



CM

50Hz

Light horizontal multistage
centrifugal pump



Stock code:300145



E200701
subject to amendments



Pumping Water Pumping Honor



Company profile

Nanfang Pump Industry Co., Ltd (CNP), as a subsidiary of Nanfang Zhongjin Environment Co., Ltd, was founded in 1991, and listed on Shenzhen Stock Exchange on December 9, 2010 with stock code 300145.

In 2019, CNP's annual output exceeded 900,000 units/set with nearly 3 billion sales revenue, continuing to maintain high growth. As a national enterprise technology center, CNP has flagship ultra-high efficient product -new generation CDM (F) light vertical multistage centrifugal pump, MEI $\geq$ 0.7. Same series high temperature pump products are developed in 2019 to satisfy high temperature applications. All light stainless steel pump product series grow stably. Advanced frequency conversion water supply equipment has been innovated to the 6th generation. Fire pump and diesel engine have obtained UL certification. TD in-line pump, NIS/NISO end suction pump, NSC split casing pump, WQ sewage pump, PQ stainless steel fountain submersible pump, BP silent tube pump, pool pump, non-blocking self-priming sewage pump, metering pump, oil pump and other pump products, can meet various application needs of different fields.

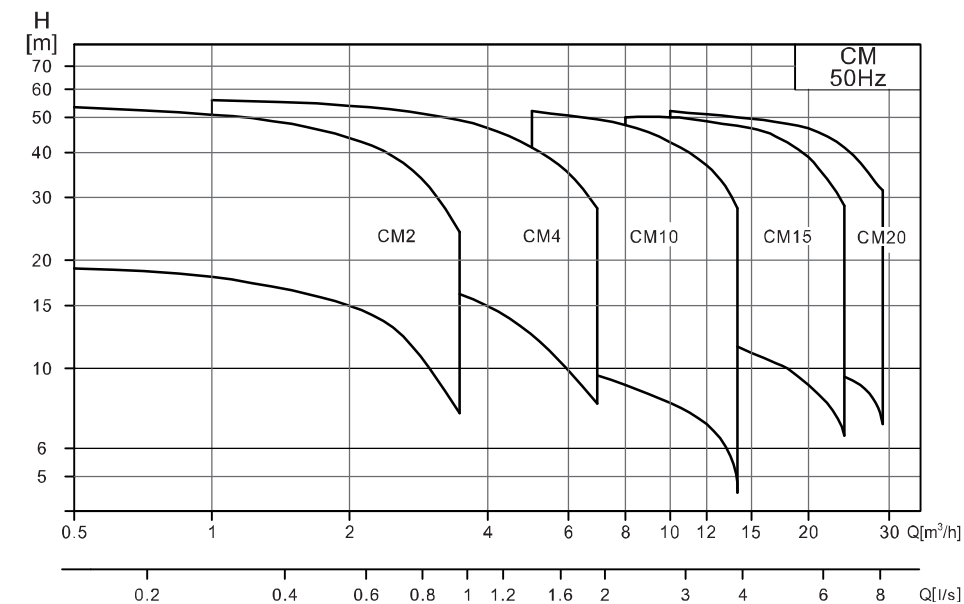
CNP has a complete sales network both in domestic and overseas market, exporting to over 60 countries and regions, maintaining long <g relationship with our clients. CNP pumps have been widely applied in various fields like water treatment, water supply and drainage, HVAC, industrial application, seawater desalination, energy and power etc.

CNP, a green water expert beside you.

Contents

Performance range	1
Performance scope	1
Product introduction	2
Motor	2
Working condition	2
Model definition	2
Application	2
Curve conditions	2
CM2,4 Material list	3
CM10 Material list	4
CM15,20 Material list	5
CM2 Performance curves & Performance table	6
CM4 Performance curves & Performance table	7
CM10 Performance curves & Performance table	8
CM15 Performance curves & Performance table	9
CM20 Performance curves & Performance table	10
CM2,4 Installation sketch	11
CM10,15,20 Installation sketch	12

Performance range



Performance scope

Description	Model	CM				
Rated flow [m³/h]		2	4	10	15	20
Rated flow [l/s]		0.56	1.1	2.78	4.17	5.56
Flow range [m³/h]		0.5~3.5	1~7	5~14	8~24	10~29
Flow range [l/s]		0.14~0.97	0.28~1.9	1.39~3.89	2.22~6.67	2.78~8.06
Max. pressure [bar]		5.3	5.6	5.6	5.4	5.6
Motor power [kW]		0.37~0.75	0.37~1.1	0.75~2.2	1.1~4	1.1~4
Temp. [°C]		-15~+105				
Max. efficiency [%]		46	54	71	73	74
Pipeline		G1	Inlet G1½ / Outlet G1	G1½	G2	G2

Product introduction

CM series are non-self-priming light horizontal multistage centrifugal pump with long shaft motor, compact structure, smaller size, axial inlet and radial outlet. Most parts adopt stamping technology. It's energy saving, environmental friendly, with beautiful appearance, light weight, low noise, convenient installation and maintenance, and high reliability.

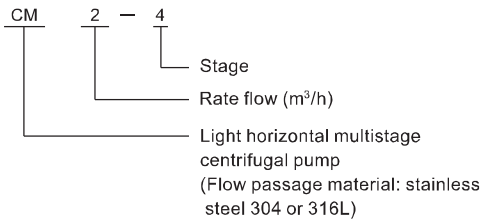
Motor

TEFC , 2-pole motor
Protection class: IP55
Insulation class: F
Standard power: 50Hz: 1×220V
3×220/380V

Working condition

Thin, clean, non-flammable, non-explosive, solid free, fiber free, physically and chemically water-like liquid.
Liquid temperature: Normal type: -15°C to 70°C
Hot water type: -15°C to 105°C
Ambient temperature: up to 40°C
Max. Working pressure: 10 bar
Max. inlet pressure is limited by Max. operating pressure

Model definition



Application

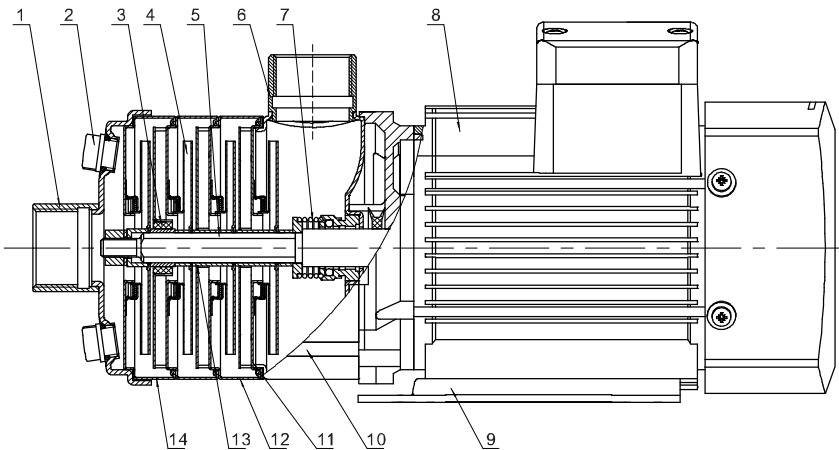
HVAC system
Cooling system
Industrial cleaning
Water purification
Aquaculture
Fertilization / metering system
Environmental application
Many other specific uses

Curve conditions

Following conditions are suitable for performance curve below.

- All curves are based on measured values under motor speed 2900rpm.
- Curve tolerance in conformity with ISO9906:2012, Grade 3B.
- Measurement is done with 20°C air-free water, kinematic viscosity of 1mm²/sec.
- The operation of pump shall refer to the performance region indicated by the thickened curve to prevent overheating due to too small flow rate or overload of motor due to too large flow rate.

CM 2 , 4 Sectional drawing

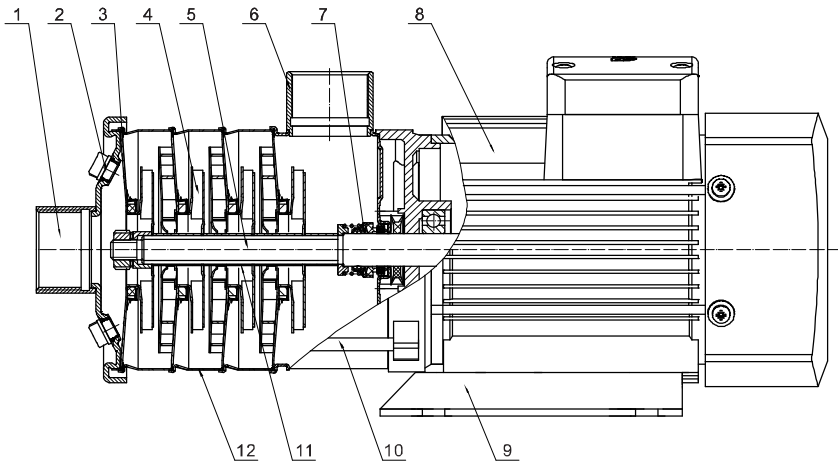


Material list

No.	Name	Material	AISI/ASTM
1	Inlet chamber	Stainless steel	AISI304
2	Nut	Stainless steel	AISI304
3	Bearing	Tungsten carbide	
4	Impeller	Stainless steel	AISI304
5	Shaft	Stainless steel	AISI304
6	Outlet chamber	Stainless steel	AISI304
7	Mechanical seal		
8	Motor		
9	Base plate	Steel plate	AISI1015
10	Stay bolt		
11	Last stage diffuser	Stainless steel	AISI304
12	Diffuser	Stainless steel	AISI304
13	Impeller sleeve	Stainless steel	AISI304
14	Supporting diffuser	Stainless steel	AISI304

Note: Other materials can be customized according to clients' needs.

CM 10 Sectional drawing

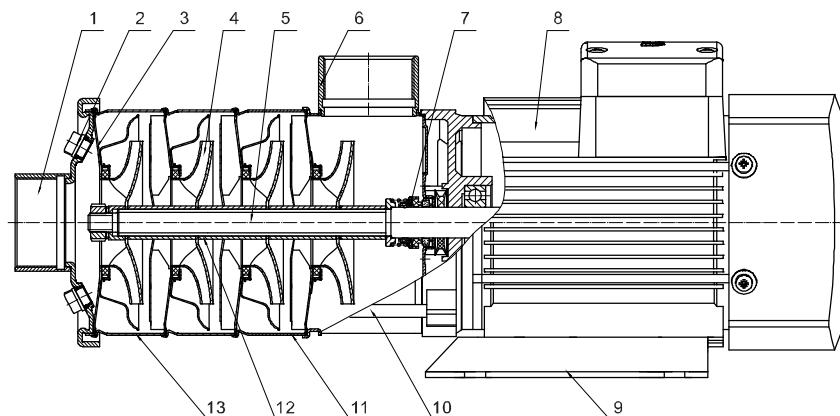


Material list

No.	Name	Material	AISI/ASTM
1	Inlet chamber	Stainless steel	AISI304
2	Nut	Stainless steel	AISI304
3	Inducer	Stainless steel	AISI304
4	Impeller	Stainless steel	AISI304
5	Shaft	Stainless steel	AISI304
6	Outlet chamber	Stainless steel	AISI304
7	Mechanical seal		
8	Motor		
9	Base plate	Steel plate	AISI1015
10	Stay bolt		
11	Impeller sleeve	Stainless steel	AISI304
12	Diffuser	Stainless steel	AISI304

Note: Other materials can be customized according to clients' needs.

CM 15 , 20 Sectional drawing

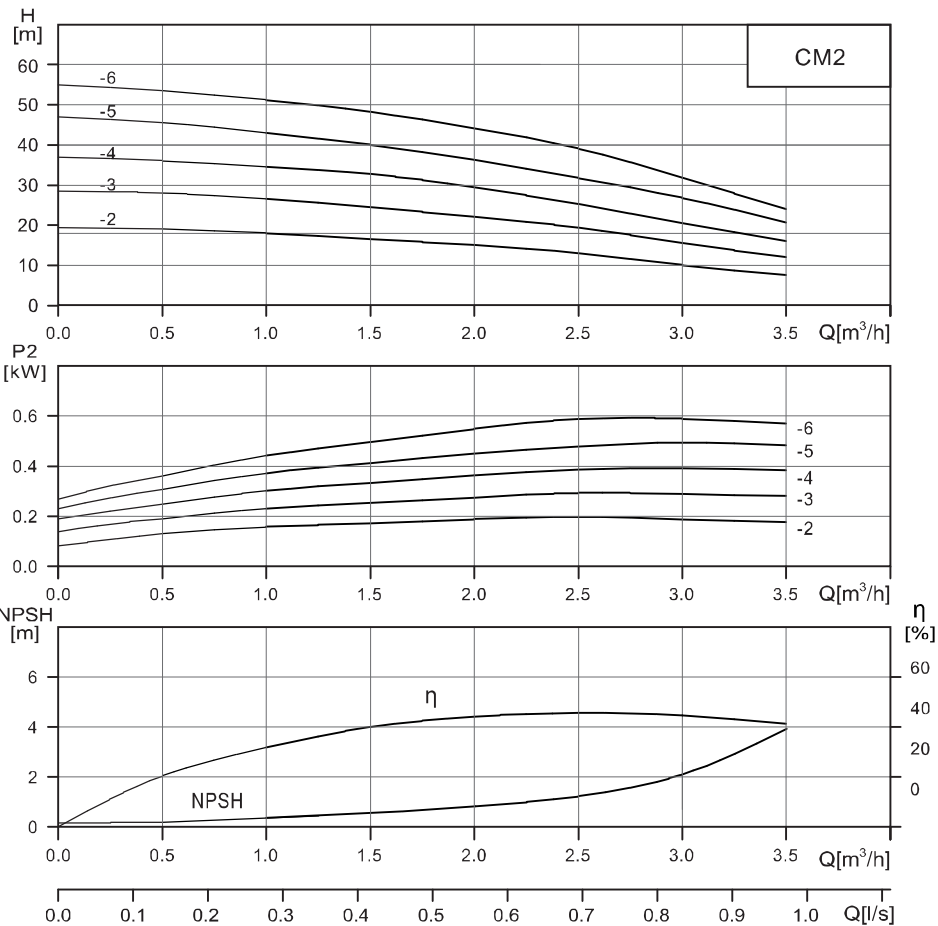


Material list

No.	Name	Material	AISI/ASTM
1	Inlet chamber	Stainless steel	AISI304
2	Nut	Stainless steel	AISI304
3	Inducer	Stainless steel	AISI304
4	Impeller	Stainless steel	AISI304
5	Shaft	Stainless steel	AISI304
6	Outlet chamber	Stainless steel	AISI304
7	Mechanical seal		
8	Motor		
9	Base plate	Steel plate	AISI1015
10	Stay bolt		
11	Last stage diffuser	Stainless steel	AISI304
12	Impeller sleeve	Stainless steel	AISI304
13	Diffuser	Stainless steel	AISI304

Note: Other materials can be customized according to clients' needs.

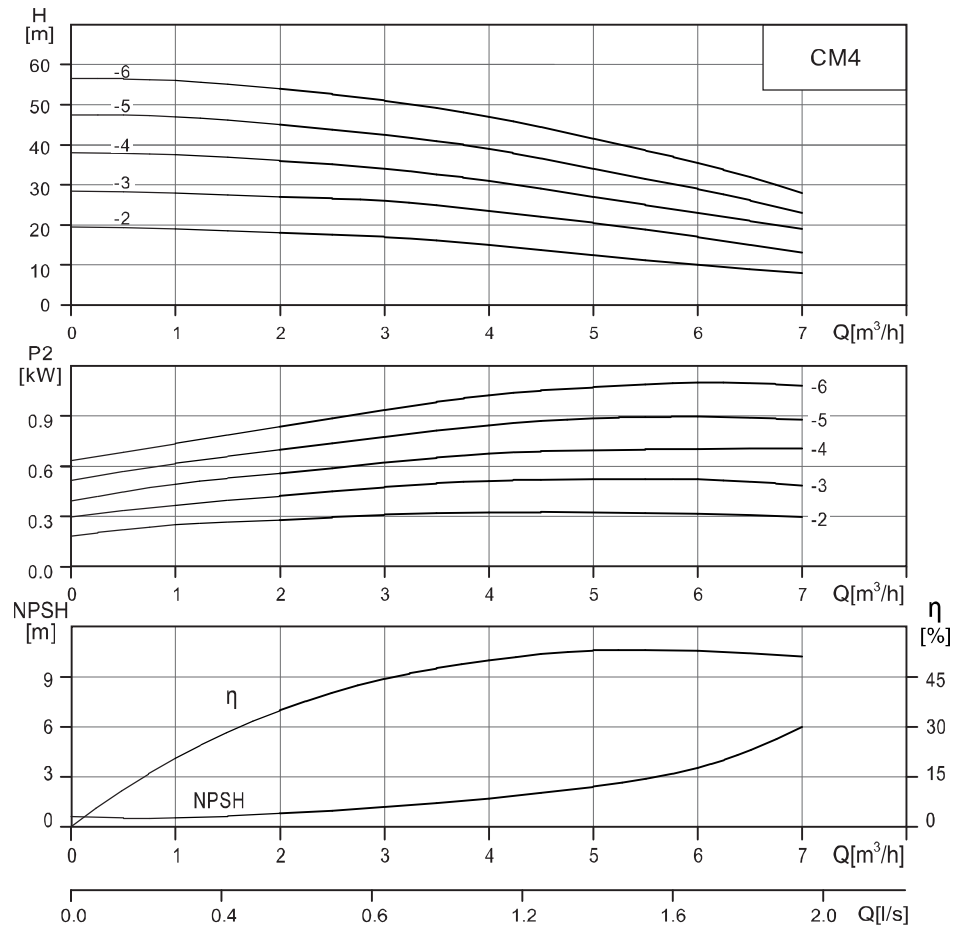
CM 2 Performance curves



CM2 Performance table

Model	Motor(kW)	Q(m³/h)	0.5	1.0	1.5	2.0	2.5	3.0	3.5
CM2-2	0.37	H(m)	19	18	16.5	15	13	10	7.5
CM2-3	0.37		28	26.5	24.5	22	19	15.5	12
CM2-4	0.55		36	34.5	33	29	25	20.5	16
CM2-5	0.55		45.5	43	40	36	31.5	26.5	20.5
CM2-6	0.75		53.5	51	48	44	39	32	24

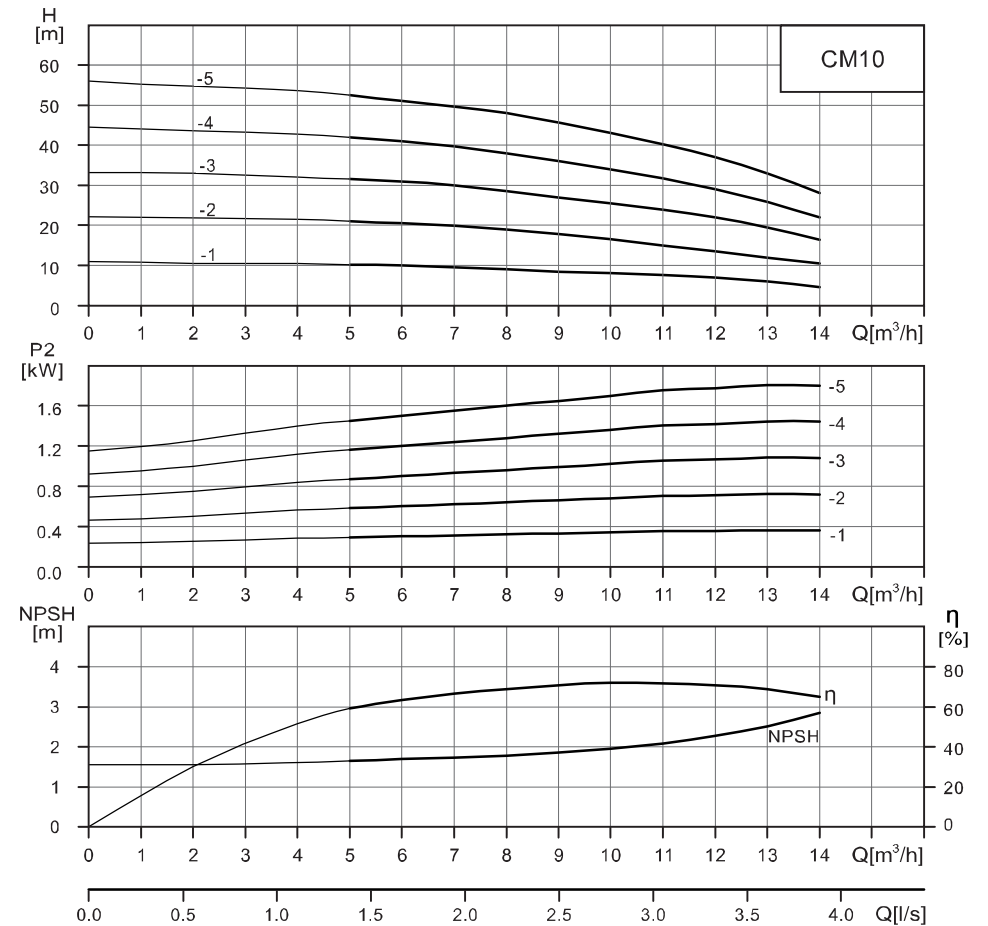
CM 4 Performance curves



CM4 Performance table

Model	Motor(kW)	Q(m³/h)	1	2	3	4	5	6	7
CM4-2	0.37	H(m)	19	18	17	15	12.5	10	8
CM4-3	0.55		28	27	26	23.5	20.5	17	13
CM4-4	0.75		37.5	36	34	31	27	23	19
CM4-5	1.1		47	45	42.5	39	34	29	23
CM4-6	1.1		56	54	51	47	41.5	35.5	28

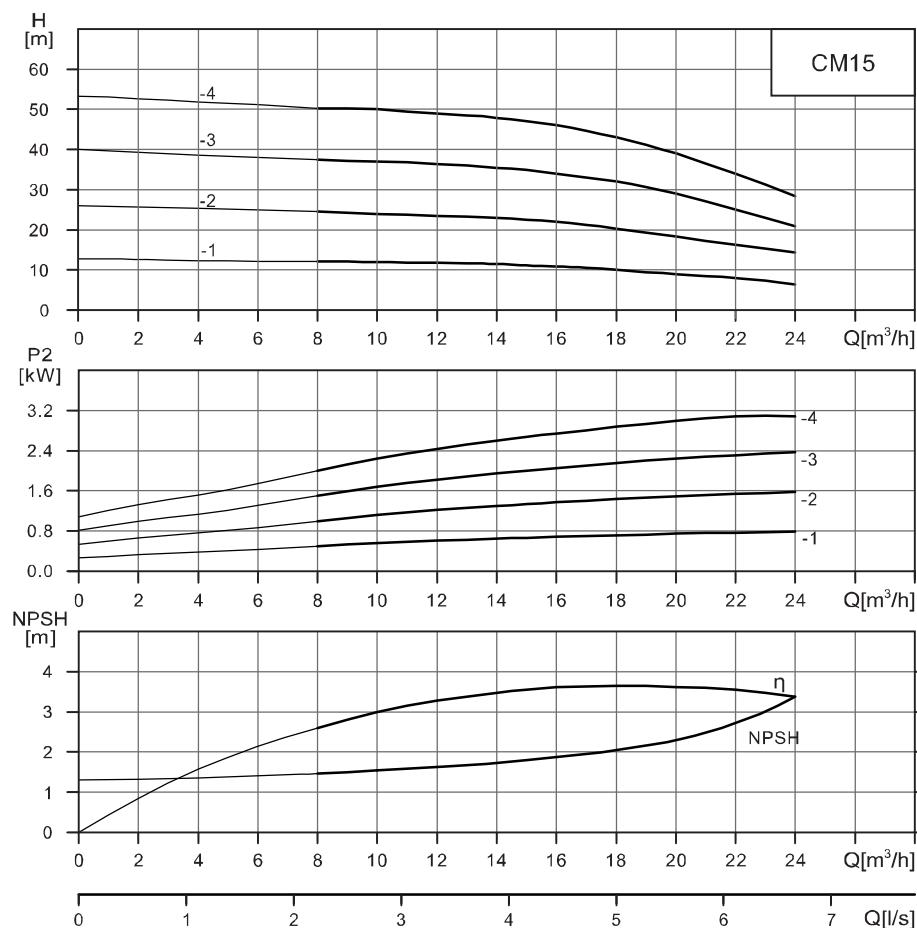
CM 10 Performance curves



CM10 Performance table

Model	Motor(kW)	Q(m³/h)	0	5	6	8	10	12	14
CM10-1	0.75	H(m)	11	10.2	10	9	8	7	4.5
CM10-2	0.75		22.2	21	20.5	19	16.5	13.5	9.5
CM10-3	1.1		33.3	31.5	31	28.5	25.5	22	16.5
CM10-4	1.5		44.5	42	41	38	34	29	22
CM10-5	2.2		56	52.5	51	48	43	37	28

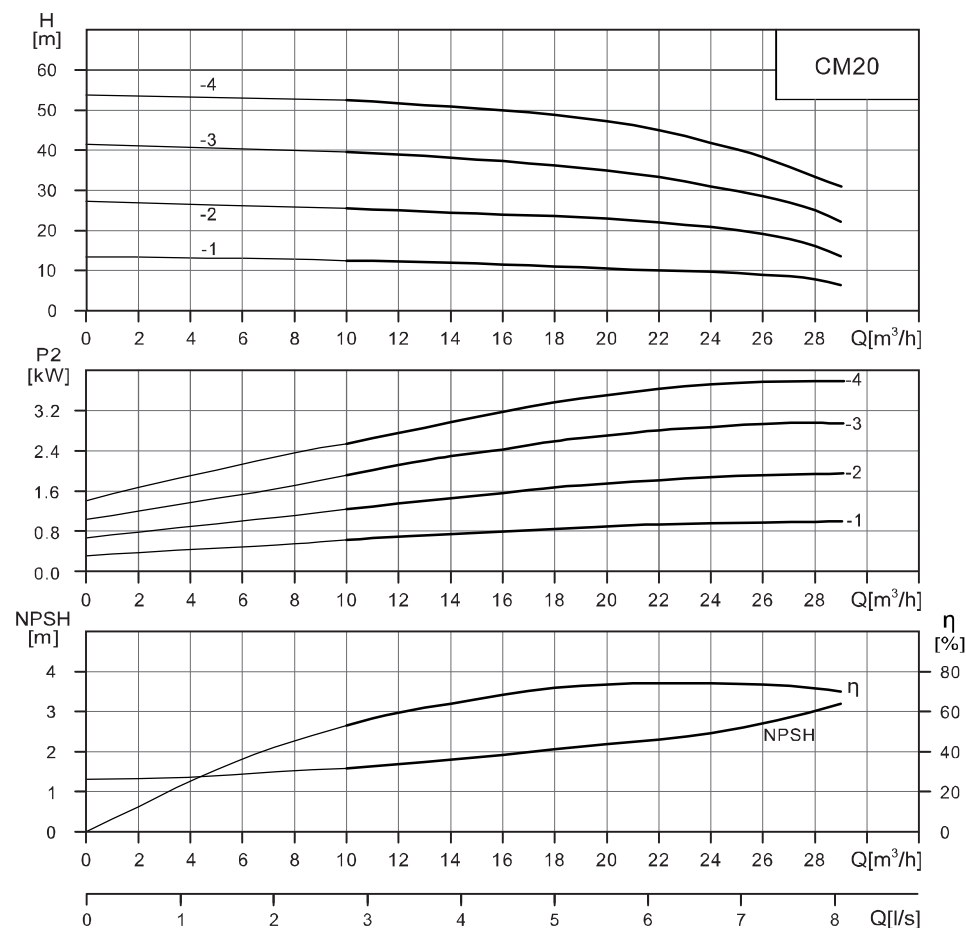
CM 15 Performance curves



CM15 Performance table

Model	Motor(kW)	Q(m³/h)	0	8	10	12	14	15	16	18	20	22	24
CM15-1	1.1	H(m)	12.6	12.2	12	11.8	11.5	11	10.5	10	9	8	6.5
CM15-2	2.2		26	24.5	24	23.5	23	22.5	21.5	20	18	16	13.5
CM15-3	3		40	37.5	37	36.5	35.5	34.5	34	32	29	25	21
CM15-4	4		54	50.5	50	49	47.5	47	46	43	39	34	28.5

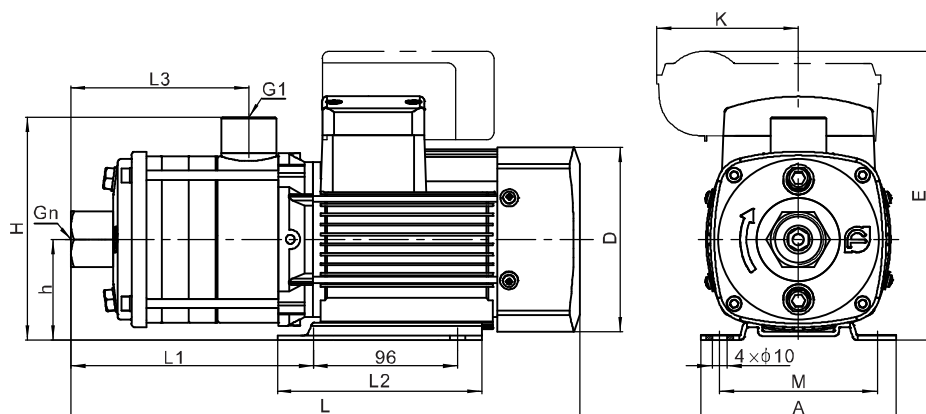
CM 20 Performance curves



CM20 Performance table

Model	Motor(kW)	Q(m³/h)	0	10	12	14	16	18	20	22	24	26	28	29
CM20-1	1.1	H(m)	13.3	12.5	12.3	12	11.5	11	10.5	10	9.5	9	8	7
CM20-2	2.2		27.2	25.5	25	24.5	24	23.7	23	22	20.5	18	16	14.5
CM20-3	3		41.5	39.5	39	38	37	36	35	33	31	28	25	23.5
CM20-4	4		55.5	52.5	51	50	49	48.5	47	45	41.5	37	33	31.5

CM2 , 4 Installation sketch



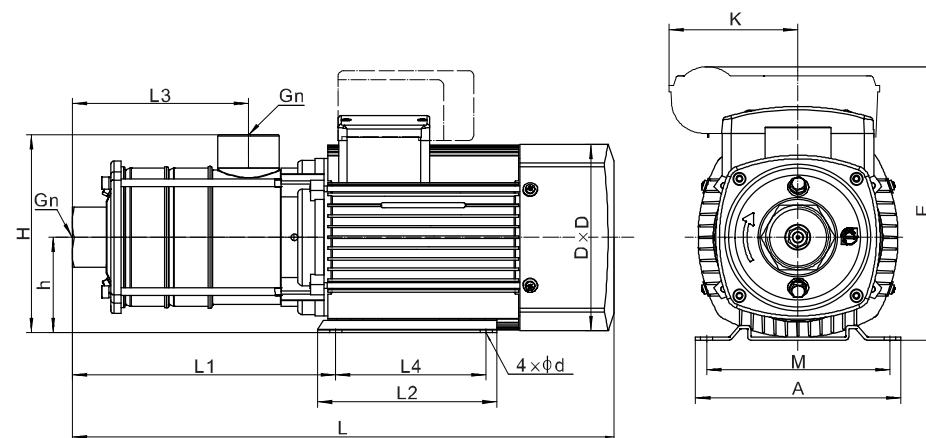
CM2 Dimensions and weight

Motor	Model	L	L1	L2	L3	h	H	E	D	M	A	n	K	Model (kg)
Three-phase/ single-phase	CM2-2	309	126	136	83	67	149	162/197	121	105	130	1	/53	7
	CM2-3	327	144	136	101	67	149	162/197	121	105	130	1	/53	7
	CM2-4	350	156	150	120	75	157	180/218	141	125	157	1	/62	9
	CM2-5	368	174	150	138	75	157	180/218	141	125	157	1	/62	9.5
	CM2-6	386	192	150	156	75	157	180/218	141	125	157	1	/62	10

CM4 Dimensions and weight

Motor	Model	L	L1	L2	L3	h	H	E	D	M	A	n	K	Model (kg)
Three-phase/ single-phase	CM4-2	318	135	136	92	67	149	162/197	121	105	130	1 1/4	/53	7
	CM4-3	349	155	150	119	75	157	180/218	141	125	158	1 1/4	/62	9
	CM4-4	376	182	150	146	75	157	180/218	141	125	158	1 1/4	/62	10
	CM4-5	424/445	210	160	174	85	167	195/235	151/161	125	158	1 1/4	/92	13
	CM4-6	451/472	237	160	201	85	167	195/235	151/161	125	158	1 1/4	/92	13

CM 10 , 15 , 20 Installation sketch



CM10 Dimensions and weight

Motor	Model	L	L1	L2	L3	L4	h	H	D	E	M	A	n	d	K	Model (kg)
Three-phase/ single-phase	CM10-1	362	171	150	116.5	96	85	193	141	190/228	125	157	1 1/2	10	/62	11.5
	CM10-2	362	171	150	116.5	96	85	193	141	190/228	125	157	1 1/2	10	/62	11.5
	CM10-3	410/434	218/239	136/140	146.5	96	100	208	151/161	210/253	125	158	1 1/2	10	/92	14
	CM10-4	464/474	269/265	140/200	176.5	96	100	208	161/175	214/268	125/160	158/200	1 1/2	10	/92	18
	CM10-5	504	287/295	200	206.5	140	100	208	171/175	221/268	160	200	1 1/2	10	/92	21

CM15 Dimensions and weight

Motor	Model	L	L1	L2	L3	L4	h	H	D	E	M	A	n	d	K	Model (kg)
Three-phase/ single-phase	CM15-1	408/432	216/237	136/140	138	96	100	208	151/161	210/253	125	158	2	10	/92	13.5
	CM15-2	442	225/233	200	138	140	100	208	171/175	221/268	160	200	2	10	/92	19.5
	CM15-3	551/	282/	180/	183	140	100	208	196/	232/	160	200	2	10	/	27
	CM15-4	607/	346/	180/	228	140	112	220	214/	262/	190	230	2	12	/	35.5

CM20 Dimensions and weight

Motor	Model	L	L1	L2	L3	L4	h	H	D	E	M	A	n	d	K	Model (kg)
Three-phase/ single-phase	CM20-1	408/432	216/237	136/140	138	96	100	208	151/161	210/253	125	158	2	10	/92	13.5
	CM20-2	442	225/233	200	138	140	100	208	171/175	221/268	160	200	2	10	/92	19.5
	CM20-3	551/	282/	180/	183	140	100	208	196/	232/	160	200	2	10	/	28.5
	CM20-4	607/	346/	180/	228	140	112	220	214/	262/	190	230	2	12	/	37