



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. 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.

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. Single-phase motors have built-in thermal overload protection. Rated speed: 2850rpm(50Hz), 3450rpm(60Hz)

Enclosure class: IP 54

Insulation class: F

Standard voltages:

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



Operating conditions

Liquid temperature range: 0°C ~+90°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 10 kg /cm².

Maximum inlet pressure is limited by maximum operating pressure.



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General data

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Model code

Type range	Nominal flow rate [m ³ /h]	Number of stages x10	Mechanical Seals
CB(I) 2 , 4	4	- 30	- CQBE

Type range	Nominal flow rate [m ³ /h]	Max. discharge pressure[m]	Mechanical Seals
CB 8 , 12	8	- 30	- CQBE

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 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 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.

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	Optional	Optional

● Standard



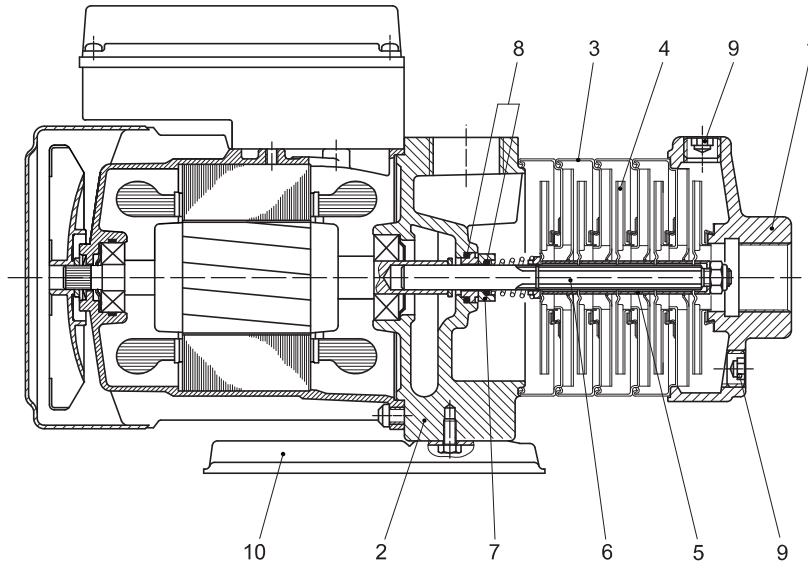
STAIRS PUMPS

General data

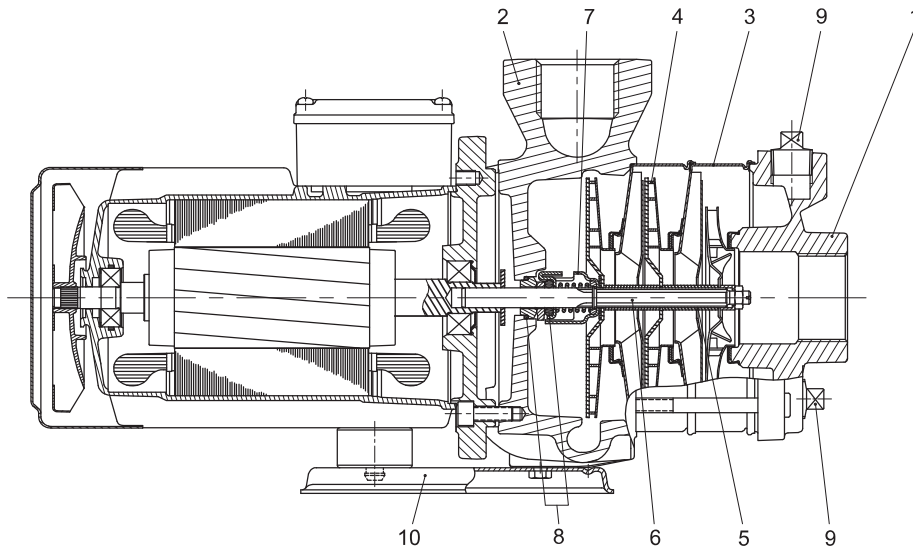
CB, CBI

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

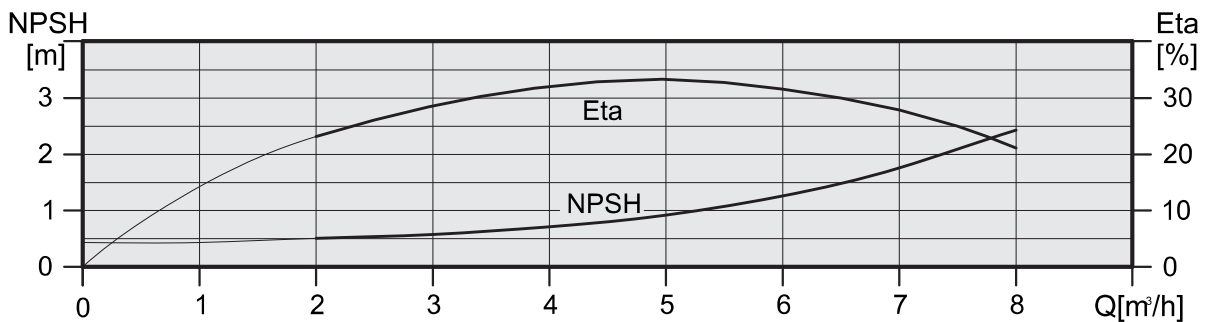
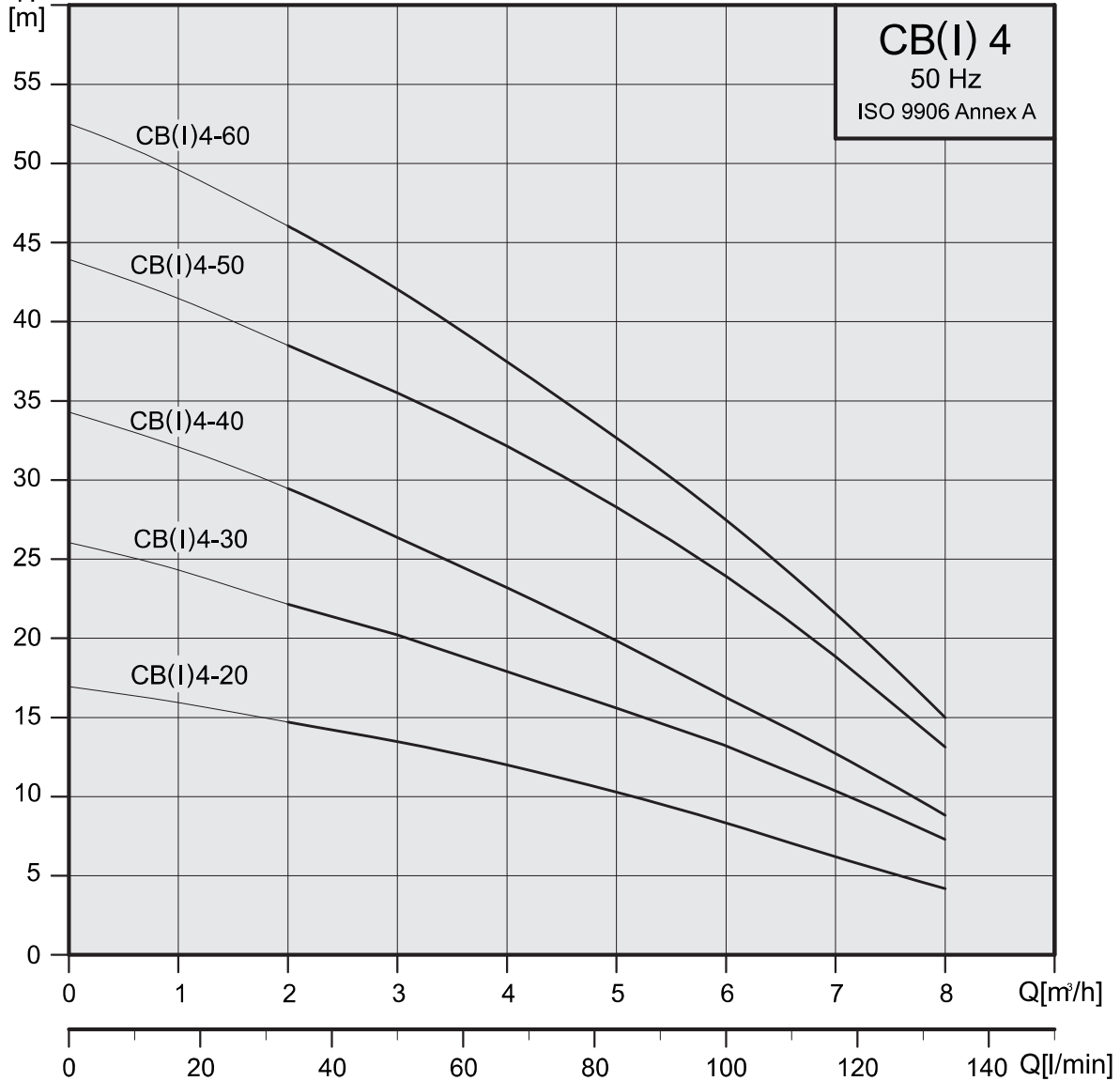


STAIRS PUMPS

Technical data

CB, CBI 4

Performance curves 50Hz



Electrical data, 2850 rpm

Pump type	1Φ 220-240V			3Φ Δ220-240V / Y 380-415V		
	I _{1n} [A]	P ₁ [W]	P ₂ [W]	I _{1n} [A]	P ₁ [W]	P ₂ [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



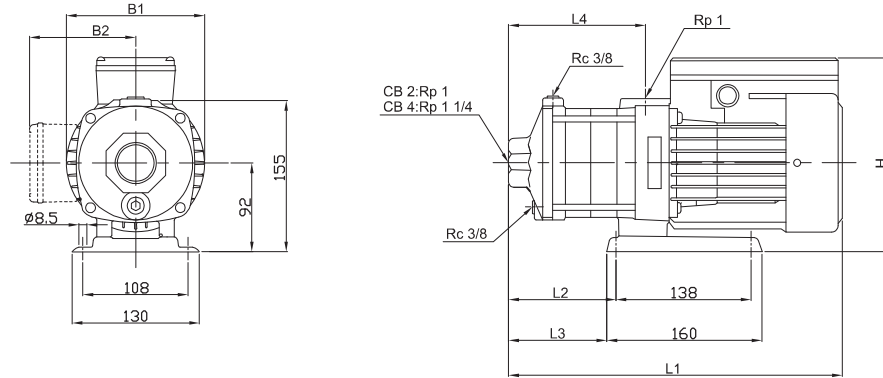
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Technical data

CB, CBI

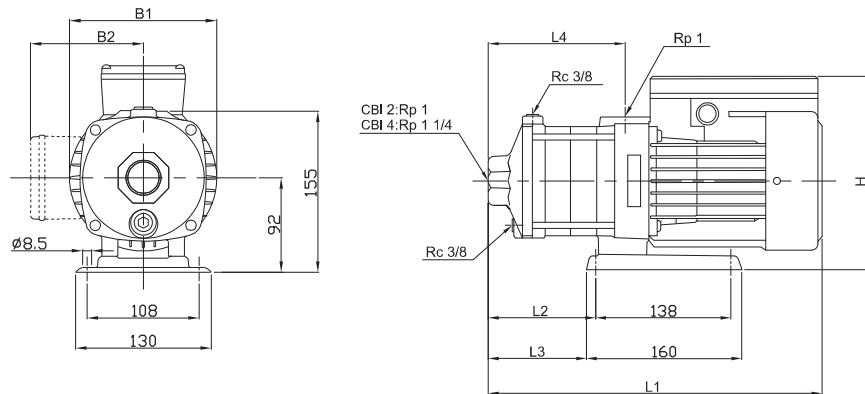
Dimensions and weights 50 Hz

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	115	228	207	10.3	10.0	
CB 2-30	327	93	81	119	141	127	115	228	207	10.5	10.3	
CB 2-40	345	111	99	137	141	127	115	228	207	10.8	10.5	
CB 2-50	363	129	117	155	141	127	115	228	207	11.6	11.2	
CB 2-60	381	147	135	173	141	127	115	228	207	11.8	11.5	
CB 4-20	318	84	72	110	141	127	115	228	207	10.4	10.1	
CB 4-30	344	111	99	137	141	127	115	228	207	10.8	10.5	
CB 4-40	372	138	126	164	141	127	115	228	207	11.6	11.2	
CB 4-50	438	165	153	191	141	127	115	228	207	13.4	13.1	
CB 4-60	465	192	180	218	141	127	115	228	207	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	115	228	207	9.1	8.8	
CBI 2-30	327	93	81	119	141	127	115	228	207	9.4	9.1	
CBI 2-40	345	111	99	137	141	127	115	228	207	9.6	9.4	
CBI 2-50	363	129	117	155	141	127	115	228	207	10.4	10.1	
CBI 2-60	381	147	135	173	141	127	115	228	207	10.7	10.3	
CBI 4-20	318	84	72	110	141	127	115	228	207	9.2	9.0	
CBI 4-30	344	111	99	137	141	127	115	228	207	9.6	9.3	
CBI 4-40	372	138	126	164	141	127	115	228	207	10.4	10.1	
CBI 4-50	438	165	153	191	141	127	115	228	207	11.3	12.0	
CBI 4-60	465	192	180	218	141	127	115	228	207	13.6	13.4	