

 STAIRS

# CB, CBI HBI, HBN

CB, 2, 4, 8, 12 CBI 2, 4 series  
HBI, HBN 2, 4, 8, 12 series

50/60Hz

Horizontal Multistage Pumps



STAIRS INDUSTRIAL CO., LTD.


**CB,CBI**
**General Data**

Performance Range	1
Model Code	2
Applications	2
Motor	2
Pump	2
Pump Liquids	2
Standard Voltages	3
Mechanical Seals	3
Pipe Connections	3
Operating Conditions	3
Material	4

**Technical Data**

CB/CBI 2 50Hz	5
CB/CBI 4 50Hz	7
CB 8 50Hz	9
CB 12 50Hz	11
CB/CBI 2 60Hz	13
CB/CBI 4 60Hz	15
CB 8 60Hz	17
CB 12 60Hz	19

**CB(I) series pumps are horizontal multistage pumps.**

Stairs' Horizontal Multistage Pump is non-self priming and closed coupled pump. It is ideal for a wide variety of domestic, commercial and industrial applications. Its small size saves valuable space, while its Cast Iron, 304 and 316 stainless steel construction, ensures a long, trouble-free life.

Stairs' Horizontal Multistage Pump features a maintenance-free, so the pump can handle commercial and industrial liquids in a broad range of operating conditions.


**HBI,HBN**
**General Data**

Performance Range	21
Model Code	22
Applications	22
Motor	22
Pump	22
Pump Liquids	22
Standard Voltages	23
Mechanical Seals	23
Pipe Connections	23
Operating Conditions	23
Material	24

**Technical Data**

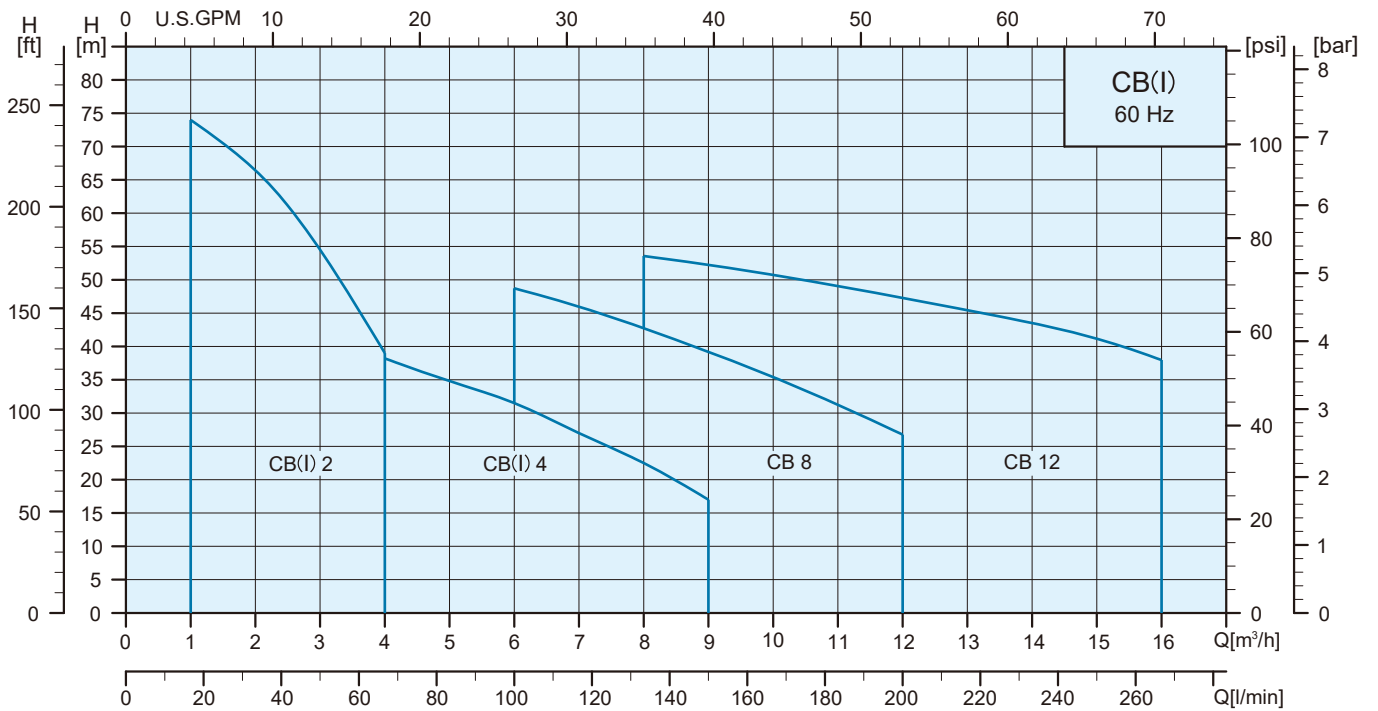
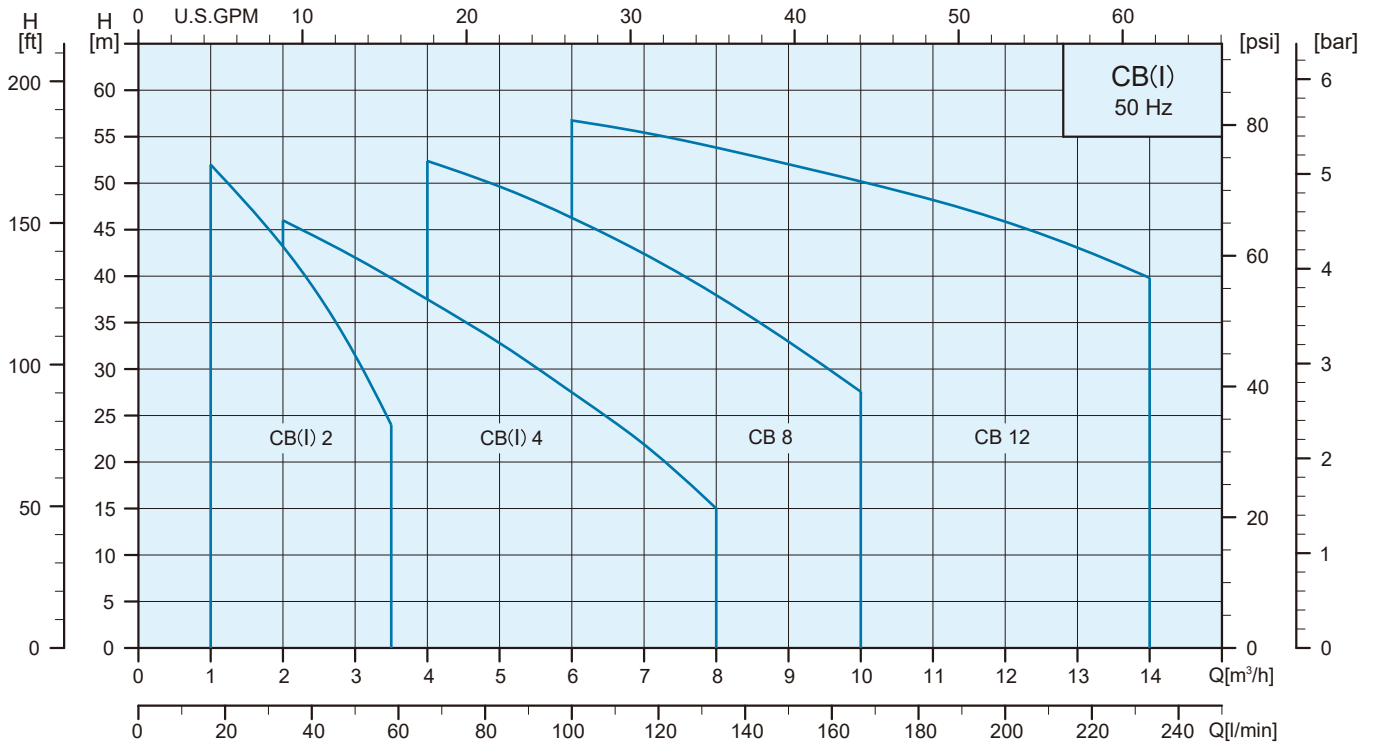
HBI/HBN 2 50Hz	25
HBI/HBN 4 50Hz	27
HBI/HBN 8 50Hz	29
HBI/HBN 12 50Hz	31
HBI/HBN 2 60Hz	33
HBI/HBN 4 60Hz	35
HBI/HBN 8 60Hz	37
HBI/HBN 12 60Hz	39

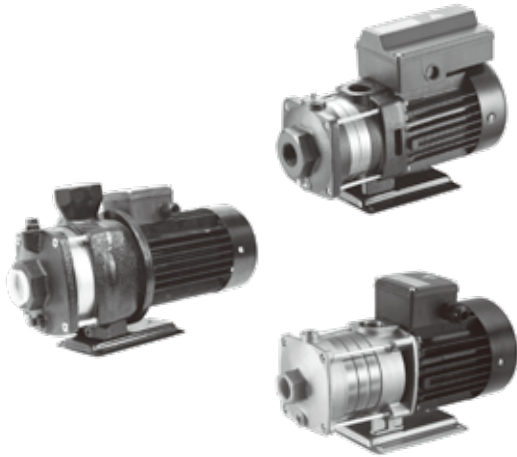
**HBI(N) series pumps are horizontal multistage pumps.**

Stairs' Horizontal Multistage Pump is non-self priming and closed coupled pump. It is ideal for a wide variety of domestic, commercial and industrial applications. Its small size saves valuable space, while its Cast Iron, 304 and 316 stainless steel construction, ensures a long, trouble-free life.

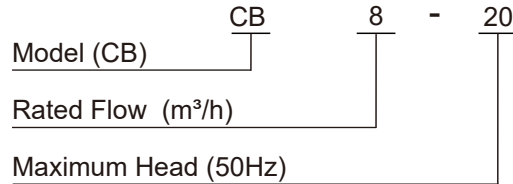
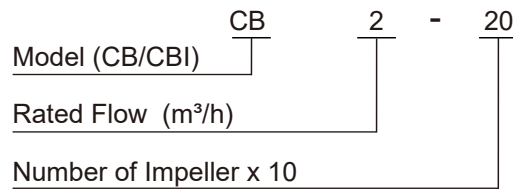
Stairs' Horizontal Multistage Pump features a maintenance-free, so the pump can handle commercial and industrial liquids in a broad range of operating conditions.

### Performance Range





### Model Code



### Applications

- Domestic
- Liquid transfer and circulation of liquids within light industry and farming
- Pressure boosting
- Air-conditioning systems
- Cooling systems or cooling machine
- Specialized OEM equipment

### Motor

The pump is fitted with a totally enclosed, fan-cooled, squirrel-cage motor. Single-phase motors have built-in thermal overload protection.

- Frequency : 50Hz  
Nominal Speed : 2850 rpm
- Frequency : 60Hz  
Nominal Speed : 3450 rpm
- Insulation class: F
- Enclosure class: IP 55

### Pump

The CB and CBI series are non-self priming, horizontal multistage centrifugal pumps. Pump is coupled with motor at the same shaft and mounted on a base-plate.

The friendly design makes the pump suitable for installation in the small domestic or industrial water supply systems. The pump is fitted with a mechanical seal and through-going pump-motor shaft.

CB: The discharge and suction chamber are made of cast iron. The other parts of pump in contact with the liquid are made of stainless steel.

EPDM or Viton O-rings are available as standard.

CBI: All parts of pump in contact with the liquid are made of stainless steel.

EPDM or Viton O-rings are available as standard.

### Pumped Liquids

These pumps are designed for pumping freely flowing non-corrosive, non-explosive, and non-flammable liquids.

The liquids to be pumped must also be free of solid matter, sands, fibers, and similar materials.

Most common non-highly corrosive watery liquids, oily liquids, hot and cold liquids can be pumped with these pumps.

The suitability of these pumps for pumping any particular liquid depends upon a number of factors, such as the pH value, contents of chemicals such as chlorides, oils, the temperature of the liquids, etc.

### Standard Voltages

	Phase	Voltages
50Hz	1Ø	220-240V
	3Ø	220-240V / 380-415V
60Hz	1Ø	110 / 220V
		220-240V
	3Ø	220-255V / 380-440V
		220-277V / 380-480V

### Mechanical Seals

Seal Type	CB		CBI
	2,4	8,12	2,4
C : O-ring seal with spring as seal driver	●	●	●
H : O-ring seal with fixed seal driver	○	○	○
<b>Seals Face Material</b>			
QB	●	●	●
QQ	○	○	○
UU	○	○	○
<b>Rubber Material</b>			
E	●	●	●
V	○	○	○

List of Materials	
Q : Silicon carbide	E : EPDM
U : Tungsten carbide	V : Viton
B : Carbon	

● Std. ○ Opt. - N/A

### Pipe Connections

Connections	CB,CBI 2	CB,CBI 4	CB 8	CB 12
Suction port	Rp or NPT 1	Rp or NPT 1 1/4	Rp or NPT 1 1/2	Rp or NPT 1 1/2
Discharge port	Rp or NPT 1	Rp or NPT 1	Rp or NPT 1 1/4	Rp or NPT 1 1/2
Drain hole, priming hole	Rc 3/8	Rc 3/8	Rp 1/2	Rp 1/2

### Operating Conditions

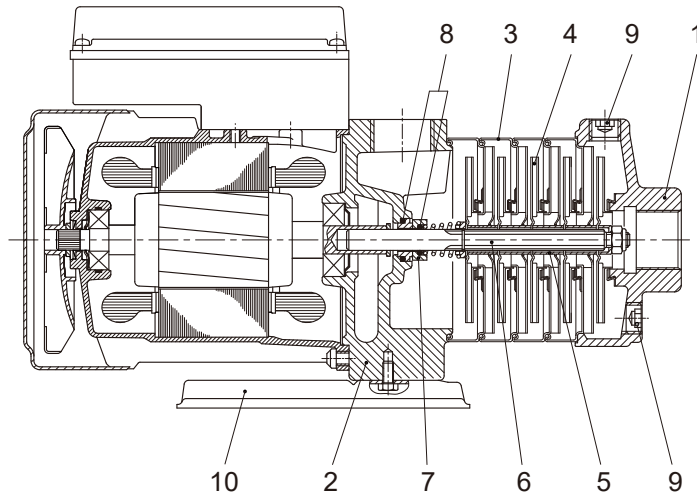
- Liquid : CB : Thin, clean, non-aggressive and non-explosive liquids without solid particles or fibres.  
CBI : Thin, clean, slightly aggressive and non-explosive liquids without solid particles or fibres.
- Liquid temperature : +32°F to +194°F(0°C to +90°C)
- Maximum ambient temperature : +122°F(+50°C)
- Maximum operating pressure: 10 kg/cm<sup>2</sup>
- The maximum operating pressure depends on the temperature of the pumped liquid, see table :

Max.operating pressure	10 kg/cm <sup>2</sup> / bar	6 kg/cm <sup>2</sup> / bar
CB(l)2, CB(l) 4	0°C to +40°C	+41°C to +90°C
CB 8, CB12	0°C to +55°C	+56°C to +90°C

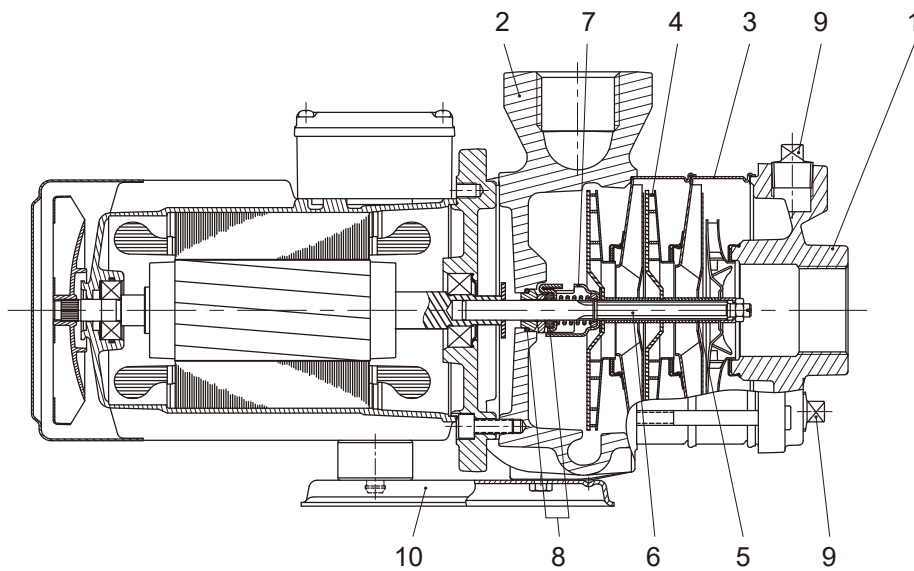
- Min. inlet pressure : According to the NPSH curve + a safety margin of 0.5m.
- Max. inlet pressure : Limited by the max. operating pressure.

### Material

CB(I) 2,4

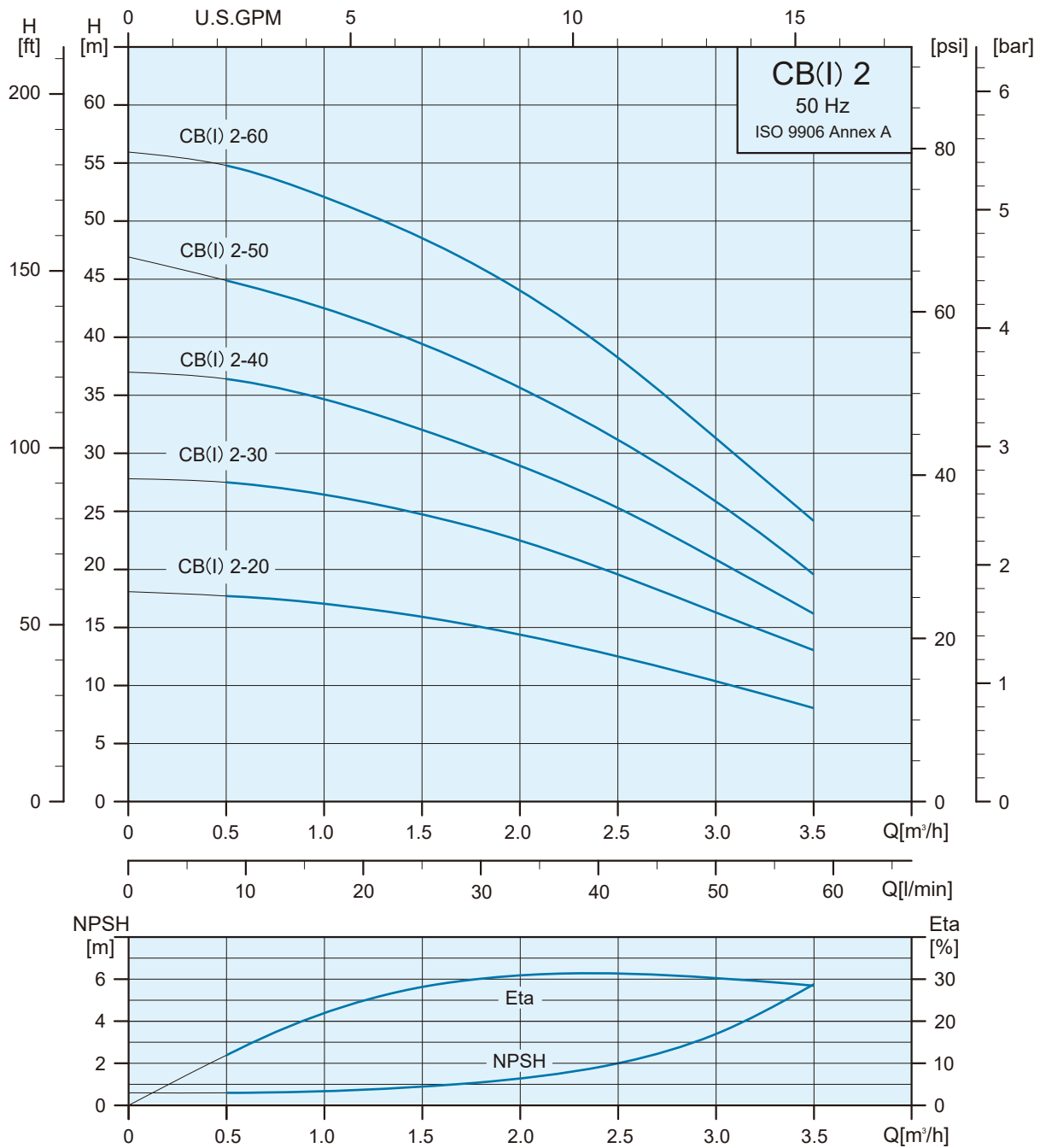


CB 8,12



Pos.	Description	Materials	
		CB	CBI
1	Suction chamber	Cast iron	SS304
2	Pump head	Cast iron	SS304
3	Intermediate chamber	SS304	SS304
4	Impeller	SS304	SS304
5	Spacing pipe	SS304	SS304
6	Shaft	SS431	SS431
7	Mechanical seal	Silicon carbide / Carbon	Silicon carbide / Carbon
8	O-ring	EPDM	EPDM
9	Drain and priming plug	Steel	SS304
10	Base plate	Steel	SS304

### Performance Range



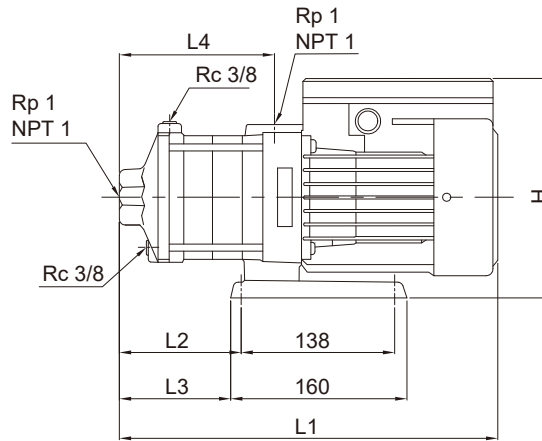
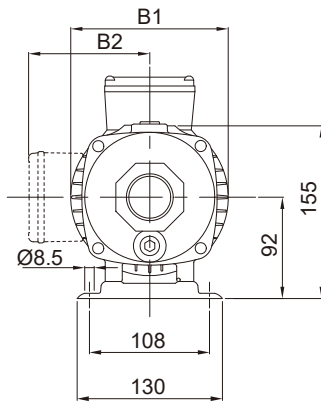
### Specifications(2850rpm)

Pump Type	220-240V			Δ 220-240 / Y 380-415V		
	1∅			3∅		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB/CBI 2-20	1.7 - 2.0	380	295	2.2 - 2.6 / 1.3 - 1.5	430	330
CB/CBI 2-30	2.1 - 2.2	470	360	2.2 - 2.5 / 1.3 - 1.45	530	410
CB/CBI 2-40	2.7 - 2.8	620	480	2.4 - 2.8 / 1.4 - 1.6	660	510
CB/CBI 2-50	3.2 - 3.1	720	550	2.5 - 2.9 / 1.45 - 1.7	770	585
CB/CBI 2-60	3.7 - 3.6	830	630	2.9 - 3.3 / 1.7 - 1.9	860	655

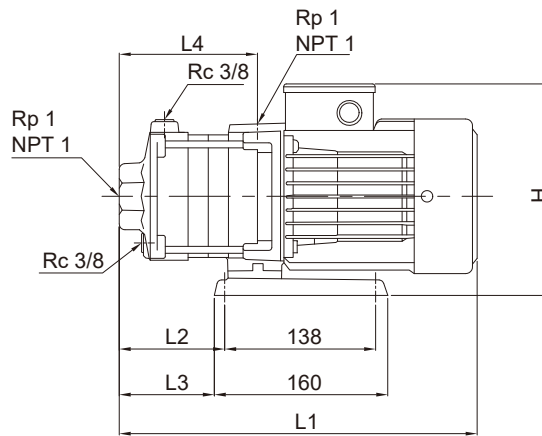
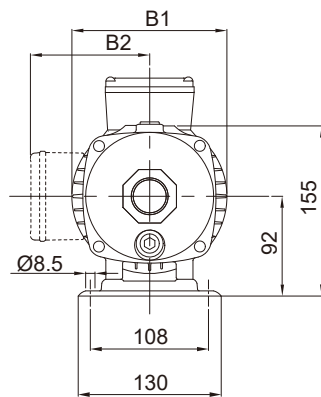


### Dimensions and Weights

CB 2

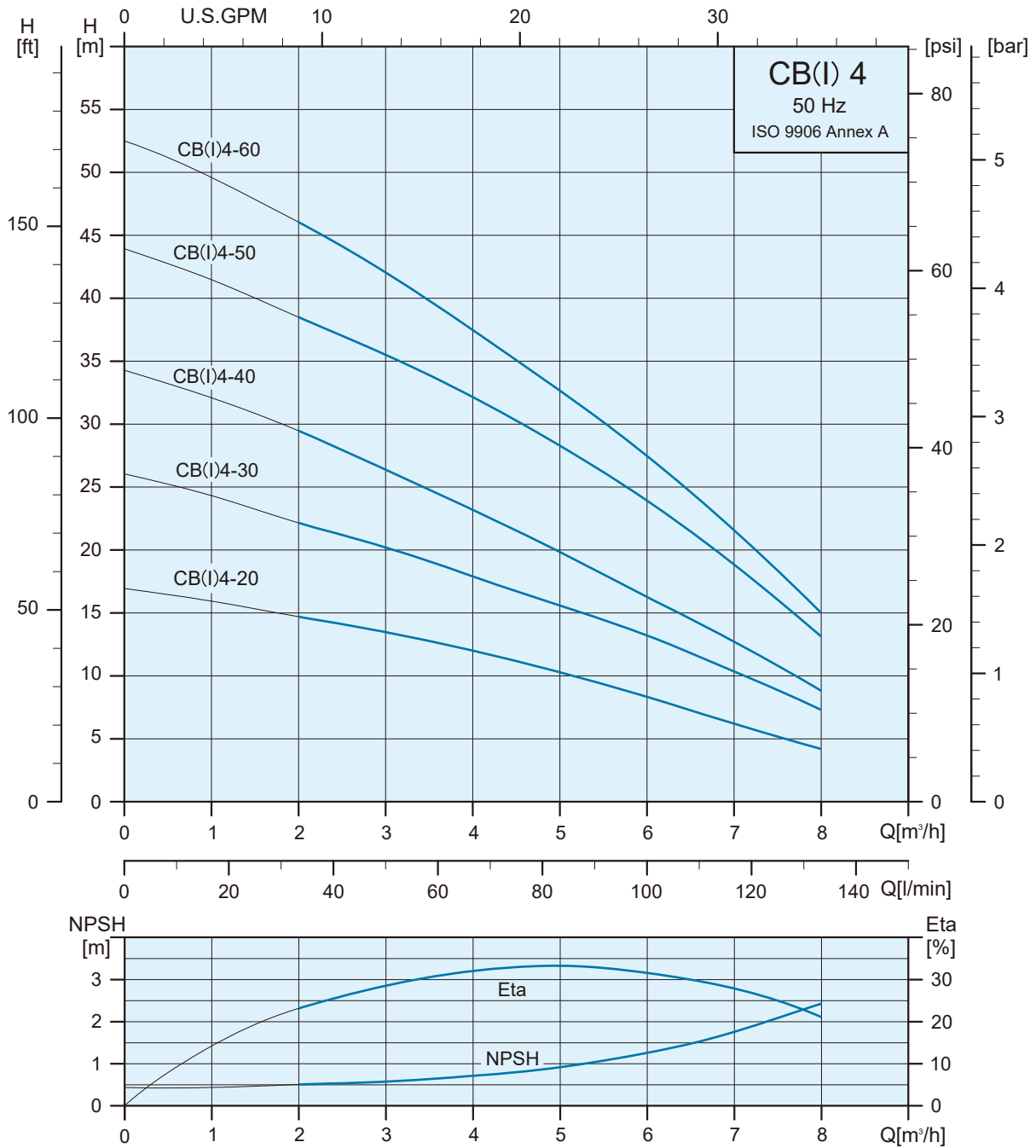


CBI 2



Pump Type	Phase	Dimensions (mm)							Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H	
CB 2-20	1Ø	309	75	63	101	141	136	228	10.3
	3Ø	309	75	63	101	141	115	207	10.0
CB 2-30	1Ø	327	93	81	119	141	136	228	10.5
	3Ø	327	93	81	119	141	115	207	10.3
CB 2-40	1Ø	345	111	99	137	141	136	228	10.8
	3Ø	345	111	99	137	141	115	207	10.5
CB 2-50	1Ø	363	129	117	155	141	136	228	11.6
	3Ø	363	129	117	155	141	115	207	11.2
CB 2-60	1Ø	381	147	135	173	141	136	228	11.8
	3Ø	381	147	135	173	141	115	207	11.5
CBI 2-20	1Ø	309	75	63	101	141	136	228	9.1
	3Ø	309	75	63	101	141	115	207	8.8
CBI 2-30	1Ø	327	93	81	119	141	136	228	9.4
	3Ø	327	93	81	119	141	115	207	9.1
CBI 2-40	1Ø	345	111	99	137	141	136	228	9.6
	3Ø	345	111	99	137	141	115	207	9.4
CBI 2-50	1Ø	363	129	117	155	141	136	228	10.4
	3Ø	363	129	117	155	141	115	207	10.1
CBI 2-60	1Ø	381	147	135	173	141	136	228	10.7
	3Ø	381	147	135	173	141	115	207	10.3

### Performance Range

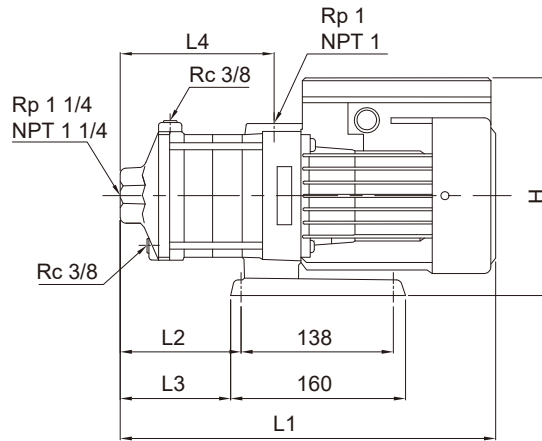
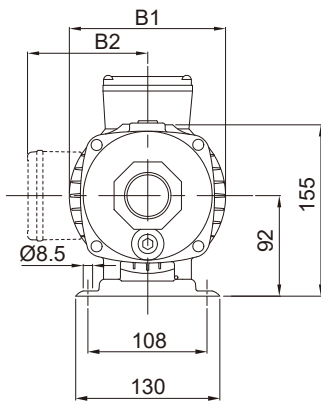


### Specifications(2850rpm)

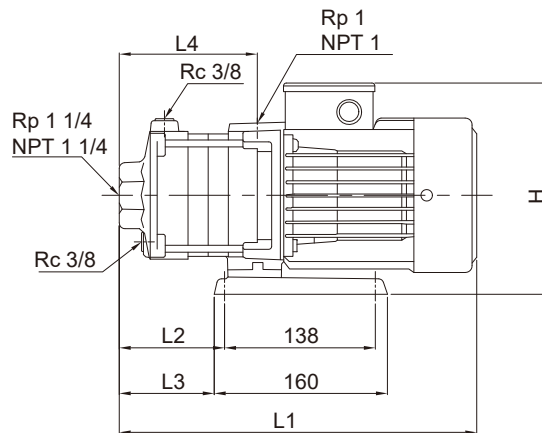
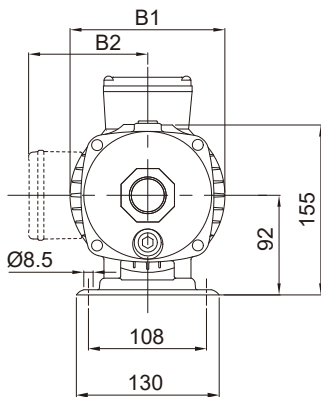
Pump Type	220-240V			Δ 220-240 / Y 380-415V		
	1∅			3∅		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB/CBI 4-20	2.6 - 2.5	560	430	2.4 - 2.9 / 1.4 - 1.7	610	465
CB/CBI 4-30	3.6 - 3.5	770	595	2.5 - 2.9 / 1.5 - 1.7	790	604
CB/CBI 4-40	4.4 - 4.1	960	735	3.1 - 3.3 / 1.8 - 1.9	1010	770
CB/CBI 4-50	5.3 - 5.0	1160	940	4.2 - 4.5 / 2.4 - 2.6	1240	990
CB/CBI 4-60	6.7 - 6.4	1430	1135	5.1 - 5.5 / 2.9 - 3.2	1460	1180

### Dimensions and Weights

CB 4

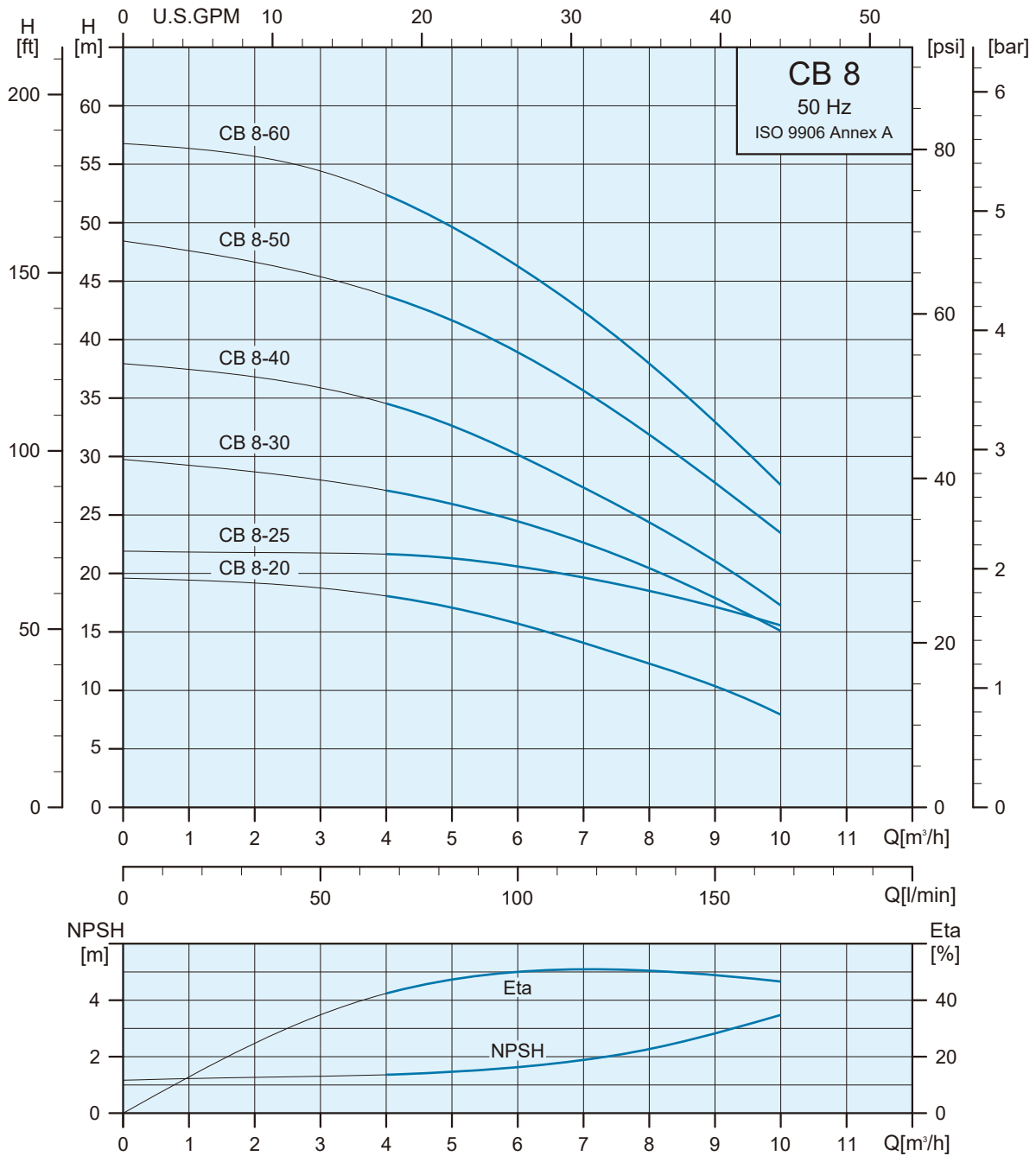


CBI 4



Pump Type	Phase	Dimensions (mm)							Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H	
CB 4-20	1Ø	318	84	72	110	141	136	228	10.4
	3Ø	318	84	72	110	141	115	207	10.1
CB 4-30	1Ø	344	111	99	137	141	136	228	10.8
	3Ø	344	111	99	137	141	115	207	10.5
CB 4-40	1Ø	372	138	126	164	141	136	228	11.6
	3Ø	372	138	126	164	141	115	207	11.2
CB 4-50	1Ø	438	165	153	191	141	136	228	13.4
	3Ø	438	165	153	191	141	115	207	13.1
CB 4-60	1Ø	465	192	180	218	141	136	228	14.8
	3Ø	465	192	180	218	141	115	207	14.5
CBI 4-20	1Ø	318	84	72	110	141	136	228	9.2
	3Ø	318	84	72	110	141	115	207	9.0
CBI 4-30	1Ø	344	111	99	137	141	136	228	9.6
	3Ø	344	111	99	137	141	115	207	9.3
CBI 4-40	1Ø	372	138	126	164	141	136	228	10.4
	3Ø	372	138	126	164	141	115	207	10.1
CBI 4-50	1Ø	438	165	153	191	141	136	228	11.3
	3Ø	438	165	153	191	141	115	207	12.0
CBI 4-60	1Ø	465	192	180	218	141	136	228	13.6
	3Ø	465	192	180	218	141	115	207	13.4

**Performance Range**



**Specifications(2850rpm)**

Pump Type	220-240V			Δ 220-240 / Y 380-415V		
	1∅			3∅		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB 8-20	3.3 - 3.2	760	595	2.9 - 3.3 / 1.7 - 1.9	810	620
CB 8-25	-	-	-	3.5 - 3.8 / 2.0 - 2.2	1060	860
CB 8-30	5.2 - 5.0	1130	910	4.3 - 4.8 / 2.5 - 2.8	1260	1020
CB 8-40	6.3 - 6.1	1390	1105	5.7 - 6.3 / 3.3 - 3.7	1520	1205
CB 8-50	8.2 - 8.1	1940	1610	5.7 - 6.3 / 3.4 - 3.7	1860	1475
CB 8-60	9.0 - 8.8	2090	1740	6.5 - 7.0 / 3.8 - 4.1	2110	1755

**Dimensions and Weights**

CB 8

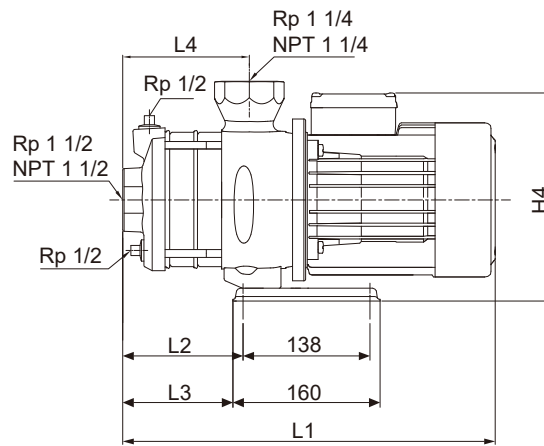
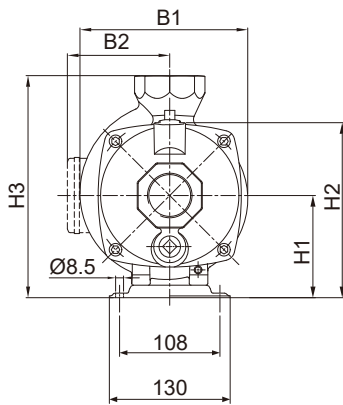


Fig. 1

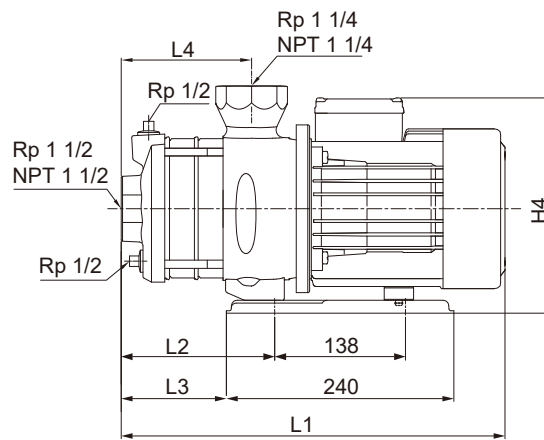
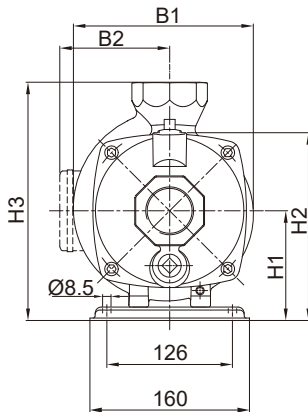
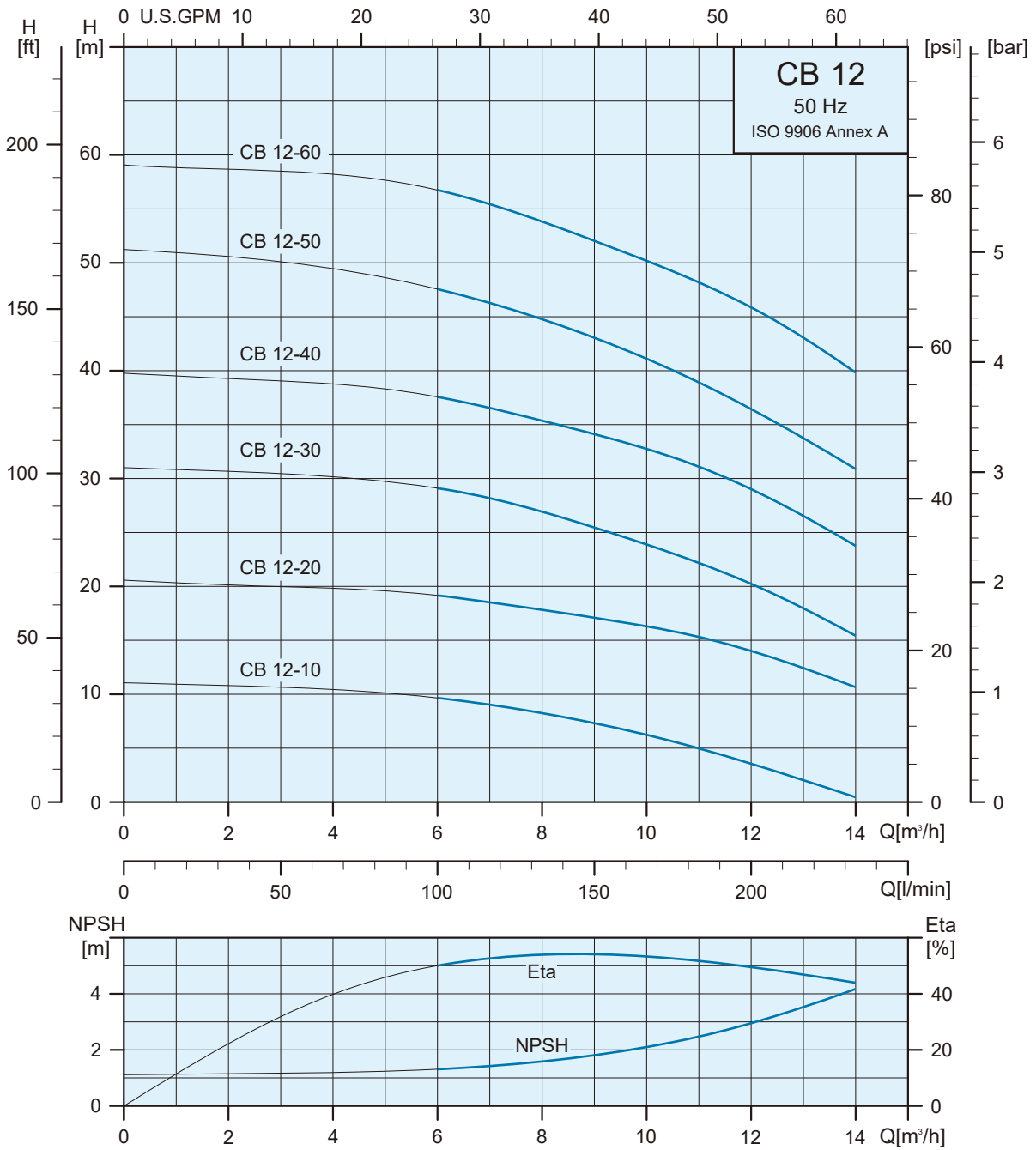


Fig. 2

Pump Type	Phase	Dimensions (mm)										Fig.	Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H1	H2	H3	H4		
CB 8-20	1Ø	320	54	41	77	181	135	110	187	239	245	1	17.2
	3Ø	320	54	41	77	181	114	110	187	239	224	1	17.0
CB 8-25	1Ø	-	-	-	107	-	-	110	187	239	-	-	-
	3Ø	390	84	71	107	181	114	110	187	239	224	1	19.1
CB 8-30	1Ø	390	84	71	107	181	135	110	187	239	245	1	19.5
	3Ø	390	84	71	107	181	114	110	187	239	224	1	19.2
CB 8-40	1Ø	390	84	71	107	181	135	110	187	239	245	1	20.7
	3Ø	390	84	71	107	181	114	110	187	239	224	1	20.5
CB 8-50	1Ø	480	162	111	137	185	152	110	187	239	262	2	28.5
	3Ø	420	114	101	137	181	114	110	187	239	224	1	21.4
CB 8-60	1Ø	480	162	111	137	185	152	110	187	239	262	2	28.7
	3Ø	480	162	111	137	185	139	110	187	239	249	2	27.6

**Performance Range**



**Specifications(2850rpm)**

Pump Type	220-240V			Δ 220-240 / Y 380-415V		
	1∅			3∅		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB 12-10	-	-	-	2.8 - 3.1 / 1.6 - 1.8	590	455
CB 12-20	5.3 - 5.1	1160	935	3.8 - 4.0 / 2.2 - 2.3	1170	950
CB 12-30	7.8 - 7.4	1680	1330	5.7 - 6.5 / 3.3 - 3.8	1690	1365
CB 12-40	11.0 - 10.6	2400	1995	7.3 - 7.6 / 4.2 - 4.4	2350	1960
CB 12-50	12.7 - 12.2	2910	2440	8.8 - 9.0 / 5.1 - 5.2	2820	2375
CB 12-60	-	-	-	10.6 - 11.4 / 6.1 - 6.6	3320	2860

**Dimensions and Weights**

CB 12

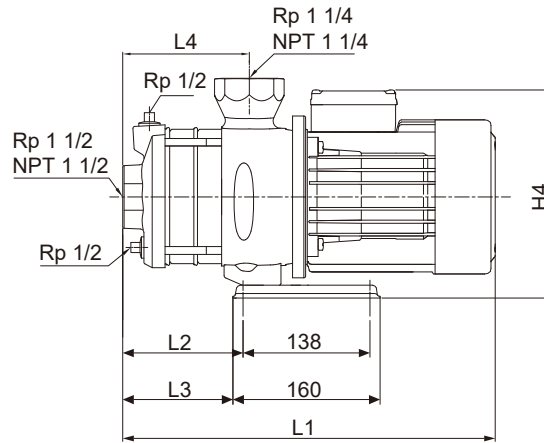
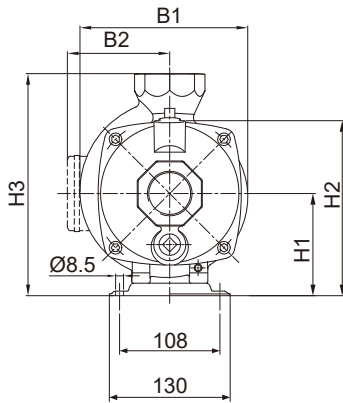


Fig. 1

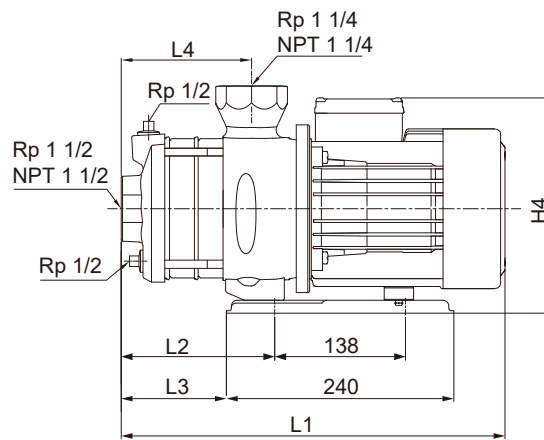
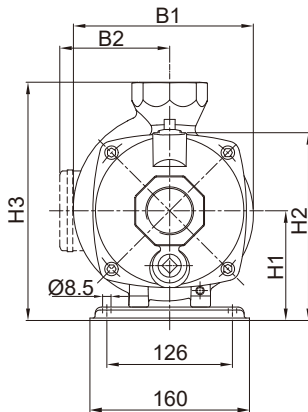
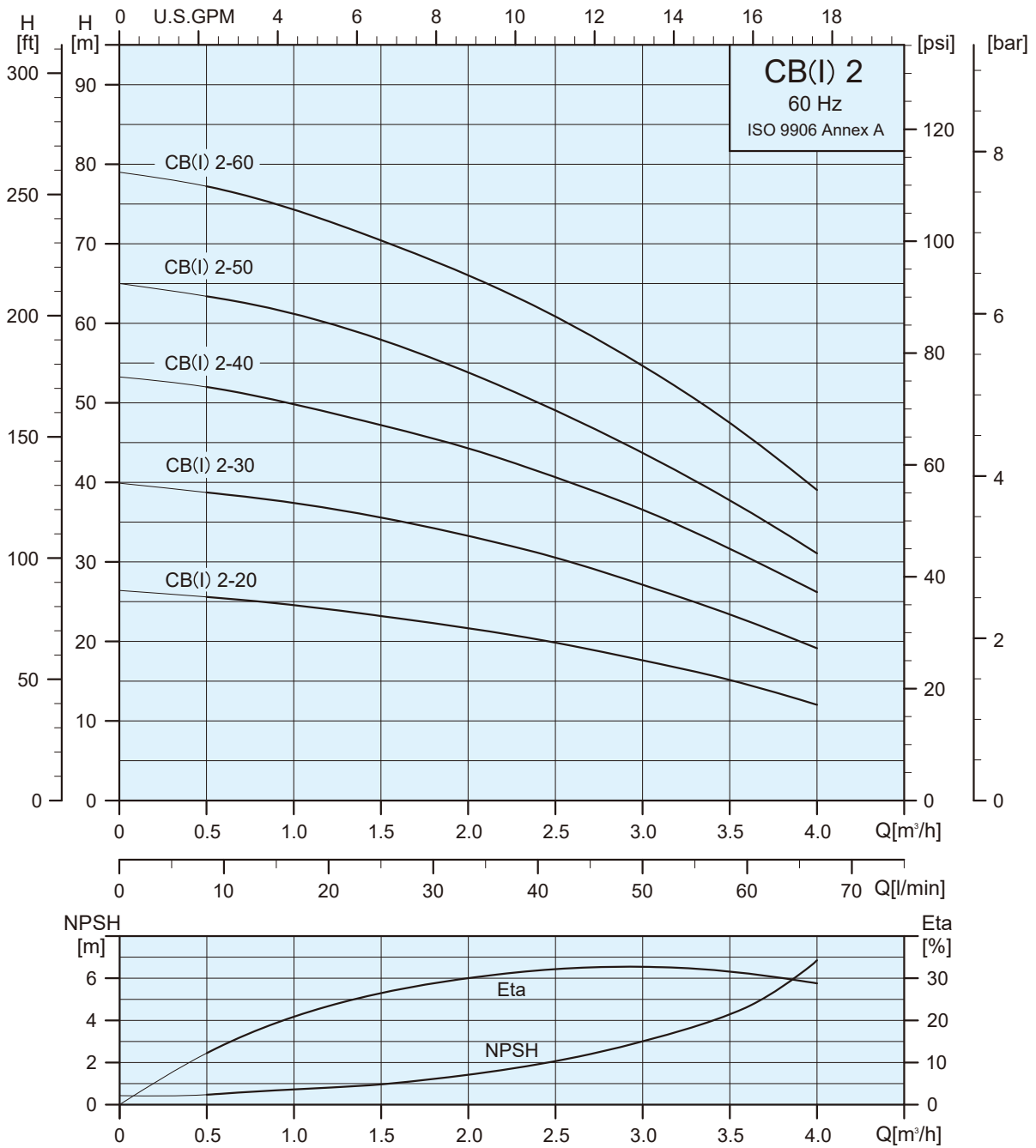


Fig. 2

Pump Type	Phase	Dimensions (mm)										Fig.	Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H1	H2	H3	H4		
CB 12-10	1Ø	-	-	-	77	-	-	110	187	239	-	-	-
	3Ø	320	54	41	77	181	114	110	187	239	224	1	17.9
CB 12-20	1Ø	360	54	41	77	181	135	110	187	239	245	1	18.4
	3Ø	360	54	41	77	181	114	110	187	239	224	1	18.2
CB 12-30	1Ø	390	84	71	107	181	135	110	187	239	245	1	20.6
	3Ø	390	84	71	107	181	114	110	187	239	224	1	20.4
CB 12-40	1Ø	450	132	81	107	185	152	110	187	239	262	2	27.7
	3Ø	450	132	81	107	185	139	110	187	239	249	2	26.7
CB 12-50	1Ø	480	162	111	137	185	152	110	187	239	262	2	29.8
	3Ø	480	162	111	137	185	139	110	187	239	249	2	29.9
CB 12-60	1Ø	-	-	-	137	-	-	122	199	251	-	-	-
	3Ø	501	162	111	137	196	150	122	199	251	272	2	35.2

### Performance Range



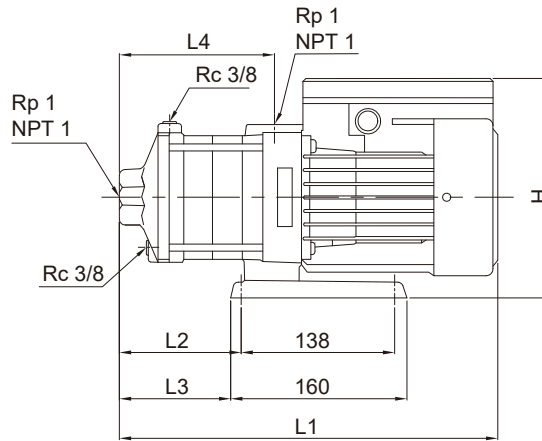
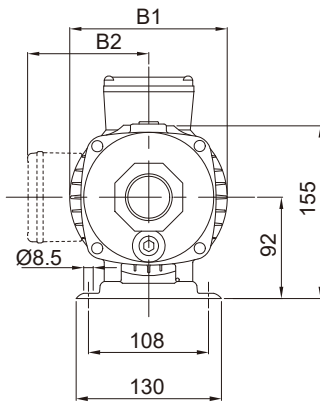
### Specifications(3450rpm)

Pump Type	110 / 220V			Δ 220-255 / Y 380-440V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB/CBI 2-20	6.3 / 3.2	570	460	1.8-1.9 / 1.0-1.1	550	430
CB/CBI 2-30	7.9 / 4.1	780	630	3.5-3.3 / 2.0-1.9	680	540
CB/CBI 2-40	8.8 / 4.4	870	710	3.1-3.2 / 1.8-1.9	950	725
CB/CBI 2-50	11.7 / 5.9	1190	995	3.7-3.8 / 2.1-2.2	1160	940
CB/CBI 2-60	13.7 / 6.9	1410	1180	3.7-3.8 / 2.3-2.4	1280	1060

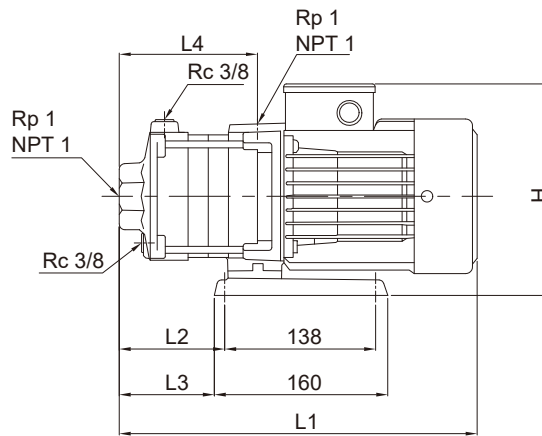
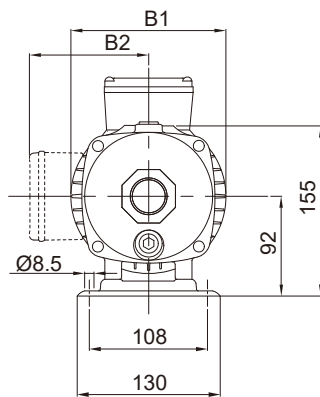


### Dimensions and Weights

CB 2

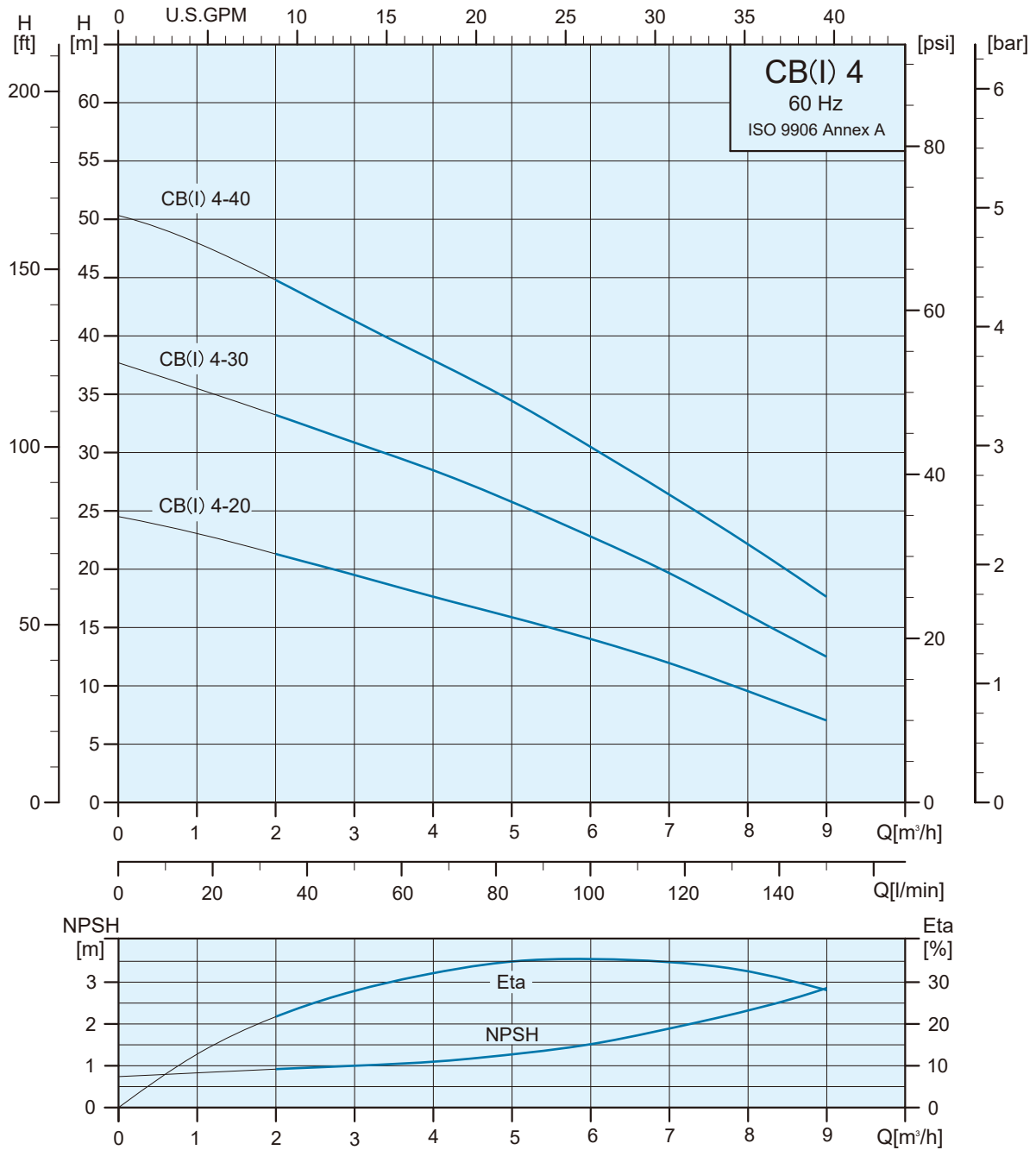


CBI 2



Pump Type	Phase	Dimensions (mm)							Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H	
CB 2-20	1Ø	309	75	63	101	141	136	228	10.3
	3Ø	309	75	63	101	141	115	207	10.0
CB 2-30	1Ø	327	93	81	119	141	136	228	11.1
	3Ø	327	93	81	119	141	115	207	10.8
CB 2-40	1Ø	345	111	99	137	141	136	228	11.3
	3Ø	345	111	99	137	141	115	207	11.1
CB 2-50	1Ø	403	129	117	155	141	136	228	13.0
	3Ø	403	129	117	155	141	115	207	12.4
CB 2-60	1Ø	421	147	135	173	141	136	228	13.2
	3Ø	421	147	135	173	141	115	207	12.7
CBI 2-20	1Ø	309	75	63	101	141	136	228	9.1
	3Ø	309	75	63	101	141	115	207	8.8
CBI 2-30	1Ø	327	93	81	119	141	136	228	10.0
	3Ø	327	93	81	119	141	115	207	9.6
CBI 2-40	1Ø	345	111	99	137	141	136	228	10.2
	3Ø	345	111	99	137	141	115	207	10.0
CBI 2-50	1Ø	403	129	117	155	141	136	228	11.8
	3Ø	403	129	117	155	141	115	207	11.5
CBI 2-60	1Ø	421	147	135	173	141	136	228	12.1
	3Ø	421	147	135	173	141	115	207	11.7

### Performance Range

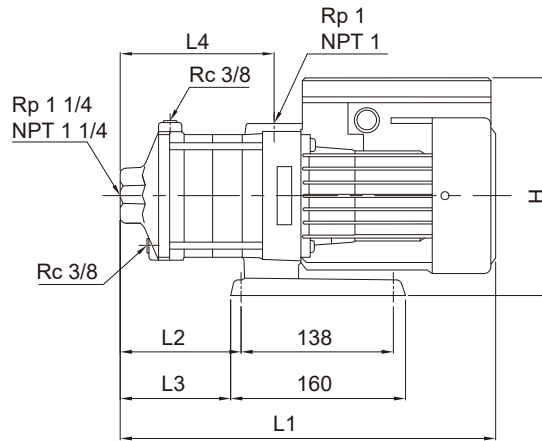
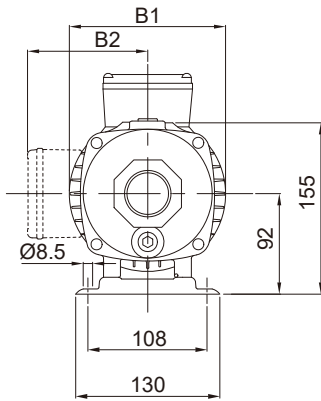


### Specifications(3450rpm)

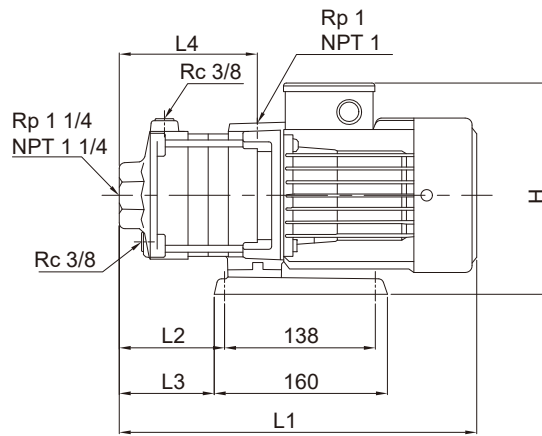
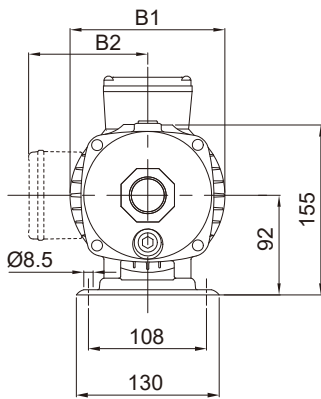
Pump Type	110 / 220V			Δ 220-255 / Y 380-440V		
	1∅			3∅		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB/CBI 4-20	9.5 / 4.7	950	770	2.85-3.0 / 1.65-1.8	890	720
CB/CBI 4-30	12.5 / 6.2	1310	1100	3.9-4.0 / 2.3-2.4	1250	1050
CB/CBI 4-40	- / 8.3	1700	1360	5.1-5.3 / 2.9-3.1	1630	1310

### Dimensions and Weights

CB 4

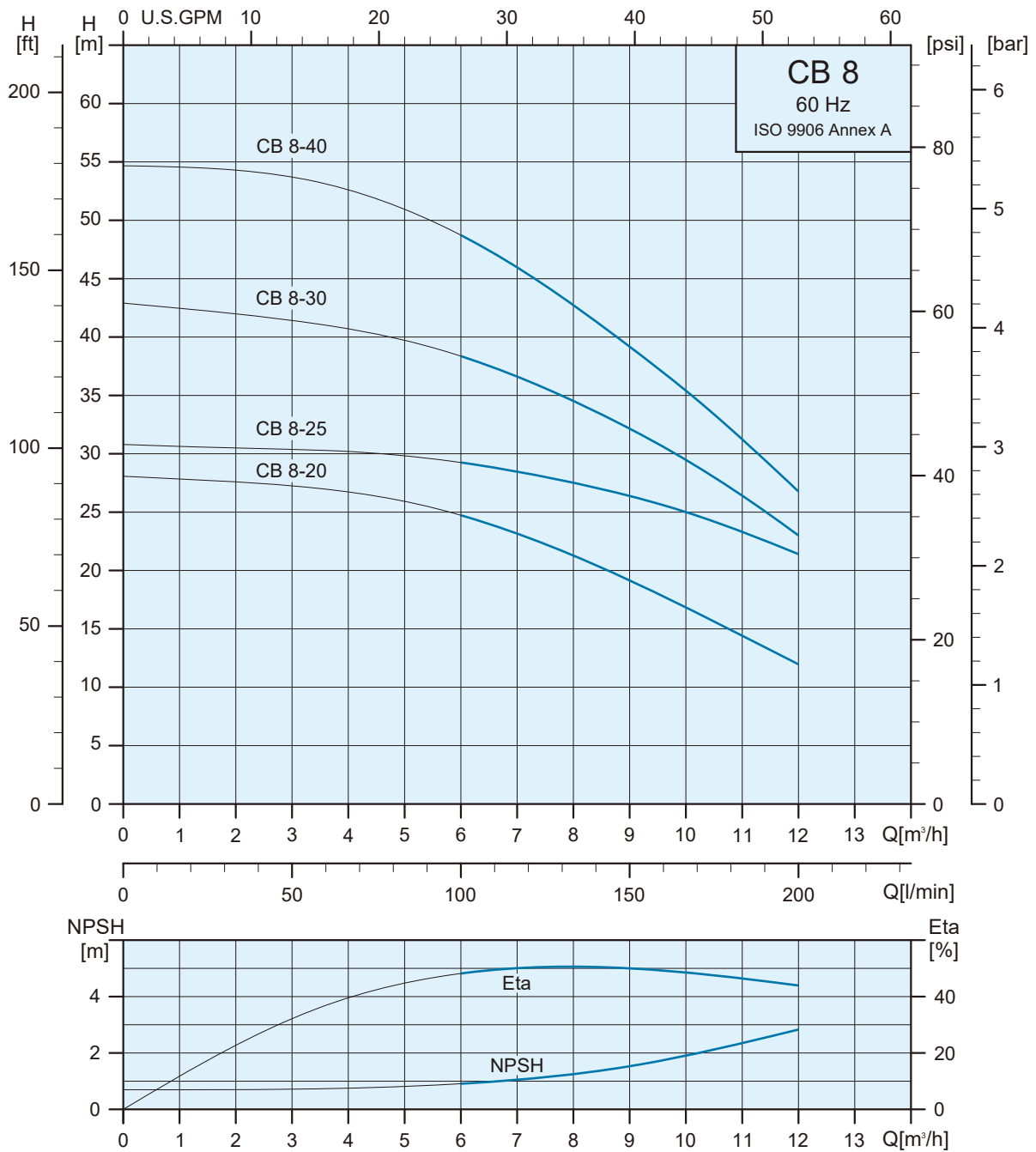


CBI 4



Pump Type	Phase	Dimensions (mm)							Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H	
CB 4-20	1Ø	318	84	72	110	141	136	228	12.2
	3Ø	318	84	72	110	141	115	207	10.7
CB 4-30	1Ø	384	111	99	137	141	136	228	12.7
	3Ø	384	111	99	137	141	115	207	12.3
CB 4-40	1Ø	412	138	126	164	141	136	228	14.0
	3Ø	432	138	126	164	141	115	207	13.7
CBI 4-20	1Ø	318	84	72	110	141	136	228	9.8
	3Ø	318	84	72	110	141	115	207	9.5
CBI 4-30	1Ø	384	111	99	137	141	136	228	11.5
	3Ø	384	111	99	137	141	115	207	11.1
CBI 4-40	1Ø	412	138	126	164	141	136	228	12.8
	3Ø	412	138	126	164	141	115	207	12.6

**Performance Range**



**Specifications(3450rpm)**

Pump Type	110 / 220V			Δ 220-255 / Y 380-440 V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB 8-20	11.7 / 5.9	1250	1050	3.7-3.8 / 2.2-2.3	1220	1020
CB 8-25	-	-	-	4.8-5.0 / 2.8-2.9	1620	1295
CB 8-30	- / 8.9	1830	1510	5.7-5.5 / 3.3-3.2	1860	1490
CB 8-40	- / 10.4	2080	1720	Δ 220-277 / Y 380-480 V		
				6.4-5.9 / 3.7-3.4	2340	1930

**Dimensions and Weights**

CB 8

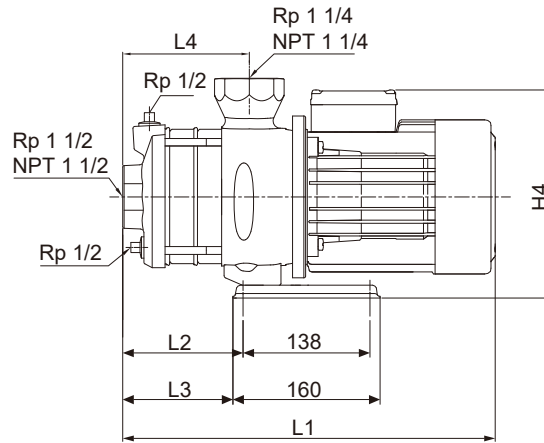
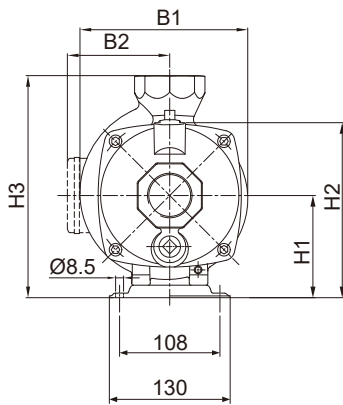


Fig. 1

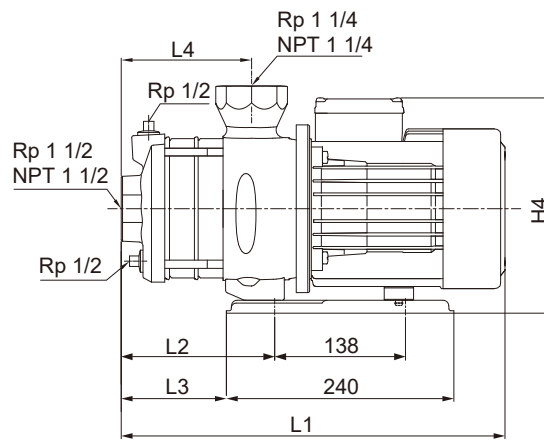
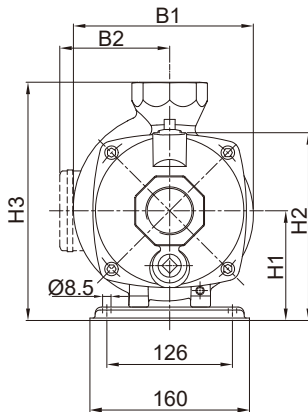
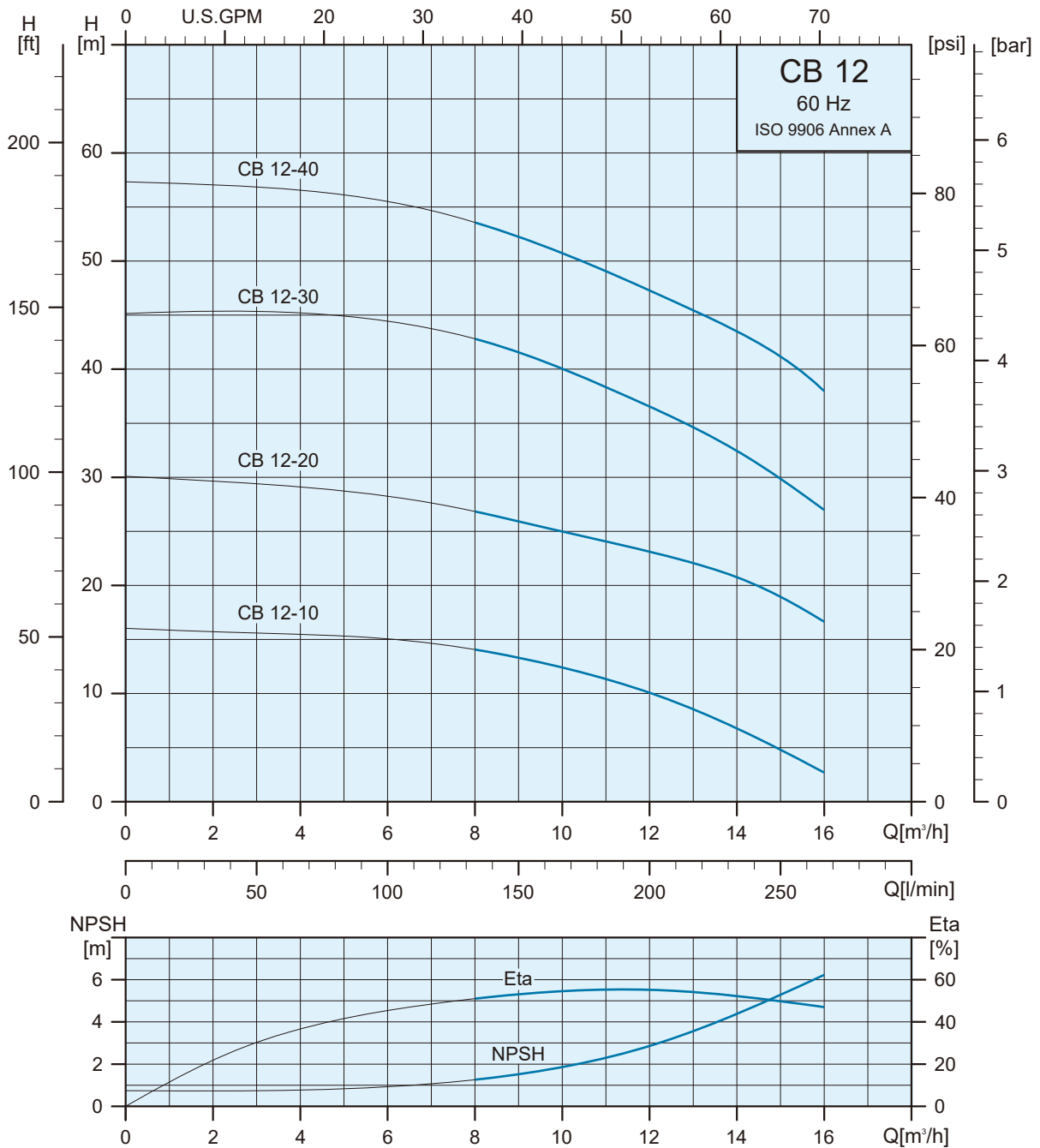


Fig. 2

Pump Type	Phase	Dimensions (mm)										Fig.	Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H1	H2	H3	H4		
CB 8-20	1Ø	360	54	41	77	181	135	110	187	239	245	1	18.6
	3Ø	360	54	41	77	181	114	110	187	239	224	1	18.4
CB 8-25	1Ø	-	-	-	107	-	-	110	187	239	-	-	-
	3Ø	390	84	71	107	181	114	110	187	239	224	1	20.3
CB 8-30	1Ø	450	132	81	107	185	152	110	187	239	262	2	26.6
	3Ø	390	84	71	107	181	114	110	187	239	224	1	20.4
CB 8-40	1Ø	450	132	81	107	185	152	110	187	239	262	2	26.8
	3Ø	450	132	81	107	185	139	110	187	239	249	2	26.8

**Performance Range**



**Specifications(3450rpm)**

Pump Type	110 / 220V			Δ 220-255 / Y 380-440 V		
	1∅			3∅		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB 12-10	-	-	-	3.5-3.7 / 2.0-2.1	910	765
CB 12-20	- / 9.4	2120	1750	6.0-5.9 / 3.5-3.4	1960	1570
CB 12-30	-	-	-	Δ 220-277 / Y 380-480 V		
				8.8-10.2 / 5.1-5.9	2940	2430
CB 12-40	-	-	-	11.2-11.3 / 6.5-6.6	3810	3250

**Dimensions and Weights**

CB 12

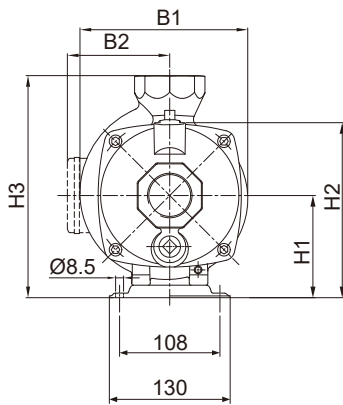


Fig. 1

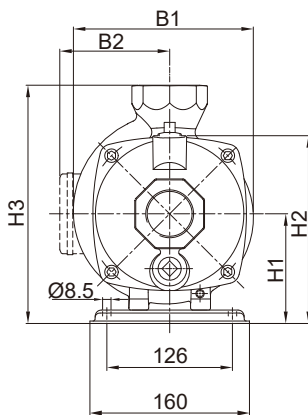
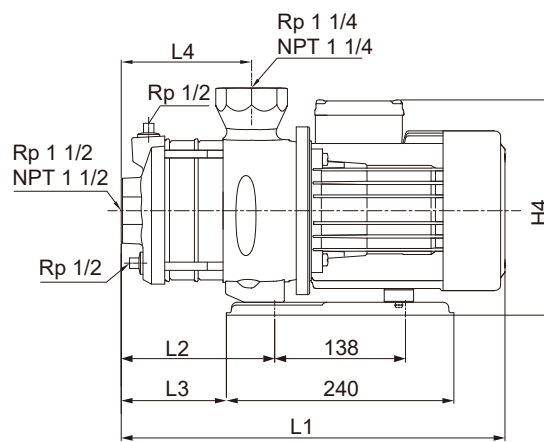
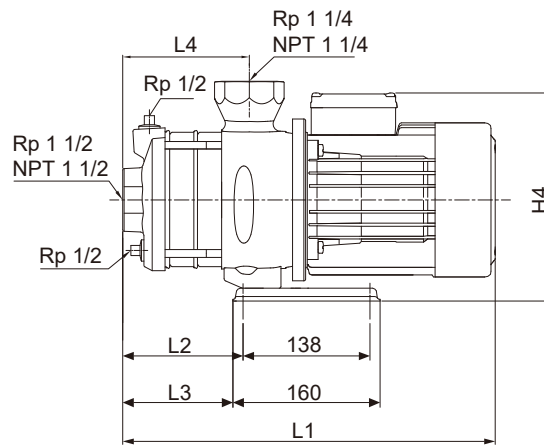
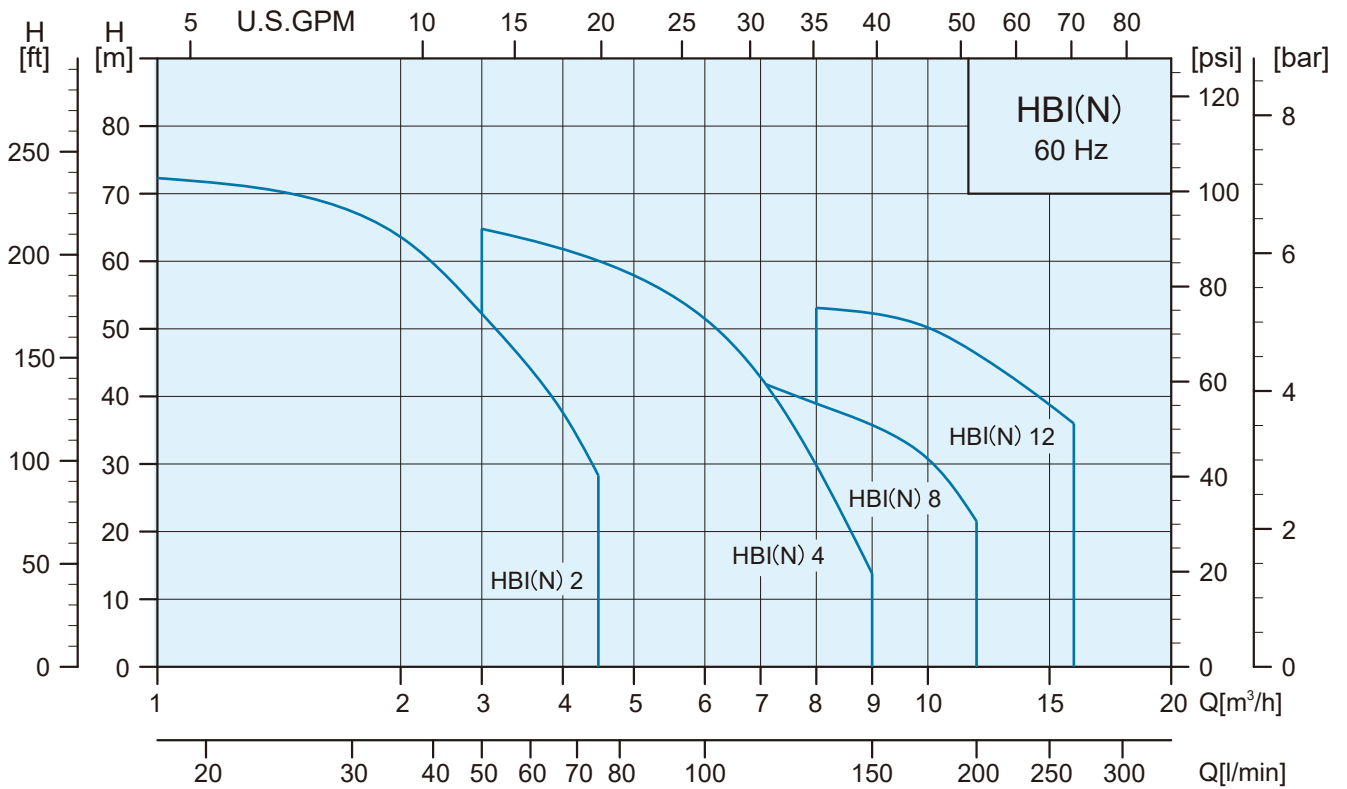
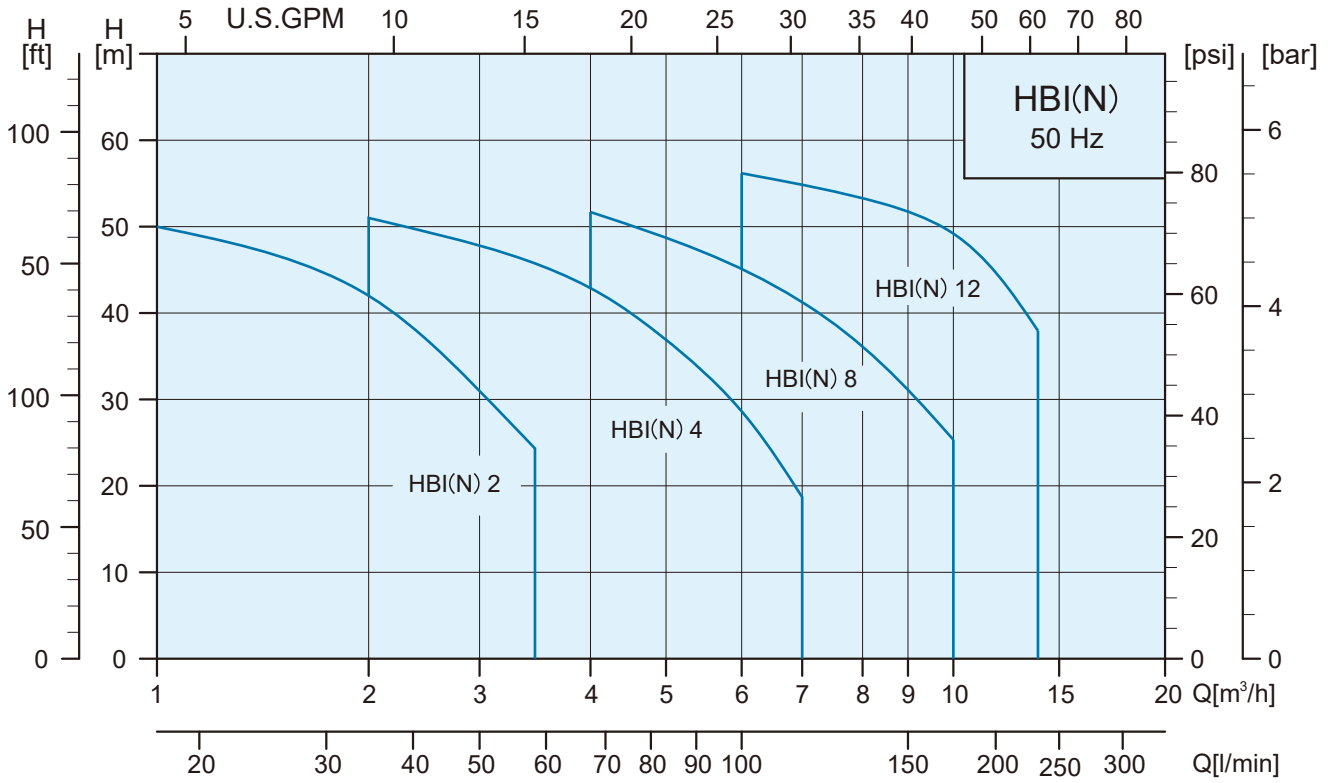


Fig. 2



Pump Type	Phase	Dimensions (mm)										Fig.	Net Weight (kg)	
		L1	L2	L3	L4	B1	B2	H1	H2	H3	H4			
CB 12-10	1Ø	-	-	-	-	-	-	-	-	-	-	-	-	-
	3Ø	360	54	41	77	181	114	110	187	239	224	1	18.9	
CB 12-20	1Ø	420	102	51	77	185	152	110	187	239	262	2	25.8	
	3Ø	380	54	41	77	181	114	110	187	239	224	1	20.4	
CB 12-30	1Ø	-	-	-	-	-	-	-	-	-	-	-	-	
	3Ø	450	132	81	107	185	139	110	187	239	249	2	30.0	
CB 12-40	1Ø	-	-	-	-	-	-	-	-	-	-	-	-	
	3Ø	471	132	81	107	196	150	122	199	251	272	2	35.1	

### Performance Range







### Model Code

	HBI	2	-	20
Model (HBI/HBN)				
Rated Flow (m <sup>3</sup> /h)				
Number of Impeller x 10				

	HBI	8	-	2	0
Model (HBI/HBN)					
Rated Flow (m <sup>3</sup> /h)					
Impeller With 130mm Diameter					
Impeller With 98mm Diameter					

\* 0=No Impeller : 5=1 Impeller : 20M=2 98mm Impellers

### Applications

- Water supply and pressure boosting
- Air-conditioning
- Water treatment
- Heating and cooling in industrial processes
- Industrial washing and dish-washing machines softened water
- Pressure boosting of process water
- Fertilizer/dosing systems

### Motor

Totally enclosed and fan-cooled standard motor.

- Frequency : 50Hz  
Nominal Speed : 2850 rpm
- Frequency : 60Hz  
Nominal Speed : 3450 rpm
- Insulation class : F
- Enclosure class : IP 55

### Pump

A horizontal, multistage centrifugal pump is made of stainless steel. The pump is a non-self priming type and fitted with a mechanical shaft seal.

### Pumped Liquids

These pumps are designed for pumping freely flowing non-corrosive, non-explosive, and non-flammable liquids. The liquids to be pumped must also be free of solid matter, sands, fibers, and similar materials. Most common non-highly corrosive watery liquids, oily liquids, hot and cold liquids can be pumped with these pumps.

The suitability of these pumps for pumping any particular liquid depends upon a number of factors, such as the pH value, contents of chemicals such as chlorides, oils, the temperature of the liquids, etc.

### Standard Voltages

	Phase	Voltages
50Hz	1Ø	220-240V
	3Ø	220-240V / 380-415V
60Hz	1Ø	110 / 220V
		220-240V
	3Ø	220-255V / 380-440V
		220-277V / 380-480V

### Mechanical Seals

Seal Type	HBI		HBN	
	2,4	8,12	2,4	8,12
R : Rubber bellows Seal	●	●	●	●
<b>Seals Face Material</b>				
QB	●	●	-	-
QQ	○	○	●	●
<b>Secondary Seal Material</b>				
E	●	●	●	●
V	○	○	○	○

List of Materials	
Q : Silicon carbide	E : EPDM
B : Carbon	V : Viton

● Std. ○ Opt. - N/A

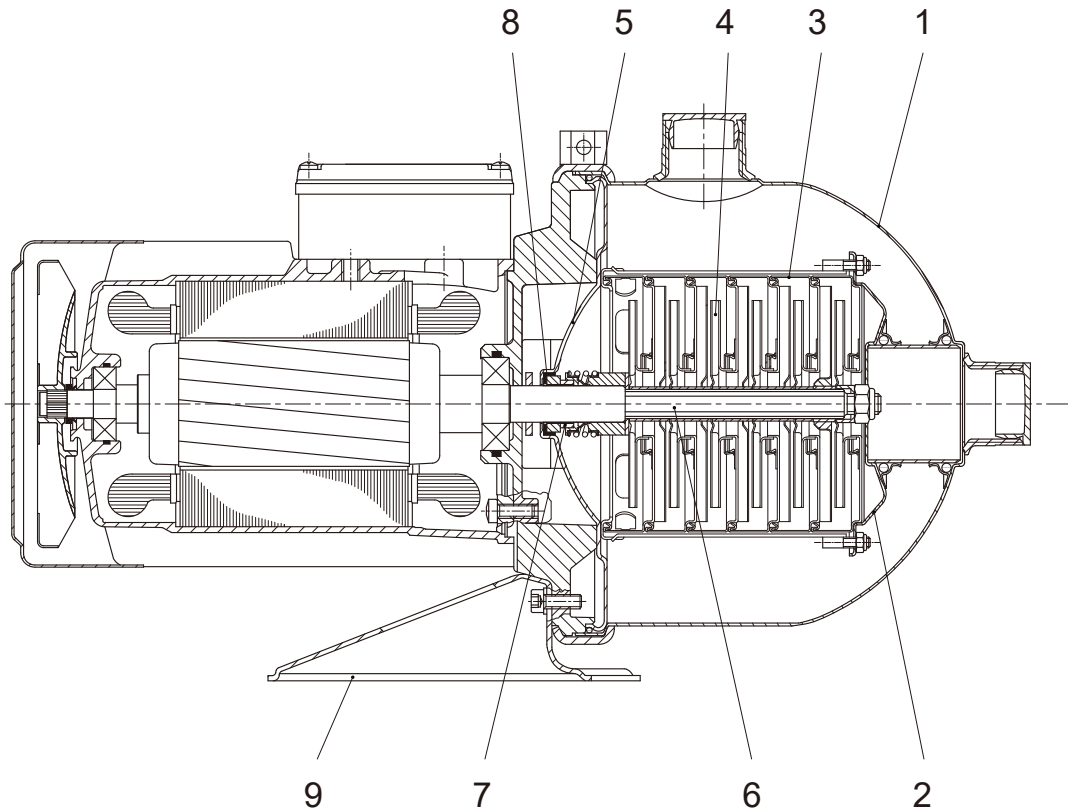
### Pipe Connections

Connections/Pump	HBI(N) 2	HBI(N) 4	HBI(N) 8	HBI(N) 12
Suction port	Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 1 1/2
Discharge port	Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 1 1/2
Drain hole, priming hole	G 3/8	G 3/8	G 3/8	G 3/8

### Operating Conditions

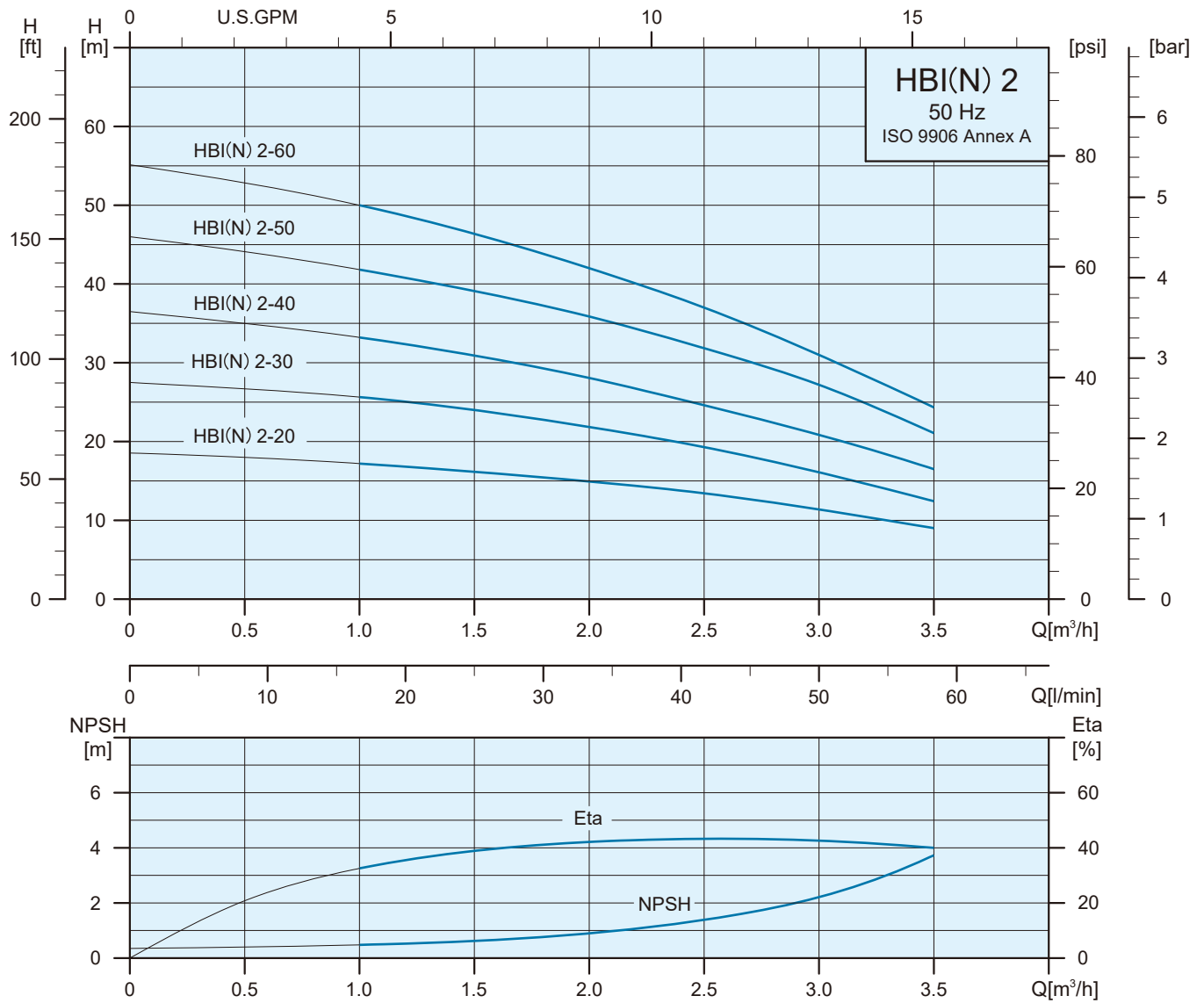
- Liquid temperature range: +32°F to +230°F(0°C~+110°C)
- Maximum ambient temperature: +122°F(+40°C)
- Maximum operating pressure: 10 kg/cm<sup>2</sup>
- Maximum inlet pressure is limited by maximum operating pressure.

### Materials



Pos.	Description	Materials	
		HBI	HBN
1	Pump casing	SS304	SS316
2	Suction inter-connector	SS304	SS316
3	Chamber	SS304	SS316
4	Impeller	SS304	SS316
5	Cover plate	SS304	SS316
6	Shaft	SS431	SS316
7	Mechanical seal	Silicon Carbide / Carbon	Silicon Carbide / Silicon Carbide
8	Rubber Cup	EPDM	EPDM
9	Base plate	Steel	Steel

### Performance Range

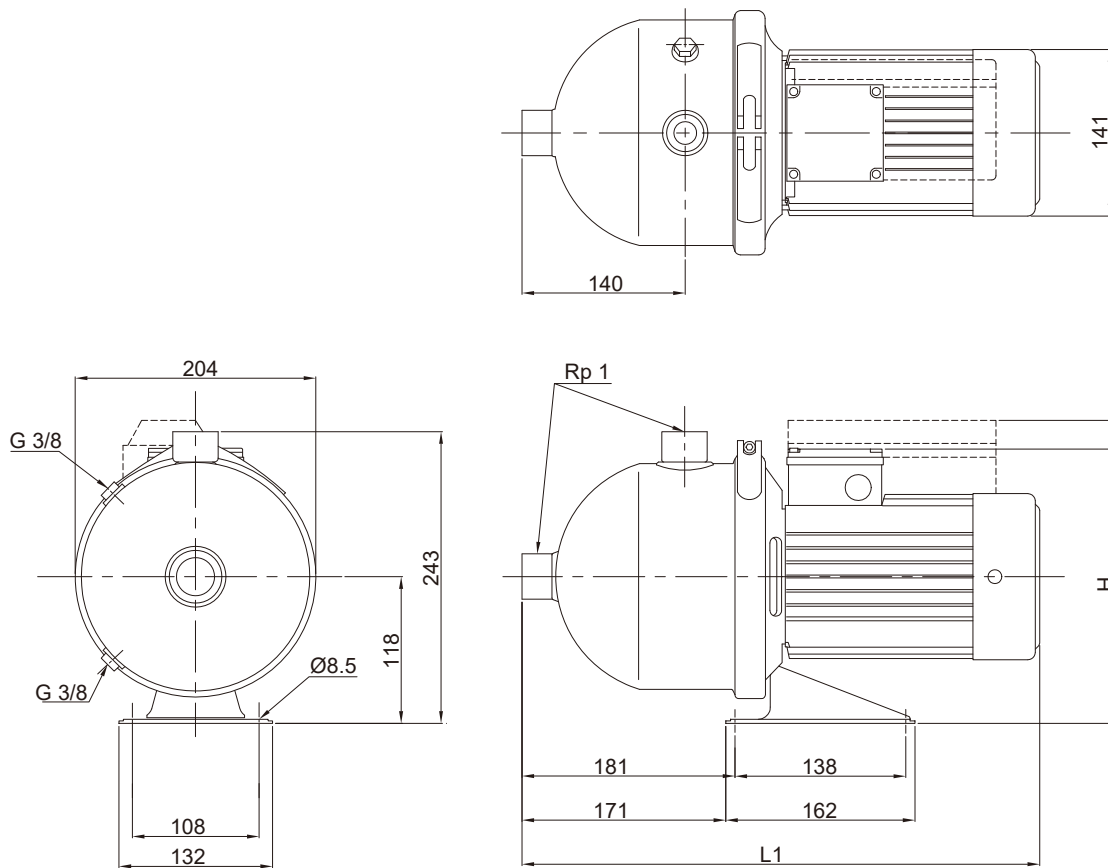


### Specifications(2850rpm)

Pump Type	220-240V			Δ 220-240V / Y 380-415V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
HBI/HBN 2-20	1.7 - 1.9	360	280	2.0 - 2.7 / 1.2 - 1.6	370	290
HBI/HBN 2-30	2.3 - 2.2	470	365	2.4 - 2.8 / 1.4 - 1.6	550	430
HBI/HBN 2-40	2.7 - 2.6	580	455	2.4 - 2.7 / 1.4 - 1.6	650	505
HBI/HBN 2-50	3.2 - 3.3	720	550	2.7 - 3.0 / 1.6 - 1.8	810	620
HBI/HBN 2-60	3.8 - 3.6	830	635	2.9 - 3.3 / 1.7 - 1.9	910	690

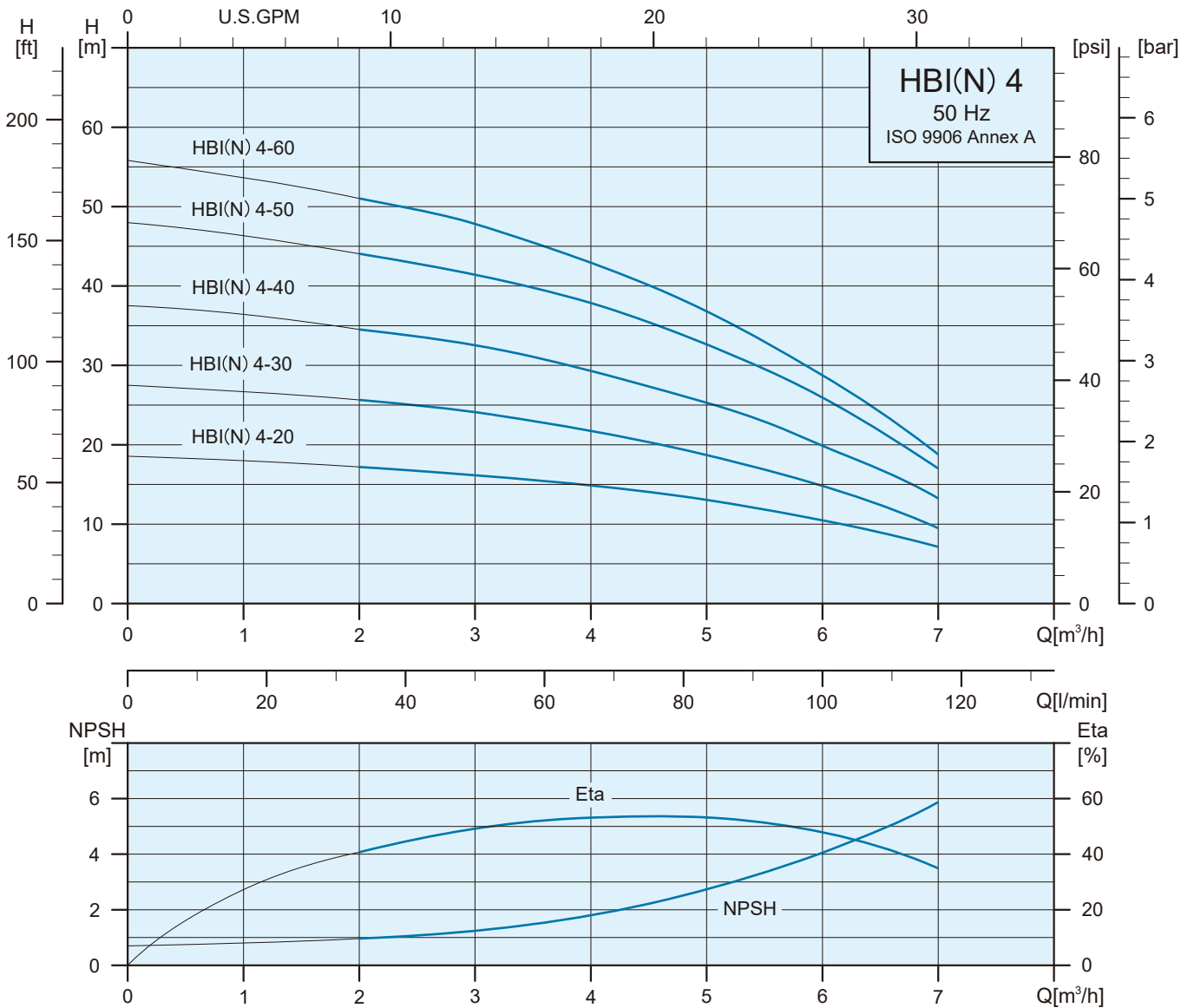
### Dimensions and Weights

HBI 2  
HBN 2



Pump Type	Dimensions (mm)				Net Weight (kg)
	L1		H		
	1Ø	3Ø	1Ø	3Ø	
HBI/HBN 2-20	403	403	255	233	9.6
HBI/HBN 2-30	403	403	255	233	9.9
HBI/HBN 2-40	403	403	255	233	10.1
HBI/HBN 2-50	403	403	255	233	10.8
HBI/HBN 2-60	403	403	255	233	11.0

### Performance Range

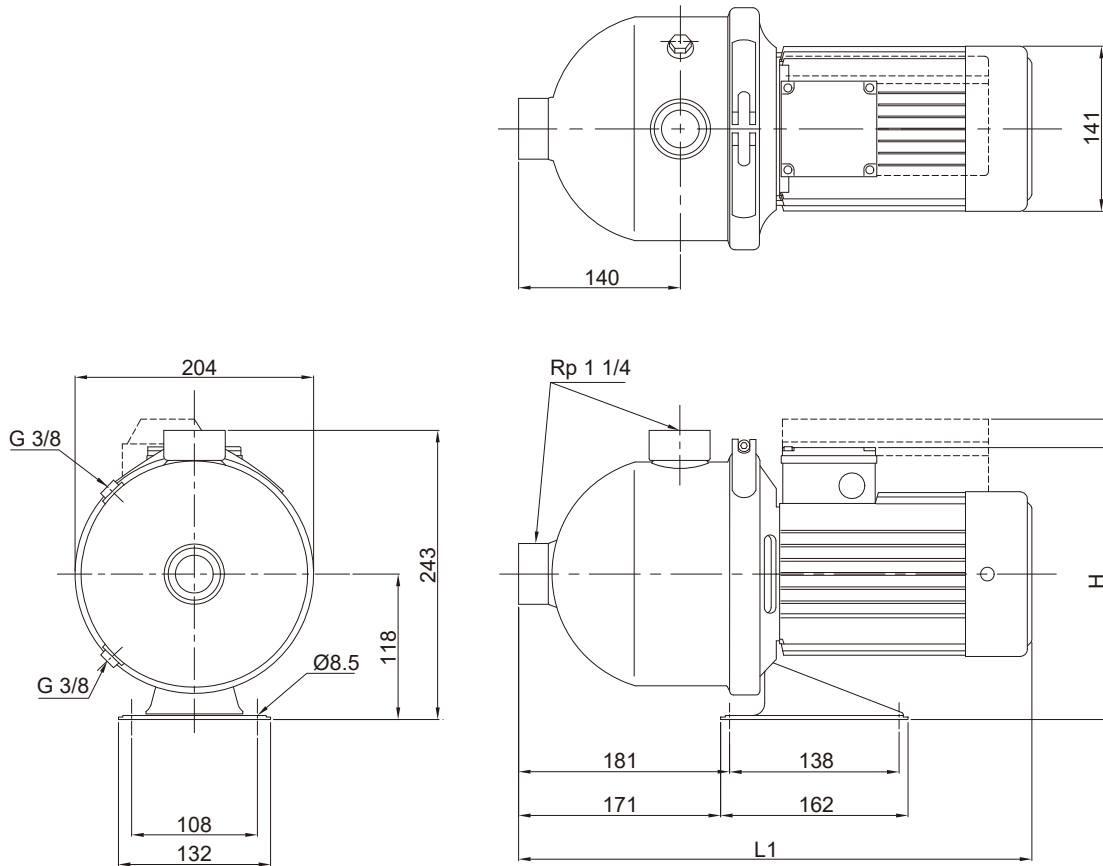


### Specifications(2850rpm)

Pump Type	220-240V			Δ 220-240V / Y 380-415V		
	1∅			3∅		
	Max.Amp	P <sub>1</sub> [W]	P <sub>2</sub> [W]	Max.Amp	P <sub>1</sub> [W]	P <sub>2</sub> [W]
HBI/HBN 4-20	2.7 - 2.6	580	450	2.5 - 2.9 / 1.5 - 1.7	660	515
HBI/HBN 4-30	3.9 - 3.7	820	635	2.8 - 3.0 / 1.6 - 1.7	850	650
HBI/HBN 4-40	4.6 - 4.4	1000	765	3.3 - 3.5 / 1.9 - 2.0	1060	810
HBI/HBN 4-50	5.8 - 5.5	1240	1005	4.2 - 4.5 / 2.4 - 2.6	1310	1060
HBI/HBN 4-60	7.1 - 6.9	1510	1210	5.2 - 5.6 / 3.0 - 3.3	1550	1230

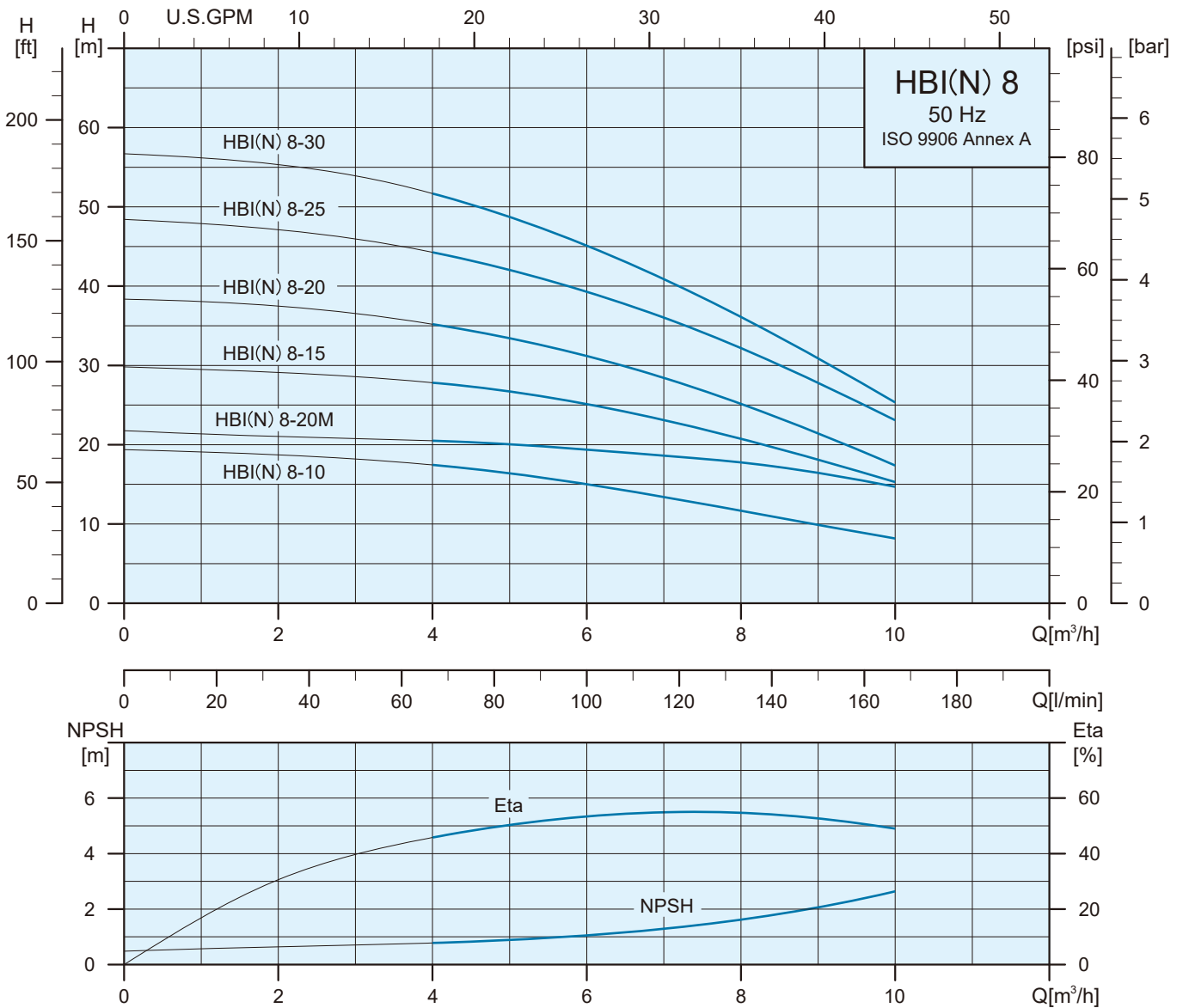
### Dimensions and Weights

HBI 4  
HBN 4



Pump Type	Dimensions (mm)				Net Weight (kg)
	L1		H		
	1 Ø	3 Ø	1 Ø	3 Ø	
HBI/HBN 4-20	403	403	255	233	9.6
HBI/HBN 4-30	403	403	255	233	9.9
HBI/HBN 4-40	403	403	255	233	10.6
HBI/HBN 4-50	441	441	255	233	12.1
HBI/HBN 4-60	441	441	255	233	12.3

### Performance Range



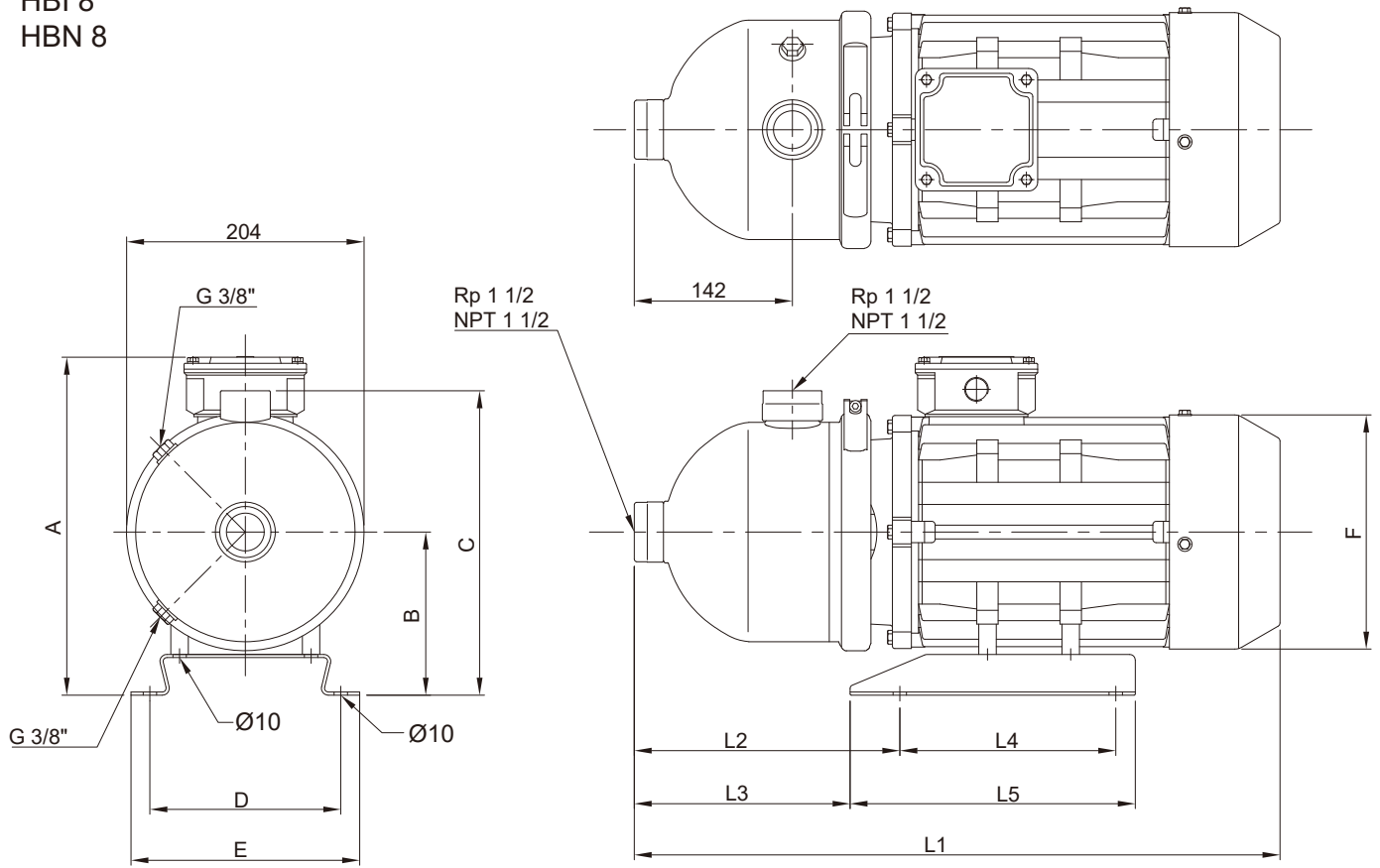
### Specifications(2850rpm)

Pump Type	220-240V			Δ 220-240V / Y 380-415V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
HBI/HBN 8-10	3.3 - 3.1	760	580	2.7 - 3.1 / 1.6 - 1.8	810	620
HBI/HBN 8-20M	-	-	-	4.2 - 4.5 / 2.4 - 2.6	1120	910
HBI/HBN 8-15	5.3 - 5.1	1150	930	3.9 - 4.4 / 2.3 - 2.6	1190	965
HBI/HBN 8-20	6.8 - 6.6	1420	1130	5.0 - 5.5 / 2.9 - 3.2	1450	1150
HBI/HBN 8-25	8.1 - 7.9	1880	1560	5.8 - 6.5 / 3.4 - 3.8	1840	1460
HBI/HBN 8-30	9.1 - 9.0	2100	1750	6.4 - 6.9 / 3.7 - 4.0	2050	1710



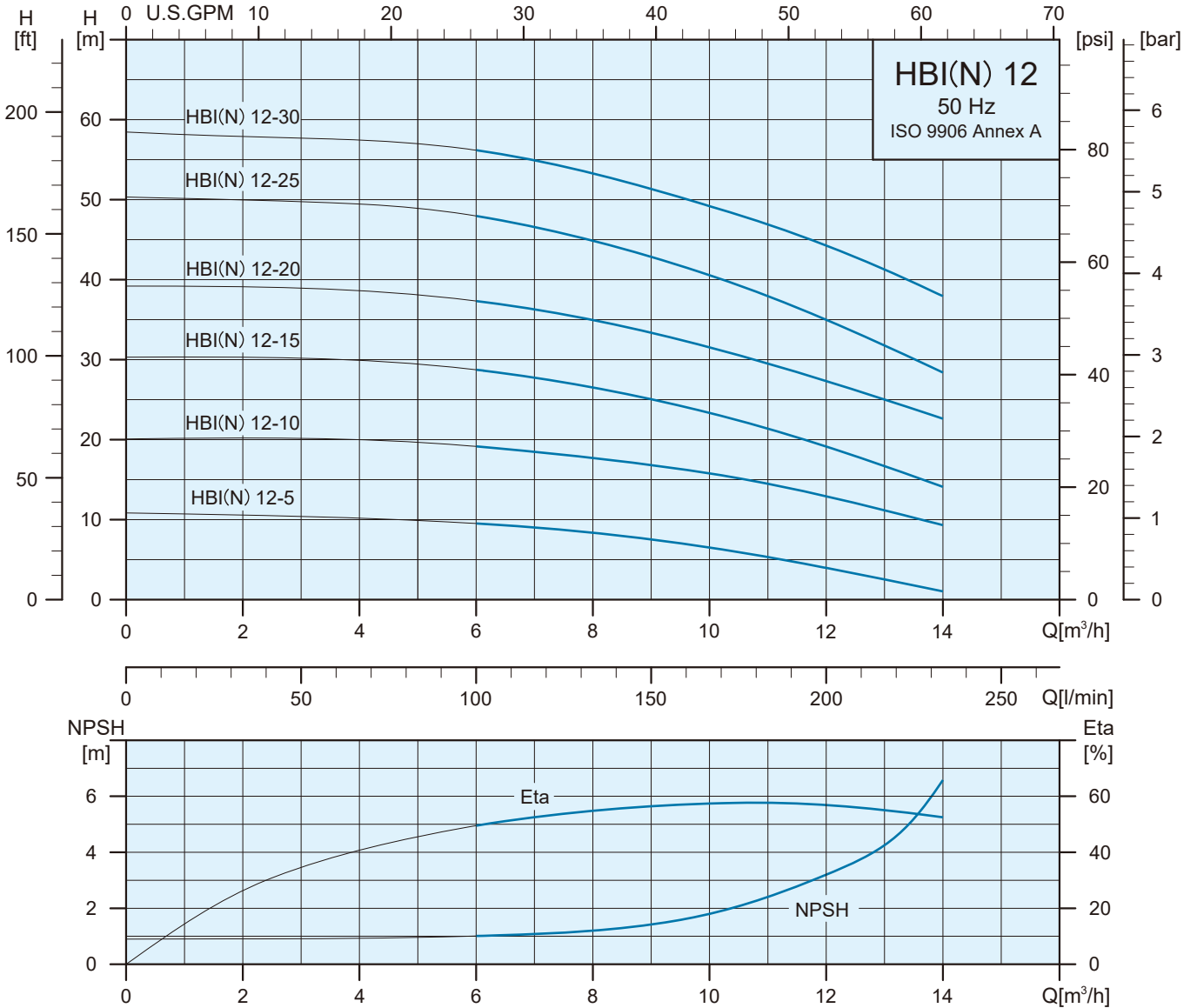
### Dimensions and Weights

HBI 8  
HBN 8



Pump Type	Phase	Dimensions (mm)											Net Weight (kg)
		L1	L2	L3	L4	L5	A	B	C	D	E	F	
HBI/HBN 8-10	1Ø	403	181	171	138	162	255	118	243	108	132	141	10.2
	3Ø	403	181	171	138	162	233	118	243	108	132	141	10.0
HBI/HBN 8-15	1Ø	441	181	171	138	162	255	118	243	108	132	141	12.3
	3Ø	441	181	171	138	162	233	118	243	108	132	141	12.1
HBI/HBN 8-20M	1Ø	-	181	171	138	162	-	118	243	108	132	141	-
	3Ø	441	181	171	138	162	233	118	243	108	132	141	12.0
HBI/HBN 8-20	1Ø	441	181	171	138	162	255	118	243	108	132	141	13.5
	3Ø	441	181	171	138	162	233	118	243	108	132	141	13.3
HBI/HBN 8-25	1Ø	514	200	180	195	235	267	121	245	158	178	177	23.1
	3Ø	441	181	171	138	162	233	118	243	108	132	141	13.9
HBI/HBN 8-30	1Ø	514	200	180	195	235	267	121	245	158	178	177	23.1
	3Ø	514	200	180	195	235	261	121	245	158	178	177	22.2

### Performance Range

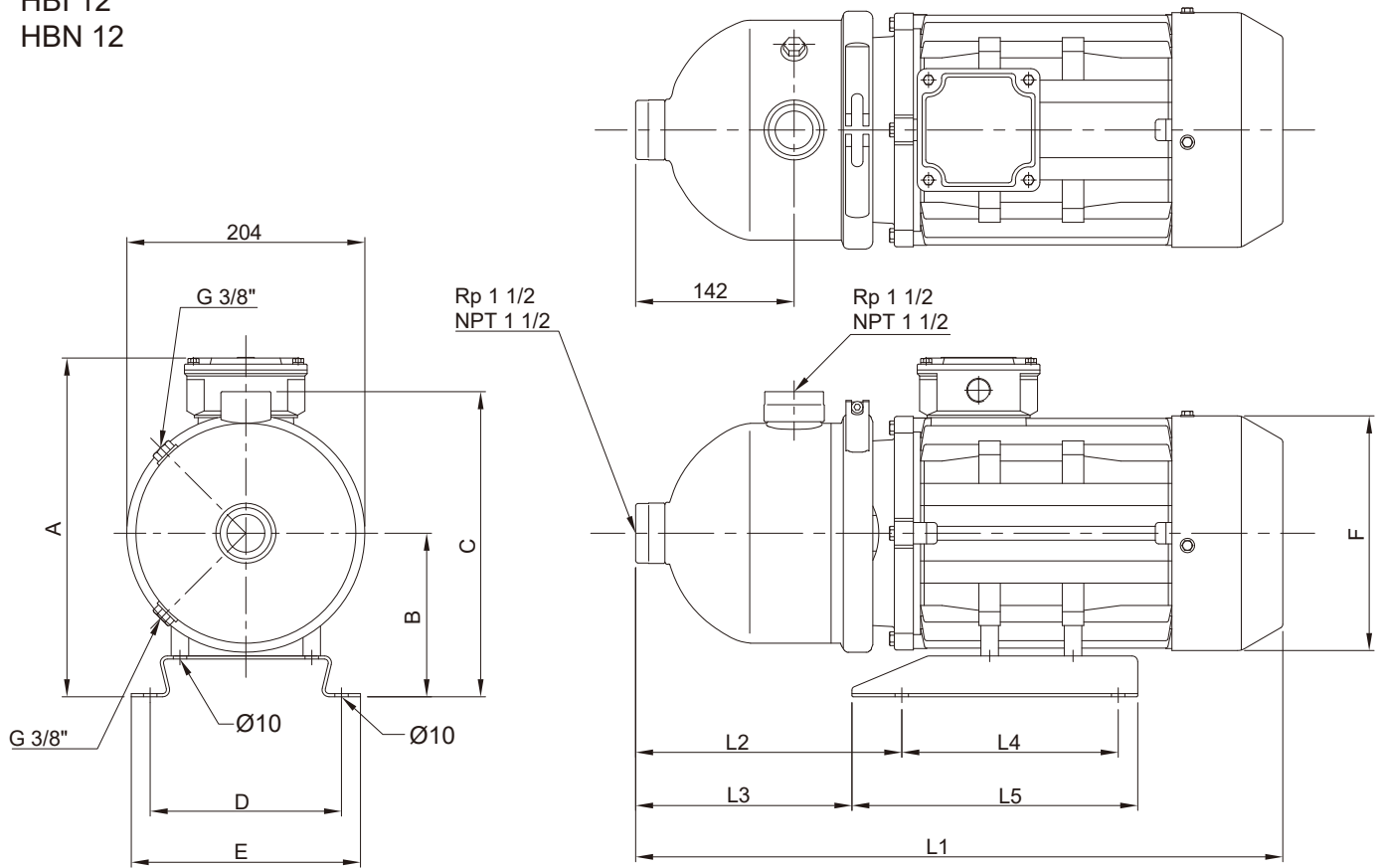


### Specifications(2850rpm)

Pump Type	220-240V			Δ 220-240V / Y 380-415V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
HBI/HBN 12-05	-	-	-	2.4 - 2.8 / 1.4 - 1.6	550	425
HBI/HBN 12-10	5.3 - 5.1	1170	945	3.6 - 3.8 / 2.1 - 2.2	1190	965
HBI/HBN 12-15	7.6 - 7.5	1650	1310	5.5 - 6.0 / 3.2 - 3.5	1690	1345
HBI/HBN 12-20	10.6 - 10.4	2310	1925	7.0 - 7.4 / 4.0 - 4.3	2350	1960
HBI/HBN 12-25	13.1 - 12.7	2980	2510	9.0 - 9.3 / 5.2 - 5.4	2880	2420
HBI/HBN 12-30	-	-	-	11.7 - 12.1 / 6.8 - 7.0	3610	3110

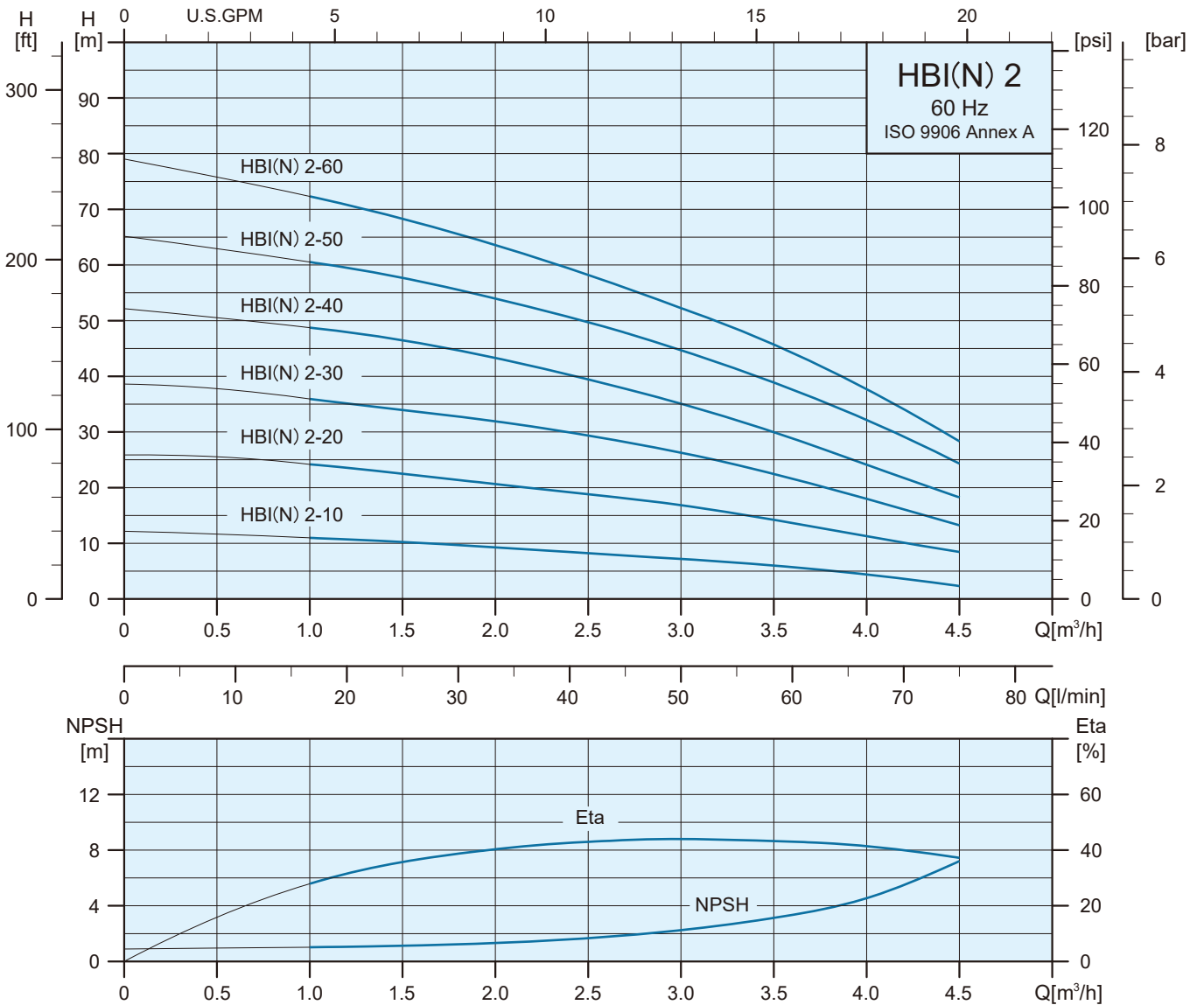
### Dimensions and Weights

HBI 12  
HBN 12



Pump Type	Phase	Dimensions (mm)											Net Weight (kg)
		L1	L2	L3	L4	L5	A	B	C	D	E	F	
HBI/HBN 12-05	1Ø	-	181	171	138	162	-	118	243	108	132	141	-
	3Ø	403	181	171	138	162	233	118	243	108	132	141	9.4
HBI/HBN 12-10	1Ø	441	181	171	138	162	255	118	243	108	131	141	11.7
	3Ø	441	181	171	138	162	233	118	243	108	131	141	11.5
HBI/HBN 12-15	1Ø	441	181	171	138	162	255	118	243	108	132	141	13.4
	3Ø	441	181	171	138	162	233	118	243	108	132	141	13.2
HBI/HBN 12-20	1Ø	514	200	180	195	235	267	121	245	158	178	177	22.5
	3Ø	514	200	180	195	235	261	121	245	158	178	177	21.5
HBI/HBN 12-25	1Ø	514	200	180	195	235	267	121	245	158	178	177	25.7
	3Ø	514	200	180	195	235	261	121	245	158	178	177	24.4
HBI/HBN 12-30	1Ø	-	230	198	195	245	-	133	259	174	198	197	-
	3Ø	539	230	198	195	245	284	133	259	174	198	197	30.2

### Performance Range

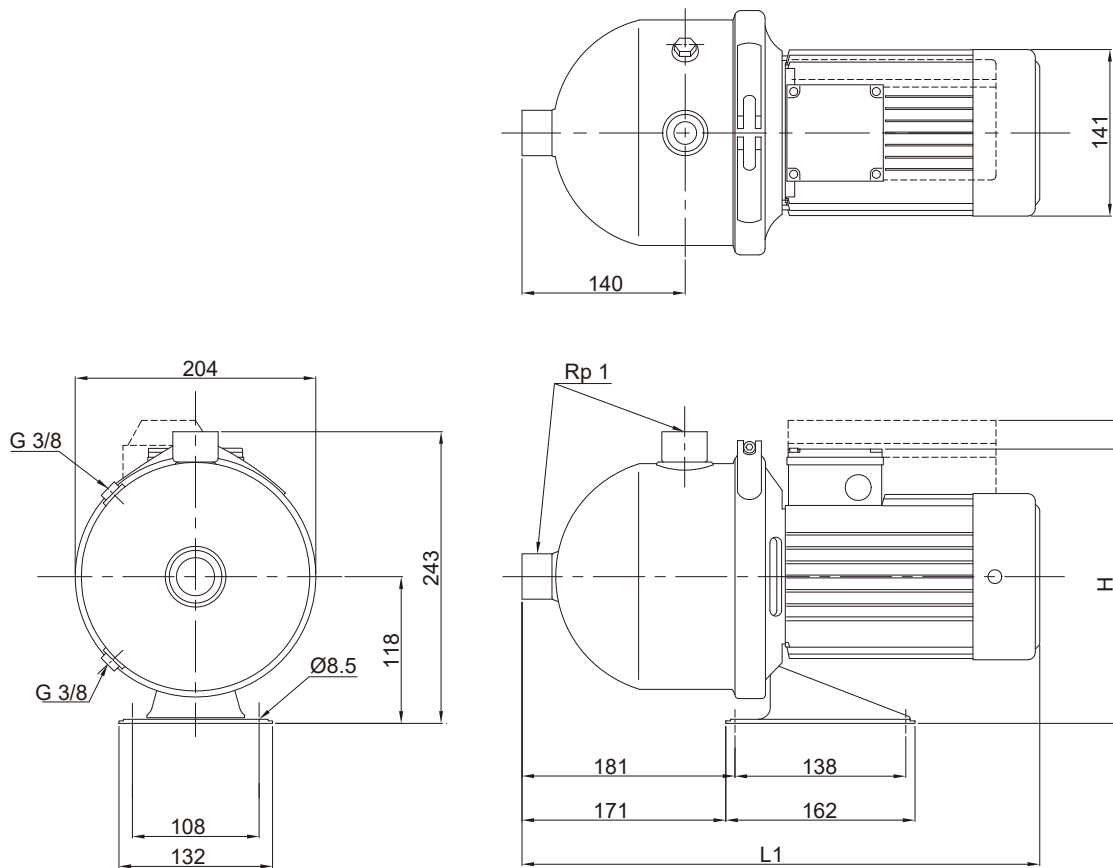


### Specifications(3450rpm)

Pump Type	110 / 220V			Δ 220-255V / Y 380-440V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
HBI/HBN 2-10	5.9 / 3.0	390	310	1.5 - 1.6 / 0.9 - 1.0	360	290
HBI/HBN 2-20	6.6 / 3.4	570	455	1.7 - 1.8 / 1.0 - 1.1	540	435
HBI/HBN 2-30	7.6 / 3.8	750	605	2.2 - 2.3 / 1.3 - 1.4	720	580
HBI/HBN 2-40	9.3 / 4.7	980	790	3.0 - 3.2 / 1.75 - 1.9	950	770
HBI/HBN 2-50	10.7 / 5.4	1160	970	3.8 - 3.9 / 2.2 - 2.3	1170	980
HBI/HBN 2-60	12.4 / 6.3	1375	1150	4.1 - 4.2 / 2.35 - 2.45	1330	1115

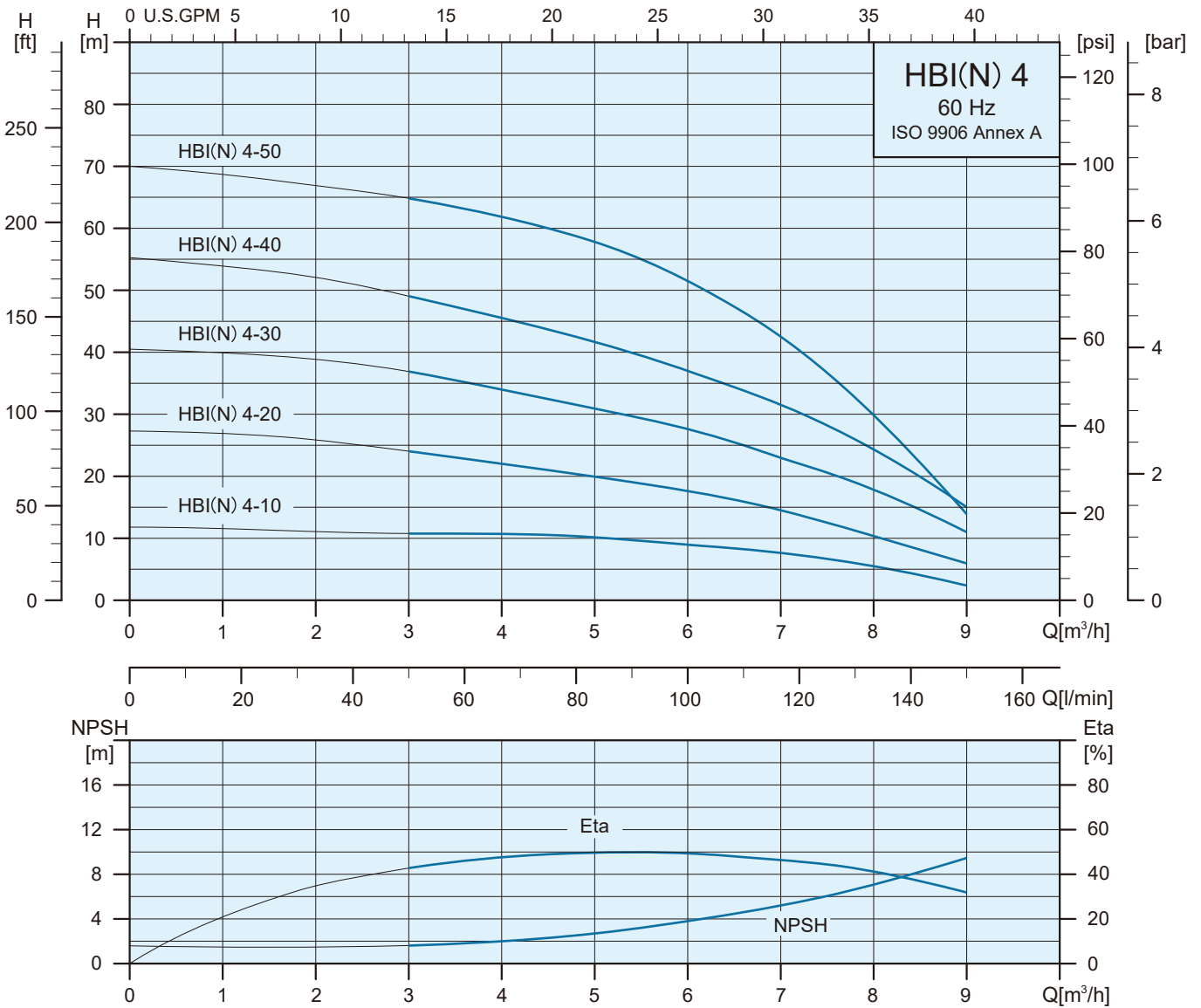
### Dimensions and Weights

HBI 2  
HBN 2



Pump Type	Dimensions (mm)				Net Weight (kg)
	L1		H		
	1Ø	3Ø	1Ø	3Ø	
HBI/HBN 2-10	403	403	255	233	9.5
HBI/HBN 2-20	403	403	255	233	9.5
HBI/HBN 2-30	403	403	255	233	9.8
HBI/HBN 2-40	403	403	255	233	10.3
HBI/HBN 2-50	441	441	255	233	11.7
HBI/HBN 2-60	441	441	255	233	12.0

### Performance Range

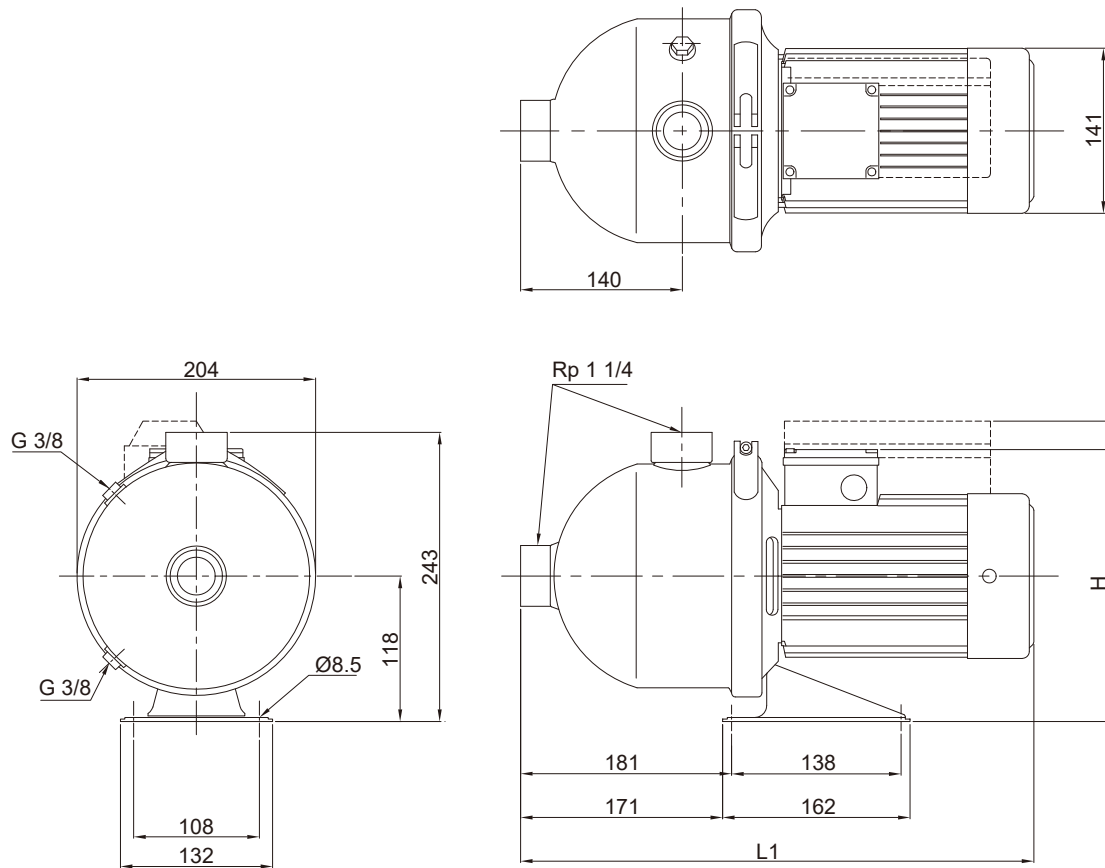


### Specifications(3450rpm)

Pump Type	110 / 220V			Δ 220-255V / Y 380-440V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
HBI/HBN 4-10	5.9 / 3.1	530	425	1.8 - 1.9 / 1.1 - 1.2	560	450
HBI/HBN 4-20	9.3 / 4.7	970	780	2.9 - 3.1 / 1.7 - 1.8	910	740
HBI/HBN 4-30	12.5 / 6.5	1360	1140	4.1 - 4.2 / 2.4 - 2.5	1280	1080
HBI/HBN 4-40	- / 8.5	1730	1380	4.7 - 4.8 / 2.7 - 2.8	1675	1340
HBI/HBN 4-50	- / 9.9	2080	1660	5.7 - 6.0 / 3.3 - 3.5	1995	1595

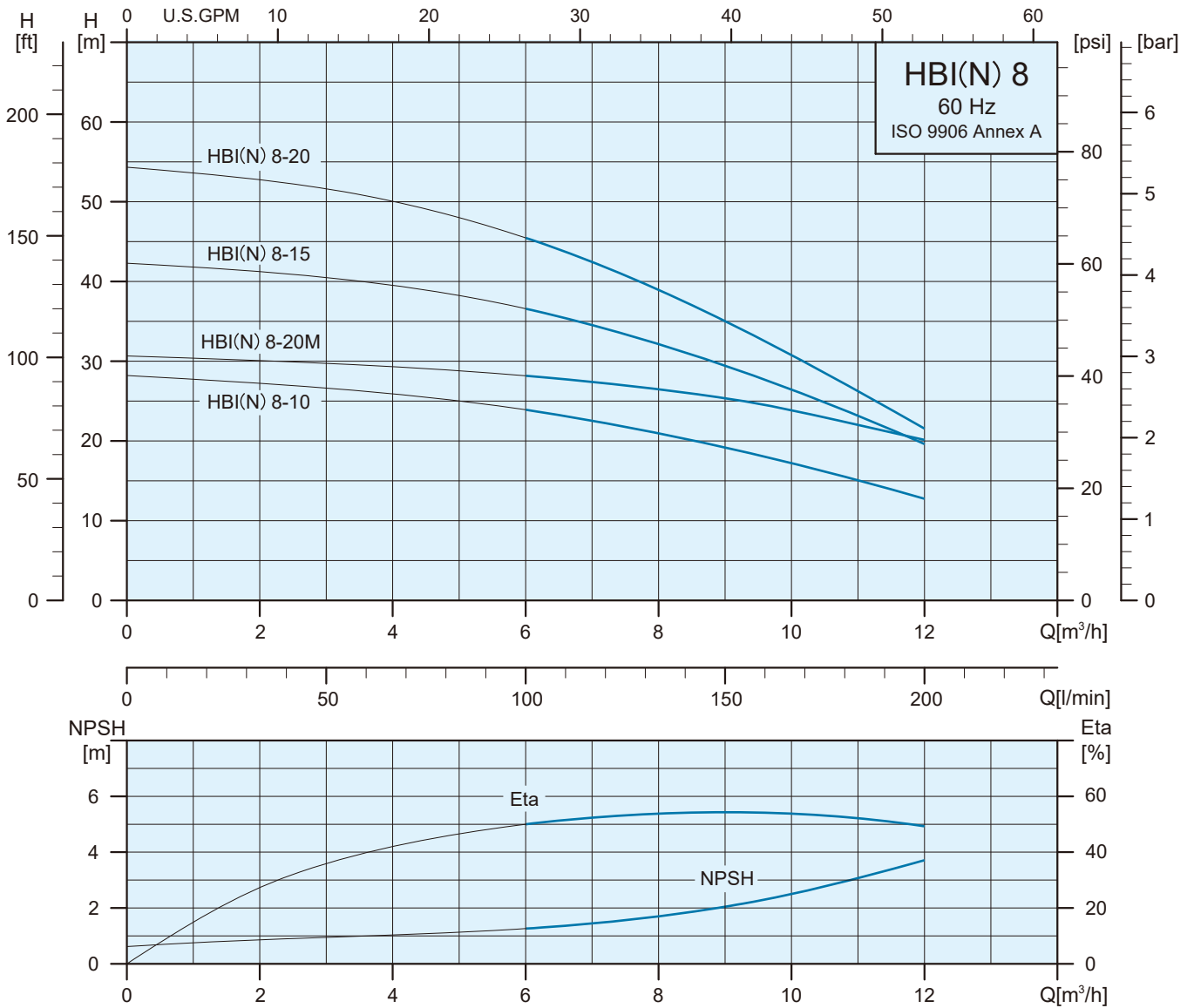
### Dimensions and Weights

HBI 4  
HBN 4



Pump Type	Dimensions (mm)				Net Weight (kg)
	L1		H		
	1Ø	3Ø	1Ø	3Ø	
HBI/HBN 4-10	403	403	255	233	9.5
HBI/HBN 4-20	403	403	255	233	9.5
HBI/HBN 4-30	441	441	255	233	10.1
HBI/HBN 4-40	441	461	255	233	11.5
HBI/HBN 4-50	441	461	255	233	12.8

### Performance Range



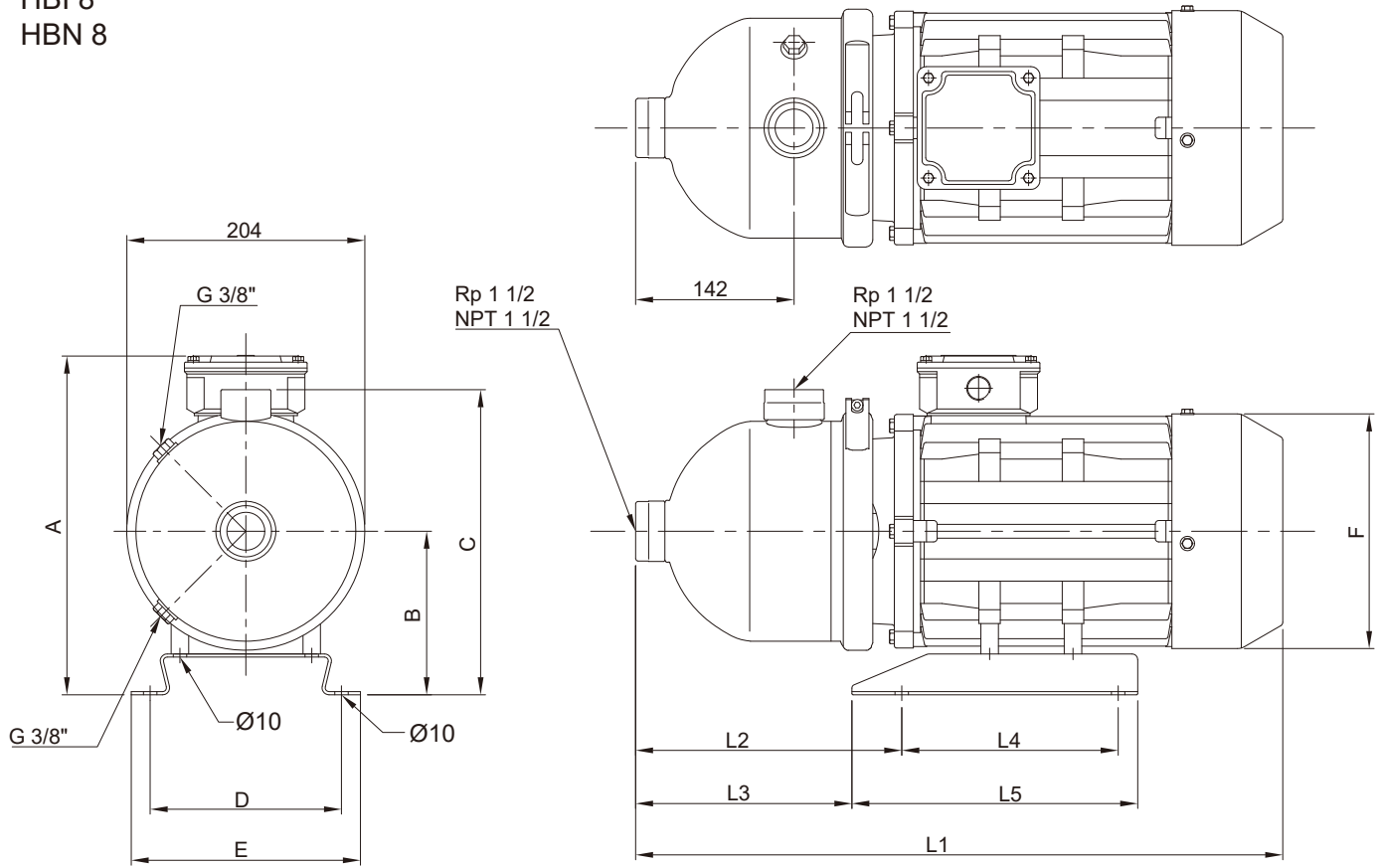
### Specifications(3450rpm)

Pump Type	110 / 220V			Δ 220-255V / Y 380-440V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
HBI/HBN 8-10	11.4 / 6.0	1280	1070	3.9-4.1 / 2.3-2.4	1210	1010
HBI/HBN 8-20M	- / 8.3	1730	1380	5.2-5.3 / 3.0-3.1	1670	1340
HBI/HBN 8-15	- / 9.3	2080	1710	5.6-5.7 / 3.2-3.3	1890	1560
HBI/HBN 8-20	- / 10.9	2460	2030	Δ 220-277V / Y 380-480V		
				7.1-6.9 / 4.1-4.0	2360	1950



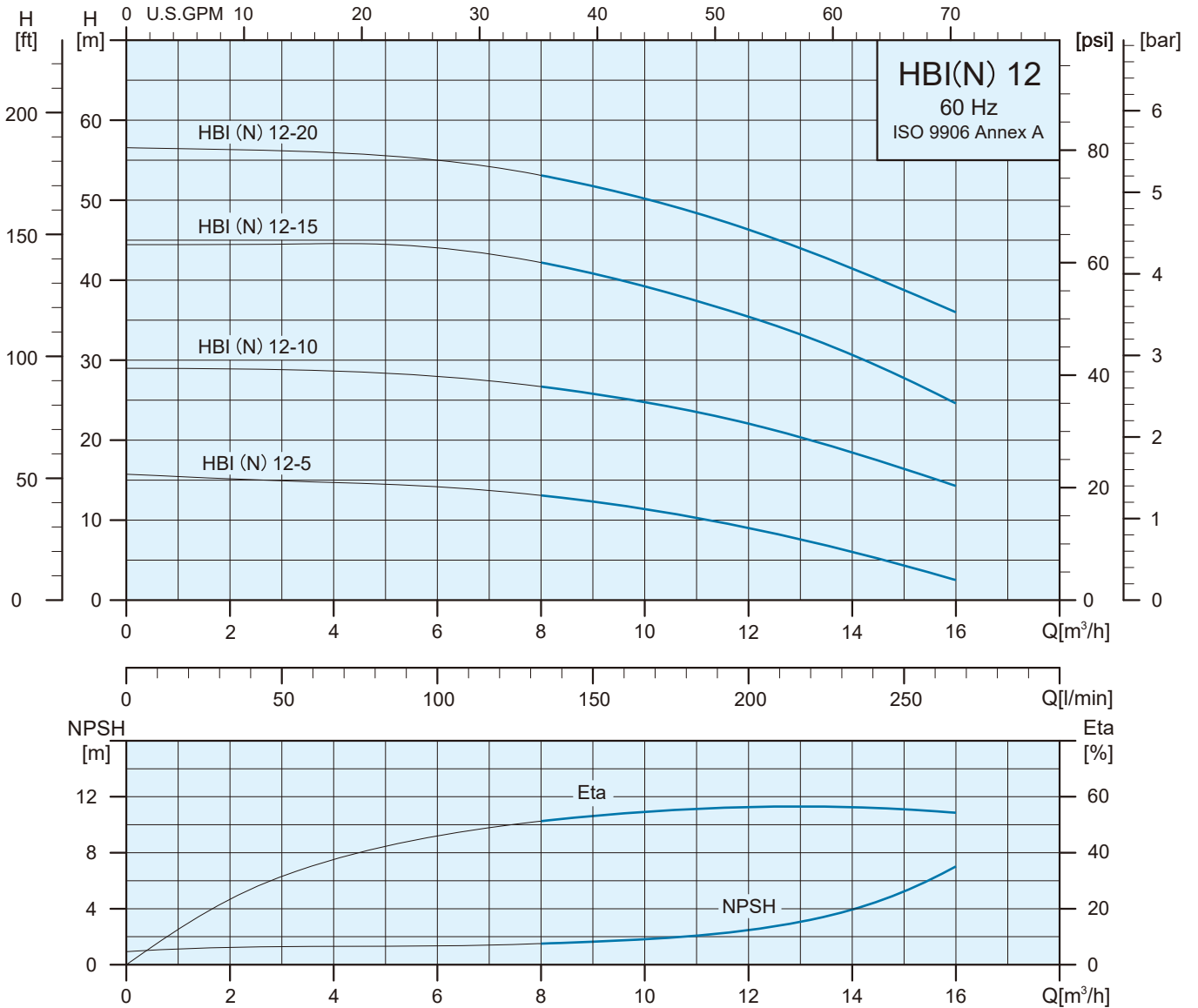
### Dimensions and Weights

HBI 8  
HBN 8



Pump Type	Phase	Dimensions (mm)											Net Weight (kg)
		L1	L2	L3	L4	L5	A	B	C	D	E	F	
HBI/HBN 8-10	1Ø	441	181	171	138	162	255	118	243	108	132	141	11.7
	3Ø	441	181	171	138	162	233	118	243	108	132	141	11.5
HBI/HBN 8-20M	1Ø	441	181	171	138	162	255	118	243	108	132	141	13.2
	3Ø	441	181	171	138	162	233	118	243	108	132	141	13.1
HBI/HBN 8-15	1Ø	514	200	180	195	235	267	121	245	158	178	177	21.4
	3Ø	461	181	171	138	162	233	118	243	108	132	141	13.2
HBI/HBN 8-20	1Ø	514	200	180	195	235	267	121	245	158	178	177	21.5
	3Ø	514	200	180	195	235	261	121	245	158	178	177	21.6

### Performance Range

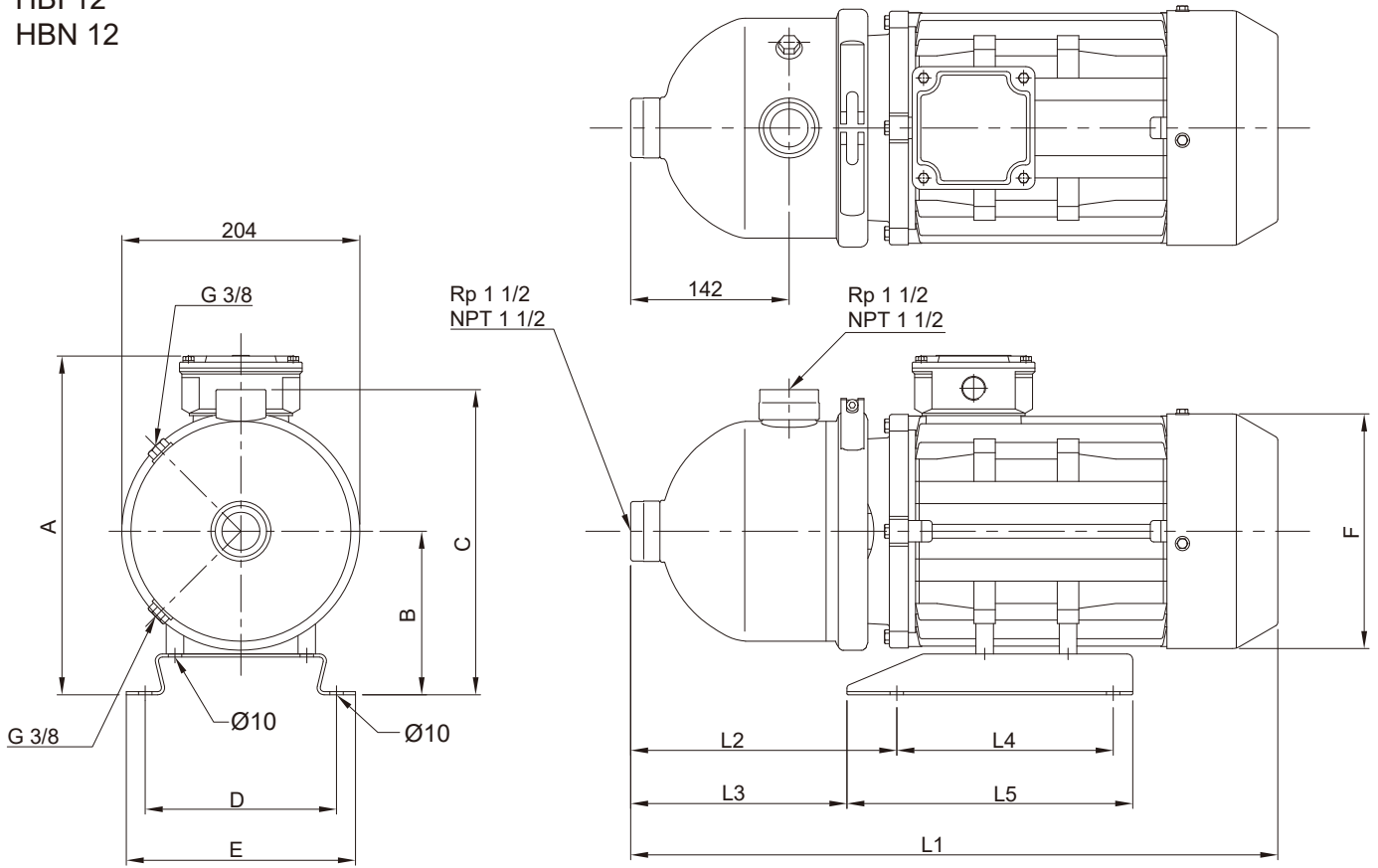


### Specifications(3450rpm)

Pump Type	110 / 220V			Δ 220-255V / Y 380-440V		
	1∅			3∅		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
HBI/HBN 12-05	8.5 / 4.5	940	760	2.8-3.0 / 1.6-1.75	850	690
HBI/HBN 12-10	- / 9.7	2170	1790	5.7-5.9 / 3.3-3.4	1930	1595
HBI/HBN 12-15	-	-	-	Δ 220-277V / Y 380-480V		
				9.2-8.9 / 5.3-5.1	2860	2365
HBI/HBN 12-20	-	-	-	11.2-11.8 / 6.5-6.8	3950	3370

### Dimensions and Weights

HBI 12  
HBN 12



Pump Type	Phase	Dimensions (mm)											Net Weight (kg)
		L1	L2	L3	L4	L5	A	B	C	D	E	F	
HBI/HBN 12-05	1Ø	403	181	171	138	162	255	118	243	108	132	141	10.3
	3Ø	403	181	171	138	162	233	118	243	108	132	141	10.1
HBI/HBN 12-10	1Ø	514	200	180	195	235	267	121	245	158	178	177	20.6
	3Ø	441	181	171	138	162	233	118	243	108	132	141	12.6
HBI/HBN 12-15	1Ø	-	200	180	195	235	-	121	245	158	178	177	-
	3Ø	493	200	180	195	235	261	121	245	158	178	177	23.7
HBI/HBN 12-20	1Ø	-	230	198	195	245	-	133	259	174	198	197	-
	3Ø	514	230	198	195	245	284	133	259	174	198	197	29.4



