



CHL 50Hz

Light Horizontal Multistage Centrifugal Pump

CHLK/CHLF(T)



Nanfang Pump Industry Co.,Ltd.

CNP Headquarter
Address: Renhe Town, Hangzhou, China
Post code: 311107
Tel: +86 571 86397837
Fax: +86 571 86397809
E-mail: info@nanfang-pump.com
<http://www.cnppump.com>

E161202
Code1500037314
subject to amendments



Company Profile



Founded in 1991, Nanfang Pump Industry Co., Ltd. (hereinafter referred to as CNP) has been listed on the Shenzhen Stock Exchange on 9th December 2010; Stock name: CNP; Stock code: 300145.

As the first enterprise specializing in the research and large-scale production of stainless steel stamping welded centrifugal pump in China, CNP is currently the professional manufacturer with the highest volume of production and marketing in that industry. It ranks first in the country in terms of product scope, sales volume, and production quality. The company has set up a complete network of marketing services to meet the requirements of overseas markets as well as domestic needs. The products have seen a wide range of application in the area of pressurization, industry, living water, cycling of air-conditioning water, heat supply, fire extinguishing system, pumping of underground water, treatment of sewage and waste water, chemical industry and desalination of sea water etc.

CNP has now entered into the fast track of development and has taken a major step forward in forging China Strong Pump Enterprise and World's famous brand in the Pump Industry. In order to better meet the client's needs and requirements for expansion, it has set up a wide network of selling and service, as well as offices and service centers in major cities in China, which are aimed at providing timely and effective services for our clients. Meanwhile, our company has successfully penetrated into the world market by forging a good business relationship with more than 50 countries and regions in the Europe, Northern American, and Southeast Asia etc.

Content

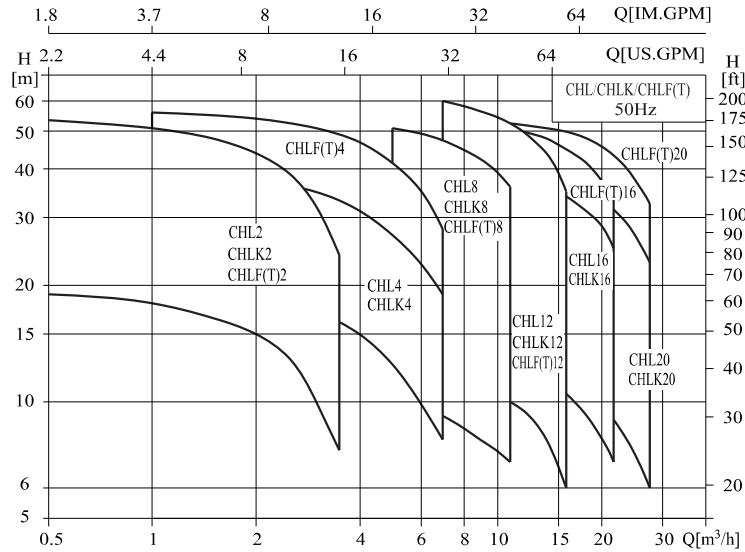
General Data

Performance scope	3
Application	4
Applicable medium	4
Pump	4
Curve conditions	4
Motor	4
Operation condition	4
Definition of Model	5
Material	5
Section drawing	6

Technical Data

CHL/CHLK2,50Hz	7
CHL/CHLK4,50Hz	9
CHL/CHLK8,50Hz	11
CHL/CHLK12,50Hz	13
CHL/CHLK16,50Hz	15
CHL/CHLK20,50Hz	17
CHLF/CHLF(T)2,50Hz	19
CHLF/CHLF(T)4,50Hz	21
CHLF/CHLF(T)8,50Hz	23
CHLF/CHLF(T)12,50Hz	25
CHLF/CHLF(T)16,50Hz	27
CHLF/CHLF(T)20,50Hz	29

● Performance scope



● Application

CHL, CHLK and CHLF(T) type pump are mainly used in industrial field:

- Air-conditioning system
- Cooling system
- Industrial cleaning
- Water treatment (Water purification)
- Aquaculture
- Fertilizing / metering system
- Environmental application
- Other special applications

● Applicable medium

- Thin and clean non-flammable and non-explosive liquid without solid granules and fibers.
- Mineral water, soft water, pure water, edible vegetable oil and other light chemical mediums.
- When the density or viscosity of to-be-conveyed liquid is larger than that of water, it is necessary to select a driving motor of high-power.
- Whether a specific liquid is suitable for the pump depends on many factors, among which the most important ones are chlorine content, PH value, temperature, solvent and oil content.

● Pump

- Horizontal multistage non-self-priming centrifugal pump, attached with long shaft electric motor.
- Compact structure renders small size of pump; axial inlet and radial outlet.

● Curve conditions

Following conditions are suitable for the performance curves shown above.

- All curves are based on the measured values of 50Hz: constant motor speed 2900r/min;
- Curve tolerance in conformity with ISO9906 Annex A.
- Measurement is done with 20°C air-free water, kinematic viscosity of 1mm²/sec.
- The operation of pump shall refer to the performance region described by the thickened curve to prevent overheating due to too small flow rate or overload of motor due to too large flow rate.

● Motor

- TEFC motor 2-pole
- Protection class: IP55
- Insulation class: F
- Standard voltage: 1 × 220-240V
3 × 220-240V/380-415V

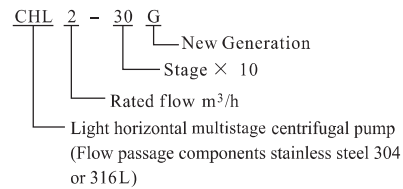
● Operation condition

- Liquid temperature: Normal temperature type: -15°C ~ +70°C
Hot water type: -15°C ~ +110°C
- Ambient temperature: up to +40°C
- Max. operation pressure: 10 bar
- Max. inlet pressure is limited by max. Operation pressure

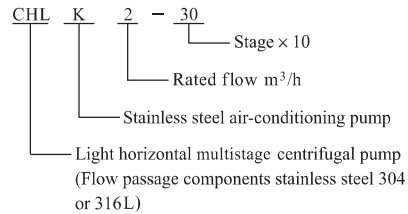
Connection port	CHL/CHLK/CHLF(T)2	CHL/CHLK/CHLF(T)4	CHL/CHLK, 12, 16, 20	CHLF(T)8	CHLF(T)12	CHLF(T)16, 20
Inlet	G1	G1 $\frac{1}{4}$	G2	G1 $\frac{1}{2}$	G1 $\frac{1}{2}$	G2
Outlet	G1	G1	G2	G1 $\frac{1}{4}$	G1 $\frac{1}{2}$	G2

● Definition of Model

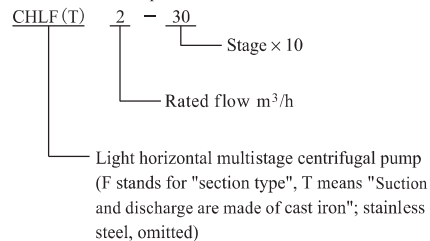
CHL Example



CHLK Example



CHLF(T) Example



● Material CHL/CHLK

No.	Name	Material	AISI / ASTM
1	Inlet and outlet chamber	Stainless steel	AISI304
2	Connection pipe	Stainless steel	AISI304
3	Clamp plate	Stainless steel	AISI304
4	Impeller	Stainless steel	AISI304
5	Shaft	Stainless steel	AISI304
6	Plug	Stainless steel	AISI304
7	Discharge diffuser	Stainless steel	AISI304
8	Mechanical seal		
9	Motor end cover	Aluminum alloy	
10	Base plate	Steel plate	AISI1015
11	Spannband	Stainless steel	AISI304
12	Diffuser	Stainless steel	AISI304
13	Support diffuser	Stainless steel	AISI304
14	Inducer	Stainless steel	AISI304

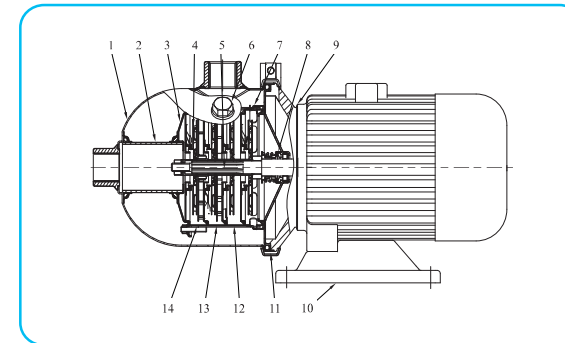
● Material CHLF/CHLF(T)

No.	Name	Material	AISI / ASTM
2	Plug	Stainless steel	AISI304
3	Bearing	Tungsten carbide	
4	Impeller	Stainless steel	AISI304
5	Shaft	Stainless steel	AISI304
8	Mechanical seal		
9	Motor end cover	Aluminum alloy	
10	Base plate	Steel plate	AISI1015
11	Staybolt	Stainless steel	AISI304
12	Diffuser	Stainless steel	AISI304
13	Support diffuser	Stainless steel	AISI304
14	Impeller sleeve	Stainless steel	AISI304

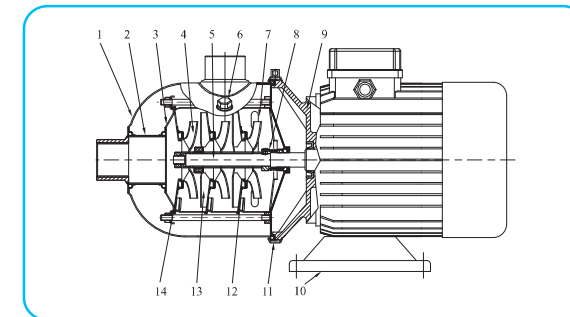
CHLF			
1	Suction	Stainless steel	AISI304
7	Discharge	Stainless steel	AISI304

CHLF(T)			
1	Suction	Cast iron	ASTM25B
7	Discharge	Cast iron	ASTM25B

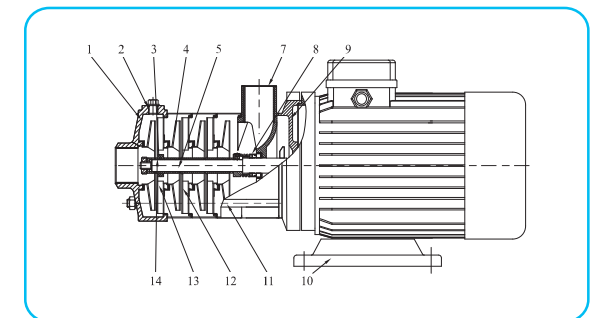
● Section drawing CHL,CHLK2,4



● Section drawing CHL,CHLK8,12,16,20

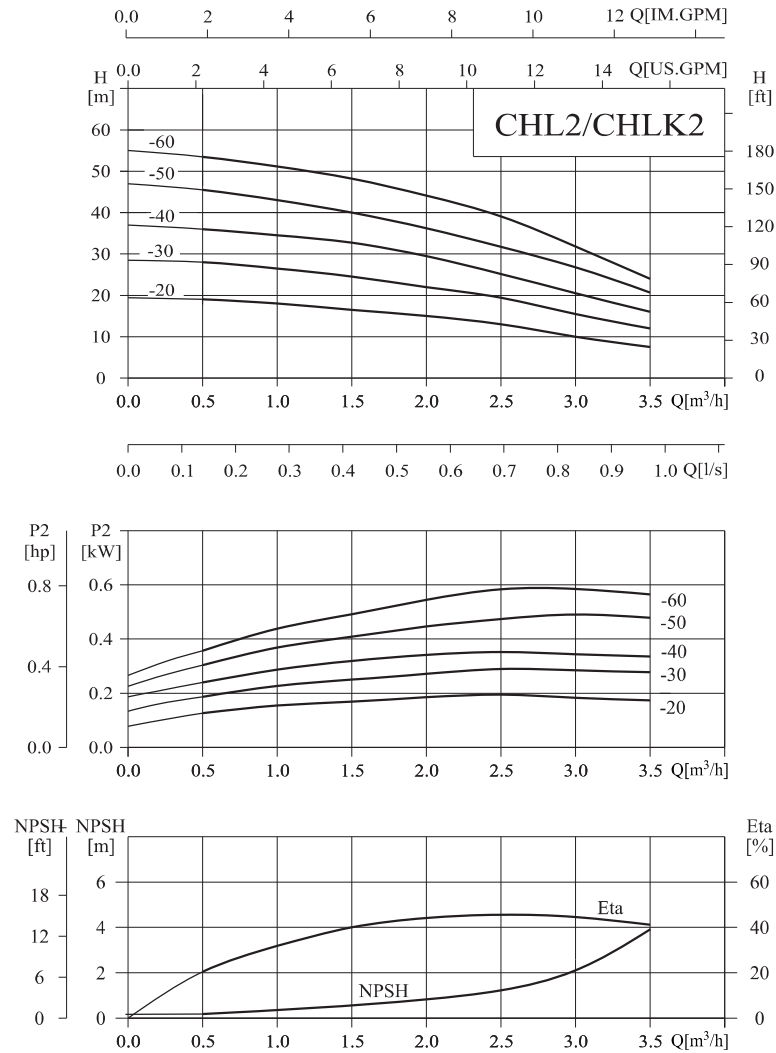


● Section drawing CHLF,CHLF(T)



● Performance curve

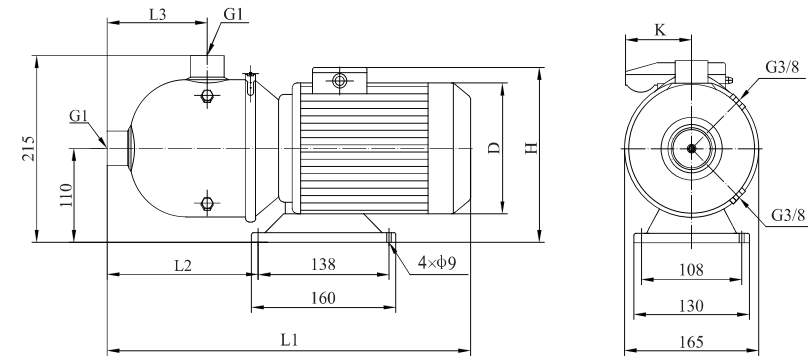
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	0.5	1	1.5	2	2.5	3	3.5
	(kW)	(hp)								
CHL2-20	0.37	0.5	H (m)	19	18	16.5	15	13	10	7.5
CHL2-20G	0.37	0.5		19	18	16.5	15	13	10	7.5
CHL2-30	0.37	0.5		28	26.5	24.5	22	19	15.5	12
CHL2-30G	0.37	0.5		28	26.5	24.5	22	19	15.5	12
CHL2-40	0.55	0.75		36	34.5	33	29	25	20.5	16
CHL2-40G	0.55	0.75		36	34.5	33	29	25	20.5	16
CHL2-50	0.55	0.75		45.5	43	40	36	31.5	26.5	20.5
CHL2-60	0.75	1		53.5	51	48	44	39	32	24

● Installation sketch

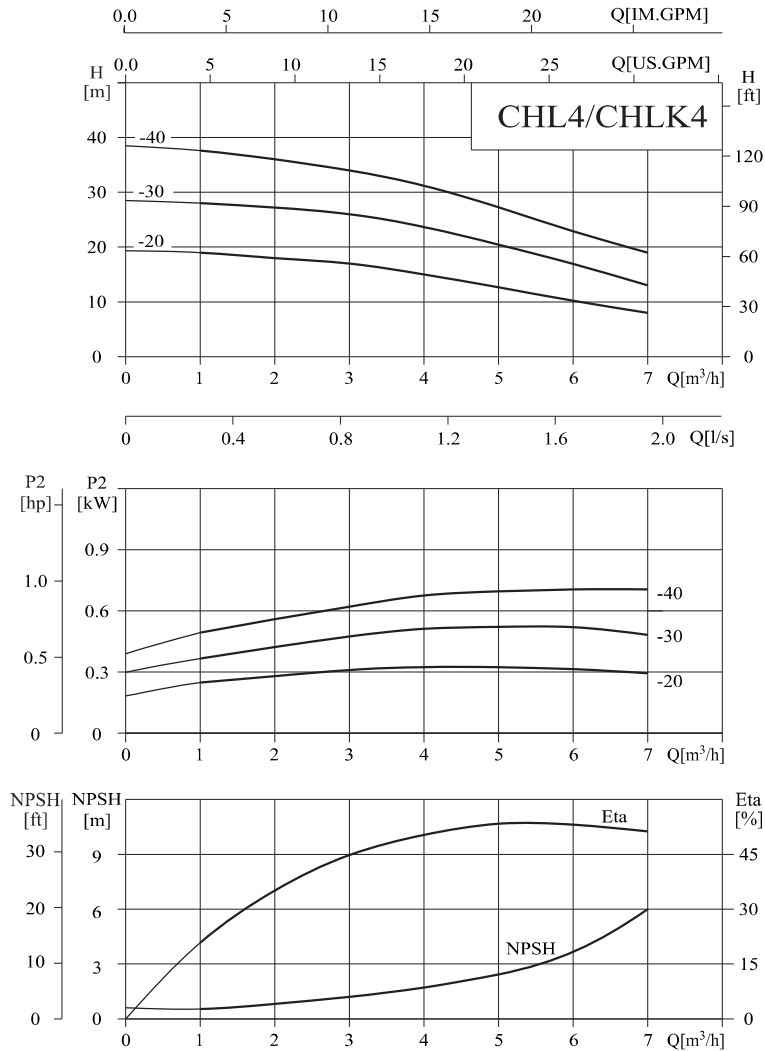


● Size and weight

Motor	Model	Size (mm)						Weight (kg)
		L1	L2	L3	D	H	K	
Three-phase/ single-phase	CHL2-20	395	165	125	140	215/249	/96	13
	CHL2-20G	355	125	85	140	215/249	/96	13
	CHL2-30	395	165	125	140	215/249	/96	13
	CHL2-30G	355	125	85	140	215/249	/96	13
	CHL2-40	395	165	125	140	215/249	/96	13
	CHL2-40G	355	125	85	140	215/249	/96	13
	CHL2-50	395	165	125	140	215/249	/96	13
	CHL2-60	415	165	125	157	230/265	/100	15

● Performance curve

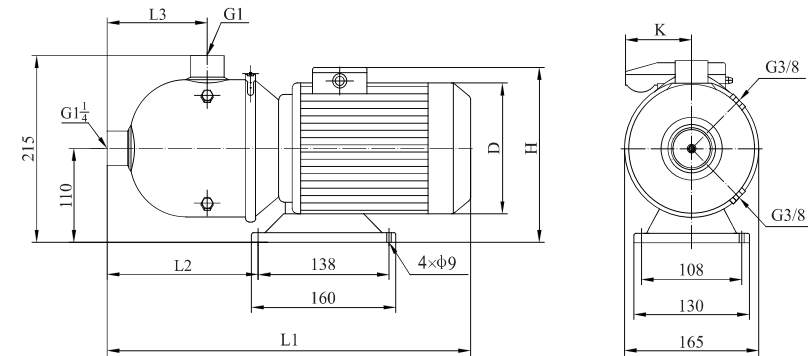
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	1	2	3	4	5	6	7
	(kW)	(hp)								
CHL4-20	0.37	0.5	H (m)	19	18	17	15	12.5	10	8
CHL4-20G	0.37	0.5		19	18	17	15	12.5	10	8
CHL4-30	0.55	0.75		28	27	26	23.5	20.5	17	13
CHL4-40	0.75	1		37.5	36	34	31	27	23	19

● Installation sketch

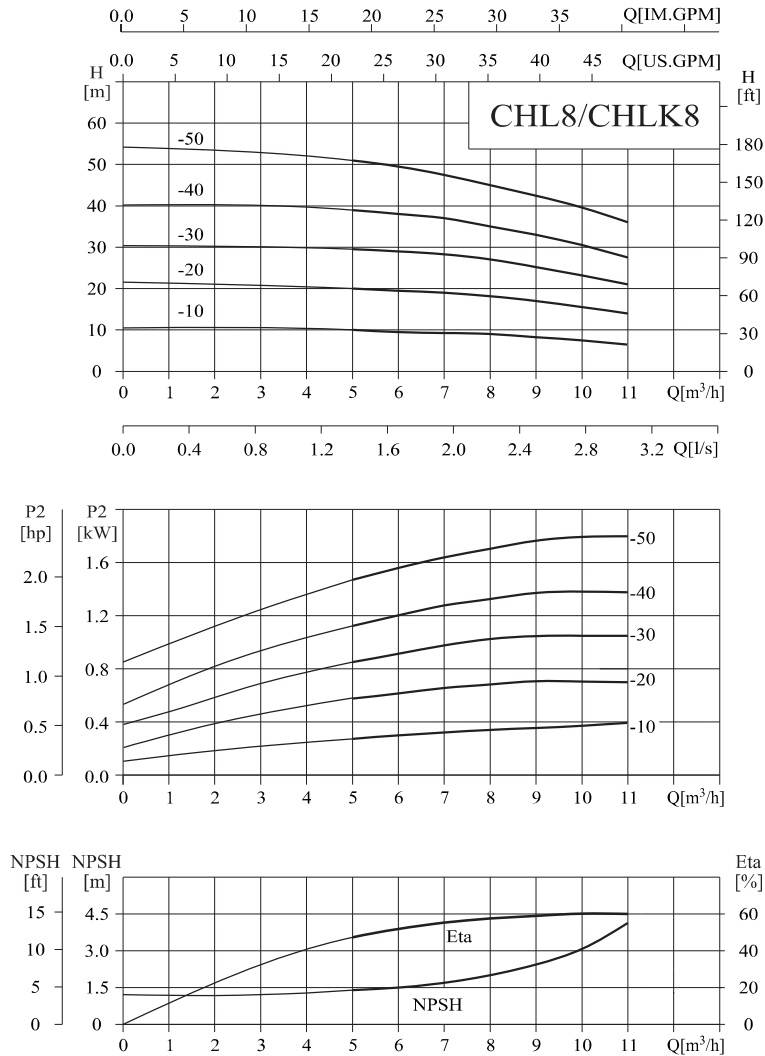


● Size and weight

Motor	Model	Size (mm)						Weight (kg)
		L1	L2	L3	D	H	K	
Three-phase/ single-phase	CHL4-20	402	172	132	140	215/249	/96	12
	CHL4-20G	362	132	92	140	215/249	/96	12
	CHL4-30	402	172	132	140	215/249	/96	15
	CHL4-40	422	172	132	157	230/265	/100	15

Performance curve

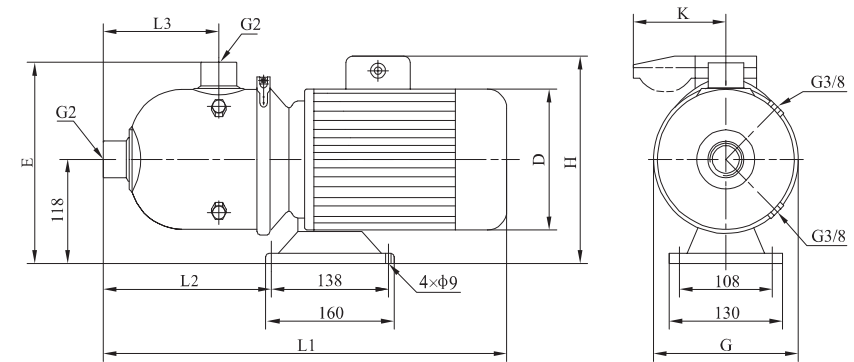
ISO9906 Annex A



Performance table

Model	Driving motor		Q (m³/h)	5	6	7	8	9	10	11
	(kW)	(hp)								
CHL8-10	0.75	1	H (m)	10	9.5	9.3	9	8	7.5	7
CHL8-10G	0.75	1		10	9.5	9.3	9	8	7.5	7
CHL8-20	0.75	1		20	19.5	19	18	17	15.5	14
CHL8-20G	0.75	1		20	19.5	19	18	17	15.5	14
CHL8-30	1.1	1.5		29.5	29	28	27	25	23	21
CHL8-30G	1.1	1.5		29.5	29	28	27	25	23	21
CHL8-40	1.5	2		39	38	37	35	33	30.5	27.5
CHL8-50	2.2	3		51	49.5	47.5	45	42.5	39.5	36

Installation sketch

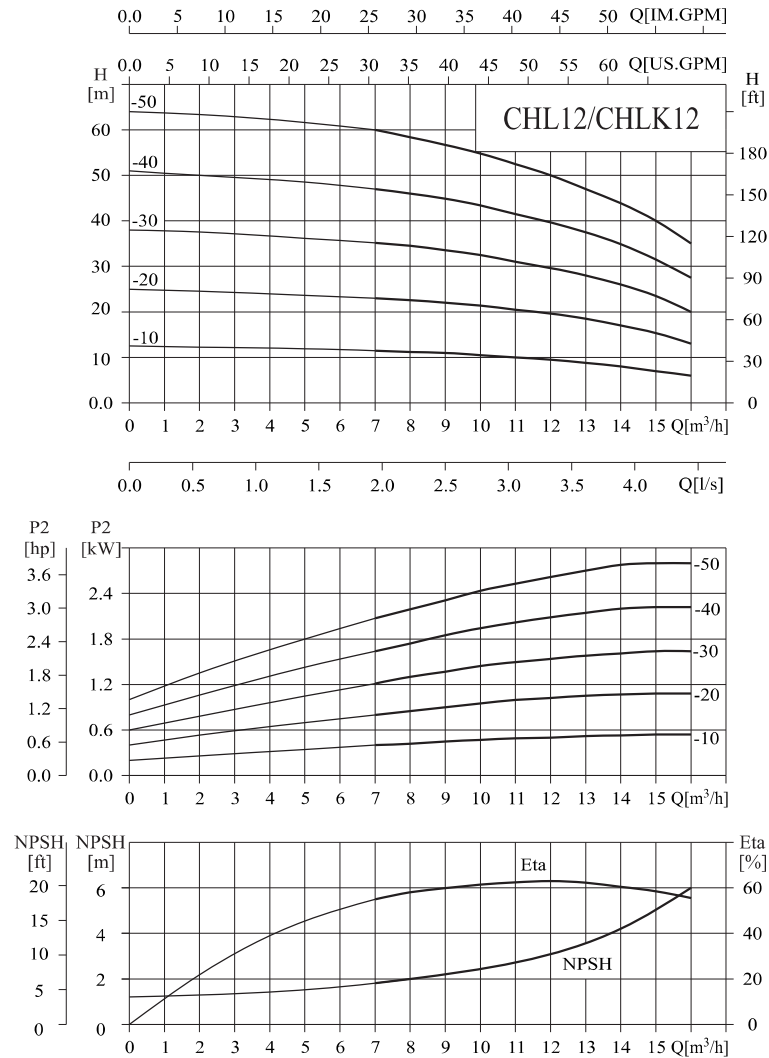


Size and weight

Motor	Model	Size (mm)								Weight (kg)
		L1	L2	L3	E	G	D	H	K	
Three-phase/ single-phase	CHL8-10	560	278	175	264	230	157	230/265	/100	20
	CHL8-10G	480	198	95	249	200	157	230/265	/100	19.5
	CHL8-20	560	278	175	264	230	157	230/265	/100	20
	CHL8-20G	480	198	95	249	200	157	230/265	/100	19.5
	CHL8-30	560	278	175	264	230	157	230/265	/100	25
	CHL8-30G	480	198	95	249	200	157	230/265	/100	24.5
	CHL8-40	570	278	175	264	230	177	235/270	/100	25
	CHL8-50	570	278	175	264	230	177	235/270	/100	30

● Performance curve

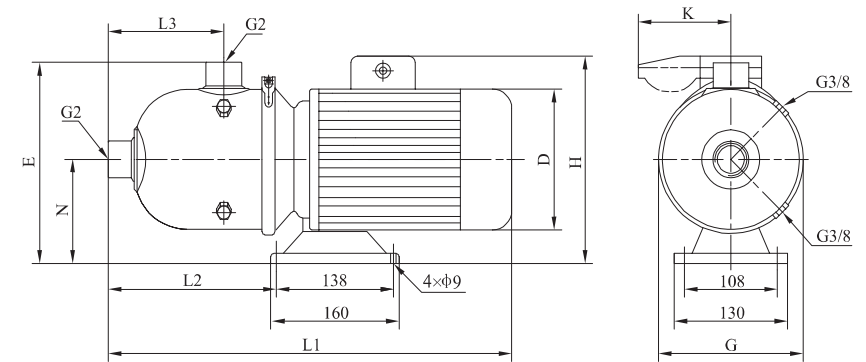
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	7	8	9	10	11	12	13	14	15	16
	(kW)	(hp)											
CHL12-10	0.75	1	H (m)	11.5	11.2	11	10.5	10	9.5	9	8	7	6
CHL12-10G	0.75	1		11.5	11.2	11	10.5	10	9.5	9	8	7	6
CHL12-20	1.2	1.6		23	22.5	22	21.5	20.5	19.5	18.5	17	15.5	13
CHL12-20G	1.2	1.6		23	22.5	22	21.5	20.5	19.5	18.5	17	15.5	13
CHL12-30	1.8	2.4		35	34.5	33.5	32.5	31	29.5	28	26	23.5	20
CHL12-30G	1.8	2.4		35	34.5	33.5	32.5	31	29.5	28	26	23.5	20
CHL12-40	2.4	3.3		47	46	45	43.5	41.5	39.5	37.5	35	31.5	27.5
CHL12-50	3	4		60	58	56.5	55	52.5	50	47	44	40	35

● Installation sketch

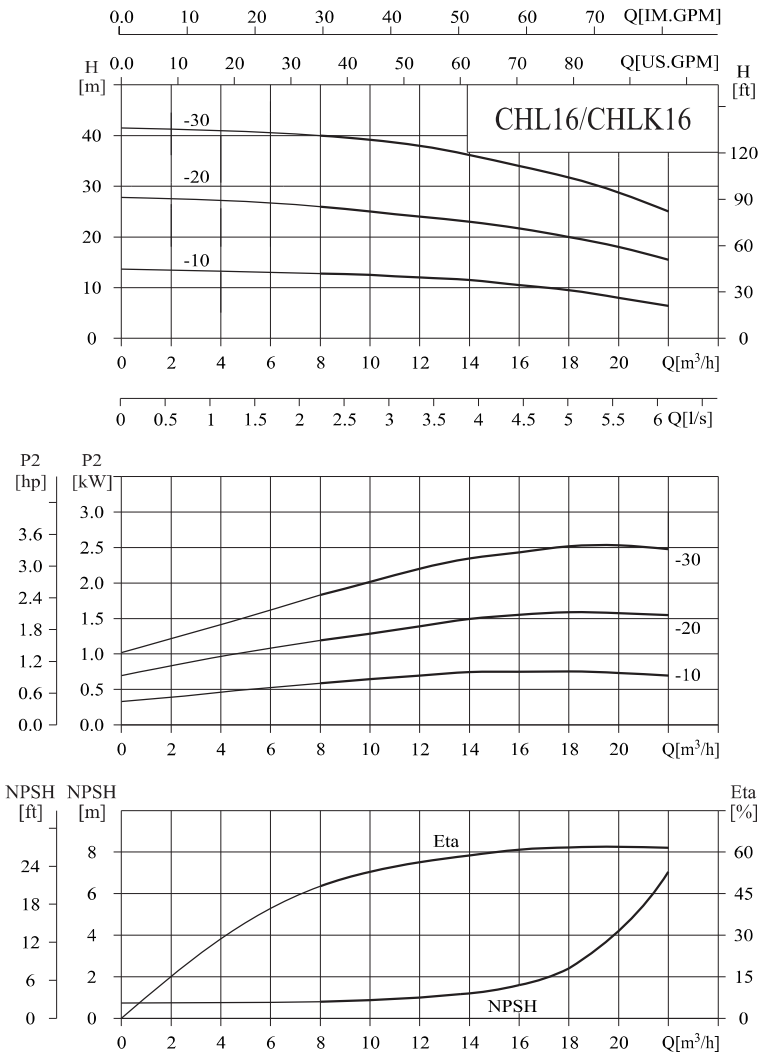


● Size and weight

Motor	Model	Size (mm)									Weight (kg)
		L1	L2	L3	N	E	G	D	H	K	
Three-phase/ single-phase	CHL12-10	560	278	175	118	264	230	157	230/265	/100	20
	CHL12-10G	480	198	95	118	249	200	157	230/265	/100	19.5
	CHL12-20	560	278	175	118	264	230	157	230/265	/100	21
	CHL12-20G	480	198	95	118	249	200	157	230/265	/100	20.5
	CHL12-30	570	278	175	118	264	230	177	235/270	/100	25
	CHL12-30G	490	198	95	118	249	200	177	235/270	/100	24.5
	CHL12-40	570	278	175	118	264	230	177	235/270	/100	29
	CHL12-50	610	268	175	128	274	230	197	255/		34

● Performance curve

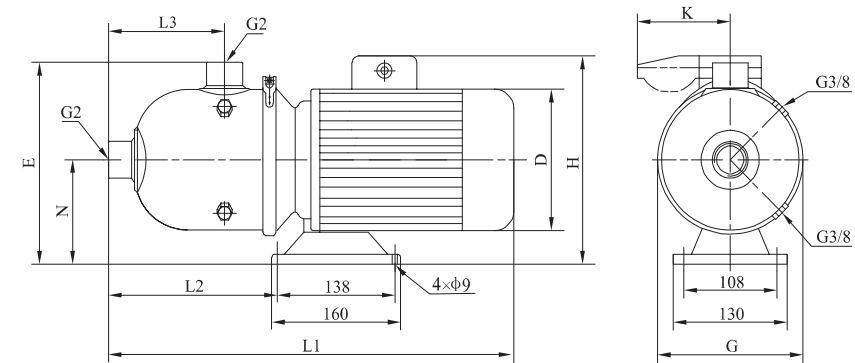
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	8	10	12	14	16	18	20	22
	(kW)	(hp)									
CHL16-10	1.1	1.5	H (m)	12.8	12.5	12	11.5	10.5	9.5	8	7
CHL16-10G	1.1	1.5		12.8	12.5	12	11.5	10.5	9.5	8	7
CHL16-20	2.2	3		26	25	24	23	21.7	20	18	15.5
CHL16-20G	2.2	3		26	25	24	23	21.7	20	18	15.5
CHL16-30	3	4		40	39	38	36	34	31.5	29	25

● Installation sketch

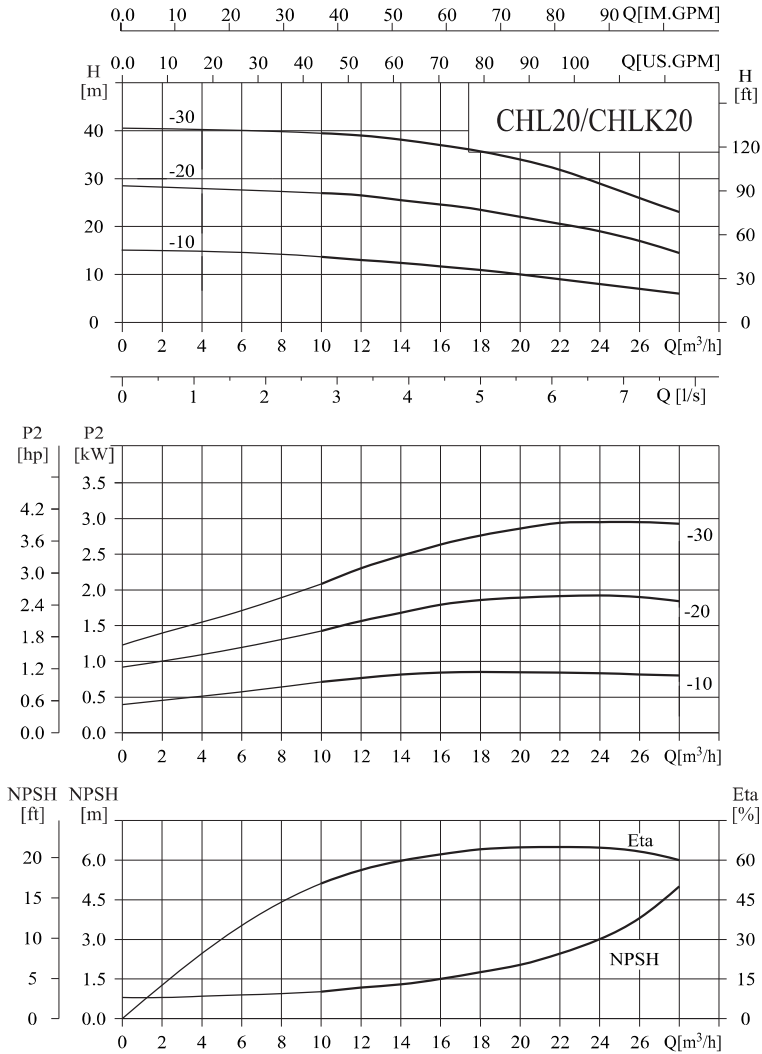


● Size and weight

Motor	Model	Size (mm)									Weight (kg)
		L1	L2	L3	N	E	G	D	H	K	
Three-phase/ single-phase	CHL16-10	560	278	175	118	264	230	157	230/265	/100	20
	CHL16-10G	480	198	95	118	249	200	157	230/265	/100	19.5
	CHL16-20	570	278	175	118	264	230	177	235/270	/100	27
	CHL16-20G	490	198	95	118	249	200	177	235/270	/100	26.5
	CHL16-30	610	268	175	128	274	230	197	255/		34

● Performance curve

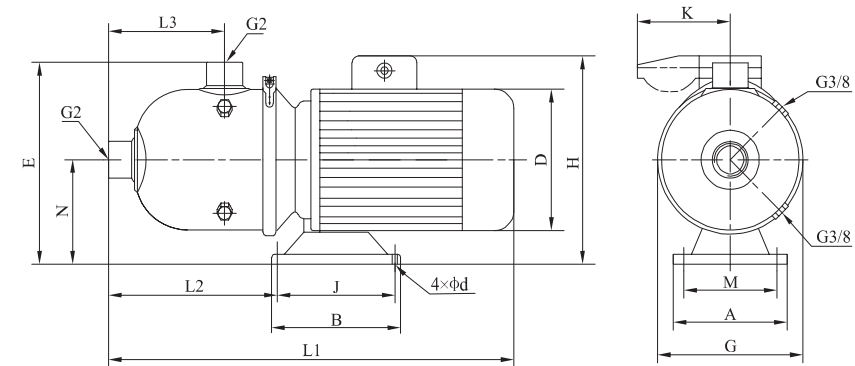
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	10	12	14	16	18	20	22	24	26	28
	(kW)	(hp)		H (m)									
CHL20-10	1.1	1.5	H (m)	13.5	13	12.5	12	11	10	9	8	7	6
CHL20-10G	1.1	1.5		13.5	13	12.5	12	11	10	9	8	7	6
CHL20-20	2.2	3		27	26.5	25.5	25	23.5	22	20.5	18.5	17	14.5
CHL20-20G	2.2	3		27	26.5	25.5	25	23.5	22	20.5	18.5	17	14.5
CHL20-30	4	5.5		39.5	39	38	37.5	35.5	34	31.5	29	26	23

● Installation sketch

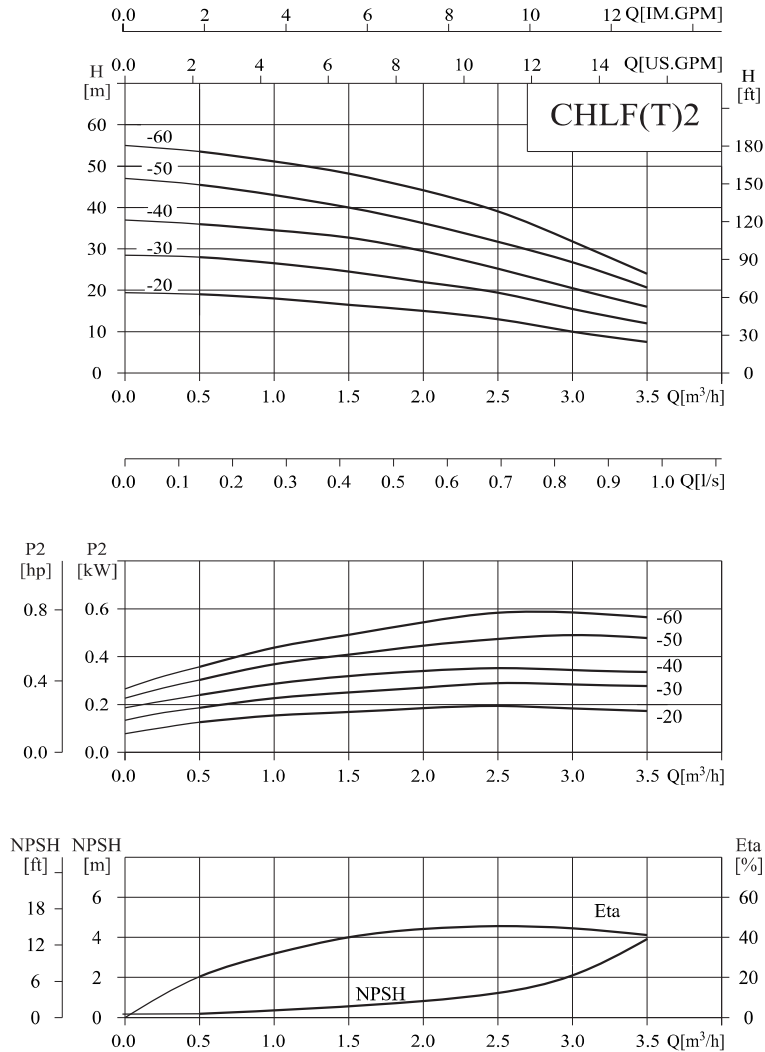


● Size and weight

Motor	Model	Size (mm)														Weight (kg)
		L1	L2	L3	N	E	G	A	M	B	J	d	D	H	K	
Three-phase/ single-phase	CHL20-10	560	278	175	118	264	230	130	108	160	138	9	157	230/265	/100	21
	CHL20-10G	480	198	95	118	249	200	130	108	160	138	9	157	230/265	/100	20.5
	CHL20-20	570	278	175	118	264	230	130	108	160	138	9	177	235/270	/100	28
	CHL20-20G	490	198	95	118	249	200	130	108	160	138	9	177	235/270	/100	27.5
	CHL20-30	612	355	175	120	266	230	220	190	170	140	12	213	270/		42

Performance curve

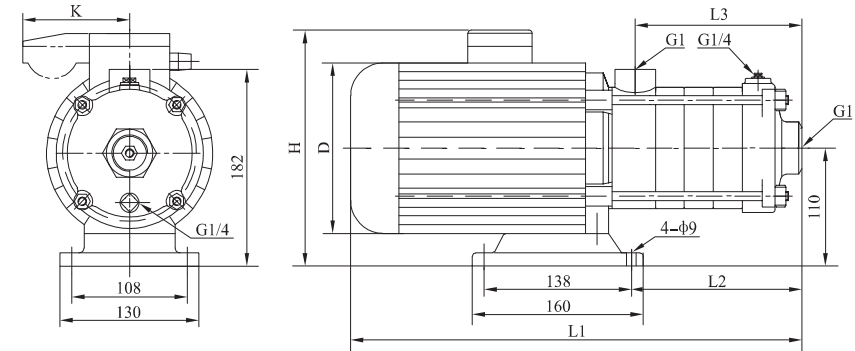
ISO9906 Annex A



Performance table

Model	Driving motor		Q (m³/h)	0.5	1	1.5	2	2.5	3	3.5
	(kW)	(hp)								
CHLF(T)2-20	0.37	0.5	H (m)	19	18	16.5	15	13	10	7.5
CHLF(T)2-30	0.37	0.5		28	26.5	24.5	22	19	15.5	12
CHLF(T)2-40	0.55	0.75		36	34.5	33	29	25	20.5	16
CHLF(T)2-50	0.55	0.75		45.5	43	40	36	31.5	26.5	20.5
CHLF(T)2-60	0.75	1		53.5	51	48	44	39	32	24

Installation sketch

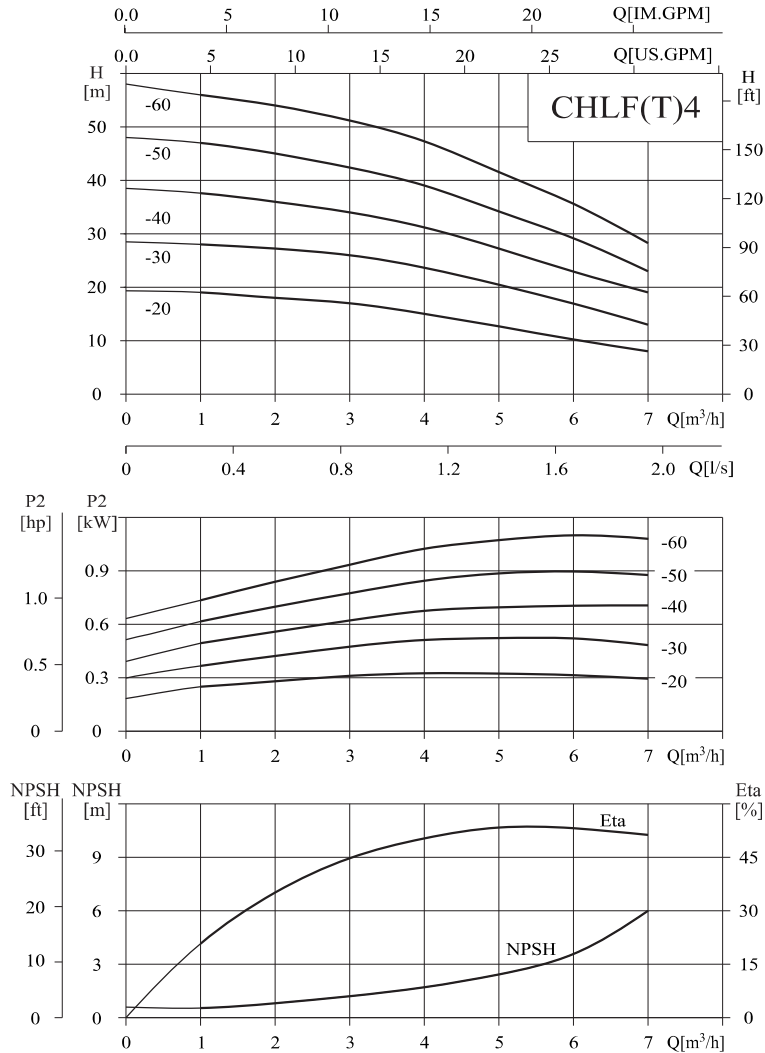


Size and weight

Motor	Model	Size (mm)						Weight (kg)
		L1	L2	L3	D	H	K	
Three-phase/ single-phase	CHLF(T)2-20	305	87	84	145	215/230	/96	15
	CHLF(T)2-30	323	105	102	145	215/230	/96	15
	CHLF(T)2-40	341	123	120	145	215/230	/96	15
	CHLF(T)2-50	359	141	138	145	215/230	/96	15
	CHLF(T)2-60	422	159	156	170	225/245	/100	17

● Performance curve

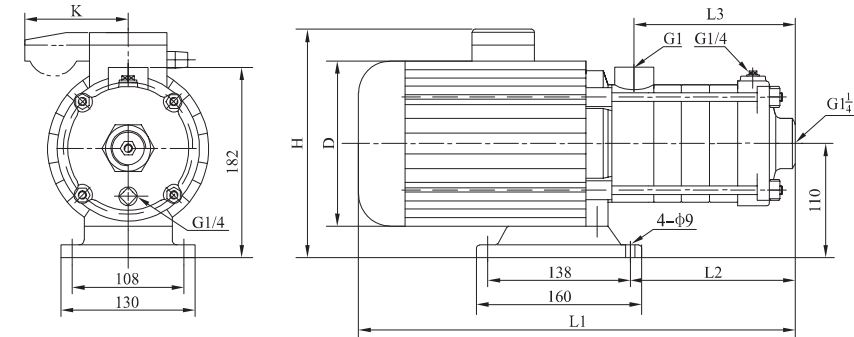
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	1	2	3	4	5	6	7
	(kW)	(hp)								
CHLF(T)4-20	0.37	0.5	H (m)	19	18	17	15	12.5	10	8
CHLF(T)4-30	0.55	0.75		28	27	26	23.5	20.5	17	13
CHLF(T)4-40	0.75	1		37.5	36	34	31	27	23	19
CHLF(T)4-50	1.1	1.5		47	45	42.5	39	34	29	23
CHLF(T)4-60	1.1	1.5		56	54	51	47	41.5	35.5	28

● Installation sketch

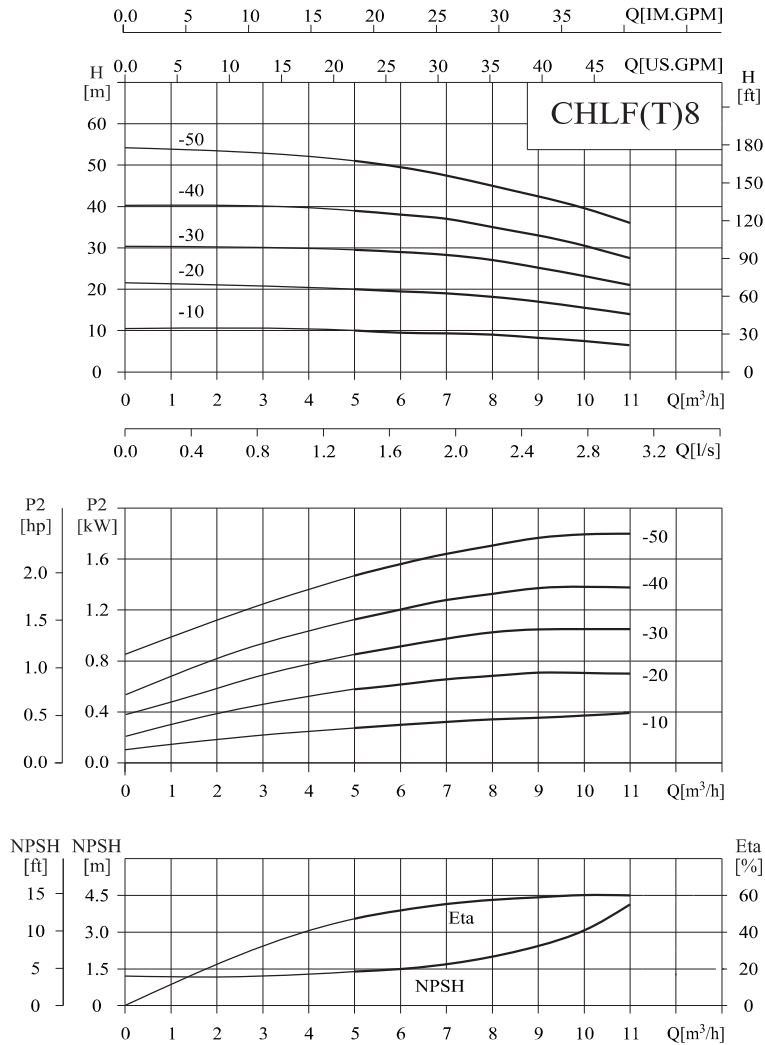


● Size and weight

Motor	Model	Size (mm)						Weight (kg)
		L1	L2	L3	D	H	K	
Three-phase/ single-phase	CHLF(T)4-20	329	105	102	145	215/230	/96	15
	CHLF(T)4-30	356	132	129	145	215/230	/96	15
	CHLF(T)4-40	416	162	156	170	225/245	/100	17
	CHLF(T)4-50	455	188	183	170	225/245	/100	17
	CHLF(T)4-60	482	213	210	170	225/245	/100	17

● Performance curve

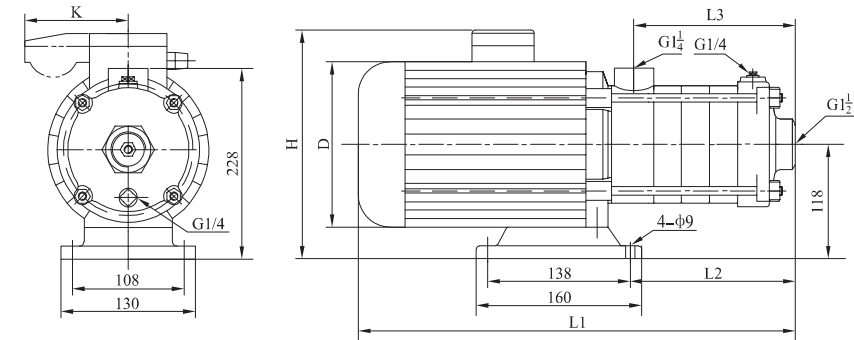
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	5	6	7	8	9	10	11
	(kW)	(hp)								
CHLF(T)8-10	0.75	1	H (m)	10	9.5	9.3	9	8	7.5	7
CHLF(T)8-20	0.75	1		20	19.5	19	18	17	15.5	14
CHLF(T)8-30	1.1	1.5		29.5	29	28	27	25	23	21
CHLF(T)8-40	1.5	2		39	38	37	35	33	30.5	27.5
CHLF(T)8-50	2.2	3		51	49.5	47.5	45	42.5	39.5	36

● Installation sketch

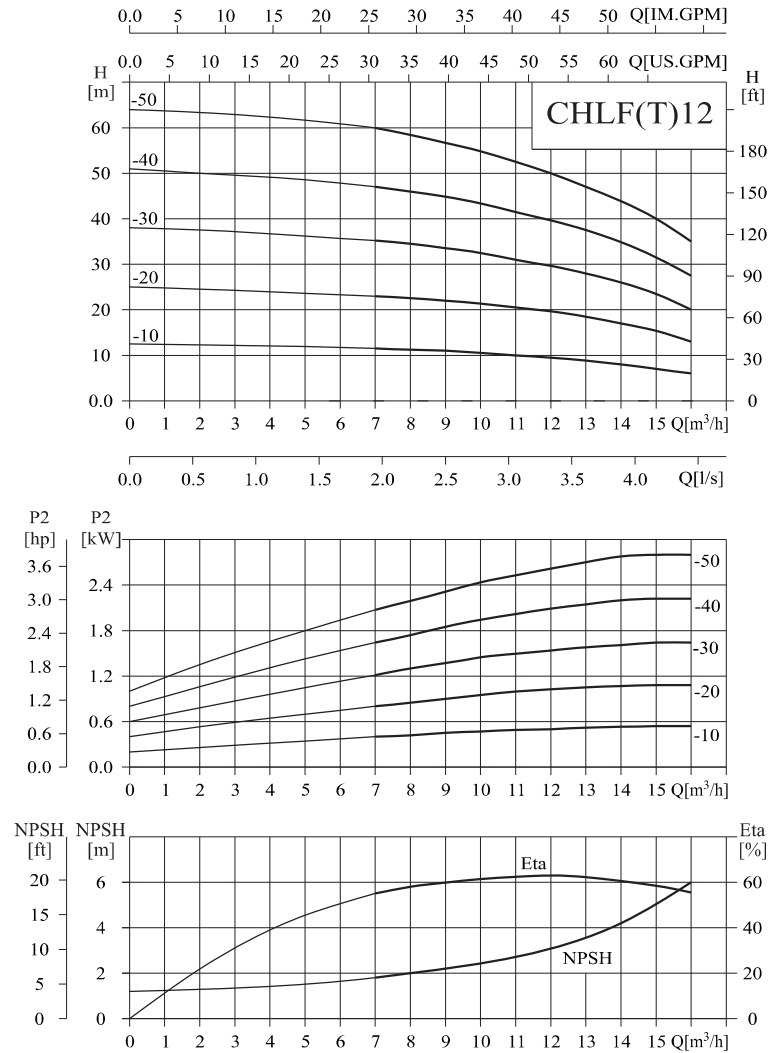


● Size and weight

Motor	Model	Size (mm)						Weight (kg)
		L1	L2	L3	D	H	K	
Three-phase/ single-phase	CHLF(T)8-10	395	126	108	170	230/265	/100	20
	CHLF(T)8-20	395	126	108	170	230/265	/100	20
	CHLF(T)8-30	425	156	138	170	230/265	/100	25
	CHLF(T)8-40	490	186	168	180	240/270	/100	28
	CHLF(T)8-50	520	216	198	180	240/270	/100	30

● Performance curve

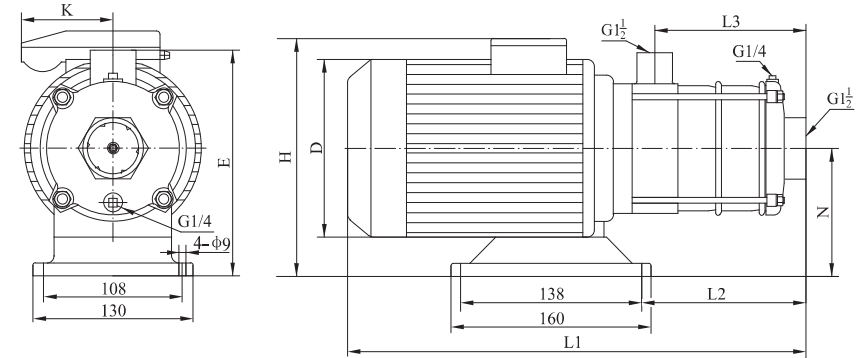
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m ³ /h)	7	8	9	10	11	12	13	14	15	16
	(kW)	(hp)		H (m)									
CHLF(T)12-10	0.75	1		11.5	11.2	11	10.5	10	9.5	9	8	7	6
CHLF(T)12-20	1.2	1.6		23	22.5	22	21.5	20.5	19.5	18.5	17	15.5	13
CHLF(T)12-30	1.8	2.4		35	34.5	33.5	32.5	31	29.5	28	26	23.5	20
CHLF(T)12-40	2.4	3.3		47	46	45	43.5	41.5	39.5	37.5	35	31.5	27.5
CHLF(T)12-50	3	4		60	58	56.5	55	52.5	50	47	44	40	35

● Installation sketch

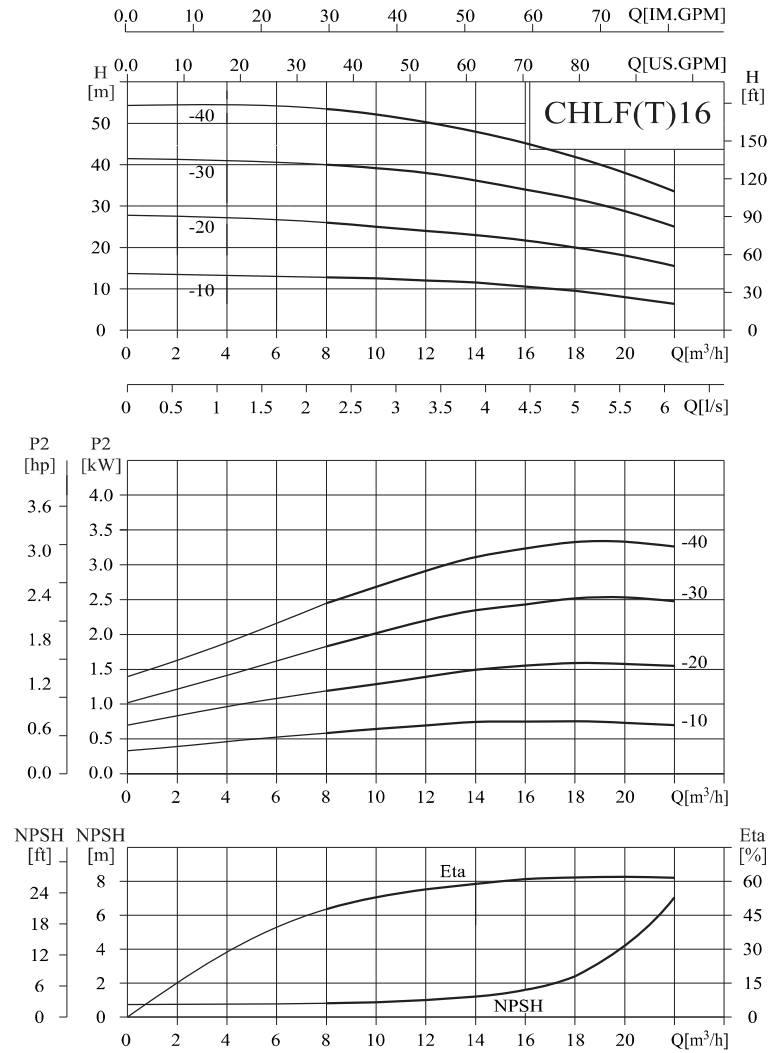


● Size and weight

Motor	Model	Size (mm)								Weight (kg)
		L1	L2	L3	H	D	E	N	K	
Three-phase/ single-phase	CHLF(T)12-10	395	126	108	230/265	170	228	118	/100	20
	CHLF(T)12-20	395	126	108	230/265	170	228	118	/100	21
	CHLF(T)12-30	460	156	138	240/270	180	228	118	/100	25
	CHLF(T)12-40	490	186	168	240/270	180	228	118	/100	29
	CHLF(T)12-50	555	216	198	270/	195	240	126		34

● Performance curve

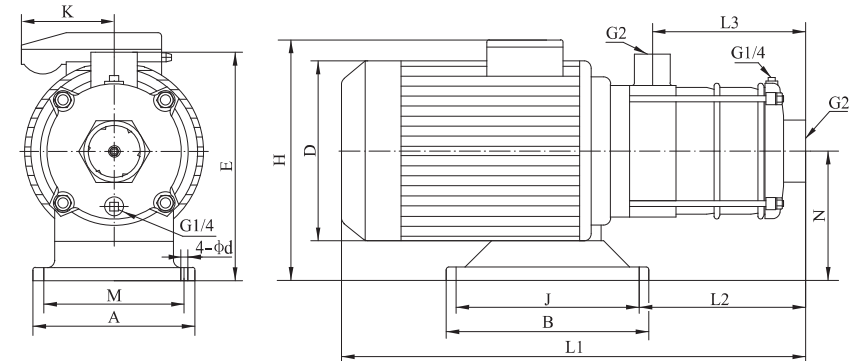
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	8	10	12	14	16	18	20	22
	(kW)	(hp)									
CHLF(T)16-10	1.1	1.5	H (m)	12.8	12.5	12	11.5	10.5	9.5	8	7
CHLF(T)16-20	2.2	3		26	25	24	23	21.7	20	18	15.5
CHLF(T)16-30	3	4		40	39	38	36	34	31.5	29	25
CHLF(T)16-40	4	5.5		53.5	52	50	48	45	42	38	33.5

● Installation sketch

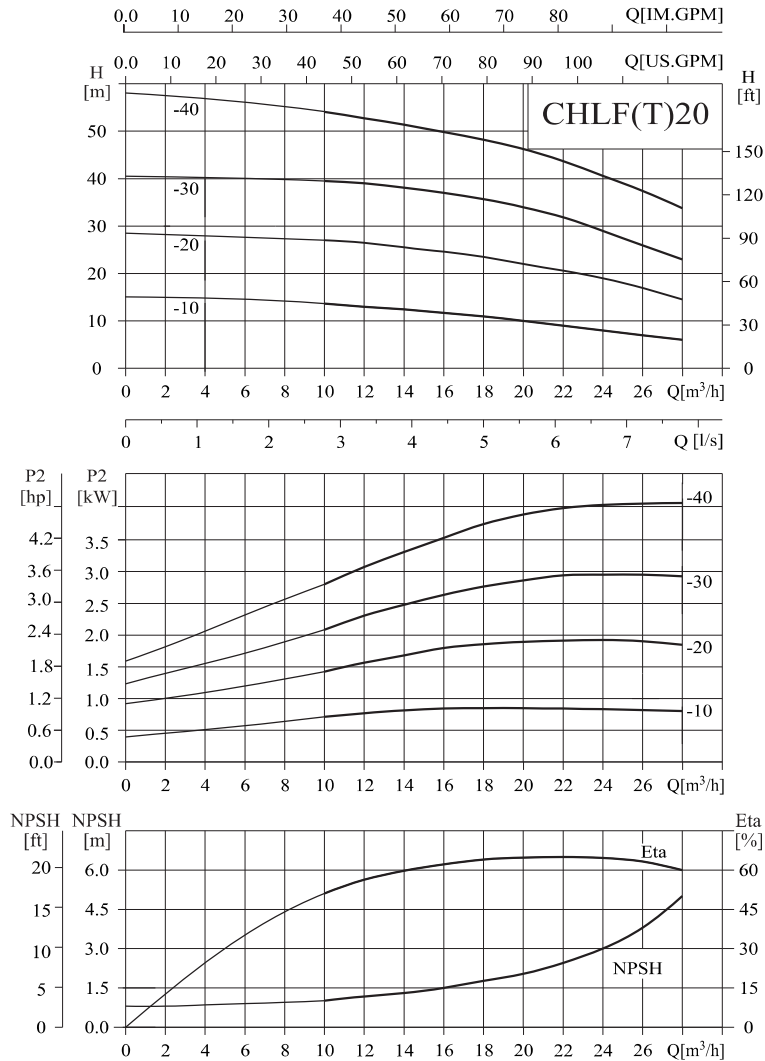


● Size and weight

Motor	Model	Size (mm)											Weight (kg)		
		L1	L2	L3	H	D	E	N	A	M	B	J		d	K
Three-phase/ single-phase	CHLF(T)16-10	423	151	126	230/265	170	227	117	130	108	160	138	9	/100	17.5
	CHLF(T)16-20	455	151	126	240/270	180	228	118	130	108	160	138	9	/100	27
	CHLF(T)16-30	561	196	171	270/	195	240	130	130	108	160	138	9		33
	CHLF(T)16-40	621	340	216	270/	220	230	120	230	190	170	140	12		41

● Performance curve

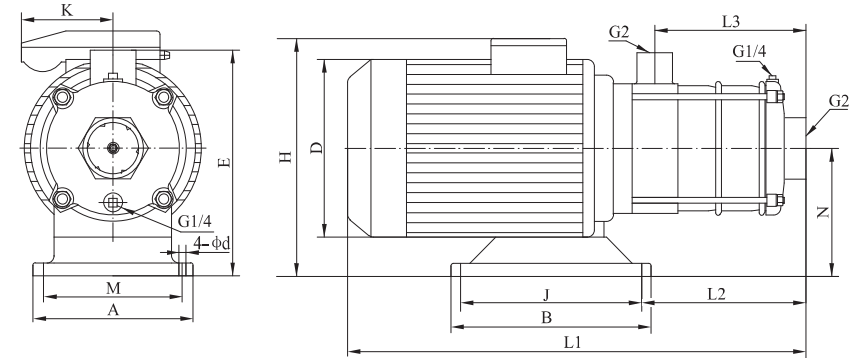
ISO9906 Annex A



● Performance table

Model	Driving motor		Q (m³/h)	10	12	14	16	18	20	22	24	26	28
	(kW)	(hp)											
CHLF(T)20-10	1.1	1.5	H (m)	13.5	13	12.5	12	11	10	9	8	7	6
CHLF(T)20-20	2.2	3		27	26.5	25.5	25	23.5	22	20.5	18.5	17	14.5
CHLF(T)20-30	4	5.5		39.5	39	38	37.5	35.5	34	31.5	29	26	23
CHLF(T)20-40	4.4	6		53	52	51	50	48.5	46.5	43	40	36	32.5

● Installation sketch



● Size and weight

Motor	Model	Size (mm)											Weight (kg)		
		L1	L2	L3	H	D	E	N	A	M	B	J		d	K
Three-phase/ single-phase	CHLF(T)20-10	423	151	126	230/265	170	227	117	130	108	160	138	9	/100	17.5
	CHLF(T)20-20	455	151	126	240/270	180	228	118	130	108	160	138	9	/100	27
	CHLF(T)20-30	576	294	171	270/	220	230	120	230	190	170	140	12		41
	CHLF(T)20-40	621	340	216	270/	220	230	120	230	190	170	140	12		44

MEMO

A series of horizontal dashed lines for writing.

MEMO

A series of horizontal dashed lines for writing.

