
ELECTRONIC CIRCULATORS FOR HEATING SYSTEMS



GENERAL DATA

Applications

The VE circulator features an electronic control device that detects the changes in performance demanded by the heating system (equipped with automatic thermostatic valves) and automatically adapts circulator performance accordingly, always ensuring optimal efficiency, low noise operation, and minimum energy consumption. When the system requires the maximum available flow rate, the circulator self-adjusts to maximum speed and operates at full power. When the capacity of the system is reduced, either by manual actions performed by the user or due to automatic operation of the thermostatic valves, the electronic controller detects the required flow rate reduction and reduces the speed (and hence flow rate) of the circulator accordingly, while keeping the head virtually constant (with a conventional circulator this parameter would tend to increase under similar conditions).

Construction features

Wet rotor circulator.

Cast iron pump body.

Motor shaft and rotor protective jacket in stainless steel.

Thanks to the internal protection of the motor, the pump does not require any form of external protection cutout.

The pump always starts with medium power (high torque) irrespective of whether the current setting is normal duty or night-time reduction (min.).

Voltage-free contact for service and fault signalling.

Facility for operation at economy speed (min. 1).

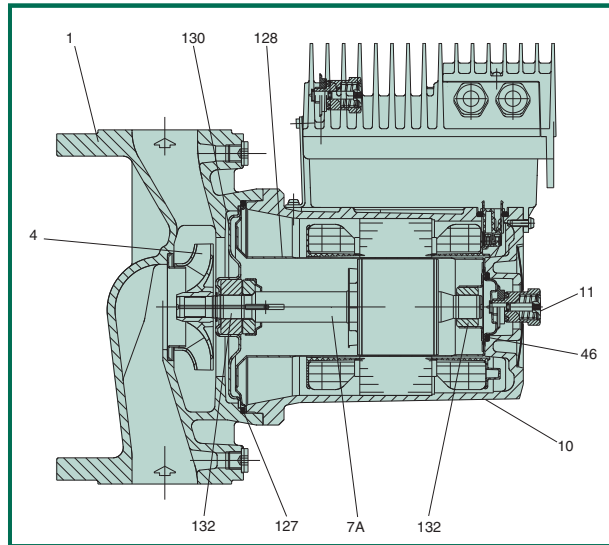
On request: analogue module for external setup of rotation speed via 0-10 V or 0-20 mA input.

This product complies with European standard EN 60335-2-51.

ELECTRONIC CIRCULATORS FOR HEATING SYSTEMS

TECHNICAL DATA

N.	PARTS	MATERIALS
1	PUMP BODY	CAST IRON 200 UNI ISO 185
4	IMPELLER	TECHNOPOLYMER
7A	MOTOR SHAFT	STAINLESS STEEL
10	MOTOR CASING	ALUMINIUM
11	BREATHER PLUG	BRASS PCu Zn 40 Pb2 UNI 570S
127	SEAL RING	EPDM
46	SEAL RING	EPDM
128	STATOR JACKET	STAINLESS STEEL
130	CLOSING FLANGE	STAINLESS STEEL
132	BUSHINGS	CERAMIC



– Designation index:
(example)

VEA = circulator with threaded ports
VEB = flanged circulator

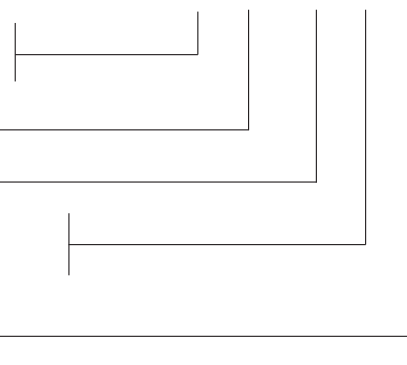
maximum head (dm)

centre distance (mm)

(DN) flanged ports nominal diameter
X = 2" threaded ports

M = single-phase motor
T = three-phase motor

VEA 40 / 190 . X M



Operating range:

from 0.5 to 115 m³/h with head of up to 10.5 m.

Liquid temperature range:

from +15°C to +95°C

Liquid quality requirements:

clean, free of solid contaminants and mineral oils, non-viscous, chemically neutral, close to the properties of water..

Maximum working pressure:

6 bar (600 kPa).
(Special executions on request 16 bar (1600 kPa)).

Insulation class:

H

Cable gland:

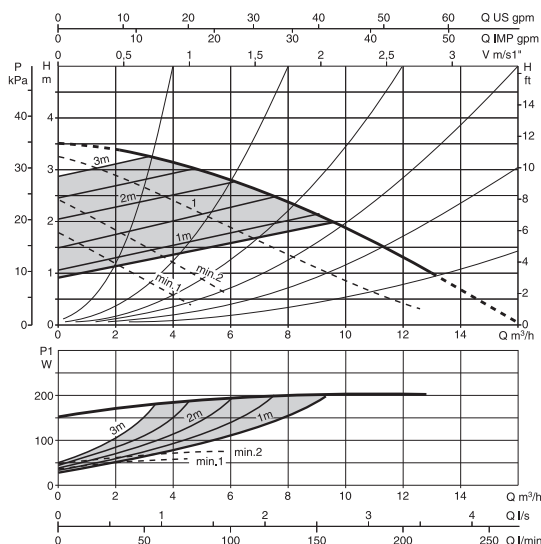
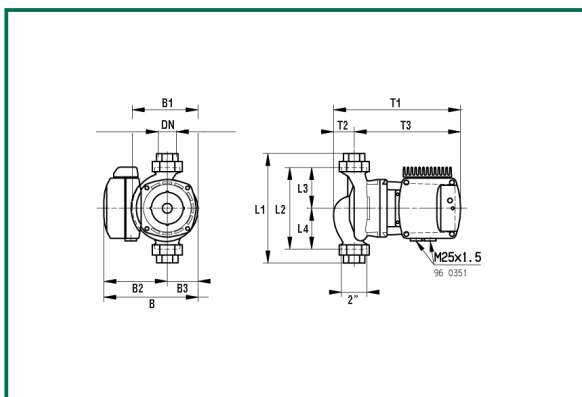
PG 16

Protection rating:

☉ corresponding to IP42

VEA 40/190 XM

SINGLE WITH UNIONS - SINGLE-PHASE



MODEL	DN	B	B1	B2	B3	L1	L2	L3	L4	T1	T2	T3	WEIGHT (kg)
VEA 40/190 XM	2" G	220	153	148	72	255	190	95	95	296	48	248	15

MODEL	POWER SUPPLY 50 Hz	CENTRE DISTANCE mm	ELECTRICAL DATA					
			SPEED	rpm	P1 MAX W	In A	CAPACITOR	
VEA 40/190 XM	1x230 V ~	190	MIN adjustment	600	32	0,2	8	450
			MAX adjustment	1460	200	0,9		
			min1	600	30	0,2		

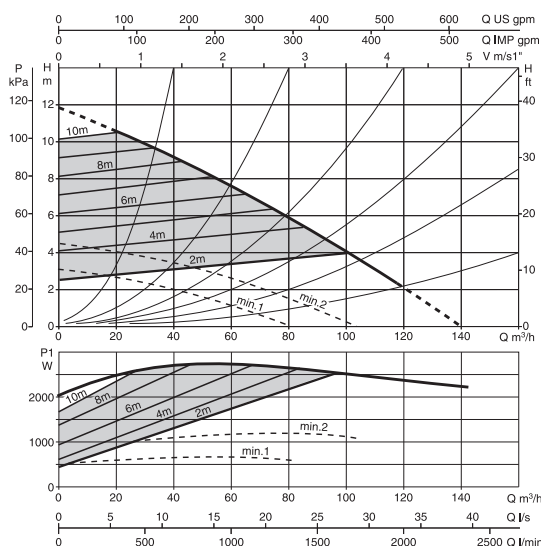
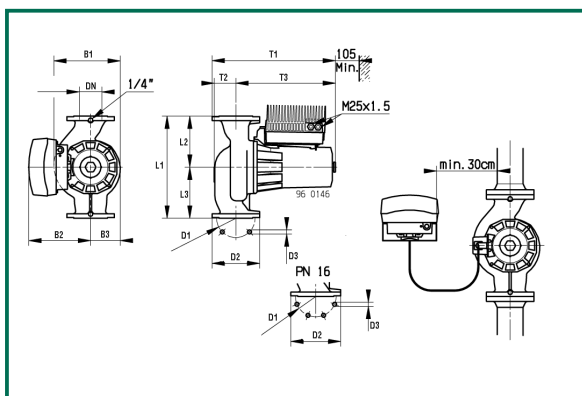
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Tolerance of curves to ISO 9906.

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Liquid temperature range: from +15°C to +95°C
 Maximum working pressure: 6 bar (600 kPa) - 16 bar (1600 kPa) on request

VEB 110/450.100 T

SINGLE FLANGED - THREE-PHASE



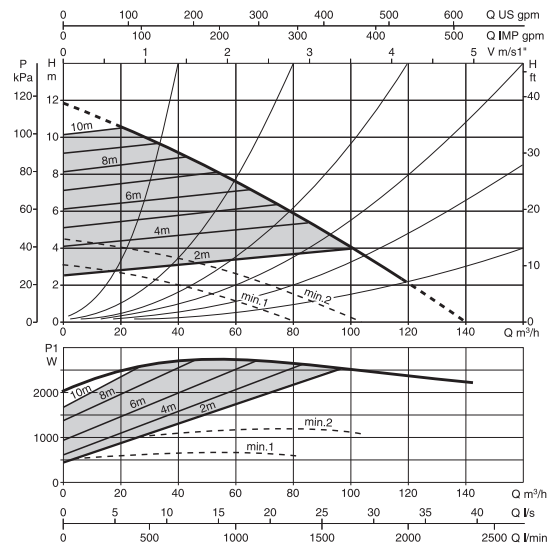
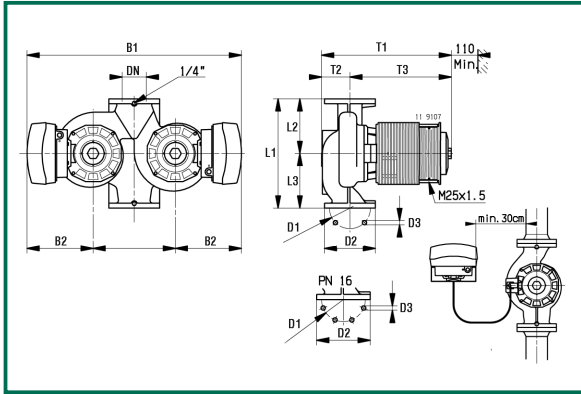
MODEL	DN	B1	B2	B3	PN 6			PN 16			L1	L2	L3	T1	T2	T3	WEIGHT (kg)
VEB 110/450.100 T	100	294	273	131	D1	D2	D3	D1	D2	D3	450	225	225	545	96	440	75

MODEL	POWER SUPPLY 50 Hz	CENTRE DISTANCE mm	ELECTRICAL DATA			
			SPEED	rpm	P1 MAX W	In A
VEB 110/450.100 T	3x400 V ~	450	MIN adjustment	800	400	1,0
			MAX adjustment	1700	2800	6,0
			min1	800	400	1,0

* Only on request

DEB 110/450.100 T

TWIN FLANGED - THREE-PHASE



MODEL	DN	B1	B2	B3	PN 6			D1	D2	D3	L1	L2	PN 16			WEIGHT (kg)	
					D1	D2	D3						T1	T2	T3		
DEB 110/450.100 T	100	886	273		170	210	18	180	220	18	450	225	225	535	117	419	152

MODEL	POWER SUPPLY 50 Hz	CENTRE DISTANCE mm	ELECTRICAL DATA			
			SPEED	rpm	P1 MAX W	In A
DEB 110/450.100 T	3x400 V ~	450	MIN adjustment	800	400	1,0
			MAX adjustment	1700	2800	6,0
			min1	800	400	1,0

* Only on request

Hydraulic data refer to a single pump in operation.