

NOTE! All technical data are based on a working pressure of 6 bar and with oil. For oil-free performances are -10 to 15% lower. Speed tolerance accuracy $\pm 10\%$



II 2G Ex h IIC T4 Gb X

II 2D Ex h IIC T130°C Db X

**Robust reversible motor with keyed shaft, flange**

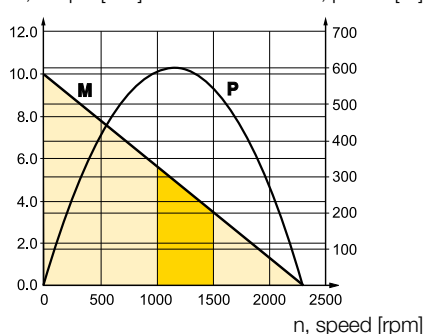
Max power	Free speed*	Nominal speed	Nominal torque	Min start torque	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm	rpm	Nm	Nm	l/s		mm	Kg	
0,600	2 300	1 150	5,00	7,50	15	G3/8	13	3,00	P1V-M060C0230
0,600	1 460	730	7,80	11,70	15	G3/8	13	3,00	P1V-M060C0146
0,600	540	270	21,00	31,50	15	G3/8	13	3,40	P1V-M060C0054
0,600	340	170	33,60	50,40	15	G3/8	13	3,40	P1V-M060C0034
0,600	210	105	54,50	80**	15	G3/8	13	3,40	P1V-M060C0021
0,600	120	60	80**	80**	15	G3/8	13	3,80	P1V-M060C0012

* maximum admissible speed (idling) / ** gear box restriction

P1V-M060C0230

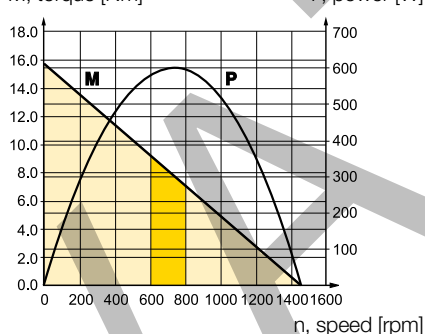
M, torque [Nm]

P, power [W]

**P1V-M060C0146**

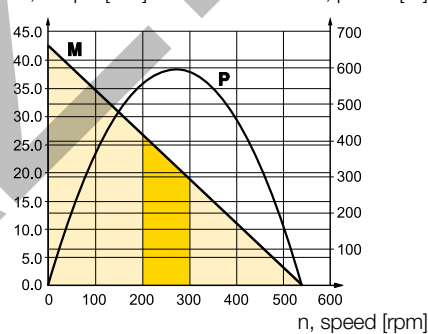
M, torque [Nm]

P, power [W]

**P1V-M060C0054**

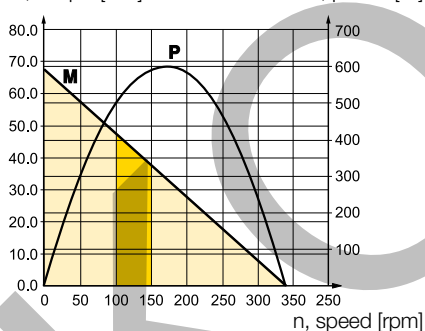
M, torque [Nm]

P, power [W]

**P1V-M060C0034**

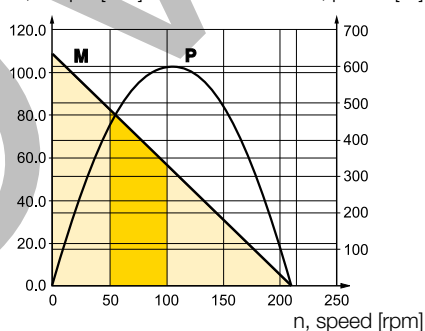
M, torque [Nm]

P, power [W]

**P1V-M060C0021**

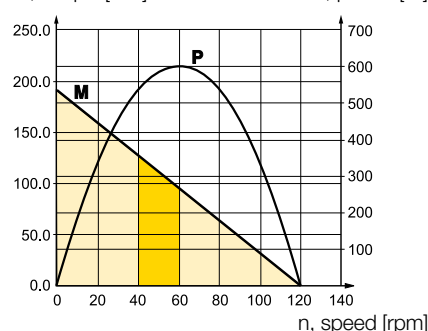
M, torque [Nm]

P, power [W]

**P1V-M060C0012**

M, torque [Nm]

P, power [W]



Possible working range of motor.



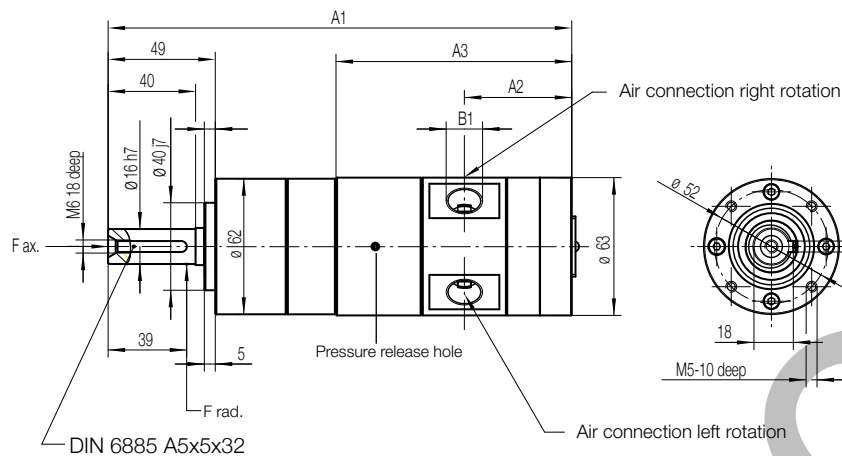
Optimum working range of motor.

Higher speeds = more vane wear

Lower speeds with high torque = more gearbox wear

Dimensions (mm)

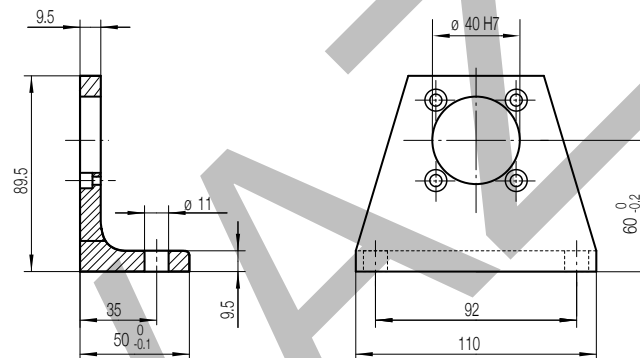
Motor P1V-M060C



Motors have 2 or 3 openings at the outside of the gearbox which must stay open in order to guarantee troublefree operation.

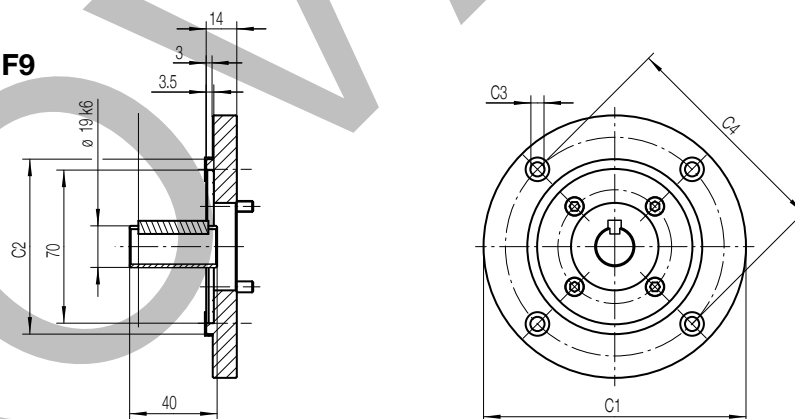
Foot bracket

P1V-MF4



Flanges

P1V-MF8, P1V-MF9



Motor size				Dimensions (mm)			
				A1	A2	A3	B1
600 watts	P1V-M060C0230	P1V-M060C0034		227.5	56.5	123	G3/8
	P1V-M060C0146	P1V-M060C0021	P1V-M060C0012	243.5	56.5	123	G3/8
	P1V-M060C0054			259	56.5	123	G3/8

Motor type	Dimensions (mm)			
	C1	C2	C3	C4
P1V-M060C		(IEC80 B5) P1V-MF9	200	130f7
		(IEC80 B14) P1V-MF8	120	80f7
			M6	100

Permissible forces air motors with gear boxes

Max. permitted load on output shaft for basic motors (based on 10,000 rpm at input shaft with 90 % probable service life for ball bearings).

a (mm)	Radial force (N)	Axial force (N)
Motors P1V-M020C0230, P1V-M020C0146		
39	240	50
Motors P1V-M020C0054, P1V-M020C0034, P1V-M020C0021		
39	360	70
Motors P1V-M020C0012, P1V-M020C0008, P1V-M020C0003		
39	520	120

Motors P1V-M040C0230, P1V-M040C0146		
39	240	50
Motors P1V-M040C0054, P1V-M040C0034, P1V-M040C0021		
39	360	70
Motors P1V-M040C0012, P1V-M040C0008		
39	520	120

Motors P1V-M060C0230, P1V-M060C0146		
39	240	50
Motors P1V-M060C0054, P1V-M060C0034, P1V-M060C0021		
39	360	70
Motors P1V-M060C0012		
39	520	120

Motors P1V-M090C0245, P1V-M090C0156		
39	400	80
Motors P1V-M090C0058, P1V-M090C0036, P1V-M090C0023		
39	600	120
Motors P1V-M090C0013, P1V-M090C0009, P1V-M090C0004		
39	1000	200

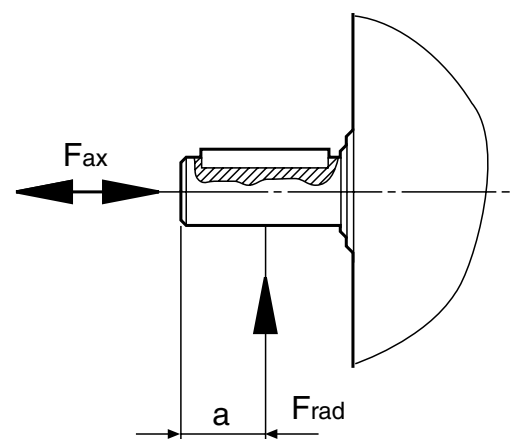
Motors P1V-M120C0245, P1V-M120C0156		
39	400	80
Motors P1V-M120C0058, P1V-M120C0036, P1V-M120C0023		
39	600	120

Permissible forces air motors without gear boxes

	a (mm)	Radial force (N)	Axial force (N)
P1V-M020B	8	145	0
P1V-M040B	8	145	0
P1V-M060B	8	145	0
P1V-M090B	9	145	0
P1V-M120B	9	145	0

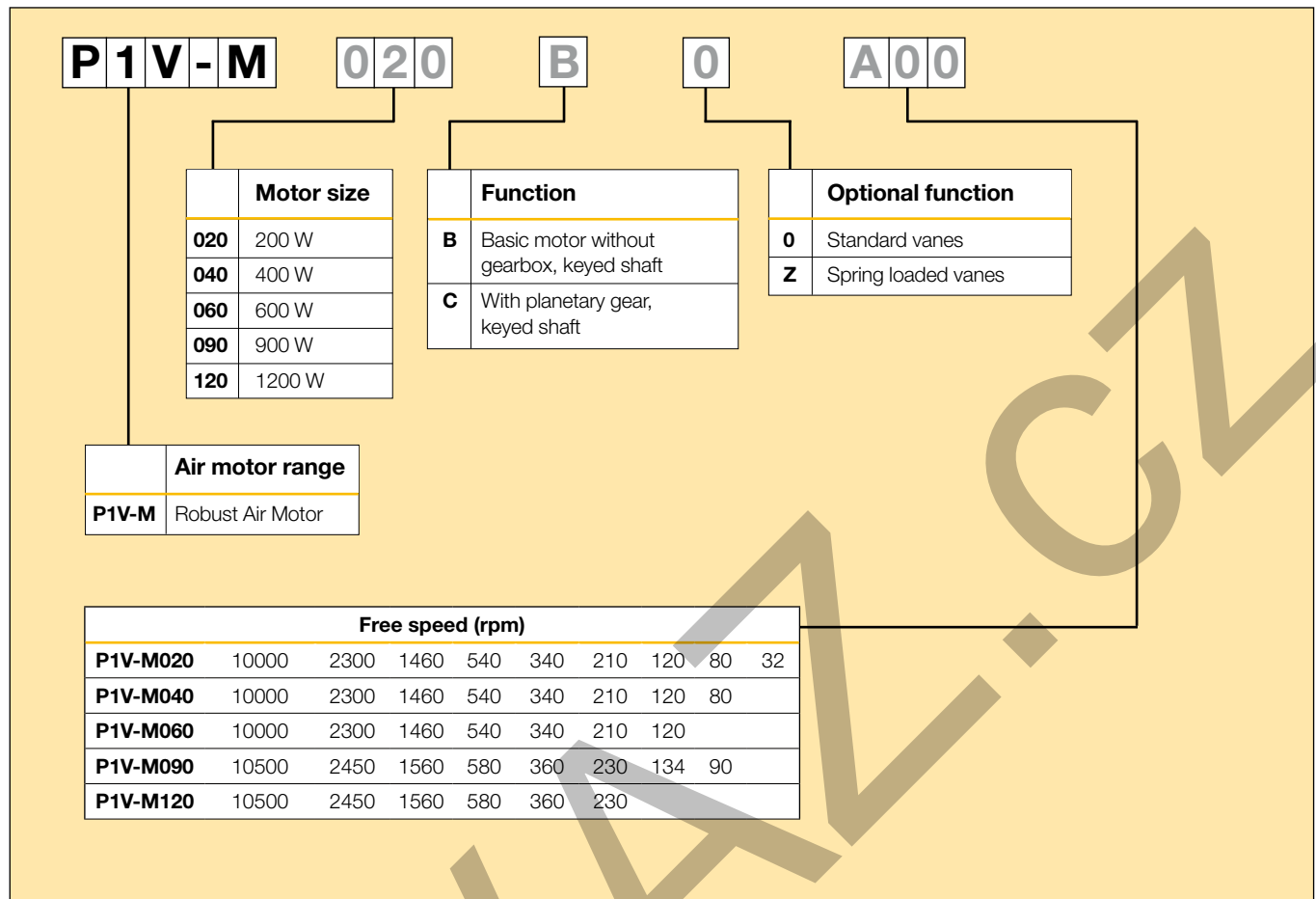
F_{rad} = Radial loading (N)

F_{ax} = Axial loading (N)



Loads on output shaft for basic motor with shaft with key slot.

Order key



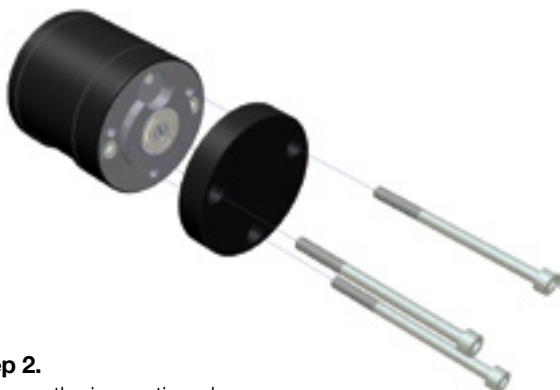
Note : This model code can not be used for creating new part numbers. All possible combinations between motor size, function and free speed are in all previous pages except for optional function.

Service – Easier - Faster - Cheaper

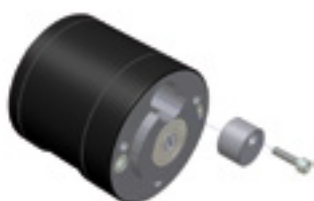
Replacing vanes - step by step.

Step 1.

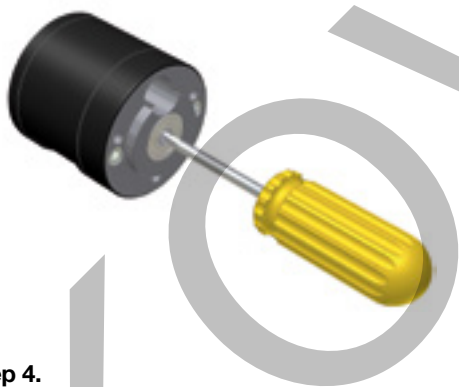
Remove the rear piece.

**Step 2.**

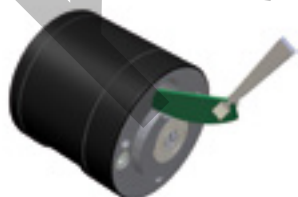
Remove the inspection plug.

**Step 3.**

Use a screwdriver to rotate the motor until you can see a vane in the centre of the inspection hole.

**Step 4.**

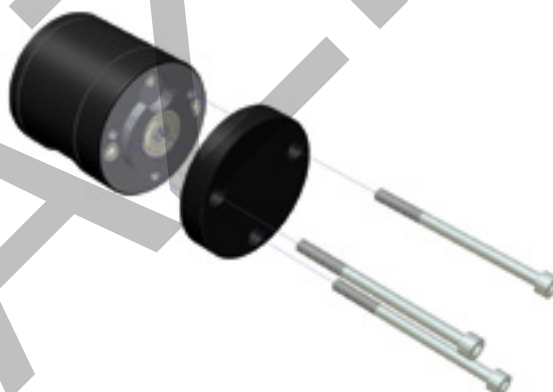
Remove the old vane and replace it with a new one.

**Repeat steps 3 and 4 until all the vanes have been replaced.****Step 5.**

Replace the inspection plug.

**Step 6.**

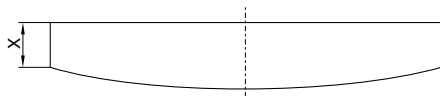
Replace the rear piece.

**Replacing vanes with motor still fitted to the machine**

The P1V-M motor has been developed to allow the vanes to be replaced without the need to remove the motor from the machine. This makes vane replacement easier, quicker and cheaper, while minimising stoppages.

Lubrication and service life

The first service is due after approximately 500 hours of operation. After the first service, the service interval is determined by the degree of vane wear*. The table below shows new dimensions and the minimum dimensions of worn vanes.



Air motors	Dimensions on new vanes X [mm]	Minimum dimensions on vane X [mm]
P1V-M020	8,5	6,5
P1V-M040	7,0	5,0
P1V-M060	8,0	6,0
P1V-M090	X	X
P1V-M120	X	X

Spare parts

For motor with Z optional function, please consult factory

Spare parts Order Code		
Motor	Air Motor (1)	Gear Box (2)
P1V-M020C0230	P1V-M/202193A	P1V-M/202202B
P1V-M020C0146	P1V-M/202193A	P1V-M/202202D
P1V-M020C0054	P1V-M/202193A	P1V-M/202202G
P1V-M020C0034	P1V-M/202193B	P1V-M/202202C
P1V-M020C0021	P1V-M/202193B	P1V-M/202202E
P1V-M020C0012	P1V-M/202193B	P1V-M/202202F
P1V-M020C0008	P1V-M/202193B	P1V-M/202202H
P1V-M020C0003	P1V-M/202193B	P1V-M/202202I
Motor	Air Motor (1)	Gear Box (2)
P1V-M040C0230	P1V-M/202194A	P1V-M/202202B
P1V-M040C0146	P1V-M/202194A	P1V-M/202202D
P1V-M040C0054	P1V-M/202194A	P1V-M/202202G
P1V-M040C0034	P1V-M/202194B	P1V-M/202202C
P1V-M040C0021	P1V-M/202194B	P1V-M/202202E
P1V-M040C0012	P1V-M/202194B	P1V-M/202202F
P1V-M040C0008	P1V-M/202194B	P1V-M/202202H
Motor	Air Motor (1)	Gear Box (2)
P1V-M060C0230	P1V-M/202179A	P1V-M/202202B
P1V-M060C0146	P1V-M/202179A	P1V-M/202202D
P1V-M060C0054	P1V-M/202179A	P1V-M/202202G
P1V-M060C0034	P1V-M/202179B	P1V-M/202202C
P1V-M060C0021	P1V-M/202179B	P1V-M/202202E
P1V-M060C0012	P1V-M/202179B	P1V-M/202202F
Motor	Air Motor (1)	Gear Box (2)
P1V-M090C0245	P1V-M/202409A	P1V-M/807015B
P1V-M090C0156	P1V-M/202409B	P1V-M/807015C
P1V-M090C0058	P1V-M/202409A	P1V-M/807015D
P1V-M090C0036	P1V-M/202409B	P1V-M/807015E
P1V-M090C0023	P1V-M/202409B	P1V-M/807015F
P1V-M090C0013	P1V-M/202409A	P1V-M/807015G
P1V-M090C0009	P1V-M/202409B	P1V-M/807015H
P1V-M090C0004	P1V-M/202409B	P1V-M/807015I
Motor	Air Motor (1)	Gear Box (2)
P1V-M120C0245	P1V-M/202457A	P1V-M/807015B
P1V-M120C0156	P1V-M/202457B	P1V-M/807015C
P1V-M120C0058	P1V-M/202457A	P1V-M/807015D
P1V-M120C0036	P1V-M/202457B	P1V-M/807015E
P1V-M120C0023	P1V-M/202457B	P1V-M/807015F

Service kits

The following kits are available for the basic motors, consisting of vanes.



Service kits, vanes for intermittent lubrication operation, option "0"

For motors	Order code
P1V-M020	P1V-6/4462971A
P1V-M040	P1V-6/4462981A
P1V-M060	P1V-6/4462991A
P1V-M090	P1V-6/4449171A
P1V-M120	P1V-6/4449181A

The following kits are available for the basic motors, consisting of vanes and springs.



Service kits, vanes for intermittent lubrication operation, option "Z"

For motors	Order code
P1V-M020	P1V-6/4449144B
P1V-M040	P1V-6/4449154B
P1V-M060	P1V-6/4449164B
P1V-M090	P1V-6/4449174B
P1V-M120	P1V-6/4449184B

* The following normal service intervals should be applied in order to guarantee problem-free operation in air motors working at load speeds. The specified hours of operation apply when the motor is running at the speed corresponding to maximum power (load speed). This is approximately half free speed. If the motor operates at higher speeds, the service interval is shorter. If the motor operates at lower speeds, the service interval is longer.

