

General

Three-phase motors which are controlled by means of a frequency converter must be able to reach their maximum torque even in speed ranges below 50 %. Therefore the motor is supplied by the frequency converter with an increased motor current up to twice the rated motor current. As an inevitable result the motor temperature rises quickly due to insufficient cooling. Thus burning out of the motor coil can only be avoided by external venting of the drive motor.

Functional description of vent motors

The fan shell and the fan blade of the drive motor are removed and replaced by the extended fan shell with integrated fan. The fan is fitted with a direct mains connection and thus delivers the maximum quantity of cooling air required to protect the motor at all speeds against overheating. The external vents can be operated at a wide voltage range according to the technical data listed on page 2. They can be connected to three-phase or a.c. power supply if the instructions for connection are followed. For 1-phase operation a running capacitor is contained in the terminal box (see electrical wiring diagram on page 2).

The external vents work as a function of the sense of rotation. The air flow must be directed towards the motor.

Special versions available

- extended fan shell (for operation with tacho-alternator or motor brake)
- alternative fixing hole positions
- different fan shell diameter
- other motor suppliers than listed in the "Technical data" table

Order example

The stroke frequency of diaphragm meterin pump MEMDOS E 260 is to be controlled as a function of the water flow. A frequency converter controls the speed. To make sure that also low speeds the drive motor is not damaged, an external vent must be installed. An earthing contact-type socket is available for power supply.

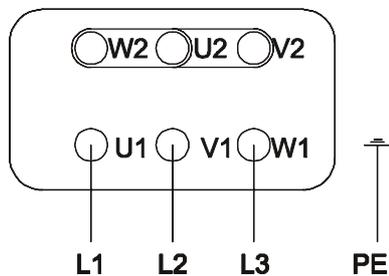
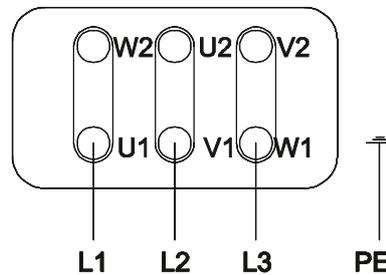
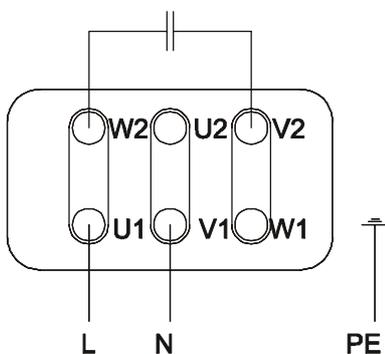
For the size of the pump motor with a power of: 0.55 kW, model 80, brand VEM, the following air vent has to be selected:

Part No. 47000100

Technical data

Motor model	63	71	80	90	100	112	
Quantity of air (m ³ /h)	47	60	88	169	208	295	
Power consumption (W)	27	30	28,5	86	86	84.5	
Speed at 50 Hz (min-1)	2910	2870	2790	2880	2830	2770	
Sound pressure level dB(A)	47	51	55	58	59	61	
Protection class	IP 66						
Dimensions (mm)	Height	185	190	195	205	210	215
	Diameter	126	143	160	176	196	220
Rated motor current (A)	3-phase 200 V...290 V	0.092	0.095	0.090	0.28	0.27	0.27
	1-phase 220 V	0.075	0.081	0.090	0.19	0.21	0.23
Part No. drive motor ATB	47000200	47000201	47000202	47000203	47000204	47000205	
Part No. drive motor VEM	-	47000101	47000100	-	-	-	
Part No. drive motor Siemens	-	-	47000303	-	-	-	

Wiring diagram

 3~  star connection

 3~  delta connection

 1~  delta Steinmetz


U1=black
 U2=green
 V1=light blue
 V2=white
 W1=brown
 W2=yellow