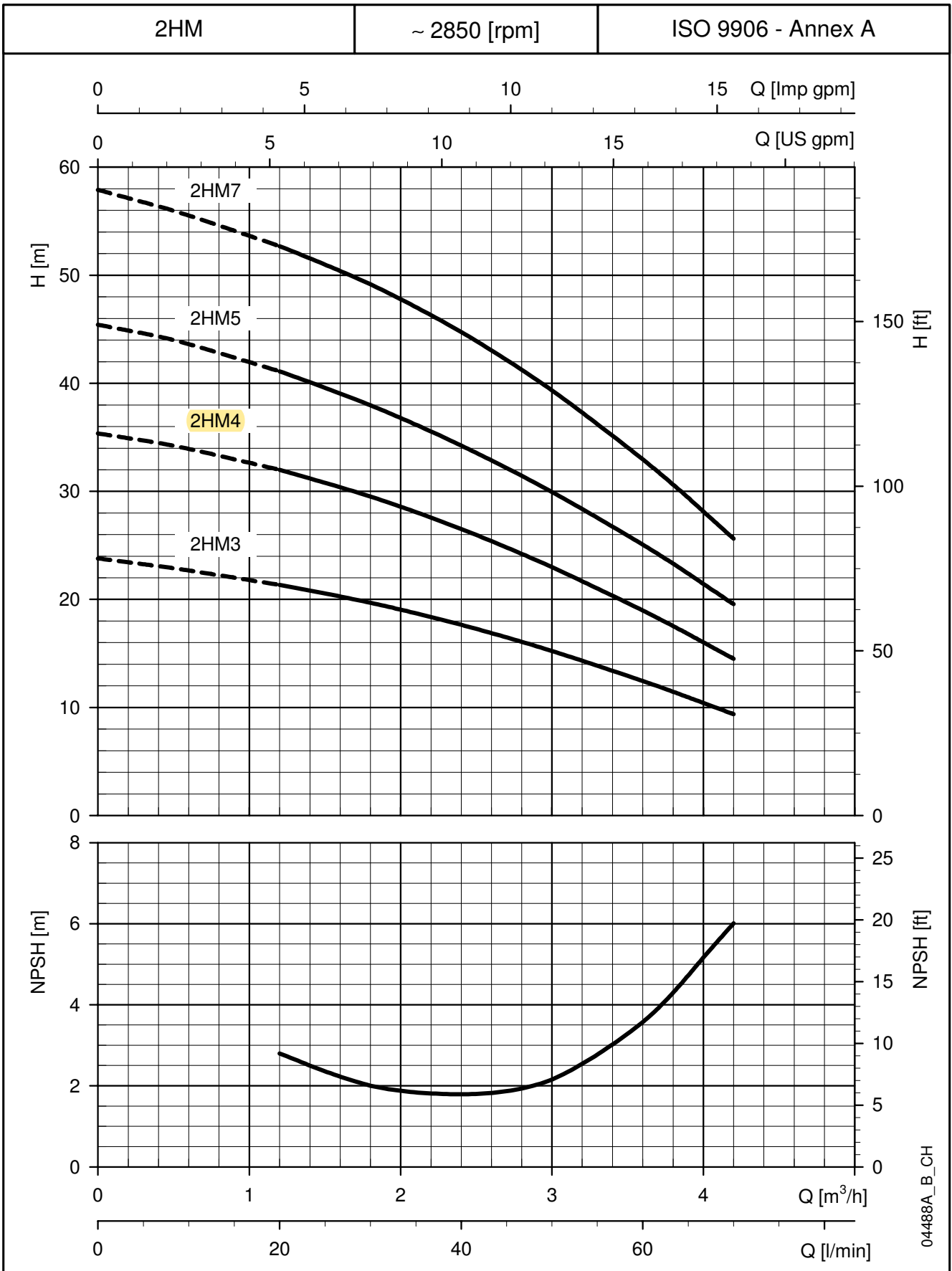
HMZ SERIES ELECTRICAL DATA AT 50 Hz, 2 POLES

PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT* 220-240 V	CAPACITOR μF / 450 V	PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT* 220-240 V	INPUT CURRENT* 380-415 V
		kw	A				kw	A	A
2HM3Z	SM63HM/1035	0,51	2,34	10	2HM3ZT	SM63HM/303	0,47	1,80	1,04
2HM4Z	SM63HM/1045	0,66	2,92	14	2HM4ZT	SM63HM/304	0,67	2,56	1,48
2HM5Z	SM63HM/1055	0,85	3,72	16	2HM5ZT	SM63HM/305	0,87	2,94	1,70
2HM7Z	SM71HM/1075	1,13	5,09	20	2HM7ZT	SM80HM/307PE	1,04	3,22	1,86
4HM4Z	SM63HM/1045	0,62	2,77	14	4HM4ZT	SM63HM/304	0,62	2,51	1,45
4HM5Z	SM63HM/1055	0,86	3,76	16	4HM5ZT	SM63HM/305	0,88	2,96	1,71
4HM7Z	SM71HM/1095	1,29	5,74	25	4HM7ZT	SM80HM/311PE	1,16	3,88	2,24
4HM9Z	SM71HM/1095	1,45	6,49	25	4HM9ZT	SM80HM/311PE	1,34	4,23	2,44

*Maximum value in specified range.

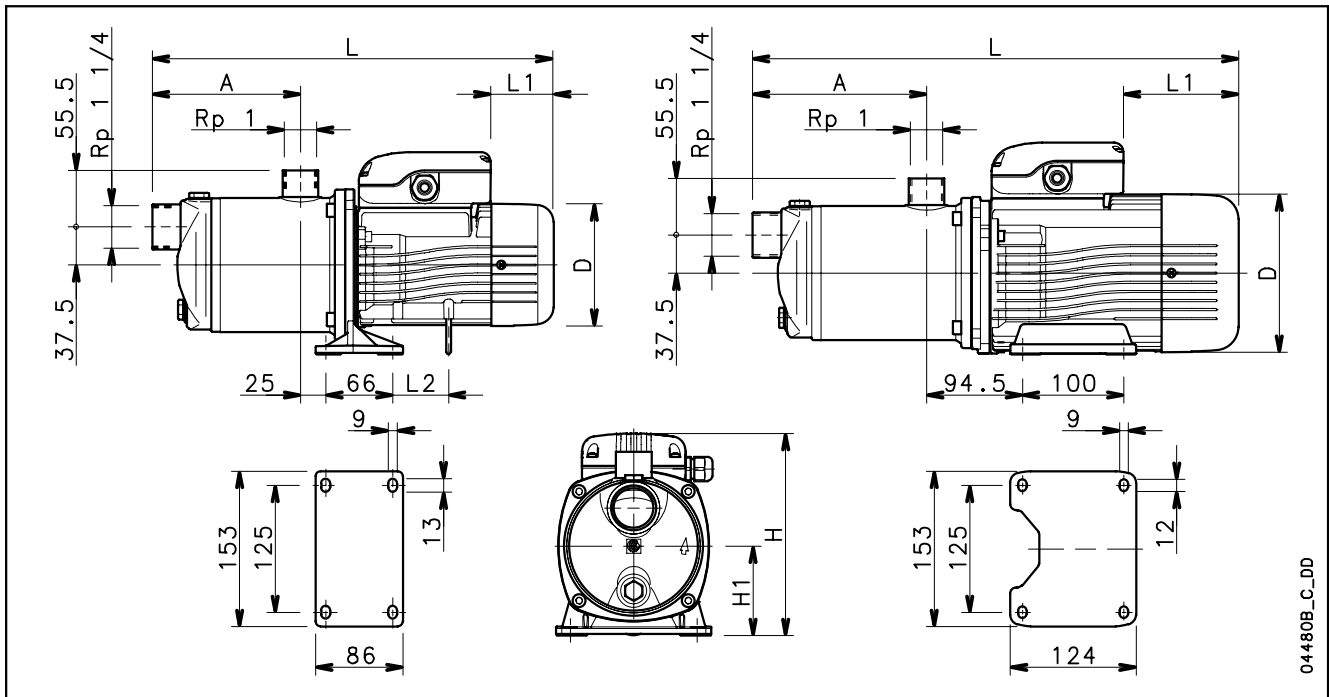
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**2HM SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

HM-HMZ-HMS SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



04480B_C_DD

PUMP TYPE	NUMBER OF STAGES	DIMENSIONS (mm)							WEIGHT kg
		A	D	L	L1	L2	H	H1	
2HM3/A - 2HM3Z/A	2	96	120	345	62	56	199	88	6,8
2HM4/A - 2HM4Z/A	3	121	120	370	62	56	199	88	7,7
2HM5/A - 2HM5Z/A	4	146	120	395	62	56	199	88	8,5
2HM7/A - 2HM7Z/A	5	171	140	434	76	56	209	88	12
4HM4/A - 4HM4Z/A	2	96	120	345	62	56	199	88	7,3
4HM5/A - 4HM5Z/A	3	121	120	370	62	56	199	88	8,1
4HM7/A - 4HM7Z/A	4	146	140	409	31	56	218	88	11,6
4HM9/A - 4HM9Z/A	5	171	140	434	31	56	218	88	11,4
2HM3T/A - 2HM3ZT/A	2	96	120	345	62	56	199	88	6,6
2HM4T/A - 2HM4ZT/A	3	121	120	370	62	56	199	88	7,6
2HM5T/A - 2HM5ZT/A	4	146	120	395	62	56	199	88	8,3
2HM7T/D - 2HM7ZT/D	5	171	155	480	114	-	209	80	14
4HM4T/A - 4HM4ZT/A	2	96	120	345	62	56	199	88	7,2
4HM5T/A - 4HM5ZT/A	3	121	120	370	62	56	199	88	8
4HM7T/D - 4HM7ZT/D	4	146	155	455	114	-	209	80	13,5
4HM9T/D - 4HM9ZT/D	5	171	155	480	114	-	209	80	14
2HMS3/A	2	96	120	345	62	56	199	88	7
2HMS4R/A	3	121	120	370	62	56	199	88	7,6
2HMS4/A	4	146	120	395	62	56	199	88	8
2HMS7/A	5	171	140	434	76	56	209	88	12
4HMS3/A	2	96	120	345	62	56	199	88	7
4HMS4/A	3	121	120	370	62	56	199	88	7,8
4HMS5/A	4	146	120	395	62	56	199	88	8,7
4HMS7/A	5	171	140	434	76	56	209	88	10
2HMS3T/A	2	96	120	345	62	56	199	88	7
2HMS4RT/A	3	121	120	370	62	56	199	88	7,6
2HMS4T/A	4	146	120	395	62	56	199	88	8,2
2HMS7T/D	5	171	155	480	114	-	209	80	12
4HMS3T/A	2	96	120	345	62	56	199	88	6,8
4HMS4T/A	3	121	120	370	62	56	199	88	7,7
4HMS5T/A	4	146	120	395	62	56	199	88	8,5
4HMS7T/D	5	171	155	480	114	-	209	80	12,5

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TECHNICAL APPENDIX

TYPICAL APPLICATIONS HM SERIES ELECTRIC PUMPS

Water Purification:

Filtration
De-ionized water
Water treatment
Commercial and residential pools

Plastic Industry:

Temperature Regulators
Extrusion machines
Manufacture of polymers
Heat treatment

Agricultural Residential Applications:

Irrigation
Greenhouses
Humidifiers
Water supply

Heating, Ventilating & Air Conditioning:

Air scrubbers
Water re-circulation
Cooling towers
Cooling systems
Temperature control
Chillers
Induction heating
Heat exchangers
Water heating

Waste Management:

Waste treatment
Pollution control

Machine Tool:

Degreasing
Parts washing
Chemical treatment

Graphics:

Film washing
Cooling processes

Marine Sector:

Water on board ships

Computers:

Circuit board washing
Unit cooling

Laundry:

Commercial washers

Food and Drink:

Food processing
Bottle washing
Citrus processing
Dishwashing
Brewing
Sanitary ware

General Industry:

Spray booths
Light chemical transfer
Booster systems

Medical:

Laser cooling
Massage
Medical chillers
Sanitary equipment