

 STAIRS

CB,CBI HBI,HBN

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

HBI,HBN2,4,8,12 series

50/60Hz

Horizontal Multistage Pumps



STAIRS INDUSTRIAL CO., LTD.



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.

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



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.

HBI,HBN

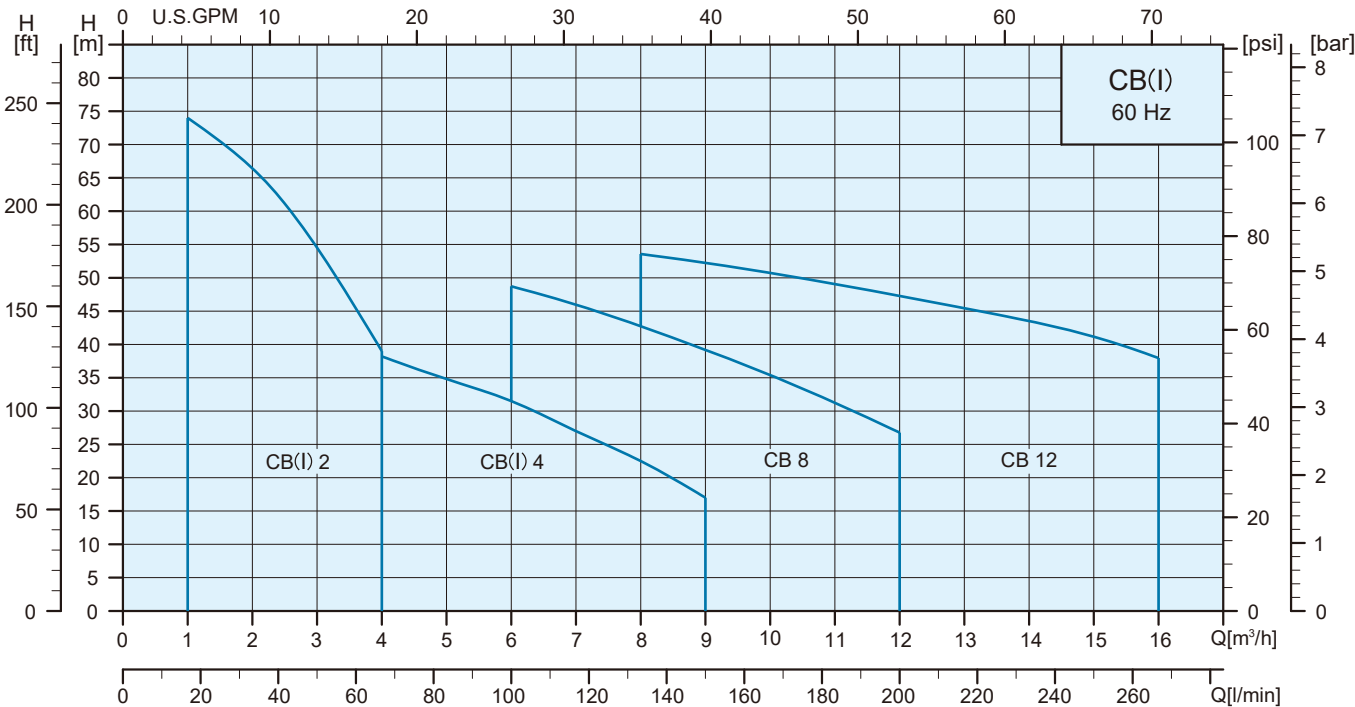
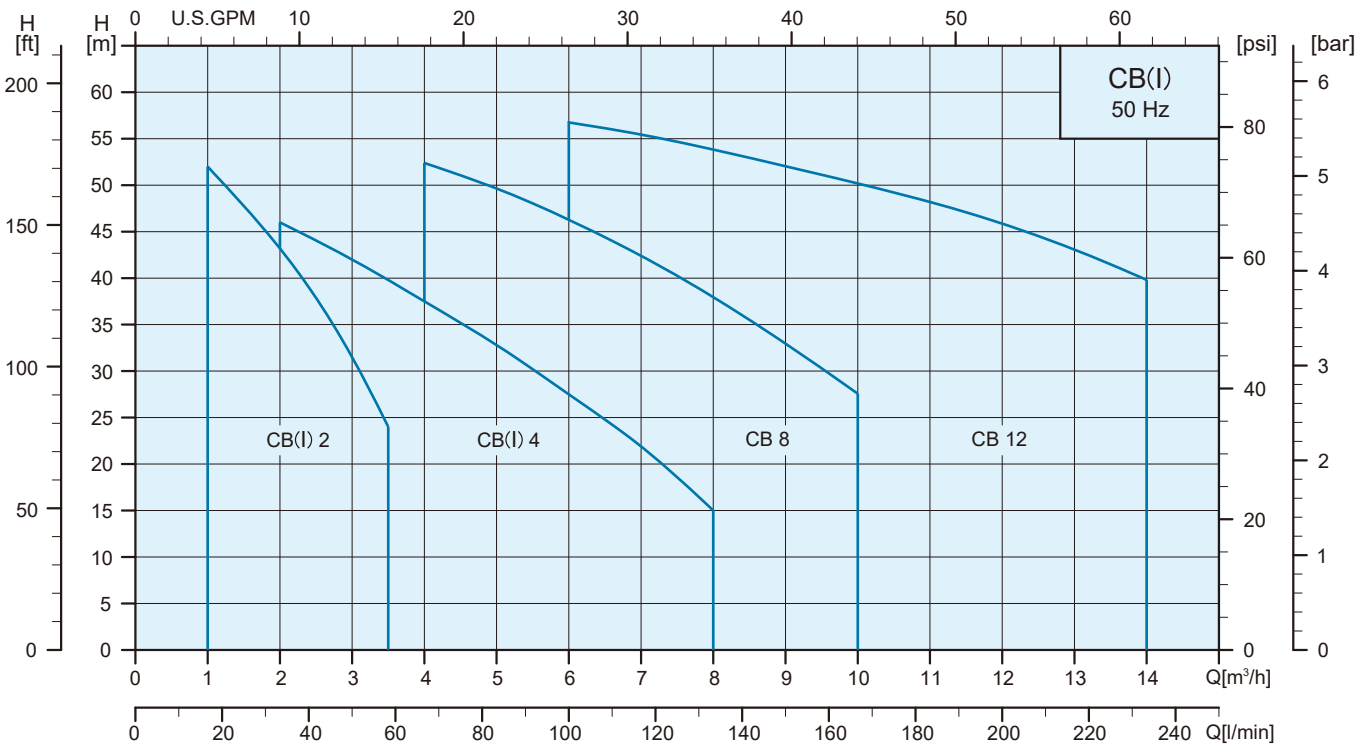
General Data

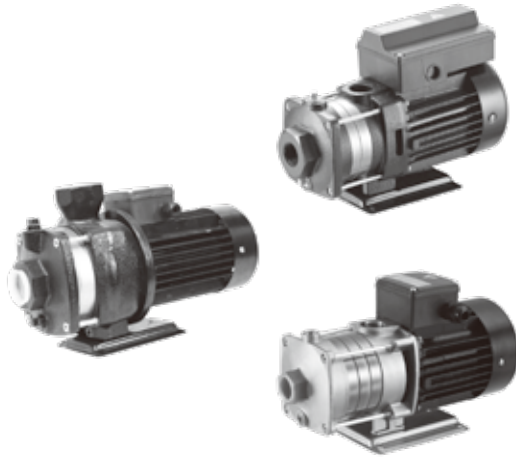
Performance Range	21
Model Code	22
Applications	22
Motor	22
Pump	22
Pump Liquids	22
Standard Voltages	23
Mechanical Seals	23
Pipe Connections	23
Operating Conditions	23
Material	24

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

Performance Range





Model Code

	CB	2	-	20
Model (CB/CBI)				
Rated Flow (m ³ /h)				
Number of Impeller x 10				

	CB	8	-	20
Model (CB)				
Rated Flow (m ³ /h)				
Maximum Head (50Hz)				

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	○	○	○
Seals Face Material			
QB	●	●	●
QQ	○	○	○
UU	○	○	○
Rubber Material			
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

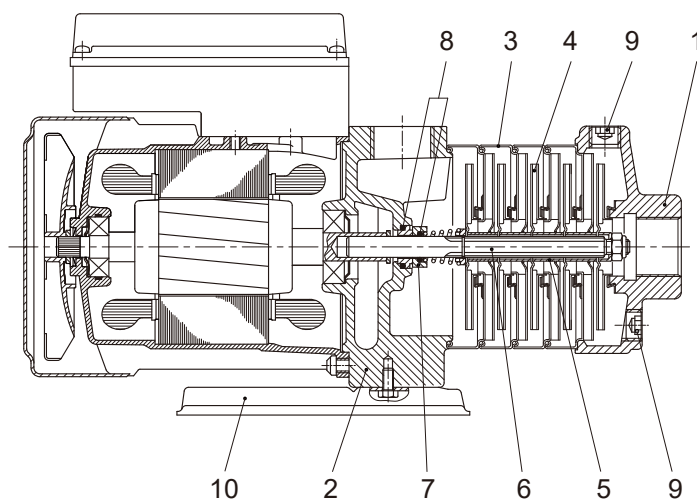
- Liquid : CB : Thin, clean, non-aggressive and non-explosive liquids without solid particles or fibres.
CBI : Thin, clean, slightly aggressive and non-explosive liquids without solid particles or fibres.
- Liquid temperature : +32°F to +194°F (0°C to +90°C)
- Maximum ambient temperature : +122°F (+50°C)
- Maximum operating pressure: 10 kg/cm²
- The maximum operating pressure depends on the temperature of the pumped liquid, see table :

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

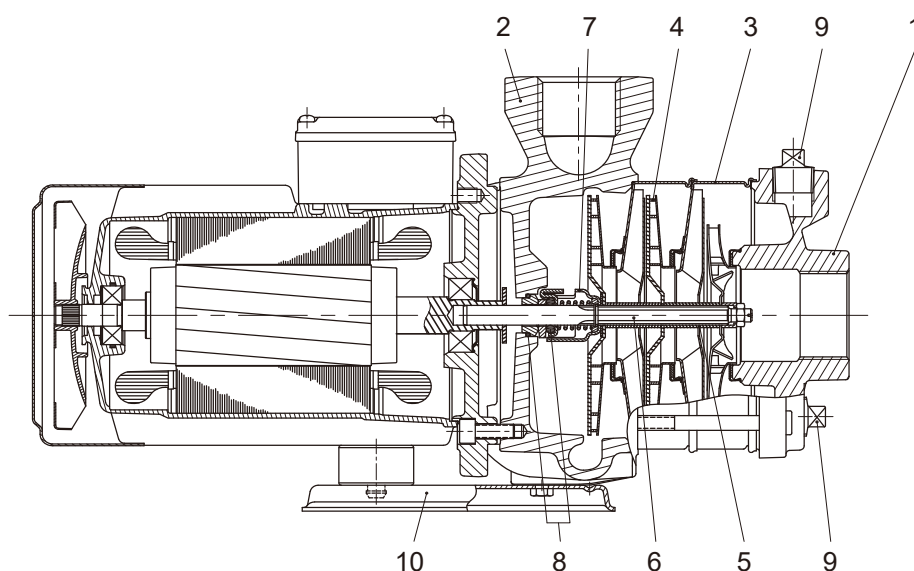
- Min. inlet pressure : According to the NPSH curve + a safety margin of 0.5m.
- Max. inlet pressure : Limited by the max. operating pressure.

Material

CB(I) 2,4

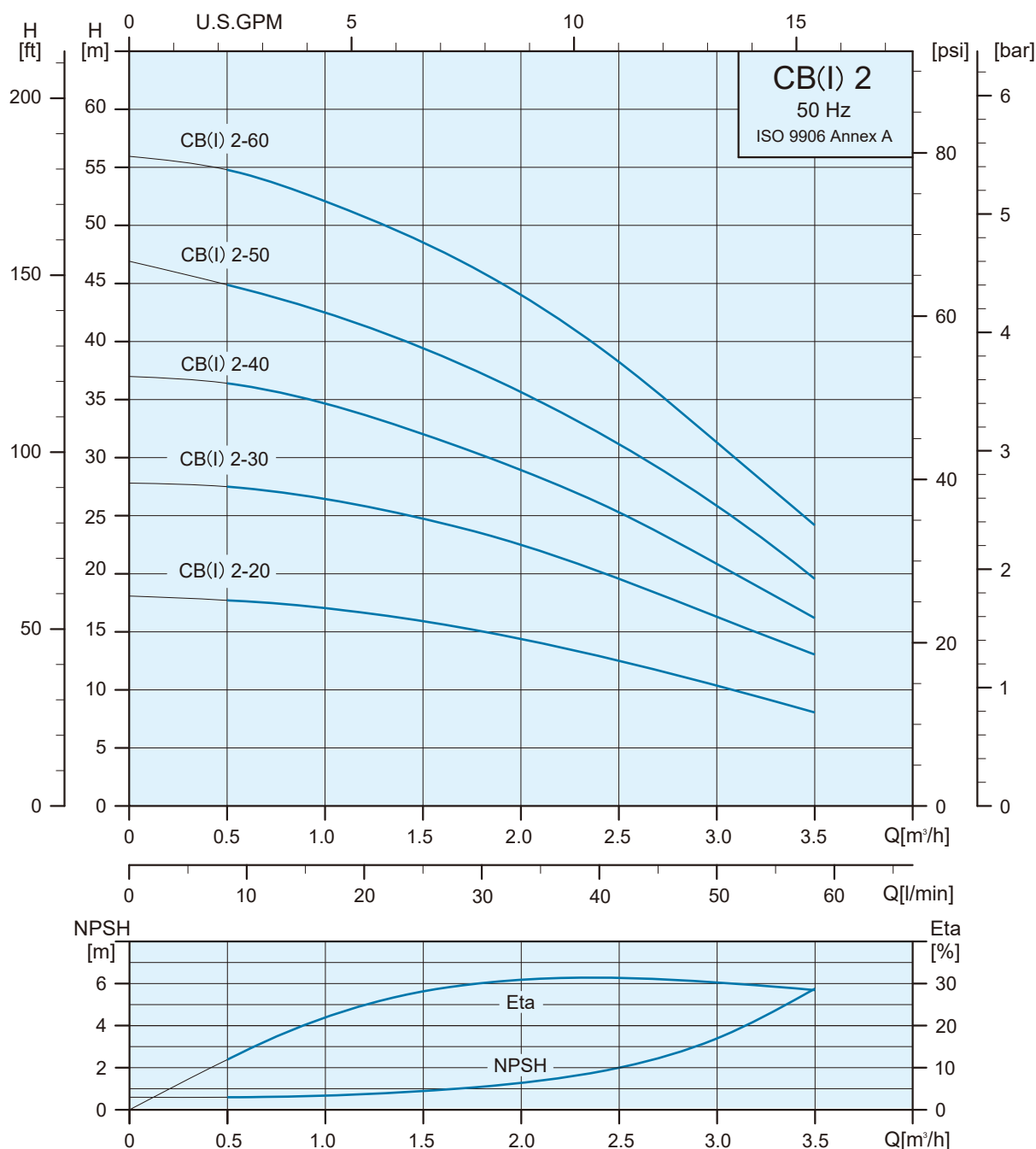


CB 8,12



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

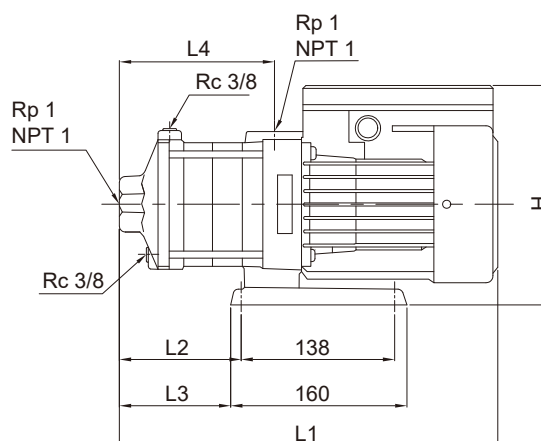
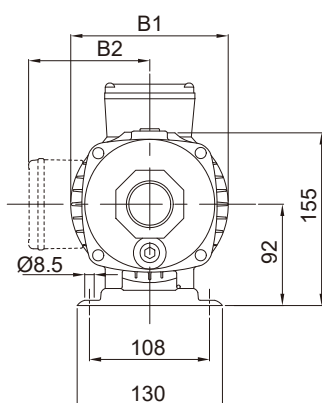


Specifications(2850rpm)

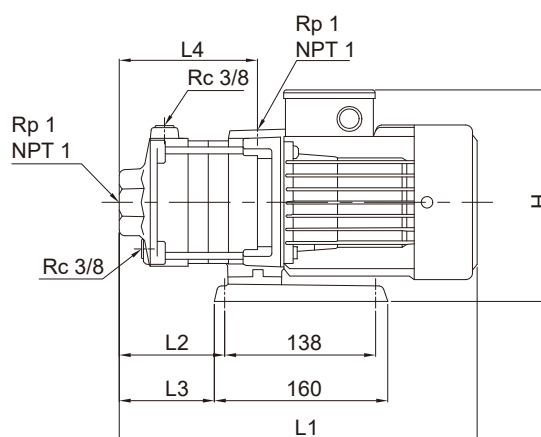
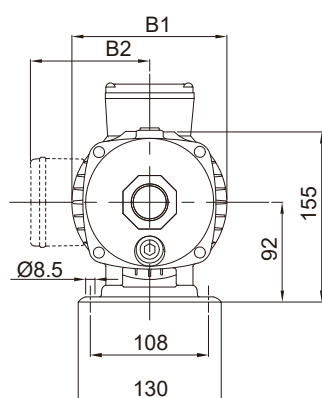
Pump Type	220-240V			Δ 220-240 / Y 380-415V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB/CBI 2-20	1.7 - 2.0	380	295	2.2 - 2.6 / 1.3 - 1.5	430	330
CB/CBI 2-30	2.1 - 2.2	470	360	2.2 - 2.5 / 1.3 - 1.45	530	410
CB/CBI 2-40	2.7 - 2.8	620	480	2.4 - 2.8 / 1.4 - 1.6	660	510
CB/CBI 2-50	3.2 - 3.1	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

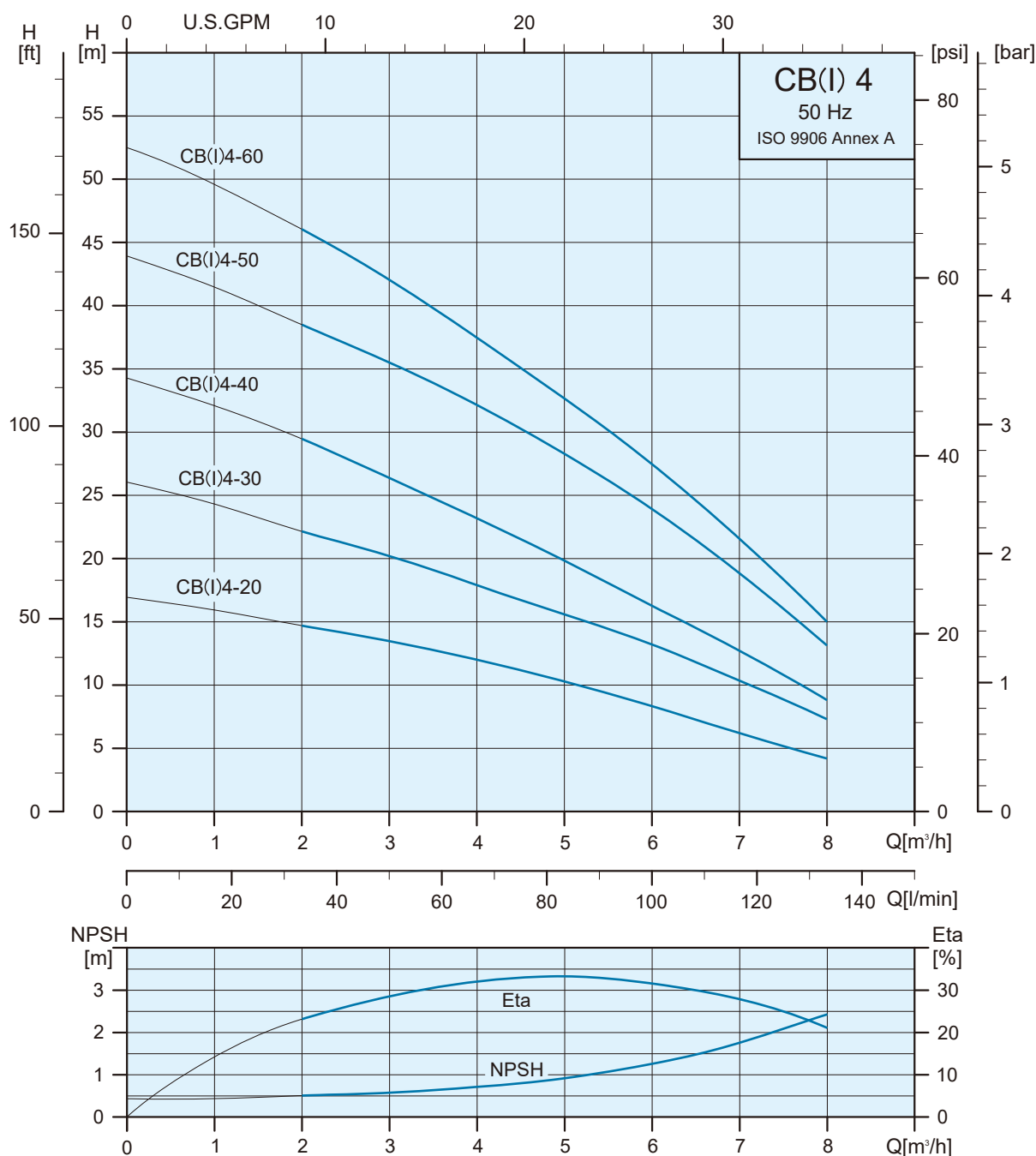


CBI 2



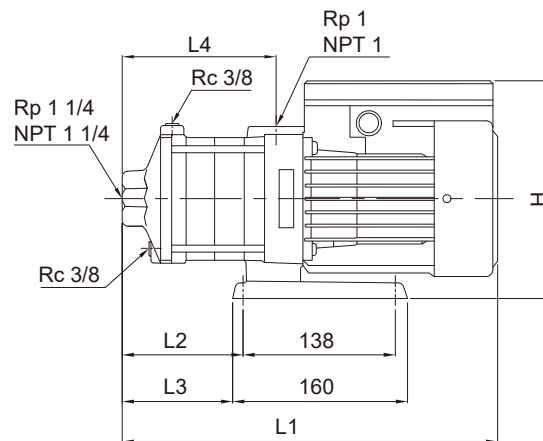
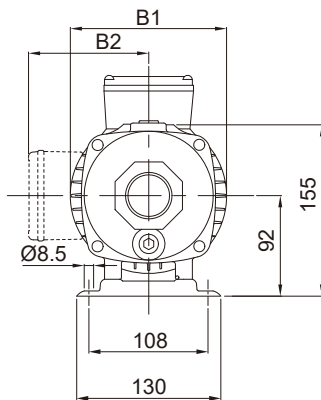
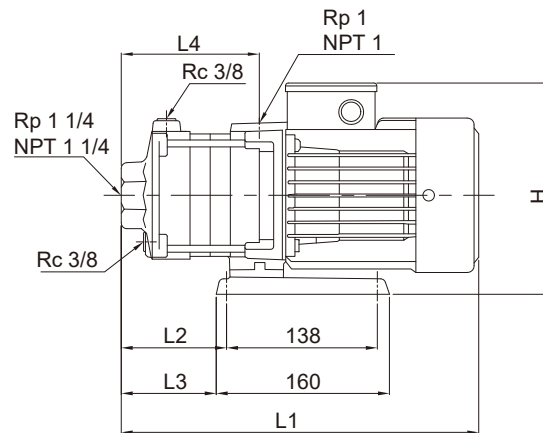
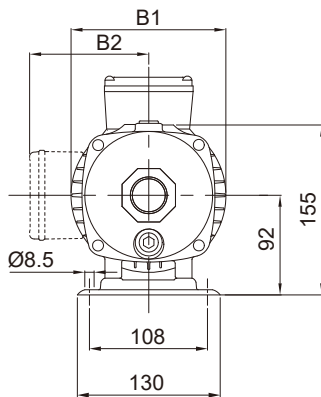
Pump Type	Phase	Dimensions (mm)							Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H	
CB 2-20	1Ø	309	75	63	101	141	136	228	10.3
	3Ø	309	75	63	101	141	115	207	10.0
CB 2-30	1Ø	327	93	81	119	141	136	228	10.5
	3Ø	327	93	81	119	141	115	207	10.3
CB 2-40	1Ø	345	111	99	137	141	136	228	10.8
	3Ø	345	111	99	137	141	115	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



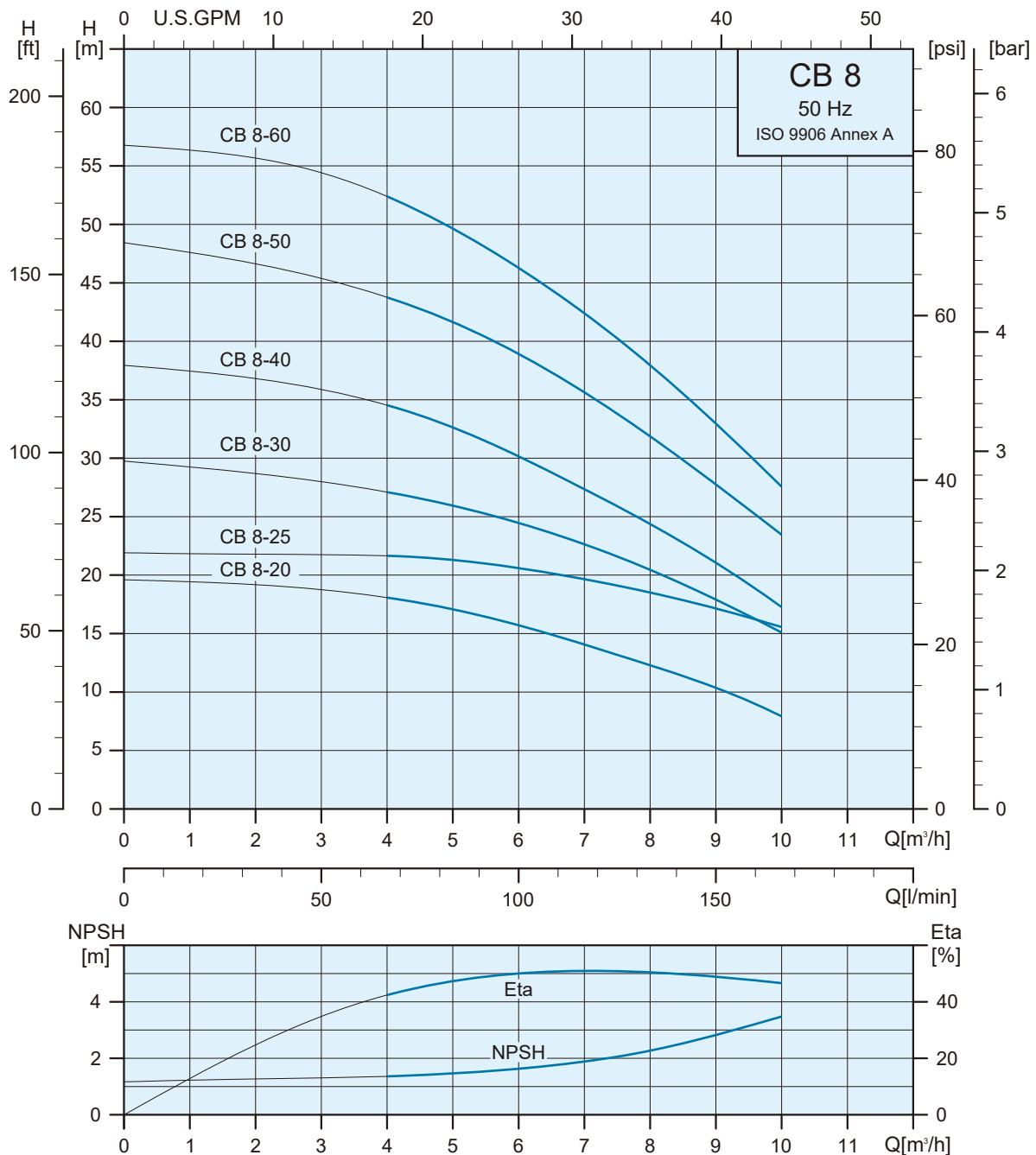
Specifications(2850rpm)

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


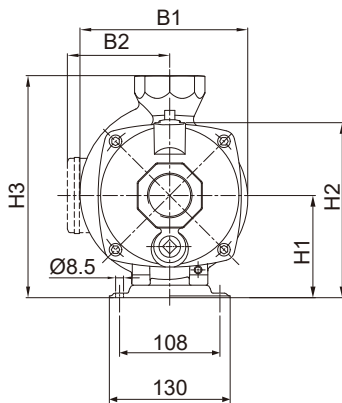
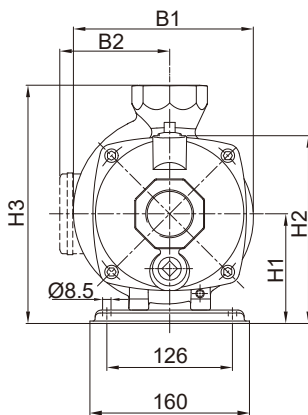
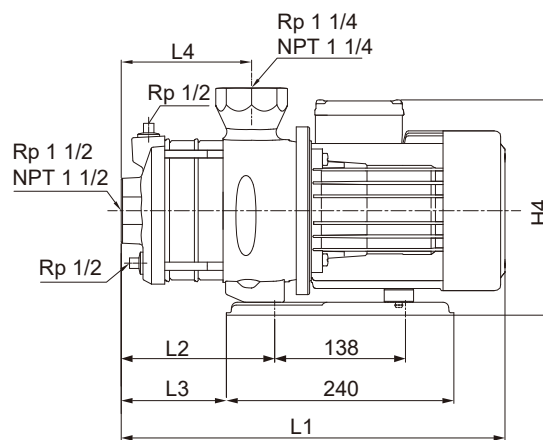
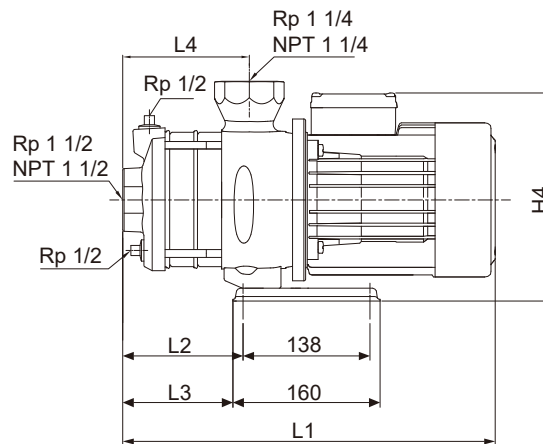
Pump Type	Phase	Dimensions (mm)							Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H	
CB 4-20	1Ø	318	84	72	110	141	136	228	10.4
	3Ø	318	84	72	110	141	115	207	10.1
CB 4-30	1Ø	344	111	99	137	141	136	228	10.8
	3Ø	344	111	99	137	141	115	207	10.5
CB 4-40	1Ø	372	138	126	164	141	136	228	11.6
	3Ø	372	138	126	164	141	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



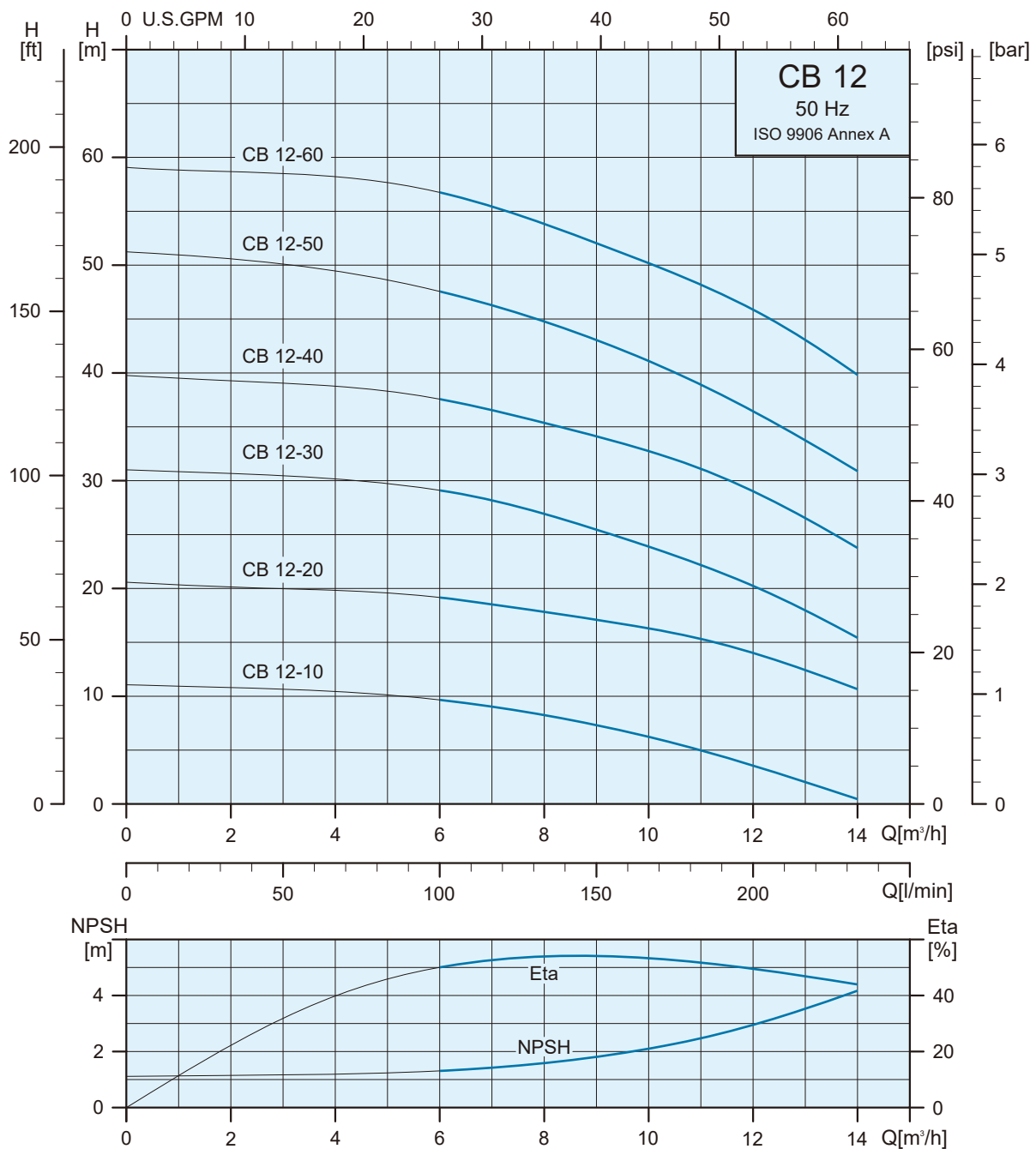
Specifications(2850rpm)

Pump Type	220-240V			Δ 220-240 / Y 380-415V		
	1Ø			3Ø		
	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	Not available	Not available	Not available	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	Not available	Not available	Not available	107	Not available	Not available	110	187	239	Not available	Not available	Not available
	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		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB 12-10	Not available	Not available	Not available	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	Not available	Not available	Not available	10.6 - 11.4 / 6.1 - 6.6	3320	2860

Dimensions and Weights

CB 12

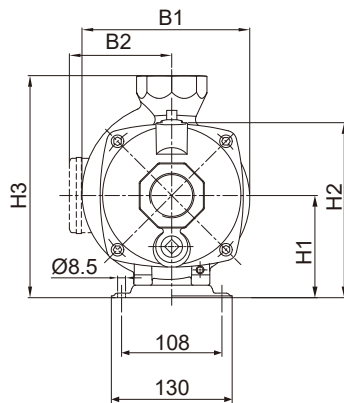


Fig. 1

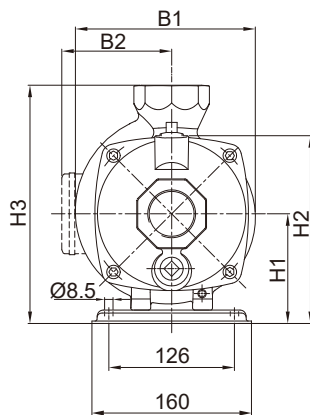
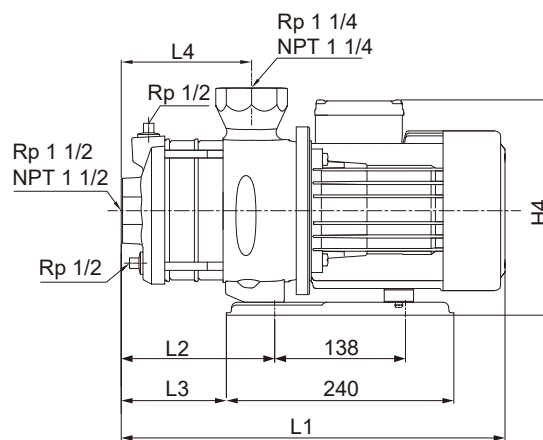
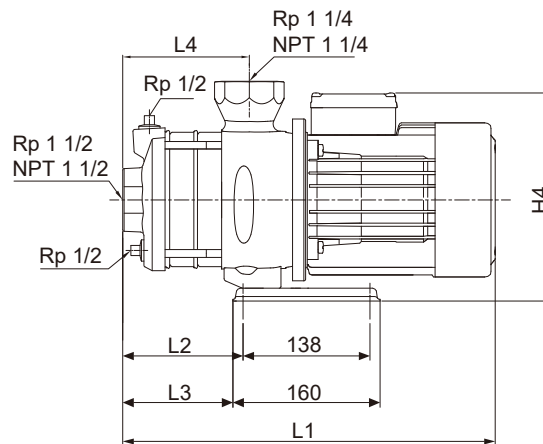
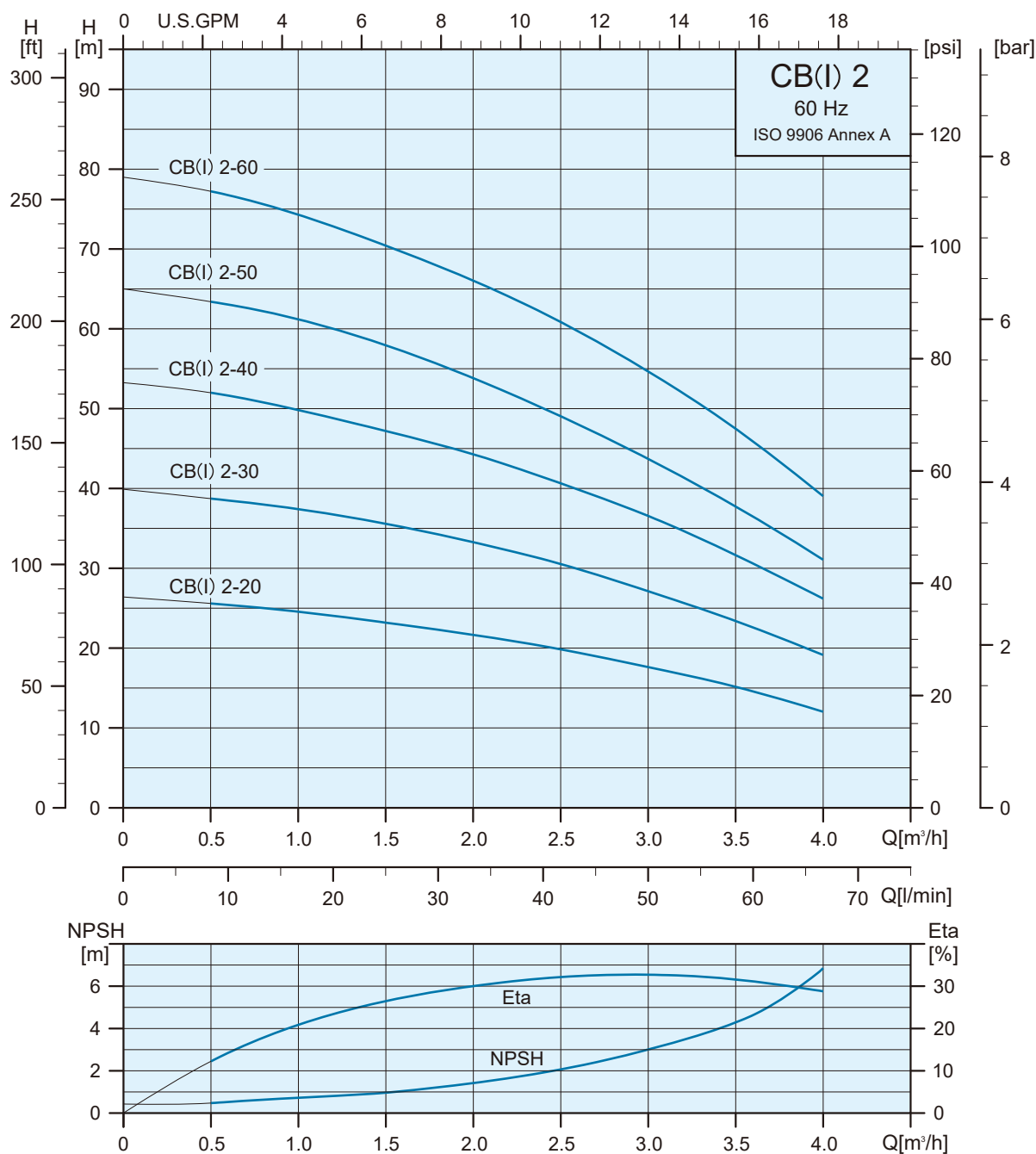


Fig. 2



Pump Type	Phase	Dimensions (mm)										Fig.	Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H1	H2	H3	H4		
CB 12-10	1Ø	Not available	Not available	Not available	77	Not available	Not available	110	187	239	Not available	Not available	Not available
	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	Not available	Not available	Not available	137	Not available	Not available	122	199	251	Not available	Not available	Not available
	3Ø	501	162	111	137	196	150	122	199	251	272	2	35.2

Performance Range

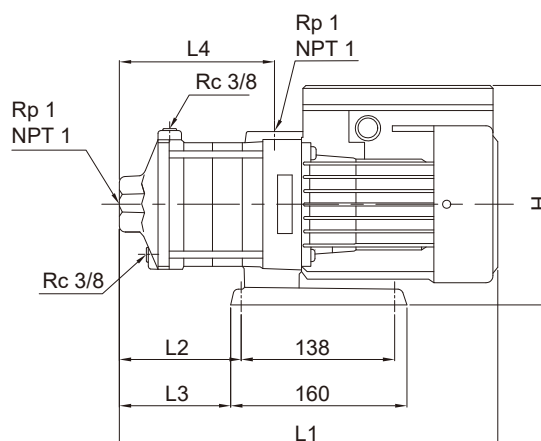
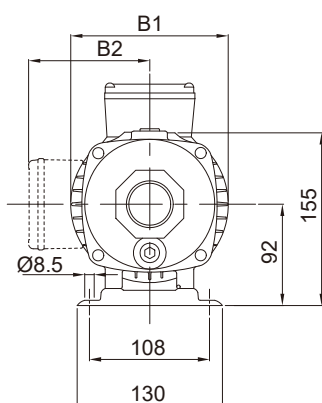


Specifications(3450rpm)

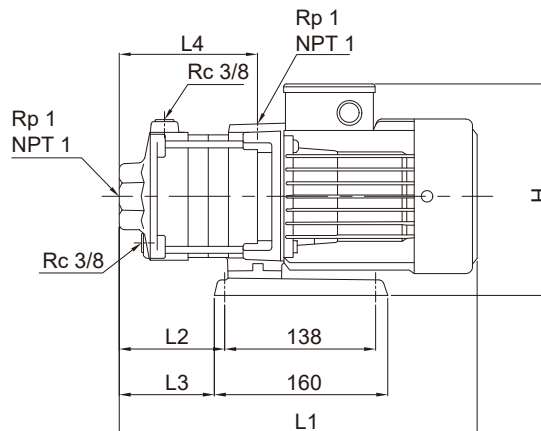
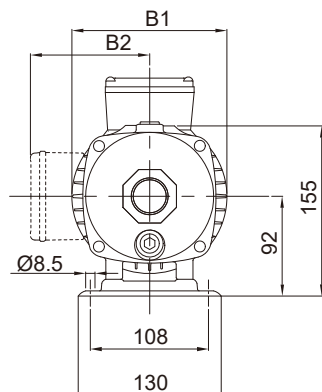
Pump Type	110 / 220V			Δ 220-255 / Y 380-440V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB/CBI 2-20	6.3 / 3.2	570	460	1.8-1.9 / 1.0-1.1	550	430
CB/CBI 2-30	7.9 / 4.1	780	630	3.5-3.3 / 2.0-1.9	680	540
CB/CBI 2-40	8.8 / 4.4	870	710	3.1-3.2 / 1.8-1.9	950	725
CB/CBI 2-50	11.7 / 5.9	1190	995	3.7-3.8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

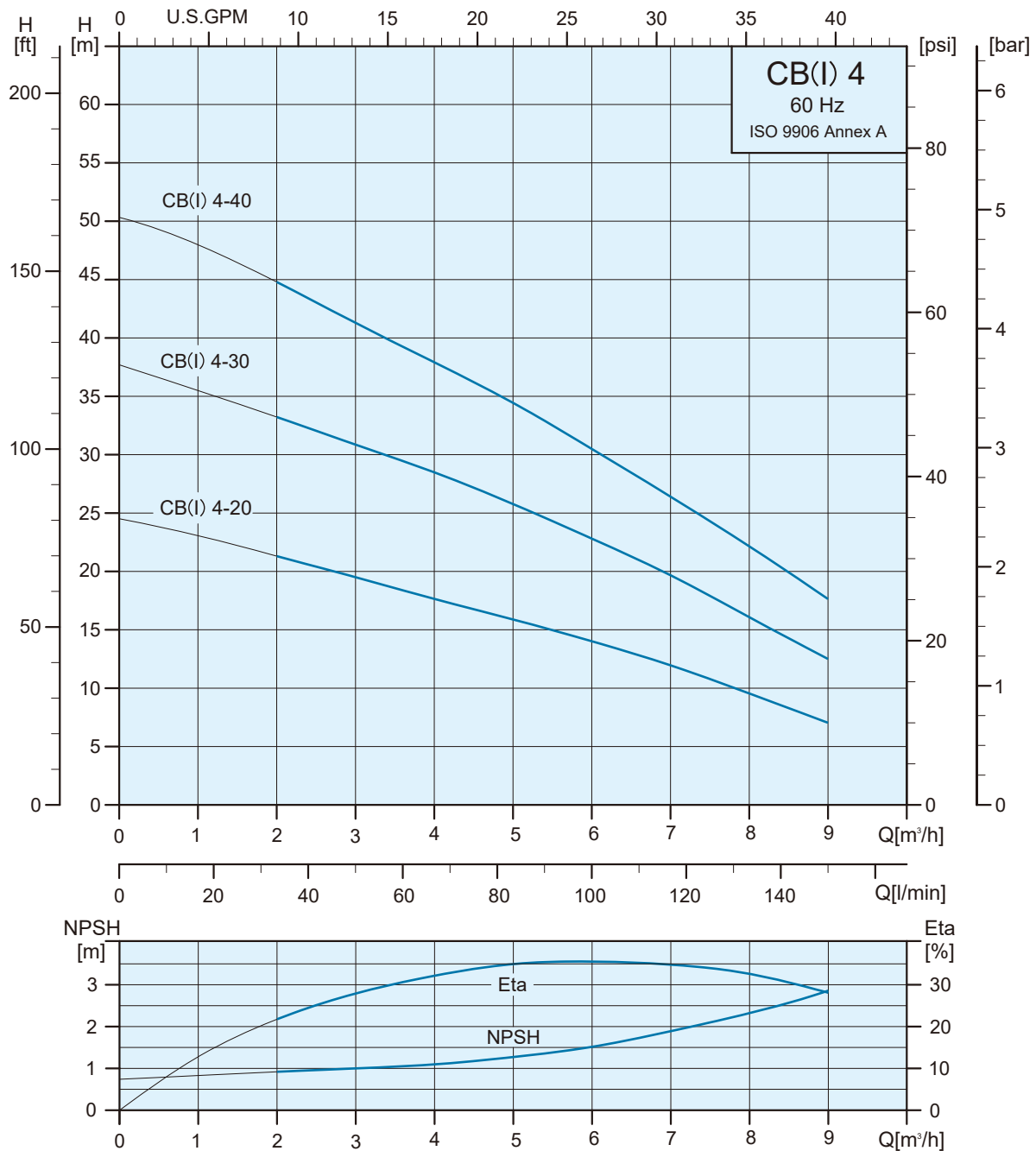


CBI 2



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

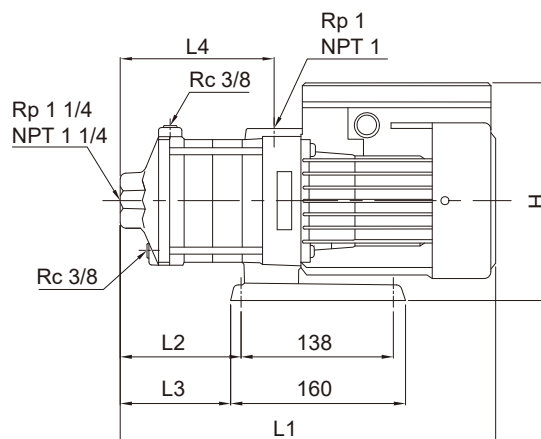
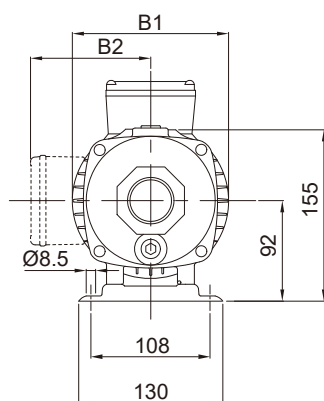


Specifications(3450rpm)

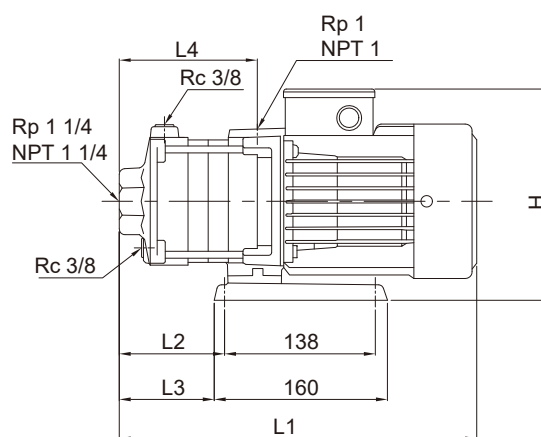
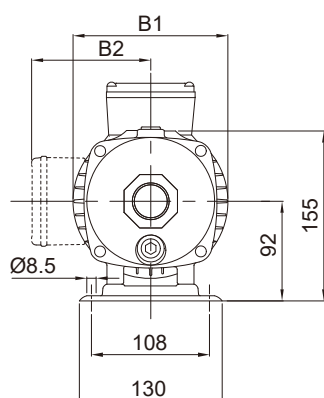
Pump Type	110 / 220V			Δ 220-255 / Y 380-440V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB/CBI 4-20	9.5 / 4.7	950	770	2.85-3.0 / 1.65-1.8	890	720
CB/CBI 4-30	12.5 / 6.2	1310	1100	3.9-4.0 / 2.3-2.4	1250	1050
CB/CBI 4-40	Not available / 8.3	1700	1360	5.1-5.3 / 2.9-3.1	1630	1310

Dimensions and Weights

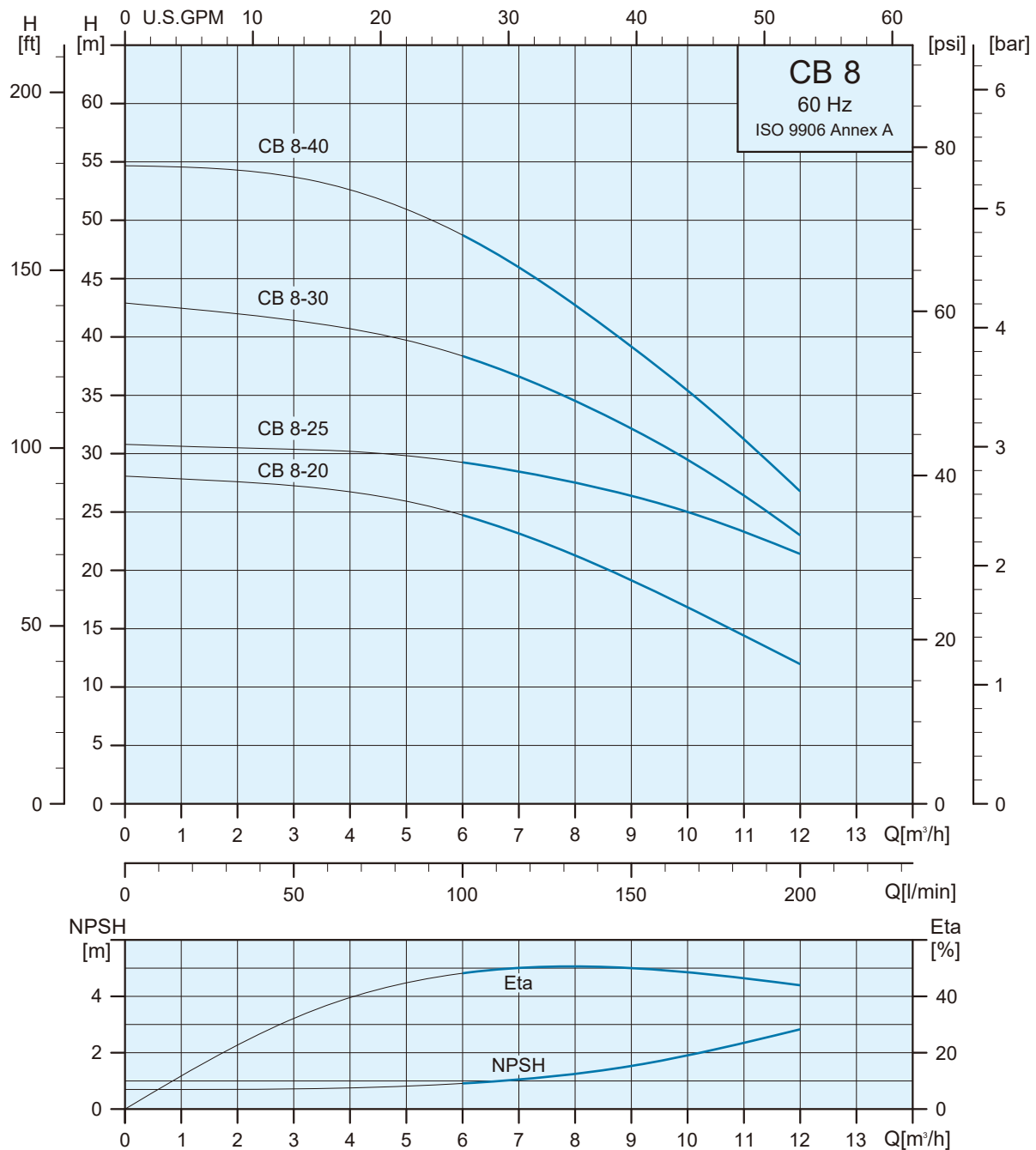
CB 4



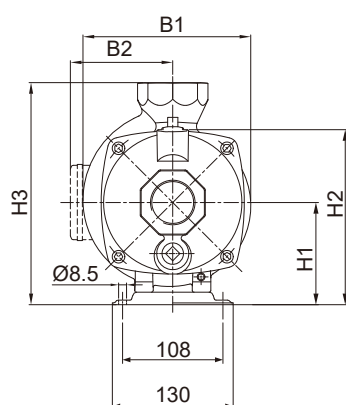
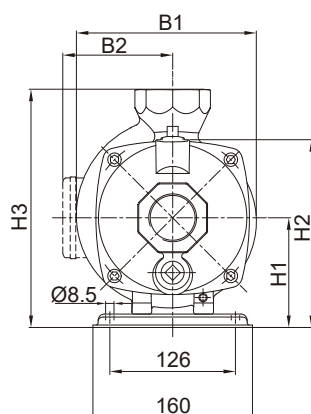
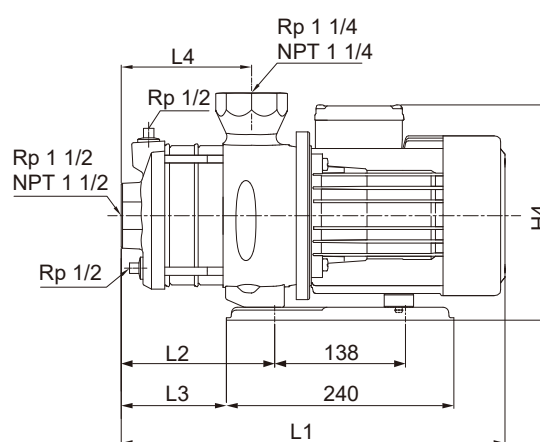
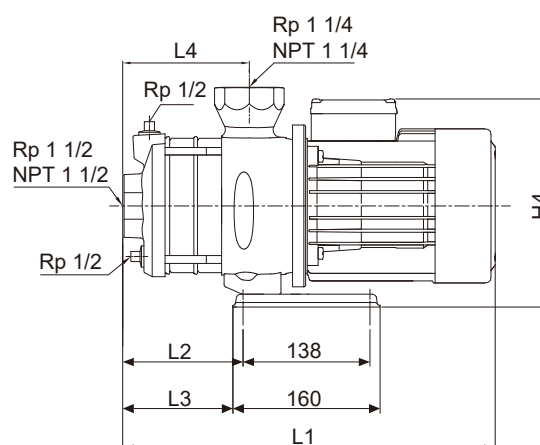
CBI 4



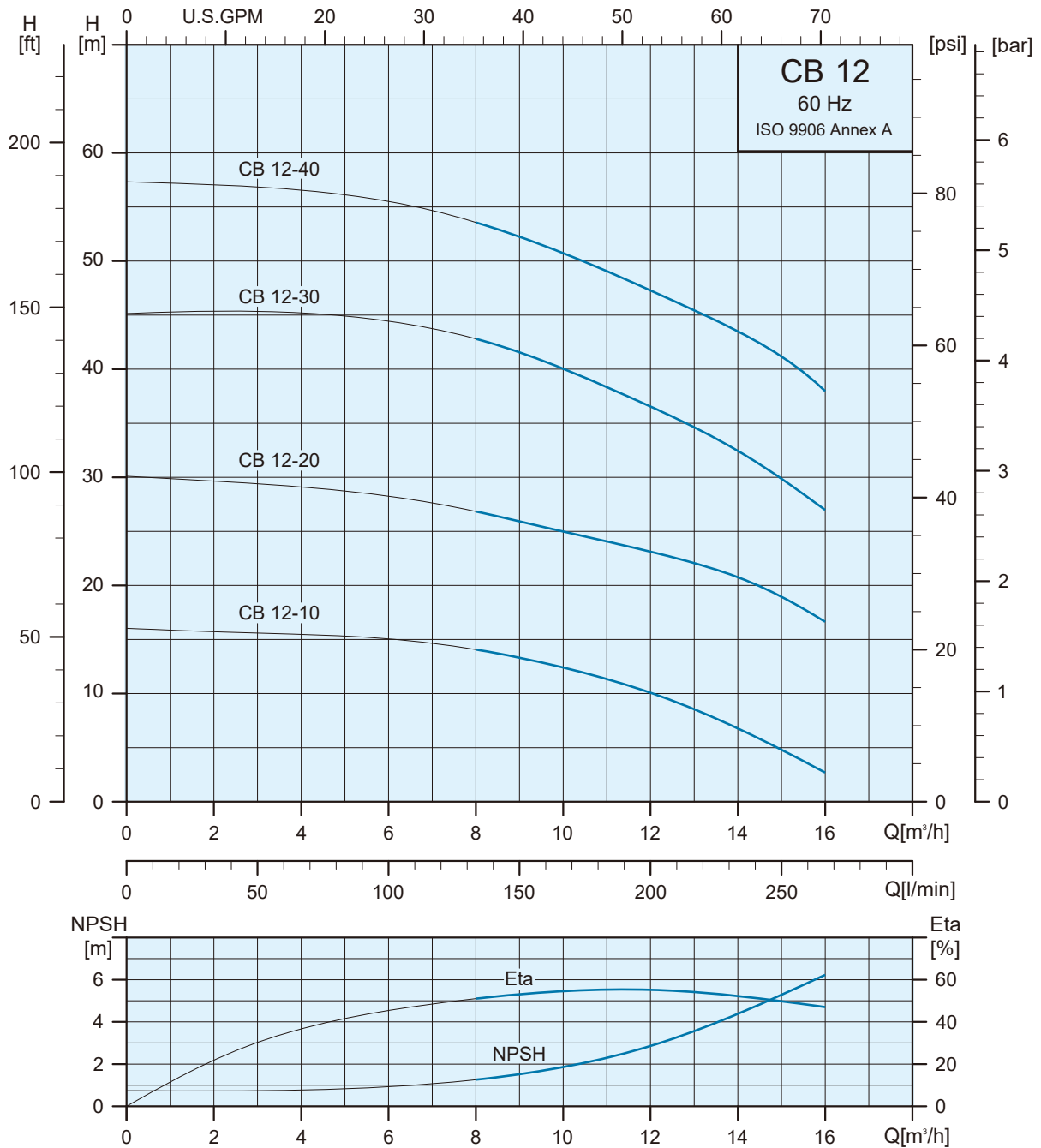
Pump Type	Phase	Dimensions (mm)							Net Weight (kg)
		L1	L2	L3	L4	B1	B2	H	
CB 4-20	1Ø	318	84	72	110	141	136	228	12.2
	3Ø	318	84	72	110	141	115	207	10.7
CB 4-30	1Ø	384	111	99	137	141	136	228	12.7
	3Ø	384	111	99	137	141	115	207	12.3
CB 4-40	1Ø	412	138	126	164	141	136	228	14.0
	3Ø	412	138	126	164	141	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	Not available	Not available	Not available	4.8-5.0 / 2.8-2.9	1620	1295
CB 8-30	Not available / 8.9	1830	1510	5.7-5.5 / 3.3-3.2	1860	1490
CB 8-40	Not available / 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	Not available	Not available	Not available	107	Not available	Not available	110	187	239	Not available	Not available	Not available
	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

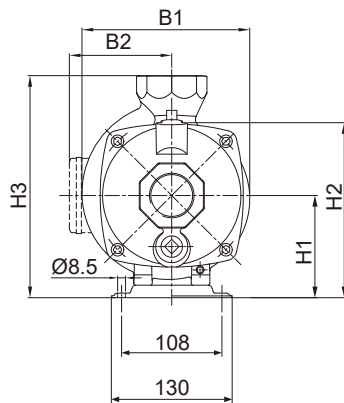
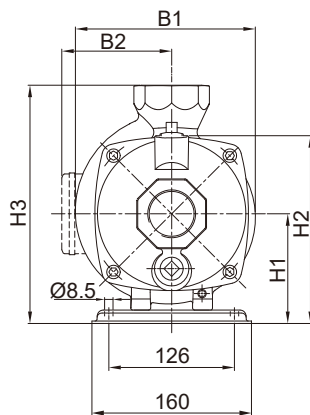
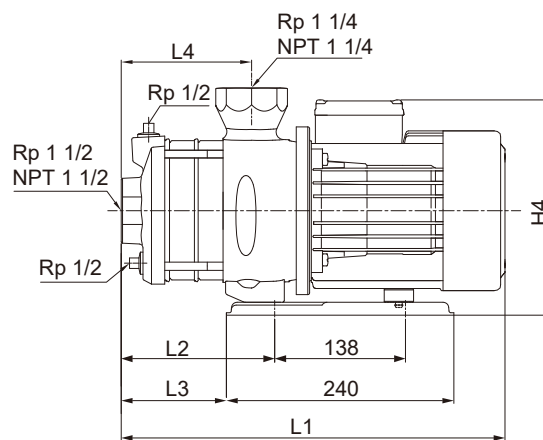
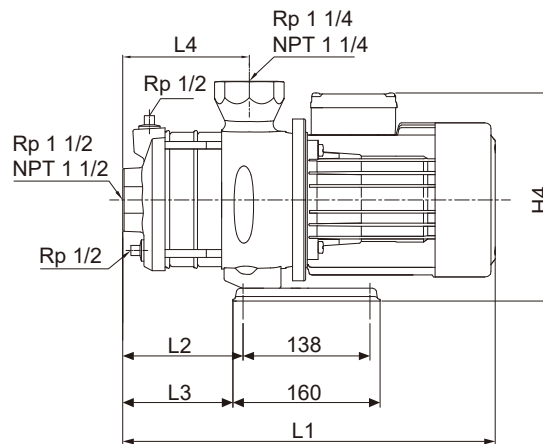
Performance Range

Specifications(3450rpm)

Pump Type	110 / 220V			Δ 220-255 / Y 380-440 V		
	1Ø			3Ø		
	Max.Amp	P1[W]	P2[W]	Max.Amp	P1[W]	P2[W]
CB 12-10	Not available	Not available	Not available	3.5-3.7 / 2.0-2.1	910	765
CB 12-20	Not available / 9.4	2120	1750	6.0-5.9 / 3.5-3.4	1960	1570
CB 12-30	Not available	Not available	Not available	Δ 220-277 / Y 380-480 V		
				8.8-10.2 / 5.1-5.9	2940	2430
CB 12-40	Not available	Not available	Not available	11.2-11.3 / 6.5-6.6	3810	3250

Technical Data

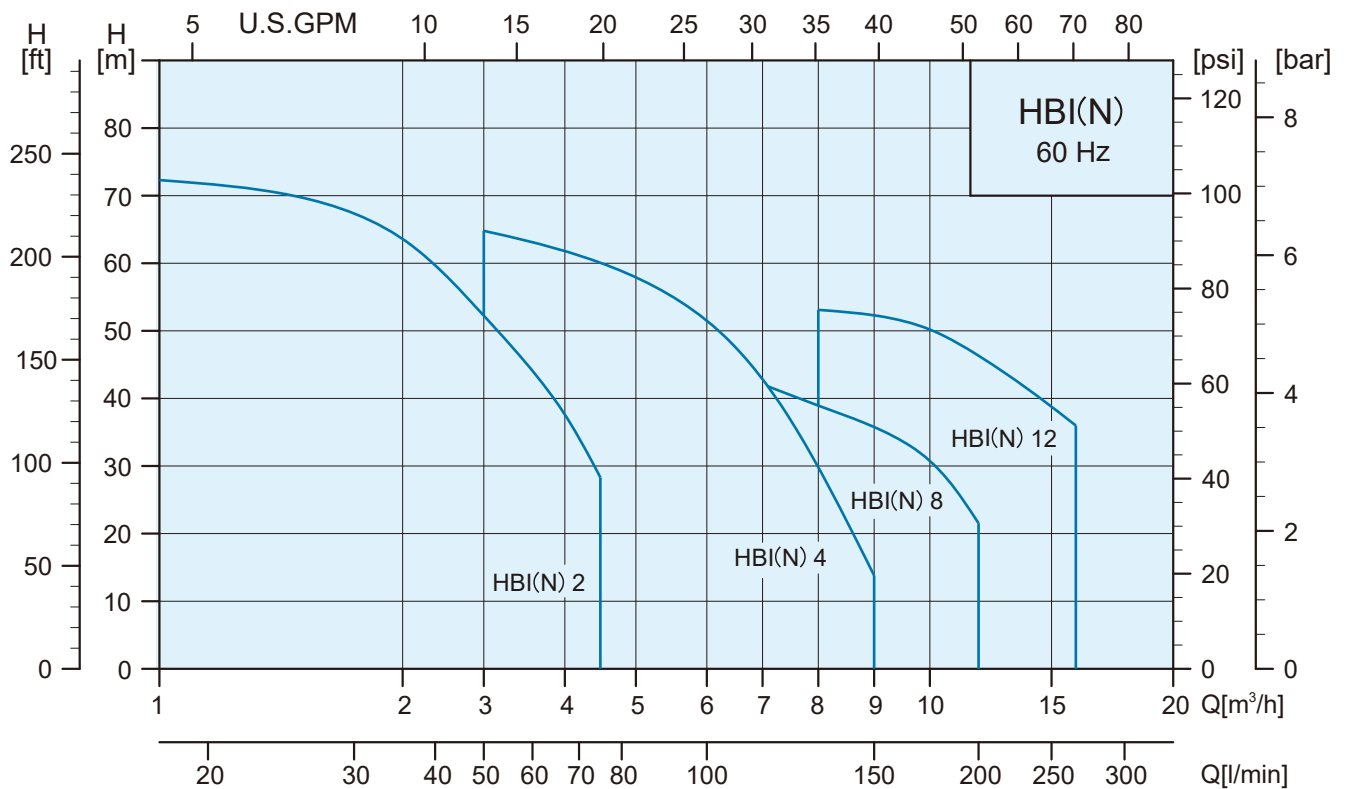
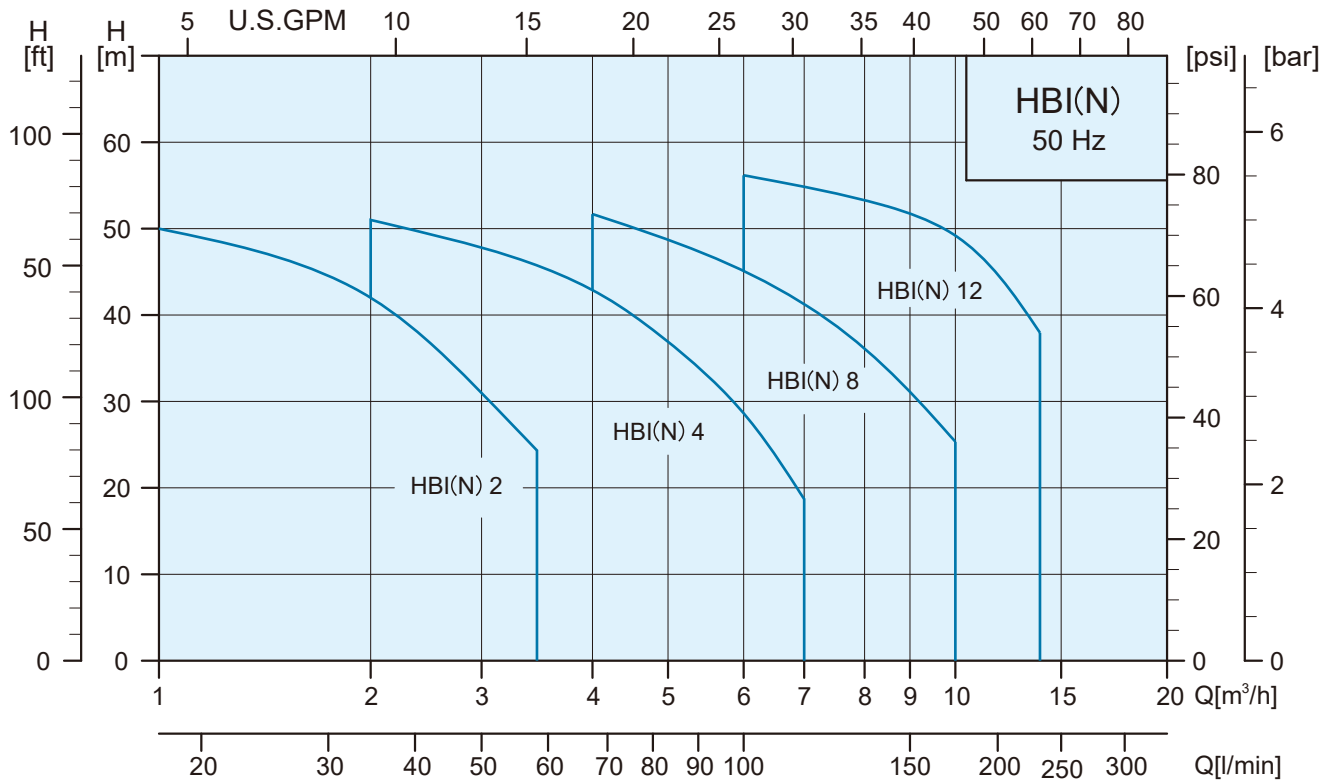
60Hz

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	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available
	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	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available
	3Ø	450	132	81	107	185	139	110	187	239	249	2	30.0
CB 12-40	1Ø	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available
	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 (m³/h)				
Number of Impeller x 10				

	HBI	8	-	2	0
Model (HBI/HBN)					
Rated Flow (m³/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	●	●	●	●
Seals Face Material				
QB	●	●	-	-
QQ	○	○	●	●
Secondary Seal Material				
E	●	●	●	●
V	○	○	○	○

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

● Std. ○ Opt. - N/A

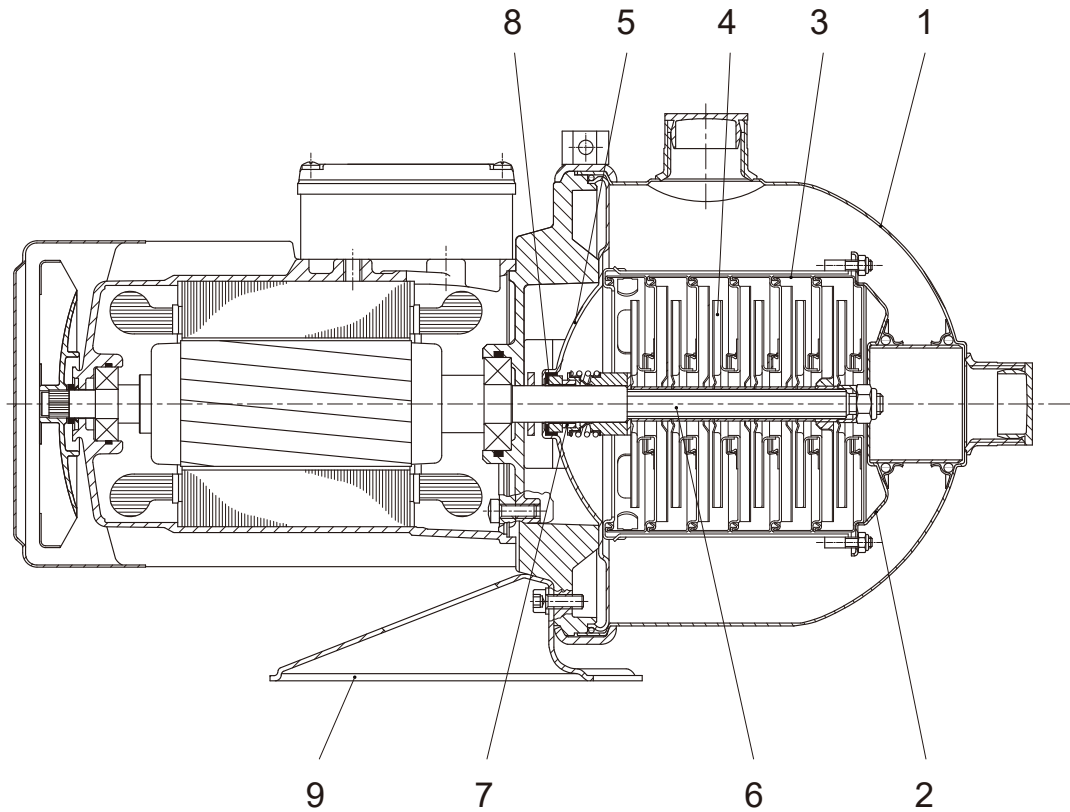
Pipe Connections

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

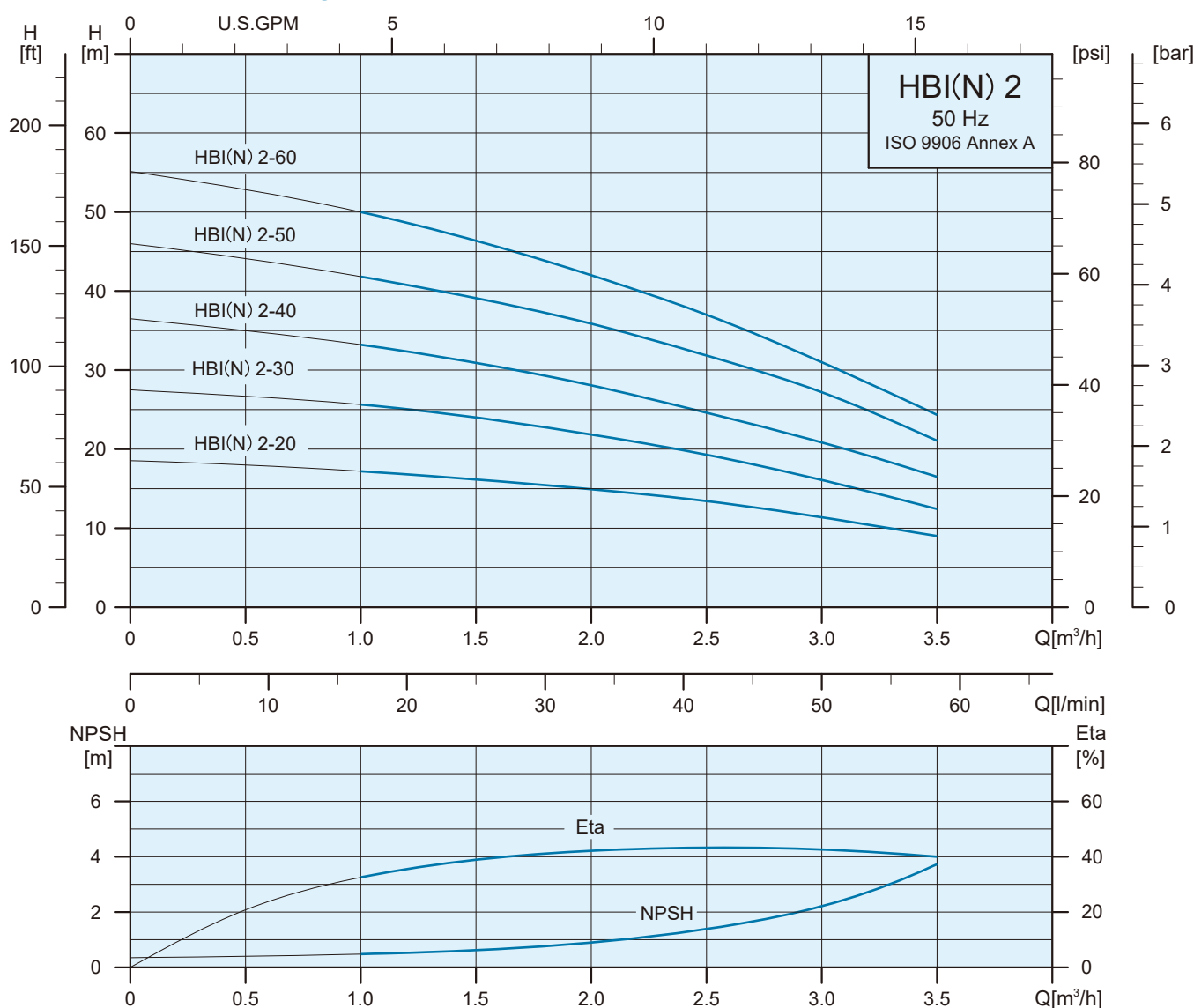
- Liquid temperature range: +32°F to +230°F(0°C~+110°C)
- Maximum ambient temperature: +122°F(+40°C)
- Maximum operating pressure: 10 kg/cm²
- Maximum inlet pressure is limited by maximum operating pressure.

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



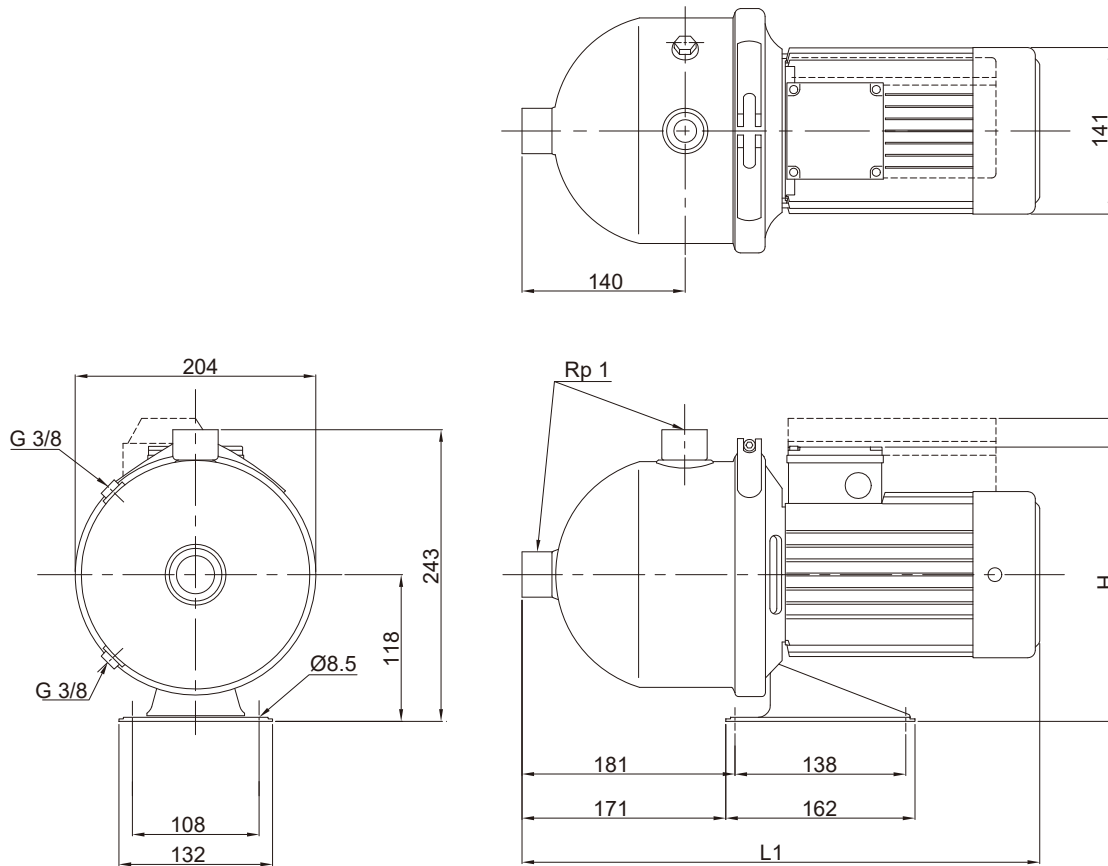
Specifications(2850rpm)

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

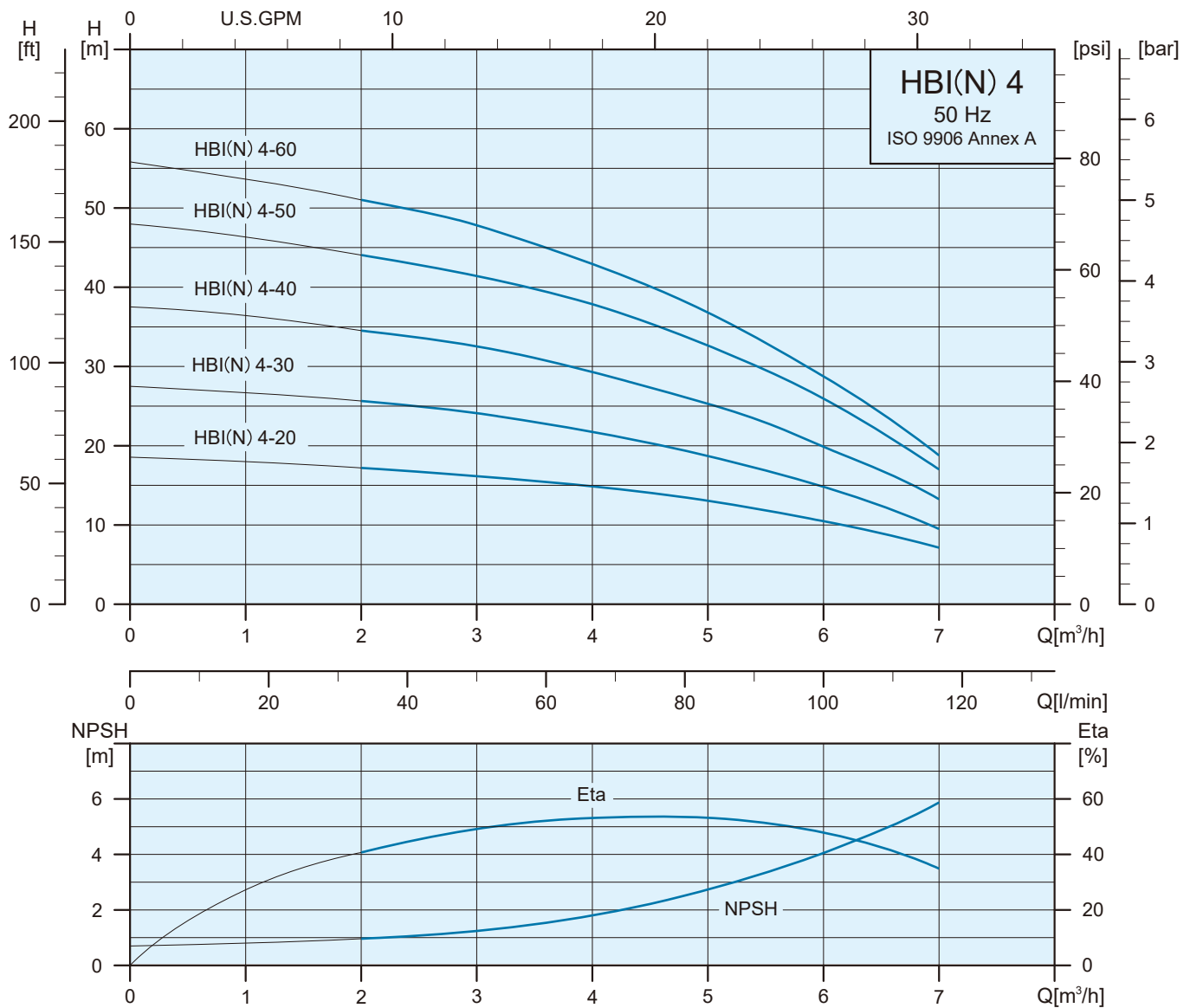
HBI 2

HBN 2



Pump Type	Dimensions (mm)				Net Weight (kg)
	L1		H		
	1 Ø	3 Ø	1 Ø	3 Ø	
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



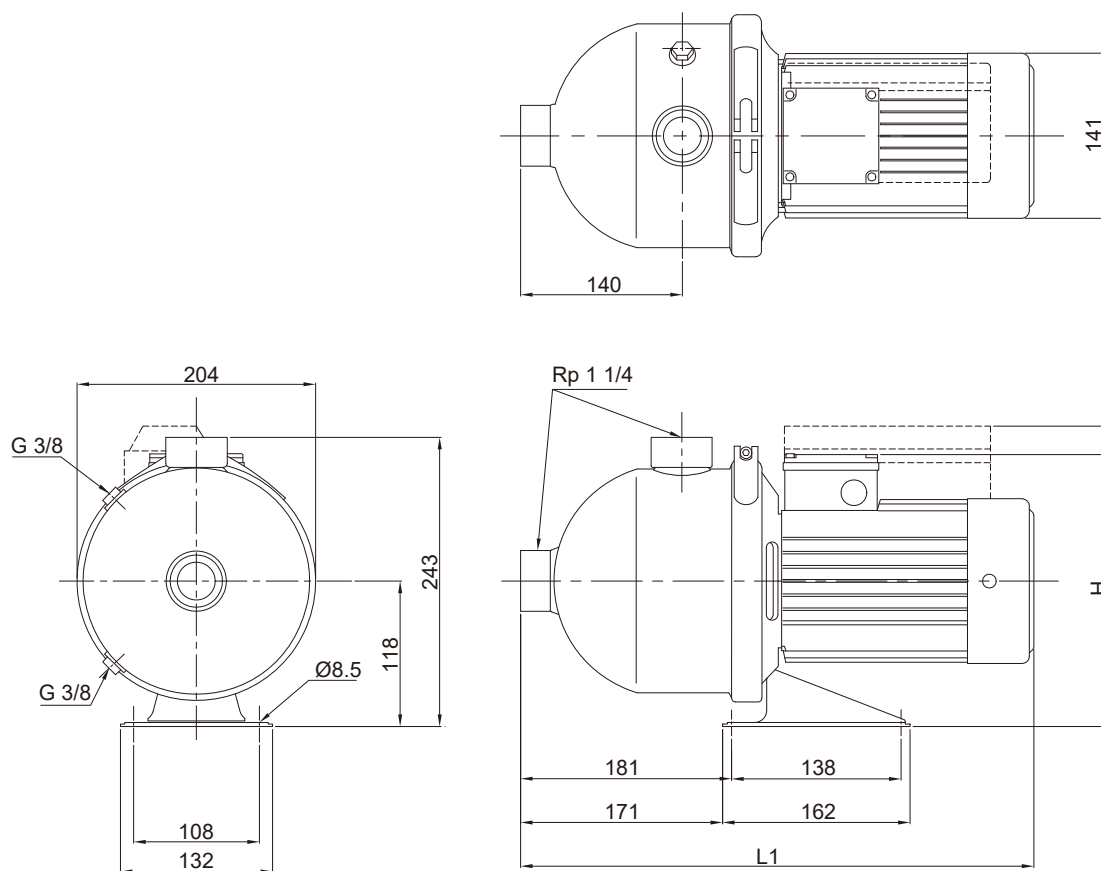
Specifications(2850rpm)

Pump Type	220-240V			Δ 220-240V / Y 380-415V		
	1Ø			3Ø		
	Max.Amp	P ₁ [W]	P ₂ [W]	Max.Amp	P ₁ [W]	P ₂ [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

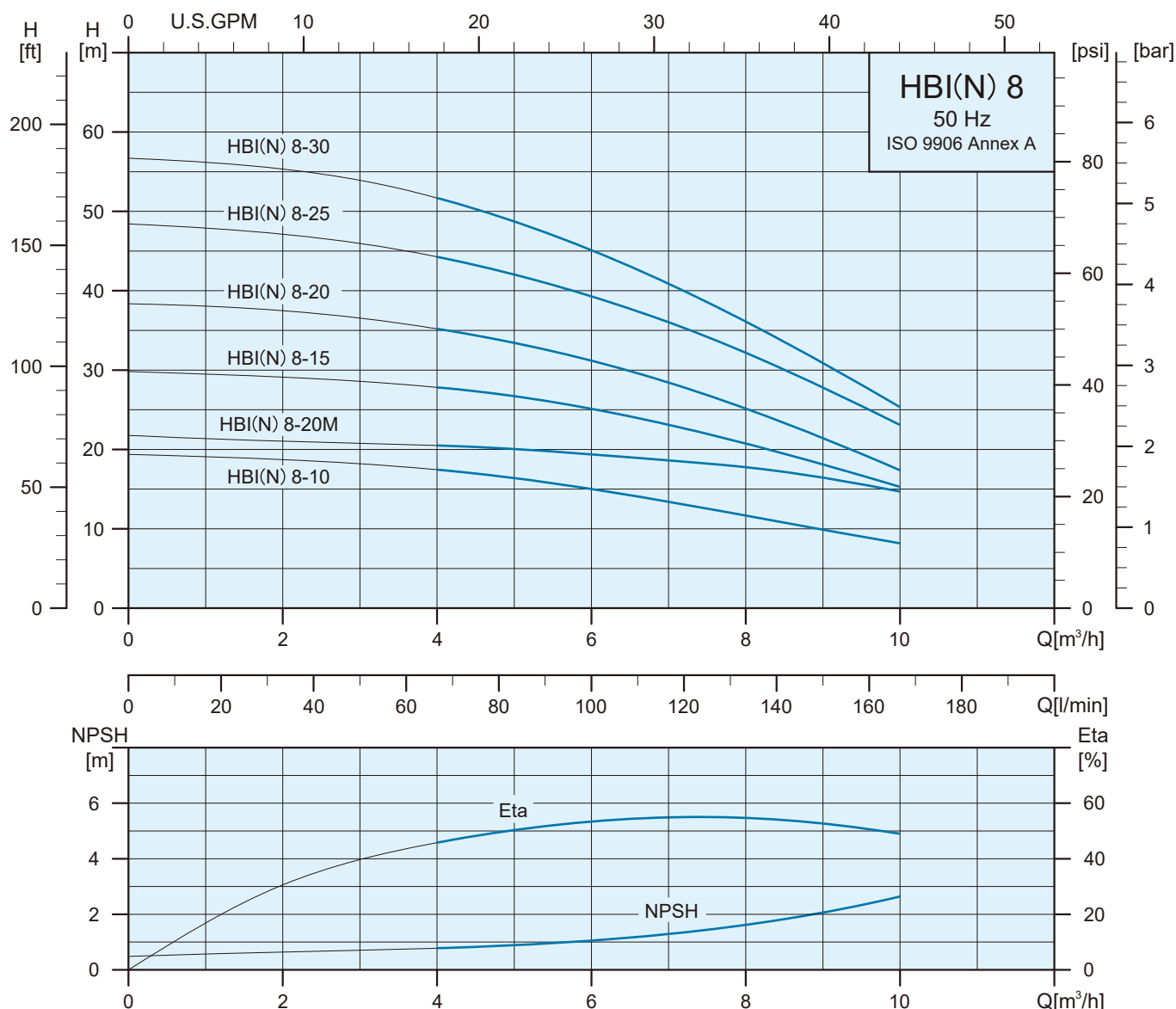
HBI 4

HBN 4



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



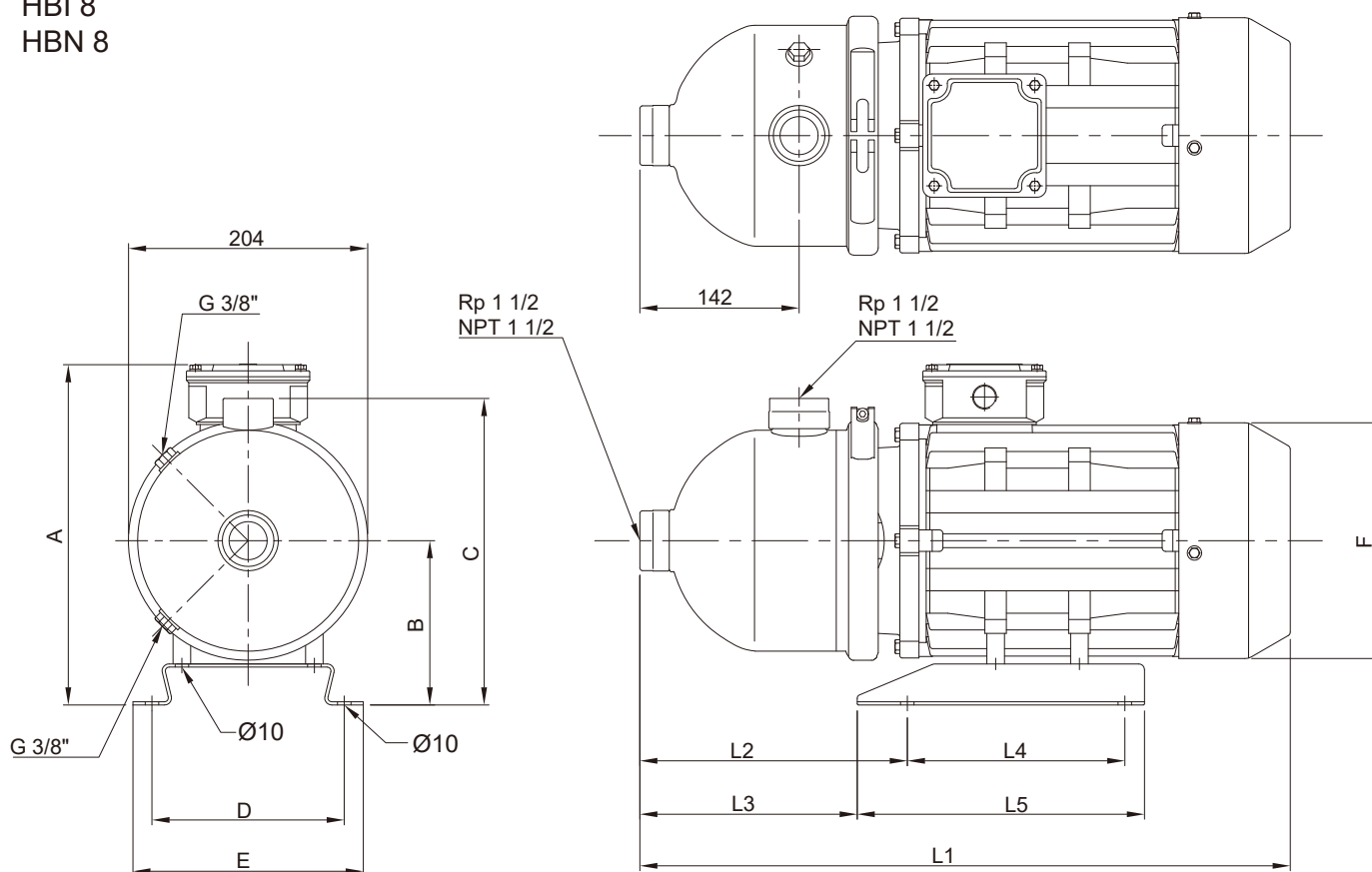
Specifications(2850rpm)

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	Not available	Not available	Not available	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

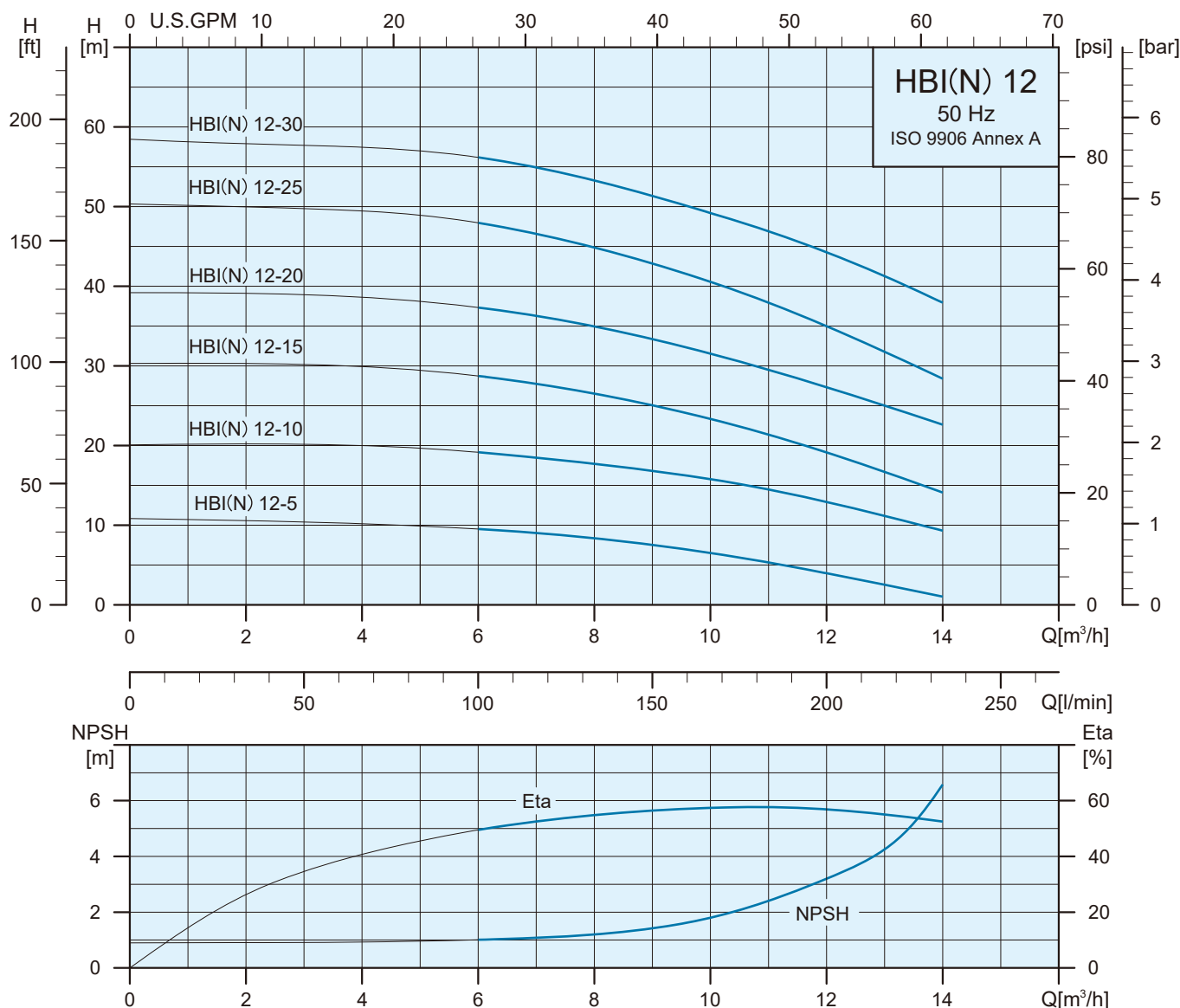
HBI 8

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	Not available	181	171	138	162	Not available	118	243	108	132	141	Not available
	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

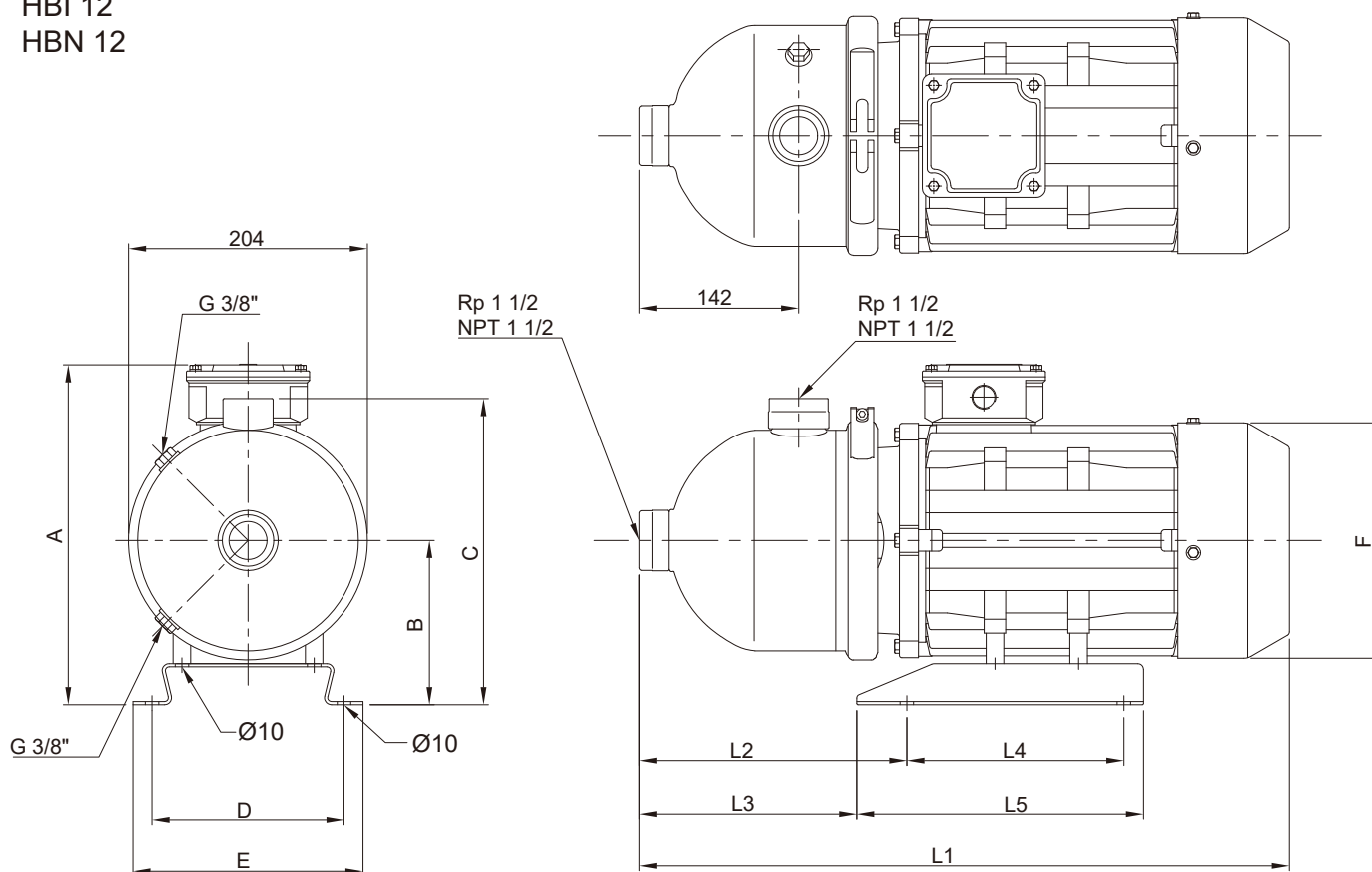


Specifications(2850rpm)

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	Not available	Not available	Not available	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	Not available	Not available	Not available	11.7 - 12.1 / 6.8 - 7.0	3610	3110

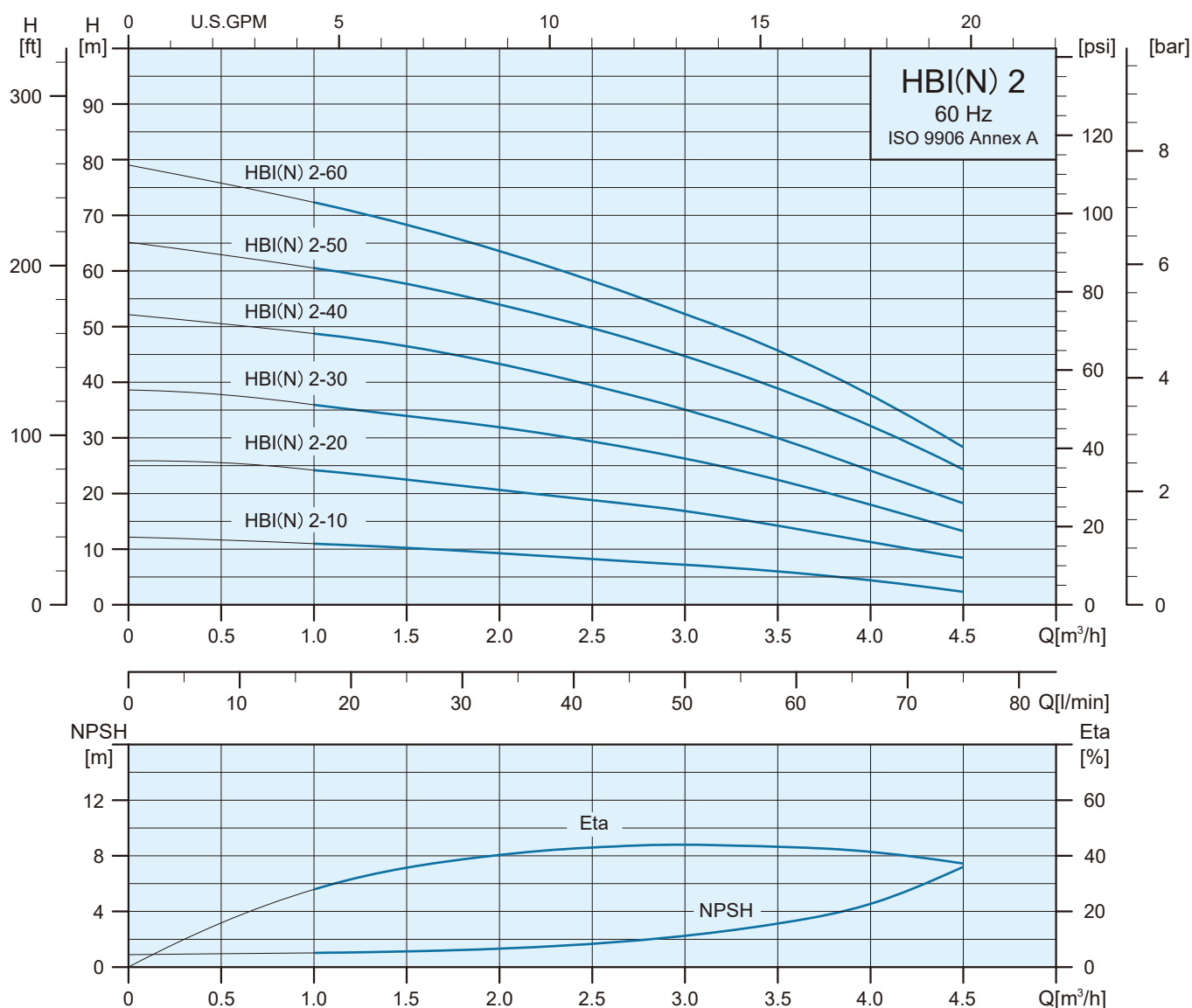
Dimensions and Weights

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	Not available	181	171	138	162	Not available	118	243	108	132	141	Not available
	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	Not available	230	198	195	245	Not available	133	259	174	198	197	Not available
	3Ø	539	230	198	195	245	284	133	259	174	198	197	30.2

Performance Range



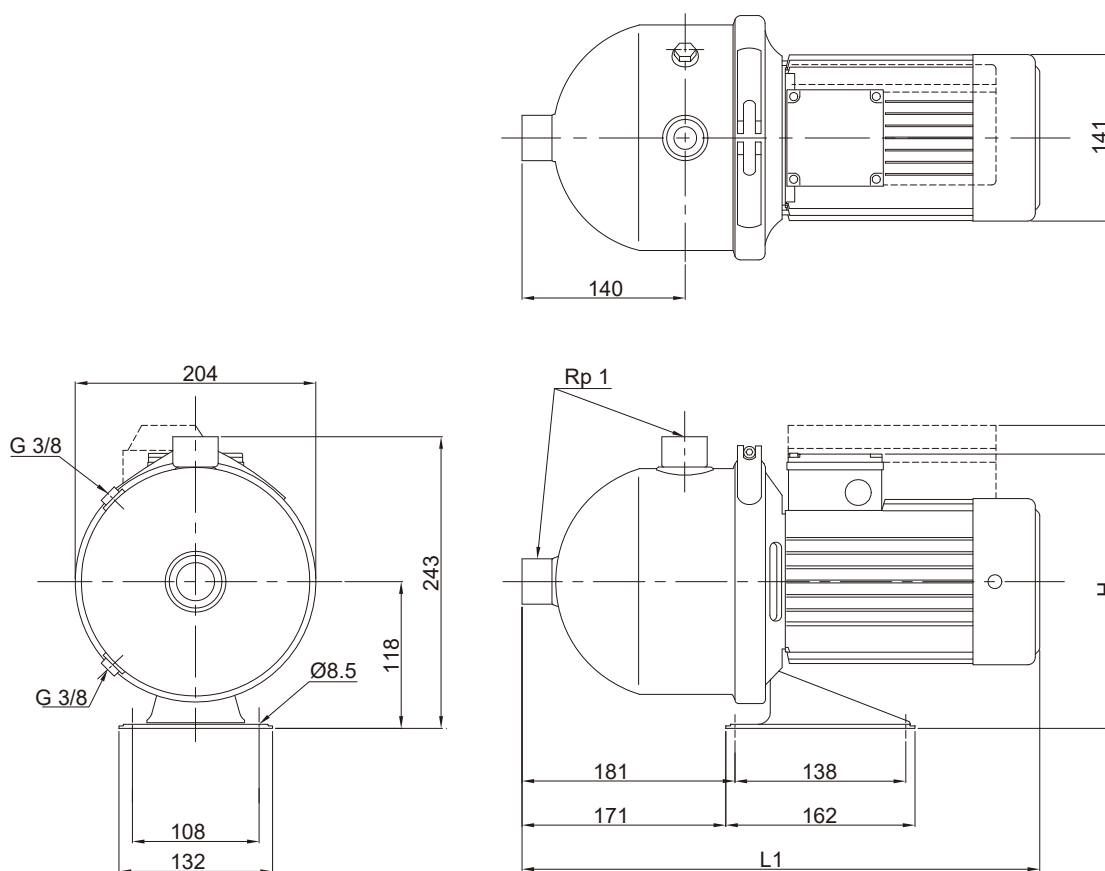
Specifications(3450rpm)

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

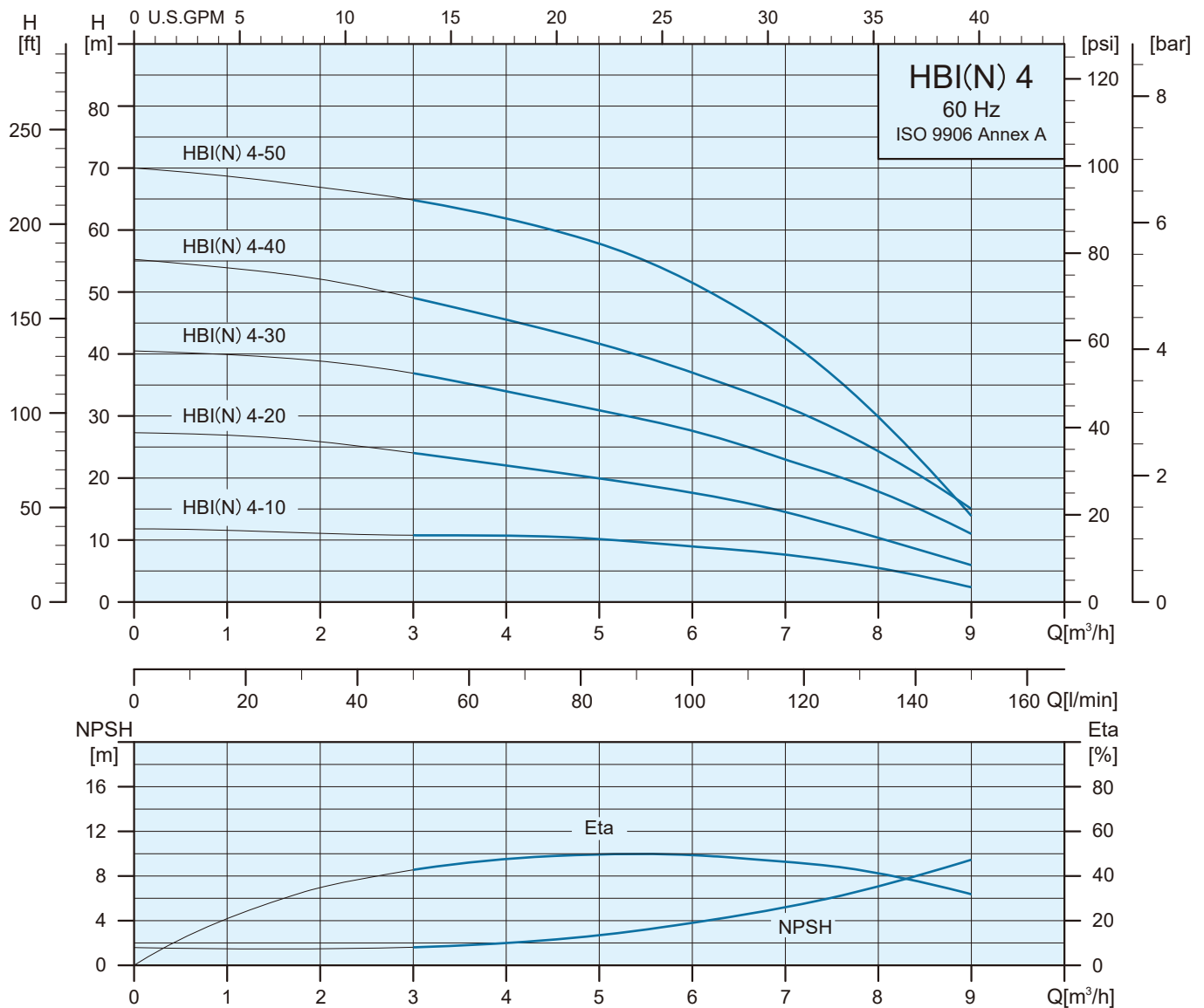
HBI 2

HBN 2



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

Performance Range



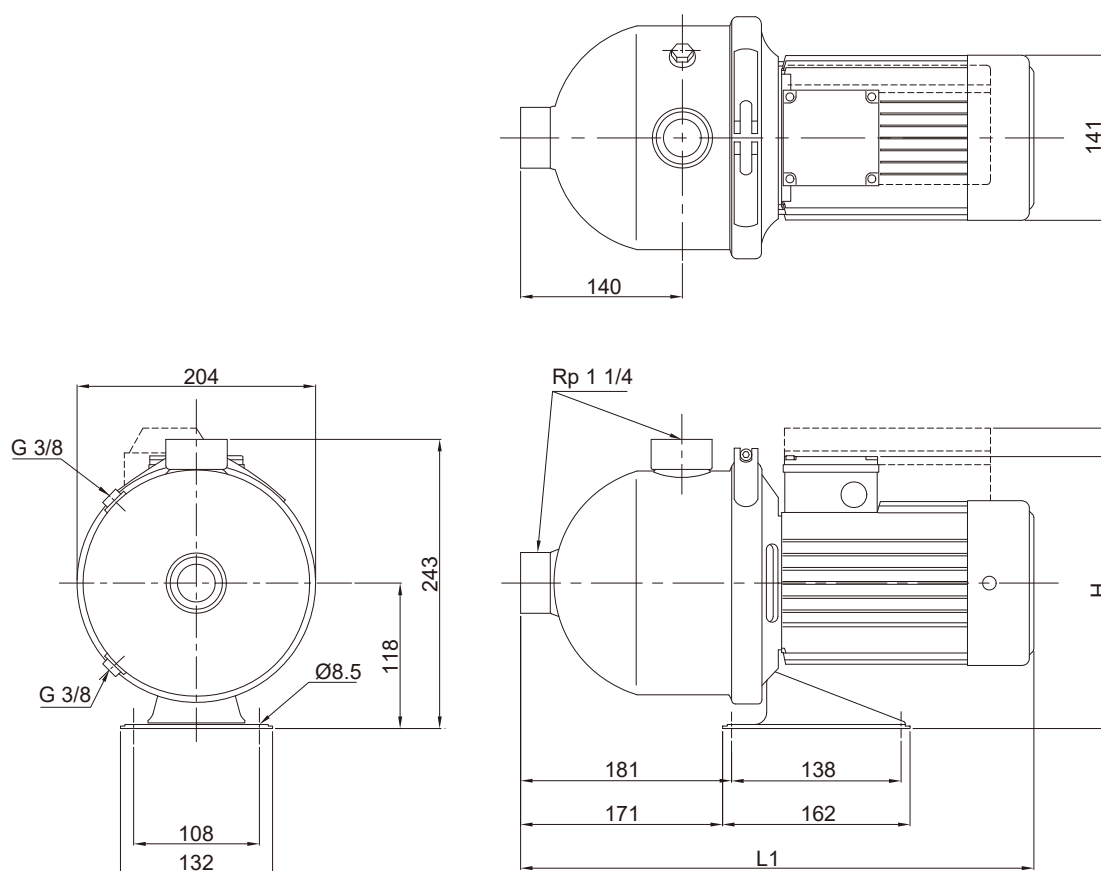
Specifications(3450rpm)

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	Not available / 8.5	1730	1380	4.7 - 4.8 / 2.7 - 2.8	1675	1340
HBI/HBN 4-50	Not available / 9.9	2080	1660	5.7 - 6.0 / 3.3 - 3.5	1995	1595

Dimensions and Weights

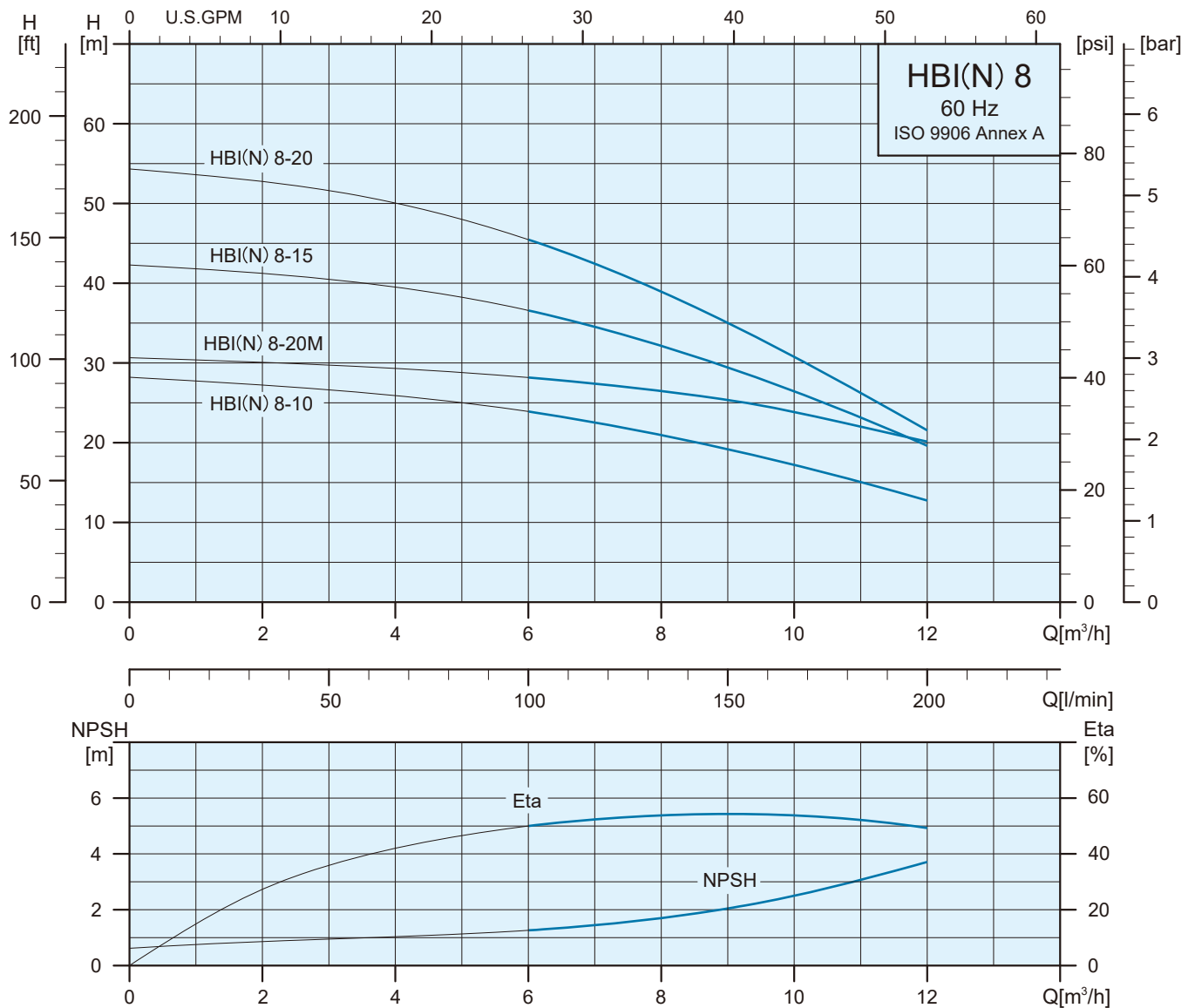
HBI 4

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



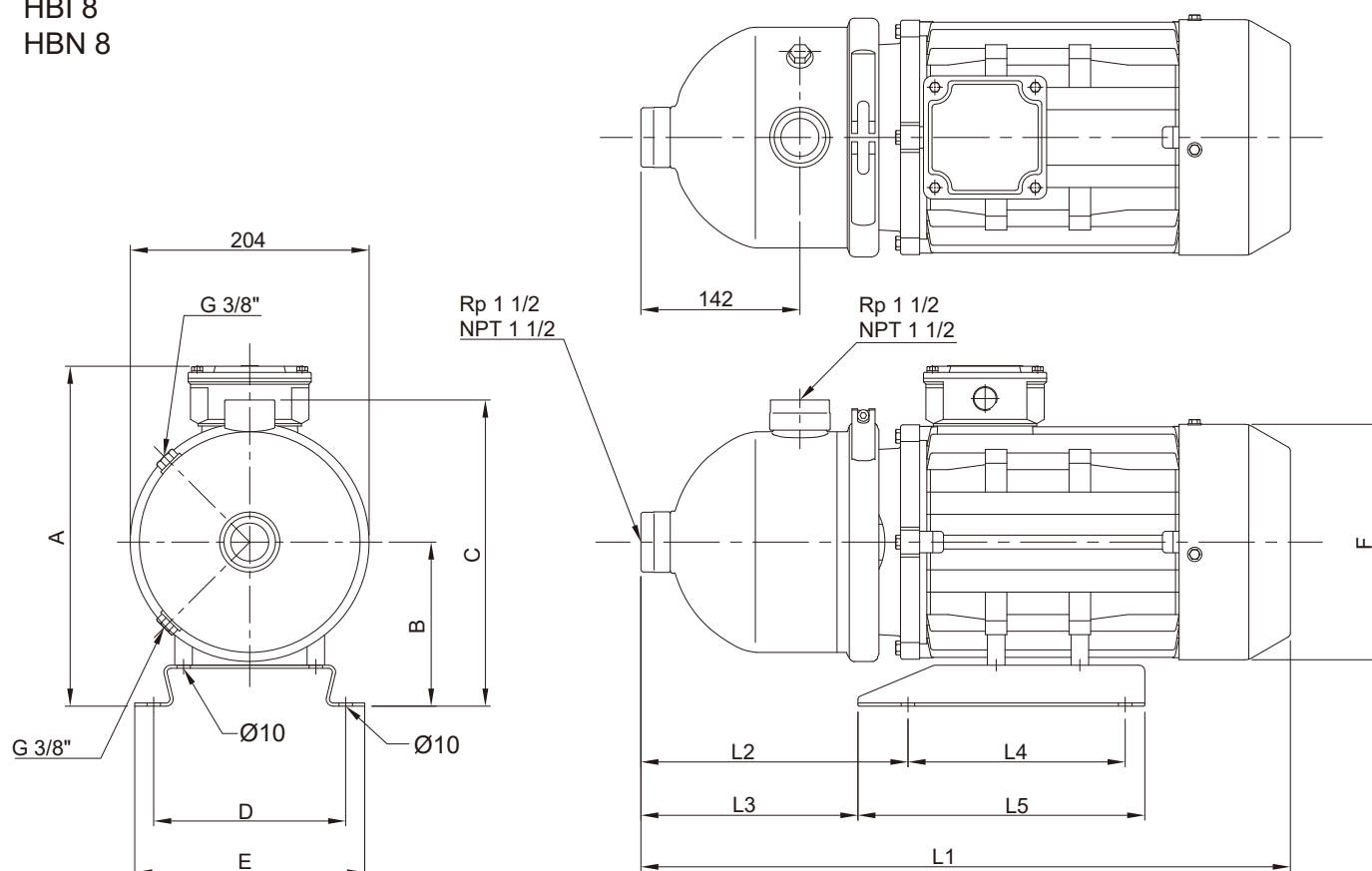
Specifications(3450rpm)

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	Not available / 8.3	1730	1380	5.2-5.3 / 3.0-3.1	1670	1340
HBI/HBN 8-15	Not available / 9.3	2080	1710	5.6-5.7 / 3.2-3.3	1890	1560
HBI/HBN 8-20	Not available / 10.9	2460	2030	Δ 220-277V / Y 380-480V		
				7.1-6.9 / 4.1-4.0	2360	1950

Dimensions and Weights

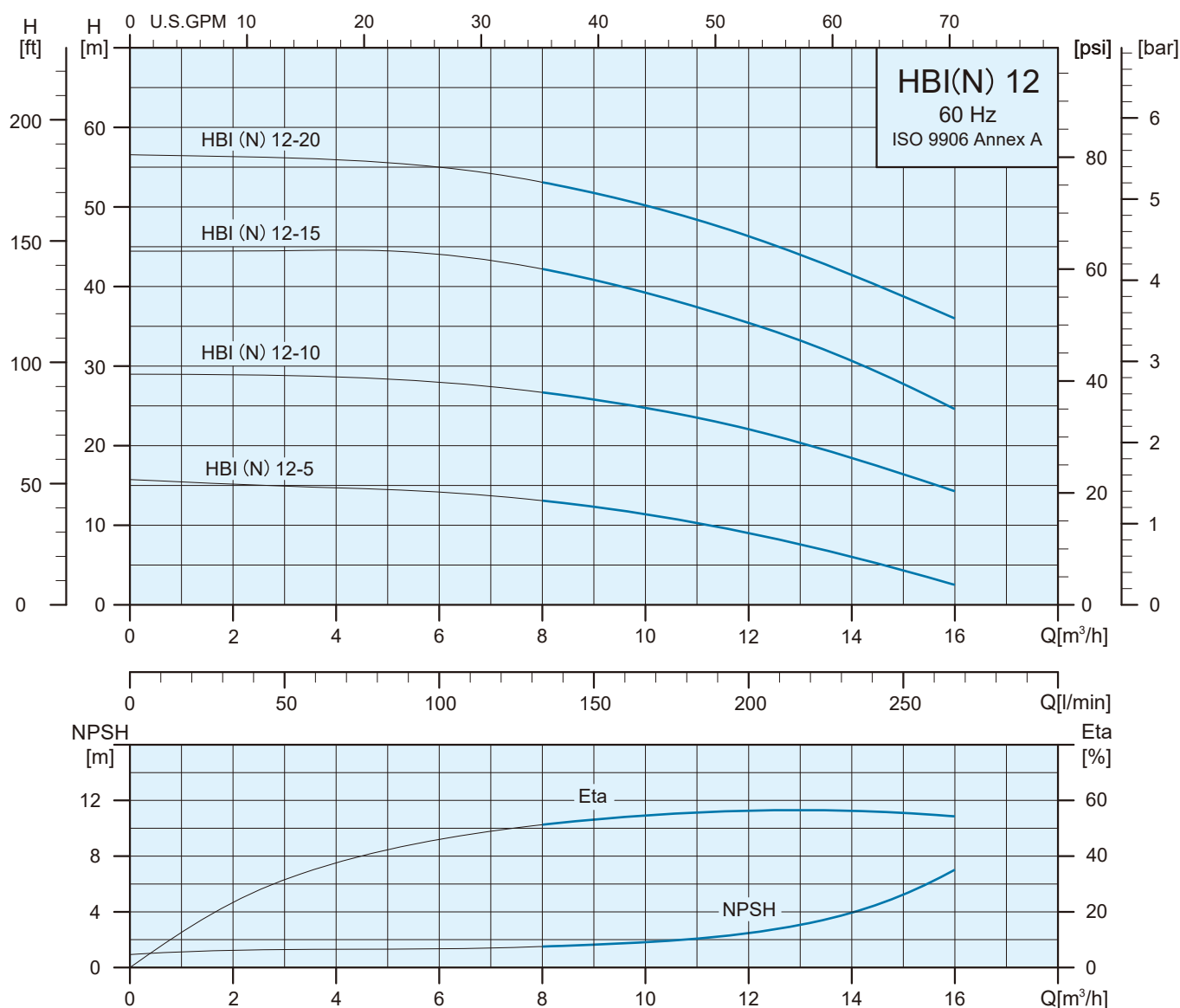
HBI 8

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

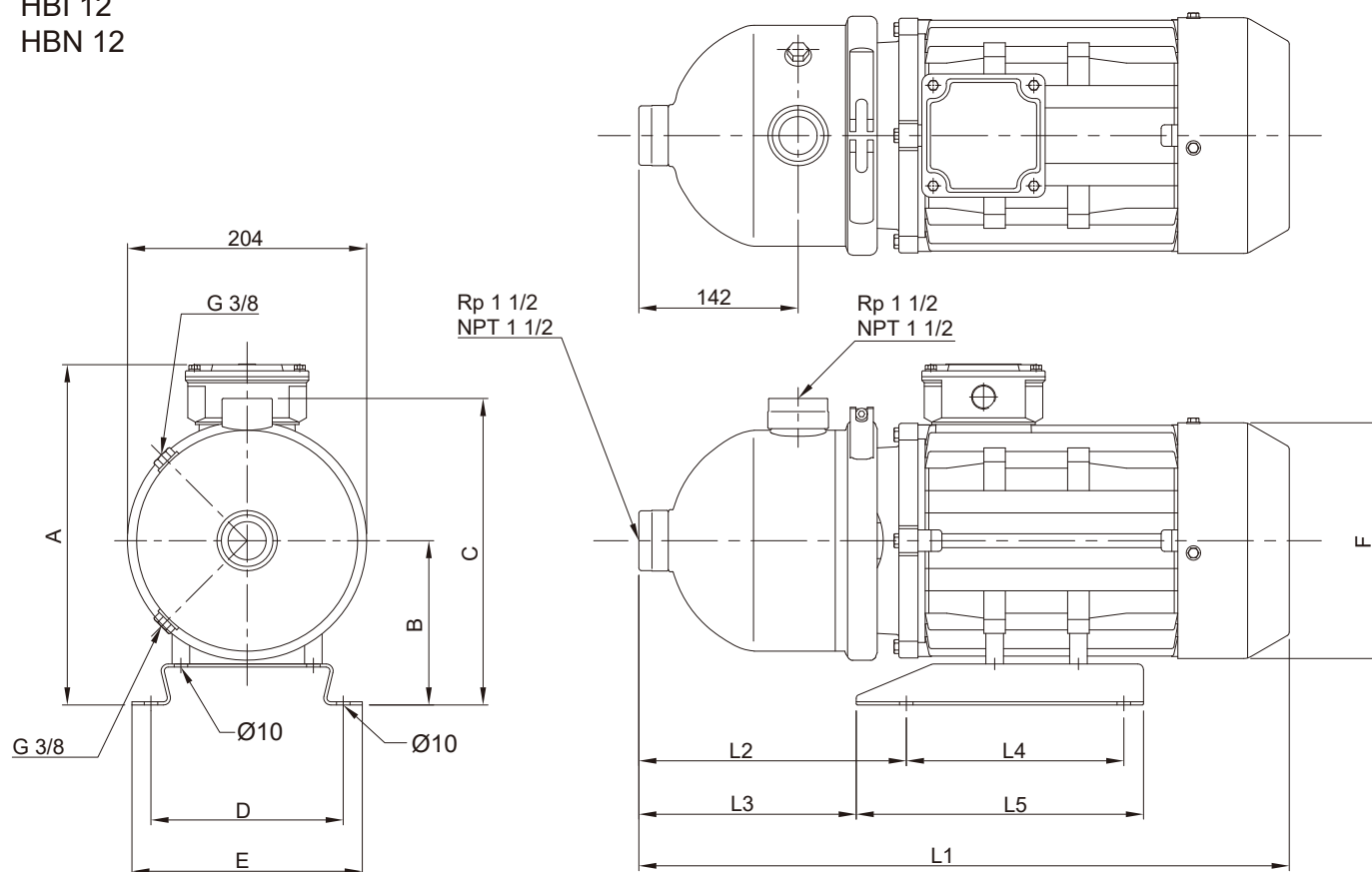


Specifications(3450rpm)

Pump Type	110 / 220V			Δ 220-255V / Y 380-440V		
	1Ø			3Ø		
	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	Not available / 9.7	2170	1790	5.7-5.9 / 3.3-3.4	1930	1595
HBI/HBN 12-15	Not available	Not available	Not available	Δ 220-277V / Y 380-480V		
				9.2-8.9 / 5.3-5.1	2860	2365
HBI/HBN 12-20	Not available	Not available	Not available	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	Not available	200	180	195	235	Not available	121	245	158	178	177	Not available
	3Ø	493	200	180	195	235	261	121	245	158	178	177	23.7
HBI/HBN 12-20	1Ø	Not available	230	198	195	245	Not available	133	259	174	198	197	Not available
	3Ø	514	230	198	195	245	284	133	259	174	198	197	29.4

[illegible]

[illegible]



No.6-7-1,Shanzijiao, Lucao Township, Chiayi County 61158, Taiwan
Tel: +886 5 3750488 Fax: +886 5 3755658
www.stairs.com.tw E-mail:stairs@stairs.com.tw

1131007

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	Not available	Not available	Not available	107	Not available	Not available	110	187	239	Not available	Not available	Not available
	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

