SPCO
makes life easier

HM, HMK, HMC, HMN

Horizontal Multistage Centrifugal Pumps, 50Hz

Approvals

electrosuisse

Expert's report

Confirmation on preparation of an expert's report

CERTIFIES

Expert ref no. CH-10-IK-0172.Exa-B
page 1 of 1

Product	Horizontal and vertical pumps
Applicant	Swiss Pump Company, Moosweg 36, CH-3645 Gwatt
Manufacturer	Swiss Pump Company, Moosweg 36, CH-3645 Gwatt
Manufactured at Factory	Swiss Pump Company, Moosweg 36, CH-3645 Gwatt
Trade-mark	SPCO, SWP
Type/Model	ND,CC,MB, QB, SMP, VM, VMC, VMN, CDL, CHLF, CHL, CDLF, CDLFT, CHLFT, SCP, PD, HMC, HM, HMN
Ratings, characteristics	220-240V, 3x230V, 3x400V, 3x460V, 50/60Hz Power range: >30 - 1900kW, IP55
Standards safety	EN 60204-1:06 + A1:09 IEC 60204-1(ed.5),am1
Standards EMC	—
Other standards	—

For the product an expert's report with regard to the aforementioned normative documents, respectively technical features has been issued.
The results are given in the reports ref.no.
10-IK-0172.01

Electrosuisse
National Certification Body

Martin Pfiffner
Product Certification

SCESS 035
(EN 45011)

Fehraltorf, 2015-06-16

IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and SQS
hereby certify that the organisation

Swiss Pump Company AG
3645 Thun-Gwatt
Switzerland

Certified area
Whole Company

Field of activity
Design, development, manufacture and sale of products for the transportation of liquids

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

ISO 9001:2008

Scope No(s): 17, 18, 19
Issued on: 2012-02-20
Validity date: 2015-02-19
Registration Number: ***CH-32160***

IQNet

Michael Drechsel
President of IQNet

Roland Glauser
Managing Director SQS

SQS

IQNet Partners*:
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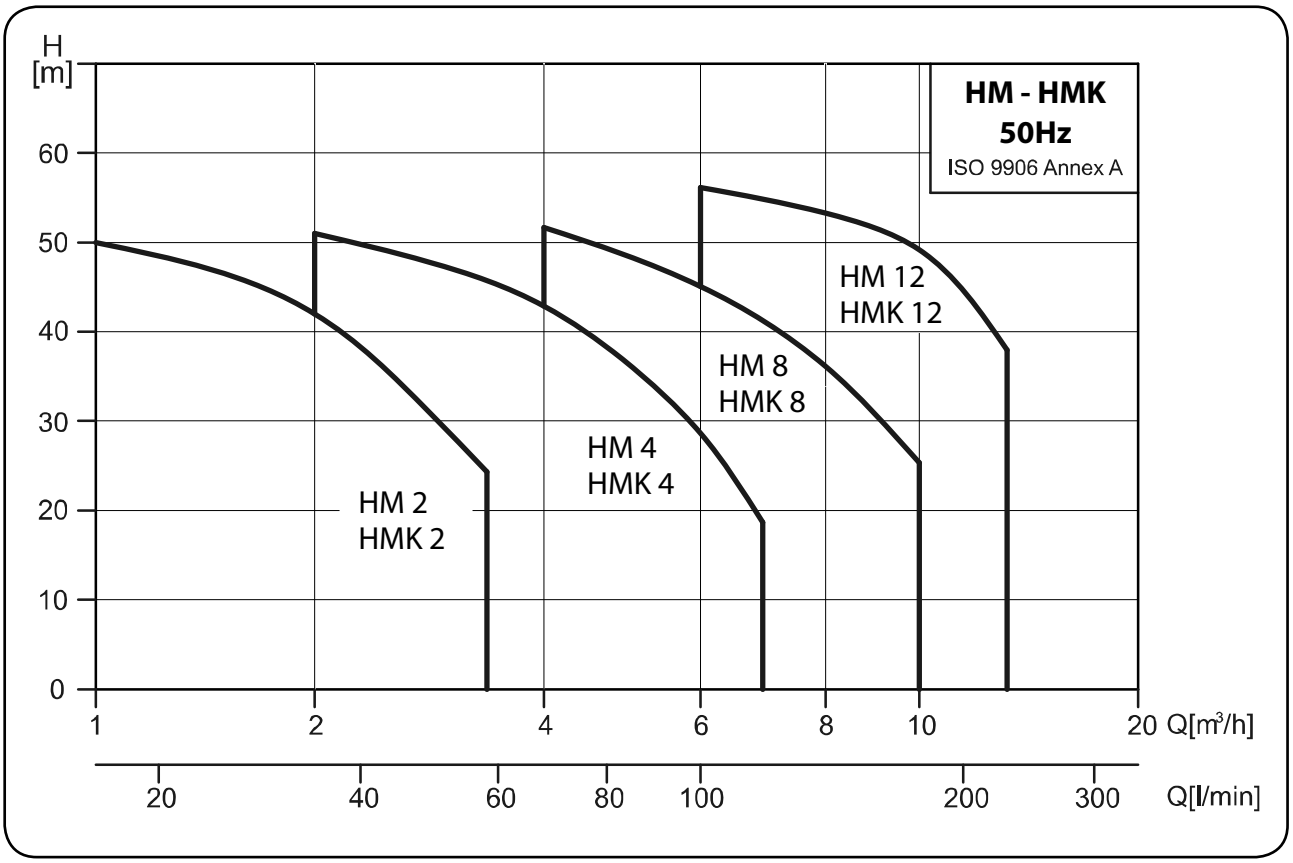
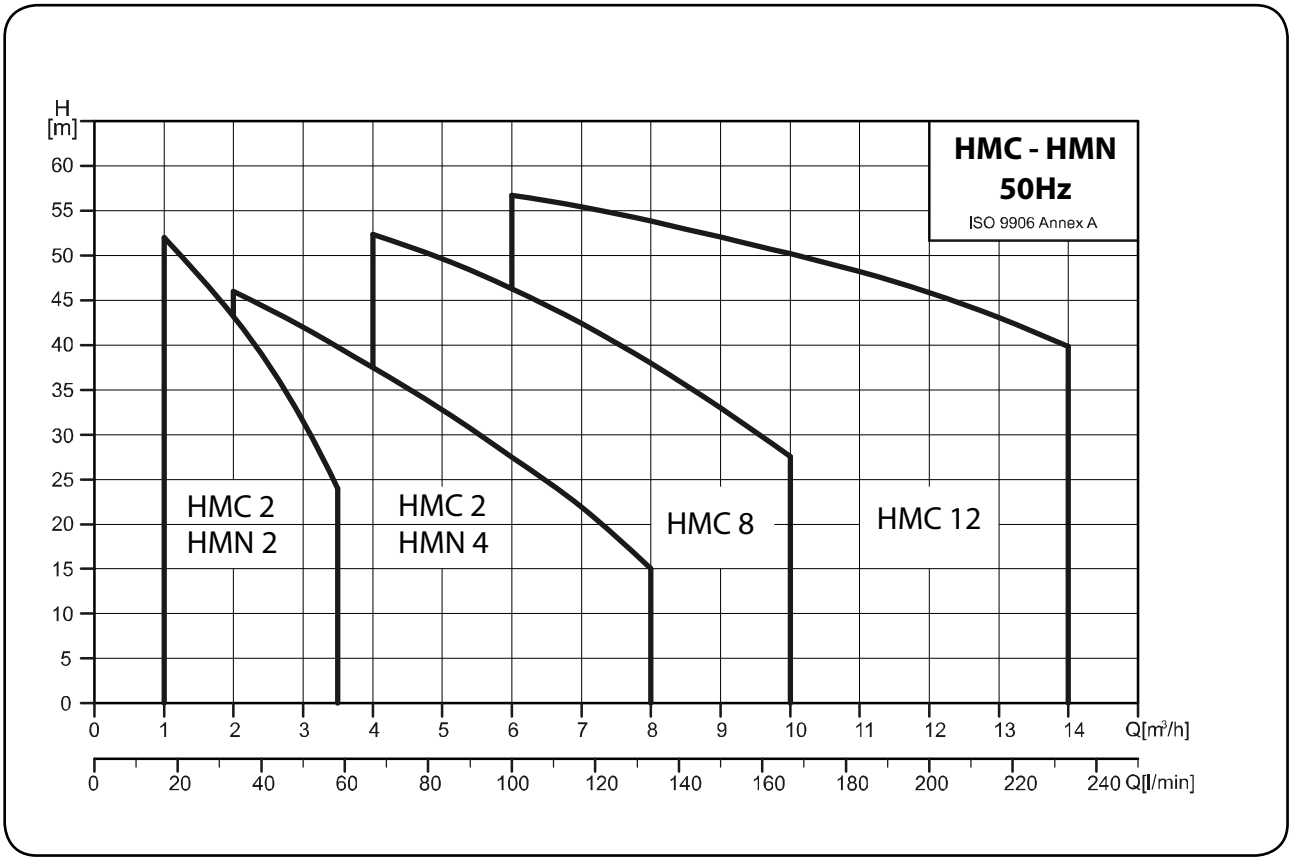
IQNet is represented in the USA by: AFNOR Certification, CISQ, DQS Holding GmbH and NSAI Inc.
* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

General Data

Technical Data

Performance range





Applications HM - HMK

- Water supply and pressure boosting.
- Water treatment.
- Air-conditioning.
- Heating and cooling in industrial processes.
- Industrial washing and dish-washing machines.
- Softened water.
- Pressure boosting of process water.
- Fertilizer/ dosing systems.

Pump HM - HMK

A horizontal multistage centrifugal pump is made of stainless steel.
The pump is a non-self priming type and fitted with a mechanical shaft seal.

Operating conditions HM - HMK

Liquid temperature range: 0 °C ~ +110 °C .

Maximum ambient temperature: +52 °C .

Maximum operating pressure: 10 kg/cm^2.

Maximum inlet pressure is limited by maximum operating pressure.

Pipe connections

Connection	**HM(K) 2**	**HM(K) 4**	**HM(K) 8**	**HM(K) 12**
Suction Port	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
Drain hole, Priming Hole	G 3/8	G 3/8	G 3/8	G 3/8

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 SPCO if there are any questions as to whether certain liquids are suitable for pumping with these pumps.

Applications HMC - HMN

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

Pump HMC - HMN

The HMC and HMN series are non-self priming, horizontal multistage centrifugal pumps. pump 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 systems. 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 HMC - HMN

Liquid: Clean liquid without solid particles.

Liquid temperature range: 0°C ~ +90°C .

Maximum ambient temperature: +52°C .

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

Max. Operating Pressure	**10 kg/cm²**	**6 kg/cm²**
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	**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
Discharge Port	Rp 1	Rp 1	Rp 1 1/4	Rp 1 1/2
Drain hole, Priming Hole	Rc 3/8	Rc 3/8	Rp 1/2	Rp 1/2

Definition of Model

HM(K) Example

HM(K) 4 - 30 - RQQE

- RQQE: Mechanical seals
- 30: Stage x10
- 4: Rated flow m3/h
- HM(K): Pump type

HMC Example

HMC 4 - 30 - CQBE

- CQBE: Mechanical seals
- 30: Stage x10
- 4: Rated flow m3/h
- HMC: Pump type

HMN Example

HMN 4 - 30 - CQBE

- CQBE: Mechanical seals
- 30: Stage x10
- 4: Rated flow m3/h
- HMN: Pump type

Electric Motor

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

Rated speed: 2850 rpm (50Hz)

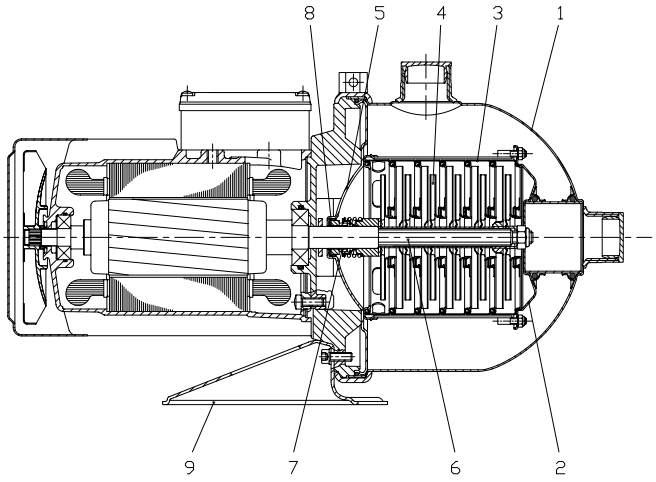
Enclosure class: IP 54

Insulation class: F

Standard voltage: 1 x 220 ~ 240 V, 50Hz

3 x 220 ~ 240 V/380 ~ 415 V, 50Hz

Section drawing HM - HMK



Material HM - HMK

No.	Description	Materials	
		HM	HMK
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 / Sic
8	O-ring	EPDM or Viton	EPDM or Viton
9	Base plate	Steel	Steel

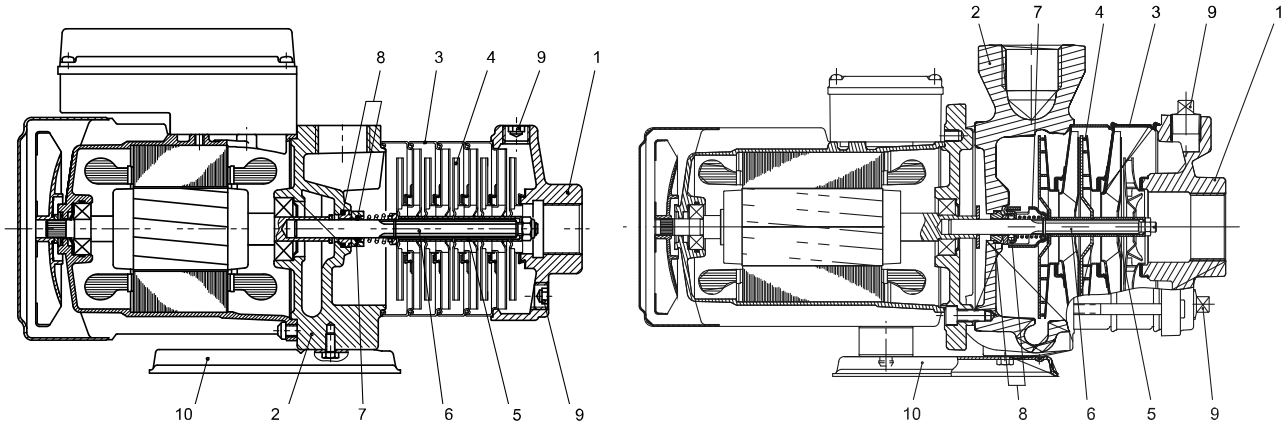
Mechanical seal HM - HMK

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

Mechanical Seals	**HM**	**HMK**
RQQ	Optional	•
RQB	•	Optional
O-ring		
E	•	•
V	•	•

• Standard.

Section drawing HMC - HMN



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

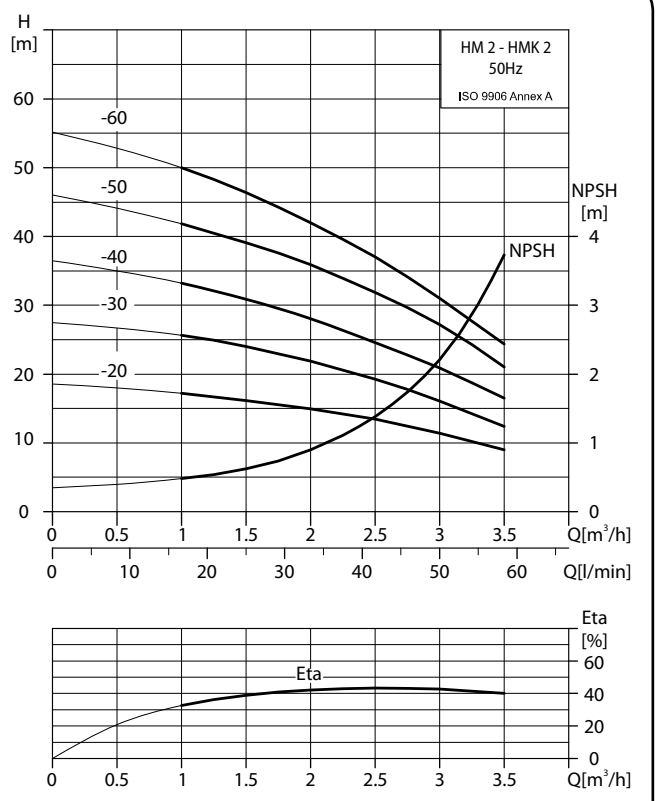
Mechanical seal HMC - HMN

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

Mechanical Seals	**HMC(N) 2, 4**	**HMC 8, 12**
CQB	•	•
CQQ	Optional	Optional
AUU	Optional	Optional
O-ring		
E	•	•
V	•	•

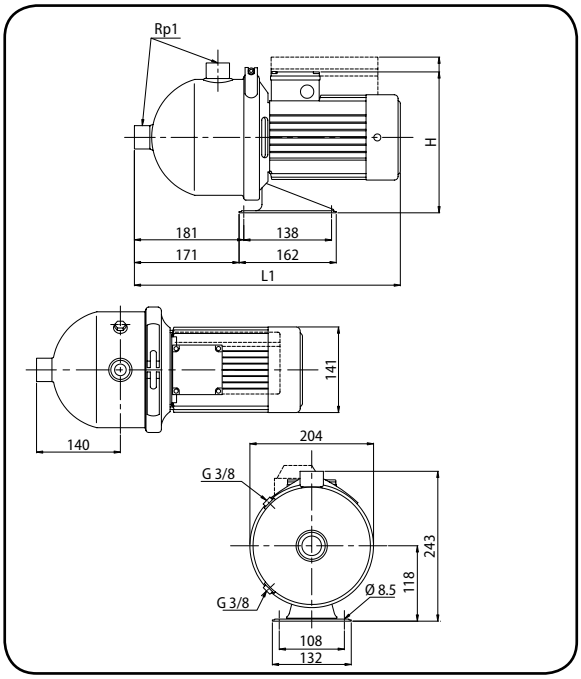
• Standard.

Performance curves



HM 2 - HMK 2

Installation sketch



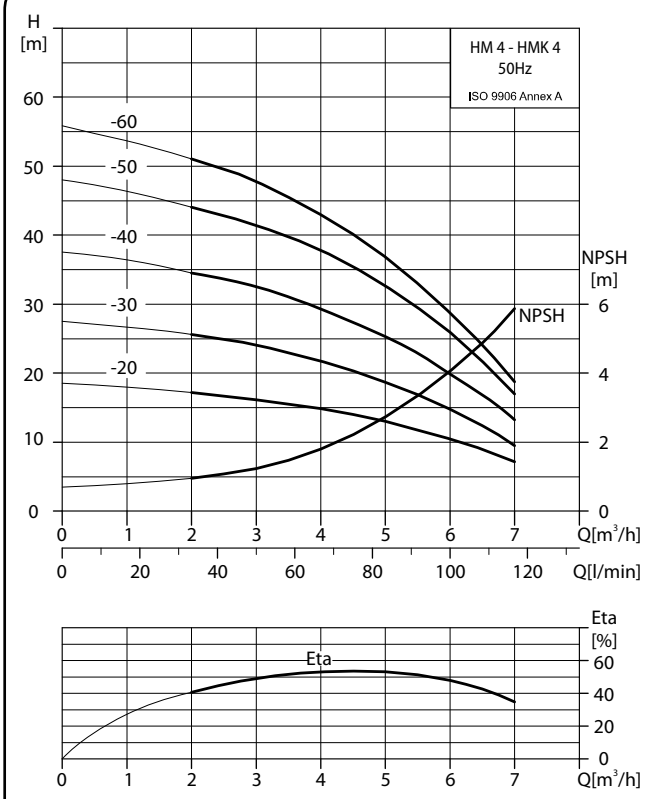
Dimensions and weights

Model	Dimension [mm]				Weight [kg]
	1-Phase		3-Phase		
	L1	H	L1	H	
HM 2-20 / HMK 2-20	403	255	403	233	9.6
HM 2-30 / HMK 2-30	403	255	403	233	9.9
HM 2-40 / HMK 2-40	403	255	403	233	10.1
HM 2-50 / HMK 2-50	403	255	403	233	10.8
HM 2-60 / HMK 2-60	403	255	403	233	11.0

Electrical data, 2850 min^{-1}

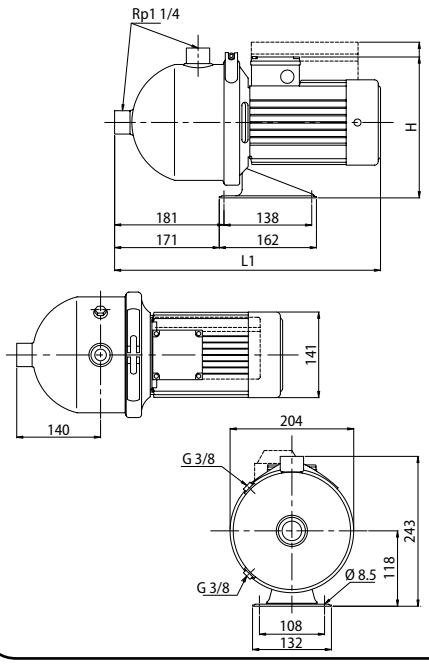
Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HM 2-20 / HMK 2-20	450	1.9	370	1.9 / 1.1
HM 2-30 / HMK 2-30	540	2.4	480	1.9 / 1.1
HM 2-40 / HMK 2-40	630	2.8	620	2.0 / 1.2
HM 2-50 / HMK 2-50	800	3.8	820	2.7 / 1.6
HM 2-60 / HMK 2-60	940	4.2	910	2.8 / 1.6

Performance curves



HM 4 - HMK 4

Installation sketch



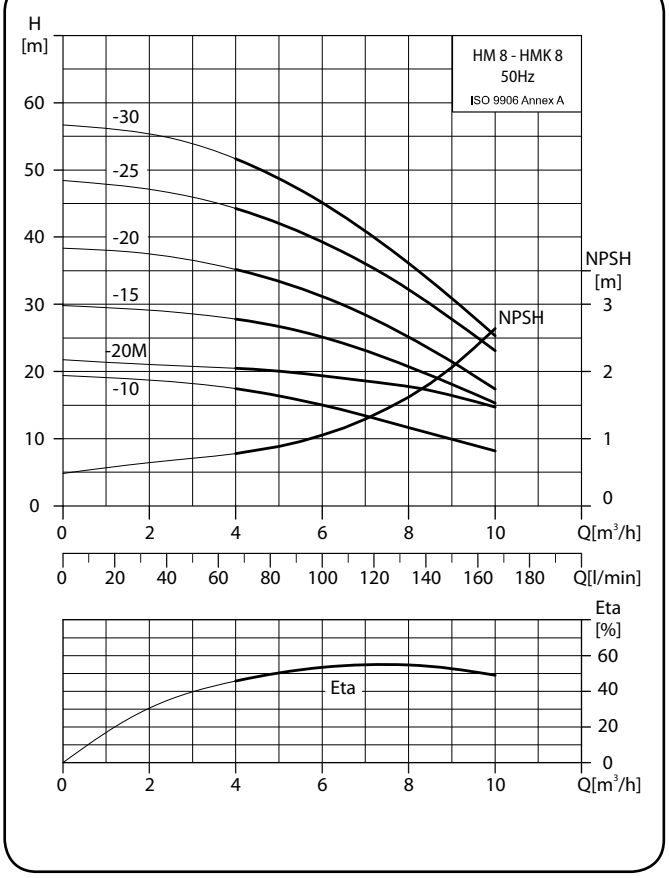
Dimensions and weights

Model	Dimension [mm]				Weight [kg]
	1-Phase		3-Phase		
	L1	H	L1	H	
HM 4-20 / HMK 4-20	403	255	403	233	9.6
HM 4-30 / HMK 4-30	403	255	403	233	9.9
HM 4-40 / HMK 4-40	403	255	403	233	10.6
HM 4-50 / HMK 4-50	441	255	441	233	12.1
HM 4-60 / HMK 4-60	441	255	441	233	12.3

Electrical data, 2850 min^{-1}

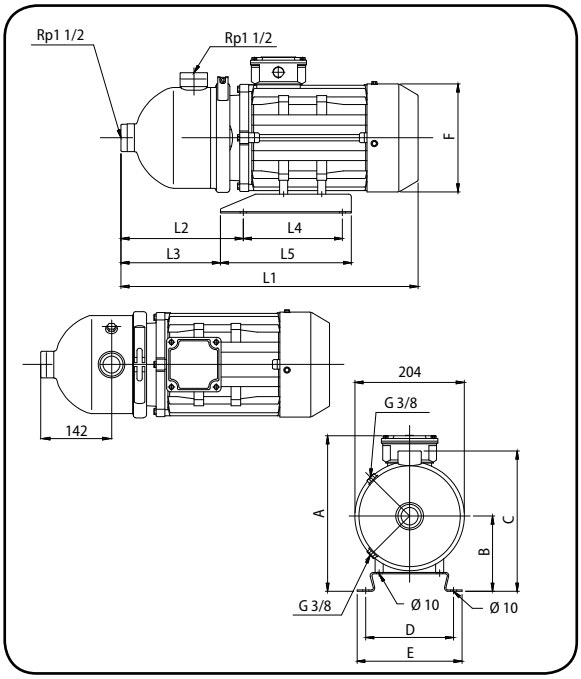
Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HM 4-20 / HMK 4-20	560	2.5	560	2.0 / 1.2
HM 4-30 / HMK 4-30	760	3.5	720	2.4 / 1.4
HM 4-40 / HMK 4-40	1000	4.8	980	3.2 / 1.8
HM 4-50 / HMK 4-50	1220	5.7	1210	4.0 / 2.3
HM 4-60 / HMK 4-60	1410	6.4	1410	4.8 / 2.7

Performance curves



HM 8 - HMK 8

Installation sketch



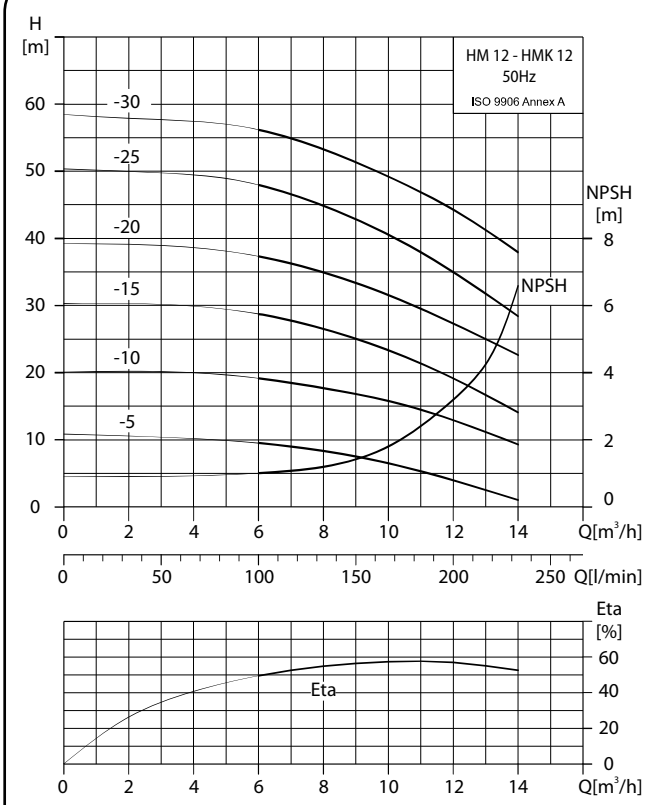
Dimensions and weights

Model	Motor		Dimension [mm]													Weight [kg]	
	P2		L1		L2	L3	L4	L5	A		B	C	D	E	F		
	Phase	HP	1Ø	3Ø					1Ø	3Ø						1Ø	3Ø
HM 8-10 / HMK 8-10	1 3	0.75	403	403	181	171	138	162	255	233	118	243	108	132	141	10.2	10.02
HM 8-15 / HMK 8-15	1 3	1	441	441	181	171	138	162	255	233	118	243	108	132	141	12.28	12.08
HM 8-20M / HMK 8-20M	3	1	--	441	181	171	138	162	--	233	118	243	108	132	141	--	11.98
HM 8-20 / HMK 8-20	1 3	1.5	441	441	181	171	138	162	255	233	118	243	108	132	141	13.54	13.34
HM 8-25 / HMK 8-25	1	2	514	--	200	180	195	235	267	--	121	245	158	178	177	23.08	--
	3	1.5	--	441	181	171	138	162	--	233	118	243	108	132	141	--	13.92
HM 8-30 / HMK 8-30	1 3	2	514	493	200	180	195	235	267	261	121	245	158	178	177	23.14	22.22

Electrical data, 2850 min^{-1}

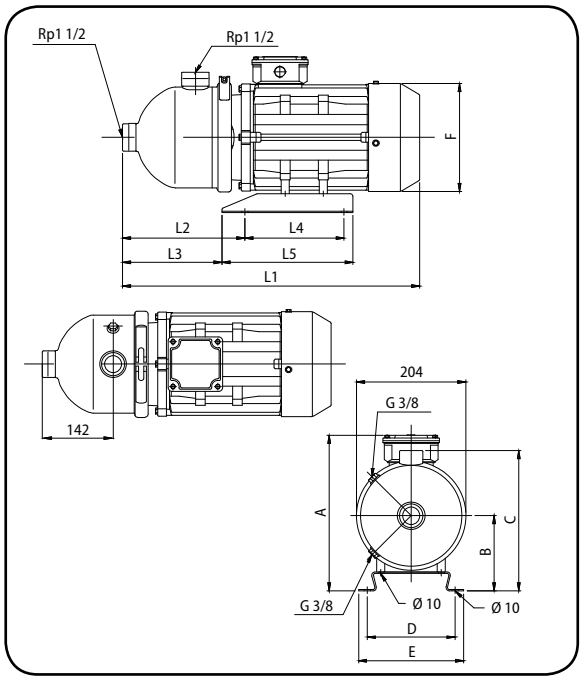
Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HM 8-10 / HMK 8-10	720	3.4	760	2.9 / 1.7
HM 8-20M / HMK 8-20M	--	--	1030	4.1 / 2.4
HM 8-15 / HMK 8-15	1150	5.4	1180	4.3 / 2.5
HM 8-20 / HMK 8-20	1400	6.4	1430	5.5 / 3.2
HM 8-25 / HMK 8-25	1930	8.6	1810	6.0 / 3.5
HM 8-30 / HMK 8-30	2100	9.3	2050	6.9 / 4.0

Performance curves



HM 12 - HMK 12

Installation sketch



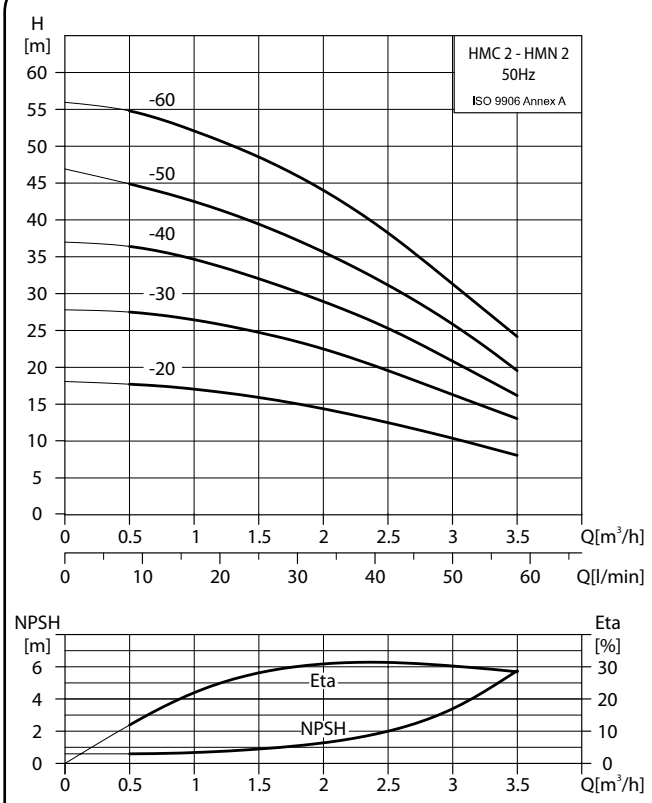
Dimensions and weights

Model	Motor		Dimension [mm]													Weight [kg]	
	P2		L1		L2	L3	L4	L5	A		B	C	D	E	F		
	Phase	HP	1Ø	3Ø					1Ø	3Ø						1Ø	3Ø
HM 12-05 / HMK 12-05	3	0.5	--	403	181	171	138	162	--	233	118	243	108	132	141	--	9.41
HM 12-10 / HMK 12-10	1 3	1	441	441	181	171	138	162	255	233	118	243	108	132	141	11.72	11.52
HM 12-15 / HMK 12-15	1 3	1.5	441	441	181	171	138	162	255	233	118	243	108	132	141	13.38	13.18
HM 12-20 / HMK 12-20	1 3	2	514	493	200	180	195	235	267	261	121	245	158	178	177	22.52	21.48
HM 12-25 / HMK 12-25	1 3	3	514	493	200	180	195	235	267	261	121	245	158	178	177	25.74	24.36
HM 12-30 / HMK 12-30	3	4	--	539	230	198	195	245	--	284	133	259	174	198	197	--	30.2

Electrical data, 2850 min^{-1}

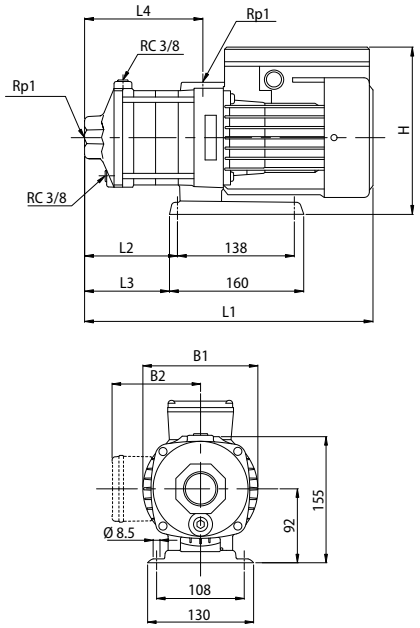
Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HM 12-05 / HMK 12-05	--	--	550	2.6 / 1.5
HM 12-10 / HMK 12-10	1200	5.5	1210	4.3 / 2.5
HM 12-15 / HMK 12-15	1700	7.8	1680	5.9 / 3.4
HM 12-20 / HMK 12-20	2460	11	2410	7.4 / 4.3
HM 12-25 / HMK 12-25	2900	13	2870	9.2 / 5.3
HM 12-30 / HMK 12-30	--	--	3640	11.6 / 6.7

Performance curves



HMC 2 - HMN 2

Installation sketch



Dimensions and weights

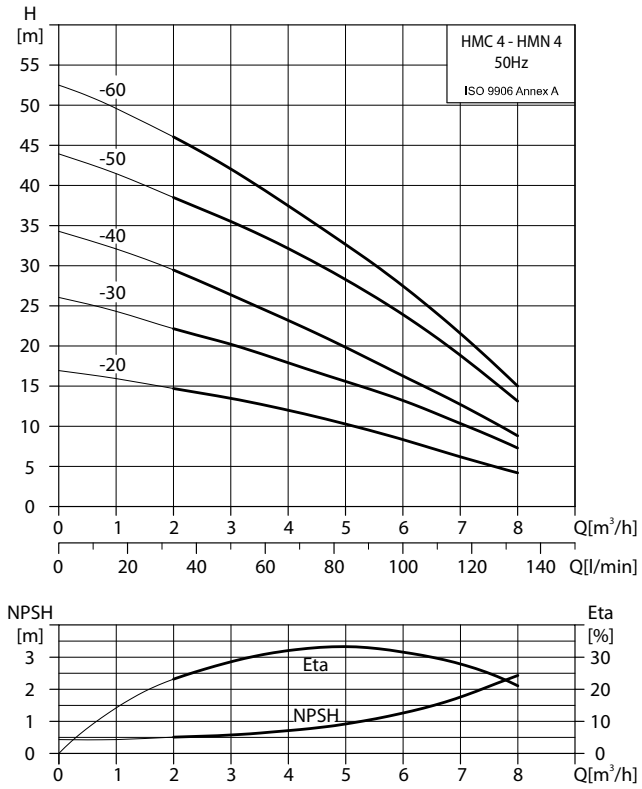
Model	Dimension [mm]									Weight [kg]	
	L1	L2	L3	L4	B1	B2		H			
						1-phase	3-phase	1-phase	3-phase	1-phase	3-phase
HMC 2-20	309	75	63	101	141	127	112	228	206	10.3	10.0
HMC 2-30	327	93	81	119	141	127	112	228	206	10.5	10.3
HMC 2-40	345	111	99	137	141	127	112	228	206	10.8	10.5
HMC 2-50	363	129	117	155	141	127	112	228	206	11.6	11.2
HMC 2-60	381	147	135	173	141	127	112	228	206	11.8	11.5

Model	Dimension [mm]									Weight [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	9.4	9.1
HMN 2-40	345	111	99	137	141	127	112	228	206	9.6	9.4
HMN 2-50	363	129	117	155	141	127	112	228	206	10.4	10.1
HMN 2-60	381	147	135	173	141	127	112	228	206	10.7	10.3

Electrical data, 2850 min^{-1}

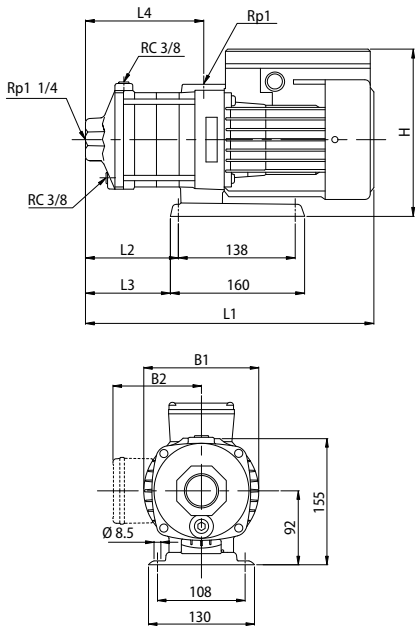
Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HMC 2-20 / HMN 2-20	420	2.1	380	1.8 / 1.1
HMC 2-30 / HMN 2-30	480	2.3	460	1.9 / 1.2
HMC 2-40 / HMN 2-40	570	2.6	560	2.0 / 1.2
HMC 2-50 / HMN 2-50	680	3.2	660	2.7 / 1.6
HMC 2-60 / HMN 2-60	810	3.7	810	2.8 / 1.6

Performance curves



HMC 4 - HMN 4

Installation sketch



Dimensions and weights

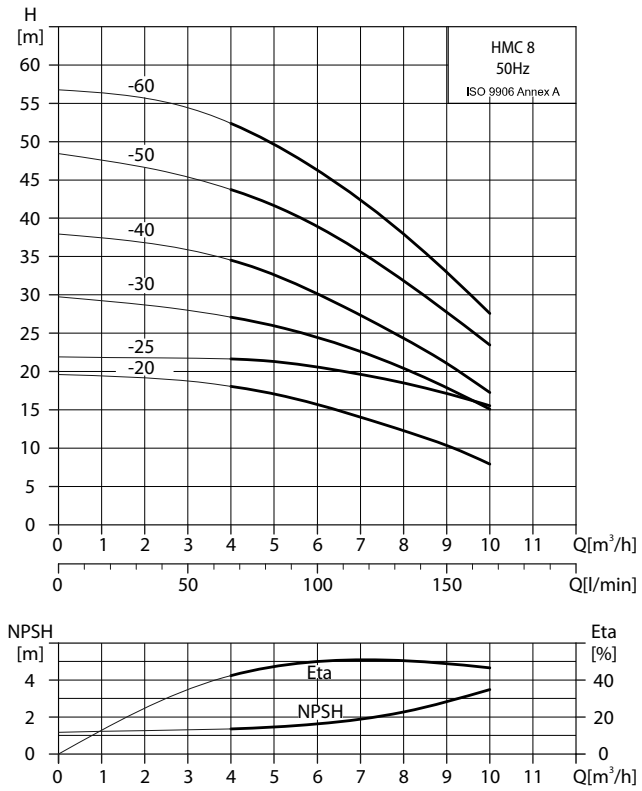
Model	Dimension [mm]									Weight [kg]	
	L1	L2	L3	L4	B1	B2		H			
						1-phase	3-phase	1-phase	3-phase	1-phase	3-phase
HMC 4-20	318	84	72	110	141	127	112	228	206	10.4	10.1
HMC 4-30	344	111	99	137	141	127	112	228	206	10.8	10.5
HMC 4-40	372	138	126	164	141	127	112	228	206	11.6	11.2
HMC 4-50	438	165	153	191	141	127	112	228	206	13.4	13.1
HMC 4-60	465	192	180	218	141	127	112	228	206	14.8	14.5

Model	Dimension [mm]									Weight [kg]	
	L1	L2	L3	L4	B1	B2		H			
						1-phase	3-phase	1-phase	3-phase	1-phase	3-phase
HMN 4-20	318	84	72	110	141	127	112	228	206	9.2	9.0
HMN 4-30	344	111	99	137	141	127	112	228	206	9.6	9.3
HMN 4-40	372	138	126	164	141	127	112	228	206	10.4	10.1
HMN 4-50	438	165	153	191	141	127	112	228	206	11.3	12.0
HMN 4-60	465	192	180	218	141	127	112	228	206	13.6	13.4

Electrical data, 2850 min^{-1}

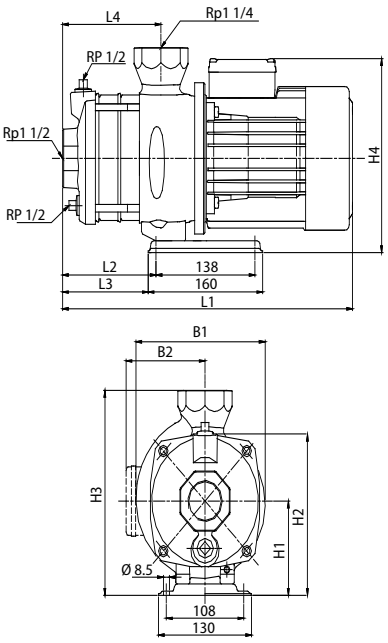
Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HMC 4-20 / HMN 4-20	540	2.4	560	2.0 / 1.2
HMC 4-30 / HMN 4-30	820	3.5	770	2.3 / 1.3
HMC 4-40 / HMN 4-40	1020	4.3	1000	3.1 / 1.8
HMC 4-50 / HMN 4-50	1220	5.4	1200	4.0 / 2.3
HMC 4-60 / HMN 4-60	1450	6.2	1400	4.6 / 2.7

Performance curves



HMC 8

Installation sketch



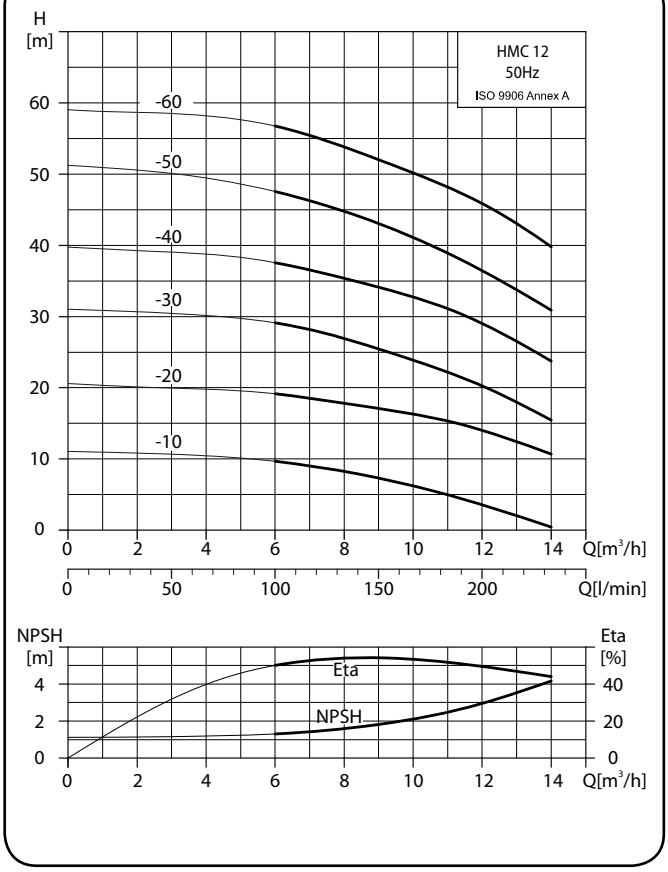
Dimensions and weights

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	320	320	54	42	78	181	181	136	116	112	190	240	248	228	17.2	17.0
HMC 8-25	--	390	84	72	108	--	181	--	116	112	190	240	--	228	--	19.1
HMC 8-30	390	390	84	72	108	181	181	136	116	112	190	240	248	228	19.5	19.2
HMC 8-40	390	390	84	72	108	181	181	136	116	112	190	240	248	228	20.7	20.5
HMC 8-50	478	420	132	120	138	185	181	156	116	112	190	240	268	228	27.9	21.4
HMC 8-60	478	478	132	120	138	185	185	156	141	112	190	240	268	253	28.1	27.0

Electrical data, 2850 min^{-1}

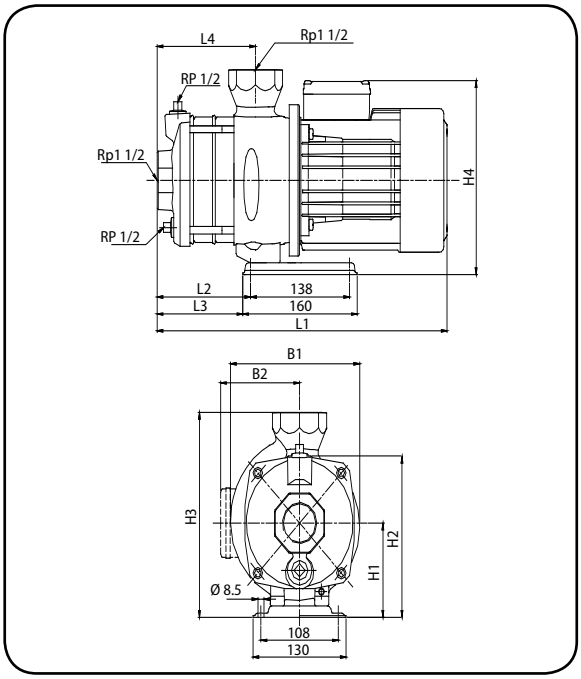
Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HMC 8-20	740	3.4	720	2.6 / 1.5
HMC 8-25	--	--	960	3.5 / 2.0
HMC 8-30	1130	5.2	1100	3.8 / 2.2
HMC 8-40	1400	6.3	1350	5.0 / 2.9
HMC 8-50	1890	8.6	1730	6.0 / 3.5
HMC 8-60	2150	9.8	2040	6.4 / 3.7

Performance curves



HMC 12

Installation sketch

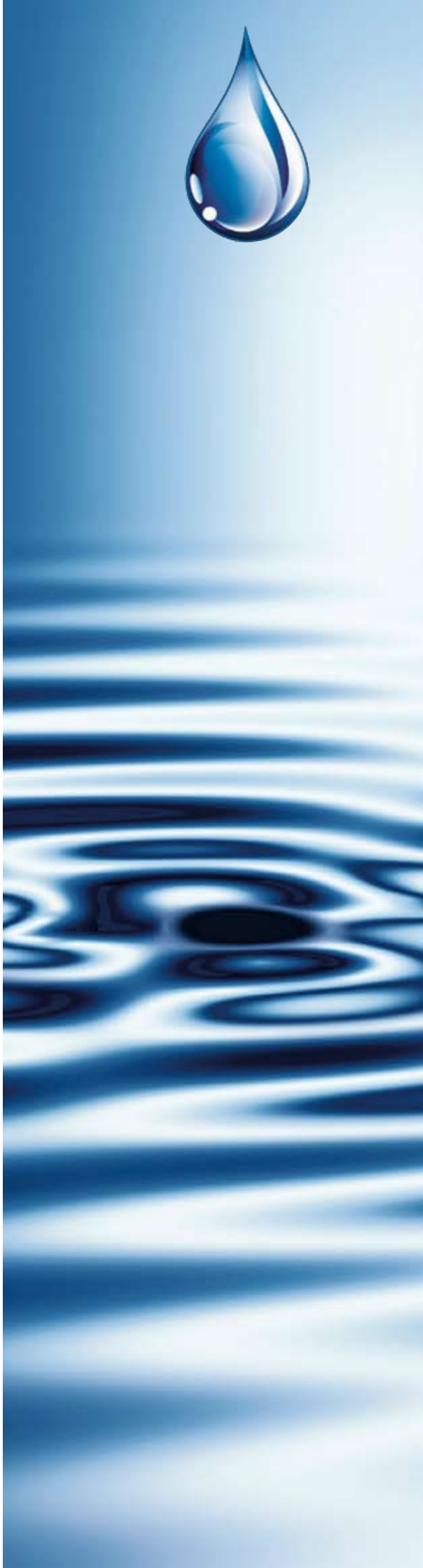


Dimensions and weights

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	--	320	54	42	78	--	181	--	116	112	190	240	--	228	--	17.85
HMC 12-20	360	360	54	42	78	181	181	136	116	112	190	240	248	228	18.35	18.15
HMC 12-30	390	390	84	72	108	181	181	136	116	112	190	240	248	228	20.62	20.40
HMC 12-40	448	448	102	90	108	185	185	156	141	112	190	240	268	253	27.05	26.05
HMC 12-50	478	450	132	120	138	185	185	156	141	112	190	240	268	253	29.22	29.30
HMC 12-60	--	503	132	120	138	--	196	--	147	125	203	253	--	272	--	34.58

Electrical data, 2850 min^{-1}

Model	1 x 220-240 V		3 x 220-240/380-415 V	
	P_1 [W]	$I_{1/1}$ [A]	P_1 [W]	$I_{1/1}$ [A]
HMC 12-10	--	--	560	2.4 / 1.4
HMC 12-20	1170	5.4	1140	3.8 / 2.2
HMC 12-30	1710	7.6	1650	5.9 / 3.4
HMC 12-40	2360	10.4	2300	7.1 / 4.1
HMC 12-50	2850	13	2820	9.1 / 5.3
HMC 12-60	--	--	3500	11.1 / 6.4



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