

SPCO
makes life easier



HM, HMC, HMN
Horizontal Multistage
Centrifugal Pump, 60Hz

Approvals

		CB TEST CERTIFICATE	Ref. Certificate No. CH-3431
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME			
Issued by:	Electrosuisse		
Product:	Horizontal and vertical multistage pumps		
Applicant:	Swiss Pump Company AG Schönenstrasse 46 CH-3645 Thun-Gwatt	Switzerland	
Manufacturer:	Swiss Pump Company AG Schönenstrasse 46 CH-3645 Thun-Gwatt	Switzerland	
Factory:	Swiss Pump Company AG Schönenstrasse 46 CH-3645 Thun-Gwatt	Switzerland	
Rating and principal characteristics:	220 - 240V~, 50/60Hz, 0.27 - 1.5kW, class I, IP55, (see appendix 1) 3 + 200 - 480V~, 50/60Hz, 0.18 - 30kW, class I, IP55		
Trade mark (if any):	SPCO		
Model/type reference:	HM ... CHL ... VM ... CDL ... ND ... DC ... (see appendix 1)		
Additional information:	—		
Sample of product tested to be in conformity with IEC:	80395-1-164-E-1am1 80395-2-416d-E-1am1	National differences: EU Group Differences, EU Special national Conditions, EU A-Deviations	
Test Report Ref. No.:	06-HG-0218.31 + 02		
This CB Test Certificate is issued by the National Certification Body:			
Electrosuisse Luppenstrasse 1, CH-8320 Fehraltorf, Switzerland			
Signed by: Hans Fischmann			
Date of issue: 2006-11-18			

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and SQS
hereby certify that the organization

Swiss Pump Company AG
CH-3645 Thun-Gwatt

Certified area
Whole company

Field of activity
Pumps- and Controlsystems

has implemented and maintains a
Management System
which fulfills the requirements of the following standard

ISO 9001:2008

Scope No: 29
Issued on: 2008-12-20
Validity date: 2011-12-19
Registration Number: **CH-32160**

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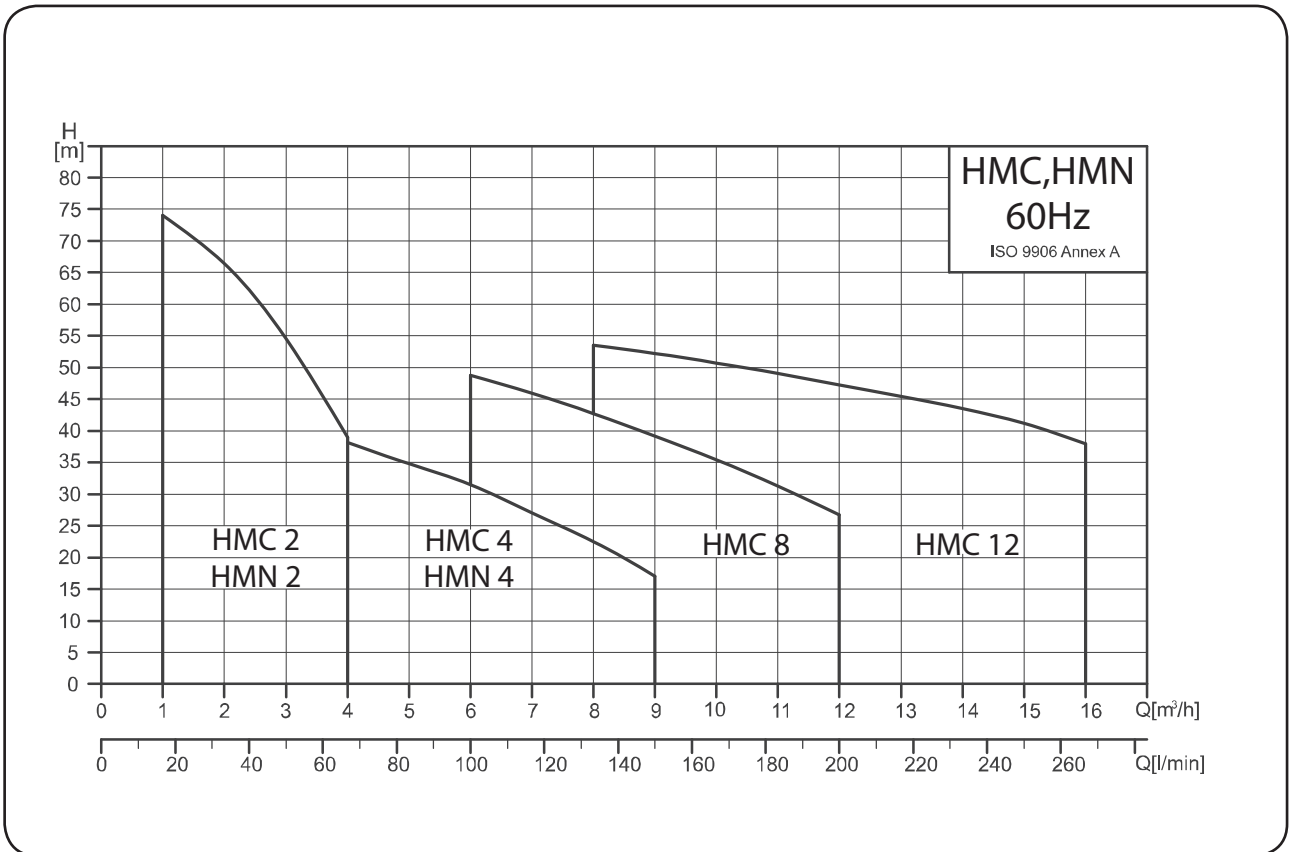
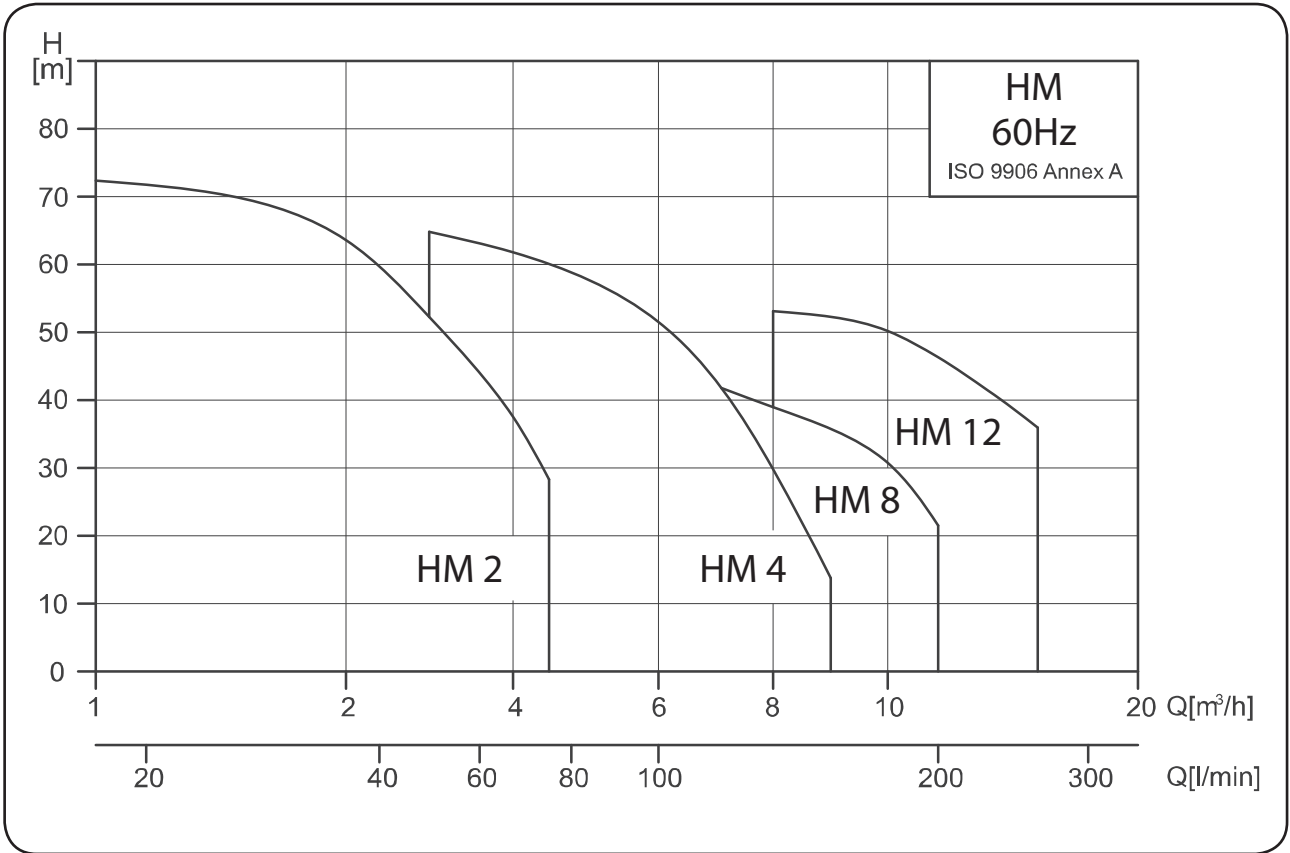
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Performance range



Applications

- Domestic
- Liquid transfer and circulation of liquids within light industry and farming
- Pressure boosting
- Air-conditioning system
- Cooling system or cooling machine
- Specialized OEM equipment

Pump

The HMC and HMN series are non-self priming, horizontal multistage centrifugal pumps. pumps is coupled with motor at the same shaft and mounted on a base- plate. The friendly design makes the pump suitable for installation in the small domestic or industrial water supply system. The pump is fitted with a mechanical seal and through going pump motor shaft.

HMC: The discharge and suction chamber are made of cast iron. The other parts of pump in contact with the liquid are made of stainless steel.

HMN: All parts of pump in contact with the liquid are made of stainless steel.
EPDM or viton O-rings are available as standard.

Operating conditions

Liquid: Clean liquid without solid particles.

Liquid temperature range: 0 C ~ +110 C .

Maximum ambient temperature: +50C .

The maximum operating pressure depends on the temperature of the pumped liquid.

Max. Operating Pressure	10 kg/cm ²	6 kg/cm ²
HM 2,4,8,12	0°C to +110 °C	
HMC(N)2, HMC(N)4	0°C to +40°C	+41°C to +90°C
HMC 8, HMC 12	0°C to +55°C	+56°C to +90°C

Min.inlet pressure: According to the NPSH curve + a safety margin of 0.5m .

Max. inlet pressure: Limited by the max. operating pressure .

Pipe connections

Connection	HM 2	HM 4	HM 8	HM 12	HMC(N) 2	HMC(N) 4	HMC 8	HMC 12
Suction Port	Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 1 1/2	Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 1 1/2
Discharge Port	Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 1 1/2	Rp 1	Rp 1	Rp 1 1/4	Rp 1 1/2
Drain hole, Priming Hole	G 3/8	G 3/8	G 3/8	G 3/8	Rc 3/8	Rc 3/8	Rp 1/2	Rp 1/2

Liquids to be pumped

These pumps are designed for pumping freely flowing non-corrosive, non-explosive. and non-flammable liquids. The liquids to be pumped must also be free of solid matter, sands, fibers, and similar materials.

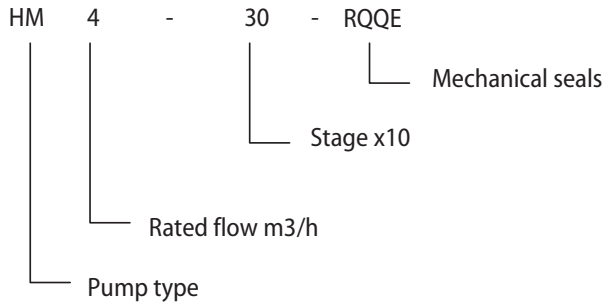
Most common non-highly corrosive watery liquids, oily liquids, hot and cold liquids can be pumped with these pumps.

The suitability of these pumps for pumping any particular liquid depends upon a number of factors, such as the ph value, contents of chemicals such as chlorides, oils, the temperature of the liquids, etc.

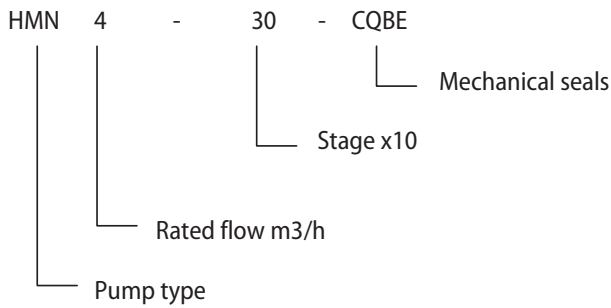
Please contact your distributor or the factory if there are any questions as to whether certain liquids are suitable for pumping with these pumps.

Definition of Model

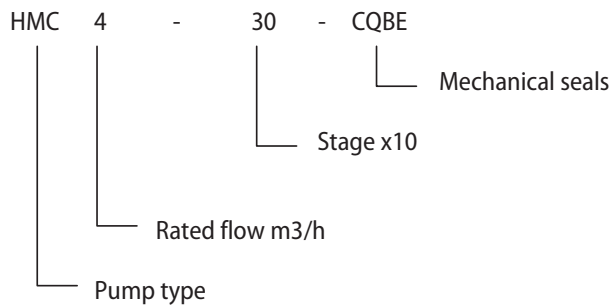
HM Example



HMN Example



HMC Example



Electric Motor

The pump is fitted with a totally enclosed, fan-cooled, squirrel-cage motor.

Rated speed: 3450 rpm (60Hz)

Enclosure class: IP 54

Insulation class: F

Standard voltage: 1 x 110 ~ 220 V, 60Hz

3 x 200 ~ 230 V/346 ~ 400Y V, 60Hz

Mechanical seals HM

Mechanical Seals	HM 304 2/4	HM 316 2/4
RQQ	Optional	Optional
RQB	•	•
O-ring		
E	•	•
V	•	•

- Standard.

List of Materials	
Q : Silicon carbide	E : EPDM
B : Carbon	V : Viton
R : Seal Type	

Mechanical seal HMC , HMN

CQB	•
CQQ	Optional
AUU	Optional
O-ring	
E	•
V	•

- Standard.

List of Materials	
Q : Silicon carbide	E : EPDM
U : Tungsten carbide	V : Viton
B : Carbon	C : Seal Type
A : Seal Type	

Material HM

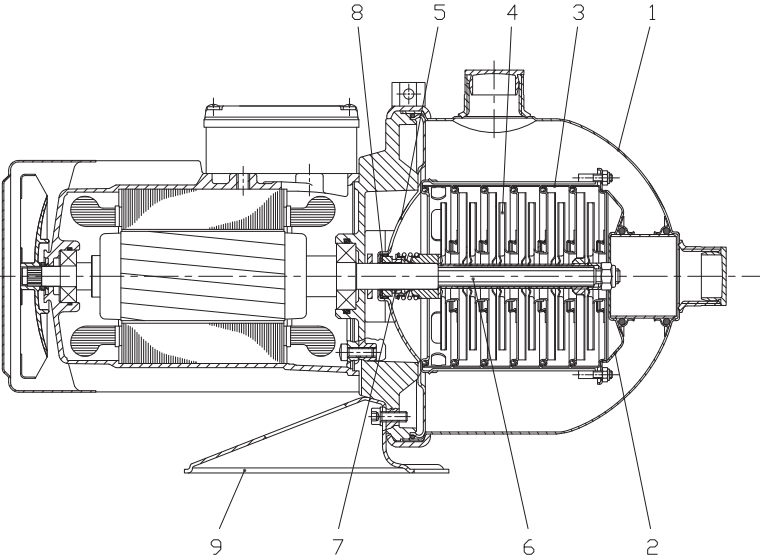
No.	Description	Materials	
		HM 304	HM 316
1	Pump casing	SS304	SS316
2	Suction inter-connector	SS304	SS316
3	Chamber	SS304	SS316
4	Impeller	SS304	SS316
5	Cover plate	SS304	SS316
6	Shaft	SS431	SS316
7	Mechanical seal	Silicon carbide / Carbon	Silicon carbide / Carbon
8	O-ring	EPDM or Viton	EPDM or Viton
9	Base plate	Steel	Steel

Material HMC, HMN

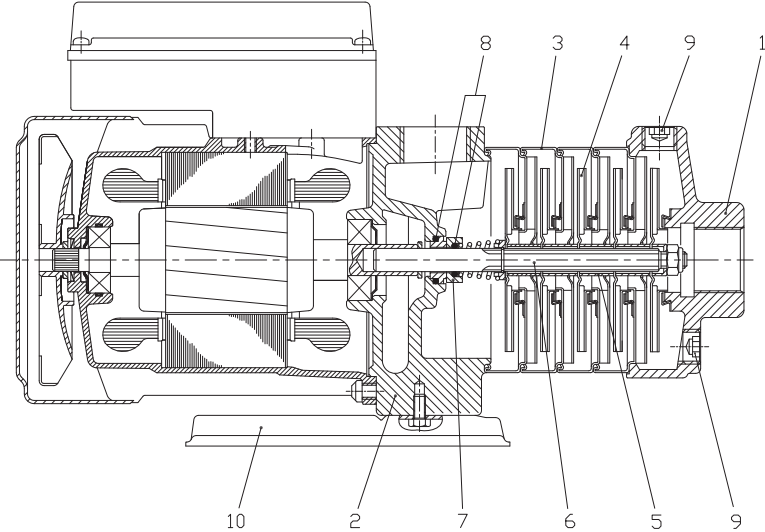
No.	Description	Materials	
		HMC	HMN
1	Suction chamber	Cast iron	SS304
2	Pump head	Cast iron	SS304
3	Intermediate chamber	SS304	SS304
4	Impeller	SS304	SS304
5	Spacing pipe	SS304	SS304
6	Shaft	SS431	SS431
7	Mechanical seal	Silicon carbide / Carbon	Silicon carbide / Carbon
8	O-ring	EPDM or Viton	EPDM or Viton
9	Drain and priming plug	Steel	SS304
10	Base plate	Steel	SS304

Section drawing

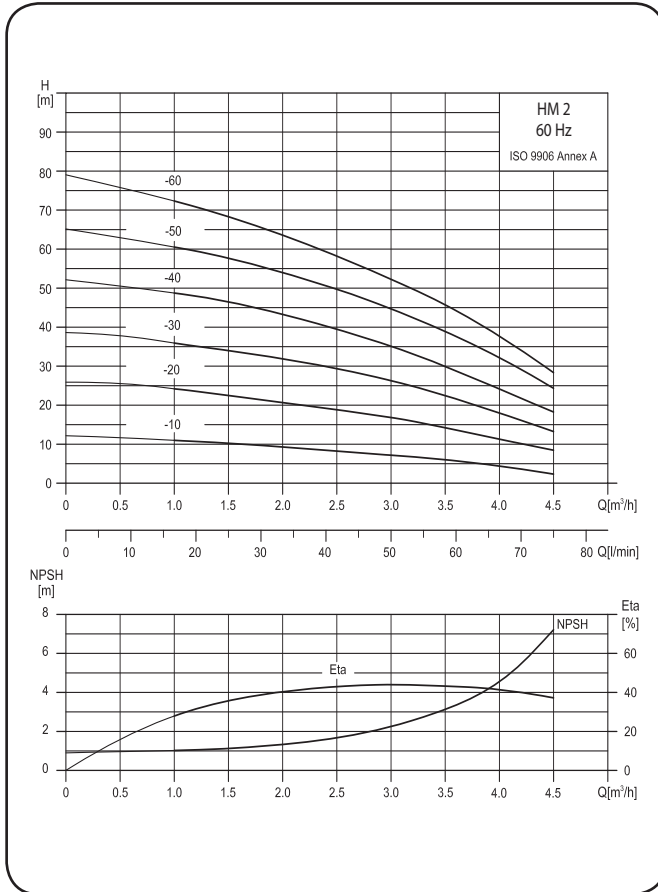
HM



HMC , HMN

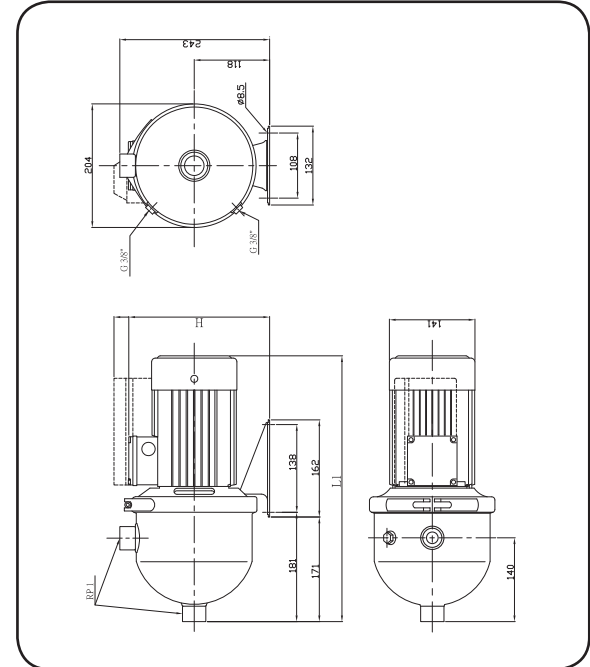


Performance Curves



HM 2

Dimensional Sketches



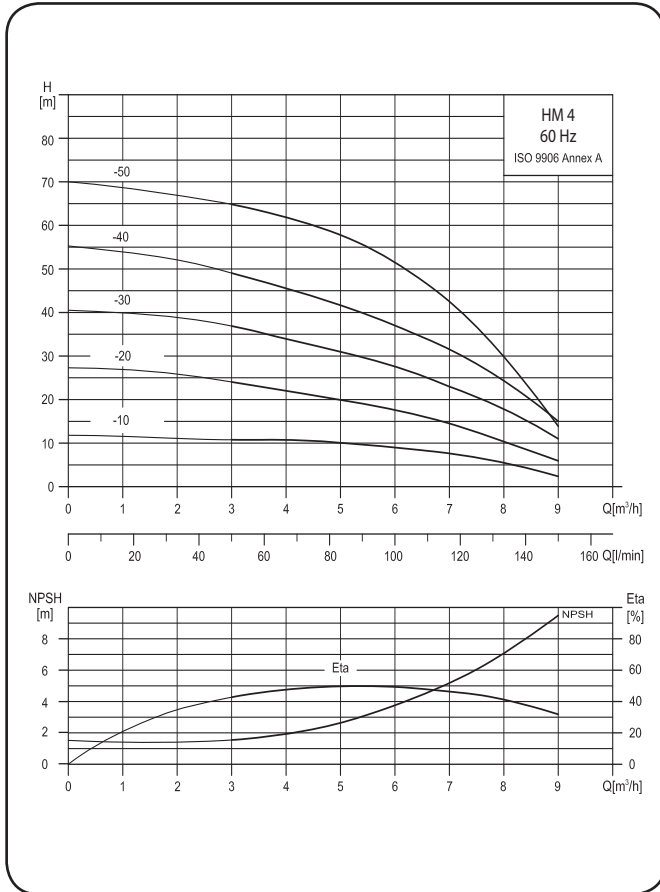
Dimensions and weights

Pump type	Dimension (mm)				Net Weight (kg)
	1-Phase		3-Phase		
	L1	H	L1	H	
HM 2-10	403	255	403	233	9.5
HM 2-20	403	255	403	233	9.5
HM 2-30	403	255	403	233	9.8
HM 2-40	403	255	403	233	10.3
HM 2-50	441	255	441	233	11.7
HM 2-60	441	255	441	233	12

Electrical data, 3450 min⁻¹

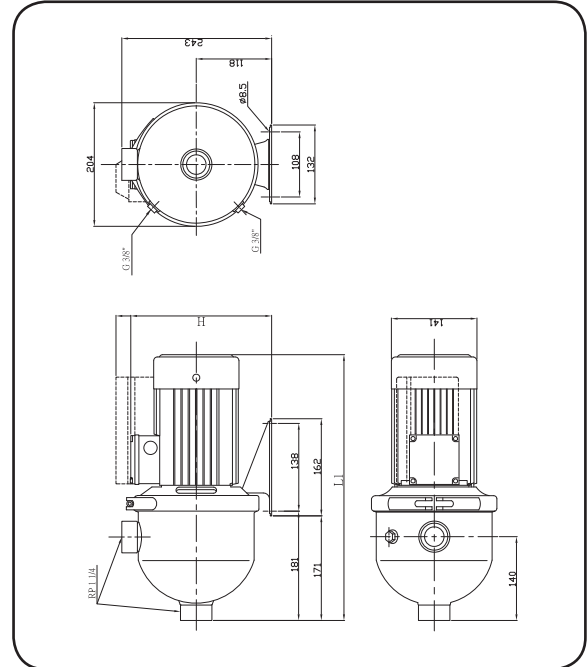
Pump type	1 x 110-220 V		3 x 200-230/346-400 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HM 2-10	450	3.4 / 1.7	380	1.5 / 0.9
HM 2-20	620	5.2 / 2.6	560	2.8 / 1.6
HM 2-30	800	7 / 3.5	780	3.2 / 1.8
HM 2-40	1020	9.4 / 4.7	1020	3.5 / 2
HM 2-50	1200	11 / 5.5	1120	3.8 / 2.2
HM 2-60	1420	13 / 6.5	1260	4.5 / 2.6

Performance Curves



HM 4

Dimensional Sketches



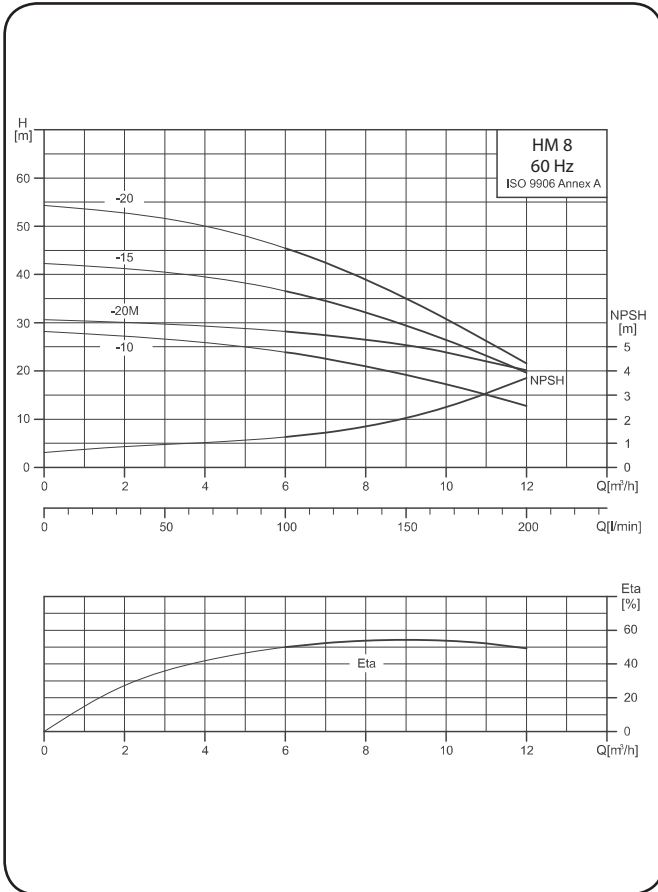
Dimensions and weights

Pump type	Dimension (mm)				Net Weight (kg)
	1-Phase		3-Phase		
	L1	H	L1	H	
HM 4-10	403	255	403	233	9.5
HM 4-20	403	255	403	233	9.5
HM 4-30	403	255	403	233	10.1
HM 4-40	441	255	441	233	11.5
HM 4-50	441	255	441	233	12.8

Electrical data, 3450 min⁻¹

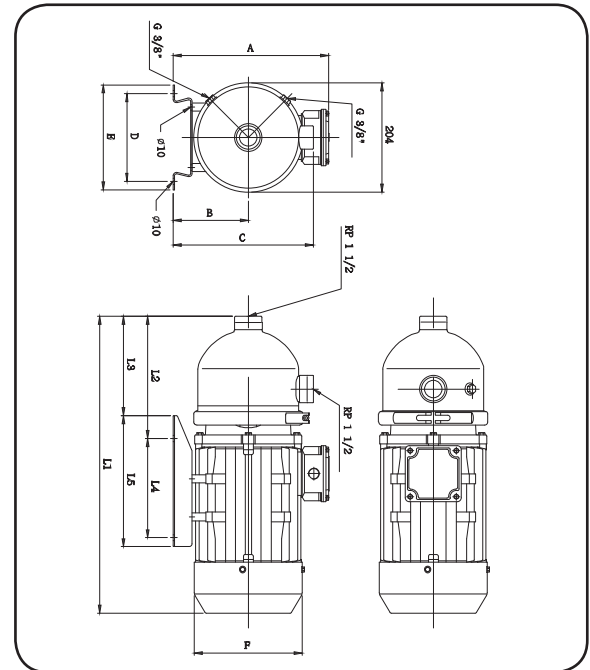
Pump type	1 x 110-220 V		3 x 200-230/346-400 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HM 4-10	520	5.4 / 2.7	530	2.7 / 1.6
HM 4-20	890	9.2 / 4.6	890	3.3 / 1.9
HM 4-30	1280	13 / 6.5	1210	4.4 / 2.5
HM 4-40	1680	16-Aug	1620	6 / 3.5
HM 4-50	2080	21 / 10.5	1830	6.8 / 3.9

Performance Curves



HM 8

Dimensional Sketches



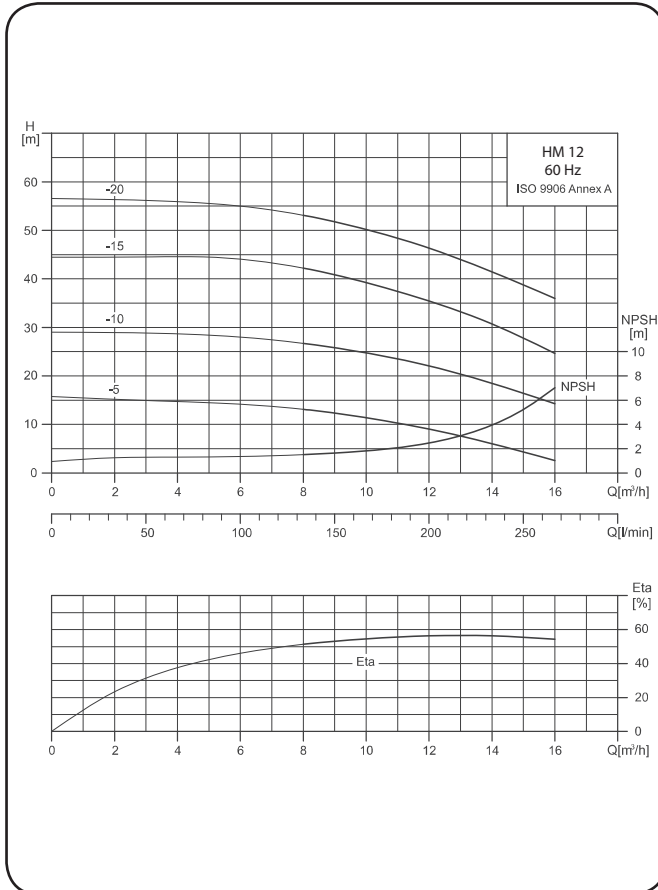
Dimensions and weights

Model	Motor		Dimension (mm)													Weight kg	
	P2		L1		L2	L3	L4	L5	A		B	C	D	E	F	1Ø	3Ø
	Phase	HP	1Ø	3Ø					1Ø	3Ø							
HM 8-10	1	1	441	441	181	171	138	162	255	233	118	243	108	132	141	11.7	11.5
	3																
HM 8-15	1	2	514	--	200	180	195	235	267	--	121	245	158	178	177	21.42	--
	3																
HM 8-20M	1	1.5	441	441	181	171	138	162	255	233	118	243	108	132	141	13.24	13.05
	3																
HM 8-20	1	2	514	493	200	180	195	235	267	261	121	245	158	178	177	21.5	21.6
	3																

Electrical data, 2850 min⁻¹

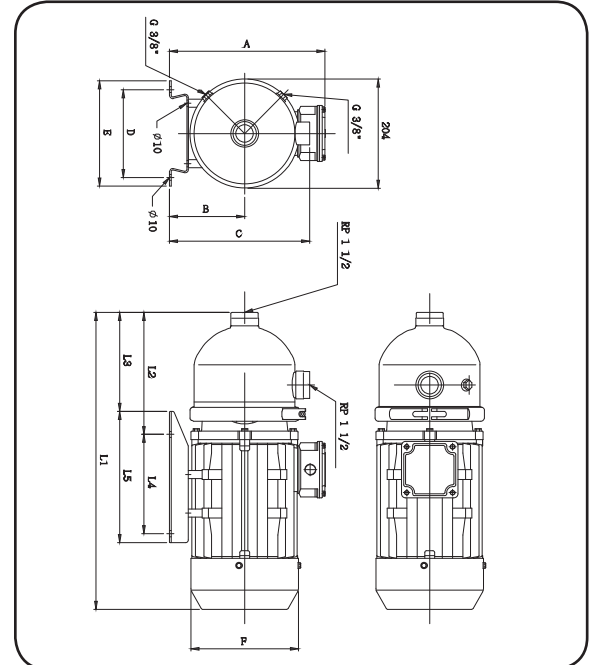
Pump type	1 x 110-220 V		3 x 220-255/380-400 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HM 8-10	1280	11.4 / 6.0	1200	4.1 / 2.4
HM 8-20M	1730	8.3	1630	5.0 / 2.9
HM 8-15	2080	9.3	1870	5.5 / 3.2
HM 8-20	2460	10.9	2320	6.9 / 4.0

Performance Curves



HM 12

Dimensional Sketches



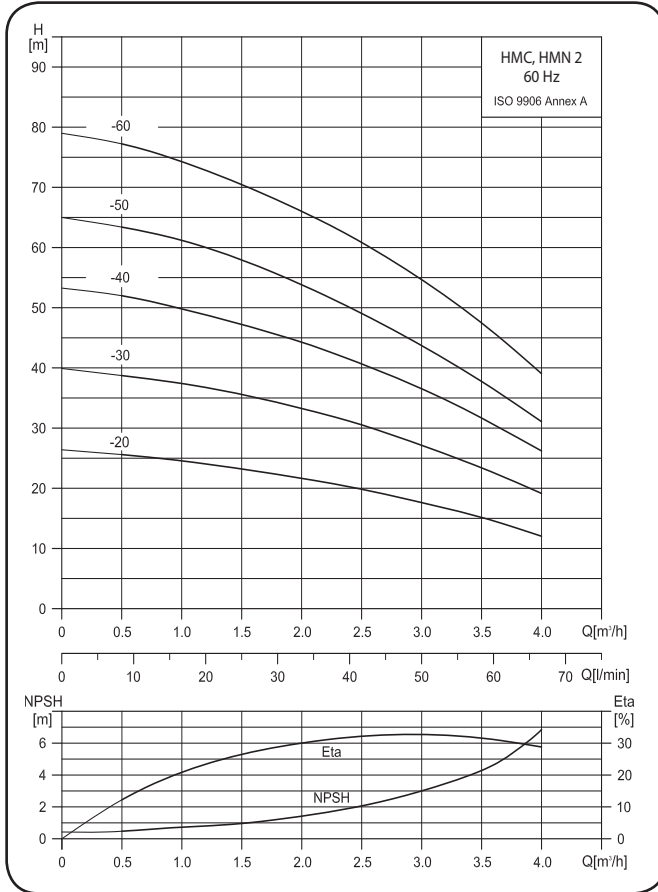
Dimensions and weights

Model	Motor		Dimension (mm)												Weight kg		
	P2		L1		L2	L3	L4	L5	A		B	C	D	E	F	1Ø	3Ø
	Phase	HP	1Ø	3Ø					1Ø	3Ø							
HM 12-05	3	0.5	--	403	181	171	138	162	--	233	118	243	108	132	141	--	9.41
HM 12-10	1	1	441	441	181	171	138	162	255	233	118	243	108	132	141	11.72	11.52
	3																
HM 12-15	1	1.5	441	441	181	171	138	162	255	233	118	243	108	132	141	13.38	13.18
	3																
HM 12-20	1	2	514	493	200	180	195	235	267	261	121	245	158	178	177	22.52	21.48
	3																

Electrical data, 2850 min⁻¹

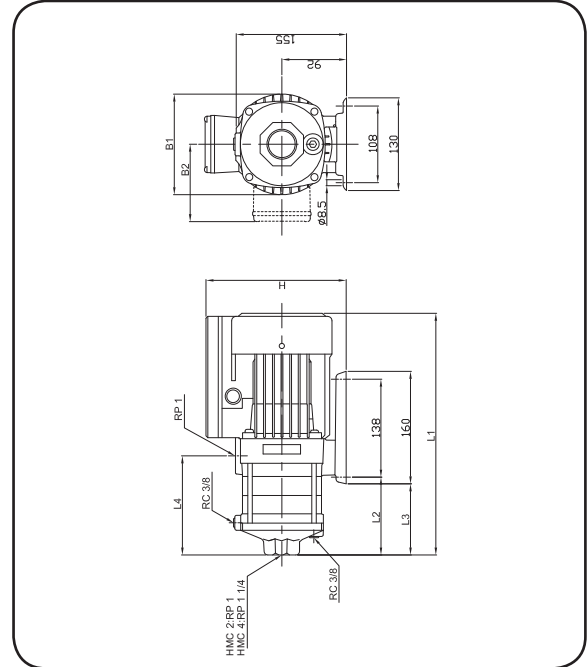
Pump type	1 x 110-220 V		3 x 220-255/380-400 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HM 12-05	940	8.5 / 4.5	840	2.8 / 1.6
HM 12-10	2170	9.7	1930	5.7 / 3.3
HM 12-15	--	--	2750	8.1 / 4.7
HM 12-20	--	--	3950	11.4 / 6.6

Performance Curves



HMC 2, HMN 2

Dimensional Sketches



Dimensions and weights

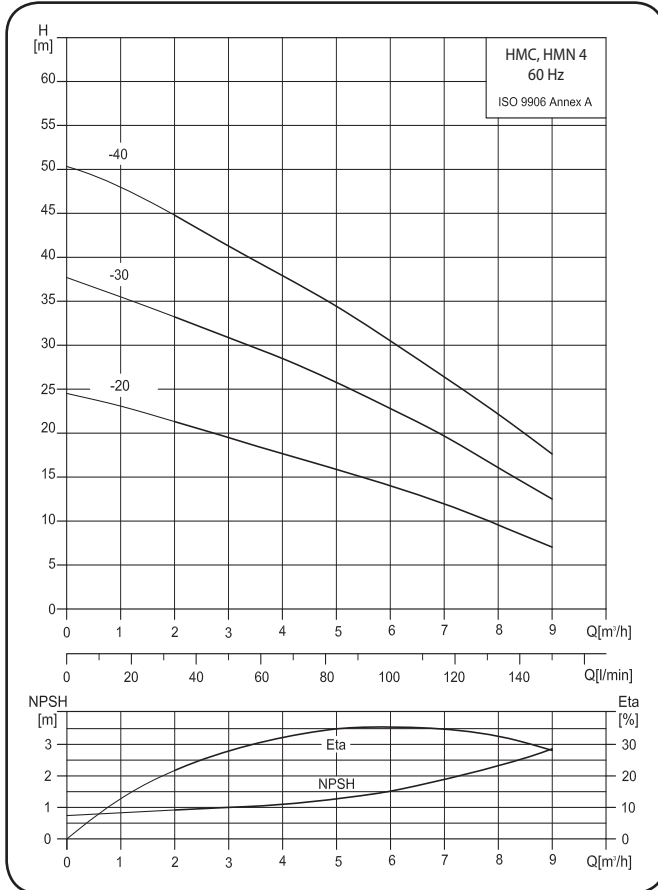
Pump type	mm									kg	
	L1	L2	L3	L4	B1	B2		H		1-phase	3-phase
						1-phase	3-phase	1-phase	3-phase		
HMC 2-20	309	75	63	101	141	127	112	228	206	10.3	10
HMC 2-30	327	93	81	119	141	127	112	228	206	11.1	10.8
HMC 2-40	345	111	99	137	141	127	112	228	206	11.3	11.1
HMC 2-50	403	129	117	155	141	127	112	228	206	13	12.4
HMC 2-60	421	147	135	173	141	127	112	228	206	13.2	12.7

Pump type	mm									kg	
	L1	L2	L3	L4	B1	B2		H		1-phase	3-phase
						1-phase	3-phase	1-phase	3-phase		
HMN 2-20	309	75	63	101	141	127	112	228	206	9.1	8.8
HMN 2-30	327	93	81	119	141	127	112	228	206	10	9.6
HMN 2-40	345	111	99	137	141	127	112	228	206	10.2	10
HMN 2-50	403	129	117	155	141	127	112	228	206	11.8	11.5

Electrical data, 3450 min⁻¹

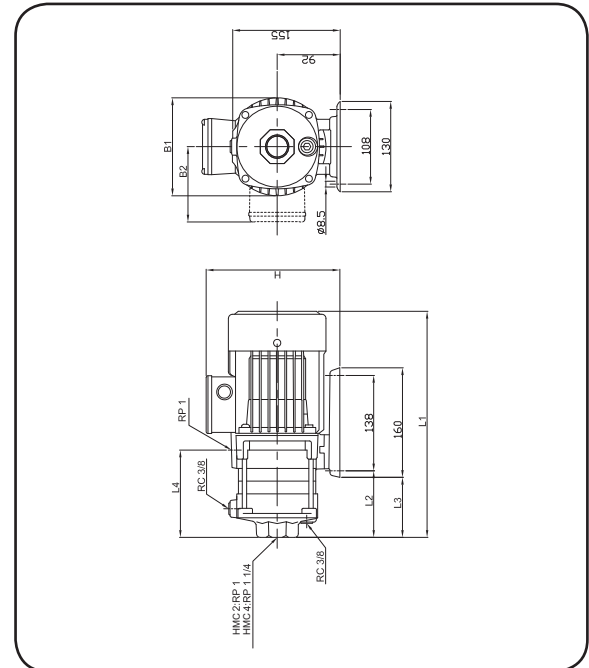
Pump type	1 x 110-220 V		3 x 200-230/346-400 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HMC/HMN 2-20	640	6 / 3	520	2.7 / 1.6
HMC/HMN 2-30	780	7.6 / 3.8	690	3 / 1.8
HMC/HMN 2-40	870	8.8 / 4.4	860	3.2 / 1.9
HMC/HMN 2-50	1210	11 / 5.5	1090	3.6 / 2.1
HMC/HMN 2-60	1280	13.5 / 6.8	1240	4.1 / 2.4

Performance Curves



HMC 4, HMN 4

Dimensional Sketches



Dimensions and weights

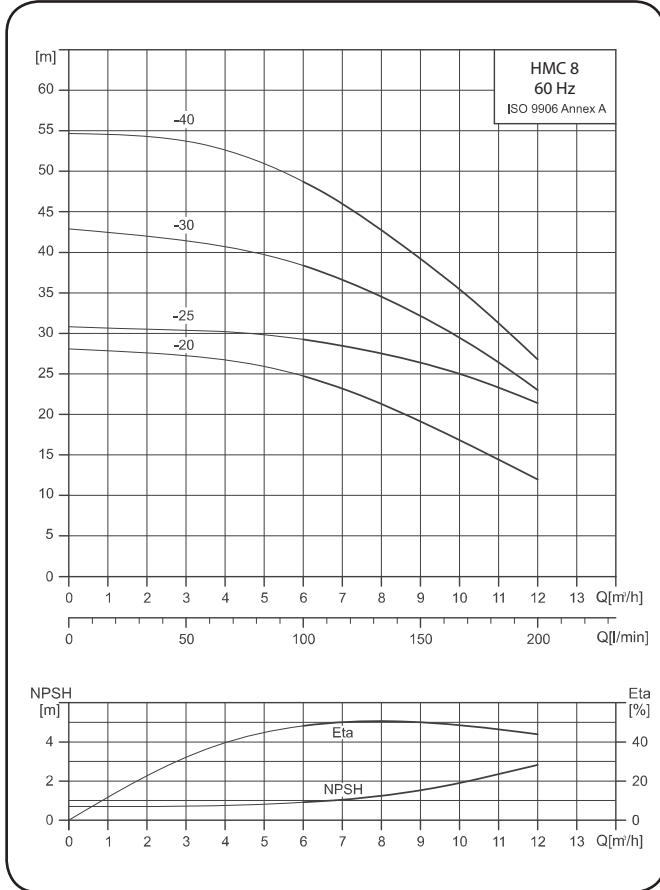
Pump type	mm									kg	
	L1	L2	L3	L4	B1	B2		H		1-phase	3-phase
						1-phase	3-phase	1-phase	3-phase		
HMC 4-20	318	84	72	110	141	127	112	228	206	12.2	10.7
HMC 4-30	384	111	99	137	141	127	112	228	206	12.2	12.3
HMC 4-40	412	138	126	164	141	127	112	228	206	14	13.7

Pump type	mm									kg	
	L1	L2	L3	L4	B1	B2		H		1-phase	3-phase
						1-phase	3-phase	1-phase	3-phase		
HMN 2-60	421	147	135	173	141	127	112	228	206	12.1	11.7
HMN 4-20	318	84	72	110	141	127	112	228	206	9.8	9.5
HMN 4-30	384	111	99	137	141	127	112	228	206	11.5	11.1
HMN 4-40	412	138	126	164	141	127	112	228	206	12.8	12.6

Electrical data, 3450 min⁻¹

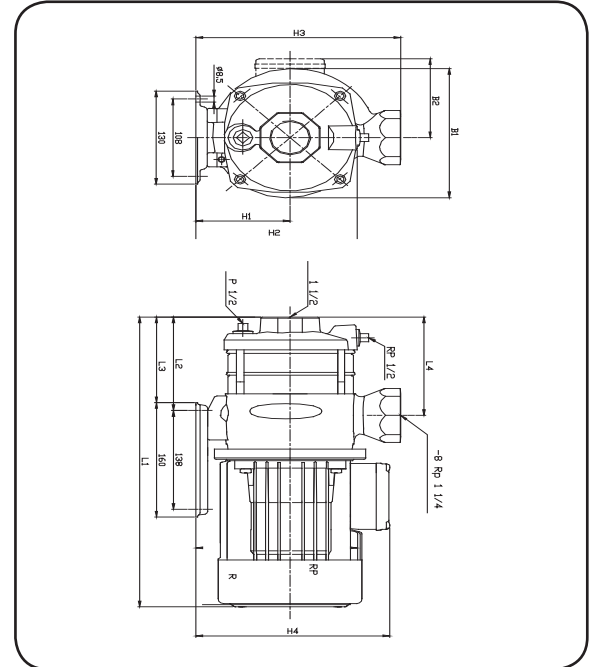
Pump type	1 x 110-220 V		3 x 200-230/346-400 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HMC/HMN 4-20	970	8.5 / 4.2	810	3.1 / 1.8
HMC/HMN 4-30	1450	13.5 / 6.8	1250	3.9 / 2.3
HMC/HMN 4-40	1710	16 / 8	1520	4.9 / 2.8

Performance Curves



HMC 8

Dimensional Sketches



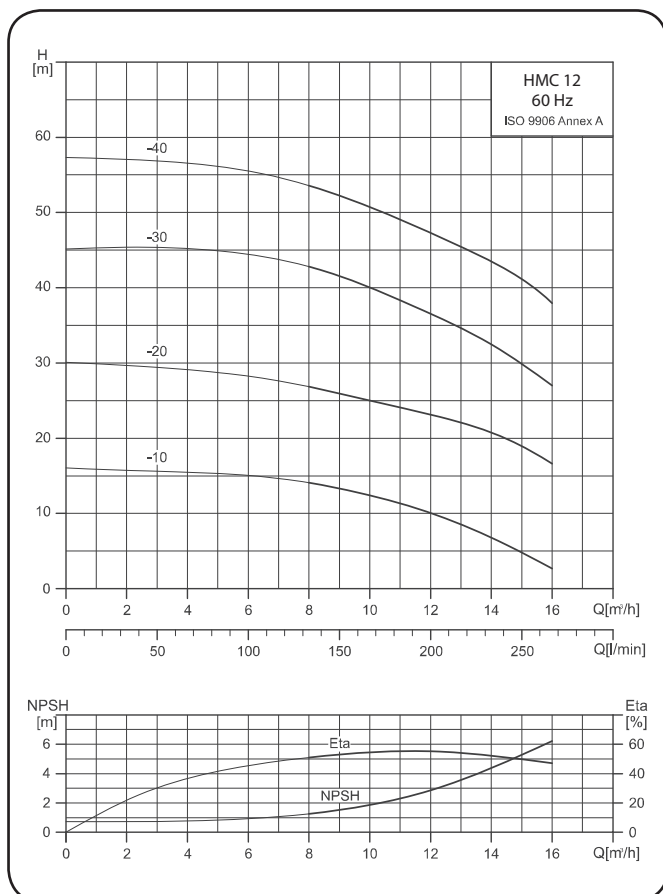
Dimensions and weights

Model	Dimension (mm)												Weight kg			
	L1		L2	L3	L4	B1		B2		H1	H2	H3	H4		1Ø	3Ø
	1Ø	3Ø				1Ø	3Ø	1Ø	3Ø				1Ø	3Ø		
HMC 8-20	360	360	54	42	78	181	181	136	116	112	190	240	248	228	18.6	18.4
HMC 8-25	--	390	84	72	108	--	181	--	116	112	190	240	--	228	--	20.3
HMC 8-30	448	390	102	90	108	185	181	156	116	112	190	240	268	228	26.0	20.4
HMC 8-40	448	448	102	90	108	185	181	156	141	112	190	240	268	253	26.2	26.2

Electrical data, 2850 min⁻¹

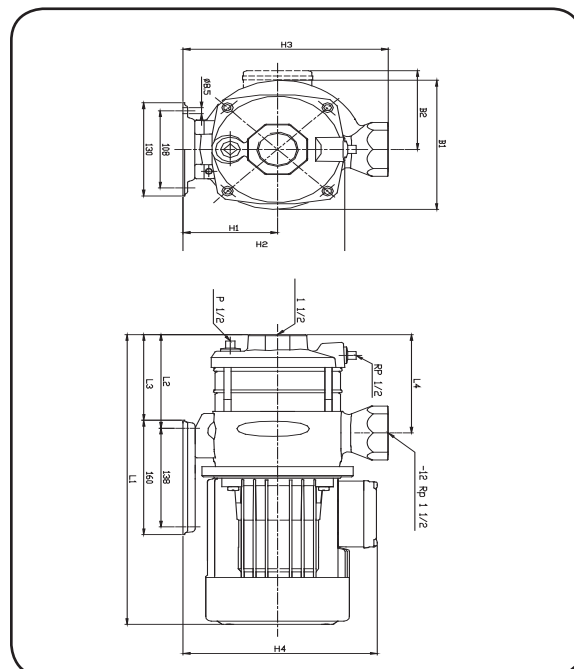
Pump type	1 x 110/220 V		3 x 220-255/380-440 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HMC 8-20	1300	12 / 6.0	1200	4.0 / 2.3
HMC 8-25	--	--	1650	5.0 / 2.9
HMC 8-30	2060	9.2	1860	5.7 / 3.3
HMC 8-40	2430	10.7	2340	6.6 / 3.8

Performance Curves



HMC 12

Dimensional Sketches

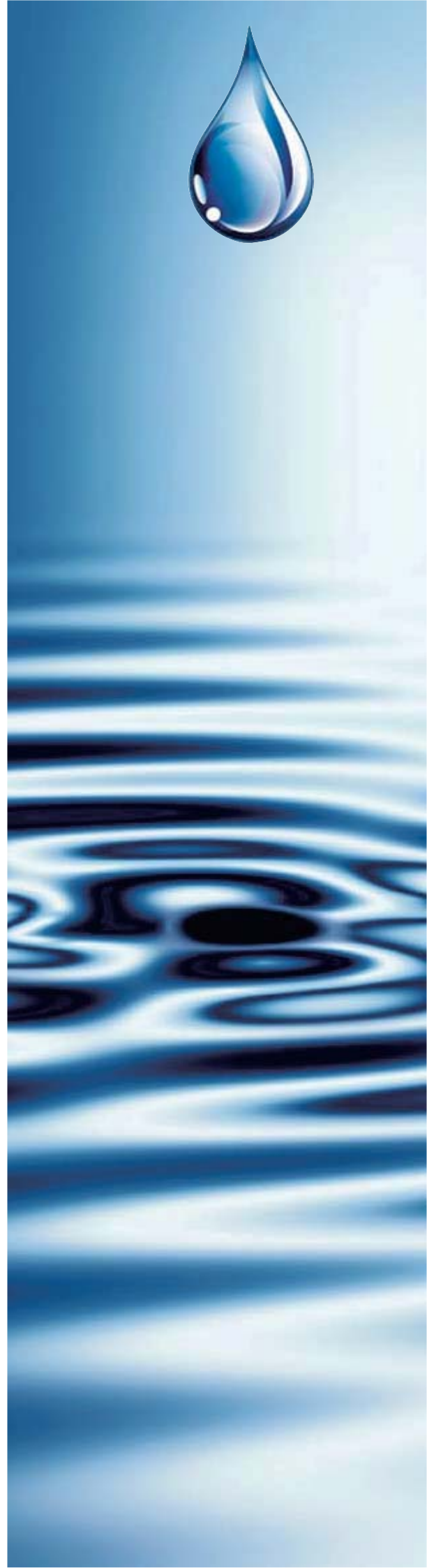


Dimensions and weights

Model	Dimension (mm)												Weight kg			
	L1		L2	L3	L4	B1		B2		H1	H2	H3	H4		1Ø	3Ø
	1Ø	3Ø				1Ø	3Ø	1Ø	3Ø				1Ø	3Ø		
HMC 12-10	--	360	54	42	78	--	181	--	116	112	190	240	--	228	--	16.2
HMC 12-20	419	390	54	42	78	185	181	156	116	112	190	240	268	228	25.24	19.1
HMC 12-30	--	425	102	90	108	--	185	--	141	112	190	240	--	253	--	28.3
HMC 12-40	--	471	102	90	108	--	196	--	147	125	203	253	--	272	--	33.64

Electrical data, 2850 min⁻¹

Pump type	1 x 110/220 V		3 x 220-255/380-440 V	
	P ₁ [W]	I _{1/1} [A]	P ₁ [W]	I _{1/1} [A]
HMC 12-10	--	--	880	3.4 / 1.9
HMC 12-20	2150	9.6	1930	6.0 / 3.5
HMC 12-30	--	--	2780	7.9 / 4.6
HMC 12-40	--	--	3920	11.4 / 6.6





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