

High efficiency electronic circulators for hot water recirculation

EB (V) Series



MARKET SECTORS

RESIDENTIAL.

APPLICATIONS

- Hot water recirculation.
- Boiler feeding.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 1 m³/h.
- **Head:** up to 3 m.
- **Temperature of pumped liquid:** -10°C ÷ +95°C.
Non-freezing, non-condensing.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Rotor assembly group:** made of stainless steel/composite material/carbon.

MOTOR

- Permanent magnet EC (Electronically Commutated) type motor with spherical rotor/stator.
- Wet rotor with a single spherical ceramic/carbon ball bearing.
- Integrated motor protection; no external protection required.
- Single-phase 220-240 V, 50-60 Hz power supply.
- Variable speed motor for standard version and version with the timer.
Single fixed speed motor for version with thermostat and version with timer and thermostat.
- **Insulation class:** F (155°C).
- **Protection class:** IP 44.

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SERIES CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, for threaded union connections.
- The design is based on spherical rotor/stator technology. This means that:
 - The only moving part is the spherical rotor/impeller unit that turns on a hard ceramic ball.
 - Shaft seals or conventional bearing bushings with a shaft have been eliminated for a single self realigning spherical bearing.
- Blockage free rotor: the spherical motor principle does not require a manual unblocking device thanks to the small touching surface of the bearing on the ball. The starting torque required is minimal.
- The following versions are available:
 - variable speed (EBV version) for performance optimization based on real requirements of the system. The speed is regulated through the selector knob placed on the motor housing. The selection of the speed is facilitated by 7 reference points on the selector. In positions 2 and 3 (ECO) the consumption is particularly optimized. EBV version is also available with timer to limit the operation to the required daily hours.
 - fixed speed (EB version).
- EB version is also available:
 - with thermostat to maintain the water at the desired temperature. The pump switches off automatically when the water is warm enough. The temperature can be set between 20°C and 70°C through the knob placed on the motor housing.
 - with thermostat and timer for a even higher energy saving.
- both versions are also available with integrated ball and check valve (EB(V)..-/110).

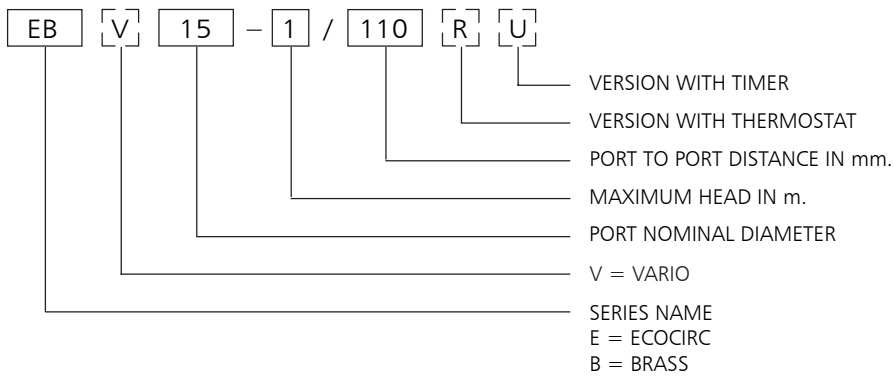
ADVANTAGES

- Energy saving.
- Blockage free.
- Minimal maintenance.
- Easy and quick installation.

INSTALLATION

- Suitable for installation in vertical or horizontal piping, in this last case not with the motor housing upward.

EB SERIES IDENTIFICATION CODE



EXAMPLE : EB 15-1/110 RU

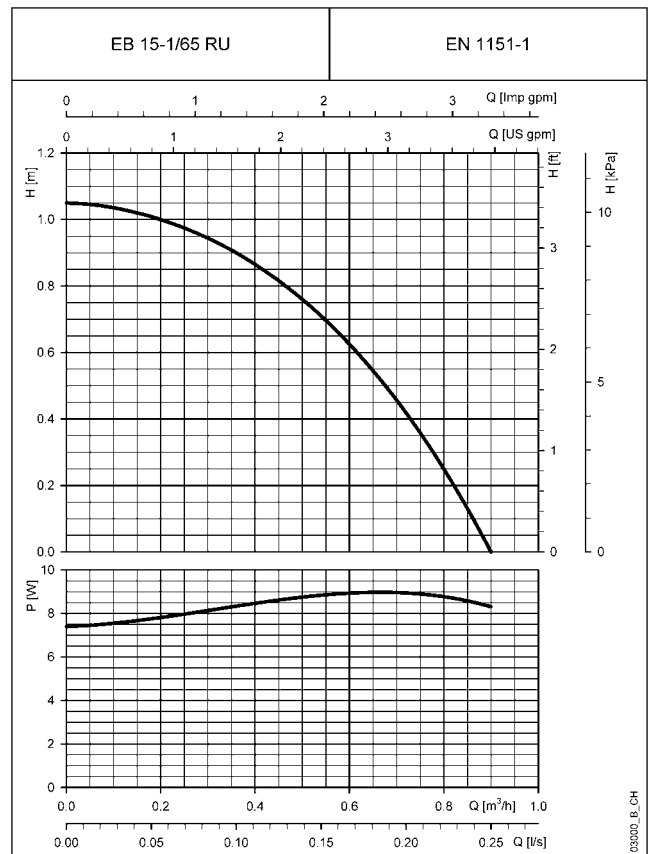
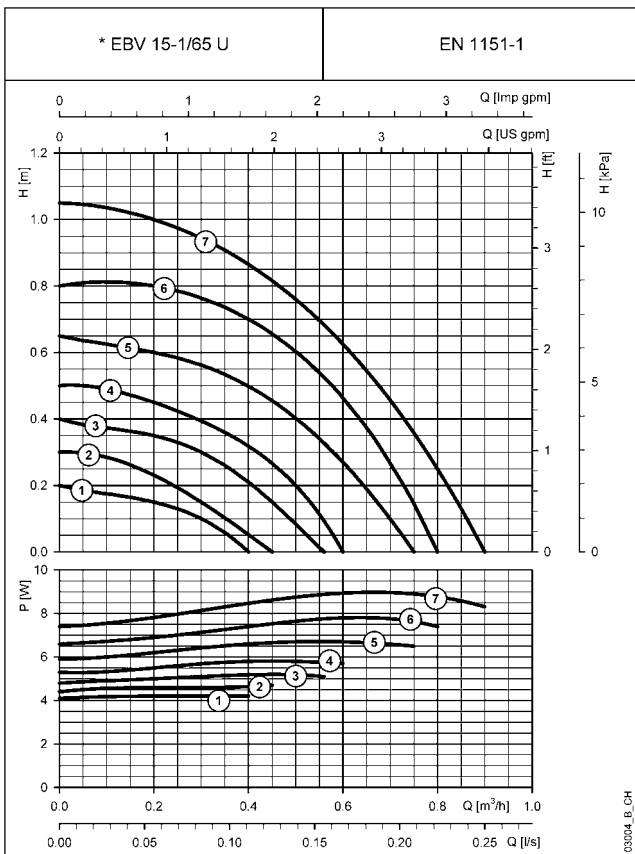
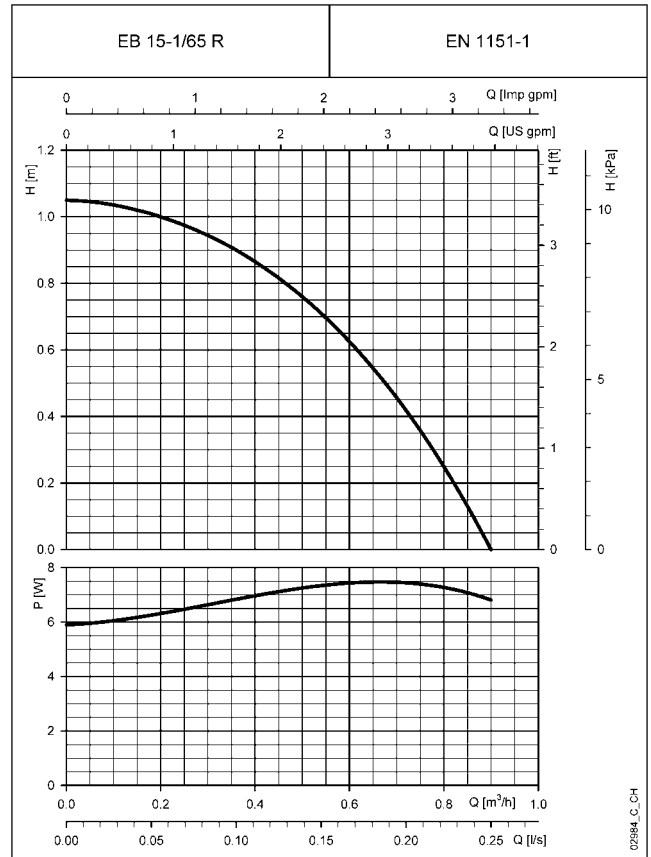
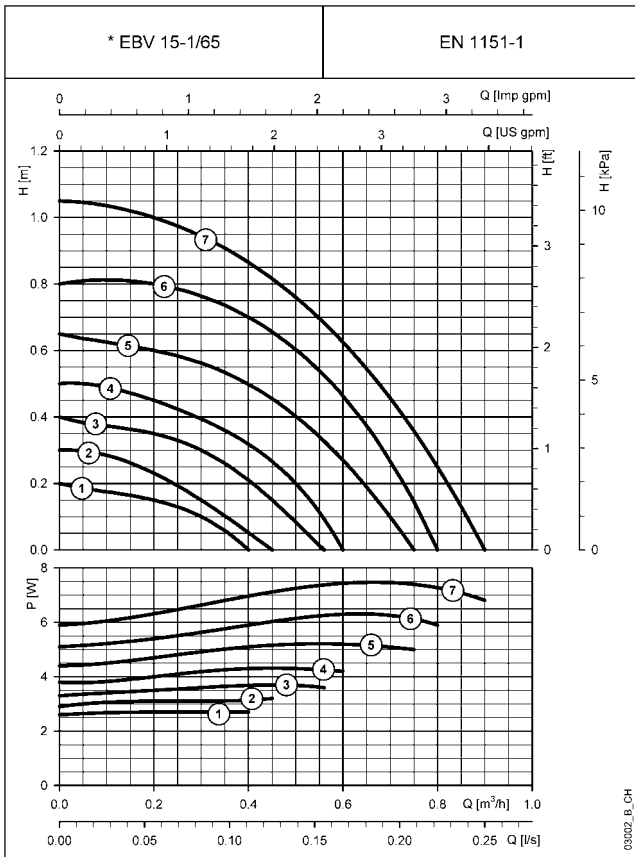
Electronic circulator of the EB series, port nominal diameter = 15,
max head = 1 m, port to port distance 110 mm, with temperature probes and timer.

TABLE OF MATERIALS

PART	MATERIAL
Pump body	Brass
Rotor assembly group	Stainless steel
	Composite material
Bearing	Carbon
Gaskets	Ceramic
	EPDM

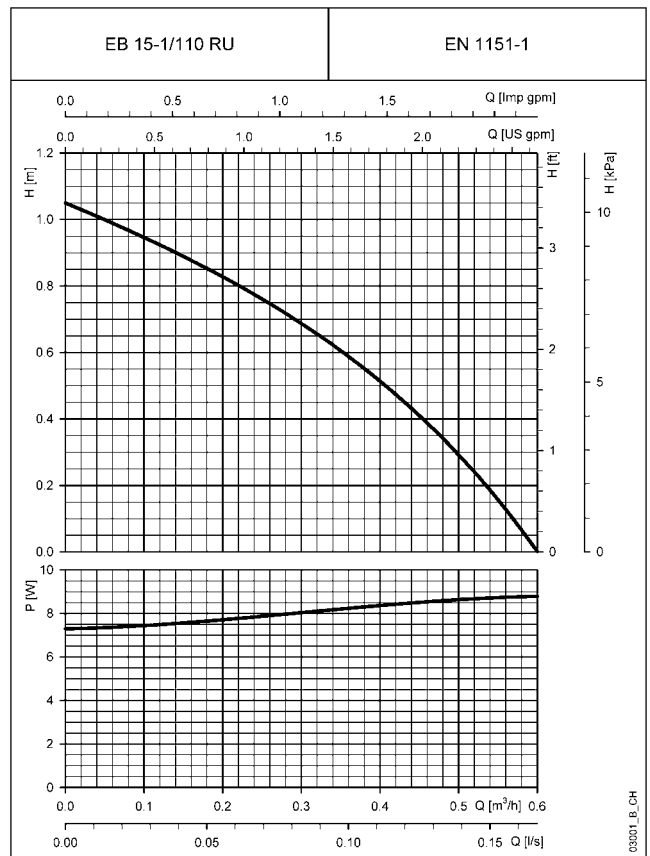
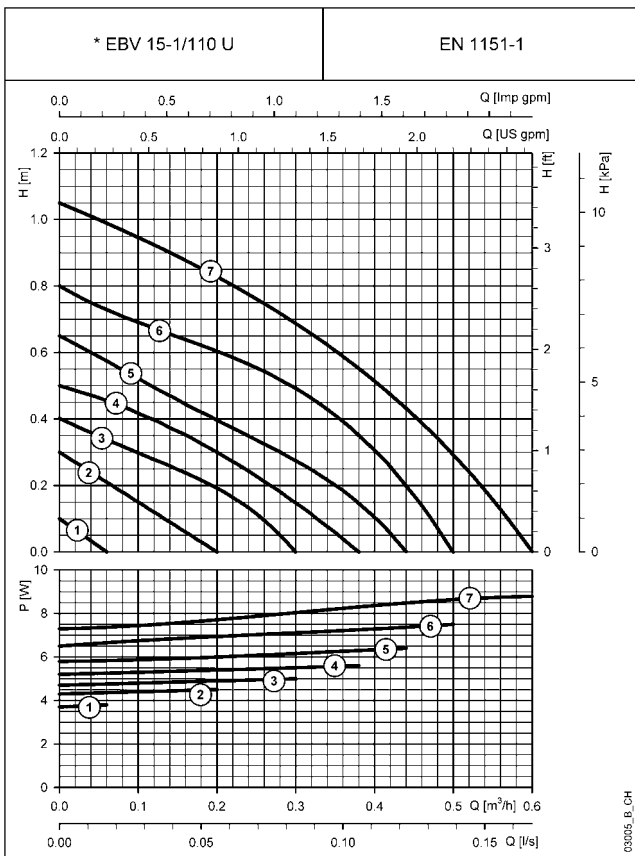
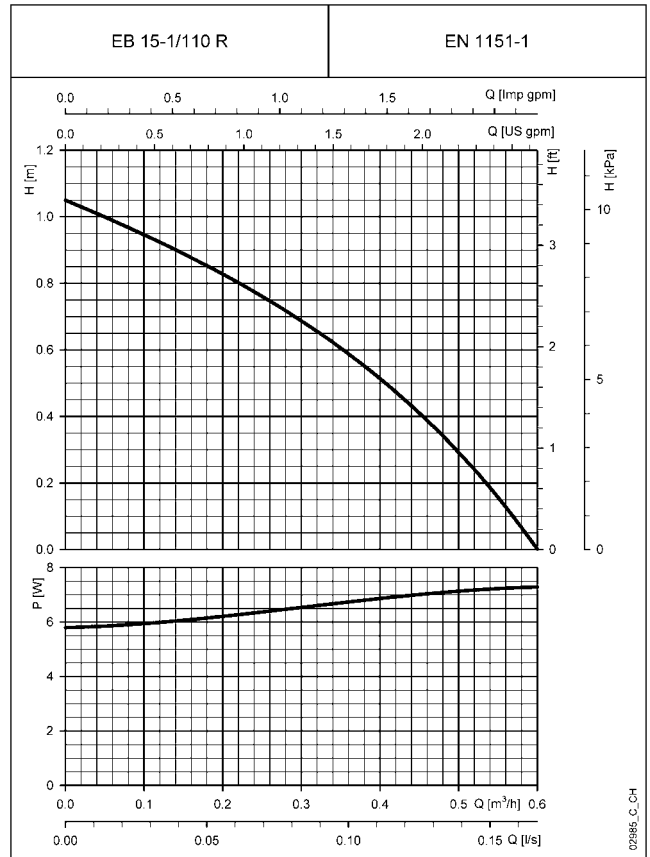
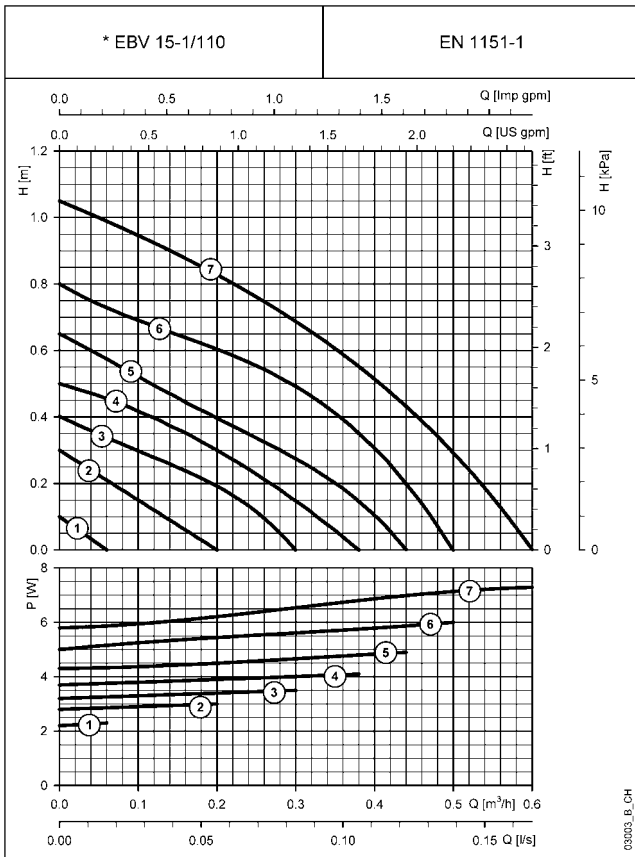
eb-50-en_b_tm

**EB (V) SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



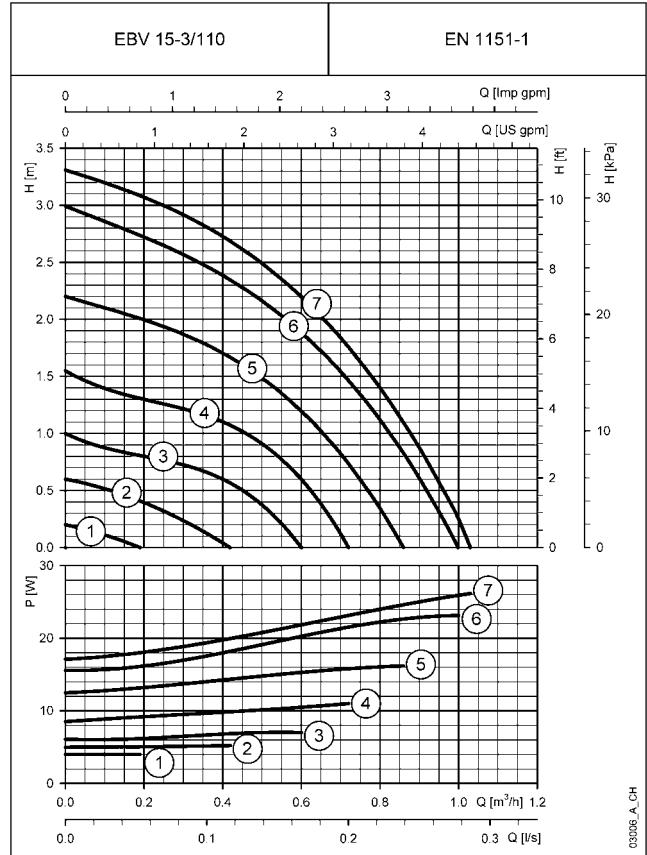
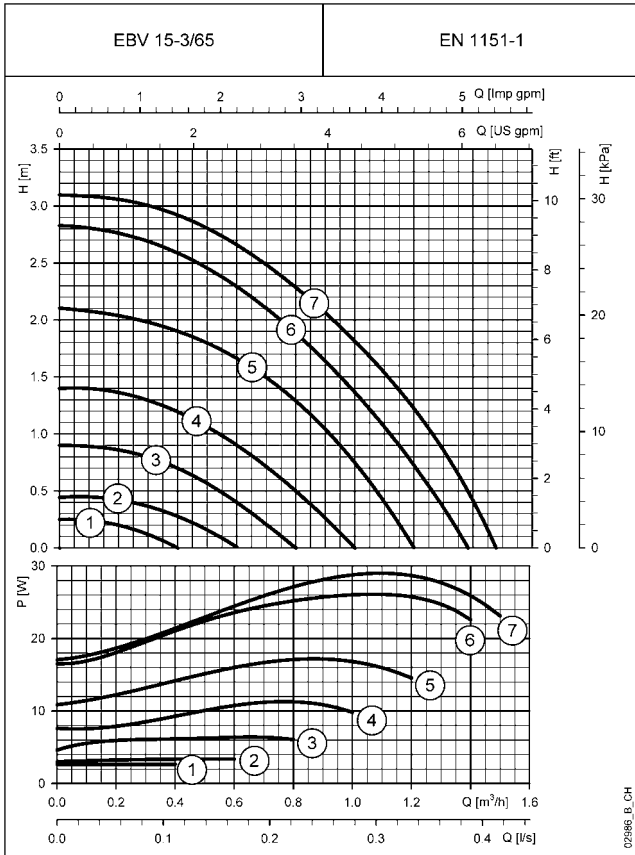
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
* Pump operates steplessly. Lines correspond to knob settings and are for reference only.

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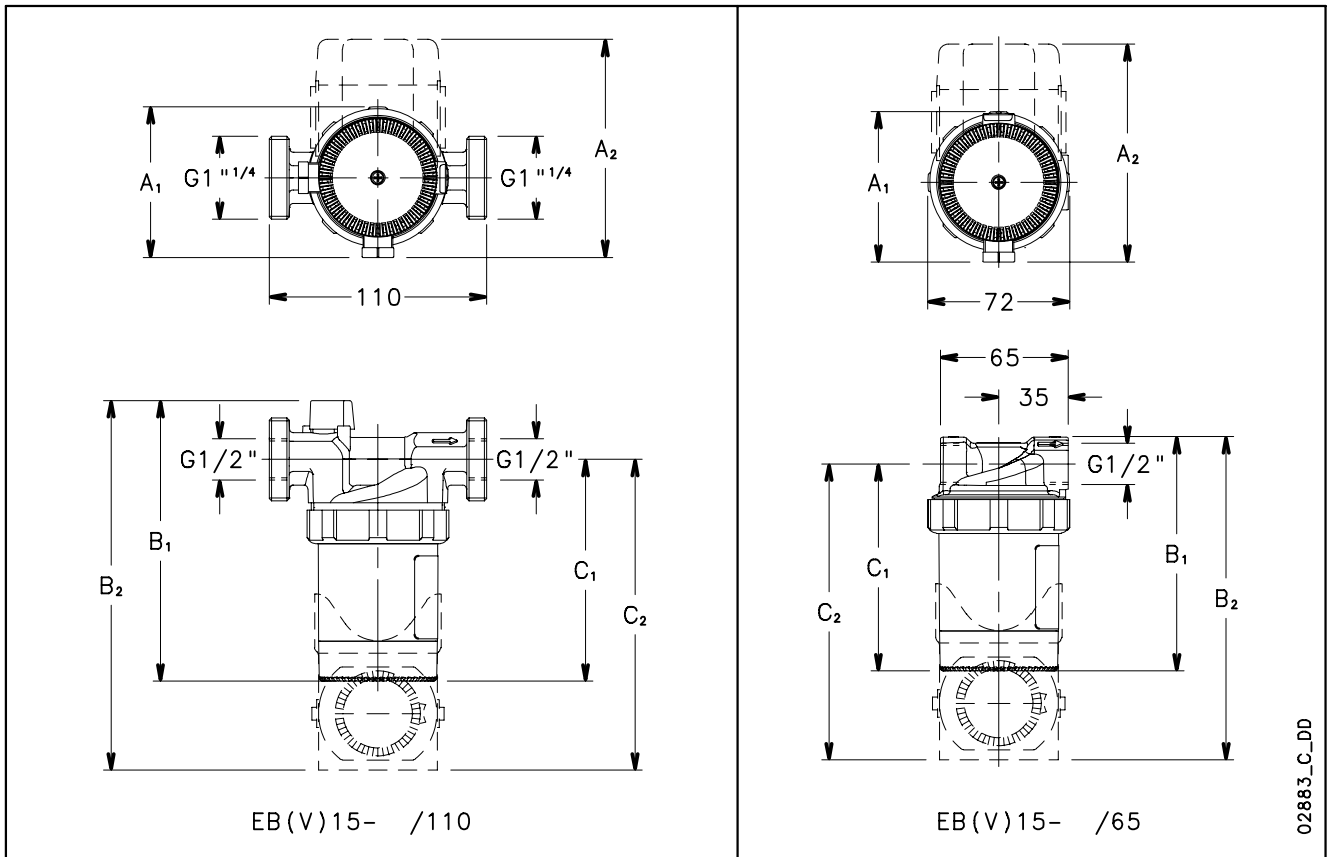
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EB (V) SERIES DIMENSIONS AND WEIGHTS



DIMENSIONS AND WEIGHTS TABLE

PUMP TYPE	DIMENSIONS (mm)						DN	WEIGHT kg
	A ₁	A ₂	B ₁	B ₂	C ₁	C ₂		
EBV 15-1/65 - EB 15-1/65R	76	-	118	-	105	-	15	0,9
EBV 15-1/65U - EB 15-1/65RU	-	110	-	163	-	150	15	1
EBV 15-1/110 - EB 15-1/110R	76	-	142	-	112	-	15	1,3
EBV 15-1/110U - EB 15-1/110RU	-	110	-	187	-	157	15	1,4
EBV 15-3/65	76	-	118	-	105	-	15	0,9
EBV 15-3/110	76	-	142	-	112	-	15	1,3

HYDRAULIC PERFORMANCE TABLE

eb-2p50-en_c_td

PUMP TYPE	POWER ABSORBED		SPEED	Q = DELIVERY											
	MIN W	MAX W		l/s 0	0,03	0,06	0,08	0,11	0,14	0,19	0,22	0,28	0,36	0,39	
				m ³ /h 0	0,1	0,2	0,3	0,4	0,5	0,7	0,8	1	1,3	1,4	
H = TOTAL HEAD METRES COLUMN OF WATER															
EBV 15-1/65	2,6	2,7	min	0,20	0,18	0,15	0,10	0							
	5,9	7,5	max	1,05	1,04	1,00	0,94	0,86	0,76	0,46	0,25				
EB 15-1/65 R	5,9	7,5	max	1,05	1,04	1,00	0,94	0,86	0,76	0,46	0,25				
EBV 15-1/65 U	4,1	4,2	min	0,20	0,18	0,15	0,10	0							
	7,4	9,0	max	1,05	1,04	1,00	0,94	0,86	0,76	0,46	0,25				
EB 15-1/65 RU	7,4	9,0	max	1,05	1,04	1,00	0,94	0,86	0,76	0,46	0,25				
EBV 15-1/110	2,2	2,3	min	0,10											
	5,8	7,3	max	1,05	0,95	0,83	0,69	0,51	0,29						
EB 15-1/110 R	5,8	7,3	max	1,05	0,95	0,83	0,69	0,51	0,29						
EBV 15-1/110 U	3,7	3,8	min	0,10											
	7,3	8,8	max	1,05	0,95	0,83	0,69	0,51	0,29						
EB 15-1/110 RU	7,3	8,8	max	1,05	0,95	0,83	0,69	0,51	0,29						
EBV 15-3/65	2,6	2,6	min	0,25	0,24	0,20	0,12	0							
	17,1	23,7	max	3,10	3,09	3,08	3,07	3,06	3,04	3,02	3,00	2,97	2,91	2,89	
EBV 15-3/110	4,0	4,0	min	0,20	0,11										
	17,1	26,6	max	3,31	3,20	3,08	2,96	2,84	2,71	2,43	2,28	1,96			