

CH, CHN

Horizontal multistage end-suction pumps
50 Hz



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Applications

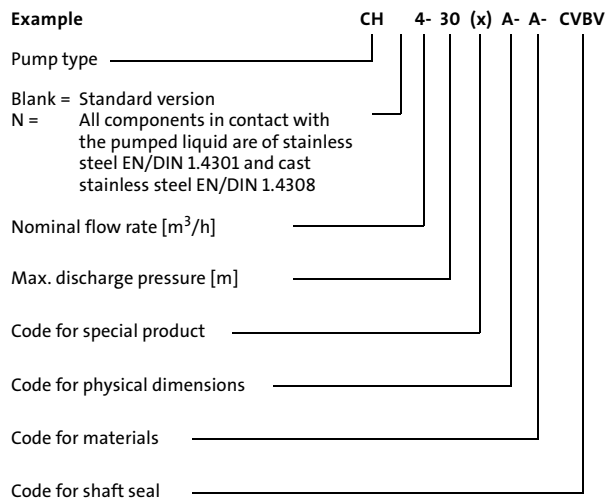
The CH, CHN range of compact, horizontal, centrifugal pumps is designed for small domestic and industrial water supply systems.

Applications include:

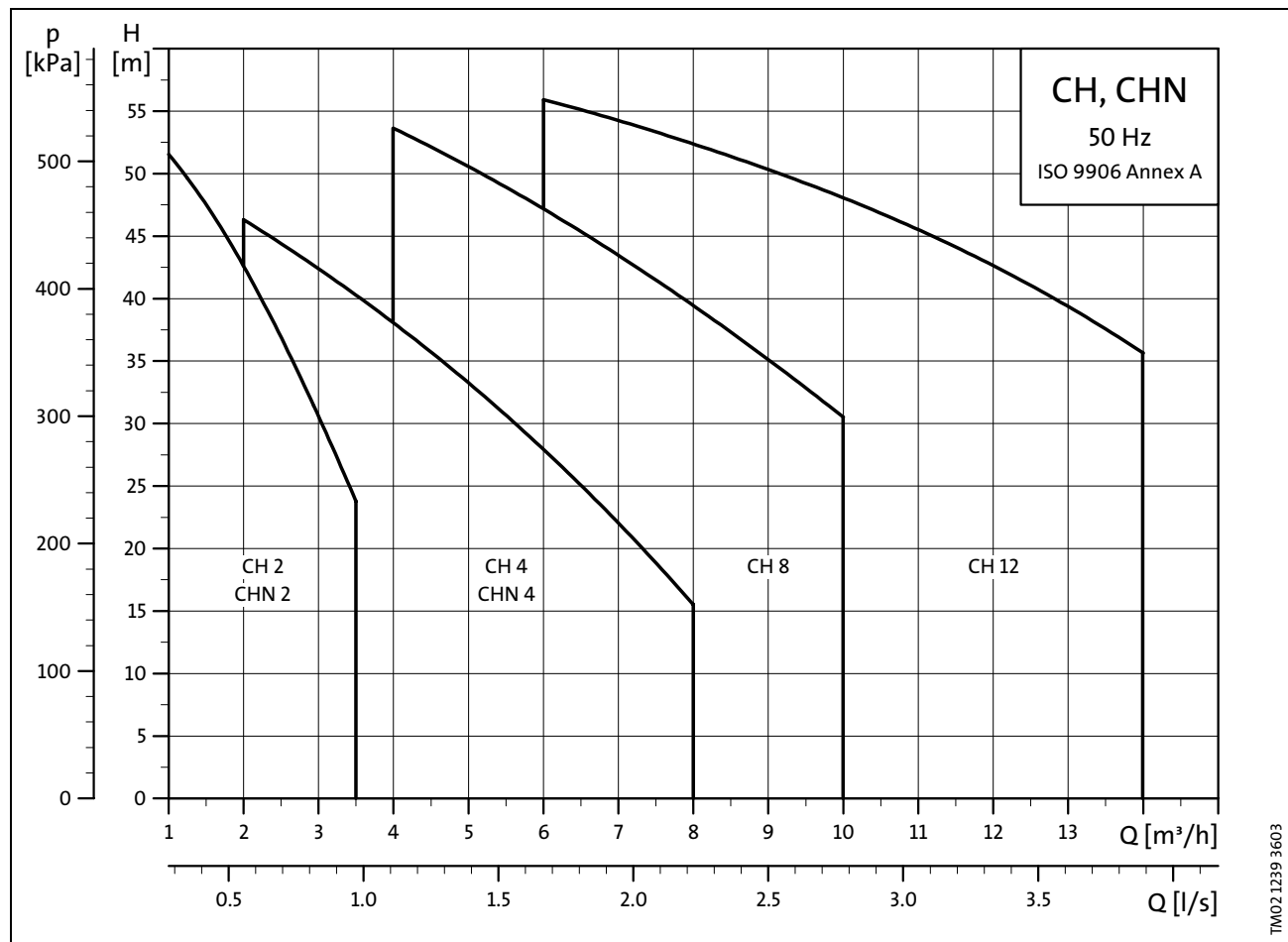
- Liquid transfer: Transfer and circulation of liquids within light industry and farming.
- Pressure boosting: Built into single-pump and multi-pump booster systems.
- Domestic water supply.
- Cooling systems.
- Air-conditioning systems.

In addition to this, the CH, CHN range is suitable for incorporation in specialized OEM equipment. (OEM = Original Equipment Manufacturer).

Type key



Performance range



Pumped liquids

CH

Thin, clean, non-aggressive and non-explosive liquids without solid particles or fibres.

CHN

Thin, clean, slightly aggressive and non-explosive liquids without solid particles or fibres.

Operating conditions

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

Max. ambient temperature: +55°C.

The maximum operating pressure depends on the temperature of the pumped liquid, see table:

Max. operating pressure	1 MPa (10 bar)	0.6 MPa (6 bar)
CH 2, CHN 2 CH 4, CHN 4	0°C to +40°C	+41°C to +90°C
CH 8 CH 12	0°C to +55°C	+56°C to +90°C

Min. inlet pressure: According to the NPSH curve plus a safety margin of 1.0 m.

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

Motor

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

Rated speed: 2900 min⁻¹

Enclosure class: IP 54

Insulation class: F

Standard voltages: 1 x 220-240 V,
3 x 220-240/380-415 V

Single-phase motors have built-in thermal overload protection. Three-phase motors must be connected to a motor starter according to local regulations.

Pump

The CH, CHN pumps are non-self-priming, horizontal, centrifugal pumps with mechanical shaft seal and extended pump/motor shaft. The pumps have axial suction port and radial discharge port and are mounted on a base plate. All movable parts in contact with the pumped liquid are made of stainless steel.

FKM O-rings are standard.

For pipe connections, see the table below.

Connections	CH 2, CHN 2	CH 4, CHN 4	CH 8	CH 12
Axial suction port	Rp 1	Rp 1 Rp 1½	Rp 1½	Rp 1½
Radial discharge port	Rp 1	Rp 1	Rp 1¼	Rp 1½
Drain port, priming port	Rp 3/8	Rp 3/8	Rp ½	Rp ½



Curve conditions

The guidelines below apply to the curves shown on page 6 to page 9:

- Tolerances to ISO 9906, Annex A
- Measurements have been made with airless water at a temperature of 20°C
- The curves apply to a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)
- The curves apply to three-phase pumps only.

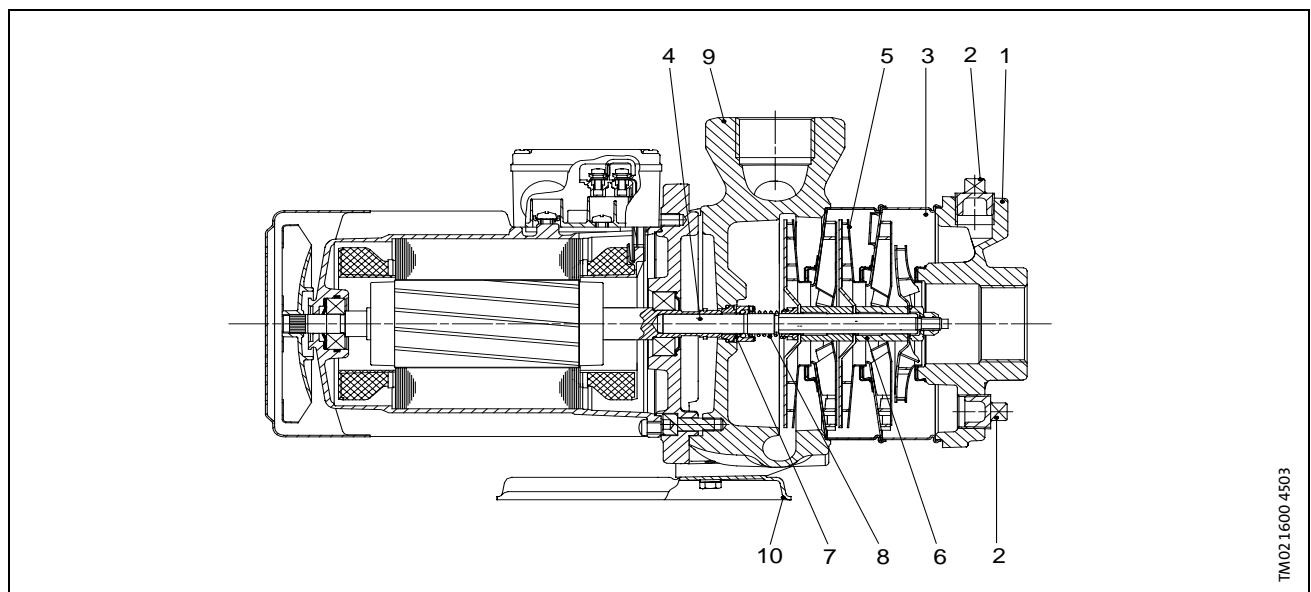
Materials, CH

Pos.	Pump component	Material	DIN/EN
1	Suction chamber	Cast iron	EN-JL1030
2	Drain plug, priming plug	Steel	1.0718
3	Chamber	Stainless steel	1.4301
4	Pump shaft	Stainless steel	1.4057/1.4401
5	Impeller	Stainless steel	1.4301
6	Spacing pipe	Stainless steel	1.4301/1.4305
7	Shaft seal faces	Carbon/ceramics	
8	Spring	Stainless steel	1.4310
9	Discharge chamber	Cast iron	EN-JL1030
10	Base plate	Painted steel	10330.3
	O-rings	FKM	

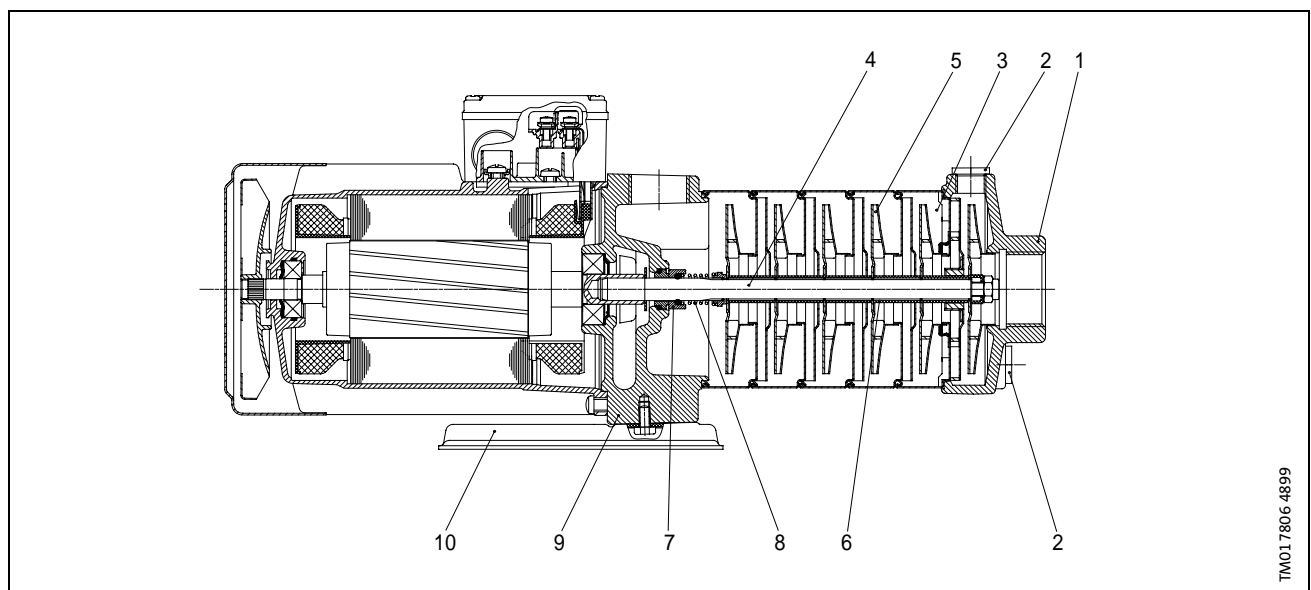
Materials, CHN

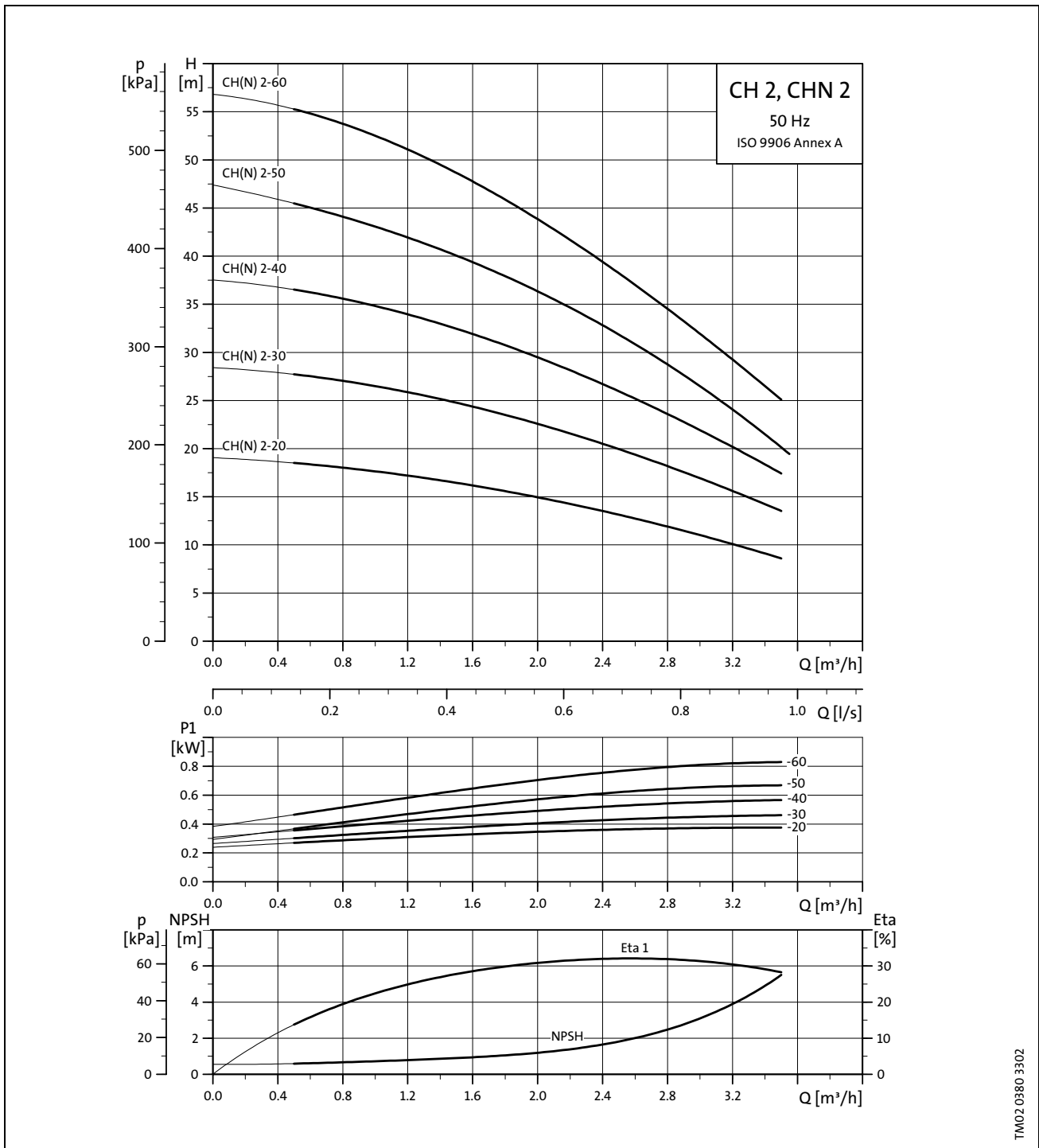
Pos.	Pump component	Material	DIN /EN
1	Suction chamber	Cast stainless steel	1.4308
2	Drain plug, priming plug	Stainless steel	1.4301
3	Chamber	Stainless steel	1.4301
4	Pump shaft	Stainless steel	1.4057
5	Impeller	Stainless steel	1.4301
6	Spacing pipe	Stainless steel	1.4301/1.4305
7	Shaft seal faces	Carbon/ceramics	
8	Spring	Stainless steel	1.4310
9	Discharge chamber	Cast stainless steel	1.4308
10	Base plate	Stainless steel	1.4301
	O-rings	FKM	

Sectional drawing CH 12-50



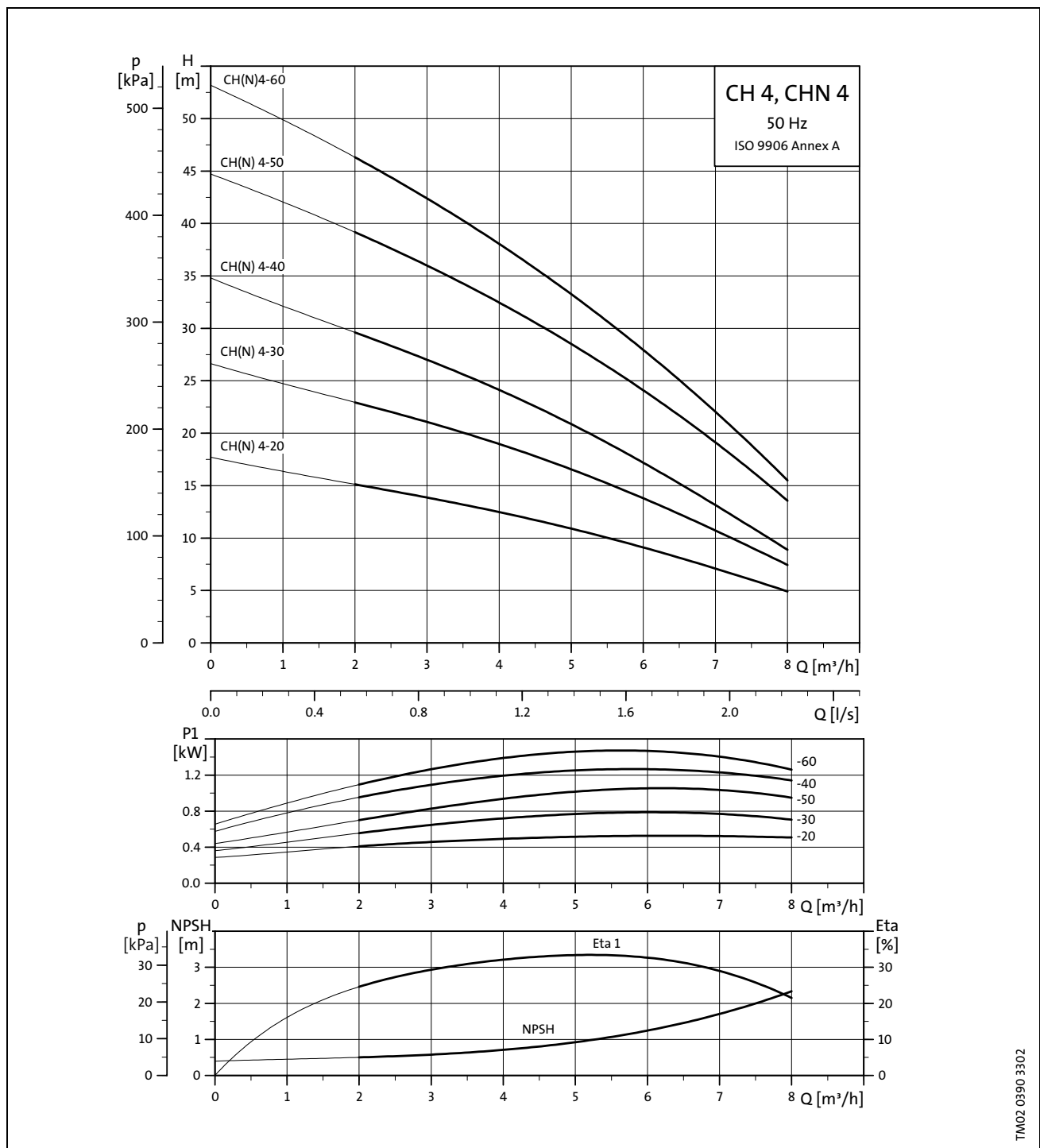
Sectional drawing CHN 4-60





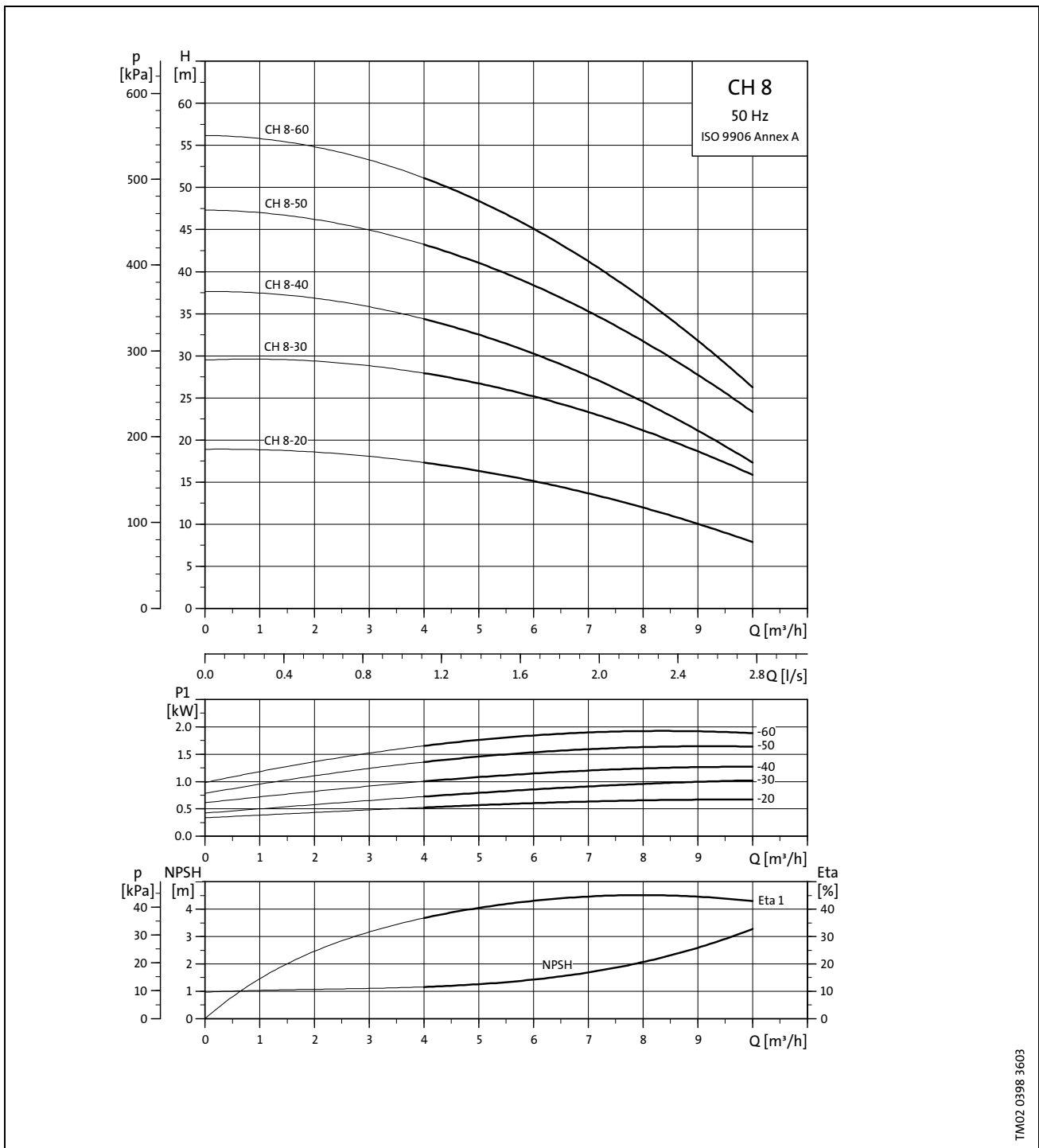
Electrical data, 2900 min⁻¹

Pump type	P ₁ [W]		I _{1/1} [A]	
	1 x 220-240 V	3 x 220-240/380-415 V	1 x 220-240 V	3 x 220-240/380-415 V
CH 2-20, CHN 2-20	420	350	2.2	1.6 / 0.9
CH 2-30, CHN 2-30	480	420	2.3	1.7 / 1.0
CH 2-40, CHN 2-40	570	520	2.6	1.9 / 1.1
CH 2-50, CHN 2-50	680	675	2.9	2.1 / 1.2
CH 2-60, CHN 2-60	800	780	3.7	2.3 / 1.4



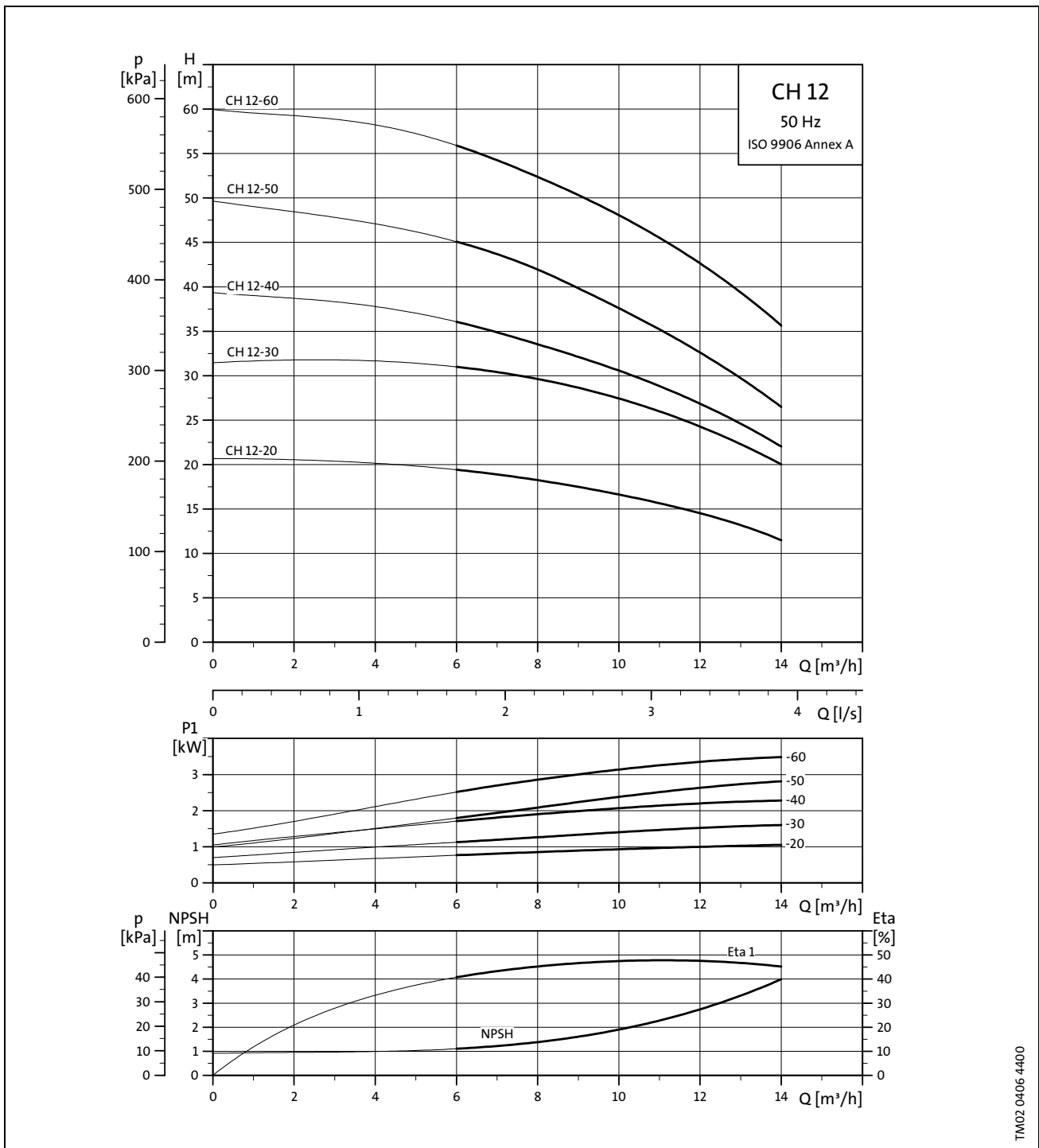
Electrical data, 2900 min⁻¹

Pump type	P ₁ [W]		I _{1/1} [A]	
	1 x 220-240 V	3 x 220-240/380-415 V	1 x 220-240 V	3 x 220-240/380-415 V
CH 4-20, CHN 4-20	540	520	2.4	1.9 / 1.1
CH 4-30, CHN 4-30	840	635	4.1	2.1 / 1.2
CH 4-40, CHN 4-40	1160	910	5.5	2.8 / 1.6
CH 4-50, CHN 4-50	1300	1300	6.0	4.0 / 2.3
CH 4-60, CHN 4-60	1460	1490	7.0	4.4 / 2.5



Electrical data, 2900 min⁻¹

Pump type	P ₁ [W]		I _{1/I} [A]	
	1 x 220-240 V	3 x 220-240/380-415 V	1 x 220-240 V	3 x 220-240/380-415 V
CH 8-20	730	650	3.2	2.1 / 1.2
CH 8-30	970	1030	4.3	3.4 / 2.0
CH 8-40	1330	1290	5.6	4.7 / 2.7
CH 8-50	1740	1650	7.8	5.2 / 3.0
CH 8-60	1930	1930	8.5	5.9 / 3.4

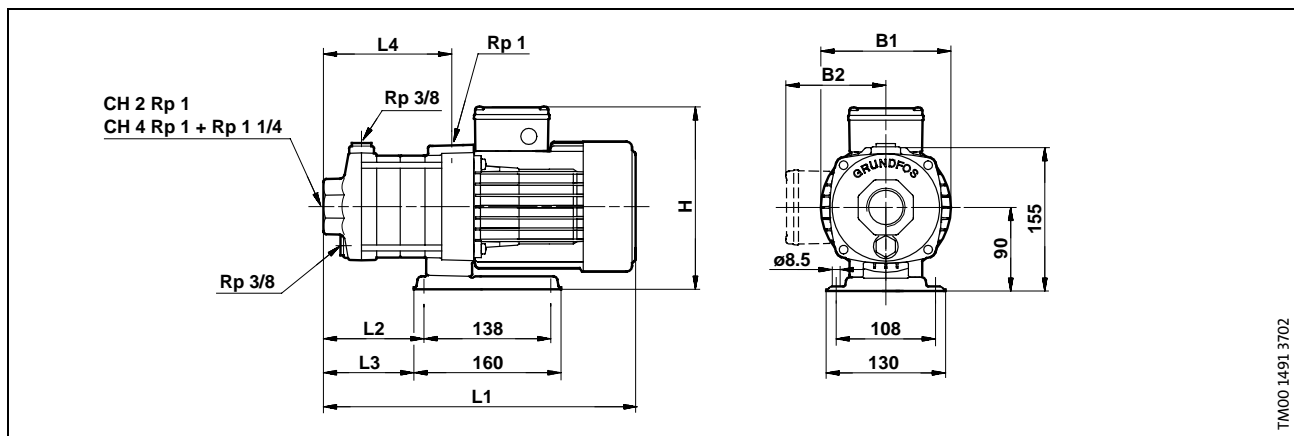


Electrical data, 2900 min⁻¹

Pump type	P ₁ [W]		I _{1/I} [A]	
	1 x 220-240 V	3 x 220-240/380-415 V	1 x 220-240 V	3 x 220-240/380-415 V
CH 12-20	1060	1030	4.8	3.2 / 1.8
CH 12-30	1520	1530	6.8	4.3 / 2.5
CH 12-40	2180	2200	9.6	6.6 / 3.8
CH 12-50	2560	2690	11.3	8.1 / 4.8
CH 12-60	-	3180	-	9.4 / 5.5

Dimensions and weights

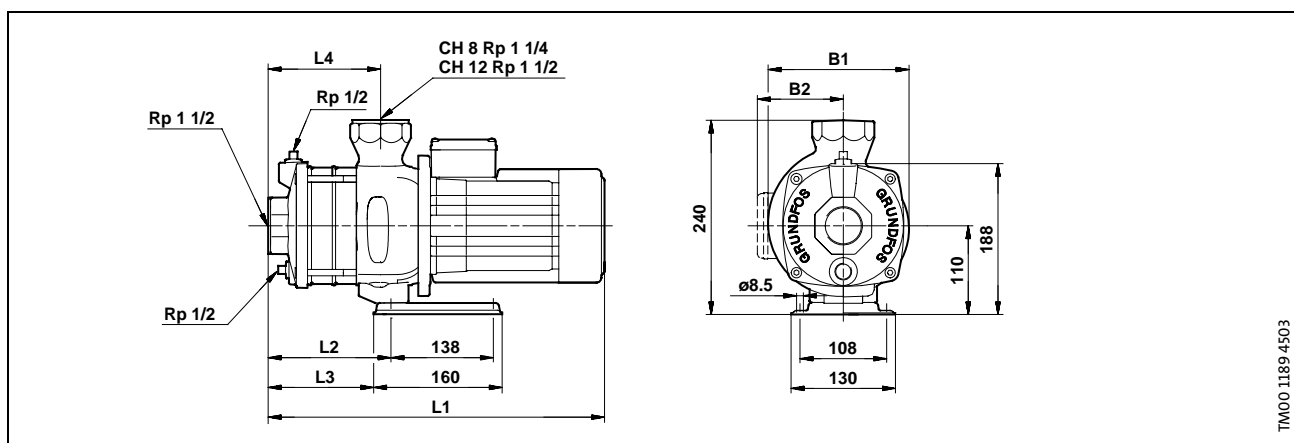
CH 2, CHN 2 and CH 4, CHN 4



TM00 1491 3702

Pump type	Motor type		L1 [mm]		L2 [mm]	L3 [mm]	L4 [mm]	B1 [mm]	B2 [mm]		H [mm]		Net weight [kg]	
	1-phase	3-phase	1-phase	3-phase					1-phase	3-phase	1-phase	3-phase	1-phase	3-phase
CH, CHN 2-20	MG 71	MG 71	304	304	74	63	99	146	115	110	205	200	9.6	11.1
CH, CHN 2-30			324	322	92	81	117	146	115	110	205	200	9.6	10.7
CH, CHN 2-40			340	340	110	99	135	146	115	110	205	200	10.9	11.0
CH, CHN 2-50			358	358	128	117	154	146	115	110	205	200	11.3	11.5
CH, CHN 2-60			376	376	146	135	172	146	115	110	205	200	11.6	11.8
CH, CHN 4-20			314	314	83	72	108	146	115	115	205	200	9.5	9.6
CH, CHN 4-30			342	342	110	99	135	146	110	110	205	200	10.9	11.0
CH, CHN 4-40			370	370	137	126	163	146	110	110	205	200	12.3	12.5
CH, CHN 4-50	MG 80	MG 80	436	438	164	153	190	142	135	110	225	200	16.0	14.2
CH, CHN 4-60			466	466	191	180	217	142	135	110	225	200	15.2	14.9

CH 8 and CH 12



TM00 1189 4503

Pump type	Motor type		L1 [mm]		L2 [mm]	L3 [mm]	L4 [mm]	B1 [mm]		B2 [mm]		Net weight [kg]	
	1-phase	3-phase	1-phase	3-phase				1-phase	3-phase	1-phase	3-phase	1-phase	3-phase
CH 8-20	MG 71	MG 71	311	311	69	58	77	177	177	109	109	15.0	15.0
CH 8-30	MG 80	MG 80	381	381	99	88	107	177	177	109	109	17.0	17.0
CH 8-40			381	381	99	88	107	177	177	109	109	19.0	19.0
CH 8-50	MG 90	MG 90	459	411	129	118	137	182	177	-	109	28.8	20.0
CH 8-60			459	459	129	118	137	182	182	-	-	28.8	25.0
CH 12-20	MG 80	MG 80	351	351	69	58	77	177	177	109	109	17.0	17.0
CH 12-30			381	381	99	88	107	177	177	109	109	19.0	19.0
CH 12-40	MG 90	MG 90	429	429	99	88	107	182	182	-	-	26.0	24.0
CH 12-50			459	459	129	118	137	182	182	-	-	27.0	27.0
CH 12-60			-	-	-	459	129	118	137	-	182	-	-

V7 17 35 60 11 03	GB
Repl. V7 17 35 60 05 01	

Subject to alterations.