DL/ DLF Series

VERTICAL-MULTI-STAGES PUMP

DL(HT 200 / ASTM80-55-06)

DLF(AISI 304 / AISI 316)

OPERATING CONDITIONS

- Low viscosity, non-inflammable and non-explosive liquids not containing solid particles or fibers. The liquids must not chemically attack the pump materials. When pumping liquids with a density or viscosity is higher than that of water, a motor with a higher output power rating shall be used.
- Liquid temperature:-20°C~+120°C
- Flow ranges: 0.7-240 m^3/h
- Liquid pH value:4-10
- Max. ambient temperature: +40°C
- Max. operation pressure: 33 bare
- Altitude: up to 1000 m

MOTOR

- IE1 motor (IE2/IE3 motor optional)
- Totally enclosed & fan-cooled
- Protection class: Ip55
- Standard voltage:60Hz, 220~230V
  3phase 60Hz 380V

IDENTIFICATIONS CODES

- DL : Cast iron base & pump cover
- DLF : Stainless steel wetted parts
- A: Oval flange; K: Clamp connector;
- G:Threaded connector

IDENTIFICATION CODES

DL/ DLF1,2,3,4,5,8,10,12,15 and 20

DL F 8 – 2

- Stage
- Rated flow (m^3/h)
- (Common type omitted) Flow passage components are of stainless steel AISI304 or 316L
- Light vertical multistage centrifugal pump

DL/ DLF32,42,45,65,85,95,125 and 150

DL F 32 – 30 / 2

- Number of small impeller
- Stage X10
- Rated flow (m^3/h)
- (Common type omitted) Flow passage components are of stainless steel AISI304 or 316L
- Light vertical multistage centrifugal pump

DL/ DLF

DL F 1 s

- S small impeller
- 1 Rated flow (m^3/h)
- F (Common type omitted) Flow passage components are of stainless steel AISI304 or 3161
- DL Light vertical multistage centrifugal pump

DL / DLF200

DL F 200 – 30 – 2A – B

- One small impeller B
- Two small impellers A
- Stage X10
- Rated flow (m^3/h)
- (Common type omitted) Flow passage components are of stainless steel AISI304 or 316L
- Light vertical multistage centrifugal pump

APPLICATION

Application	YDL	YDLF
Water supply		
Filtration and transmission of water supply system	●	○
Distribution of water supply system	●	○
Pressurization in water supply trunks	●	○
Pressurization in high-rise buildings, hotels and other buildings	●	○
Pressurization of industrial water	●	○
Industry		
Pressurization of Water		
Process water system	●	●
* Washing and cleaning system	●	●
Car wash tunnel	●	○
Fire fighting system	●	-
Liquid transfer System		
Cooling and air conditioning systems (refrigerants)	●	○
Boiler feed and condensing systems	●	○
Machine tools (cooling lubricants)	●	●
Aquaculture	●	○
Special liquid transfer work		
Oils and alcohols	●	●
Acids and Bases	-	●
Glycols and coolants	●	-
Water treatment		
Ultrafiltration	-	●
Reverse systems	-	●
Softening, ionization, demineralization systems	-	●
Distillation system	-	●
Separator	●	●
Swimming pools	-	●
Irrigation		
Farmland irrigation (flood irrigation) sprinkler	●	○
Irrigation	●	○
Drip irrigation	●	○

● Recommended version.

○ Optional version.

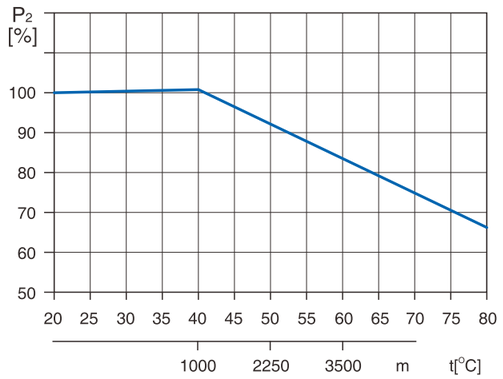
* For applications involving CIP (cleaning in place) and motors greater than 55 kW, a bearing flange and a base without thrust balancing device or flange must be used. For more information please contact our sales

DL/ DLF Series

VERTICAL-MULTI-STAGES PUMP

AMBIENT TEMPERATURE

- Max. ambient temperature: +40°C. Ambient temperature above 40°C or installation at altitude of more than 1000 meters above sea level require the use of an oversize motor. Because of low air density and poor cooling effects, the motor output power P2 will be decreased. See the picture.
- In such cases, it may be necessary to use a motor with a highe!output power rating.



For example, when the pump is installed at altitude of more than 3500 meters above sea level, P2 will be decreased to 88%.When the ambient temperature is 70°C, P2 will be decreased to 78%.

MINIMUM INLET PRESSURE-NPSH

Calculation of the inlet pressure “H" is recommended in thesesituations:
The liquid temperature is high.
The flow is significantly higher than the rated flow.
Water is drawn from depths.
Water is drawn through long pipes.
Inlet conditions are poor.

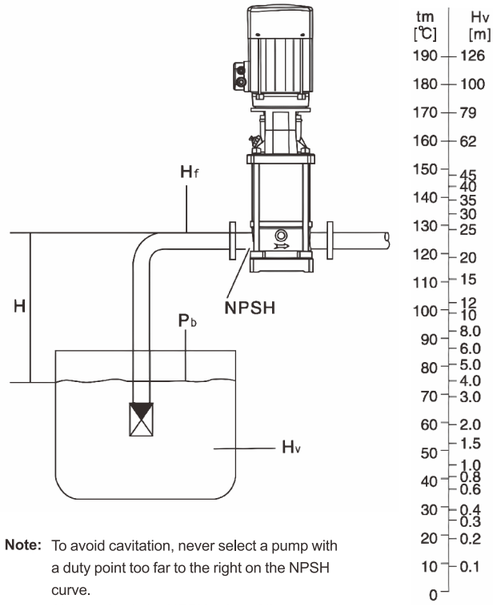
MAXIMUM INLET PRESSURE

The following table shows the maximum permissible inlet pressure. However, the current inlet pressure + the pressure against a closed valve must always be lower than the Max. permissible operating pressure.
If the maximum permissible operating pressure is exceeded, the bearing in the motor may be damaged and the life of the shaft seal reduced.

To avoid cavitation, make sure that there is a minimum pressure on the suction side of the pump. The maximum suction lift “H" in meters head can be calculated as follows:

H	= P_b x 10.2-NPSH-H_f-H_v-H_s
P_b	= Barometric pressure in bar. (Barometric pressure can be set to 1 bar). In closed systems, P_b indicates the system pressure in bar.
NPSH	= Net Positive Suction Head in meters head. (To be read from the NPSH curve at the highest flow the pump will be delivering.)
H_f	= Friction loss in suction pipe in meters head. (At the highest flow the pump will be delivering.)
H_v	= Vapor pressure in meters head. (To be read from the vapor pressure scale. “H_v" depends on the liquid temperature “tm”)
H_s	= Safety margin=minimum 0.5 meters head.

If the “H” calculated is positive, the pump can operate at a suction lift of maximum “H" meters head.
If the “H" calculated is negative, an inlet pressure of minimum“H” meters head is required.



Note: To avoid cavitation, never select a pump with a duty point too far to the right on the NPSH curve.
Always check the NPSH value of the pump at the highest possible flow.

PRODUCT RANGE

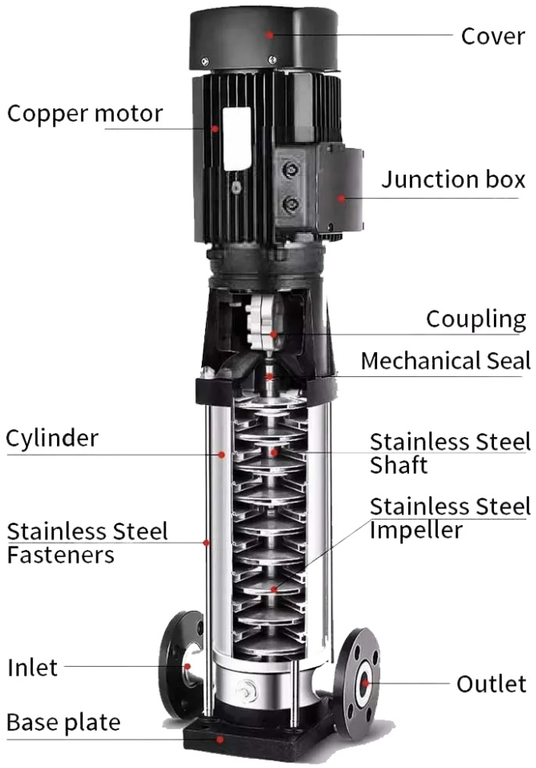
MODEL / DESCRIPTION	DL(F) 1s	DL(F) 1	DL(F) 2	DL(F) 3	DL(F) 4	DL(F) 5	DL(F) 8	DL(F) 10	DL(F) 12	DL(F) 15	DL(F) 20
Rated flow [m³/h]	1	1.2	2	3.6	4	6	8	12	12	18	24
Flow range [m³/h]	0.4-1.3	0.8-2.9	1-4.5	1.4-5.4	2.5-8	3-10.2	7-14	6-16	7-19	10-29	13-35
Max.pressure [bar]	23	24	23.5	24	21	24	20	25	25	24	21
Motor power [kW]	0.37-1.1	0.37-3.0	0.55-4	0.37-4.0	0.75-5.5	0.55-7.5	0.75-11	0.75-11	1.1-15	1.5-18.5	2.2-18.5
Temperature Range [℃]	-20℃~+120℃ (Note: Both the Max. permissible pressure and liquid temperature range refer to the pump capacity.)										
Max.pump efficiency [%]	35	49	46	59	57	67	62	70	63	72	72
Pipe connection-YDL											
Oval flange [developing]	Rp1"	Rp1"	Rp1"	Rp1"	Rp1¼"	Rp1¼"	Rp1½"	Rp1½"	Rp1½"	Rp2"	Rp2"
DIN flange	DN25	DN25	DN25	DN25	DN32	DN32	DN40	DN40	DN50	DN50	DN50
Pipe connection-YDLF											
Oval flange	—	—	—	—	—	—	—	—	—	—	—
DIN flange	DN32	DN32	DN32	DN32	DN32	DN32	DN40	DN40	DN50	DN50	DN50
Clamp connector	Φ42	Φ42	Φ42	Φ42	Φ42	Φ42	Φ60	Φ60	Φ60	Φ60	Φ60
Threaded connector	ZG1¼	ZG1¼	ZG1¼	ZG1¼	ZG1¼	ZG1¼	ZG2	ZG2	ZG2	ZG2	ZG2
YDL EN 10088 1.4301≈AISI 304	●	●	●	●	●	●	●	●	●	●	●
YDLF EN 10088 1.4301≈AISI 304/316	●	●	●	●	●	●	●	●	●	●	●

MODEL / DESCRIPTION	DL(F) 32	DL(F) 42	DL(F) 45	DL(F) 64	DL(F) 85	DL(F) 95	DL(F) 120	DL(F) 125	DL(F) 150	DL(F) 155	DL(F) 200
Rated flow [m³/h]	38	42	54	77	85	115	120	125	150	185	200
Flow range [m³/h]	18-48	30-65	26-70	36-102	60-130	58-150	60-160	60-160	80-180	90-230	100-240
Max.pressure [bar]	27	26	26	18	15	34	15	16	14	39	15
Motor power [kW]	2.2-30	5.5-45	5.5-45	7.5-45	11-45	11-90	18.5-75	11-110	15-75	18.5-200	30-110
Temperature Range [℃]	-20℃~+120℃ (Note: Both the Max. permissible pressure and liquid temperature range refer to the pump capacity.)										
Max.pump efficiency [%]	76	75	78	79	77	81	74	82	73	82	79
Pipe connection- DL											
Oval flange [developing]	—	—	—	—	—	—	—	—	—	—	—
DIN flange	DN65	DN80	DN80	DN100	DN100	DN100	DN125	DN150	DN150	DN150	DN150
Pipe connection-DLF											
Oval flange	—	—	—	—	—	—	—	—	—	—	—
DIN flange	DN65	DN80	DN80	DN100	DN100	DN100	DN125	DN150	DN150	DN150	DN150
Clamp connector	—	—	—	—	—	—	—	—	—	—	—
Threaded connector	—	—	—	—	—	—	—	—	—	—	—
DL EN 10088 1.4301≈AISI 304	●	●	●	●	●	●	●	●	●	●	●
DLF EN 10088 1.4401≈AISI 316/304	●	●	●	●	●	●	●	●	●	●	●

DL/DLF Series

VERTICAL-MULTI-STAGES PUMP

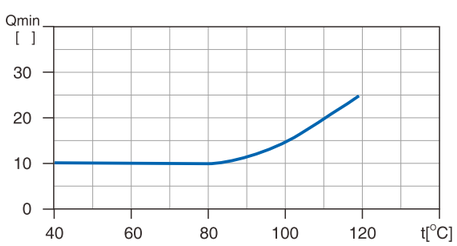
HOW TO READ THE CURVE CHARTS



MINIMUM FLOW RATE

Due to the risk of overheating, the pump should not be used at a flow below the minimum flow rate. The curve below shows the minimum flow rate as a percentage of the nominal flow rate in relation to the liquid temperature.

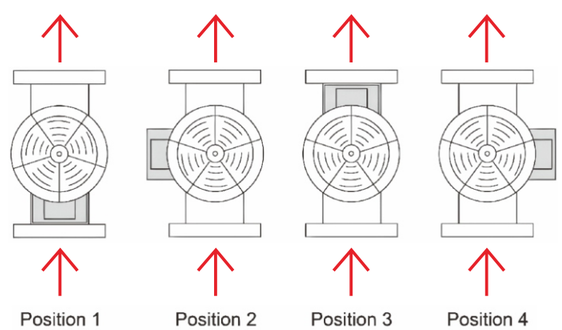
Air cooling apparatus



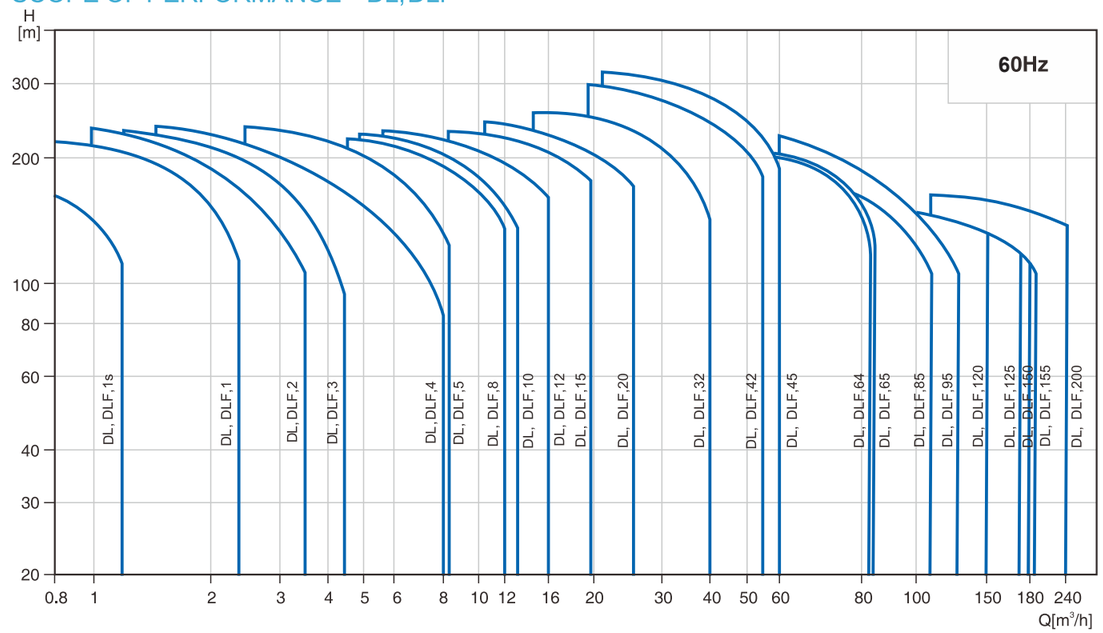
Note: The outlet valve must be opened when the pump is in operation.

TERMINAL BOX POSITIONS

(Note: set to position 1 before delivery)



SCOPE OF PERFORMANCE- DL, DLF



OPERATING RANGE OF SHAFT SEALS

The operating range of the shaft seal depends on the operating pressure, pump type, shaft seal type and liquid temperature. The ranges shown in the following diagram apply to clean water and water with antifreeze

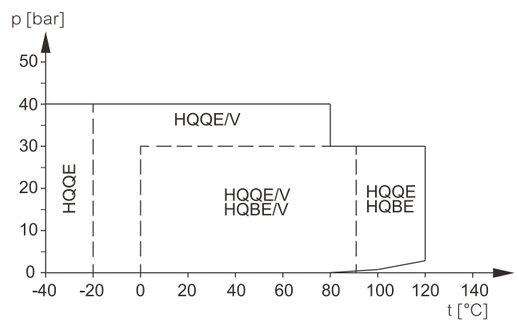
Note that if you use demineralized water with a conductivity below 2 uS/cm with a SiC/SiC shaft seal, there is an increased risk of galvanic corrosion. We recommend that you use SiC/Carbon or SiC/Tungsten Carbide shaft seals.

Operating range of standard shaft seals DL, DLF,1s-155

Standard shaft seal	Motor power [kW]	Describe	Liquid temperature [°C]
HQQE	0.37 - 55	O-ring (box type) (balanced seal), Silicon Carbide/Silicon Carbide, EPDM	-40 to +120
HQQV		O-ring (box type) (balanced seal), Silicon Carbide/Silicon Carbide, FKM	-20 to +90
HQBE		O-ring (box type) (balanced seal), Silicon Carbide/Carbon, EPDM	0 to 120
HQBV		O-ring (box type) (balanced seal), Silicon Carbide/Carbon, FKM	0 to 90

Shaft seal for Ø28 (75-110 kW) shaft end

Standard shaft seal	Motor power [kW]	Describe	Liquid temperature [°C]
HQQE	75-110	O-ring (box type) (balanced seal), Silicon Carbide/Silicon Carbide, EPDM	-40 to +120
HQQV		O-ring (box type) (balanced seal), Silicon Carbide/Silicon Carbide, FKM	-20 to +90
HQBE		O-ring (box type) (balanced seal), Silicon Carbide/Carbon, EPDM	0 to 120
HQBV		O-ring (box type) (balanced seal), Silicon Carbide/Carbon, FKM	0 to 90



1. Code Analysis

H: stands for Spring, which is usually a spring-loaded seal to ensure that the seal fits tightly to the shaft surface.

Q: stands for Graphite, which usually refers to the friction pair or sealing surface of the seal using graphite-filled PTFE (polytetrafluoroethylene) material. Graphite-filled PTFE has excellent chemical resistance and low friction coefficient.

B: stands for Silicon Carbide, which is an extremely hard and wear-resistant material, usually used for the dynamic and static rings of seals.

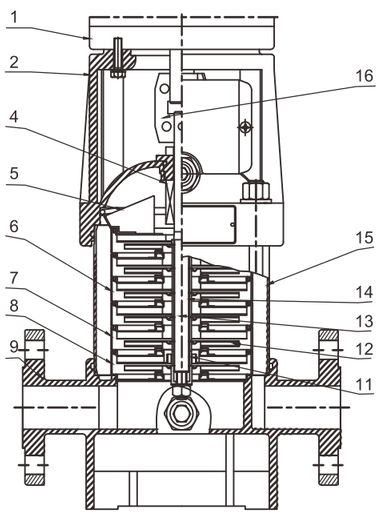
E: stands for Ethylene Propylene Rubber (EPDM), an elastomer commonly used in seals, with good chemical resistance and heat resistance, usually used in hot water or steam environments.

V: stands for Fluor rubber (Viton? or FKM), an elastomer material with extremely high chemical resistance and high temperature resistance, widely used in chemical, petrochemical and other fields.

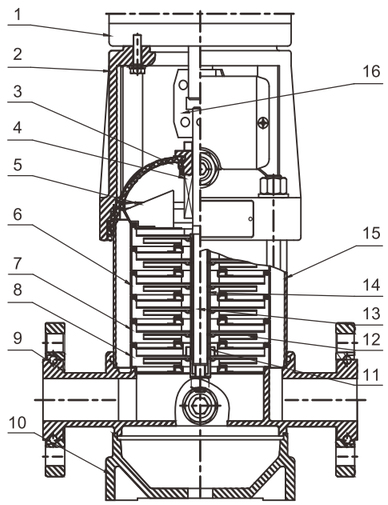
DL/DLF Series

VERTICAL-MULTI-STAGES PUMP

SECTION DRAWING DLF, DLN 1,2,3,4



DL



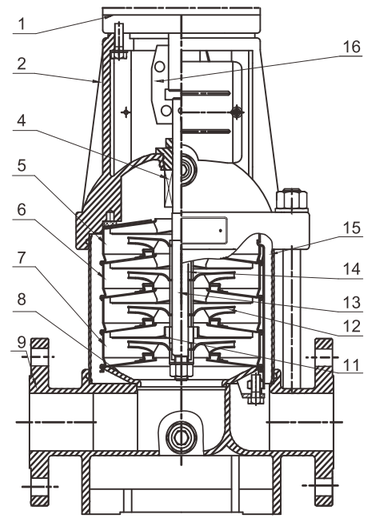
DLF

MATERIAL DLF, DLN 1,2,3,4

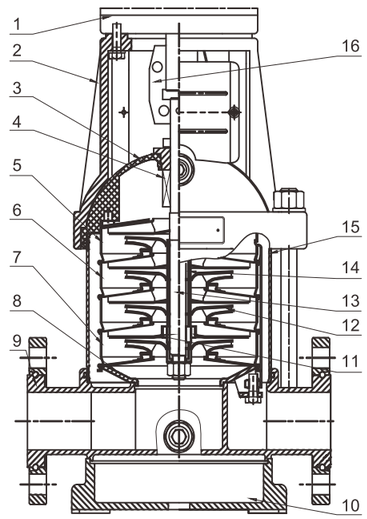
NO.	Name	Material	AISI/ASTM
1	Motor		
2	Pump head	Cast iron	HT200
4	Mechanical seal		
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
11	Bearing	Tungsten carbide	AISI304
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304 AISI316L

NO.	Name	Material	AISI/ASTM
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless stee]	AISI304
16	Coupling	Carbon steel	
	DLF		
3	Seal base	Stainless steel	AISI304
9	Inlet and outlet chamber	Stainless steel	AISI304
10	Base plate	Cast iron	HT200
	DL		
9	Inlet and outlet chamber	Cast iron	HT200

SECTION DRAWING DLF, DLN 8,10,12,15,20



DL



DLF

MATERIAL DLF, DLN 8,10,12,15,20

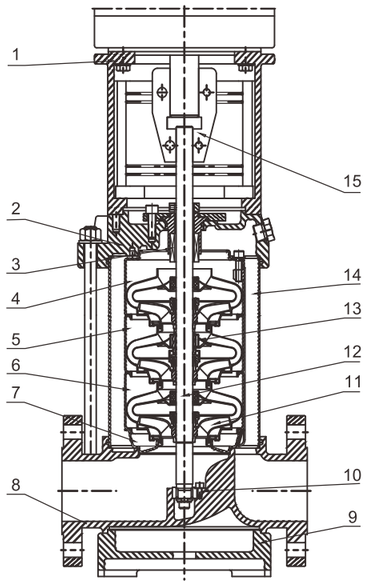
NO.	Name	Material	AISI/ASTM
1	Motor		
2	Pump head	Cast iron	HT200
4	Mechanical seal		
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
11	Bearing	Tungsten carbide	
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304 AISI316L

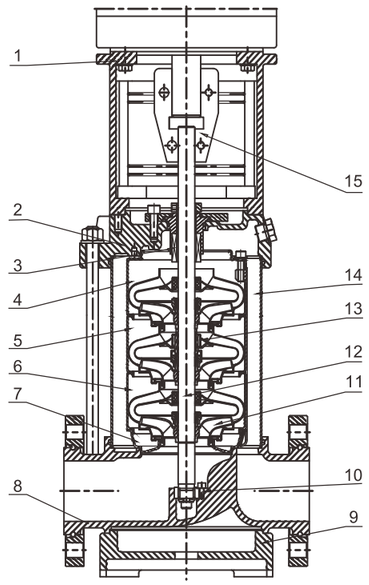
NO.	Name	Material	AISI/ASTM
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless stee]	AISI304
16	Coupling	Carbon steel	
	DLF		
3	Seal base	Stainless steel	AISI304
9	Inlet and outlet chamber	Stainless steel	AISI304
10	Base plate	Cast iron	HT200
	DL		
9	Inlet and outlet chamber	Cast iron	HT200

DL/DLF Series

VERTICAL-MULTI-STAGES PUMP

SECTION DRAWING DLF,DLN 32,42,65,85





MATERIAL DLF, DLN 32,42,65,85

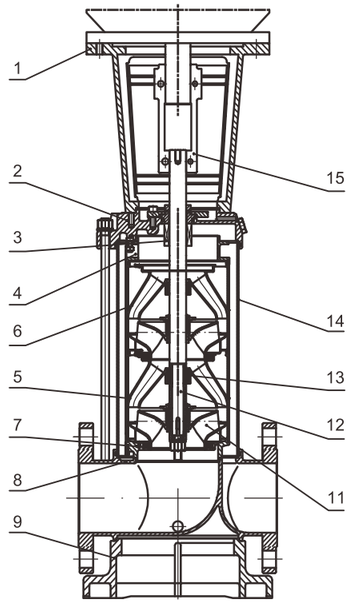
DL

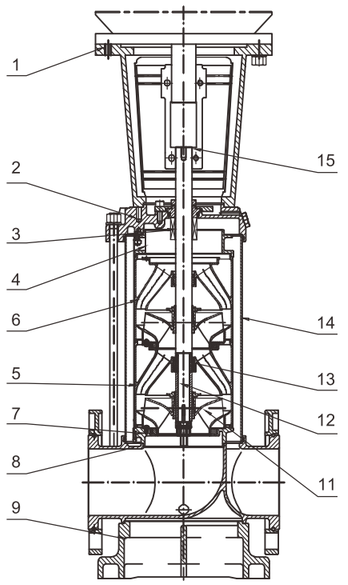
NO.	Name	Material	AISI/ASTM
1	Bracket	Cast iron	HT200
3	Mechanical seal		
4	Top diffuser	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
9	Base plate	Cast iron	HT200
10	Bottom bearing	Tungsten carbide	
11	Impeller	Stainless steel	AISI304

DLF

NO.	Name	Material	AISI/ASTM
12	Shaft	Stainless steel	AISI316L AISI304 AISI431
13	Intermediate bearing	Tungsten carbidc	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	NBR	
	DL		
2	Pump head	Cast iron	HT200
8	Inlet and outlet chamber	Cast iron	HT200
	DLF		
2	Pump head	Stainless steel	AISI304
8	Inlet and outlet chamber	Stainless steel	AISI304

SECTION DRAWING DLF, DLN 120,150,200





MATERIAL DLF, DLN 120,150,200

DL

NO.	Name	Material	AISI/ASTM
1	Bracket	Cast iron	HT200
3	Mechanical seal		
4	Discharge	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
9	Base plate	Cast iron	ASTM 80-55-06
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI304

DLF

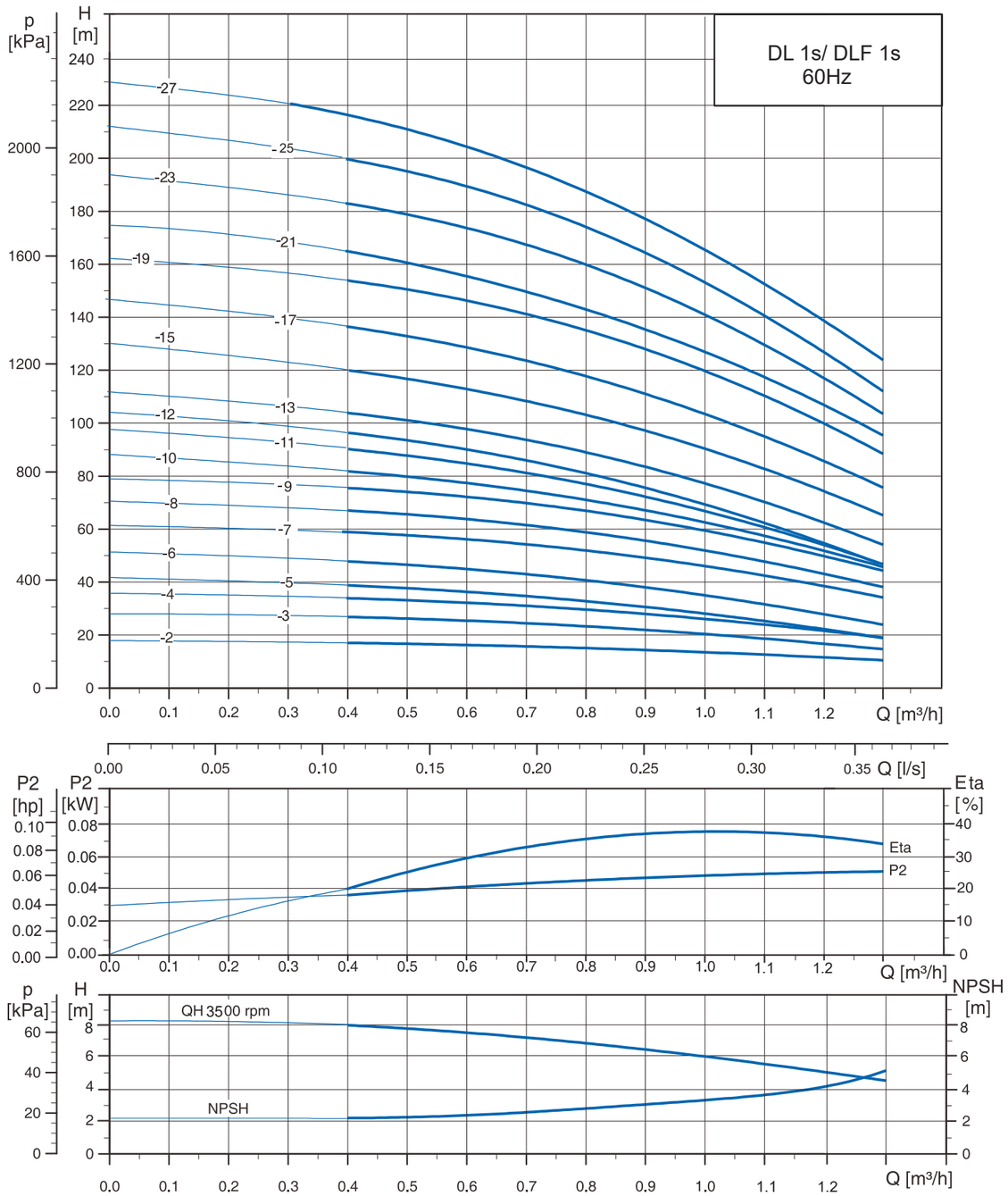
NO.	Name	Material	AISI/ASTM
13	Bearing	Tungsten carbide	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	NBR	
	DL		
2	Pump head	Cast iron	ASTM 80-55-06
8	Inlet and outlet chamber	Cast iron	ASTM 80-55-06
	DLF		
2	Pump head	Stainless steel	AISI304
8	Inlet and outlet chamber	Stainless steel	AISI304

DL/DLF Series

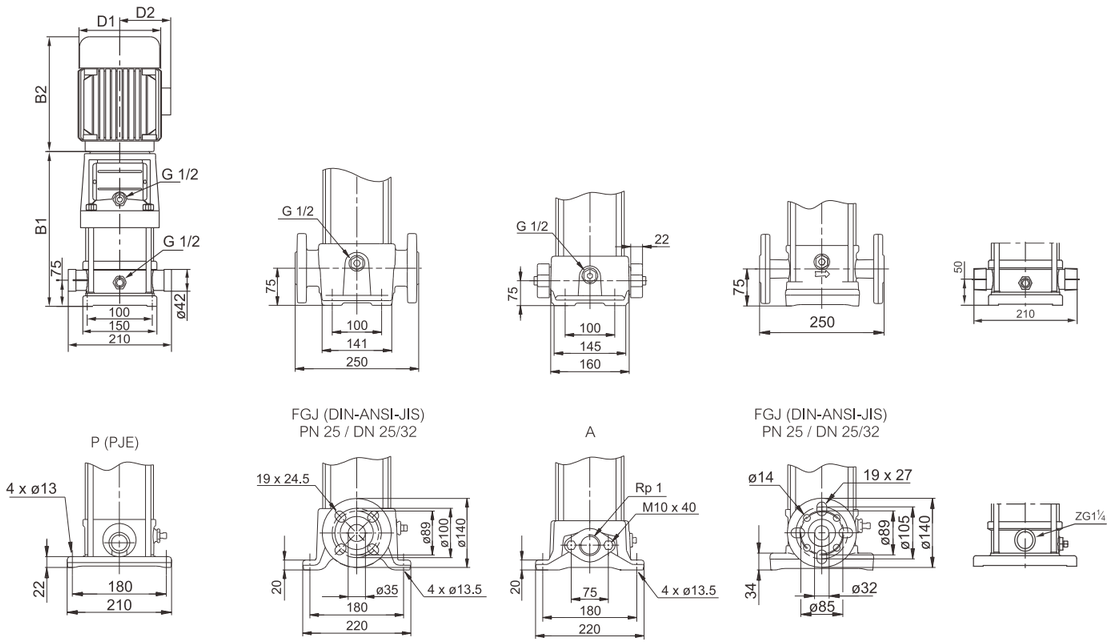
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL1s/ DLF1s



DIMENSION DRAWING



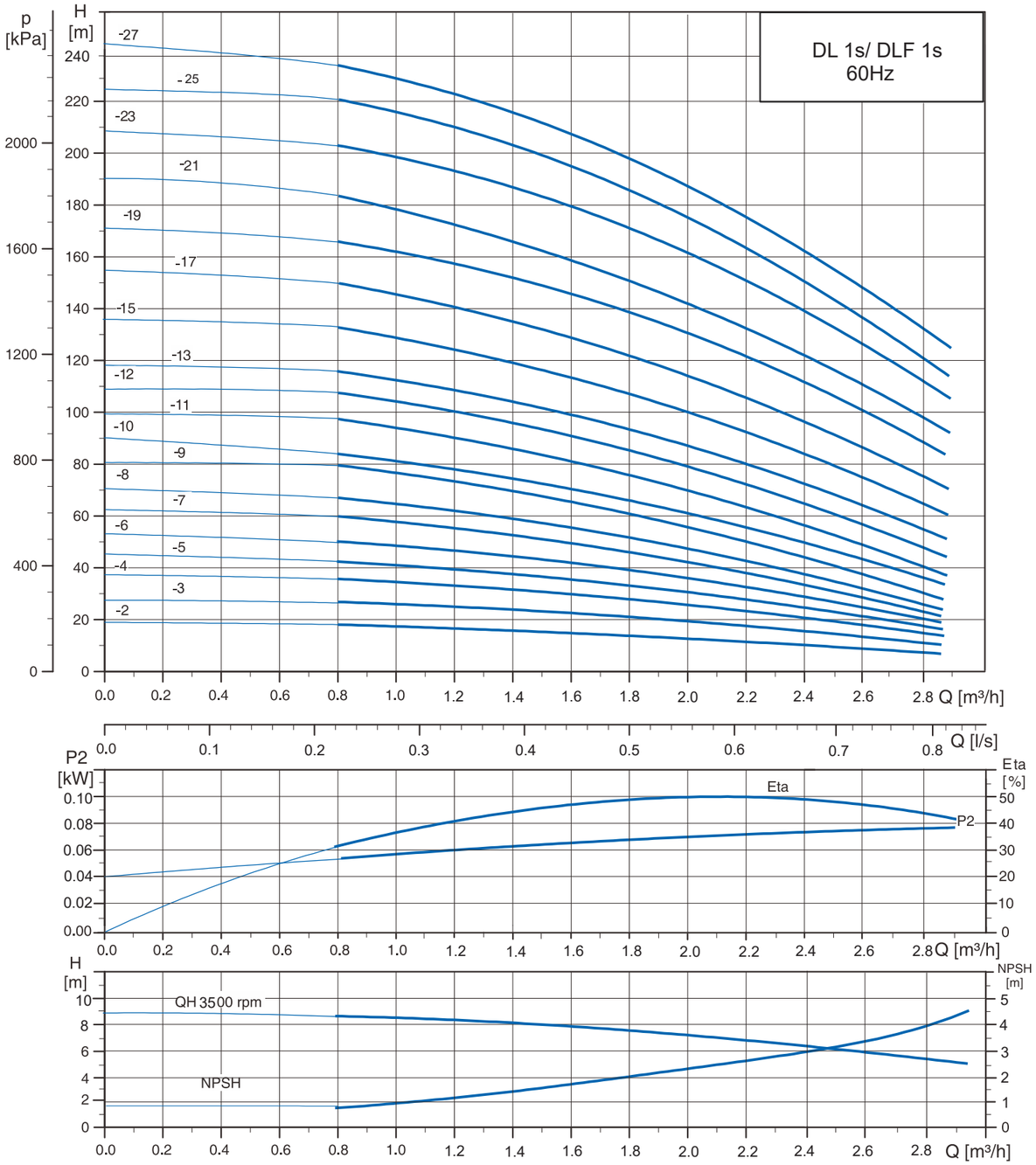
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 1s-2	0.37	258	228	486	140	107	23
DL 1s-3	0.37	276	228	504	140	107	23
DL 1s-4	0.37	294	228	522	140	107	23
DL 1s-5	0.37	312	228	540	140	107	24
DL 1s-6	0.37	330	228	558	140	107	24
DL 1s-7	0.37	348	228	576	140	107	25
DL 1s-8	0.55	366	228	594	140	107	25
DL 1s-9	0.55	384	228	612	140	107	25
DL 1s-10	0.55	402	228	630	140	107	25
DL 1s-11	0.75	420	248	668	158	125	29
DL 1s-12	0.75	448	248	696	158	125	29
DL 1s-13	0.75	466	248	714	158	125	29
DL 1s-15	1.1	502	248	750	158	125	32
DL 1s-17	1.1	538	248	786	158	125	33
DL 1s-19	1.1	574	248	822	158	125	34
DL 1s-21	1.1	610	248	858	158	125	35
DL 1s-23	1.5	646	266	912	176	132	42
DL 1s-25	1.5	692	266	958	176	132	43
DL 1s-27	1.5	728	266	994	176	132	43

DL/DLF Series

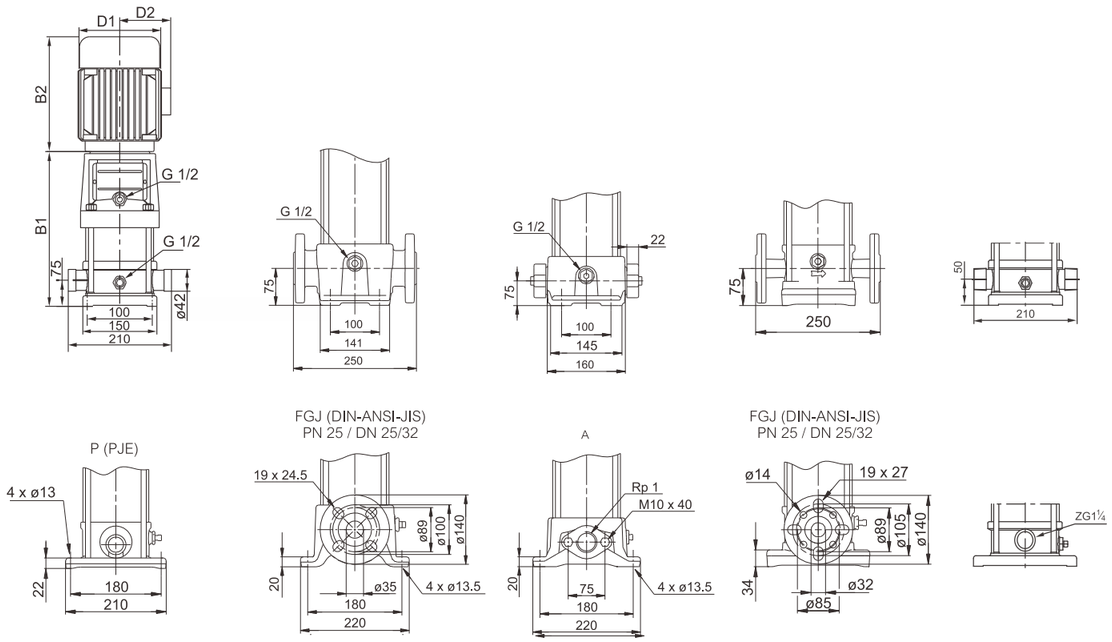
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL1/ DLF1



DIMENSION DRAWING



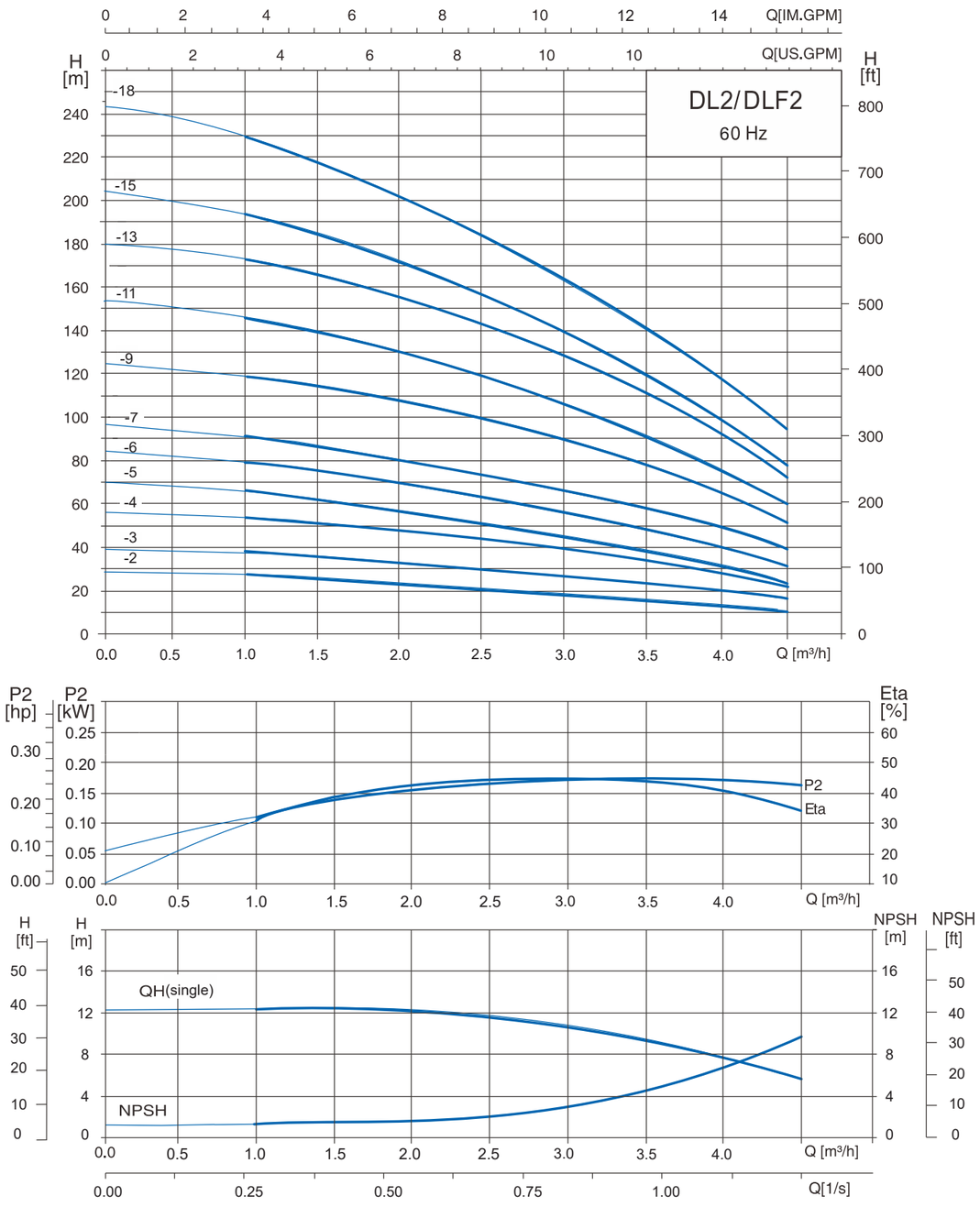
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 1-2	0.37	258	228	486	140	107	23
DL 1-3	0.37	276	228	504	140	107	23
DL 1-4	0.37	294	228	522	140	107	23
DL 1-5	0.55	312	228	540	140	107	23
DL 1-6	0.55	330	228	558	140	107	24
DL 1-7	0.75	348	248	596	158	125	27
DL 1-8	0.75	366	248	614	158	125	27
DL 1-9	0.75	384	248	632	158	125	28
DL 1-10	1.1	402	248	650	158	125	30
DL 1-11	1.1	420	248	668	158	125	31
DL 1-12	1.1	448	248	696	158	125	31
DL 1-13	1.1	466	248	714	158	125	32
DL 1-15	1.5	502	266	768	176	132	39
DL 1-17	1.5	538	266	804	176	132	40
DL 1-19	2.2	574	291	865	176	132	44
DL 1-21	2.2	610	291	901	176	132	45
DL 1-23	2.2	646	291	937	176	132	46
DL 1-25	2.2	692	291	983	176	132	47
DL 1-27	3	728	337	1065	195	142	53

DL/DLF Series

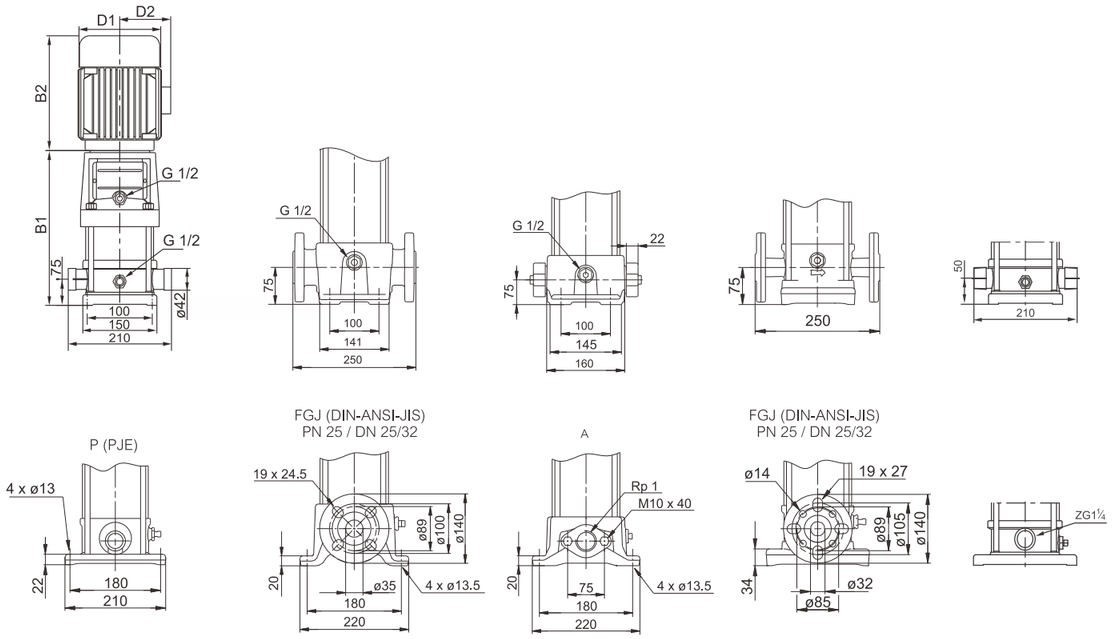
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL2/ DLF2



DIMENSION DRAWING



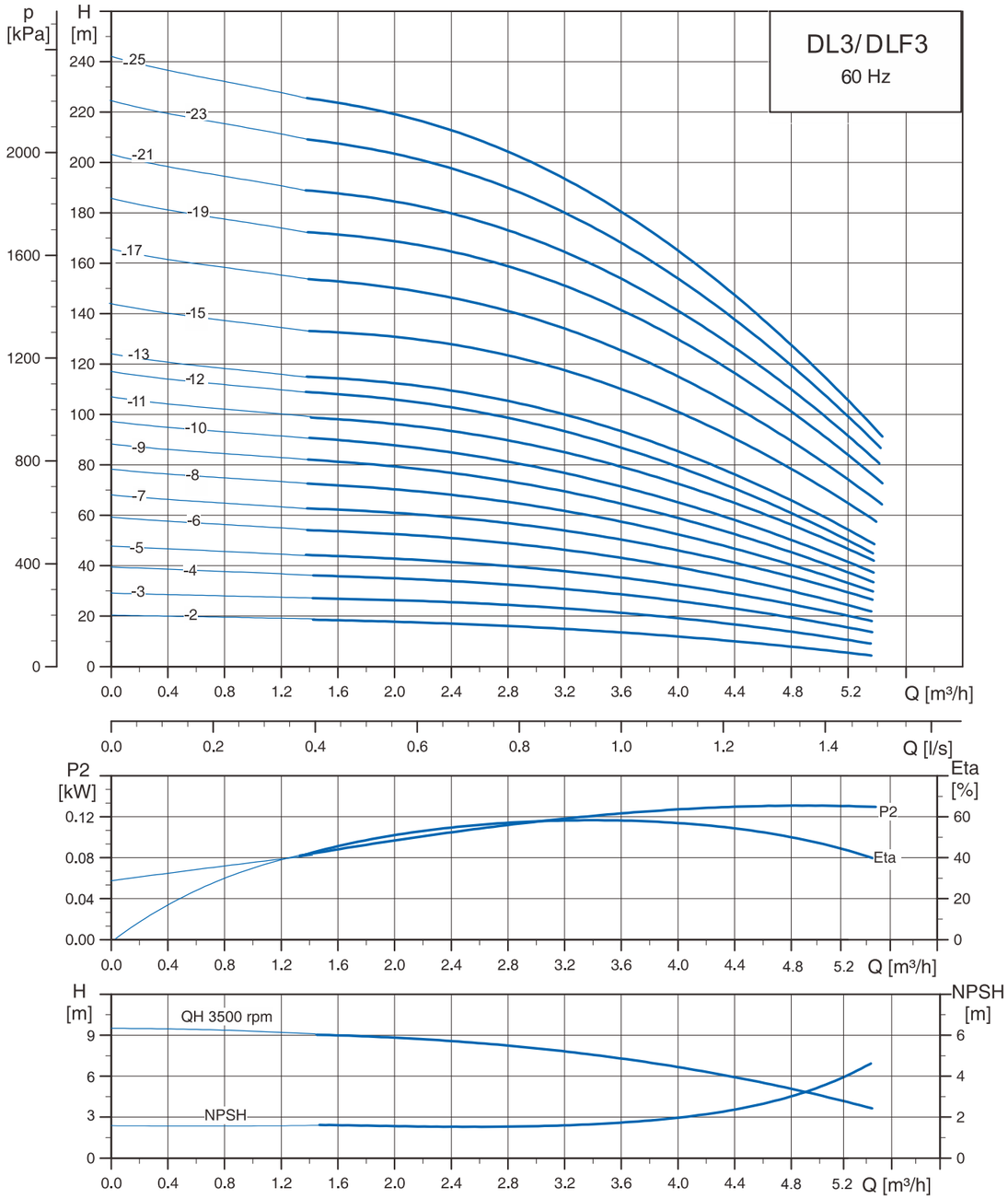
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 2-2	0.55	258	228	486	140	107	23
DL 2-3	0.75	276	248	524	140	107	24
DL 2-4	1.1	294	248	542	158	125	25
DL 2-5	1.1	312	248	560	158	125	26
DL 2-6	1.1	340	248	588	158	125	26
DL 2-7	1.5	358	266	624	176	132	32
DL 2-9	2.2	394	291	685	176	132	36
DL 2-11	2.2	430	291	721	176	132	37
DL 2-13	3	476	337	813	195	142	44
DL 2-15	3	512	337	849	195	142	45
DL 2-18	4	566	337	903	223	168	54

DL/DLF Series

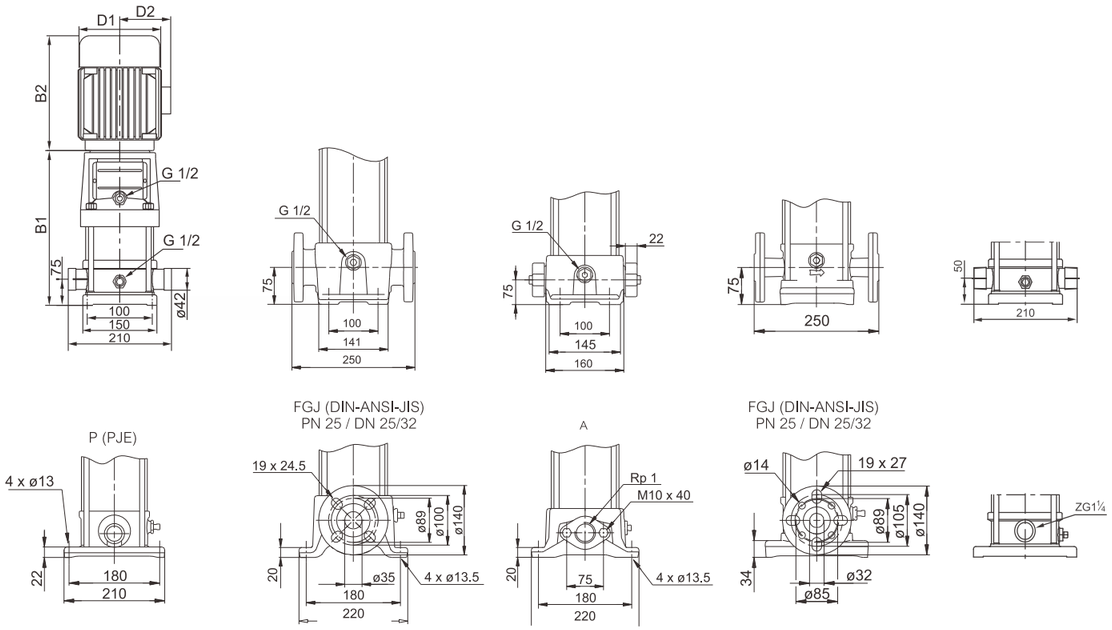
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL3/ DLF3



DIMENSION DRAWING



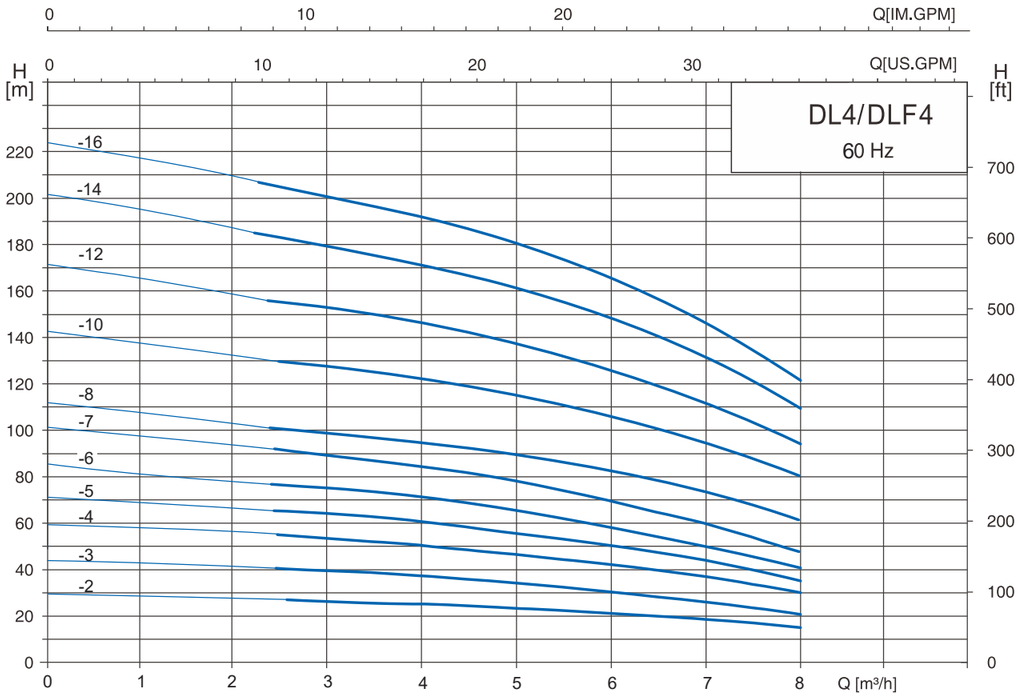
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 3-2	0.37	254	228	482	140	107	23
DL 3-3	0.55	272	228	500	140	107	23
DL 3-4	0.55	290	228	518	140	107	23
DL 3-5	0.75	308	248	556	158	125	26
DL 3-6	1.1	326	248	574	158	125	29
DL 3-7	1.1	344	248	592	158	125	29
DL 3-8	1.1	362	248	610	158	125	30
DL 3-9	1.5	380	266	646	176	132	36
DL 3-10	1.5	398	266	664	176	132	37
DL 3-11	1.5	416	266	682	176	132	37
DL 3-12	2.2	434	291	725	176	132	41
DL 3-13	2.2	452	291	743	176	132	42
DL 3-15	2.2	488	291	779	176	132	43
DL 3-17	2.2	524	291	815	176	132	44
DL 3-19	3	560	337	897	195	142	50
DL 3-21	3	596	337	933	195	142	50
DL 3-23	3	632	337	969	195	142	51
DL 3-25	4	668	337	1005	223	168	64

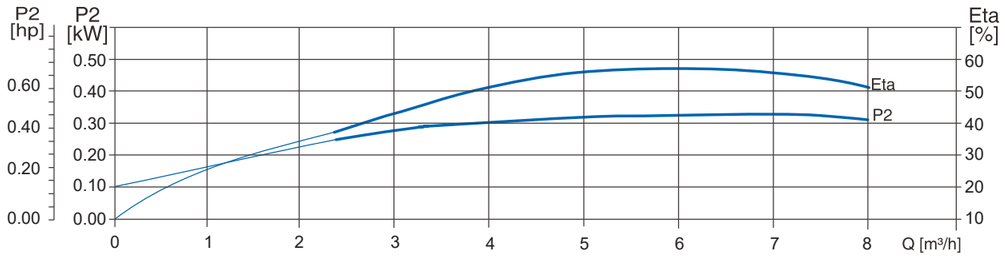
DL/DLF Series

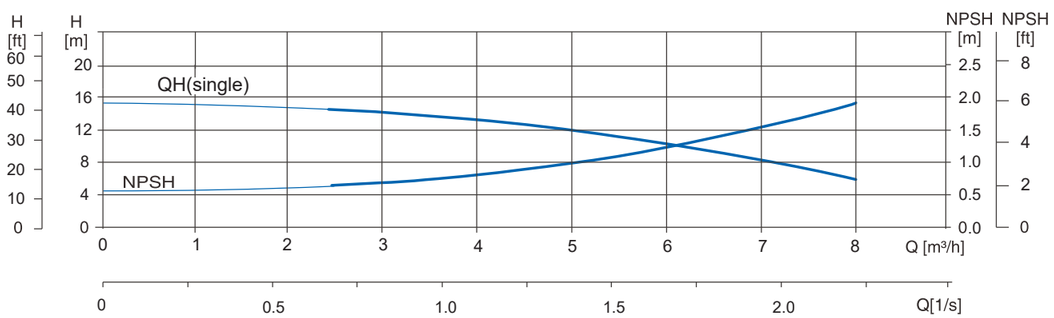
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

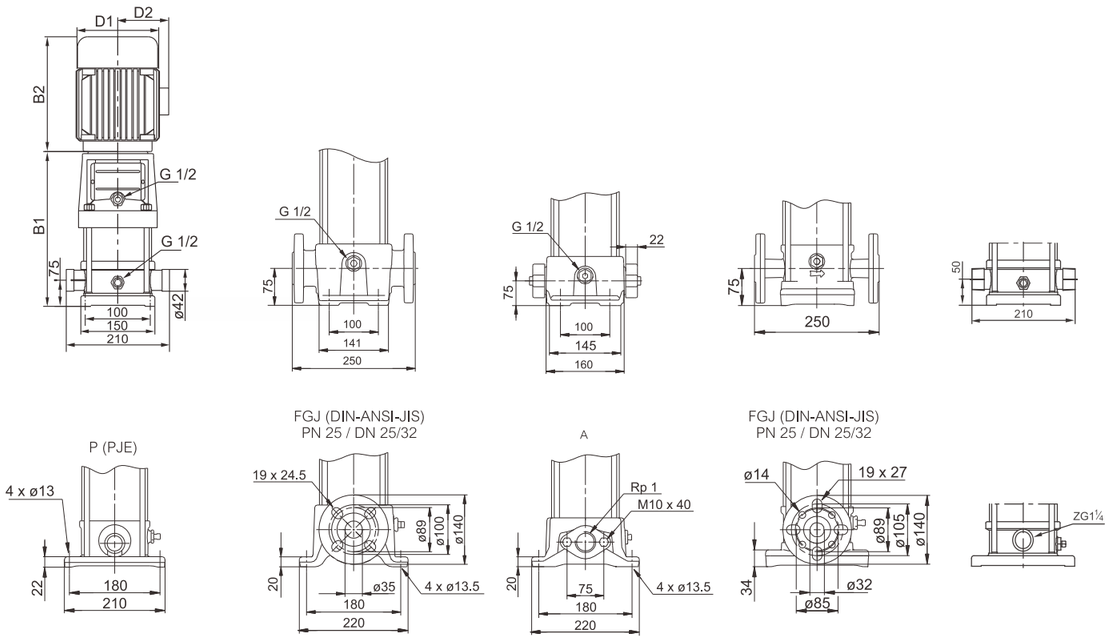
DL4/DLF4







DIMENSION DRAWING



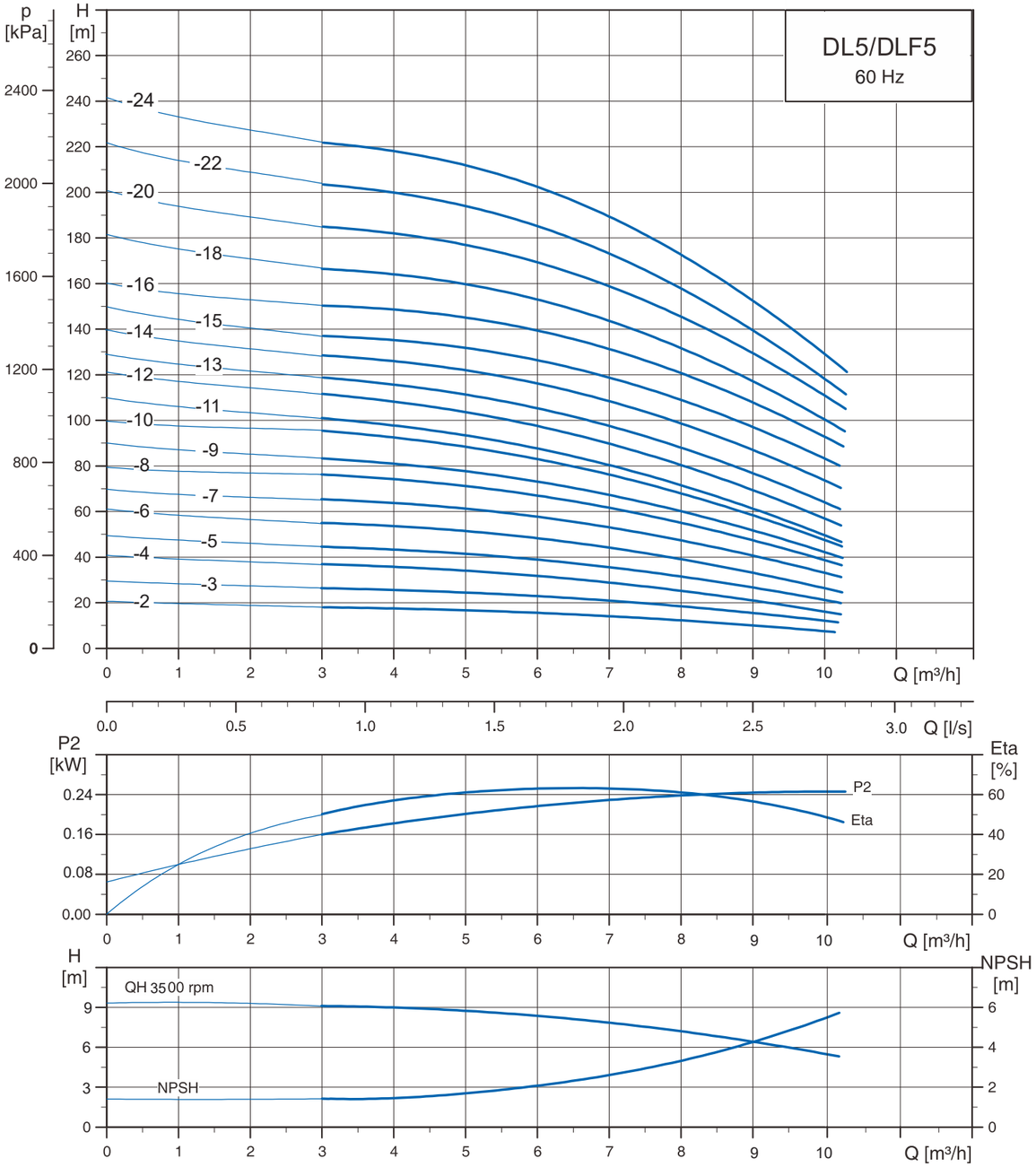
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL4-2	0.75	276	248	524	158	125	24
DL4-3	1.1	303	248	551	158	125	25
DL4-4	1.5	340	266	606	176	132	31
DL4-5	2.2	367	291	658	176	132	34
DL4-6	2.2	394	291	685	176	132	35
DL4-7	3	431	337	768	195	142	42
DL4-8	3	458	337	795	195	142	42
DL4-10	4	512	337	849	223	168	51
DL4-12	4	566	337	903	223	168	52
DL4-14	5.5	630	386	1016	259	187	64
DL4-16	5.5	684	386	1070	259	187	66

DL/DLF Series

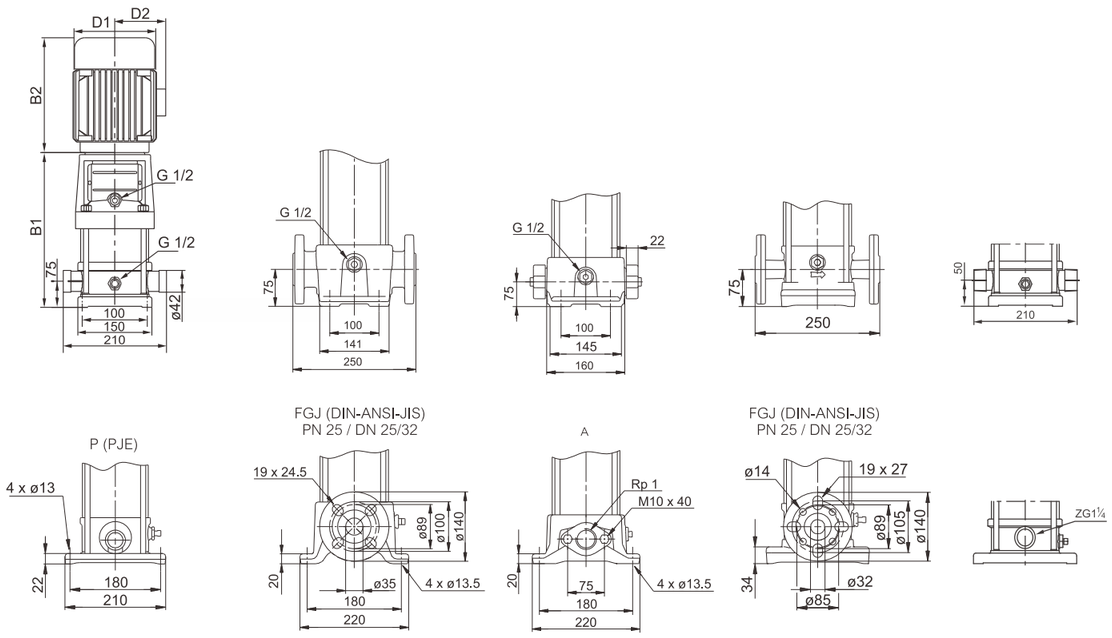
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL5/DLF5



DIMENSION DRAWING



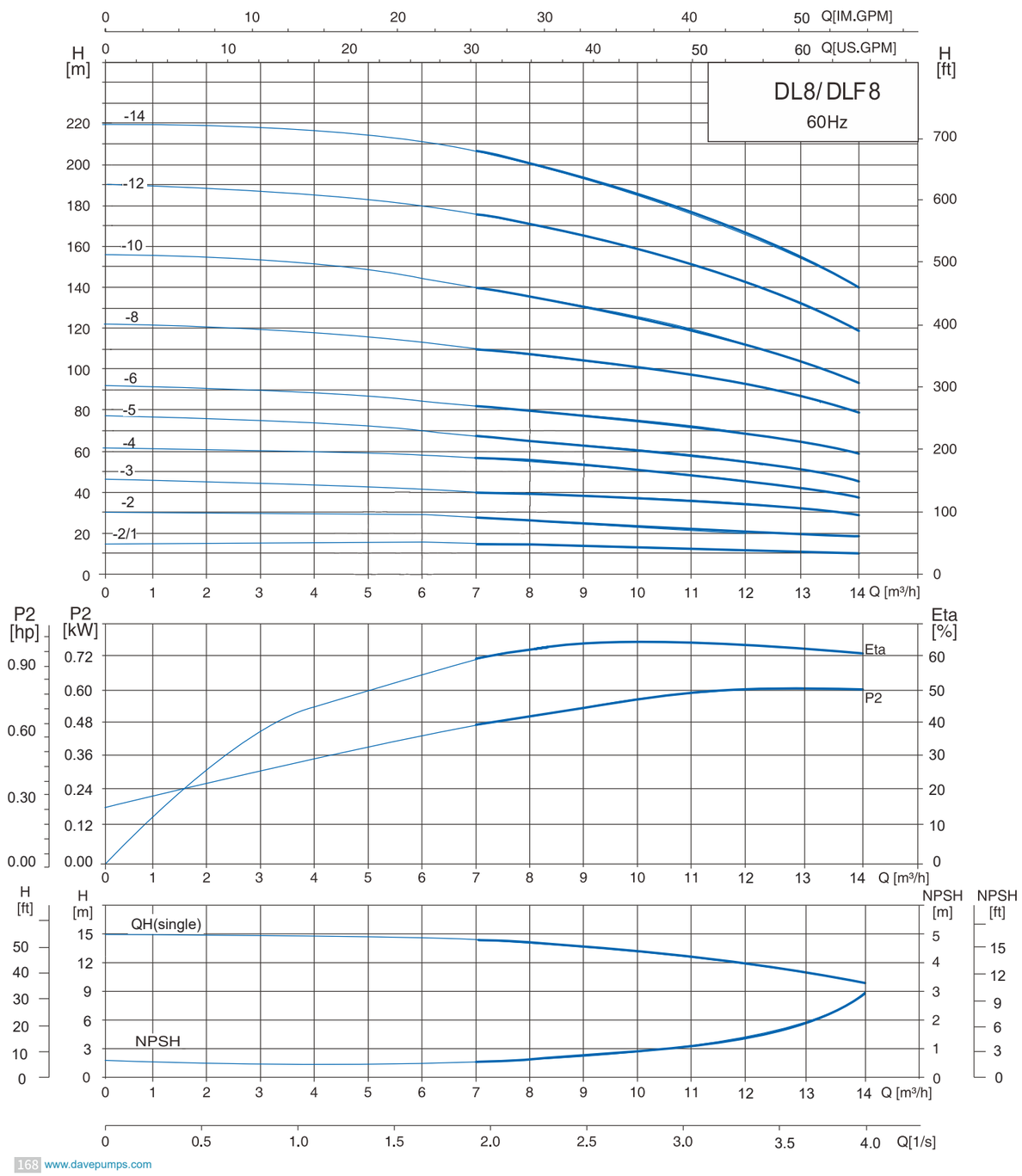
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL5-2	0.55	276	228	504	140	107	22
DL5-3	1.1	303	248	551	158	125	28
DL5-4	1.1	330	248	578	158	125	29
DL5-5	1.5	367	266	633	176	132	36
DL5-6	2.2	394	291	685	176	132	40
DL5-7	2.2	421	291	712	176	132	41
DL5-8	2.2	448	291	739	176	132	41
DL5-9	2.2	485	291	776	176	132	42
DL5-10	3	512	337	849	195	142	47
DL5-11	3	539	337	876	195	142	48
DL5-12	3	566	337	903	195	142	49
DL5-13	4	593	337	930	223	168	61
DL5-14	4	620	337	957	223	168	62
DL5-15	4	647	337	984	223	168	62
DL5-16	4	684	337	1021	223	168	63
DL5-18	5.5	738	386	1124	259	187	74
DL5-20	5.5	782	386	1168	259	187	76
DL5-22	5.5	846	386	1232	259	187	77
DL5-24	7.5	900	430	1330	259	187	88

DL/DLF Series

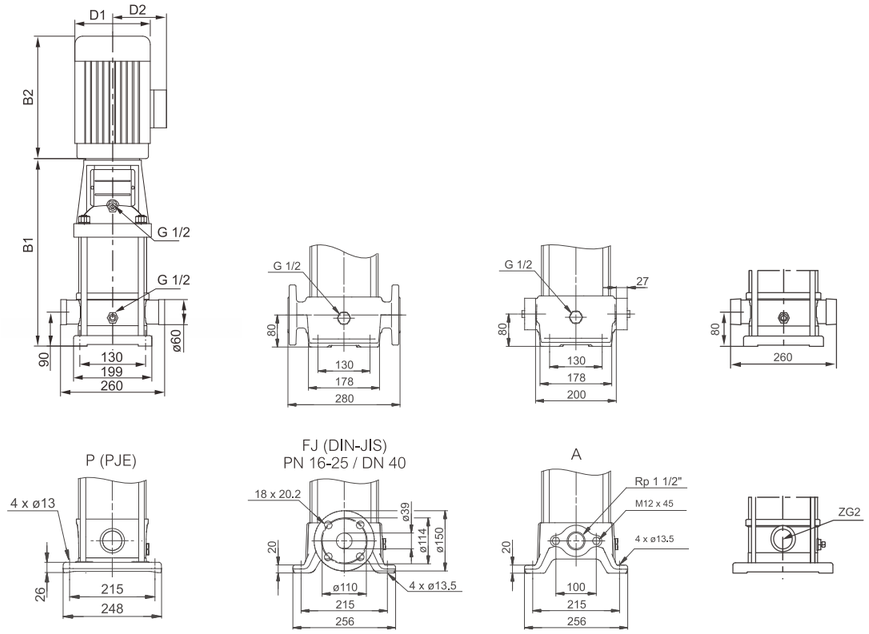
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL8/ DLF8



DIMENSION DRAWING



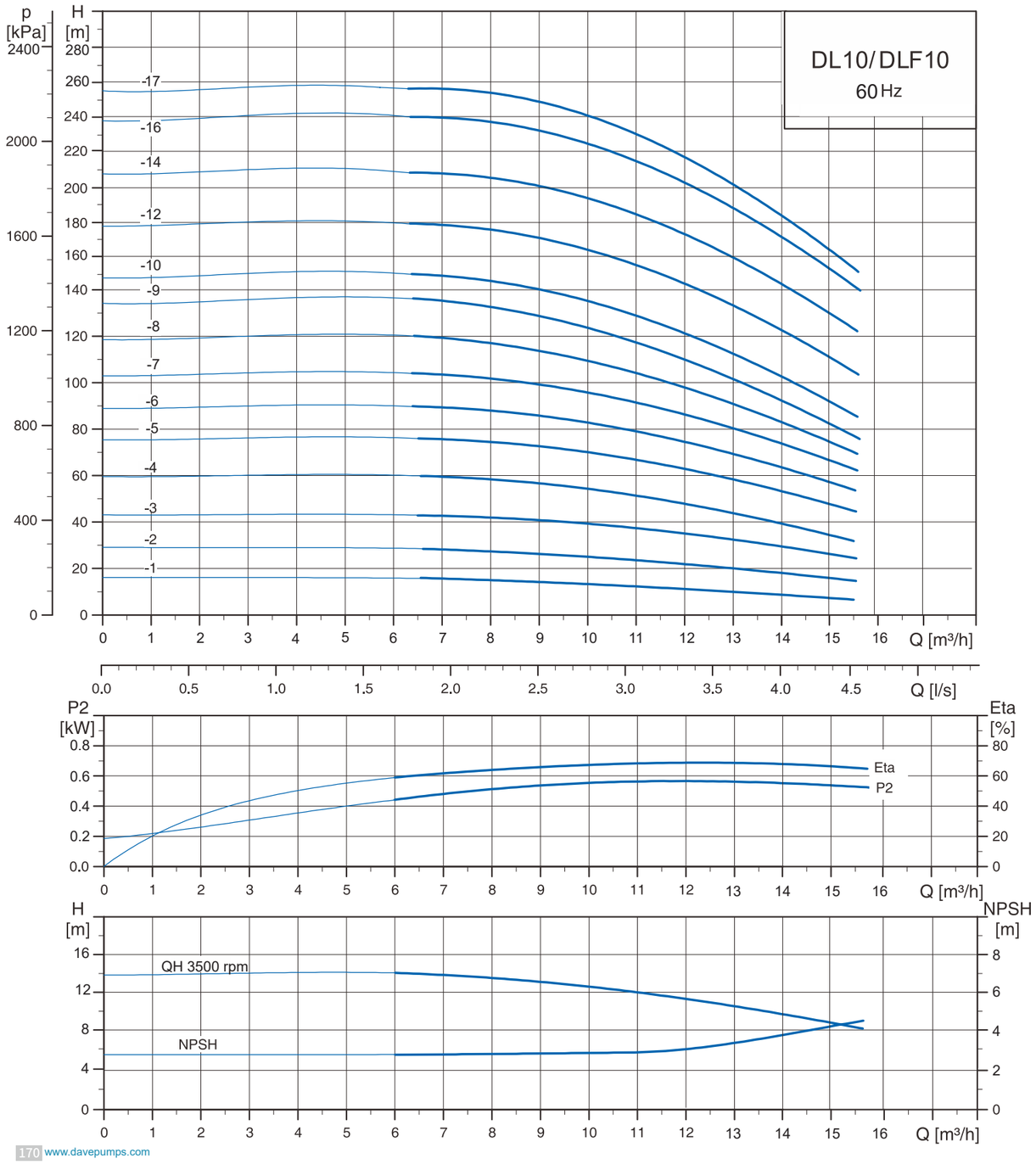
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 8-2/1	0.75	347	248	595	158	125	32
DL 8-2	1.5	347	266	613	176	132	38
DL 8-3	2.2	377	291	668	176	132	41
DL 8-4	3	417	337	754	195	142	49
DL 8-5	3	447	337	784	195	142	50
DL 8-6	4	477	337	814	223	168	58
DL 8-8	5.5	547	386	933	259	187	71
DL 8-10	7.5	607	430	1037	259	187	80
DL 8-12	7.5	667	430	1097	259	187	82
DL 8-14	11	747	519	1266	313	230	153

DL/DLF Series

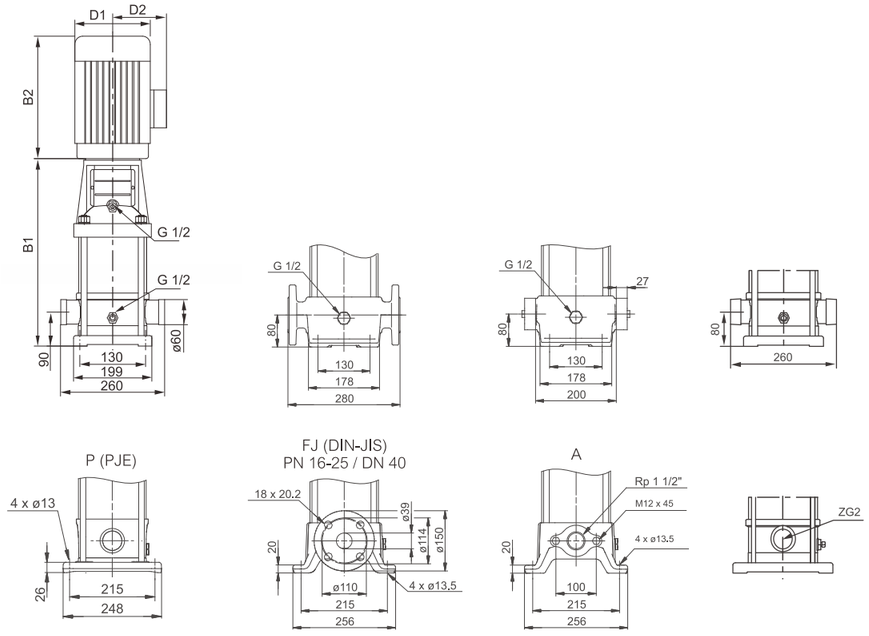
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL10/DLF10



DIMENSION DRAWING



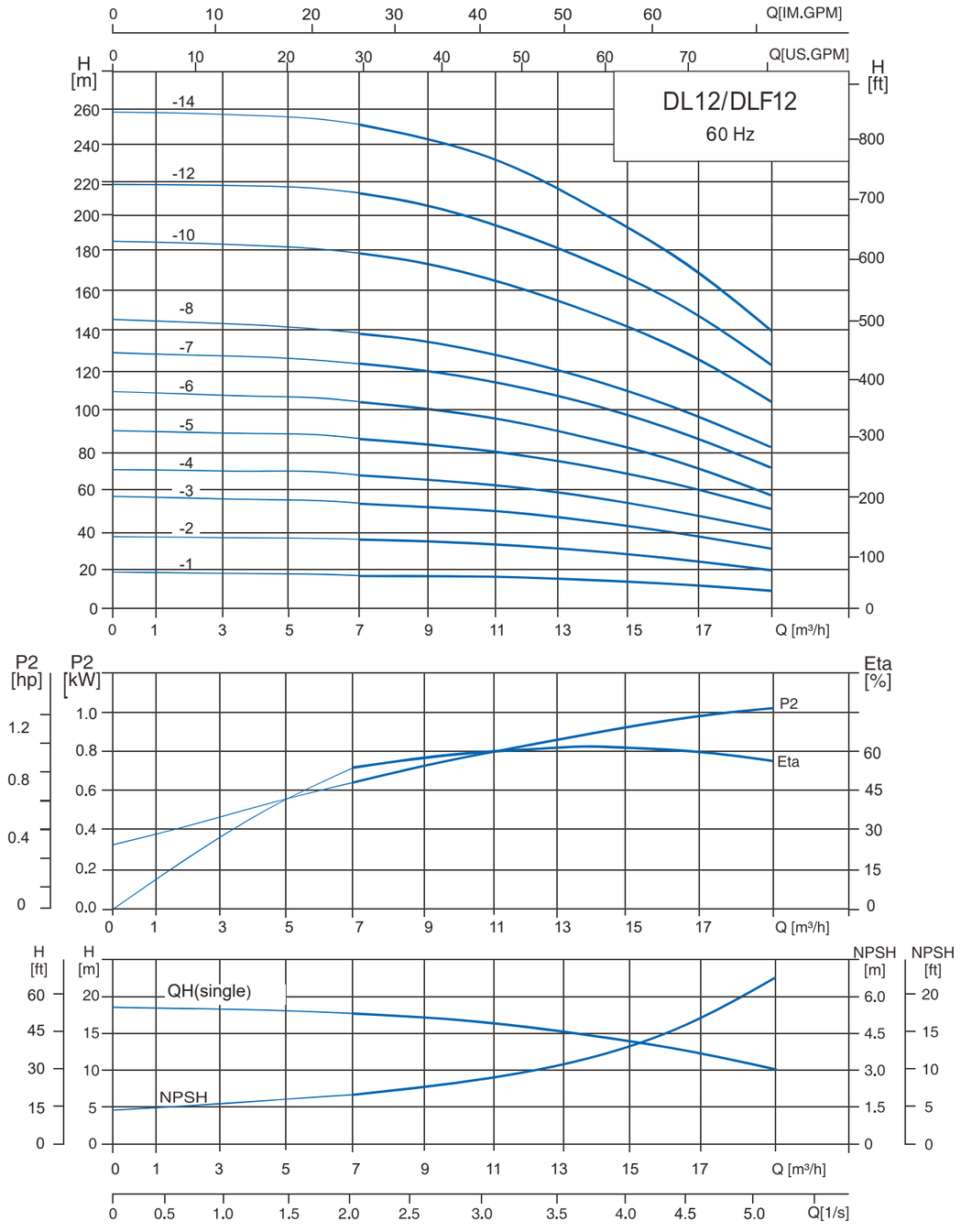
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL10-1	0.75	347	248	595	158	125	36
DL10-2	1.5	347	266	613	176	132	45
DL10-3	2.2	377	291	668	176	132	50
DL10-4	3	417	337	754	195	142	56
DL10-5	3	447	337	784	195	142	57
DL10-6	4	447	337	814	223	168	69
DL10-7	5.5	517	386	903	259	187	87
DL10-8	5.5	547	386	933	259	187	88
DL10-9	5.5	577	386	963	259	187	89
DL10-10	7.5	607	430	1037	259	187	100
DL10-12	7.5	667	430	1097	259	187	103
DL10-14	11	747	519	1266	313	230	146
DL10-16	11	807	519	1326	313	230	148
DL10-17	11	837	519	1356	313	230	150

DL/DLF Series

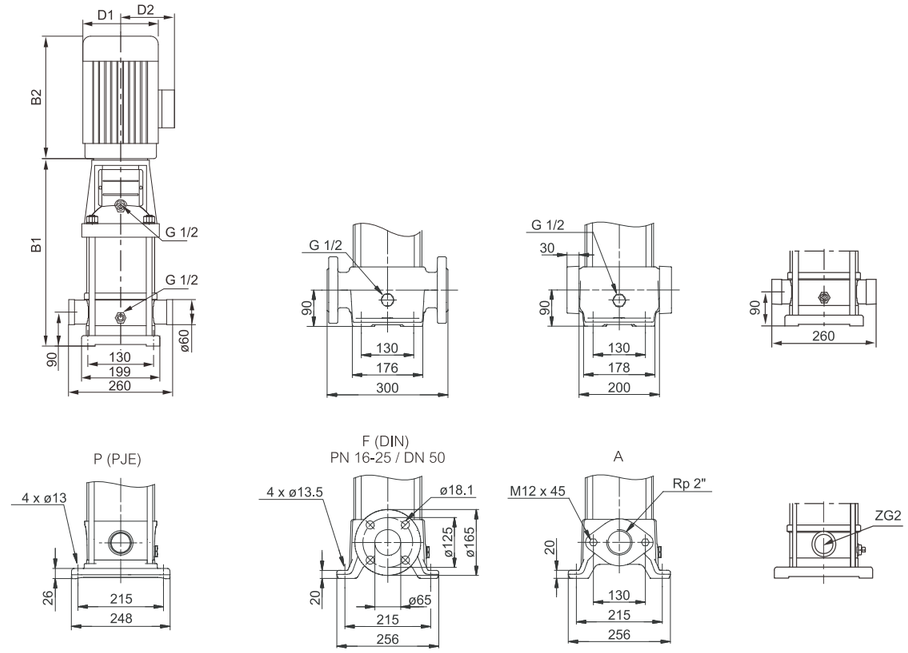
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL12/DLF12



DIMENSION DRAWING



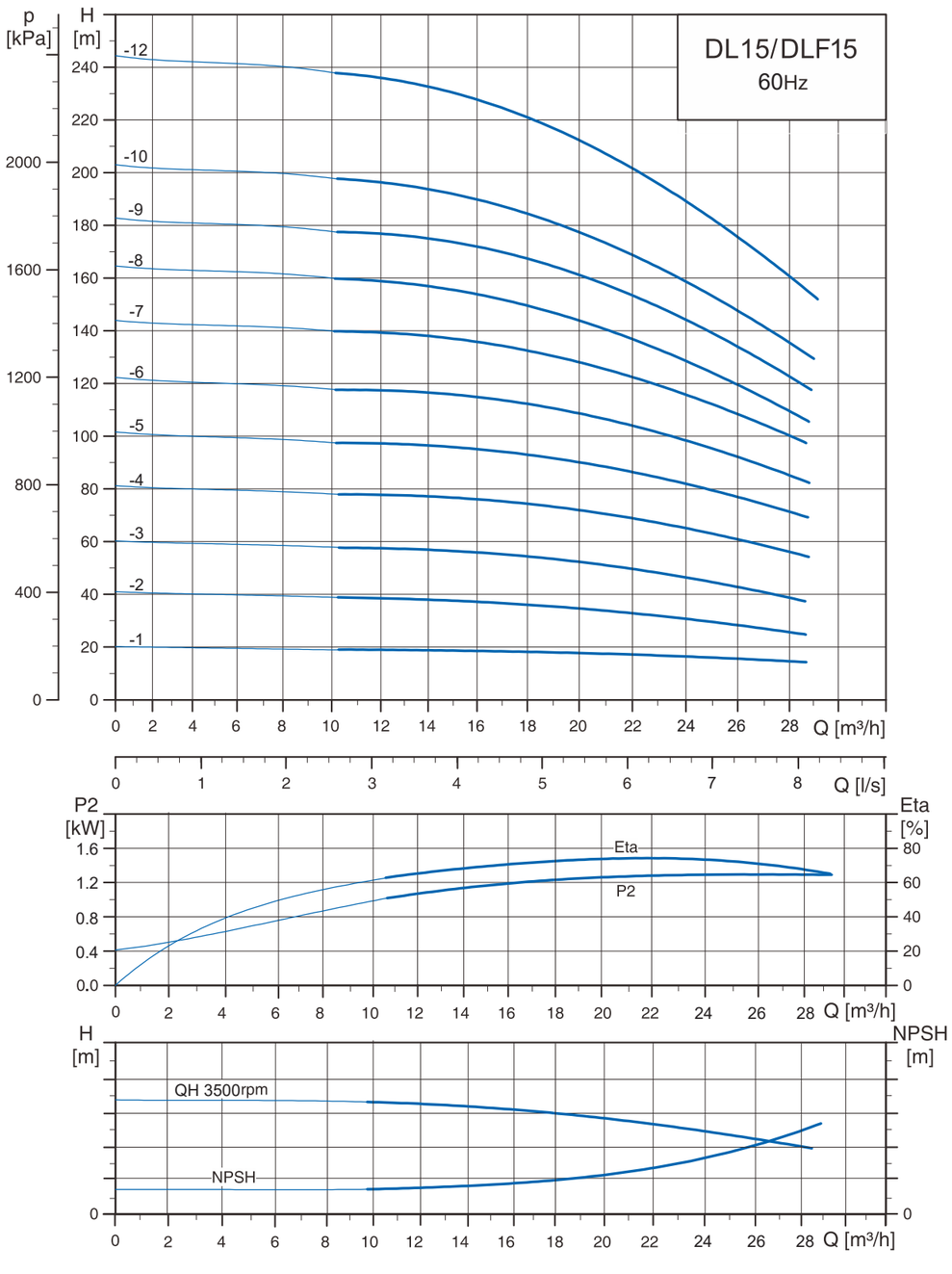
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 12-1	1.1	367	248	615	158	125	32
DL 12-2	2.2	367	291	658	176	132	41
DL 12-3	4	397	337	734	223	168	56
DL 12-4	5.5	437	386	823	259	187	69
DL 12-5	5.5	467	386	853	259	187	71
DL 12-6	7.5	497	430	927	259	187	77
DL 12-7	7.5	547	430	977	259	187	78
DL 12-8	11	577	519	1096	313	230	147
DL 12-10	11	637	519	1156	313	230	151
DL 12-12	15	697	519	1216	313	230	164
DL 12-14	15	845	519	1364	313	230	167

DL/DLF Series

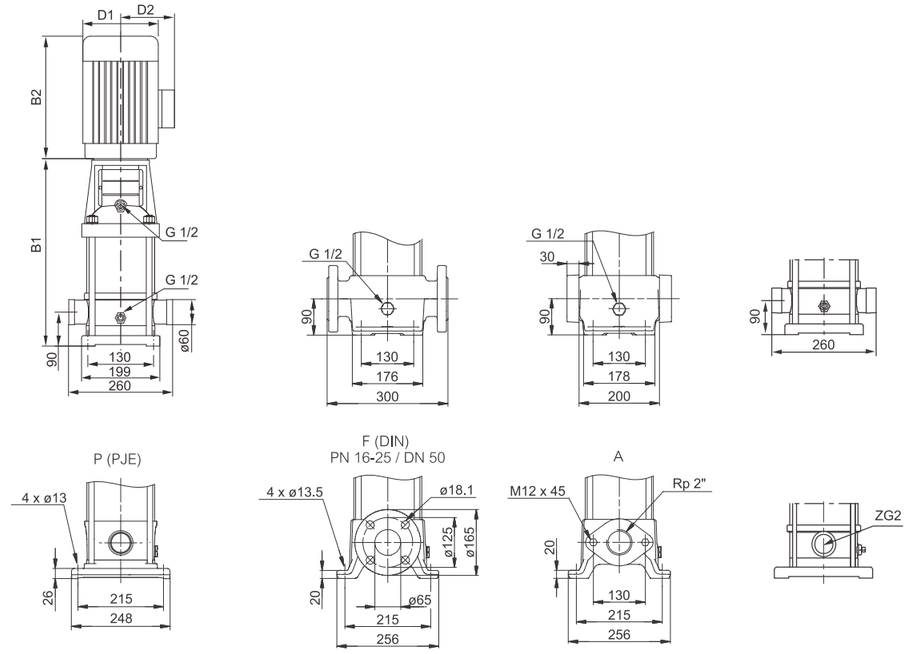
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL15/DLF15



DIMENSION DRAWING



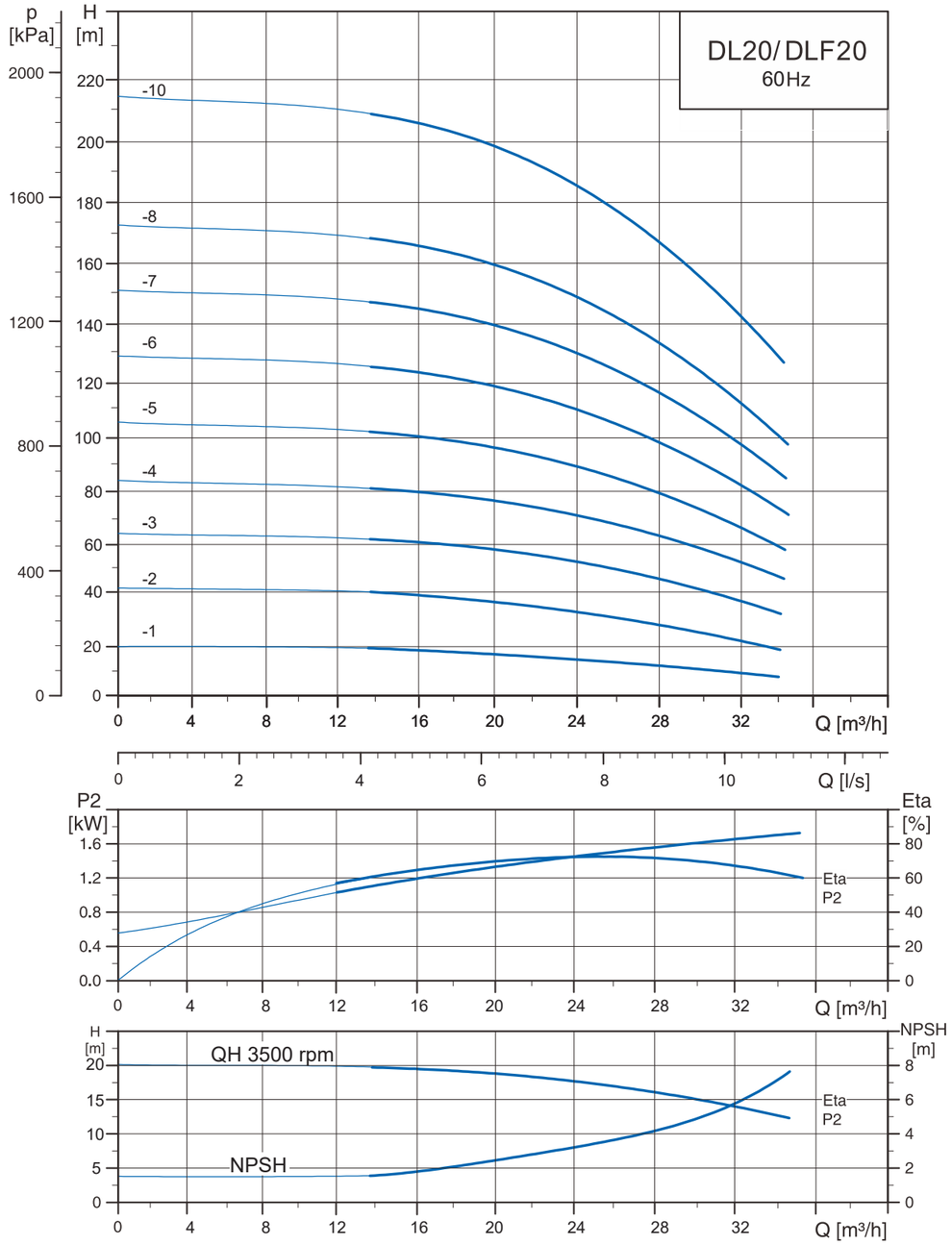
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 15-1	1.5	397	266	663	176	132	49
DL 15-2	3	397	337	734	176	132	58
DL 15-3	4	452	337	789	223	168	71
DL 15-4	5.5	497	386	883	259	187	89
DL 15-5	7.5	542	430	972	259	187	100
DL 15-6	11	607	519	1126	313	230	143
DL 15-7	11	652	519	1171	313	230	144
DL 15-8	11	697	519	1216	313	230	146
DL 15-9	15	742	519	1261	313	230	160
DL 15-10	15	875	519	1394	313	230	162
DL 15-12	18.5	965	519	1484	313	230	178

DL/DLF Series

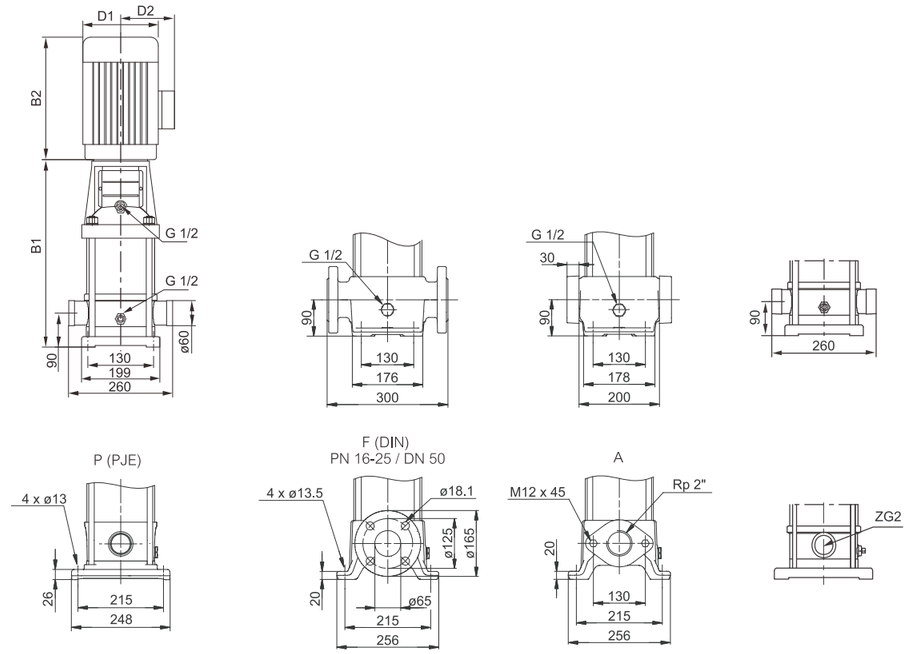
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL20/ DLF20



DIMENSION DRAWING



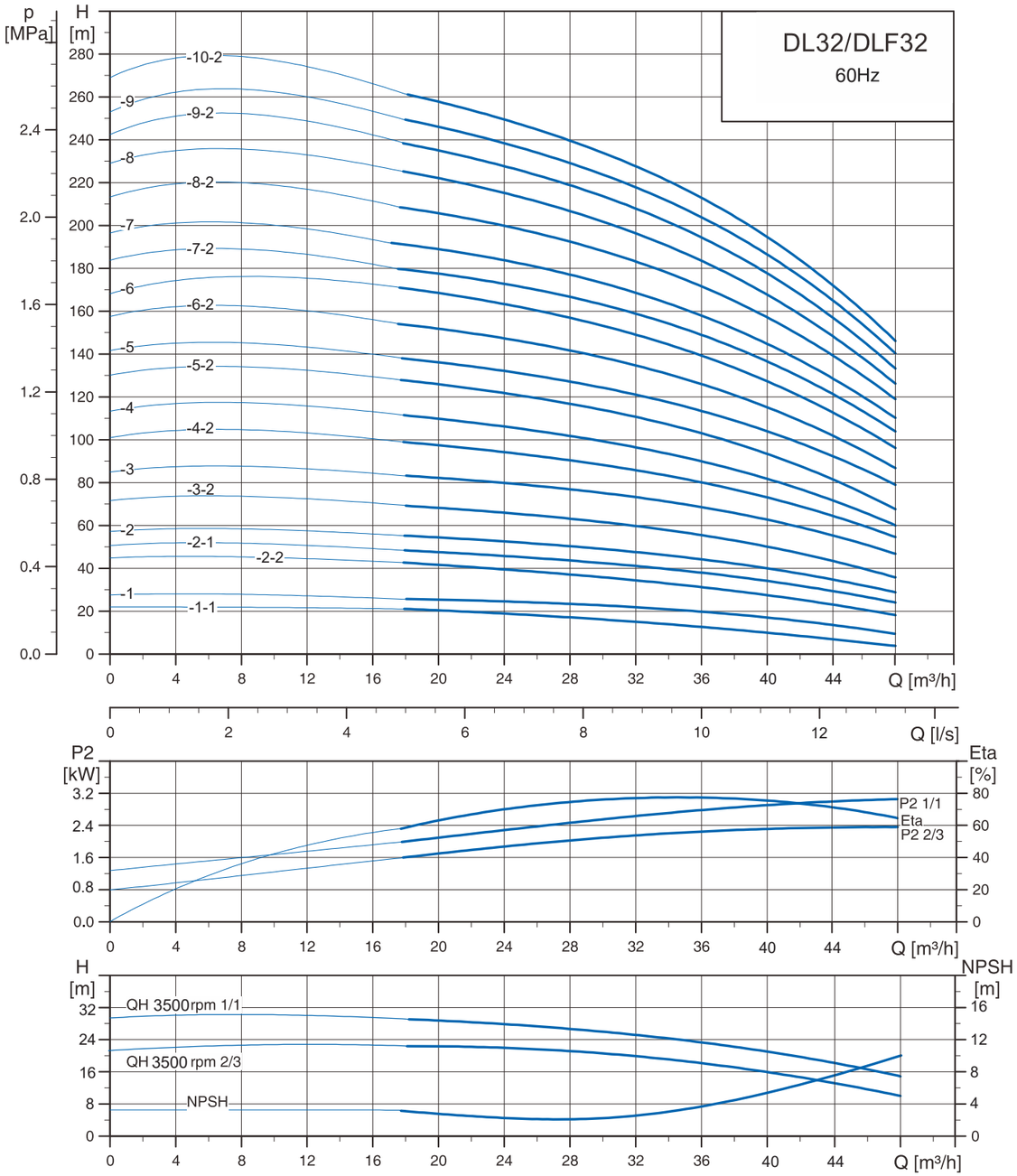
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 20-1	2.2	397	291	688	176	132	52
DL 20-2	4	397	337	734	223	168	69
DL 20-3	5.5	452	386	838	259	187	88
DL 20-4	7.5	517	430	947	259	187	99
DL 20-5	11	562	519	1081	313	230	141
DL 20-6	11	607	519	1126	313	230	143
DL 20-7	15	652	519	1171	313	230	156
DL 20-8	15	785	519	1304	313	230	158
DL 20-10	18.5	875	519	1394	313	230	175

DL/DLF Series

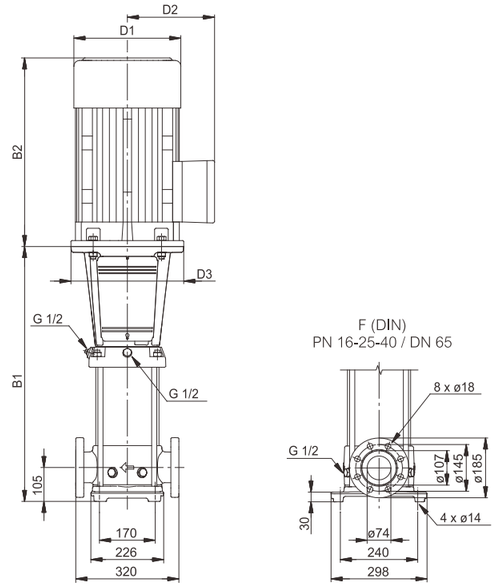
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL32/ DLF32



DIMENSION DRAWING



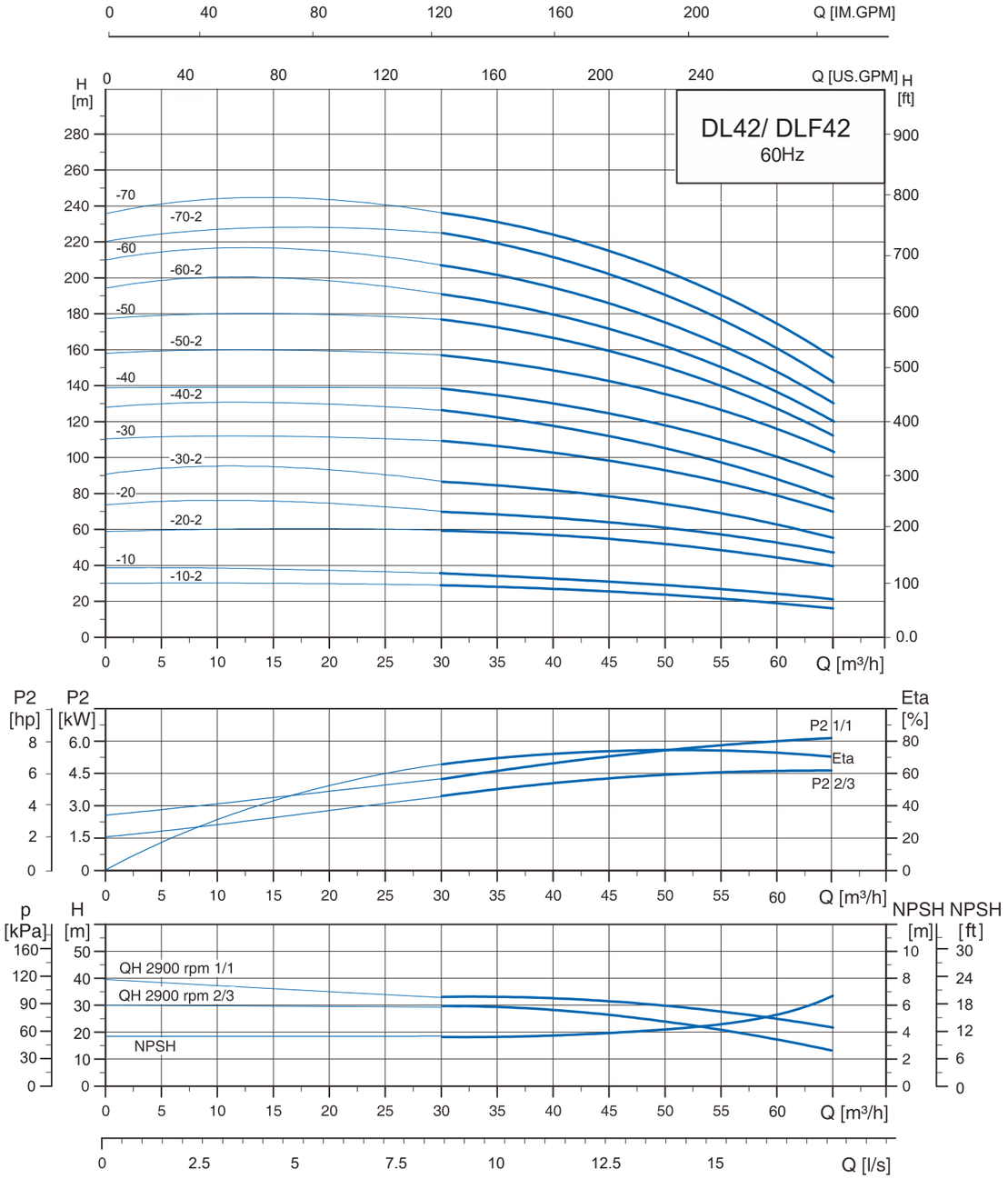
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL32-1-1	2.2	505	291	796	176	132	69
DL32-1	3	505	337	842	195	142	74
DL32-2-2	5.5	575	386	961	259	187	96
DL32-2-1	5.5	575	386	961	259	187	96
DL32-2	7.5	575	430	1005	259	187	106
DL32-3-2	11	645	519	1164	313	230	154
DL32-3	11	645	519	1164	313	230	154
DL32-4-2	11	715	519	1234	313	230	157
DL32-4	15	715	519	1234	313	230	169
DL32-5-2	15	890	519	1409	313	230	172
DL32-5	18.5	890	519	1409	313	230	185
DL32-6-2	18.5	960	519	1479	313	230	188
DL32-6	18.5	960	519	1479	313	230	188
DL32-7-2	22	1030	624	1654	356	271	206
DL32-7	22	1030	624	1654	356	271	206
DL32-8-2	30	1100	666	1766	395	283	314
DL32-8	30	1100	666	1766	395	283	314
DL32-9-2	30	1170	666	1836	395	283	318
DL32-9	30	1170	666	1836	395	283	318
DL32-10-2	30	1240	666	1906	395	283	321

DL/DLF Series

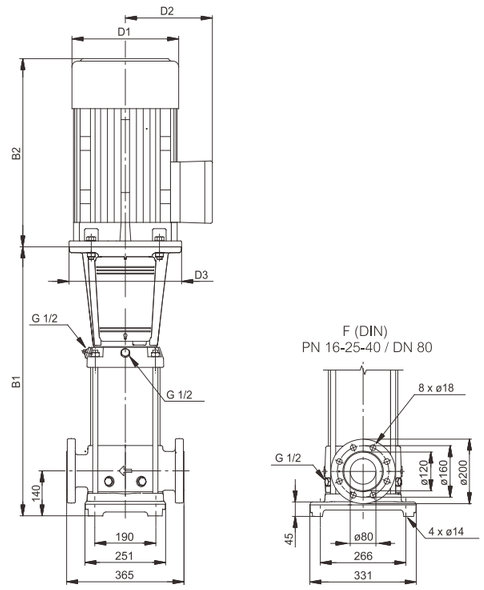
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL42/ DLF42



DIMENSION DRAWING



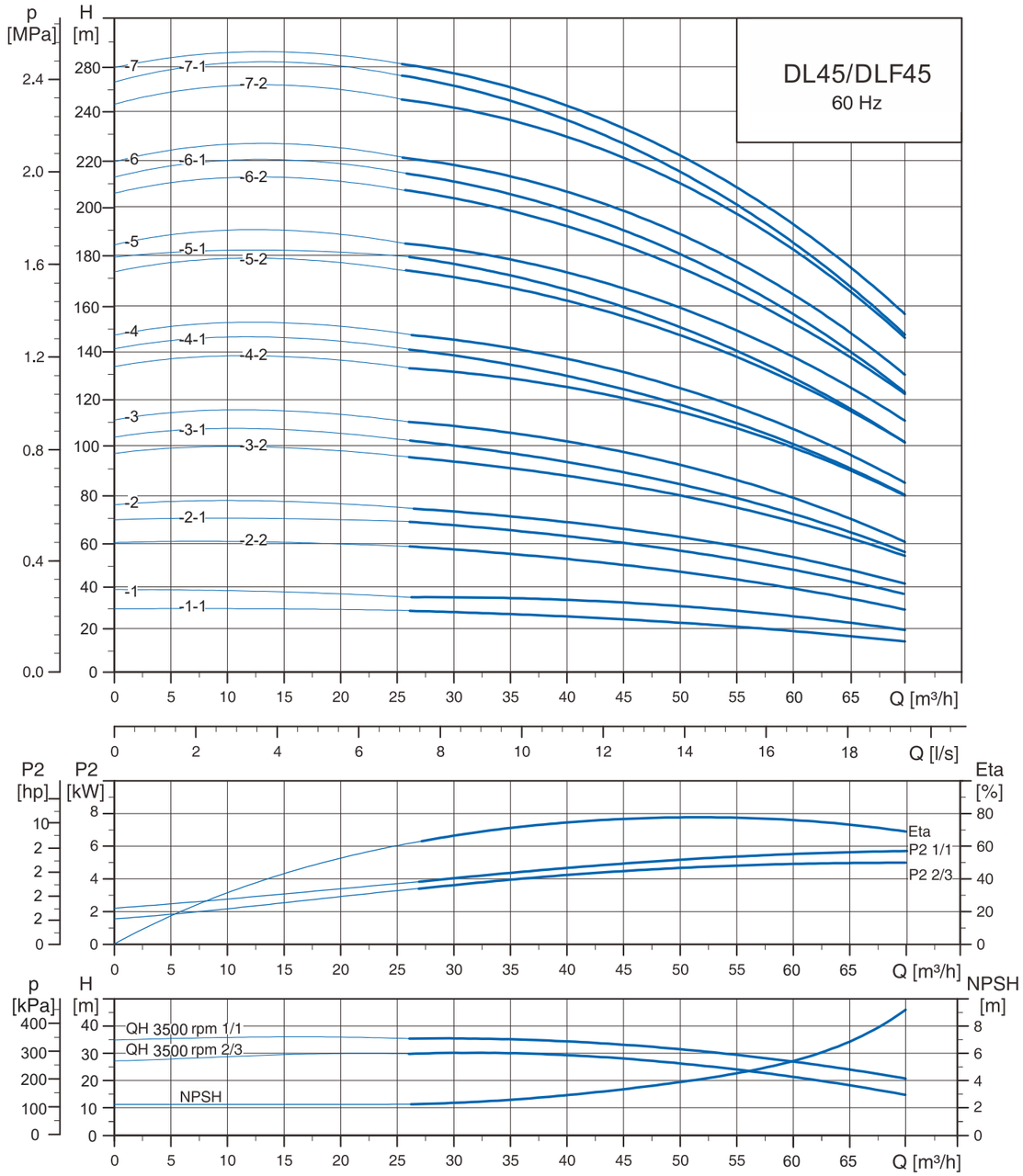
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL42-1-1	5.5	561	386	947	259	187	101
DL42-1	7.5	561	430	991	259	187	106
DL42-2-2	11	641	519	1160	313	230	178
DL42-2	15	641	519	1160	313	230	188
DL42-3-2	18.5	826	519	1345	313	230	213
DL42-3	18.5	826	519	1345	313	230	213
DL42-4-2	22	906	624	1530	356	271	253
DL42-4	30	906	666	1572	395	283	309
DL42-5-2	30	986	666	1652	395	283	313
DL42-5	30	986	666	1652	395	283	313
DL42-6-2	37	1066	666	1732	395	283	340
DL42-6	37	1066	666	1732	395	283	340
DL42-7-2	45	1146	700	1846	444	323	404
DL42-7	45	1146	700	1846	444	323	404

DL/DLF Series

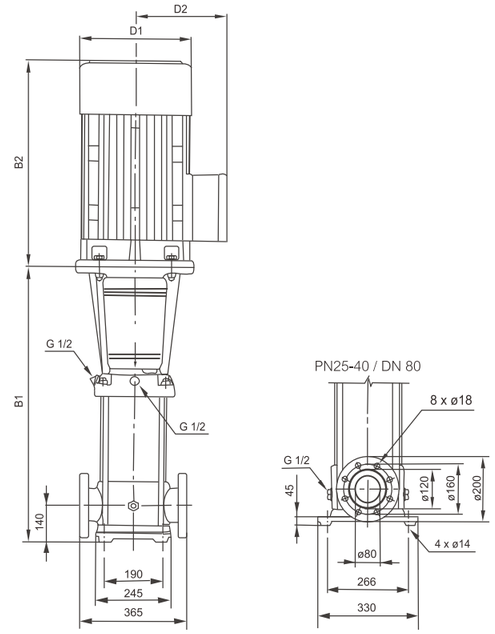
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL45/ DLF45



DIMENSION DRAWING



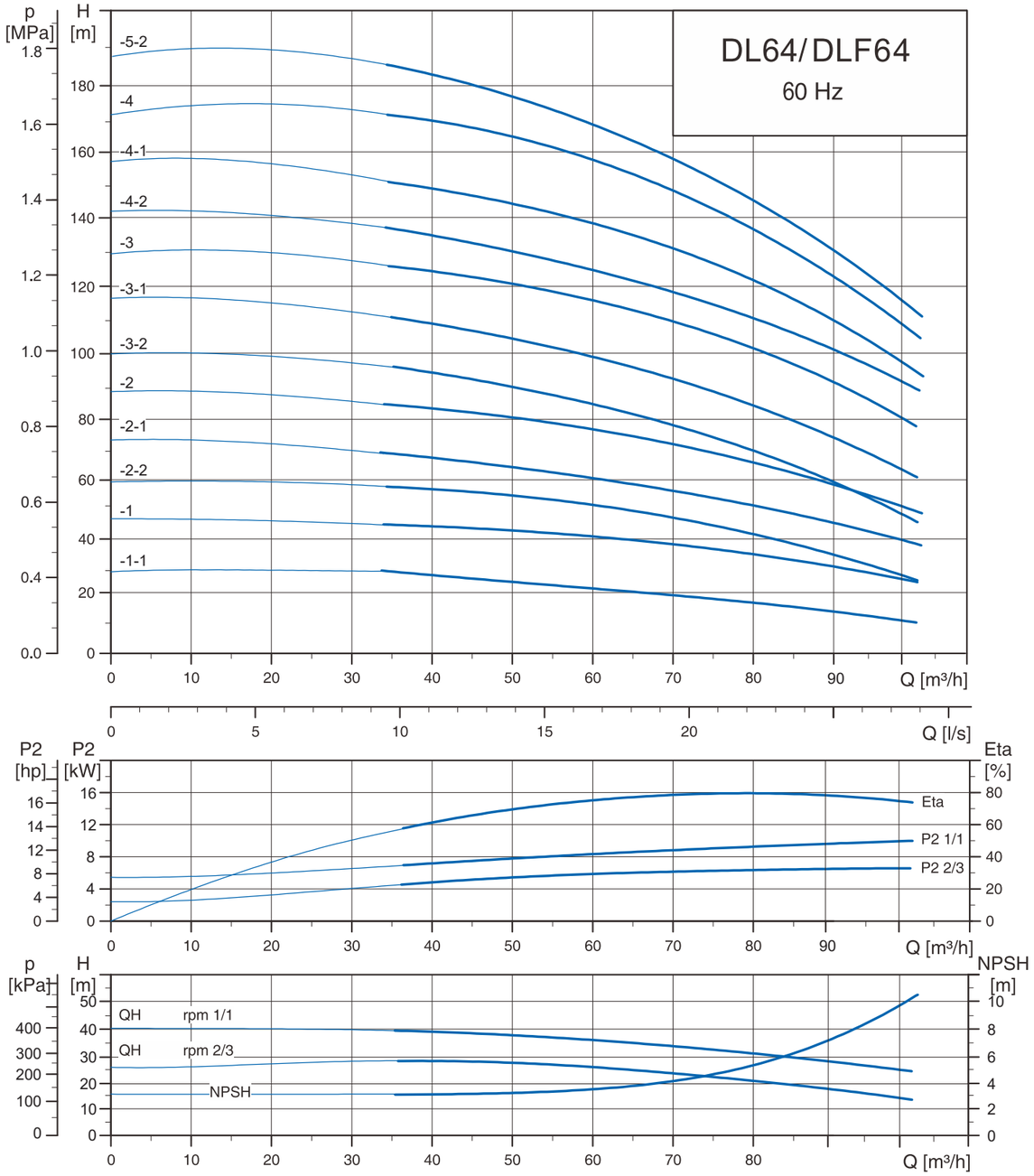
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL45-1-1	5.5	561	386	947	259	187	101
DL45-1	7.5	561	430	991	259	187	111
DL45-2-2	11	641	519	1160	313	230	159
DL45-2-1	11	641	519	1160	313	230	159
DL45-2	15	641	519	1160	313	230	171
DL45-3-2	18.5	826	519	1345	313	230	188
DL45-3-1	18.5	826	519	1345	313	230	188
DL42-3	18.5	826	519	1345	313	230	188
DL45-4-2	22	906	624	1530	356	271	207
DL45-4-1	30	906	666	1572	395	283	309
DL45-4	30	906	666	1572	395	283	309
DL45-5-2	30	986	666	1652	395	283	313
DL45-5-1	30	986	666	1652	395	283	313
DL45-5	30	986	666	1652	395	283	313
DL45-6-2	37	1066	666	1732	395	283	344
DL45-6-1	37	1066	666	1732	395	283	344
DL45-6	37	1066	666	1732	395	283	344
DL45-7-2	45	1146	700	1846	444	323	438
DL45-7-1	45	1146	700	1846	444	323	438
DL45-7	45	1146	700	1846	444	323	438

DL/DLF Series

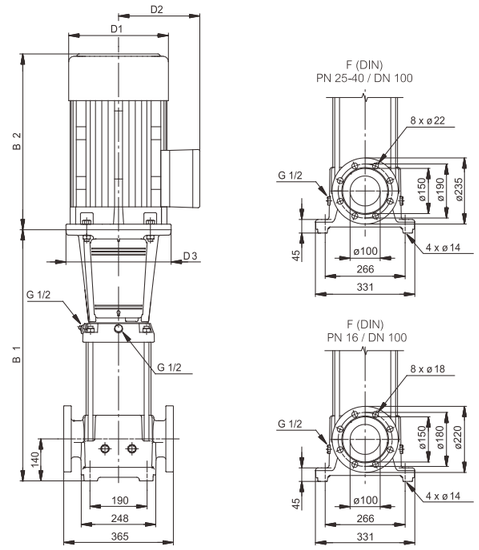
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL64/DLF64



DIMENSION DRAWING



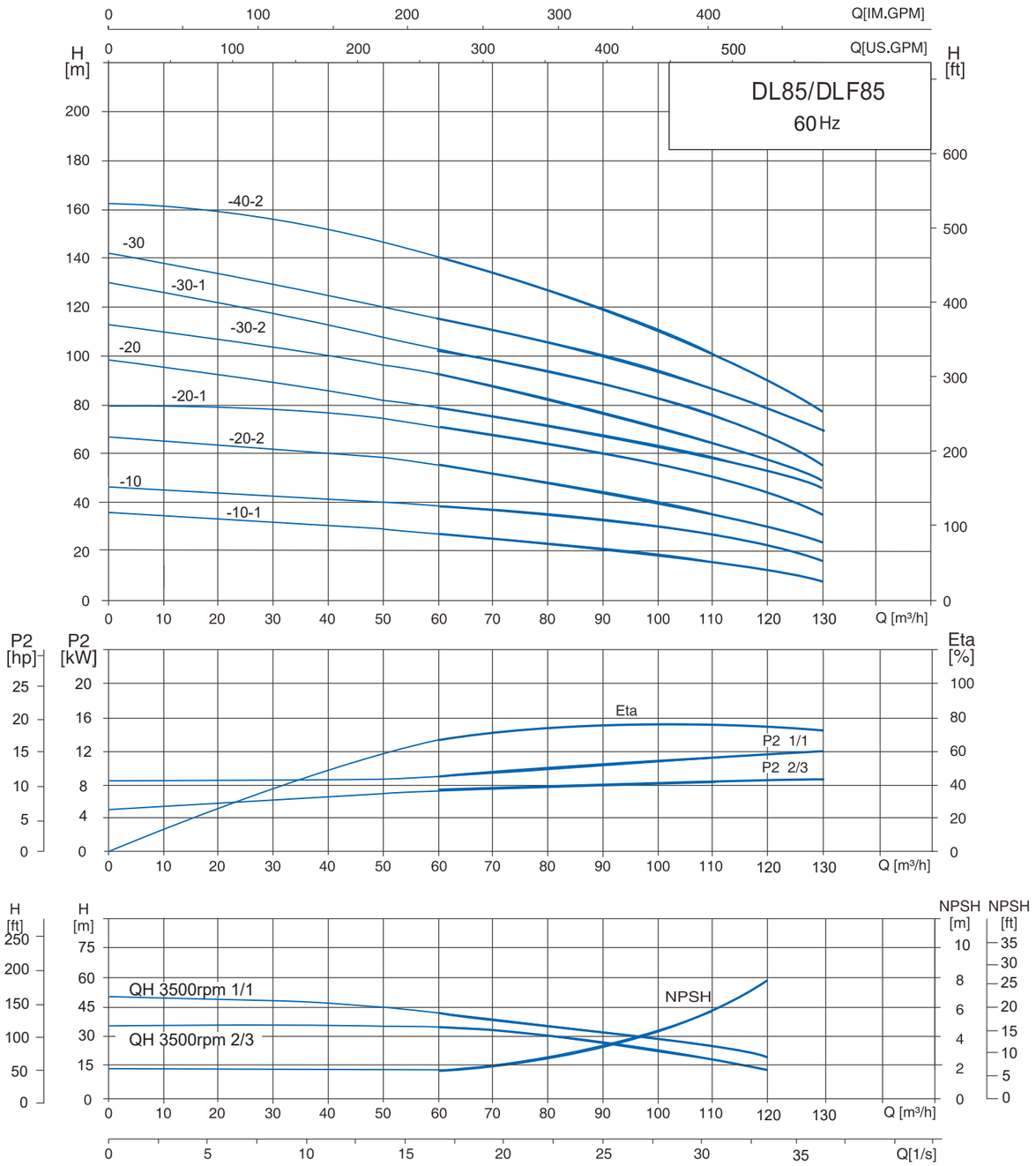
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL64-1-1	7.5	561	430	991	259	187	113
DL64-1	11	561	519	1080	313	230	158
DL64-2-2	15	644	519	1163	313	230	174
DL64-2-1	18.5	754	519	1273	313	230	187
DL64-2	22	754	624	1378	356	271	202
DL64-3-2	22	836	624	1460	356	271	206
DL64-3-1	30	836	666	1502	395	283	309
DL64-3	30	836	666	1502	395	283	309
DL64-4-2	37	919	666	1585	395	283	340
DL64-4-1	37	919	666	1585	395	283	340
DL64-4	45	919	700	1619	444	323	429
DL64-5-2	45	1001	700	1701	444	323	434

DL/DLF Series

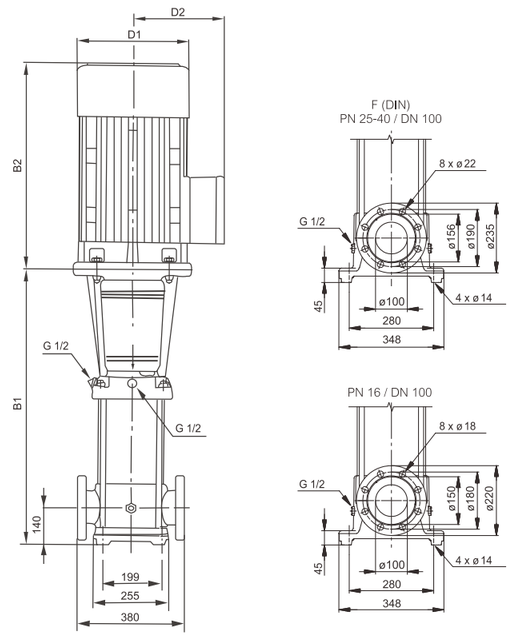
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL85/ DLF85



DIMENSION DRAWING



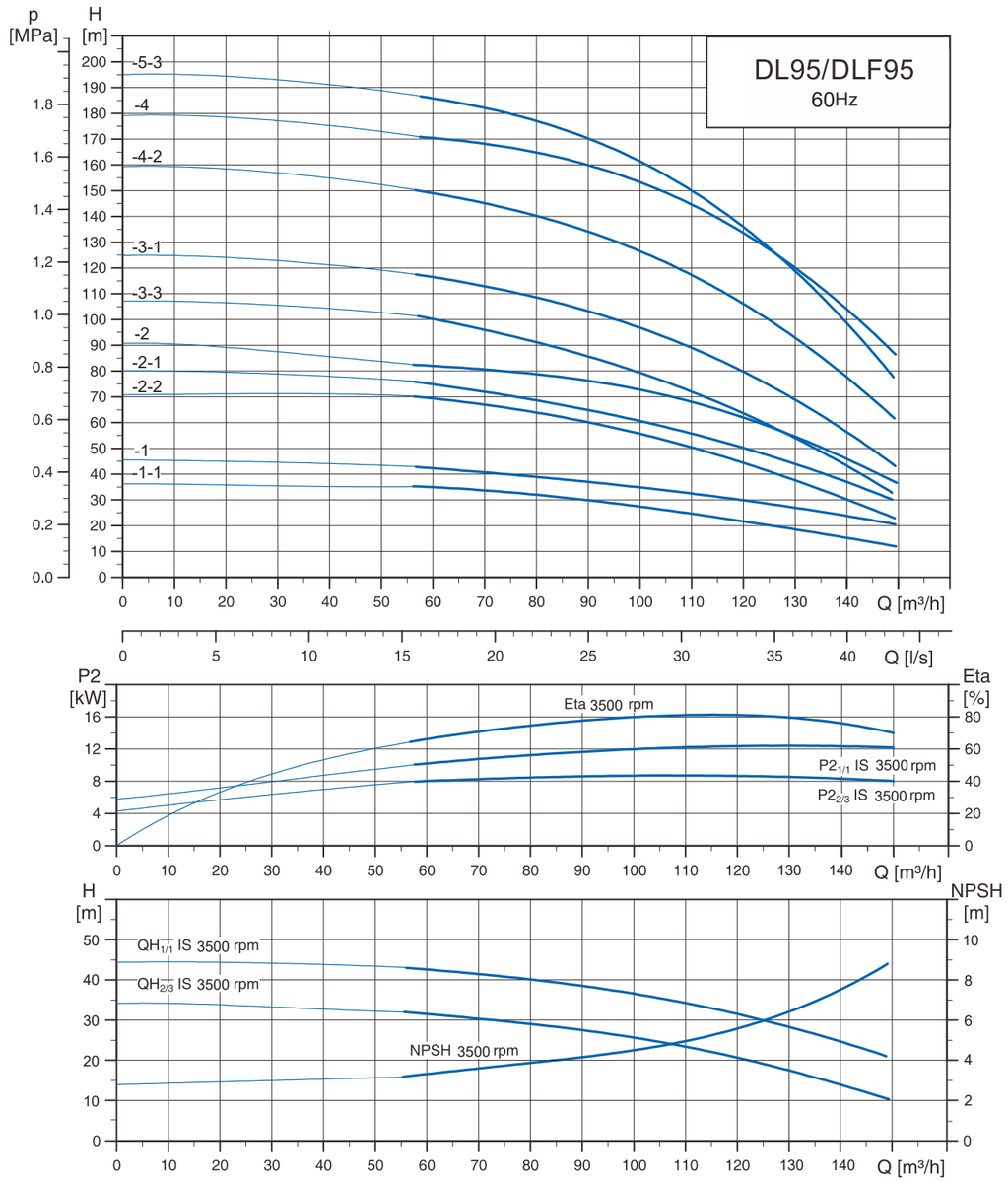
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 85-10-1	11	571	519	1090	313	230	177
DL 85-10	15	571	519	1090	313	230	188
DL 85-20-2	18.5	503	519	1022	313	230	211
DL 85-20-1	22	503	624	1127	356	271	248
DL 85-20	30	503	666	1169	395	283	304
DL 85-30-2	37	865	666	1531	395	283	330
DL 85-30-1	37	865	666	1531	395	283	330
DL 85-30	45	865	700	1565	444	323	392
DL 85-40-2	45	957	700	1657	444	323	396

DL/DLF Series

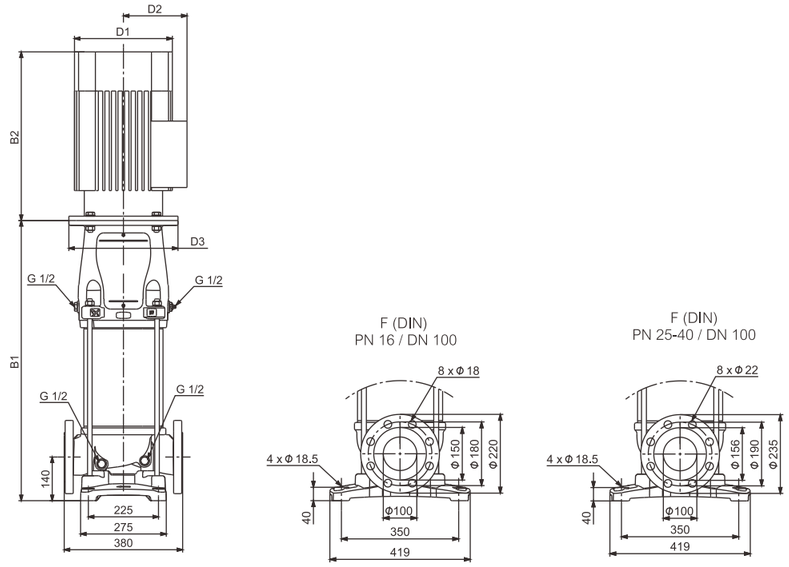
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL95/DLF95



DIMENSION DRAWING



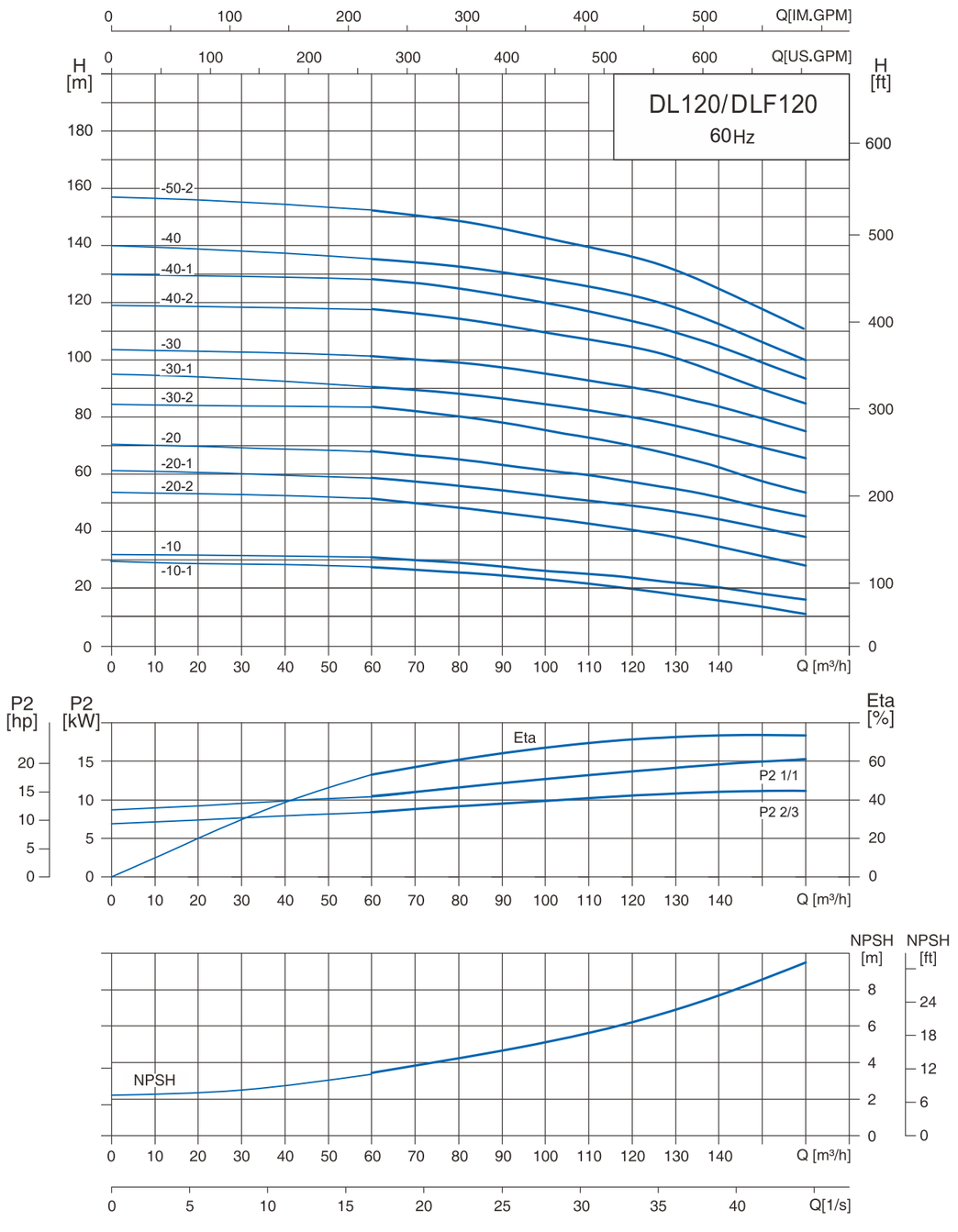
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 95-1-1	11	691	519	1210	313	230	188
DL 95-1	15	691	519	1210	313	230	200
DL 95-2-2	18.5	800	519	1319	313	230	218
DL 95-2-1	22	800	624	1424	356	271	233
DL 95-2	30	800	666	1466	395	283	337
DL 95-3-3	30	905	666	1571	395	283	343
DL 95-3-1	37	905	666	1571	395	283	368
DL 95-4-2	45	1029	700	1729	444	323	467
DL 95-4	55	1029	768	1797	485	357	581
DL 95-5-3	55	1133	768	1901	485	357	587

DL/DLF Series

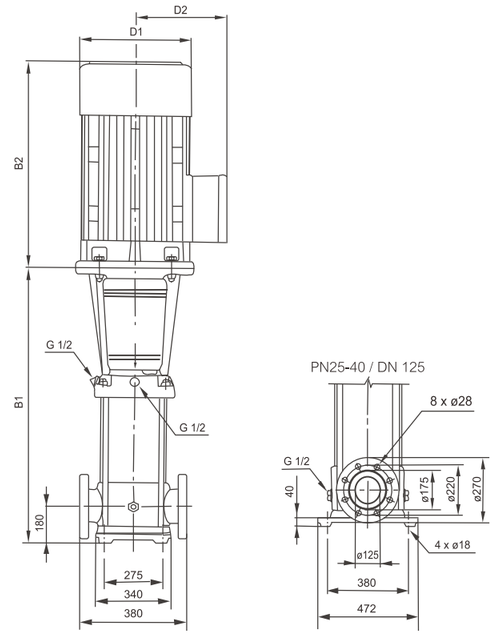
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL120/DLF120



DIMENSION DRAWING



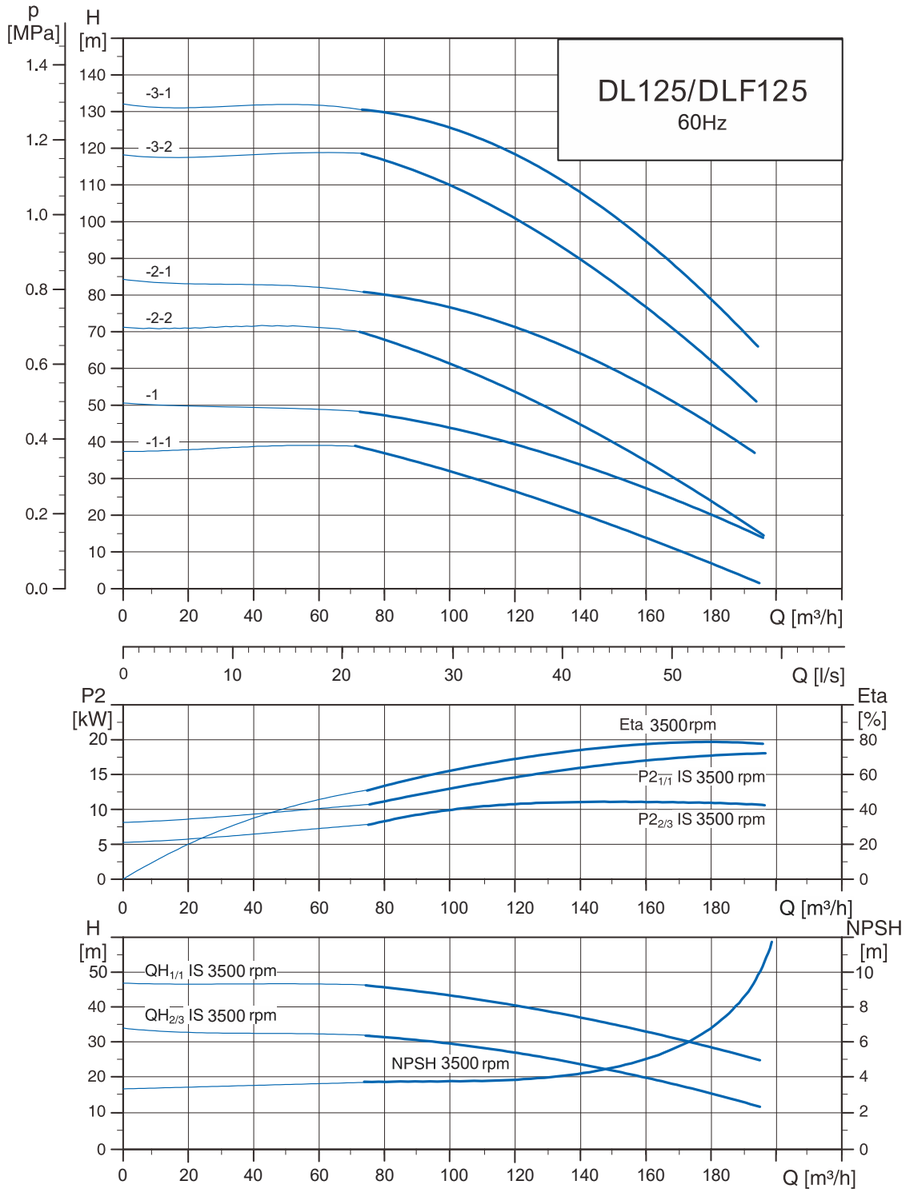
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL120-10-1	15	840	519	1359	313	230	235
DL120-10	18.5	840	519	1359	313	230	250
DL120-20-2	30	1000	666	1666	395	283	350
DL120-20-1	30	1000	666	1666	395	283	350
DL120-20	37	1000	666	1666	395	283	380
DL120-30-2	45	1160	700	1860	444	323	445
DL120-30-1	45	1160	700	1860	444	323	445
DL120-30	55	1160	768	1928	485	357	545
DL120-40-2	75	1320	850	2170	548	387	675
DL120-40-1	75	1320	850	2170	548	387	675
DL120-40	75	1320	850	2170	548	387	675
DL120-50-2	75	1480	850	2330	548	387	690

DL/DLF Series

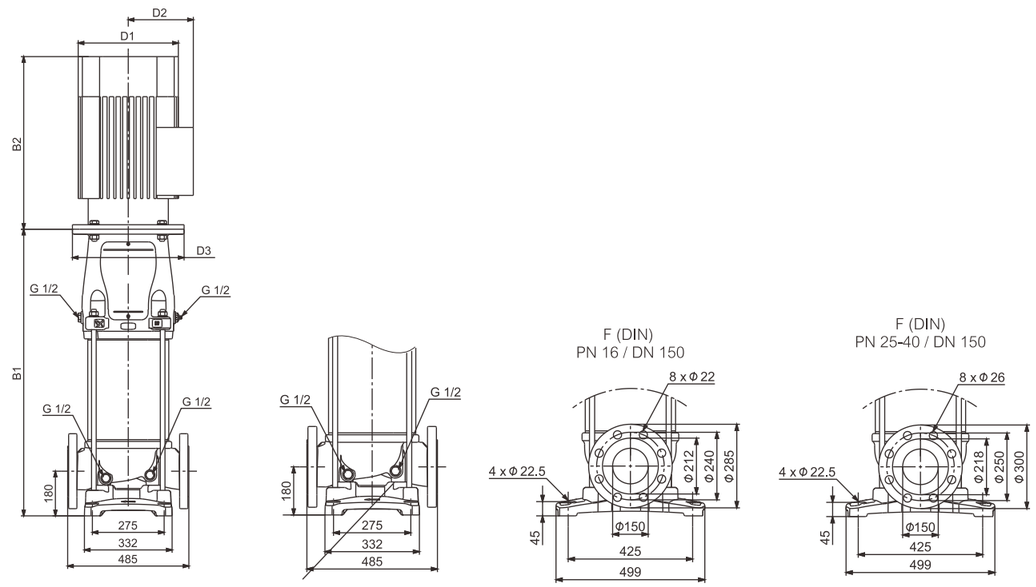
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL125/ DLF125



DIMENSION DRAWING



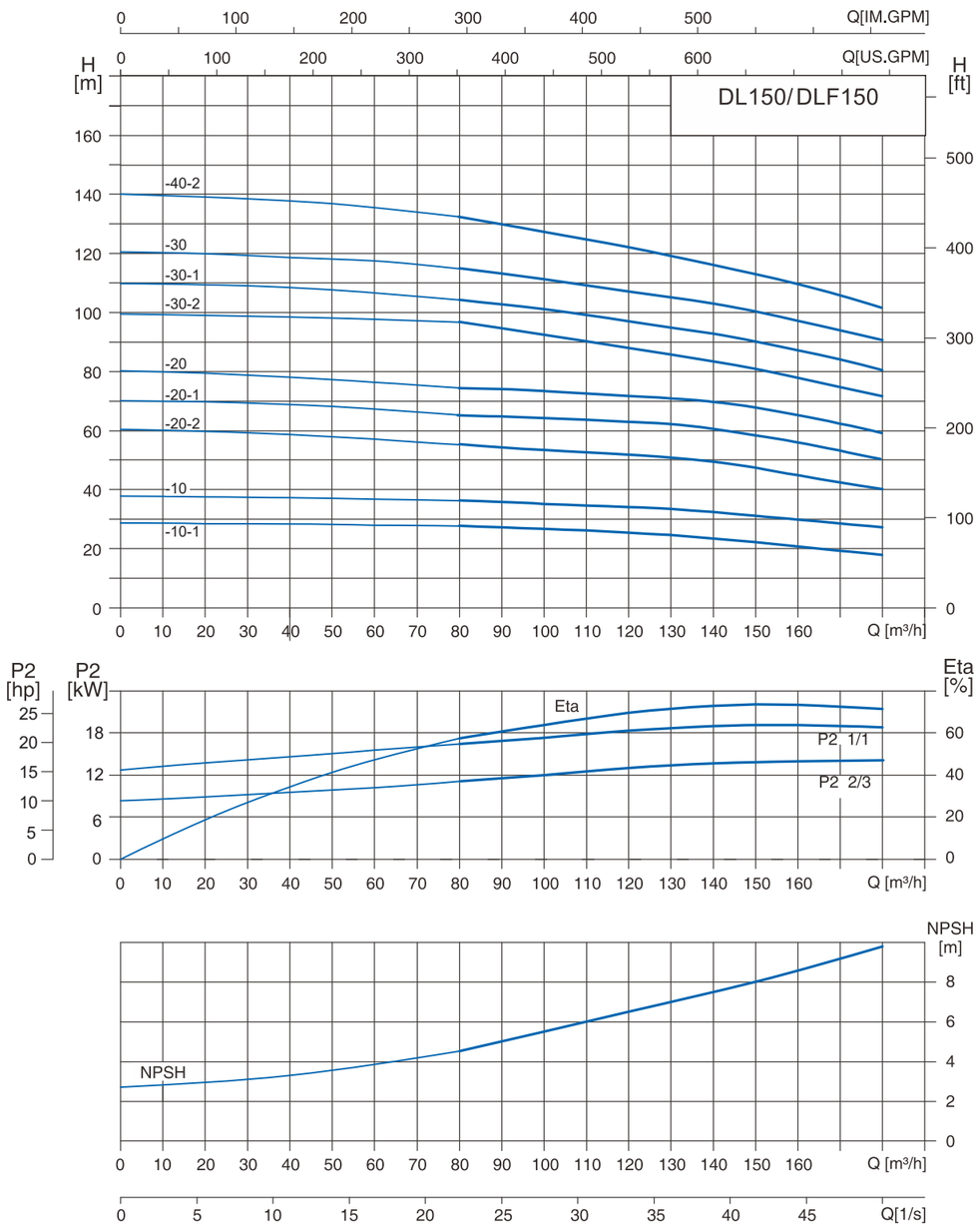
Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 125-1-1	15	783	519	1302	313	230	245
DL 125-1	22	783	624	1402	356	271	273
DL 125-2-2	30	907	666	1573	395	283	386
DL 125-2-1	37	907	666	1573	395	283	411
DL 125-3-2	45	1051	700	1751	444	323	515
DL 125-3-1	55	1051	768	1819	485	357	625

DL/DLF Series

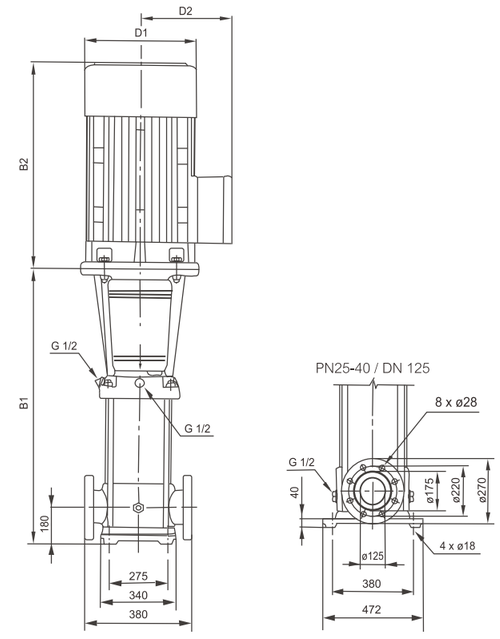
VERTICAL-MULTI-STAGES PUMP

HYDRAULIC PERFORMANCE CURVES

DL150/DLF150



DIMENSION DRAWING



Model	Motor P_2	Dimensions (mm)					Weight
	kW	B1	B2	B1+B2	D1	D2	(kgs)
DL 150-10-1	15	840	519	1359	313	230	235
DL 150-10	22	840	624	1464	356	271	280
DL 150-20-2	30	1000	666	1666	395	283	360
DL 150-20-1	37	1000	666	1666	400	315	380
DL 150-20	45	1000	700	1700	444	323	435
DL 150-30-2	55	1190	768	1958	485	357	545
DL 150-30-1	75	1190	850	2040	548	387	665
DL 150-30	75	1190	850	2040	548	387	665
DL 150-40-2	75	1350	850	2200	548	387	680