TECNODYNE

CDL, CDLF Series

Vertical Multistage Pumps
60Hz

PRODUCT CATALOGUE

PRODUCT OVERVIEW

High-efficiency hydraulics

Product Description

CDL/CDLF is a non-self-priming, vertical multistage centrifugal pump driven by a standard electric motor. The motor output shaft is connected with the pump shaft through a coupling. The pressure-resistant cylinder and flow passage components are fixed between pump head and inlet & outlet section with stay bolts.This kind of pump can be equipped with an intelligent protector to effectively prevent it from dry-running, out-of-phase and overload.

Applications

CDL/CDLF pumps are designed for a variety of applications from the pumping of potable water to the pumping of industrial liquids. Applied for liquids at different temperature, different rated flow, different pressure range.
CDL is suitable for non-corrosive liquid.
CDLF is suitable for light corrosive liquid.

- Pressure boosting: water filtration or water transfer in water factories, delivering water in different zone, boosting pressure in major pipelines, pressure boosting for high buildings.
- Pressurization: Water circulation system, washing system, high-pressure flushing system, fire-fighting system.
- HVAC: Air-conditioning system
- Water treatment: Ultra-filtration system, RO system, distillation system, separator, swimming pool.

Operating Date

Thin, clean, non-flammable, non-explosive, solid free, fiber free, physically and chemically water-like liquid.

- Liquid temperature:
  Normal temperature type: -15°C to 70°C
  Hot water type: -15°C to 120°C
- Ambient temperature: up to 40°C
- Altitude: up to 1000m

Motor

- All pumps are equipped with TEFC, 2-poles energy-efficient motors as standard.
- Protection class: IP55
- Insulation class: F
- Voltage: 60Hz:3×200-230 / 346-400V
  3×220-255 / 380-440V
  3×220-277 / 380-480V

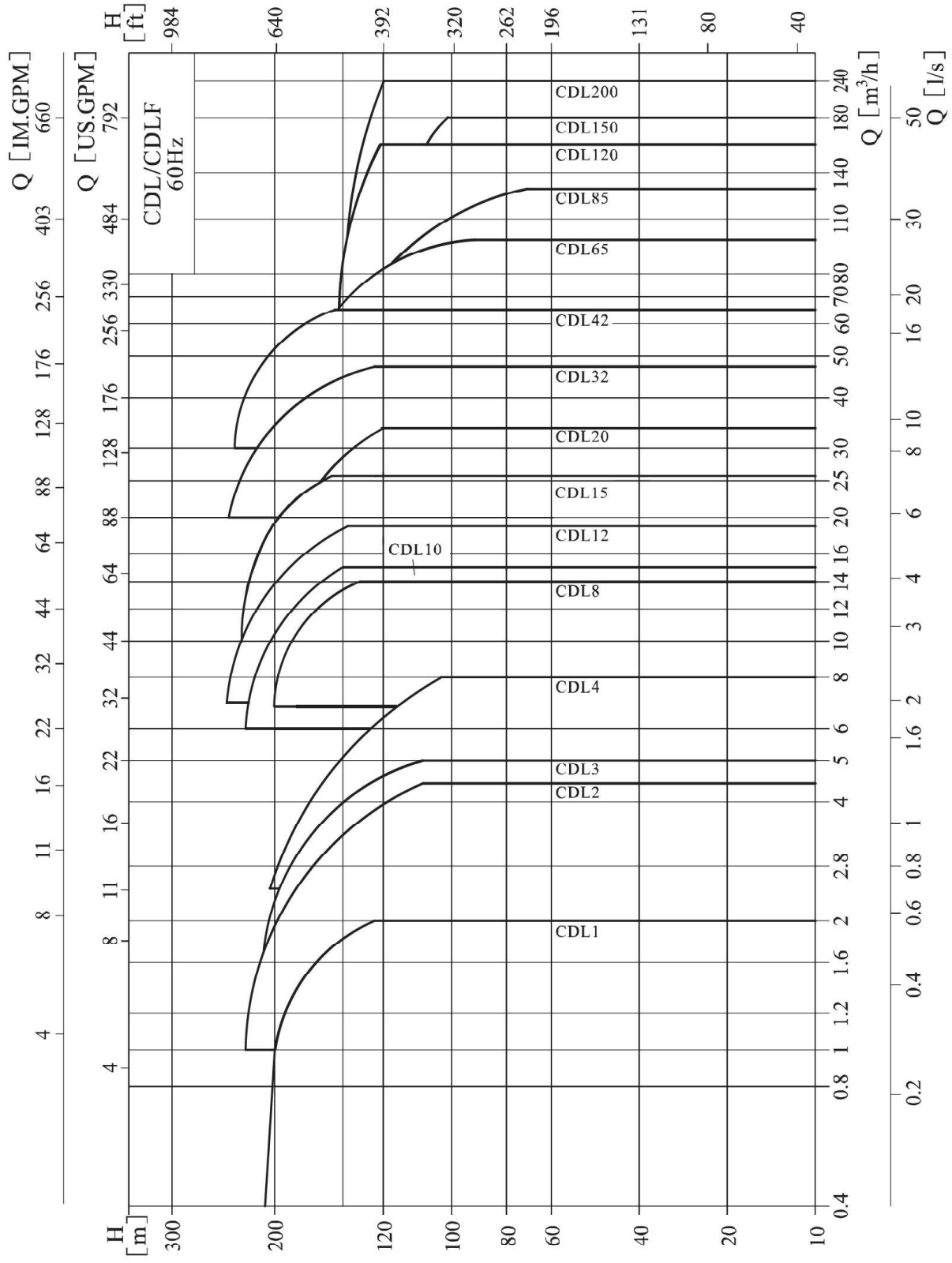
Curve Conditions

Following conditions are suitable for performance curve below.

- All curves are based on the measured values of 60Hz; constant motor speed 3500rpm or 3540rpm.
- Curve tolerance in conformity with ISO9906: 2012 Grade 3B.
- Measurement is done with 20°C air-free water, kinematic viscosity of 1 mm²/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. prevent overheating due to too small flow rate or overload of motor due to too large flow rate.

PERFORMANCE RANGE

60Hz



PERFORMANCE TABLE

60Hz

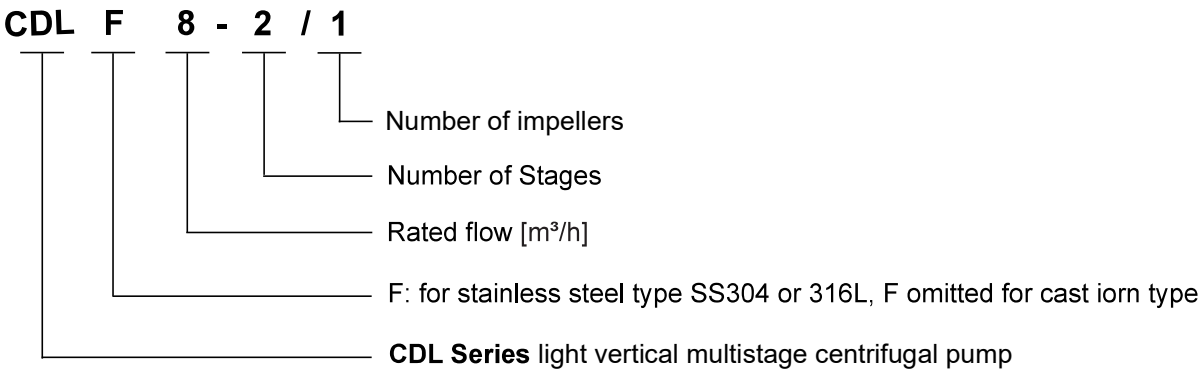
Description		CDL/CDLF							
Rated flow [m³/h]		1	2	3	4	8	10	12	15
Rated flow [l/s]		0.28	0.56	0.83	1.1	2.2	2.78	3.3	4.2
Flow range [m³/h]		0.6~2	1~4.5	1.5~5	2.5~8	7~14	6~15	7~19	10~26
Flow range [l/s]		0.17~0.56	0.28~1.25	0.42~1.4	0.7~2.2	1.9~3.9	1.67~4.17	1.9~5.3	2.8~7.2
Max. pressure [bar]		22	23.5	23	21	20	25	25	20
Motor power [kW]		0.37~3	0.55~4	0.37~4	0.75~5.5	0.75~11	0.75~11	1.1~15	1.5~18.5
Temp [°C]		-15 ~ 120							
Max. efficiency [%]		44	46	54	57	62	68	63	70
CDL Pipelines	DIN flange	DN25	DN25	DN25	DN32	DN40	DN40	DN50	DN50
	Oval flange	G1	G1	G1	G1¼	G1½	G1½		
CDLF Pipelines	DIN flange	DN25	DN25	DN25	DN32	DN40	DN40	DN50	DN50
	Cutting ferrule joint	DN32	DN32	DN32	DN32	DN50	DN50	DN50	DN50
	Pipe thread	ZG1¼	ZG1¼	ZG1¼	ZG1¼	ZG2	ZG2	ZG2	ZG2
	Oval flange	G1	G1	G1	G1¼	G1½	G1½		

Description		CDL/CDLF							
Rated flow [m³/h]		20	32	42	65	85	120	150	200
Rated flow [l/s]		5.6	8.9	11.7	18	24	33	41.6	55.6
Flow range [m³/h]		12~34	20~48	30~65	40~100	60~130	60~160	80~180	100~240
Flow range [l/s]		3.3~9.4	5.5~13.3	8.3~18	11.1~27.7	16.7~36.1	16.7~44.4	22~50	27.8~66.7
Max. pressure [bar]		20	25	26	18	15	15	14	15
Motor power [kW]		2.2~18.5	3~30	5.5~45	7.5~45	11~45	18.5~75	15~75	30~110
Temp [°C]		-15 ~ 120							
Max. efficiency [%]		69	73	75	76	77	74	73	79
CDL Pipelines	DIN flange	DN50	DN65	DN80	DN100	DN100	DN125	DN125	DN150
	Oval flange								
CDLF Pipelines	DIN flange	DN50	DN65	DN80	DN100	DN100	DN125	DN125	DN150
	Cutting ferrule joint	DN50							
	Pipe thread	ZG2							
	Oval flange								

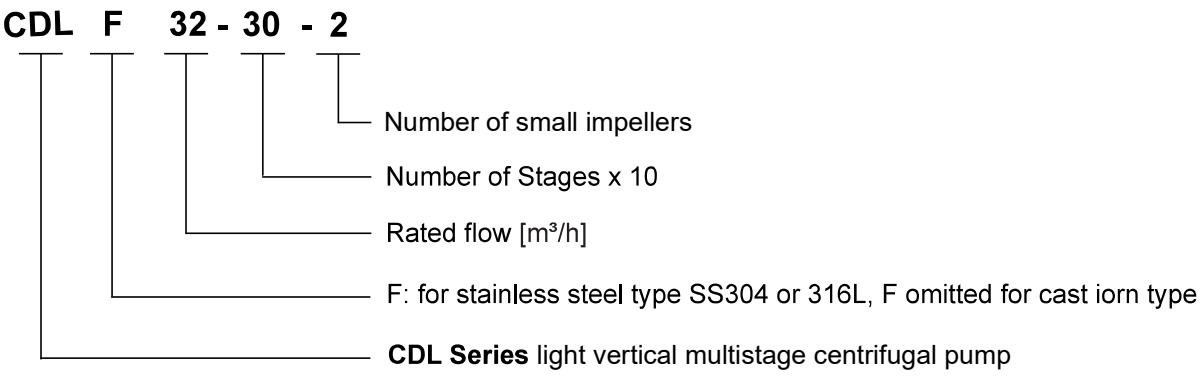
MODEL DEFINITION

CDL/CDLF

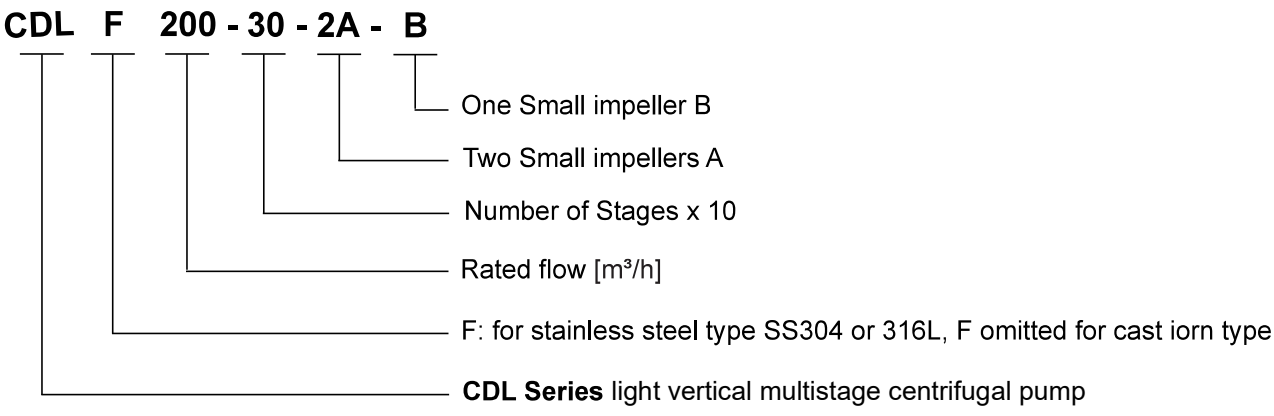
CDL/CDLF 1, 2, 3, 4, 8, 10, 12, 15 & 20



CDL/CDLF 32, 42, 65, 85,120, 150 & 200

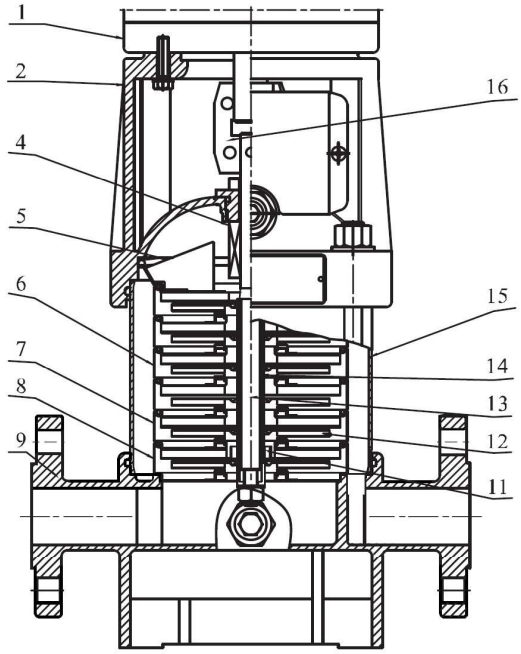


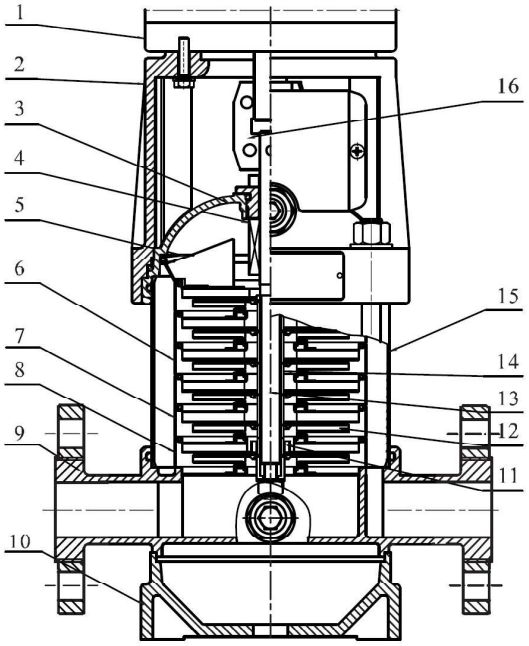
CDL/CDLF 200



SECTION DRAWING

CDL, CDLF 1, 2, 3 & 4





CDL 1, 2, 3 & 4

Pos.	Name	Material	AISI ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
4	Mechanical seal		
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
9	Inlet & outlet chamber	Cast iron	ASTM25B
11	Bearing	Tungsten carbide	
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304 AISI316L
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless steel	AISI304
16	Coupling	Carbon steel	

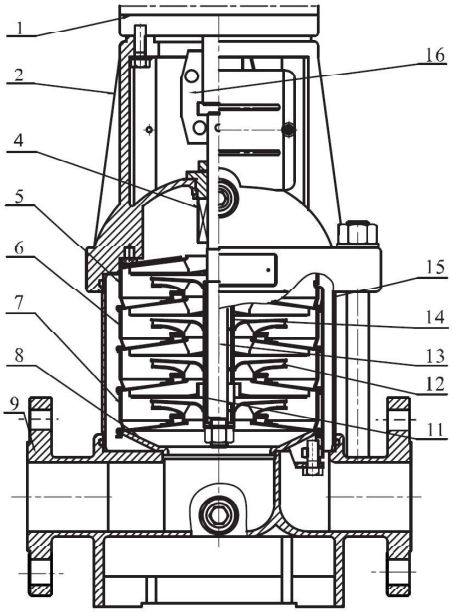
Please check with us for other materials.

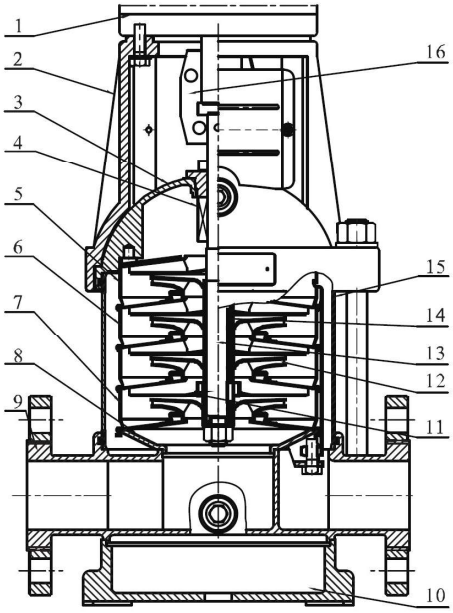
CDLF 1, 2, 3 & 4

Pos.	Name	Material	AISI/ ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
3	Seal base	Stainless steel	AISI304
4	Mechanical seal		
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
9	Inlet & outlet chamber	Stainless steel	AISI304
10	Base plate	Cast iron	ASTM25B
11	Bearing	Tungsten carbide	
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless steel	AISI304
16	Coupling	Carbon steel	

SECTION DRAWING

CDL, CDLF 8, 10, 12, 15 & 20





CDL 8, 10, 12, 15 & 20

Pos.	Name	Material	AISI ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
4	Mechanical seal		
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
9	Inlet & outlet chamber	Cast iron	ASTM25B
11	Bearing	Tungsten carbide	
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304 AISI316L
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless steel	AISI304
16	Coupling	Carbon steel/	

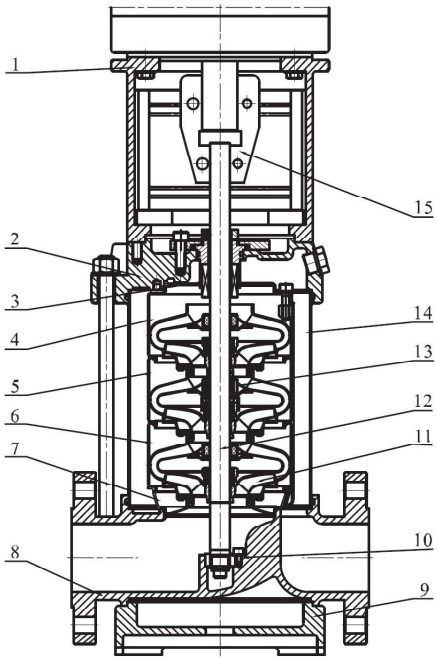
Please check with us for other materials.

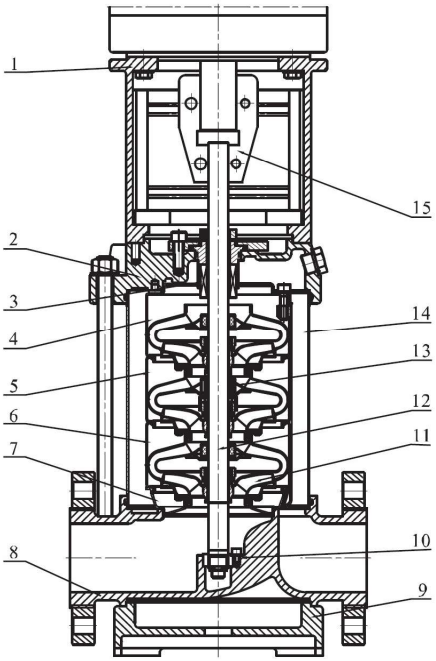
CDLF 8, 10, 12, 15 & 20

Pos.	Name	Material	AISI ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
3	Seal base	Stainless steel	AISI304
4	Mechanical seal	Tungsten carbide/ Carbon	
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
9	Inlet & outlet chamber	Stainless steel	AISI304
10	Base plate	Cast iron	ASTM25B
11	Bearing	Tungsten carbide	
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless steel	AISI304
16	Coupling	Carbon steel/ Powder metallurgy	

SECTION DRAWING

CDL, CDLF 32, 42, 65, 85





CDL 32, 42, 65, 85

Pos.	Name	Material	AISI ASTM
1	Bracket	Cast iron	ASTM25B
2	Pump head	Cast iron	ASTM25B
3	Mechanical seal		
4	Top diffuser	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
8	Inlet & outlet chamber	Cast iron	ASTM25B
9	Base plate	Cast iron	ASTM25B
10	Bottom bearing	Tungsten carbide	
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI304 AISI316L AISI431
13	Intermediate bearing	Tungsten carbide	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
14	Cylinder	Stainless steel	AISI304

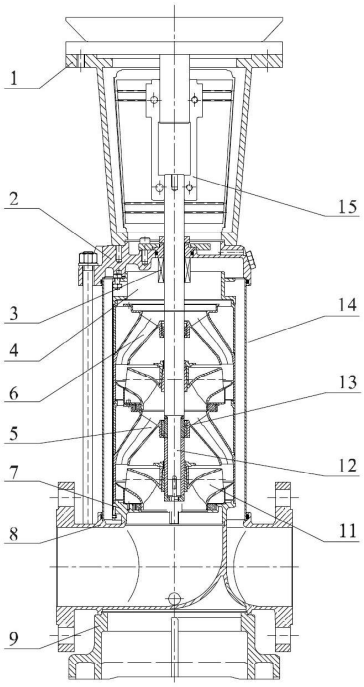
CDLF 32, 42, 65, 85

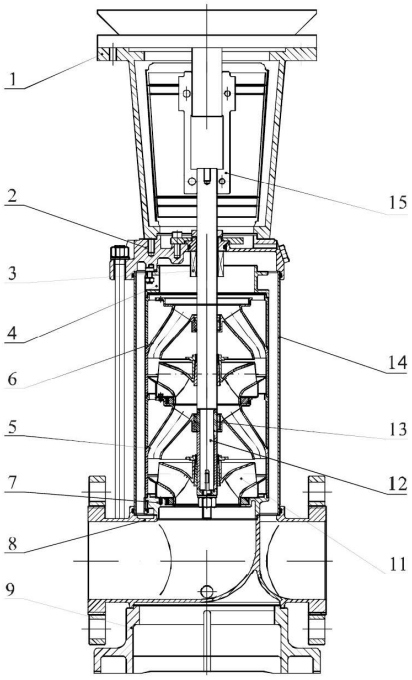
Pos.	Name	Material	AISI ASTM
1	Bracket	Cast iron	ASTM25B
2	Pump head	Stainless steel	AISI304
3	Mechanical seal		
4	Top diffuser	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
8	Inlet & outlet chamber	Stainless steel	AISI304
9	Base plate	Cast iron	ASTM25B
10	Bottom bearing	Tungsten carbide	
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI304 AISI316L AISI431
13	Intermediate bearing	Tungsten carbide	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
14	Cylinder	Stainless steel	AISI304

Please check with us for other materials.

SECTION DRAWING

CDL, CDLF 120, 150, 200





CDL 120, 150, 200

Pos.	Name	Material	AISI ASTM
1	Bracket	Cast iron	ASTM25B
2	Pump head	Cast iron	ASTM 80-55-06
3	Mechanical seal		
4	Discharge	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
8	Inlet & outlet chamber	Cast iron	ASTM 80-55-06
9	Base plate	Cast iron	ASTM25B
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI304
13	bearing	Tungsten carbide	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	NBR	

Please check with us for other materials.
CDL200 series has no NO.10

CDLF 120, 150, 200

Pos.	Name	Material	AISI ASTM
1	Bracket	Cast iron	ASTM25B
2	Pump head	Stainless steel	AISI304
3	Mechanical seal		
4	Discharge	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
8	Inlet & outlet chamber	Stainless steel	AISI304
9	Base plate	Cast iron	ASTM25B
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI304
13	bearing	Tungsten carbide	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	NBR	

Please check with us for other materials.
CDLF200 series has no NO.10

GENERAL DATA

CDL/CDLF

Max. Working Pressure

Model	Max working [bar]
CDL 1,2, 3, 4 Flange	25
CDL(F) 1,2, 3, 4 Oval flange	16
CDLF 1, 2, 3, 4 Flange, cutting ferrule joint, pipe thread	25
CDL 8, 10, 12, 15, 20 Flange	25
CDL(F) 8 Oval flange	16
CDL 8, 10, 12, 15, 20 Flange, cutting ferrule joint, pipe thread	25
CDL32	
32-10-1 ~ 32-60-2 32-60 ~ 32-100-2	16(30) 30
CDLF32	30
CDL42	
42-10-1~ 42-40-2 42-40 ~ 42-60 42-70-2 ~ 42-70	16(30) 25(30) 30
CDLF42	
42-10-1 ~ 42-60 42-70-2 ~ 42-70	25(30) 30
CDL65	
65-10-1 ~ 65-30 65-40-2 ~ 65-50-2	16(25) 25
CDL85	
85-10-1 ~ 85-30-2 85-30-1 ~ 85-40-2	16(25) 25
CDLF65,85	25
CDL/CDLF120,150,200	20

Pumps with pressure inside brackets need to specify especially.

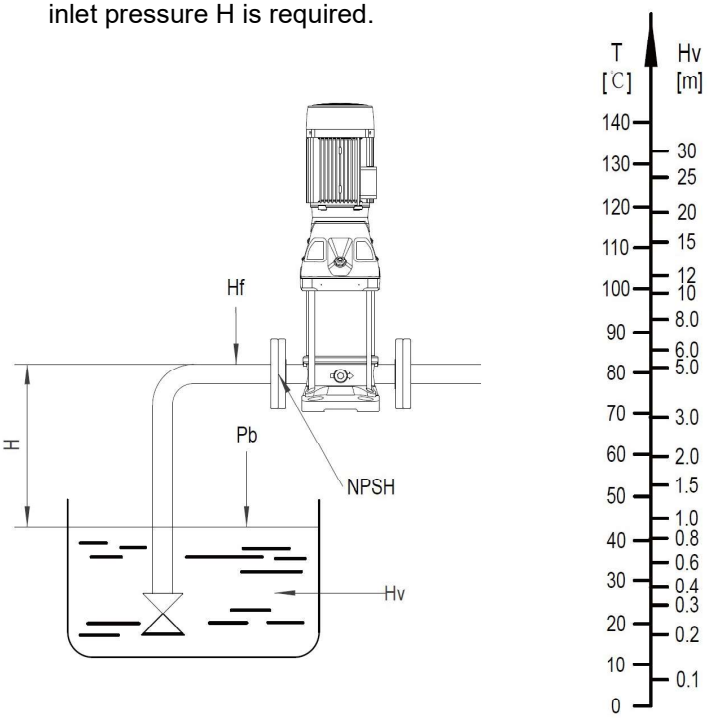
Max. Inlet Pressure

In case that the pressure in pump is lower than the steam pressure used to convey liquid, the cavitations will occur. To avoid cavitations, a minimum pressure at the inlet side of the pump shall be guaranteed. The maximum suction stroke can be calculated with following formula:

H=Pb×10.2-NPSH-Hf-Hv-Hs
pb = Barometric pressure in bar.
(Barometric pressure can be set to 1 bar).
In a closed system, Pb means system pressure [bar].
NPSH = Net Positive Suction Head [m].
(It can be read from the point of possible max. flow rate shown on NPSH curve.)
Hf = Pipe friction loss at the inlet[m].
Hv = Vapour pressure [m].
Hs = Safety margin = minimum 0.5 meters head.

If the “H” calculated is positive, the pump may run under the max. suction stroke H.

If the “H” calculated is negative, A head of minimum inlet pressure H is required.

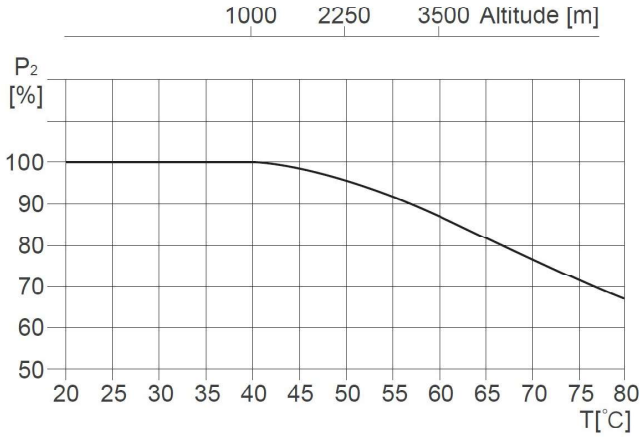


GENERAL DATA

CDL/CDLF

Max ambient temperature, altitude above sea level

When pumps working in the condition of higher than 40°C or higher than 1000m altitude, because the air density lessened, cooling performance is reduced, motor output power P2 is reduced also. The motor power shall be enlarged in those working conditions.

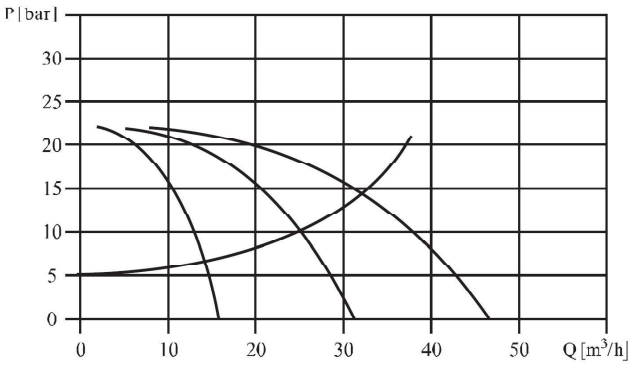


Operating in Parallel

Connecting several pumps in parallel running will benefit much more than running a single large pump.

• Applicable to different working states necessary in a variable flow system.

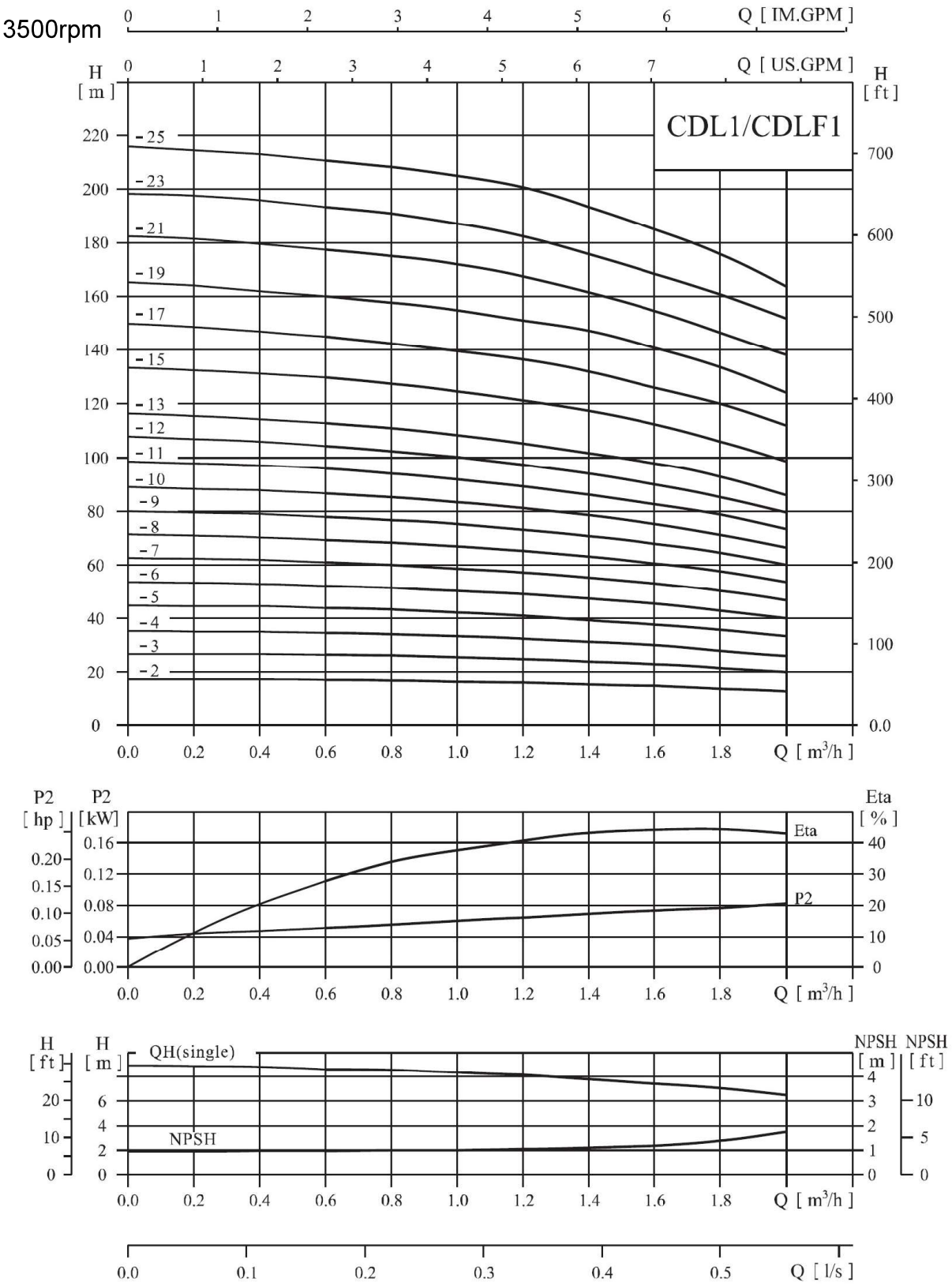
• Increasing the possibility of water supply when the pump is in failure. Because in case of pump failure, only part of the system flow is effected.



Two CDL/CDLF pumps or more can be connected in parallel if necessaty.

PERFORMANCE CURVE

CDL/CDLF 1 - 60Hz



TECHNICAL DATA

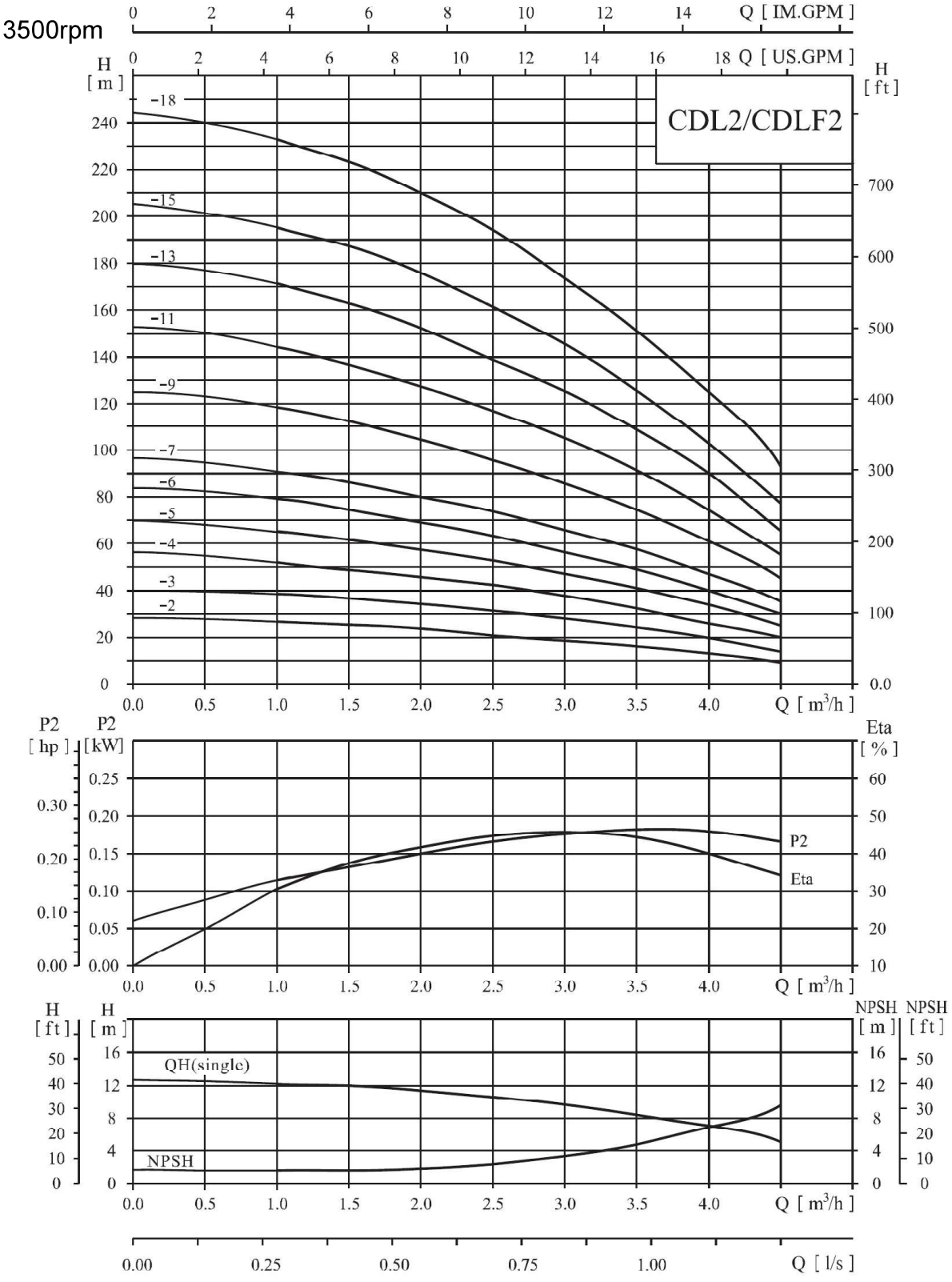
CDL/CDLF 1 - 60Hz

Performance Table

Model	Power		Q [m³/h]	0.6	0.8	1	1.2	1.4	1.6	1.8	2
	[kW]	[hp]									
1-2	0.37	0.5		17.5	17	16.5	16	15.5	15	14	13
1-3	0.37	0.5		26.5	26	25	24	23	22	21	20
1-4	0.37	0.5		35	34	33	32	31	30	28	26
1-5	0.55	0.75		43	42	41	40	39	38	35	33
1-6	0.55	0.75		52	51	50	48	47	45	43	39
1-7	0.75	1		60	59	58	56	55	52	50	46
1-8	0.75	1		68	67	65	64	62	59	57	53
1-9	0.75	1		76	75	74	73	71	66	64	60
1-10	1.1	1.5	**H [m]**	85	84	83	81	78	74	72	67
1-11	1.1	1.5		95	93	90	87	85	81	**78**	73
1-12	1.1	1.5		103	102	98	96	92	88	86	79
1-13	1.1	1.5		112	110	107	105	100	95	93	86
1-15	1.5	2		127	125	123	121	117	112	107	99
1-17	1.5	2		144	141	139	137	132	124	120	112
1-19	2.2	3		160	157	155	153	147	141	134	124
1-21	2.2	3		177	174	172	168	162	153	147	138
1-23	2.2	3		193	190	188	184	174	167	161	152
1-25	3	4		210	207	205	202	192	184	176	164

PERFORMANCE CURVE

CDL/CDLF 2 - 60Hz



TECHNICAL DATA

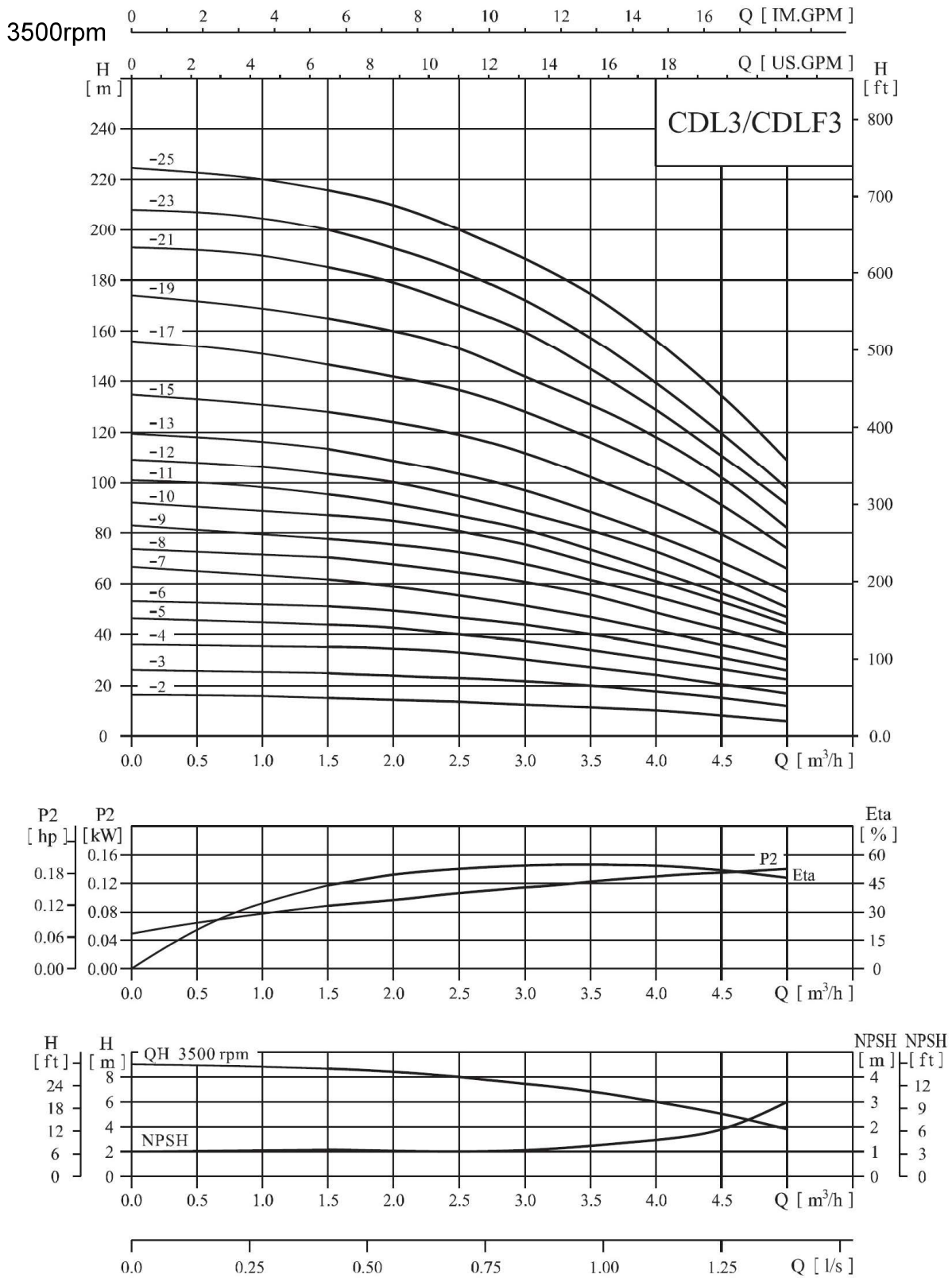
CDL/CDLF 2 - 60Hz

Performance Table

Model	Power		Q [m³/h]	1	1.5	2	2.5	3	3.5	4	4.5
	[kW]	[hp]									
2-2	0.55	0.75	H [m]	26	24	22	21	18	16	12	9
2-3	0.75	1		39	36	33	31	27	24	19	15
2-4	1.1	1.5		52	48	45	42	36	32	26	20
2-5	1.1	1.5		65	60	57	52	46	41	32	25
2-6	1.1	1.5		78	74	69	63	56	49	40	30
2-7	1.5	2		91	86	81	74	66	57	47	35
2-9	2.2	3		117	111	104	95	86	75	61	45
2-11	2.2	3		148	136	128	116	104	90	75	56
2-13	3	4		171	163	152	139	126	108	90	66
2-15	3	4		195	186	176	160	142	125	103	77
2-18	4	5.5		234	228	212	195	171	151	126	94

PERFORMANCE CURVE

CDL/CDLF 3 - 60Hz



TECHNICAL DATA

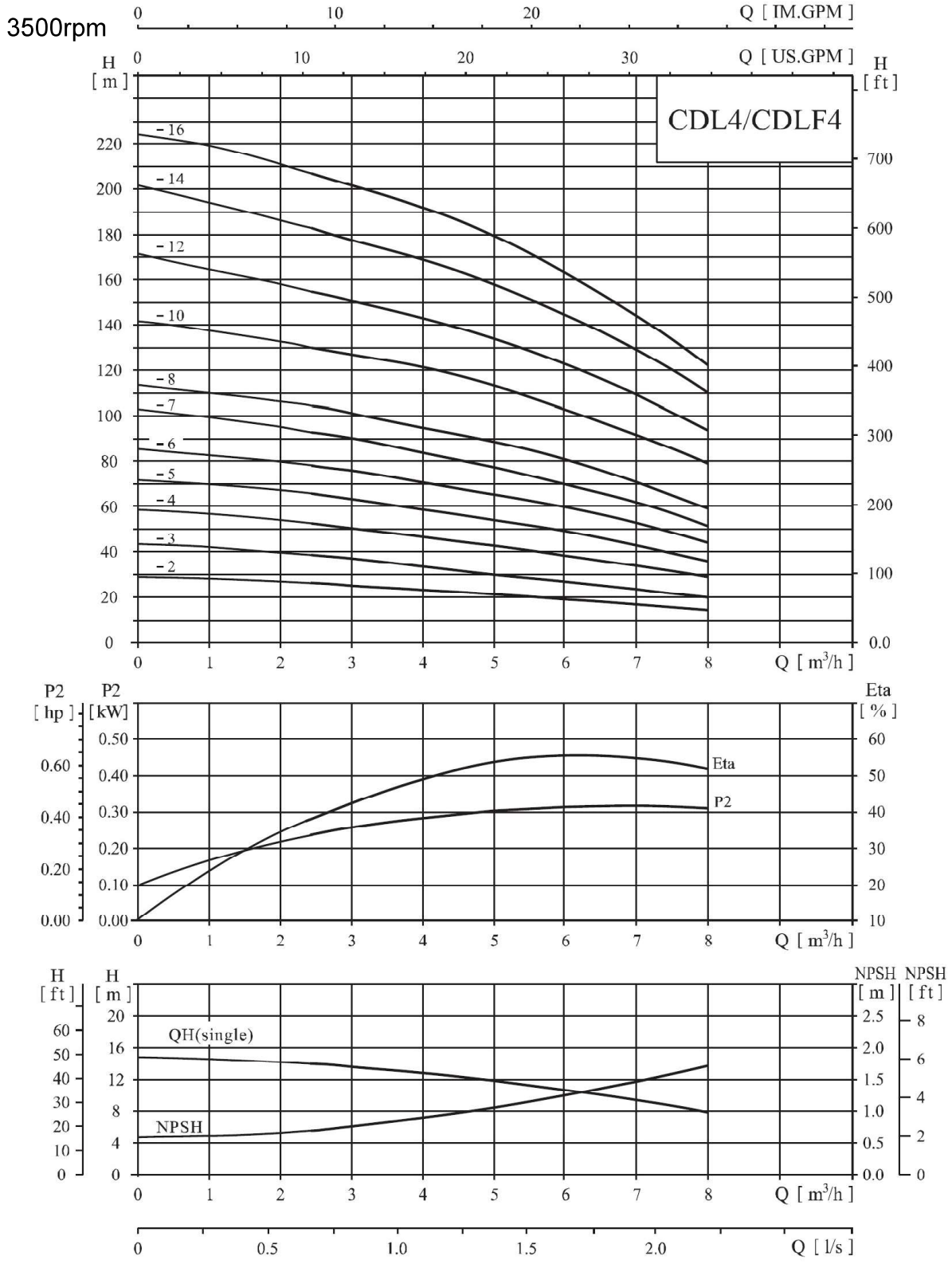
CDL/CDLF 3 - 60Hz

Performance Table

Model	Power		Q [m³/h]	1.5	2	2.5	3	3.5	4	4.5	5
	[kW]	[hp]									
3-2	0.37	0.5		17.5	16	15	14	13	11	9	8
3-3	0.55	0.75		26.5	25	24	23	20	18	15	12
3-4	0.55	0.75		35	34	32	30	27	25	20	17
3-5	0.75	1		44	42	40	38	33	31	26	23
3-6	1.1	1.5		51	50	48	45	40	37	32	27
3-7	1.1	1.5		61	59	56	52	46	43	38	31
3-8	1.1	1.5		70	67	64	61	53	49	44	35
3-9	1.5	2		78	77	72	68	60	56	50	40
3-10	1.5	2	**H [m]**	87	84	81	76	68	63	55	44
3-11	1.5	2		96	92	87	82	74	69	59	48
3-12	2.2	3		104	100	96	90	79	73	63	52
3-13	2.2	3		112	109	104	98	86	80	69	57
3-15	2.2	3		129	126	120	112	99	93	81	65
3-17	2.2	3		147	143	137	128	114	106	91	74
3-19	3	4		165	160	153	142	126	118	102	82
3-21	3	4		183	178	170	160	141	129	112	91
3-23	3	4		200	194	185	174	154	142	122	98
3-25	4	5.5		217	211	202	187	167	154	134	108

PERFORMANCE CURVE

CDL/CDLF 4 - 60Hz



TECHNICAL DATA

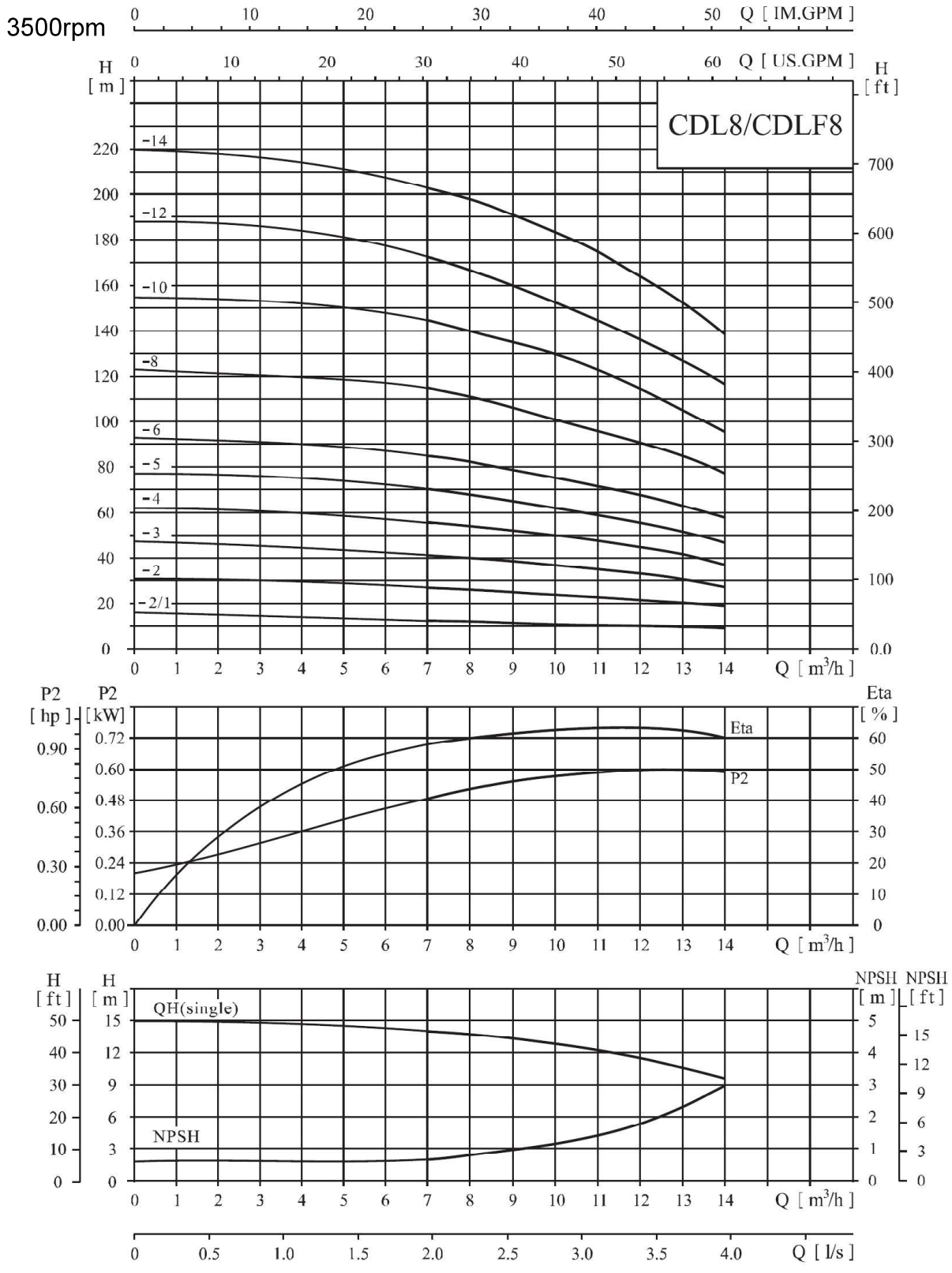
CDL/CDLF 4 - 60Hz

Performance Table

Model	Power		Q [m³/h]	2.5	3	4	5	6	7	8
	[kW]	[hp]								
4-2	0.75	1		26	25	23	21	19	16	14
4-3	1.1	1.5		39	38	36	32	28	24	21
4-4	1.5	2		52	50	48	44	38	35	31
4-5	2.2	3		65	62	60	55	49	44	39
4-6	2.2	3		78	75	72	67	***59***	54	47
4-7	3	4	**H [m]**	92	88	84	78	69	62	***55***
4-8	3	4		104	100	95	90	79	72	63
4-10	4	5.5		130	125	120	113	102	90	80
4-12	4	5.5		156	150	145	136	122	109	96
4-14	5.5	7.5		182	176	170	159	145	129	112
4-16	5.5	7.5		207	201	196	183	165	146	128

PERFORMANCE CURVE

CDL/CDLF 8 - 60Hz



TECHNICAL DATA

CDL/CDLF 8 - 60Hz

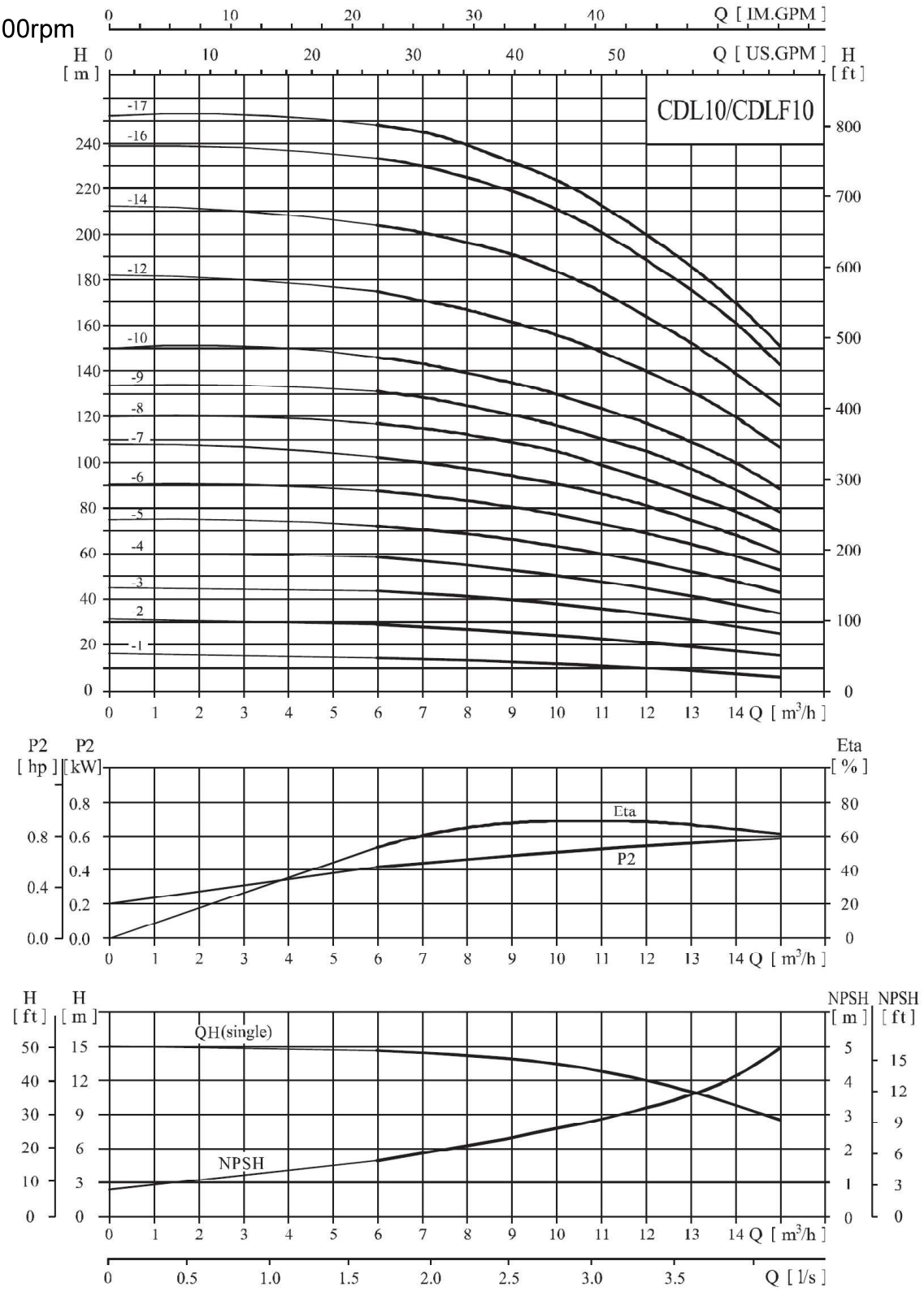
Performance Table

Model	Power		Q [m³/h]	7	8	9	10	11	12	13	14
	[kW]	[hp]									
8-2/1	0.75	1		13	12	11.5	11	l0.5	10	9.5	9
8-2	1.5	2		27	26	25	24	23	22	20	18
8-3	2.2	3		41	40	38	37	35	33	30	28
8-4	3	4		55	54	52	*50*	47	45	41	38
8-5	3	4	**H [m]**	70	68	65	63	59	56	52	47
8-6	4	5.5		85	82	78	76	72	68	62	57
8-8	*5.5*	7.5		115	110	105	101	97	91	84	75
8-10	7.5	10		145	140	132	126	122	115	105	95
8-12	7.5	10		173	167	160	152	147	132	125	115
8-14	11	15		202	195	188	179	174	163	147	135

PERFORMANCE CURVE

CDL/CDLF 10 - 60Hz

3500rpm



TECHNICAL DATA

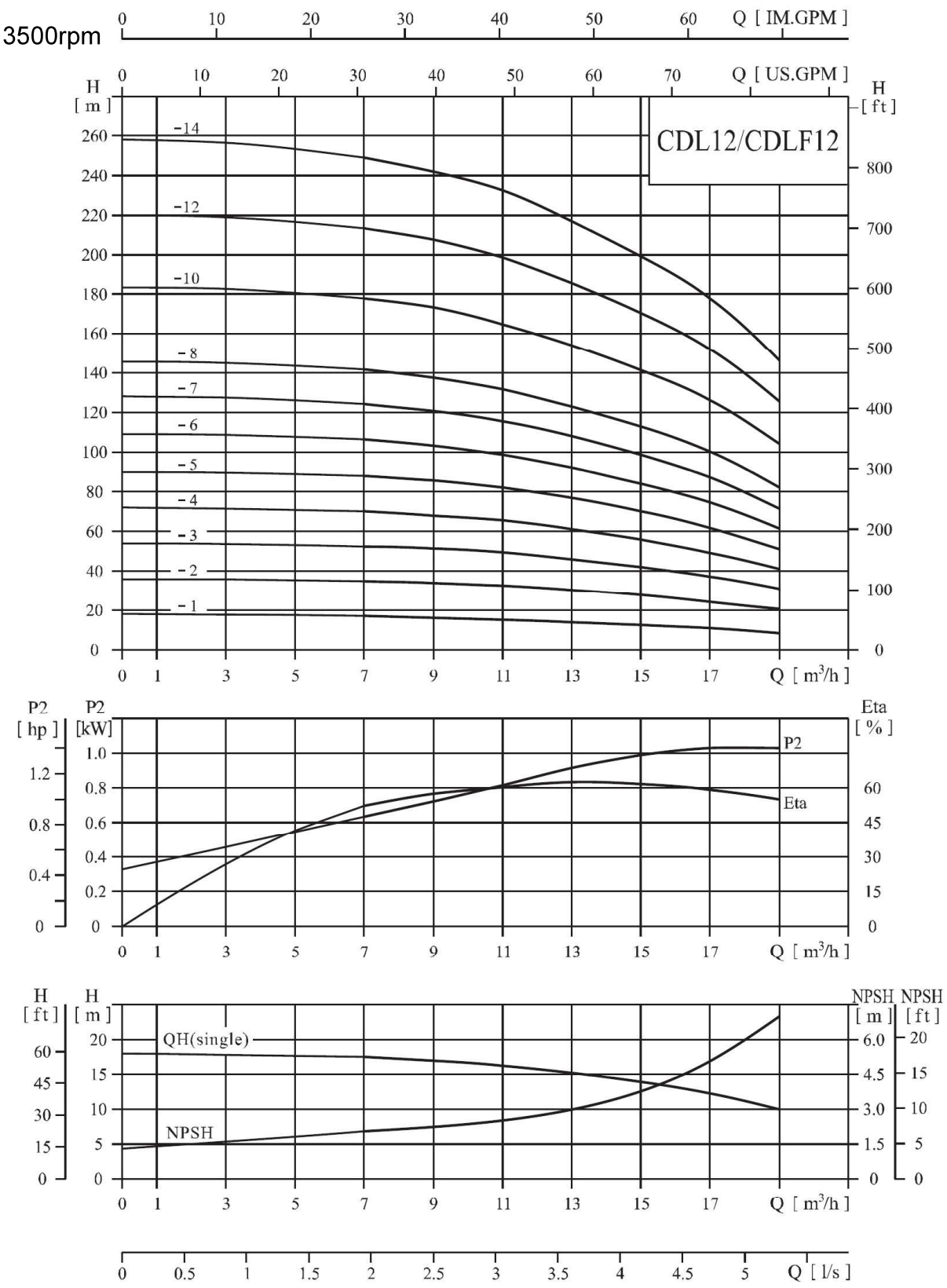
CDL/CDLF 10 - 60Hz

Performance Table

Model	Power		Q [m³/h]	6	7	8	9	10	11	12	13	14	15
	[kW]	[hp]											
10-1	0.75	1		14	13.5	13	12.5	12	11	10	9	7	6
10-2	1.5	2		29	28	27	26	25	23	22	19	18	16
10-3	2.2	3		43	42	41	39	38	36	34	31	28	25
10-4	3	4		58	57	55	53	51	48	45	41	38	34
10-5	3	4		72	71	69	66	64	61	57	52	48	43
10-6	4	5.5		87	86	83	80	77	74	69	64	59	52
10-7	5.5	7.5	**H [m]**	102	100	97	94	90	87	81	75	69	61
10-8	5.5	7.5		117	114	110	108	103	99	93	86	79	70
10-9	5.5	7.5		131	128	125	121	116	111	105	98	90	79
10-10	7.5	10		146	143	139	135	129	123	117	109	100	89
10-12	7.5	10		175	172	167	163	156	149	140	131	120	107
10-14	11	15		204	201	196	191	183	175	164	153	140	125
10-16	11	15		233	230	224	219	210	200	188	176	160	143
10-17	11	15		248	245	239	233	224	213	200	186	170	152

PERFORMANCE CURVE

CDL/CDLF 12 - 60Hz



TECHNICAL DATA

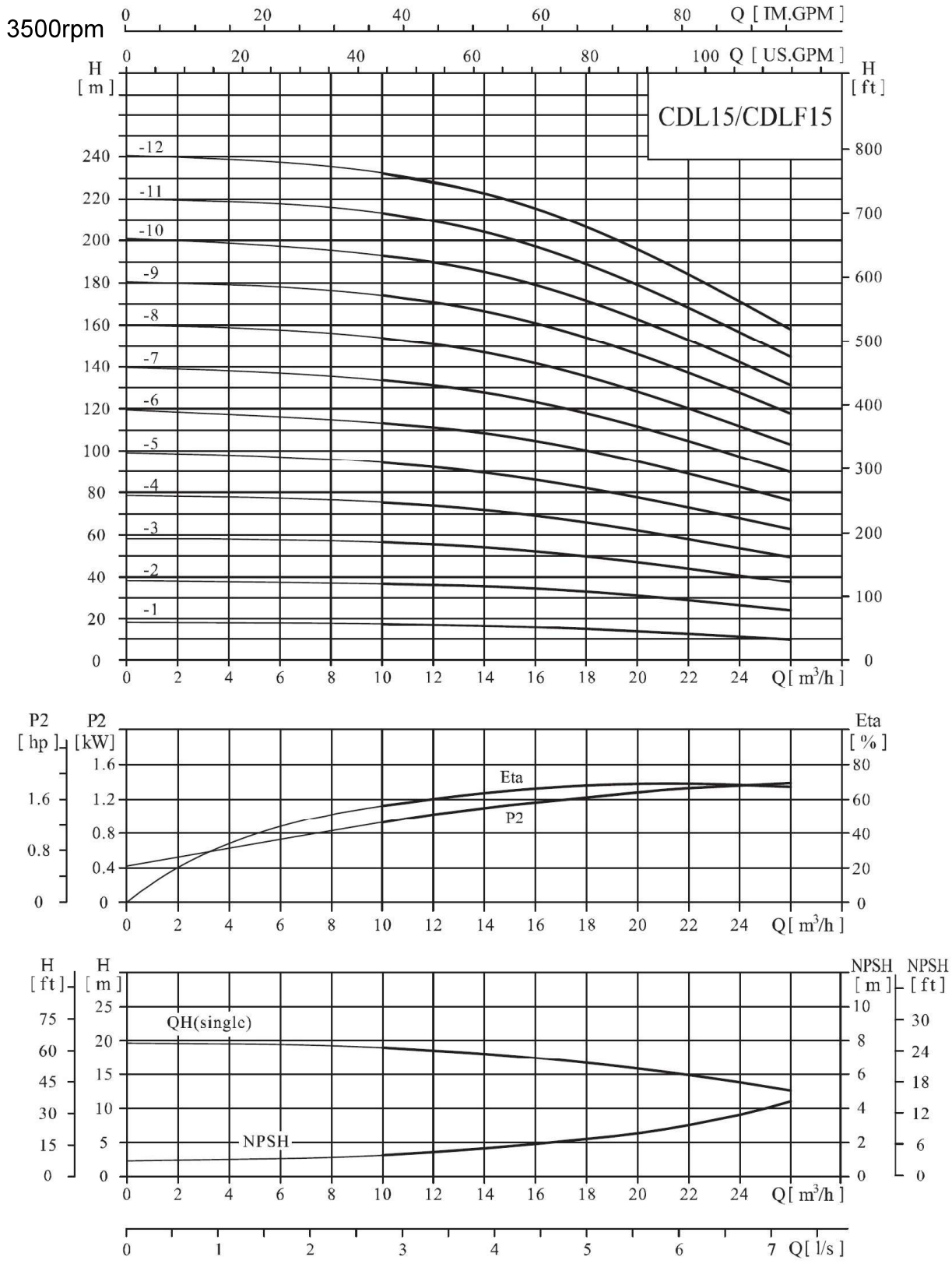
CDL/CDLF 12 - 60Hz

Performance Table

Model	Power		Q [m³/h]	7	9	11	12	13	15	17	19
	[kW]	[hp]									
12-1	1.1	1.5	H [m]	17	16	15	14.5	14	12.5	11	8.5
12-2	2.2	3		35	34	32.5	32	30.5	27	24.5	20.5
12-3	4	5.5		52.5	51.5	50	48	46	41.5	37.5	31
12-4	5.5	7.5		70	68	65.5	64	61.5	55	49.5	41
12-5	5.5	7.5		88	86	82	80	77	70	62	51
12-6	7.5	10		107	103	99	96	92	84	75	61
12-7	7.5	10		124	121	116	112	107	97	88	71
12-8	11	15		141	137	132	128	122	111	101	82
12-10	11	15		178	173	166	161	153	140	128	104
12-12	15	20		213	208	199	193	185	169	154	125
12-14	15	20		249	242	233	225	216	198	180	145

PERFORMANCE CURVE

CDL/CDLF 15 - 60Hz



TECHNICAL DATA

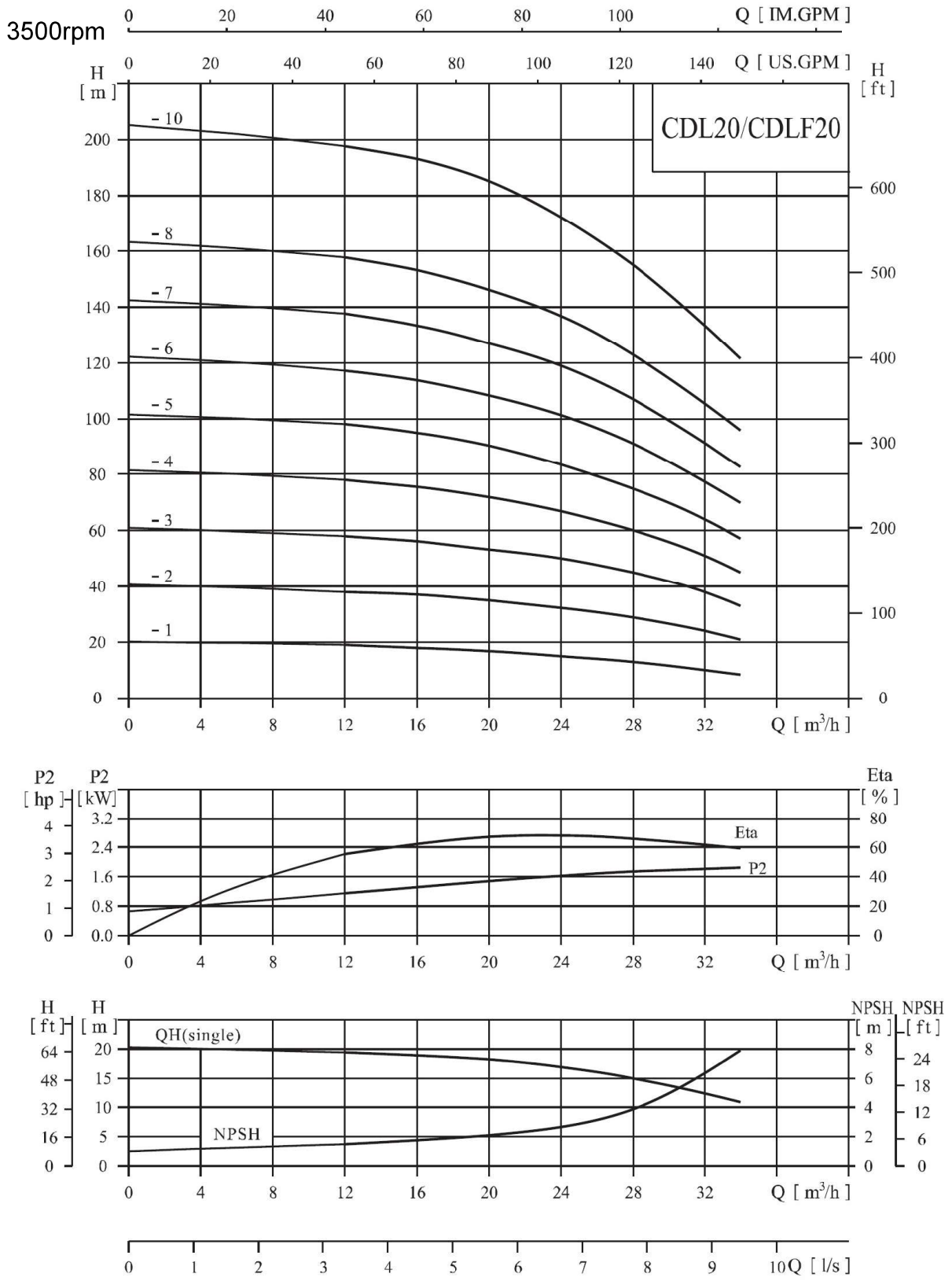
CDL/CDLF 15 - 60Hz

Performance Table

Model	Power		Q [m/h]	10	12	14	15	16	18	20	22	24	26
	[kW]	[hp]											
15-1	1.5	2	H [m]	17.5	17	16.5	16	15.5	15	14	12.5	11	9.5
15-2	3	4		36.5	36	35.5	35	34.5	33	31	29	27	24
15-3	4	5.5		56	55	54	53	52	50	47	44	41	37
15-4	5.5	7.5		75	74	72	71	69	66	62	58	54	49
15-5	7.5	10		94	92	90	88	87	83	79	74	68	62
15-6	11	15		113	111	108	107	105	101	95	89	83	76
15-7	11	15		134	131	128	126	124	118	112	105	98	90
15-8	11	15		154	151	147	144	142	136	129	121	112	103
15-9	15	20		174	171	167	164	161	155	147	138	128	118
15-10	15	20		193	190	186	182	180	172	163	154	143	131
15-12	18.5	25		232	228	223	219	216	207	197	185	172	158

PERFORMANCE CURVE

CDL/CDLF 20 - 60Hz



TECHNICAL DATA

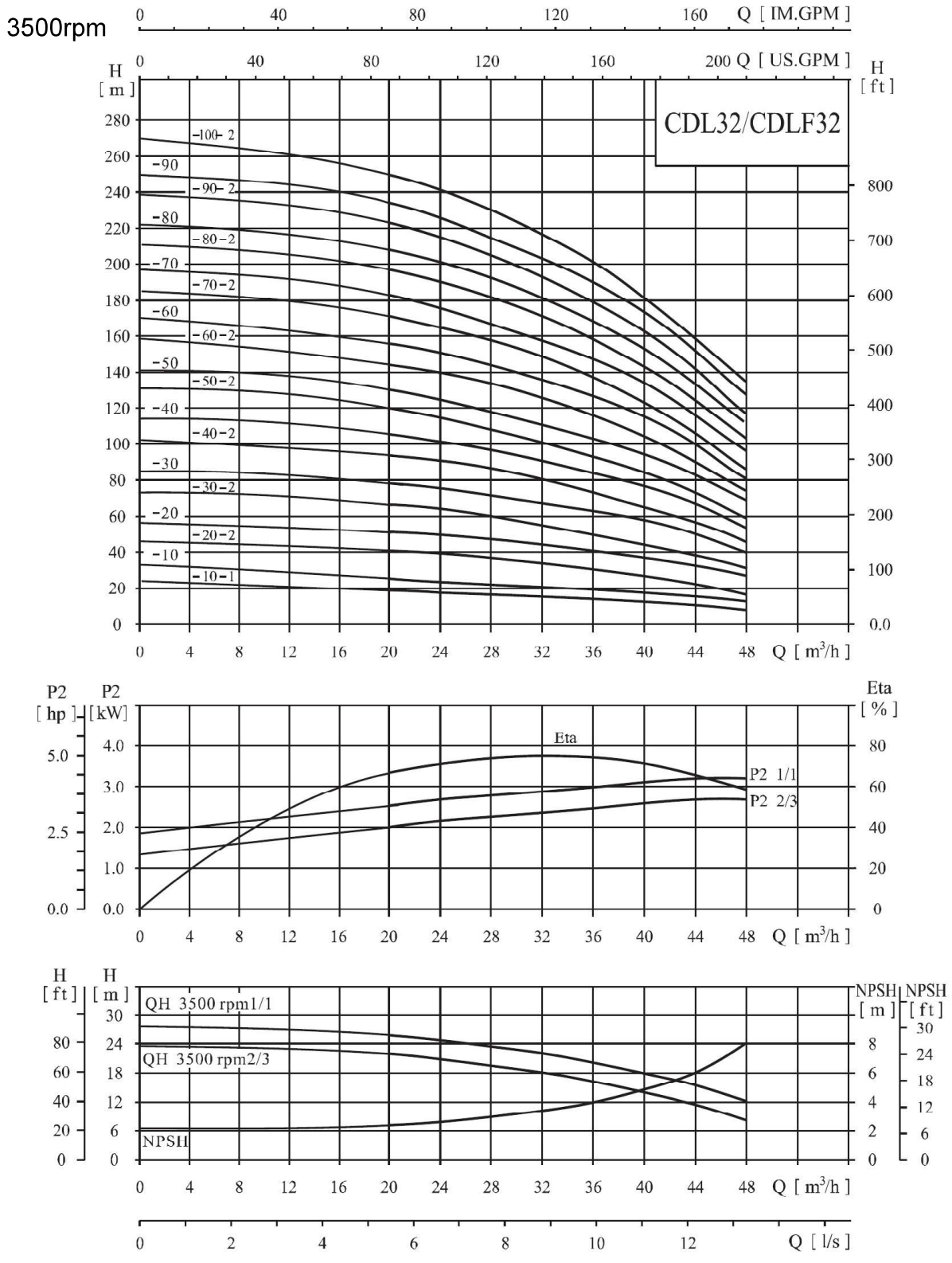
CDL/CDLF 20 - 60Hz

Performance Table

Model	Power		Q [m^3/h]	12	16	20	24	28	32	34
	[kW]	[hp]								
20-1	2.2	3		19	18	17	15	13	10	8.5
20-2	4.0	5.5		38	37	35	32	29	24	21
20-3	5.5	7.5		58	56	53	50	45	38	33
20-4	7.5	10		78	75	72	67	60	51	45
20-5	11	15	**H [m]**	98	94	90	85	75	64	57
20-6	11	15		118	113	108	102	91	77	70
20-7	15	20		138	133	127	119	107	91	83
20-8	15	20		158	153	146	137	123	105	96
20-10	18.5	25		198	193	185	172	155	133	122

PERFORMANCE CURVE

CDL/CDLF 32 - 60Hz



TECHNICAL DATA

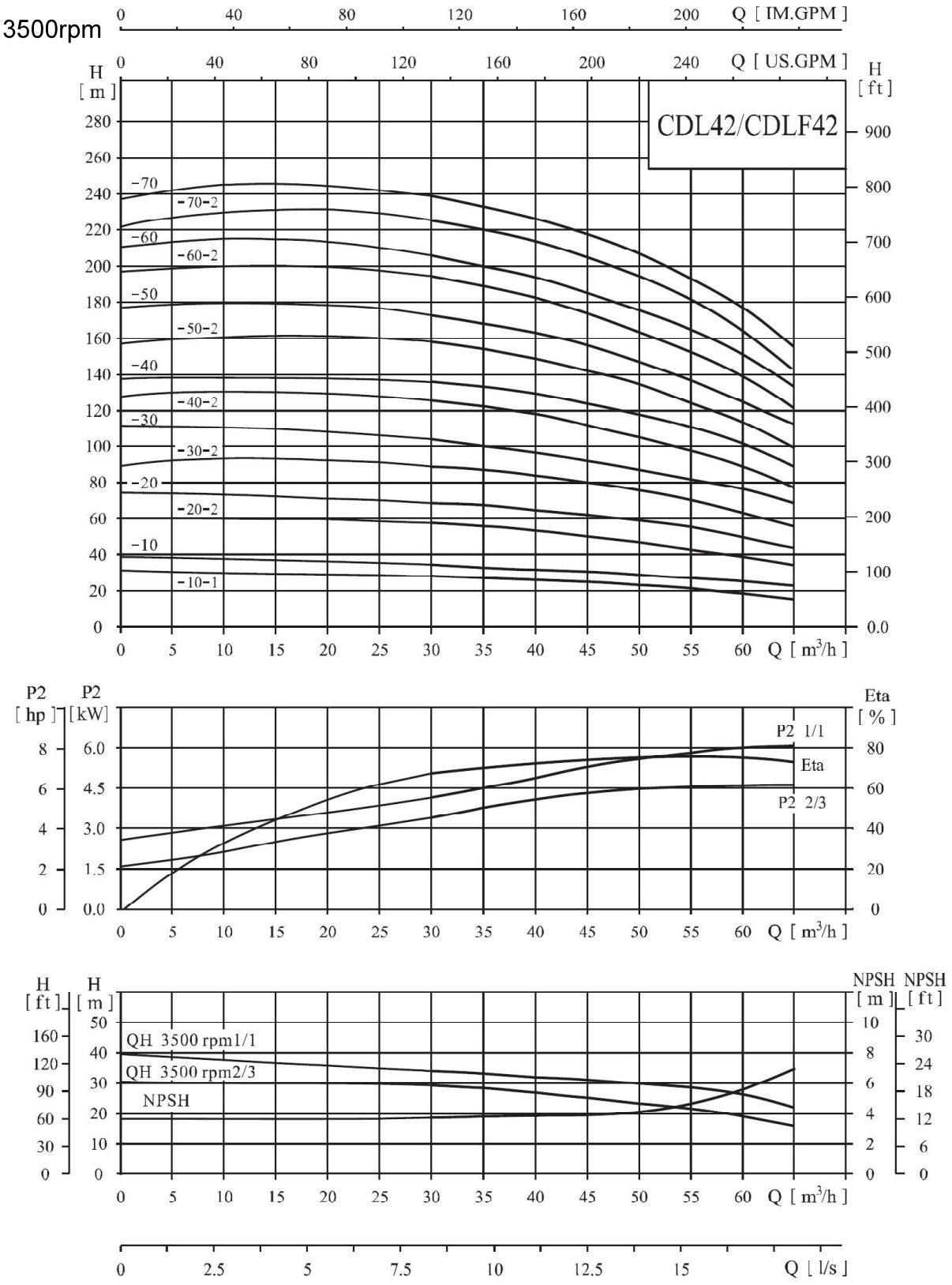
CDL/CDLF 32 - 60Hz

Performance Table

Model	Power		Q [m³/h]	20	24	28	32	36	40	44	48
	[kW]	[hp]									
32-10-1	3.0	4		20	19	18	17	15	13	10	7
32-10	4.0	*5.5*		26	*25*	24	23	21	19	17	14
32-20-2	5.5	7.5		41	40	38	35	31	27	22	17
32-20	7.5	10		52	*50*	48	45	41	37	33	27
32-30-2	7.5	10		67	64	61	57	52	46	39	31
32-30	11	15		78	75	71	67	62	56	50	40
32-40-2	11	15		94	91	87	81	73	*65*	56	45
32-40	15	20		104	101	96	91	83	75	66	*55*
32-50-2	15	20		119	115	109	102	94	84	73	59
32-50	18.5	25	**H [m]**	130	125	119	112	104	94	83	69
32-60-2	18.5	25		145	140	134	126	116	104	90	74
32-60	18.5	25		155	150	144	136	126	114	100	81
32-70-2	22	30		172	166	158	149	137	123	!06	86
32-70	22	30		182	176	168	159	148	133	118	97
32-80-2	22	30		196	190	182	172	159	143	124	102
32-80	30	40		208	201	192	181	167	152	132	117
32-90-2	30	40		223	216	206	194	179	162	142	117
32-90	30	40		234	226	216	204	189	172	152	127
32-100-2	30	40		248	241	231	217	201	181	159	133

PERFORMANCE CURVE

CDL/CDLF 42 - 60Hz



TECHNICAL DATA

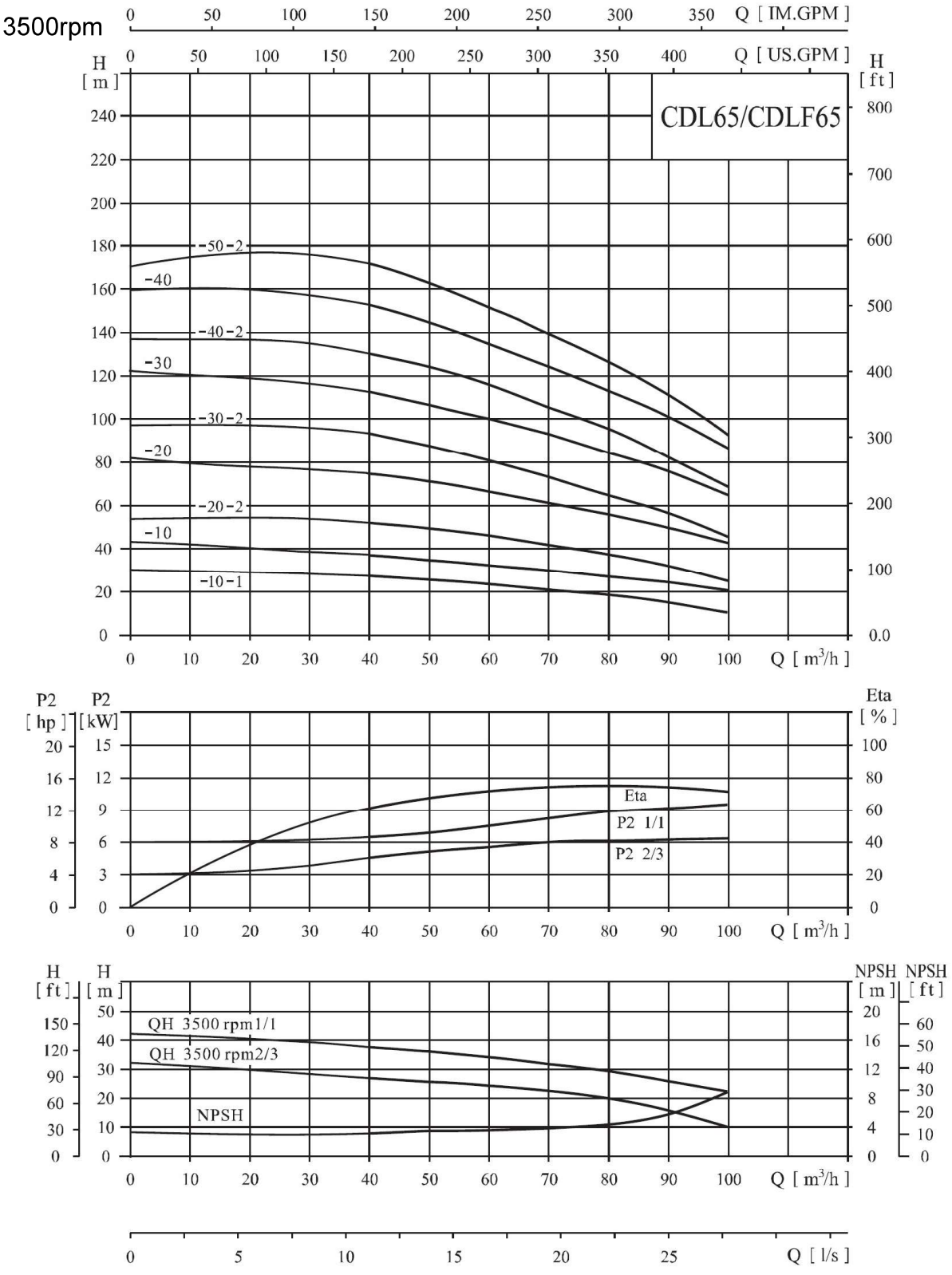
CDL/CDLF 42 - 60Hz

Performance Table

Model	Power		Q [m³/h]	30	35	40	42	45	50	55	60	65
	[kW]	[hp]										
42-10-1	5.5	7.5		29	28	27	26	25	23	21	19	16
42-10	7.5	10		34	33	32	31.5	30	29	27	25	22
42-20-2	II	15		57	55	53	52	49	46	43	38	33
42-20	15	20		69	67	65	63	61	59	55	50	44
42-30-2	18.5	25		90	88	85	83	80	75	72	63	55
42-30	18.5	25		102	100	97	95	92	88	82	76	68
42-40-2	22	30	**H [m]**	125	121	118	115	112	105	98	89	78
42-40	30	40		136	133	129	126	123	117	112	102	89
42-50-2	30	40		159	154	149	146	142	134	121	115	99
42-50	30	40		171	166	161	158	154	145	138	126	112
42-60-2	37	50		194	188	182	178	173	163	155	139	122
42-60	37	50		205	200	193	190	186	176	166	152	134
42-70-2	45	60		227	220	213	210	205	193	182	165	144
42-70	45	60		239	232	226	221	216	204	194	178	157

PERFORMANCE CURVE

CDL/CDLF 65 - 60Hz



TECHNICAL DATA

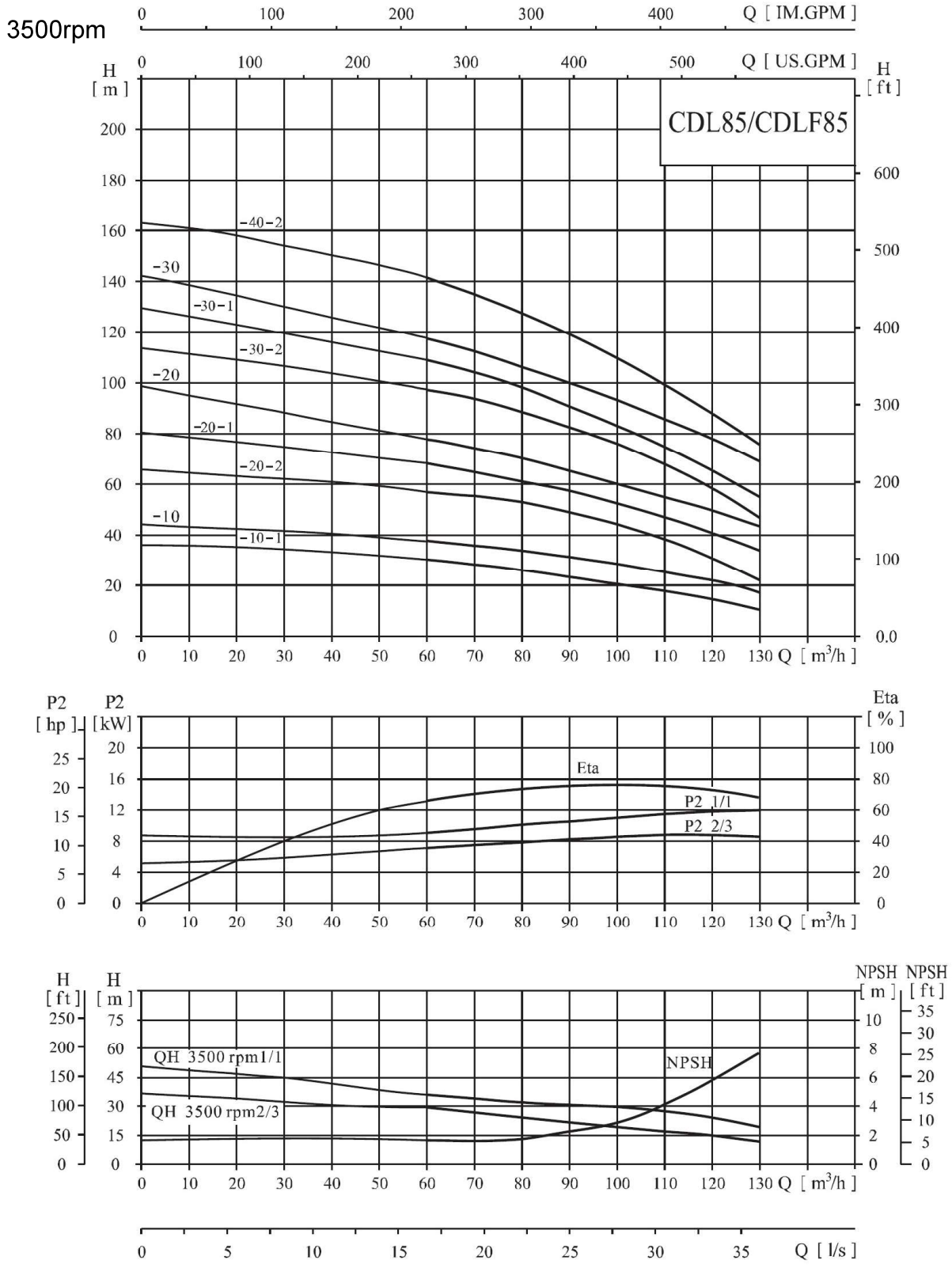
CDL/CDLF 65 - 60Hz

Performance Table

Model	Power		Q [m^3/h]	40	50	60	65	70	80	90	100
	[kW]	[hp]									
65-10-1	7.5	10	H [m]	26	25	23	22	21	18	14	10
65-10	11	15		37	35	33	32	31	28	24	21
65-20-2	15	20		53	50	47	44	42	37	31	23
65-20	22	30		74	72	67	64	62	57	51	42
65-30-2	22	30		93	88	80	76	72	65	56	45
65-30	30	40		112	108	100	96	93	86	77	65
65-40-2	37	50		130	124	115	110	103	94	83	66
65-40	45	60		152	144	135	130	123	114	102	86
65-50-2	45	60		172	162	151	144	137	126	112	91

PERFORMANCE CURVE

CDL/CDLF 85 - 60Hz



TECHNICAL DATA

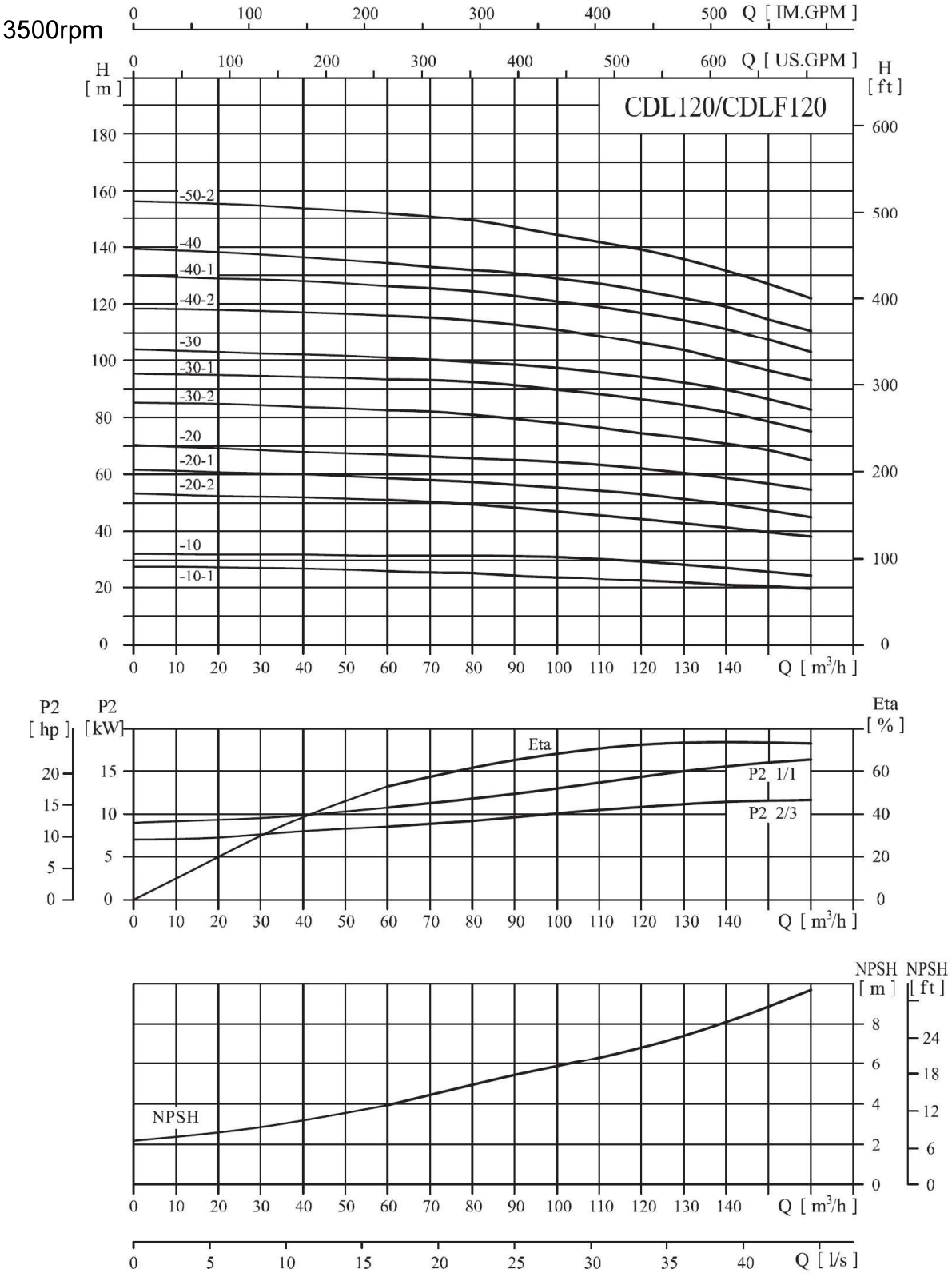
CDL/CDLF 85 - 60Hz

Performance Table

Model	Power		Q [m³/h]	60	70	80	85	90	100	110	120	130
	[kW]	[hp]										
85-10-1	11	15	H [m]	31	27	25	24	23	21	18	14	9
85-10	15	20		36	35	33	31	30	29	26	23	18
85-20-2	18.5	25		59	57	54	51	48	44	39	32	22
85-20-1	22	30		67	65	62	59	57	51	47	41	33
85-20	30	40		76	73	69	66	64	60	56	52	44
85-30-2	37	50		98	94	88	85	82	75	69	59	46
85-30-1	37	50		108	104	98	94	90	83	78	69	56
85-30	45	60		116	111	105	102	97	93	88	79	69
85-40-2	45	60		141	135	128	124	118	109	102	89	72

PERFORMANCE CURVE

CDL/CDLF 120 - 60Hz



TECHNICAL DATA

CDL/CDLF 120 - 60Hz

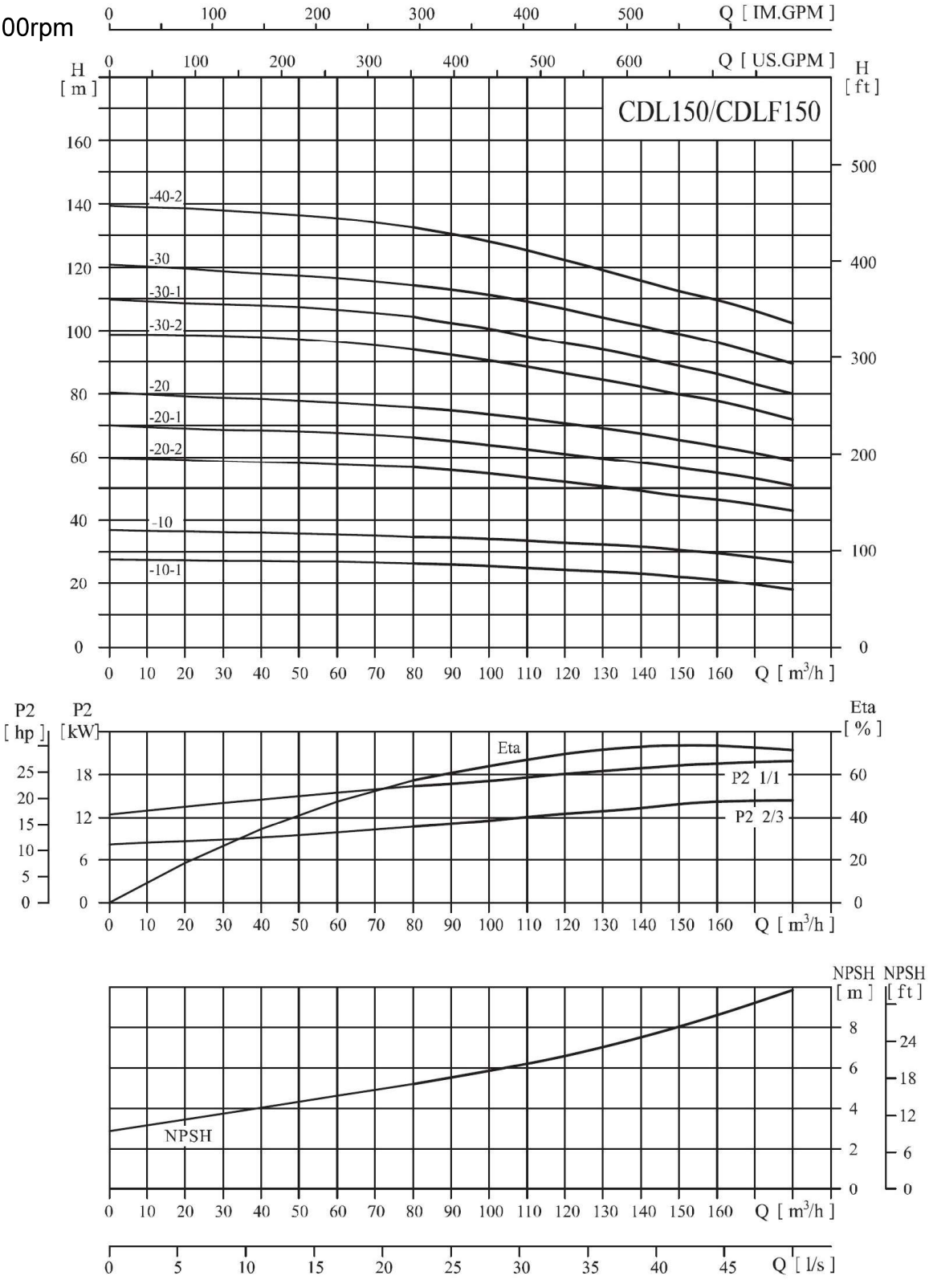
Performance Table

Model	Power		Q [m³/h]	60	70	80	90	100	110	120	130	140	150	160
	[kW]	[hp]												
120-10-1	15	20		26.5	26	25	24.5	23.8	23	22.5	21.5	21.3	21	20
120-10	18.5	25		30.8	30.7	30.7	30.5	30.3	29.5	28.8	27.6	26.4	25.4	24.4
120-20-2	30	40		51.5	50.5	49.5	47.5	46	45.5	44.8	43	41	39.7	38.5
120-20-1	30	40		58.3	58	57.3	56	54.7	54	53	51.5	50	47.4	45
120-20	37	50		66.3	66	65.7	65	64.4	63	62	60.7	59.6	57	54.6
120-30-2	45	60	**H [m]**	83	82	81	79.5	78	76	74.5	73.5	71	68.5	65
120-30-1	45	60		91.3	91	90.4	89	87.7	86	84.4	82	80	76.7	73.3
I20-30	55	75		100.3	100	99.4	98.3	97.3	95	94	92	90	86.3	82.7
120-40-2	75	100		116	115.5	114	113	111	109	105.5	104	100	97	93
I20-40-1	75	100		126	125.4	124.6	122.6	120.6	118.5	116.5	114	111.3	107	I03
120-40	75	100		134	133	132	I31	129.5	127.5	125	122	119	114.5	109.5
120-50-2	75	100		152	151	149.7	I47	144	141.5	139	135.5	132	127	122

PERFORMANCE CURVE

CDL/CDLF 150 - 60Hz

3500rpm



TECHNICAL DATA

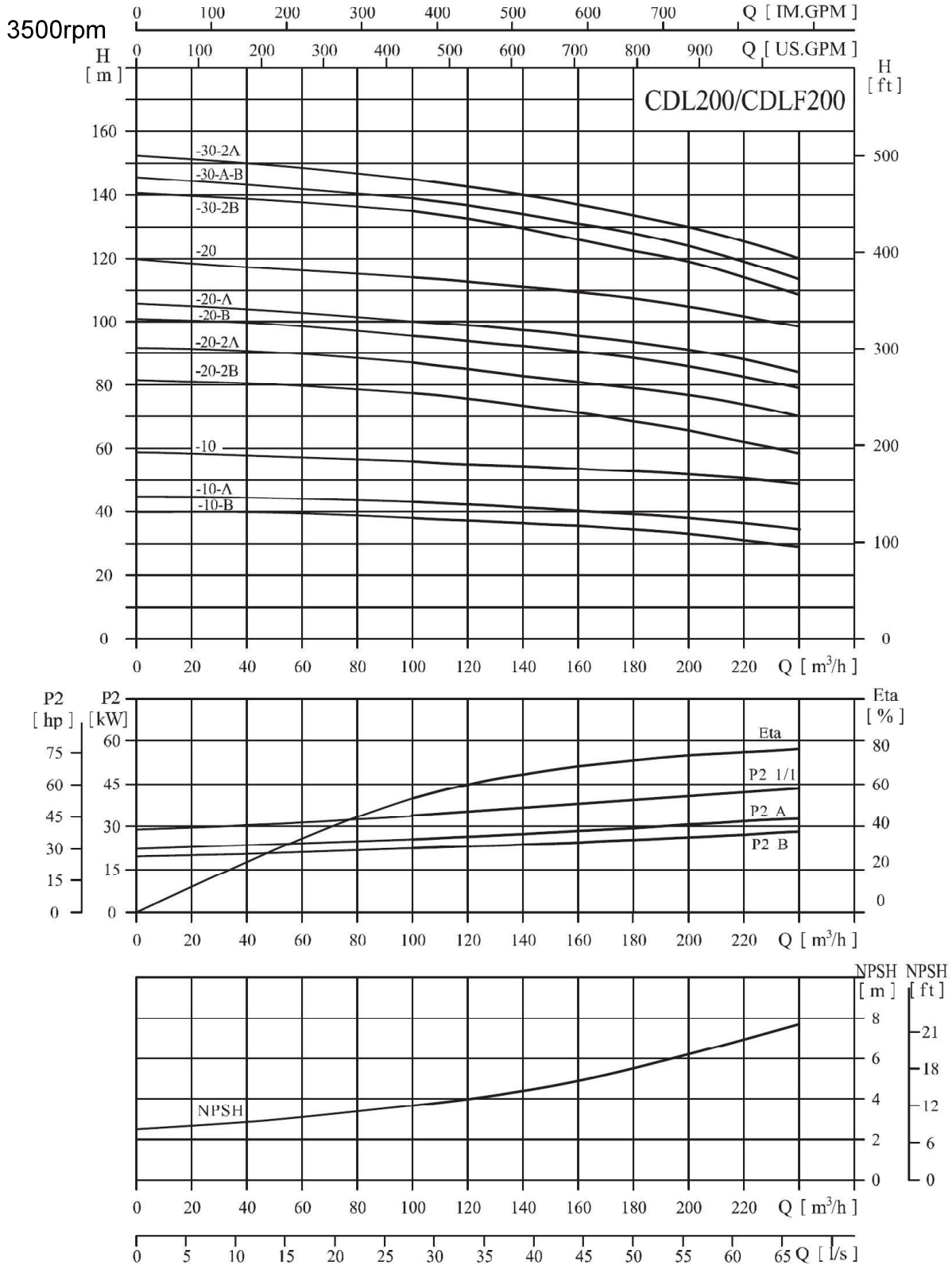
CDL/CDLF 150 - 60Hz

Performance Table

Model	Power		Q [m³/h]	80	90	100	110	120	130	140	150	160	170	180
	[kW]	[hp]												
150-10-1	15	20	H [m]	26.5	26	25.7	25	24.3	23.8	23.2	22.3	21.2	19.5	18
150-10	22	30		35	34.5	34	33.6	33	32.3	31.7	30.7	29.6	28	27
150-20-2	30	40		57	55.5	53	52	51.3	50	49	48	47	45	43
150-20-1	37	50		67	65	63.5	62	61	60	58.5	56	*55*	53	51
150-20	45	60		75.5	74.5	73.6	72	70.4	69	67.5	65.5	63.5	61	*59*
150-30-2	55	75		94	92	90.5	88.4	86.4	83.8	81	80	78	75.3	72.5
150-30-1	75	100		104	102.5	100	98	96	94	92	89	87	84	80
150-30	75	100		114.4	113	111.3	109	106.5	104	101.5	99	96	93	89.4
150-40-2	75	100		133	130.3	127.6	124.6	121.7	118.3	115	112.5	110	106.3	102.5

PERFORMANCE CURVE

CDL/CDLF 200 - 60Hz



TECHNICAL DATA

CDL/CDLF 200 - 60Hz

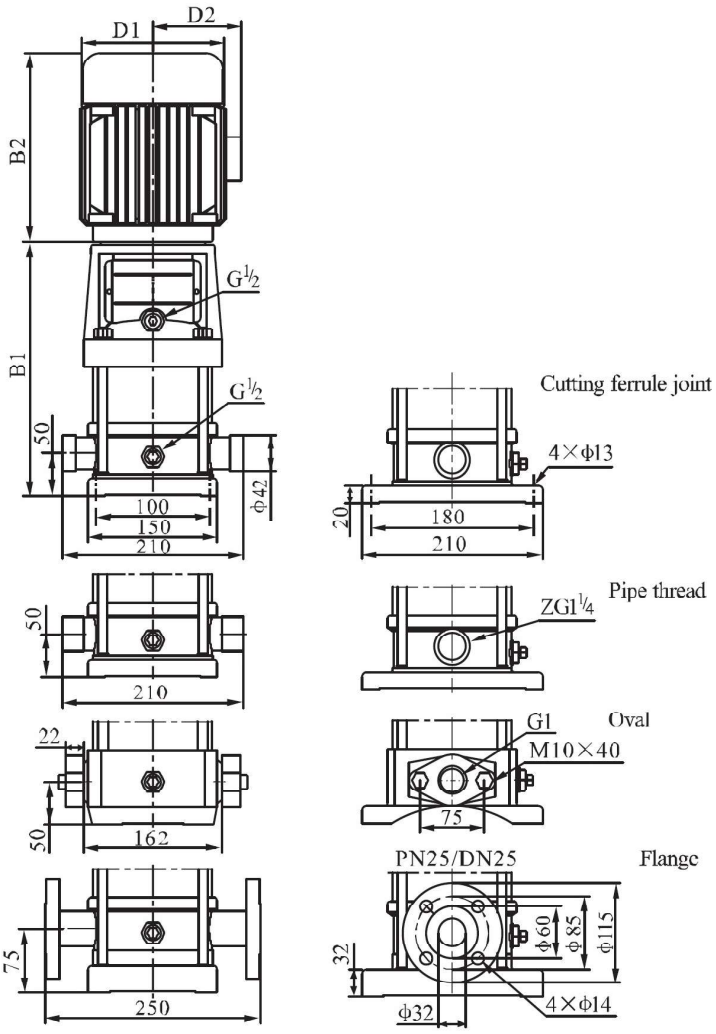
Performance Table

Model	Power		Q [m³/h]	100	120	140	160	180	200	220	240
	[kW]	[hp]									
200-10-B	30	40	H [m]	38	37	36.5	35.5	34	33	31	29
200-10-A	37	50		43	42	41.5	40	39	38	36.5	34.5
200-10	45	60		56	55	54.5	53.5	53	52	50.5	48.5
200-20-2B	55	75		77.5	75.5	73.5	71	68.5	66	62	58,5
200-20-2A	75	100		87	85	83	81	79	77	74	70
200-20-B	75	100		95.5	93.5	92.5	90.5	88.5	86	82.5	79
200-20-A	90	120		100	98.5	97.5	95.5	93.5	91	88	84
200-20	90	120		114	112.5	111	109.5	107.5	105	101.5	98.5
200-30-2B	110	150		135	132.5	129.5	126	122.5	119	114	108.5
200-30-A-B	110	150		139	136.5	134	131	128	124	119	113.5
200-30-2A	110	150		145	142.5	140	137	133.5	130	125.5	120

DIMENSIONS & WEIGHTS

CDL/CDLF 1 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
1-2	258	225	483	148	117	20
1-3	276	225	501	148	117	20
1-4	294	225	519	148	117	21
1-5	312	225	537	148	117	22
1-6	330	225	555	148	117	23
1-7	358	245	603	170	142	26
1-8	376	245	621	170	142	27
1-9	394	245	639	170	142	28
1-10	412	245	657	170	142	29
1-11	430	245	675	170	142	29
1-12	448	245	693	170	142	30
1-13	466	245	711	170	142	31
1-15	512	290	802	190	155	37
1-17	548	290	838	190	155	38
1-19	584	290	874	190	155	41
1-21	620	290	910	190	155	42
1-23	656	290	946	190	155	43
1-25	702	345	1047	197	165	51

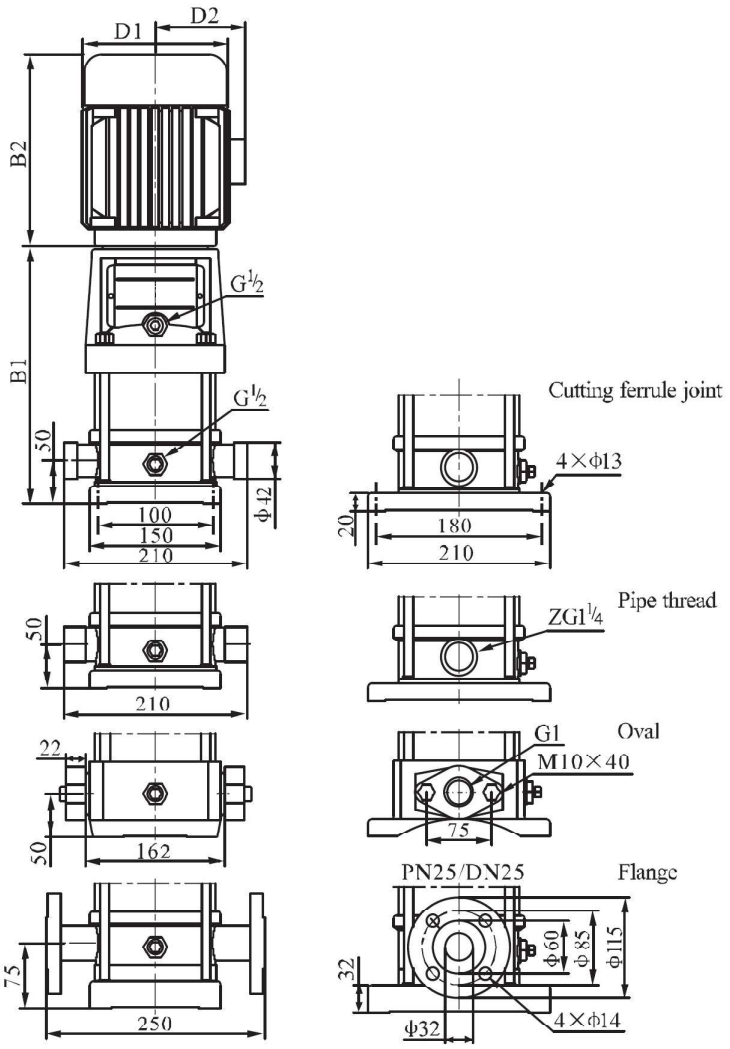


Note 1: CDL 1-19 ~ 1-25 sub-connection of pipeline has no oval flange connection.
Note 2: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 2 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
2-2	258	225	483	148	117	21
2-3	286	245	531	170	142	24
2-4	304	245	349	170	142	25
2-5	322	245	567	170	142	26
2-6	340	245	585	170	142	26
2-7	368	290	658	190	155	32
2-9	404	290	694	190	155	36
2-11	440	290	730	190	155	37
2-13	486	345	831	197	165	44
2-15	522	345	867	197	165	45
2-18	576	355	931	230	188	54

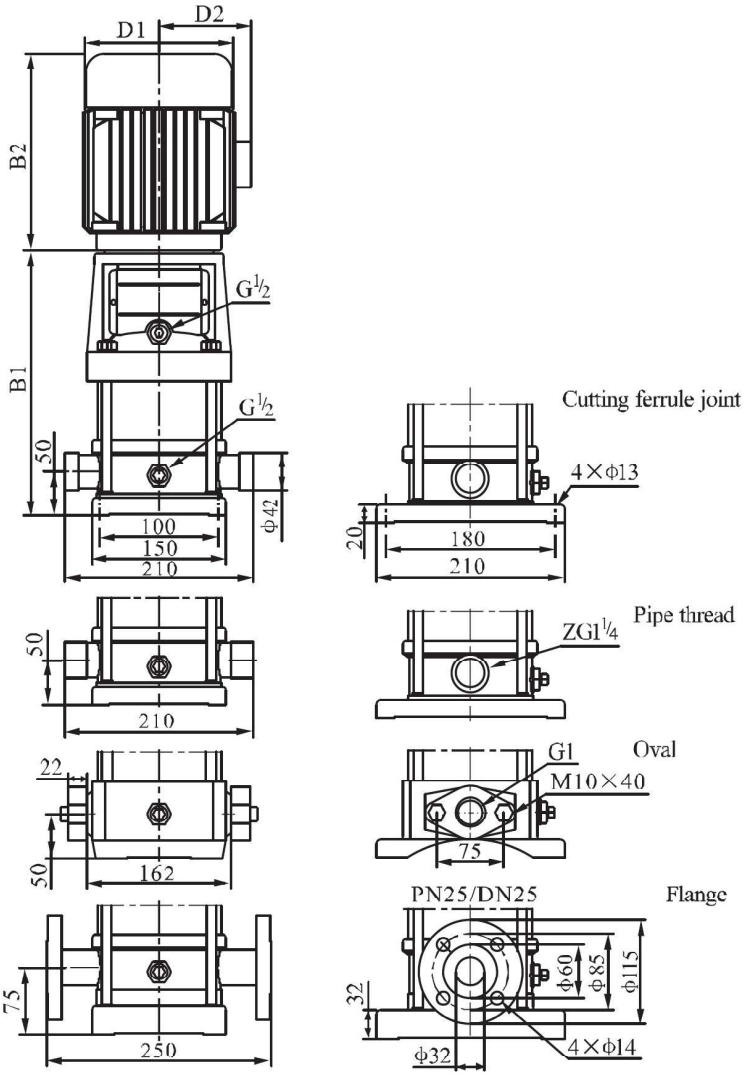


Note 1: CDL 2-13 ~ 2-18 sub-connection of pipeline has no oval flange connection.
Note 2: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 3 - 60Hz

Model	Dimensions [mm]					Weight (kg)
	B1	B2	B1+B2	D1	D2	
3-2	258	225	483	148	117	20
3-3	276	225	501	148	117	21
3-4	294	225	519	148	117	22
3-5	322	245	567	170	142	25
3-6	340	245	585	170	142	26
3-7	358	245	603	170	142	27
3-8	376	245	621	170	142	27
3-9	404	290	694	190	155	33
3-10	422	290	712	190	155	34
3-11	440	290	730	190	155	34
3-12	458	290	748	190	155	37
3-13	476	290	766	190	155	38
3-15	512	290	802	190	155	39
3-17	548	290	838	190	155	40
3-19	594	345	939	197	165	48
3-21	630	345	975	197	165	49
3-23	666	345	1011	197	165	50
3-25	702	355	1057	230	188	58

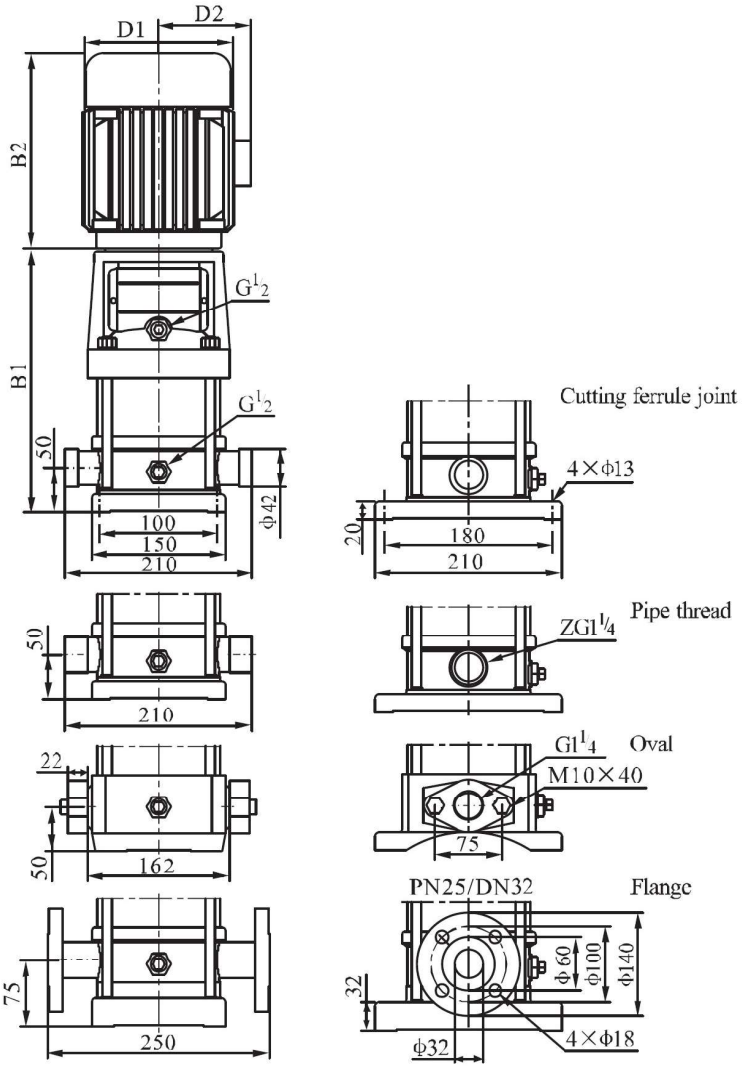


Note 1: CDL 3-17 ~ 3-25 sub-connection of pipeline has no oval flange connection.
Note 2: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 4 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
4-2	286	245	531	170	142	24
4-3	313	245	558	170	142	25
4-4	350	290	640	190	155	31
4-5	376	290	667	190	155	34
4-6	404	290	694	190	155	35
4-7	441	345	786	197	165	42
4-8	468	345	813	197	165	42
4-10	522	355	877	230	188	51
4-12	576	355	931	230	188	52
4-14	650	390	1040	260	208	64
4-I6	704	390	1094	260	208	66

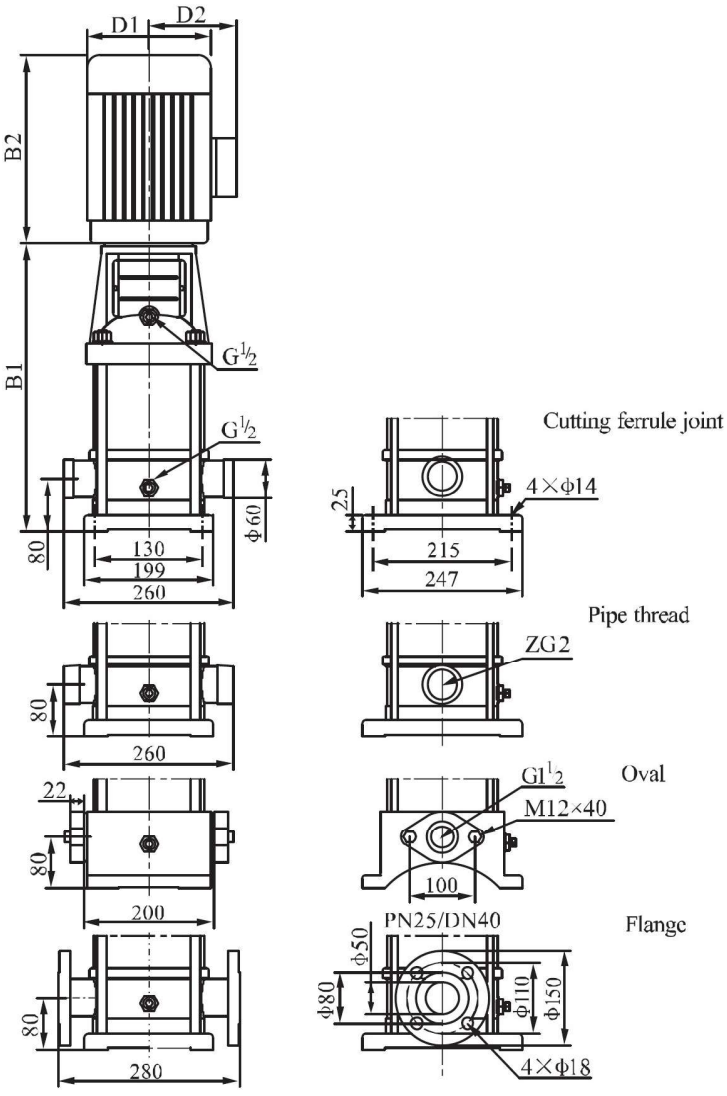


Note 1: CDL 4-12 ~ 4-16 sub-connection of pipeline has no oval flange connection.
Note 2: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 8 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
8-2/1	347	245	592	170	142	32
8-2	357	290	647	190	155	38
8-3	387	290	677	190	155	41
8-4	427	345	772	197	165	49
8-5	457	345	802	197	165	50
8-6	487	355	842	230	188	58
8-8	567	390	957	260	208	71
8-10	627	390	1017	260	208	80
8-12	687	390	1077	260	208	82
8-14	835	500	1335	330	255	153

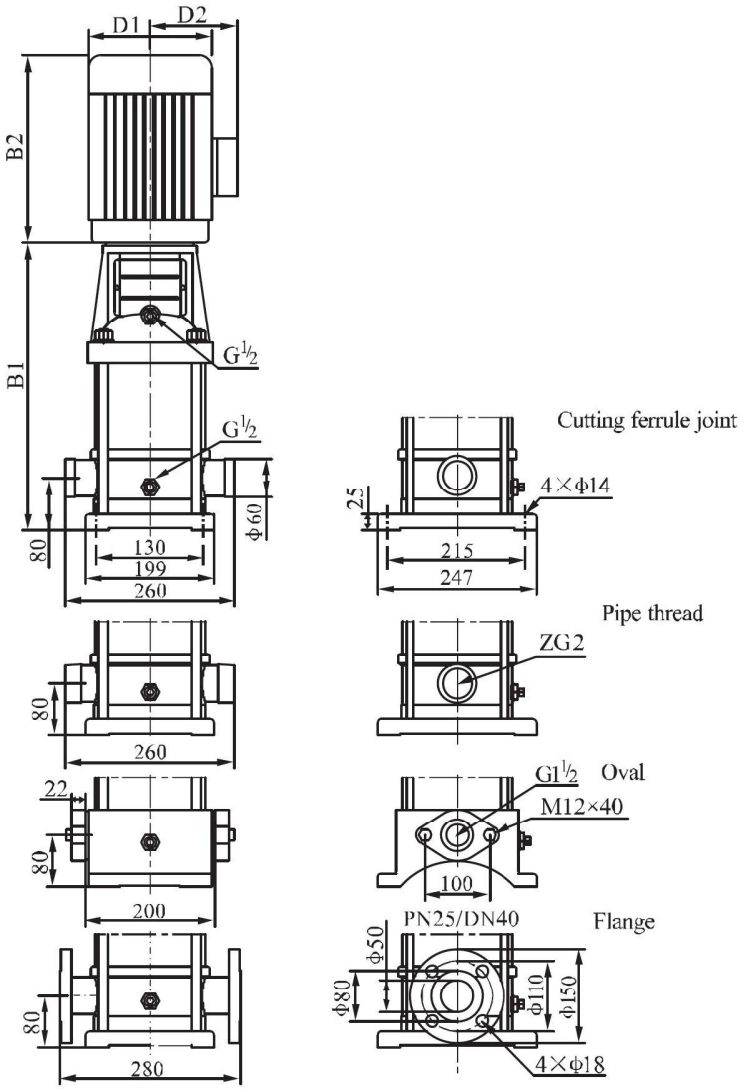


Note 1: CDL 8-10 ~ 8-14 sub-connection of pipeline has no oval flange connection.
Note 2: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 10 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
10-1	347	245	592	170	142	40
10-2	347	290	637	190	155	47
10-3	377	290	667	190	155	51
10-4	417	345	762	197	165	60
10-5	447	345	792	197	165	61
10-6	477	355	832	230	188	70
10-7	517	390	907	260	208	92
10-8	547	390	937	260	208	93
10-9	577	390	967	260	208	94
10-10	607	390	997	260	208	98
10-12	667	390	1057	260	208	100
10-14	747	500	1247	330	255	157
10-16	807	500	1307	330	255	159
10-17	837	500	1337	330	255	160

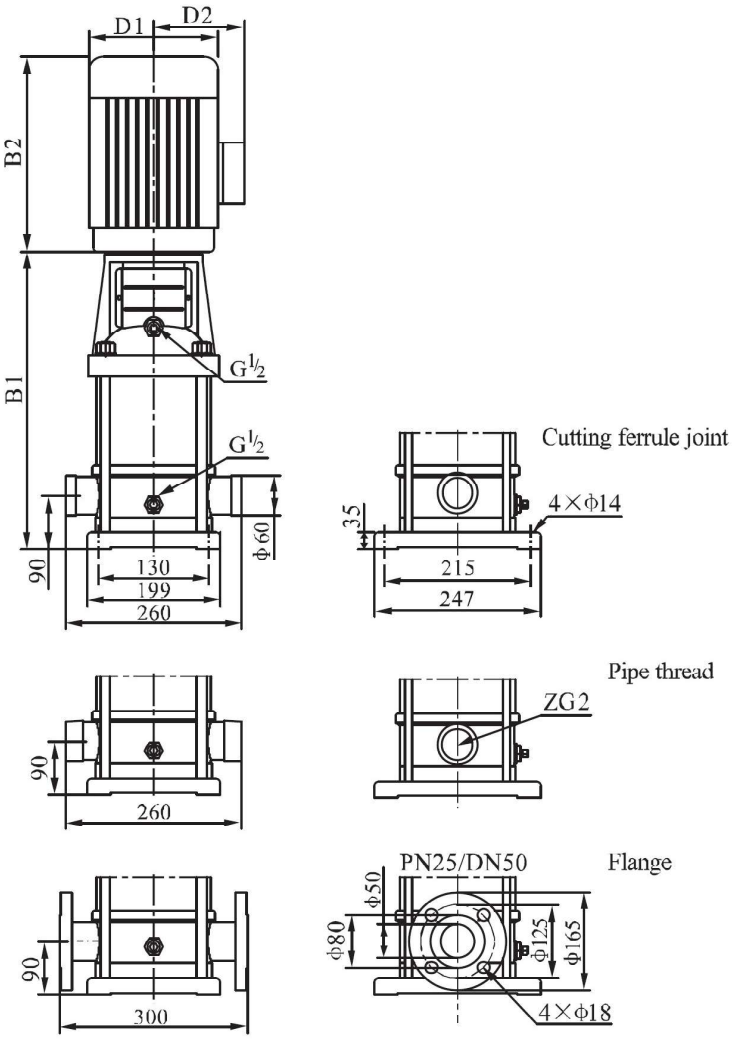


Note 1: CDL 10-12 ~ 10-17 sub-connection of pipeline has no oval flange connection.
Note 2: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 12 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
12-1	357	245	602	170	142	32
12-2	367	290	657	190	155	41
12-3	407	355	762	230	188	56
12-4	457	390	847	260	208	69
12-5	487	390	877	260	208	71
12-6	517	390	907	260	208	77
12-7	547	390	937	260	208	78
12-8	665	500	1165	330	255	147
12-10	725	500	1225	330	255	151
12-12	785	500	1285	330	255	164
12-14	845	500	1345	330	255	167

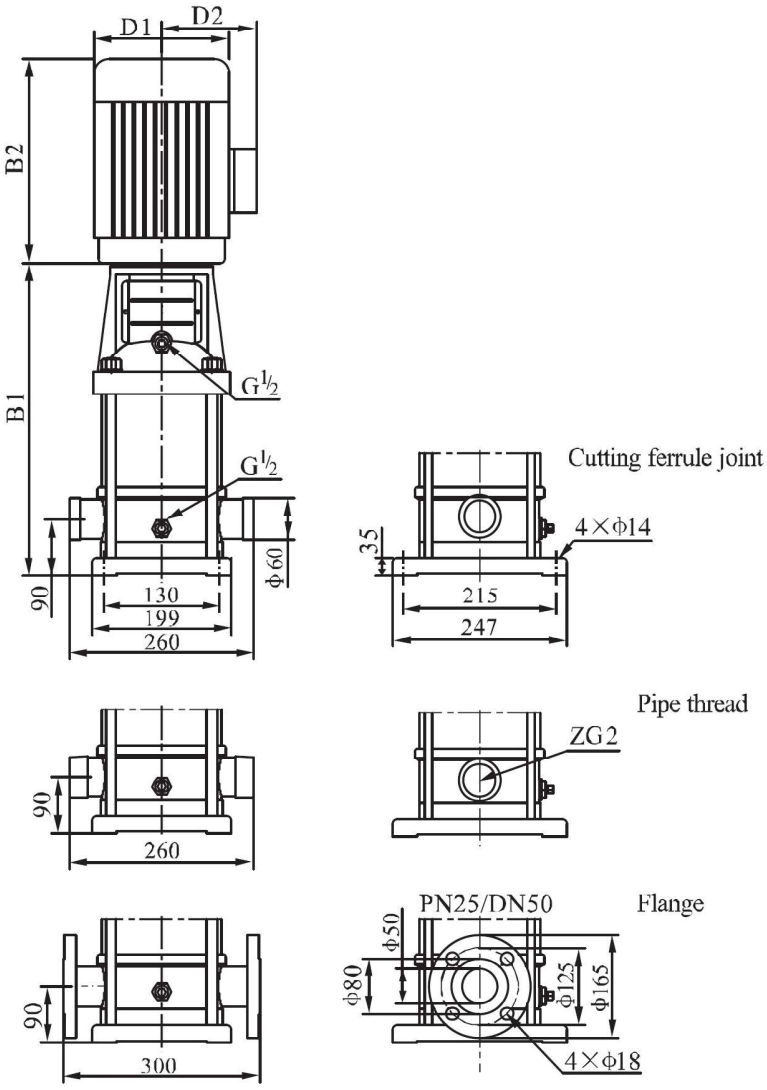


Note 1: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 15 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
15-1	397	290	687	190	155	39
15-2	407	345	752	197	165	49
15-3	452	355	807	230	188	58
15-4	517	390	907	260	208	71
15-5	562	390	952	260	255	81
15-6	695	500	1195	330	255	150
15-7	740	500	1240	330	255	152
15-8	785	500	1285	330	255	153
15-9	830	500	1330	330	255	165
15-10	875	500	1375	330	255	167
15-I2	965	550	1515	330	255	191

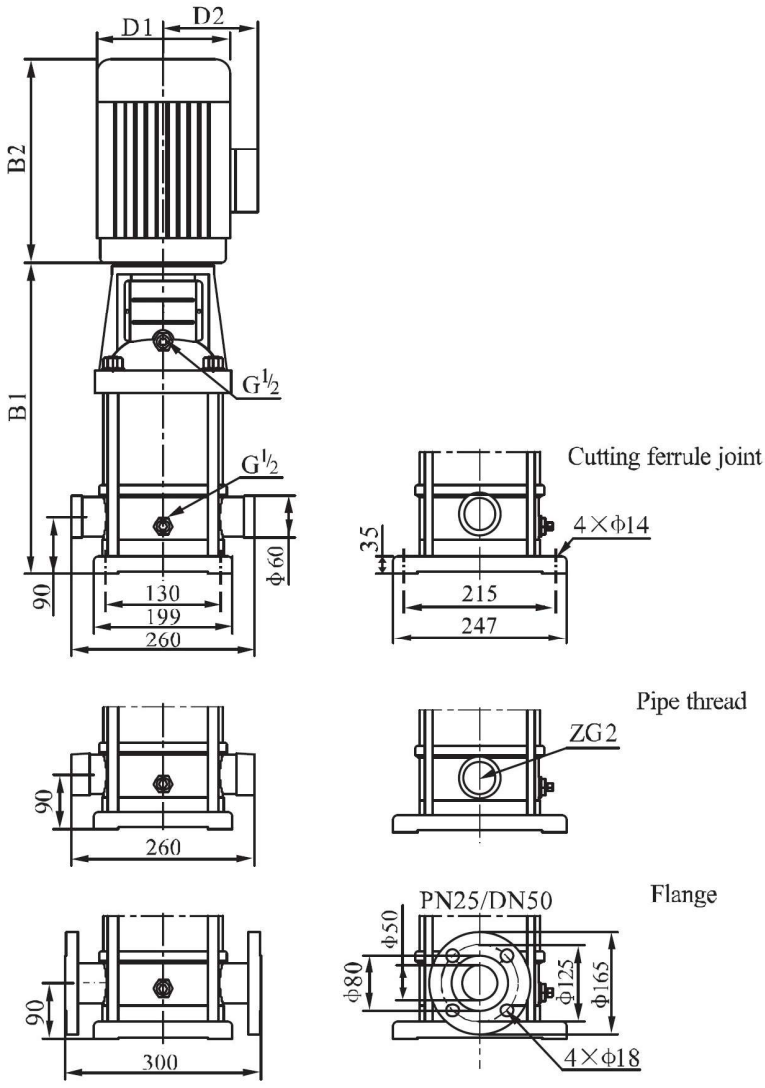


Note 1: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 20 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
20-1	397	290	687	190	155	41
20-2	407	355	762	230	188	56
20-3	472	390	862	260	208	69
20-4	517	390	907	260	208	79
20-5	650	500	1150	330	255	148
20-6	695	500	1195	330	255	150
20-7	740	500	1240	330	255	162
20-8	785	500	1285	330	255	163
20-10	875	550	1425	330	255	187

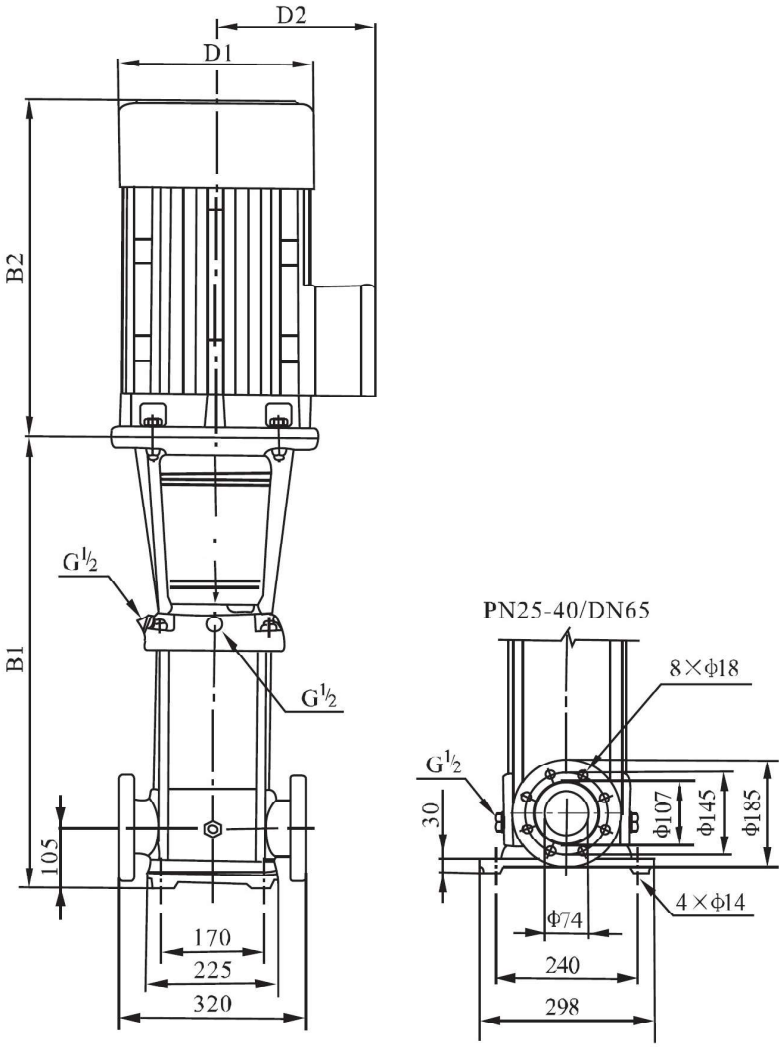


Note 1: The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 32 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
32-10-1	505	345	850	197	165	73
32-10	505	355	860	230	188	81
32-20-2	575	390	965	260	208	95
32-20	575	390	965	260	208	101
32-30-2	645	390	1035	330	255	104
32-30	750	500	1250	330	255	172
32-40-2	820	500	1320	330	255	176
32-40	820	500	1320	330	255	186
32-50-2	890	500	1390	330	255	191
32-50	890	550	1440	330	255	211
32-60-2	960	550	1510	330	255	216
32-60	960	550	1510	330	255	216
32-70-2	1030	575	1605	360	285	255
32-70	1030	575	1605	360	285	255
32-80-2	1100	575	1675	400	310	259
32-80	1100	650	1750	400	310	315
32-90-2	1170	650	1820	400	310	319
32-90	1170	650	1820	400	310	319
32-100-2	1240	650	1890	400	310	324

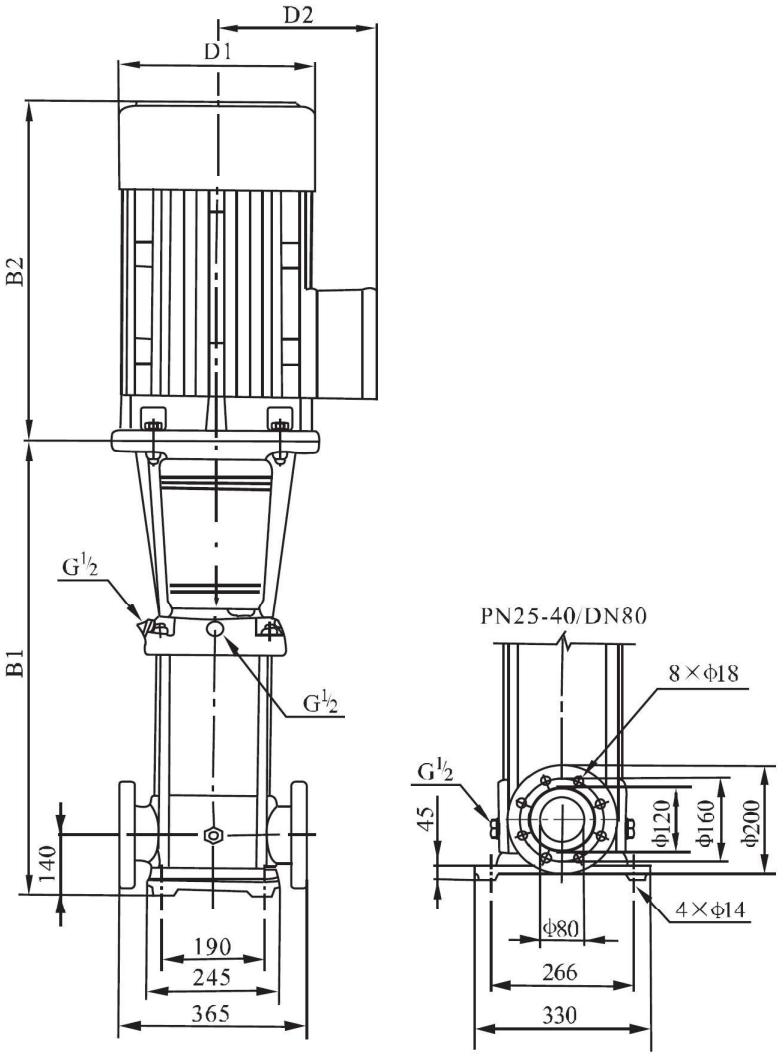


Note 1: The overall dimensions of the explosion-proof motor is a little different.
Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 42 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
42-10-1	561	390	952	260	208	101
42-10	561	390	952	260	208	106
42-20-2	748	500	1248	330	255	178
42-20	748	500	1248	330	255	188
42-30-2	828	550	1378	330	255	213
42-30	828	550	1378	330	255	213
42-40-2	908	575	1483	360	285	253
42-40	908	650	1558	400	310	309
42-50-2	988	650	1638	400	310	313
42-50	988	650	1638	400	310	313
42-60-2	1068	650	1718	400	310	340
42-60	1068	650	1718	400	310	340
42-70-2	1148	685	1833	460	340	404
42-70	1148	685	1833	460	340	404

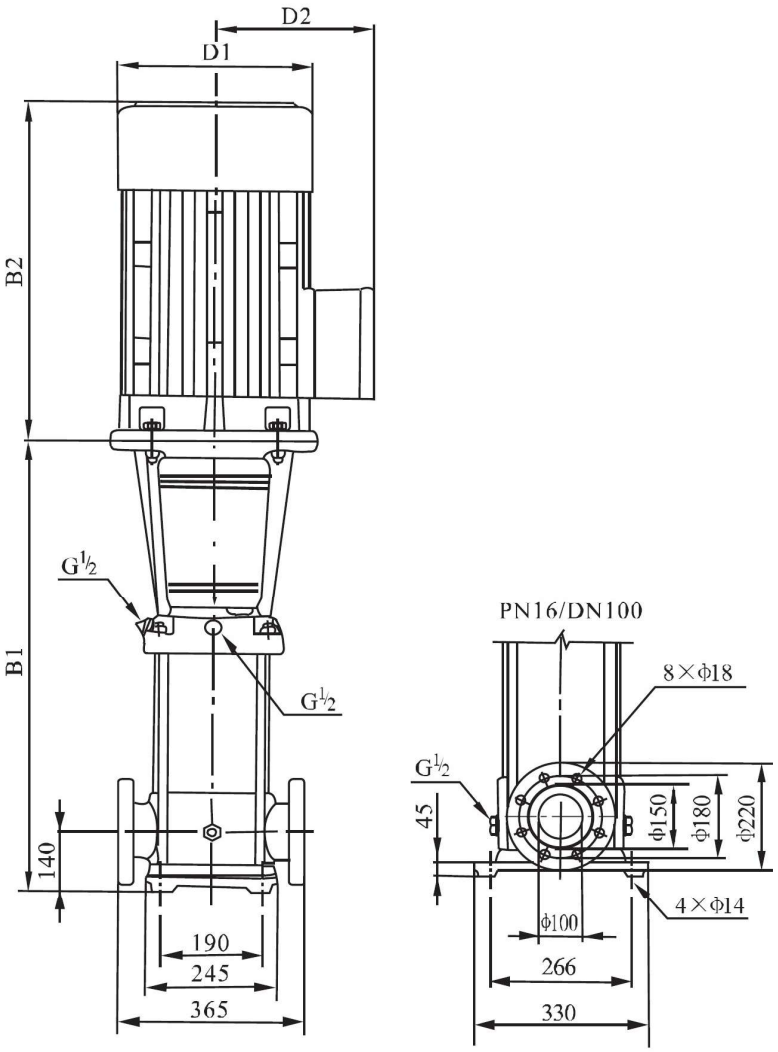


Note 1: The overall dimensions of the explosion-proof motor is a little different.
Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 65 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
65-10-1	561	390	951	260	208	109
65-10	671	500	1171	330	255	177
65-20-2	754	500	1254	330	255	187
65-20	754	575	1329	360	285	248
65-30-2	836	575	1411	360	285	252
65-30	836	650	1486	400	310	313
65-40-2	919	650	1569	400	310	336
65-40	919	685	1604	460	340	398
65-50-2	1001	685	1686	460	340	402

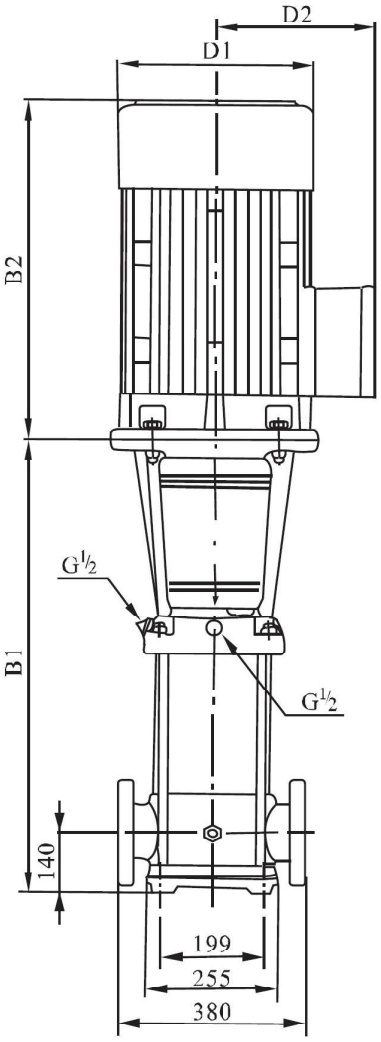


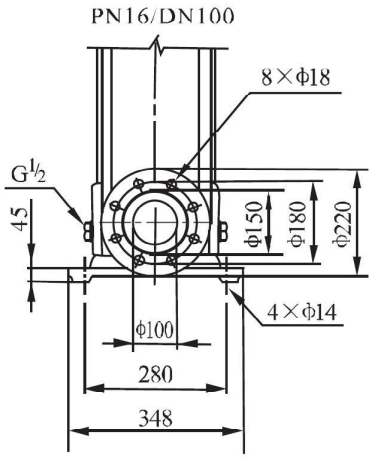
Note 1: The overall dimensions of the explosion-proof motor is a little different.
Note 2: For CDL65 series, PN25-40/DN100 standard flange is also available if required.
Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 85 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
85-10-1	571	500	1071	330	255	177
85-10	571	500	1071	330	255	188
85-20-2	773	550	1323	330	255	211
85-20-1	773	575	1348	360	285	248
85-20	773	650	1423	400	310	304
85-30-2	865	650	1515	400	310	330
85-30-1	865	650	1515	400	310	330
85-30	865	685	1550	460	340	392
85-40-2	957	685	1642	460	340	396



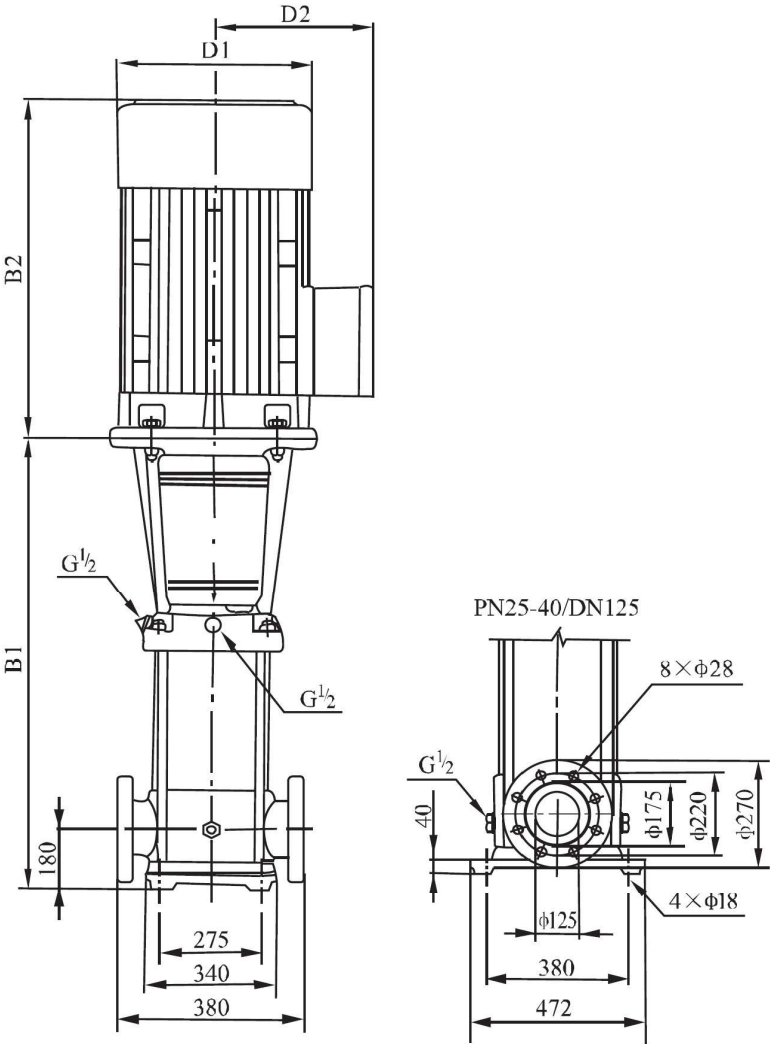


Note 1: The overall dimensions of the explosion-proof motor is a little different.
Note 2: For CDL85 series, PN25-40/DN100 standard flange is also available if required.
Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 120 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
120-10-1	840	500	1340	330	255	235
120-10	840	550	1390	330	255	250
120-20-2	1000	650	1650	400	310	350
120-20-1	1000	650	1650	400	310	350
120-20	1000	650	1650	400	310	380
120-30-2	1160	685	1845	460	340	445
120-30-1	1160	685	1845	460	340	445
120-30	1190	760	1950	510	370	545
120-40-2	1350	845	2195	580	410	675
120-40-1	1350	845	2195	580	410	675
120-40	1350	845	2195	580	410	675
120-50-2	1510	845	2355	580	410	690

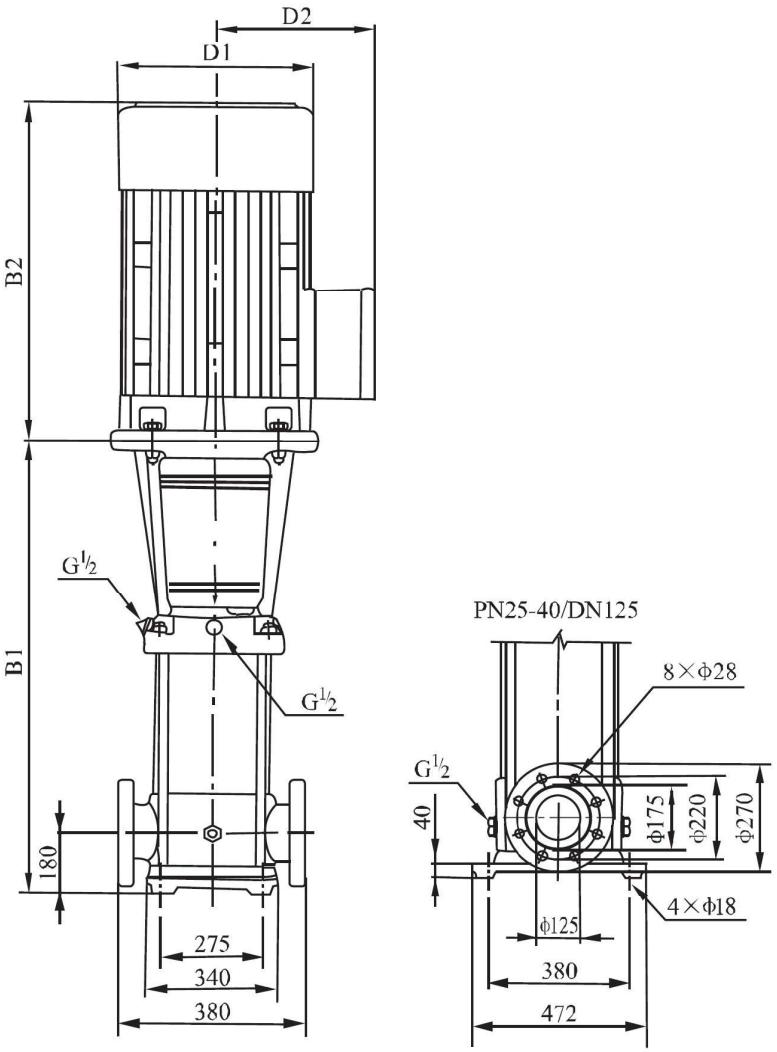


Note 1: The overall dimensions of the explosion-proof motor is a little different.
Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 150 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
150-10-1	840	500	1340	330	255	235
150-10	840	575	1415	360	285	280
150-20-2	1000	650	1650	400	310	360
150-20-1	1000	650	1650	400	310	380
150-20	1000	685	1685	460	340	435
150-30-2	1190	760	1950	510	370	545
150-30-1	1190	845	2035	580	410	665
150-30	1190	845	2035	580	410	665
150-40-2	1350	845	2195	580	410	680

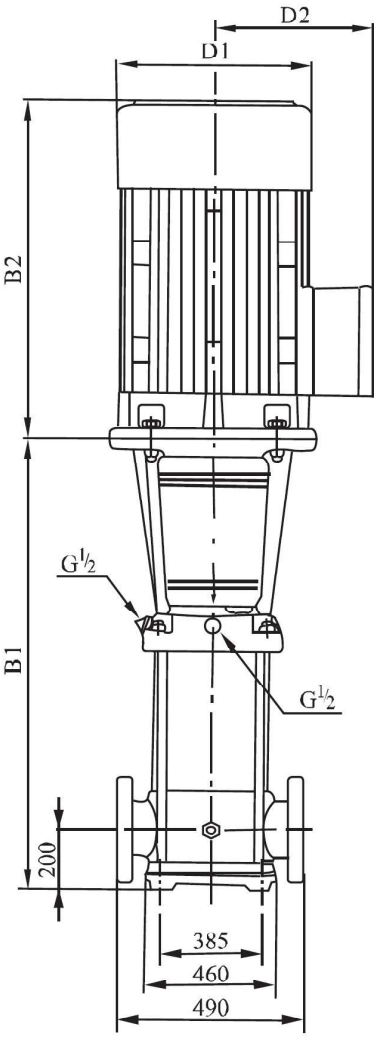


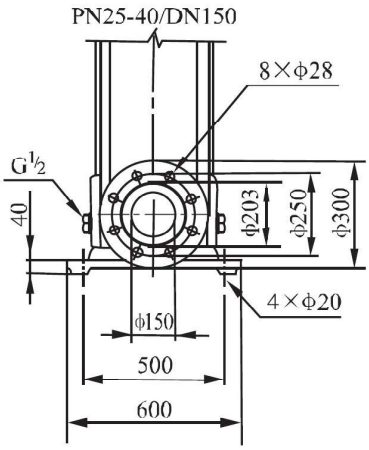
Note 1: The overall dimensions of the explosion-proof motor is a little different.
Please contact us for more details.

DIMENSIONS & WEIGHTS

CDL/CDLF 200 - 60Hz

Model	Dimensions [mm]					Weight [kg]
	B1	B2	B1+B2	D1	D2	
200-10-B	907	650	1557	400	310	403
200-10-A	907	650	1557	400	310	426
200-10	907	685	1592	450	345	484
200-20-2B	1131	760	1891	540	370	595
200-20-2A	1131	845	1976	580	410	718
200-20-B	1131	845	1976	580	410	718
200-20-A	1131	895	2026	580	410	787
200-20	1131	895	2026	580	410	787
200-30-2B	1325	1140	2465	645	550	1158
200-30-A-B	1325	1140	2465	645	550	1158
200-30-2A	1325	1140	2465	645	550	1158





Note 1: The overall dimensions of the explosion-proof motor is a little different.
Please contact us for more details.

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