



STAIRS PUMPS

# General data

CB, CBI

## 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

## 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.

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

EPDM or Viton O-rings are available as standard.

## Pipe connections:

Connections	CB, CBI 2	CB, CBI 4	CB8	CB12
Suction port	Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 1 1/2
Discharge port	Rp 1	Rp 1	Rp 1 1/4	Rp 1 1/2
Drain hole, priming hole	Rc 3/8	Rc 3/8	Rp 1/2	Rp 1/2

## Motor

The pump is fitted with a totally enclosed, fan-cooled, squirrel-cage motor.

Rated speed: 2850rpm(50Hz), 3450rpm(60Hz)

Enclosure class: IP 54

Insulation class: F

Standard voltages:

50HZ 1Ø

0.5HP~3.0HP 220-240V

60HZ 1Ø

0.5HP~1.0HP 110/220V

1.5HP~3.0HP 220-240V

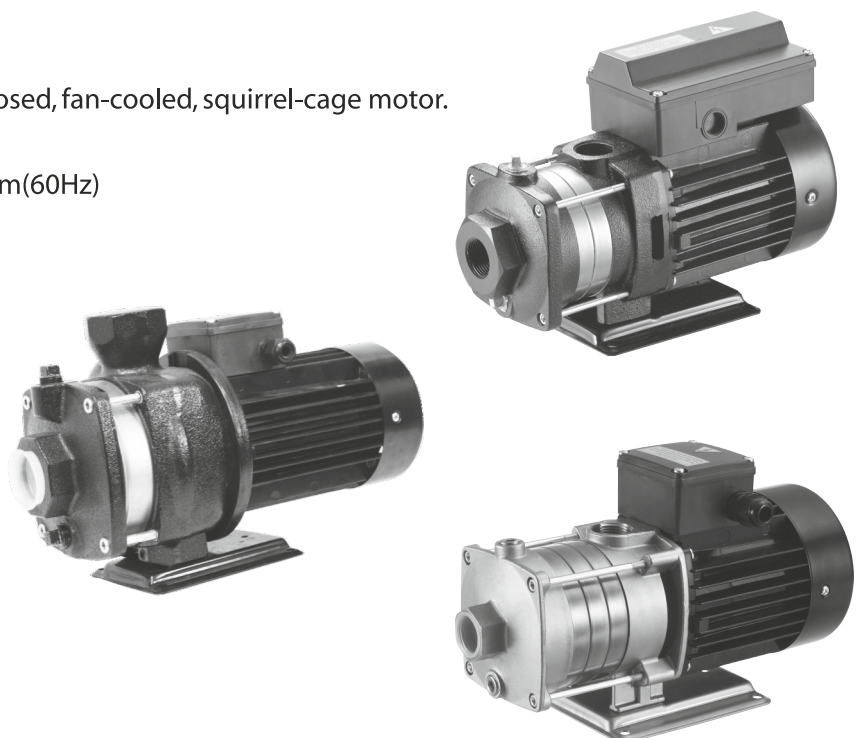
50HZ 3Ø

0.5HP~4.0HP 220-240V/380-415V

60HZ 3Ø

0.5HP~1.5HP 220-255V/380-440V

2.0HP~4.0HP 220-277V/380-480V



### Operating conditions

Liquid: Clean liquid without solid particles.

Liquid temperature range: 0°C ~ +90°C.

Maximum ambient temperature: +50°C.

The maximum operating pressure depends on the temperature of the pumped liquid, see table:

Max. operating pressure	10 kg/cm <sup>2</sup>	6 kg/cm <sup>2</sup>
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.

### Type key

Example      CB(I)                                      4                                      -                                      30                                      -                                      CQBE

                    Pump type              Nominal flow rate [m<sup>3</sup>/h]                                      Number of stages x 10                                      Mechanical Seals

### Mechanical seals

List of Materials	
Q : Silicon carbide	E : EPDM
U : Tungsten carbide	V : Viton
B : Carbon	C : Seal Type
H : Seal Type	

Mechanical Seals	CB, CBI 2/4	CB 8,12
CQB	●	●
CQQ	Optional	Optional
HUU	Optional	Optional
O-rings		
E	●	●
V	●	●

● Standard



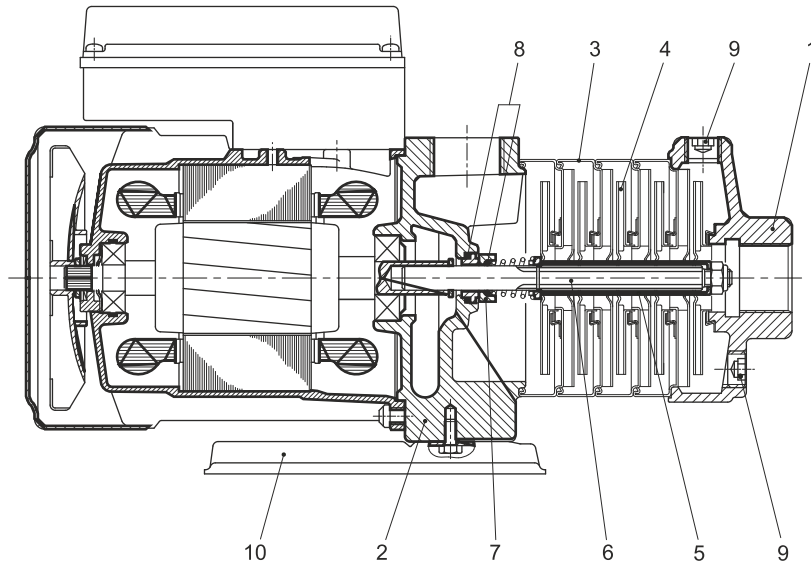
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# General data

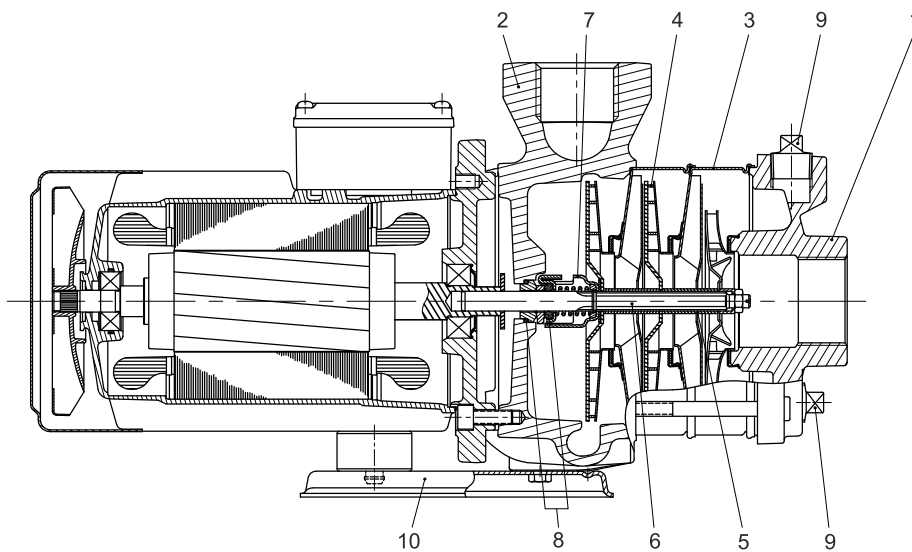
CB, CBI

## Material construction

CB(I) 2,4



CB 8,12



## Materials

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 or Viton	EPDM or Viton
9	Drain and priming plug	Steel	SS304
10	Base plate	Steel	SS304

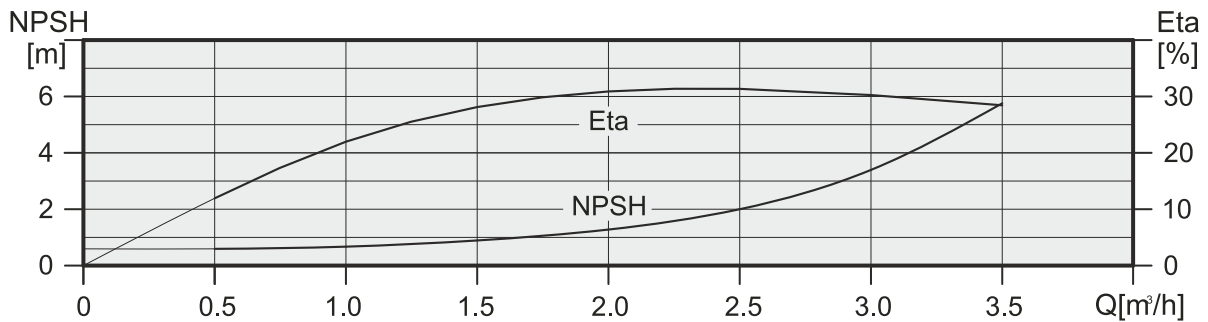
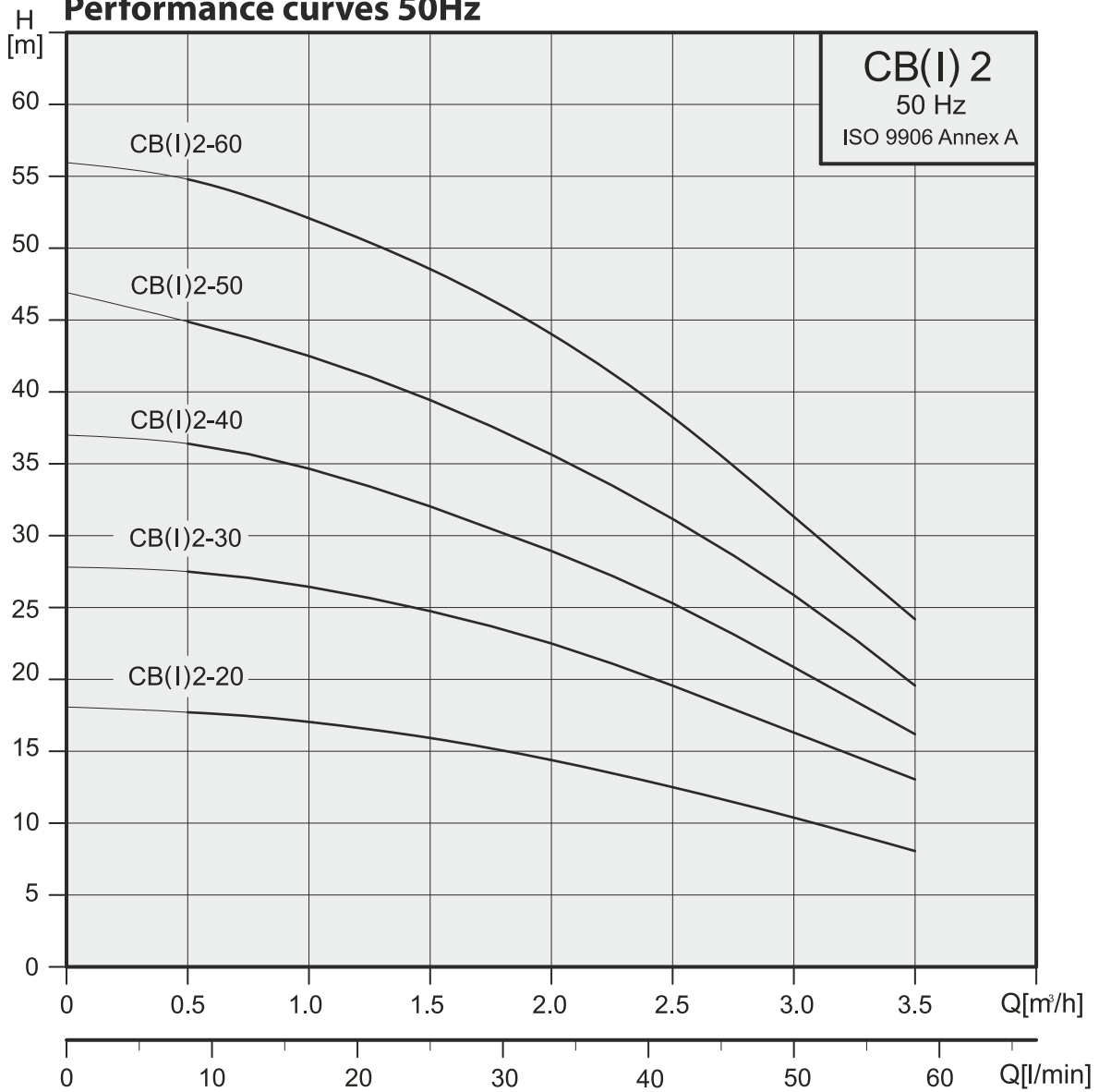


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# Technical data

CB, CBI 2

## Performance curves 50Hz



## Electrical data, 2850 min<sup>-1</sup>

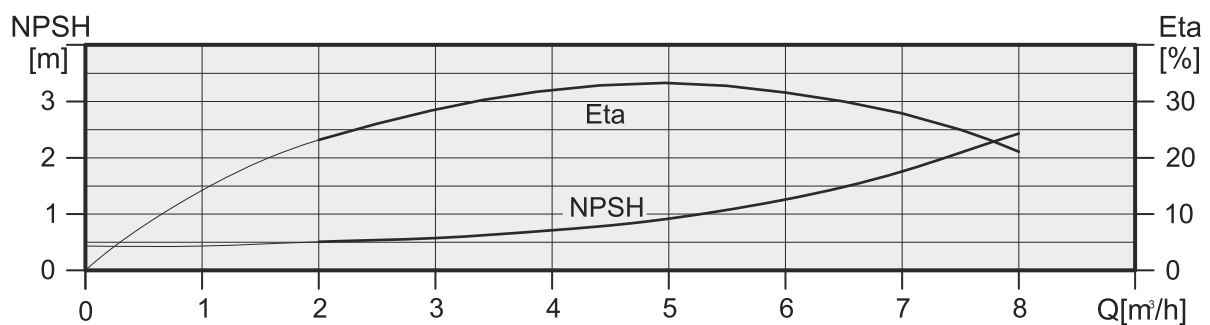
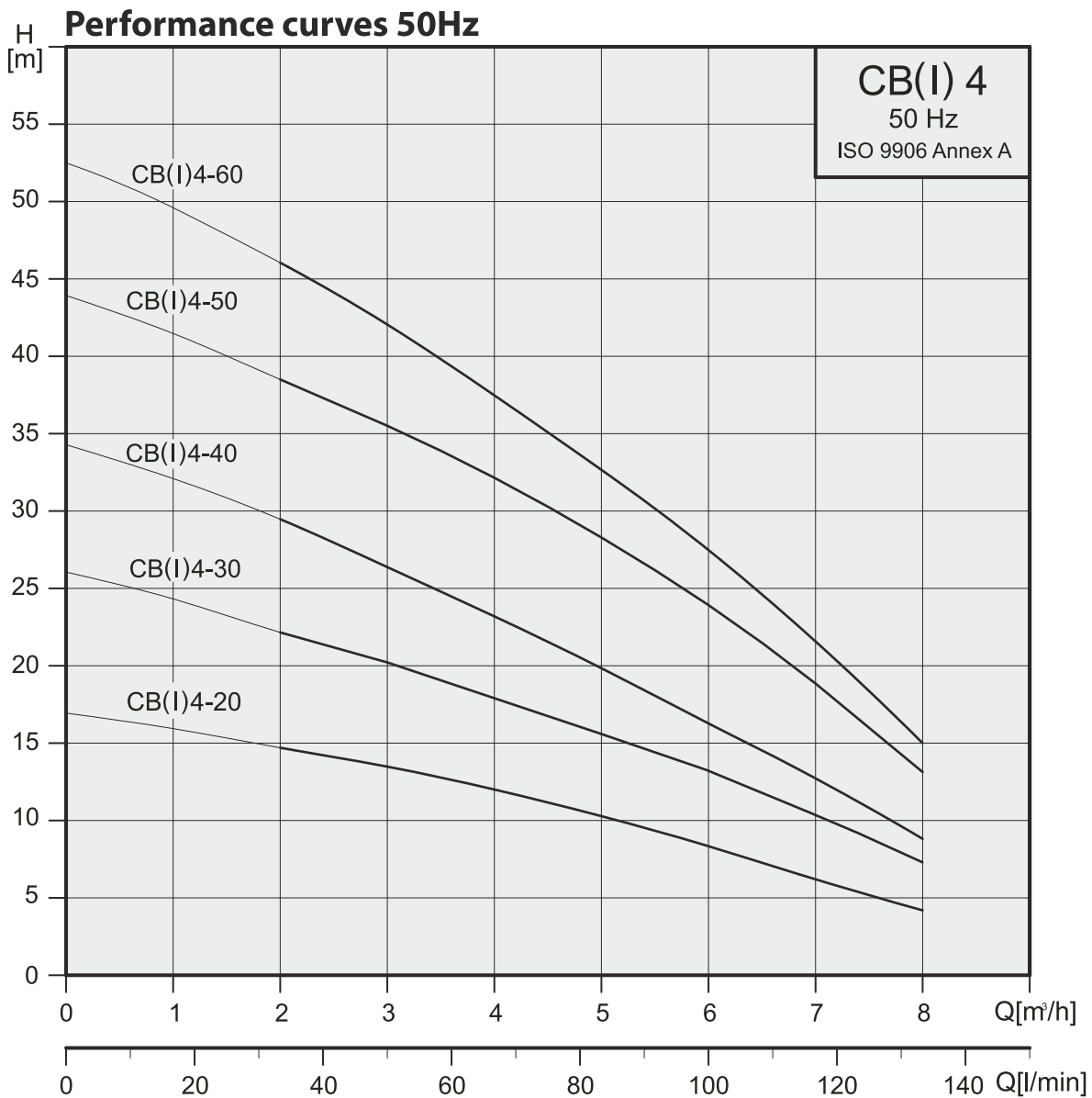
pump type	1 x 220-240 V		3 x 220-240 Δ / 380-415 Y V	
	P <sub>i</sub> [W]	I <sub>1/1</sub> [A]	P <sub>i</sub> [W]	I <sub>1/1</sub> [A]
CB/CBI 2-20	380	1.7-2.0	430	2.2-2.6 / 1.3-1.5
CB/CBI 2-30	470	2.1-2.2	530	2.2-2.5 / 1.3-1.45
CB/CBI 2-40	620	2.7-2.8	660	2.4-2.8 / 1.4-1.6
CB/CBI 2-50	720	3.2-3.1	770	2.5-2.9 / 1.45-1.7
CB/CBI 2-60	830	3.7-3.6	860	2.9-3.3 / 1.7-1.9



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# Technical data

CB, CBI 4



### Electrical data, 2850 min<sup>-1</sup>

pump type	1 x 220-240 V		3 x 220-240 Δ / 380-415 Y V	
	P <sub>1</sub> [W]	I <sub>1/1</sub> [A]	P <sub>1</sub> [W]	I <sub>1/1</sub> [A]
CB/CBI 4-20	560	2.6-2.5	610	2.4-2.9 / 1.4-1.7
CB/CBI 4-30	770	3.6-3.5	790	2.5-2.9 / 1.5-1.7
CB/CBI 4-40	960	4.4-4.1	1010	3.1-3.3 / 1.8-1.9
CB/CBI 4-50	1160	5.3-5.0	1240	4.2-4.5 / 2.4-2.6
CB/CBI 4-60	1430	6.7-6.4	1460	5.1-5.5 / 2.9-3.2



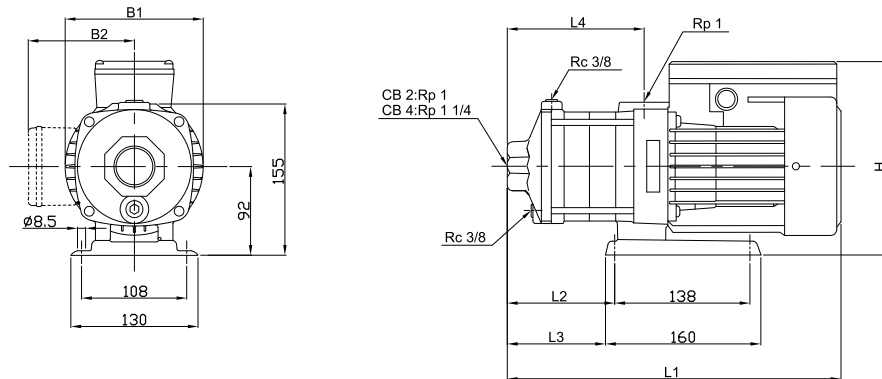
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# Technical data

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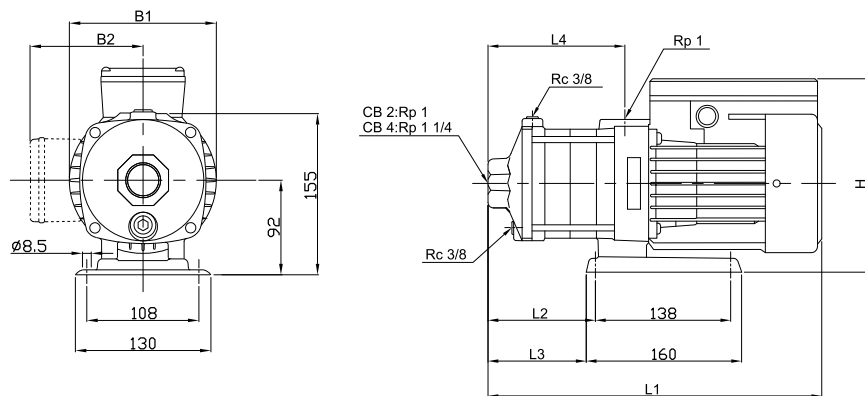
## Dimensions and weights 50 Hz

### CB-2, CB-4



pump type	mm									Kg	
	L1	L2	L3	L4	B1	B2		H		1phase	3phase
						1phase	3phase	1phase	3phase		
CB 2-20	309	75	63	101	141	127	112	228	206	10.3	10.0
CB 2-30	327	93	81	119	141	127	112	228	206	10.5	10.3
CB 2-40	345	111	99	137	141	127	112	228	206	10.8	10.5
CB 2-50	363	129	117	155	141	127	112	228	206	11.6	11.2
CB 2-60	381	147	135	173	141	127	112	228	206	11.8	11.5
CB 4-20	318	84	72	110	141	127	112	228	206	10.4	10.1
CB 4-30	344	111	99	137	141	127	112	228	206	10.8	10.5
CB 4-40	372	138	126	164	141	127	112	228	206	11.6	11.2
CB 4-50	438	165	153	191	141	127	112	228	206	13.4	13.1
CB 4-60	465	192	180	218	141	127	112	228	206	14.8	14.5

### CBI-2, CBI-4



pump type	mm									Kg	
	L1	L2	L3	L4	B1	B2		H		1phase	3phase
						1phase	3phase	1phase	3phase		
CBI 2-20	309	75	63	101	141	127	112	228	206	9.1	8.8
CBI 2-30	327	93	81	119	141	127	112	228	206	9.4	9.1
CBI 2-40	345	111	99	137	141	127	112	228	206	9.6	9.4
CBI 2-50	363	129	117	155	141	127	112	228	206	10.4	10.1
CBI 2-60	381	147	135	173	141	127	112	228	206	10.7	10.3
CBI 4-20	318	84	72	110	141	127	112	228	206	9.2	9.0
CBI 4-30	344	111	99	137	141	127	112	228	206	9.6	9.3
CBI 4-40	372	138	126	164	141	127	112	228	206	10.4	10.1
CBI 4-50	438	165	153	191	141	127	112	228	206	11.3	12.0
CBI 4-60	465	192	180	218	141	127	112	228	206	13.6	13.4