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 -+10%

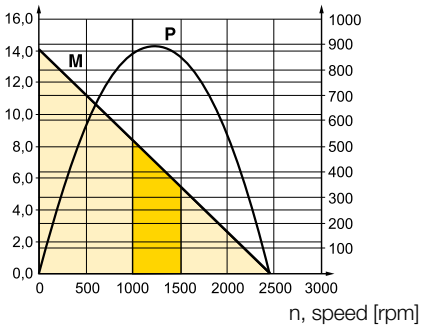
CE II 2G Ex h IIC T4 Gb X
II 2D Ex h IIIC T130°C Db X

Robust motor reversible with keyed shaft, flange

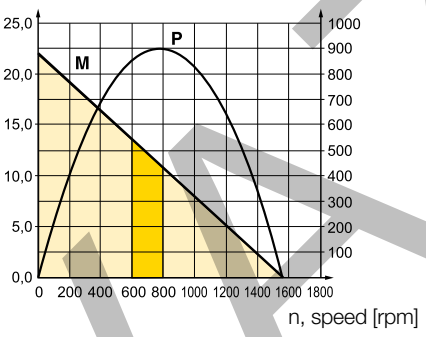
Max power	Free speed*	Nominal speed	Nominal torque	Min start torque	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm	rpm	Nm	Nm	l/s		mm	Kg	
0,900	2 450	1 225	7,00	10,50	36,7	G1/2	13	4,90	**P1V-M090C0245**
0,900	1 560	780	11,00	16,50	36,7	G1/2	13	4,90	**P1V-M090C0156**
0,900	580	290	30,00	45,00	36,7	G1/2	13	5,60	**P1V-M090C0058**
0,900	360	180	47,00	71,00	36,7	G1/2	13	5,60	**P1V-M090C0036**
0,900	230	115	75,00	112,00	36,7	G1/2	13	5,60	**P1V-M090C0023**
0,900	134	67	120**	120**	36,7	G1/2	13	6,30	**P1V-M090C0013**
0,900	90	45	120**	120**	36,7	G1/2	13	6,30	**P1V-M090C0009**
0,900	40	20	120**	120**	36,7	G1/2	13	6,30	**P1V-M090C0004**

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

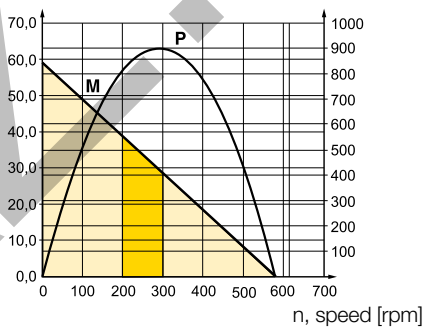
P1V-M090C0245



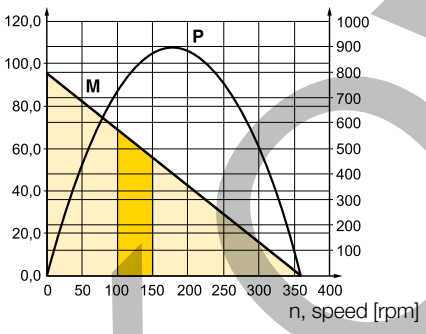
P1V-M090C0156



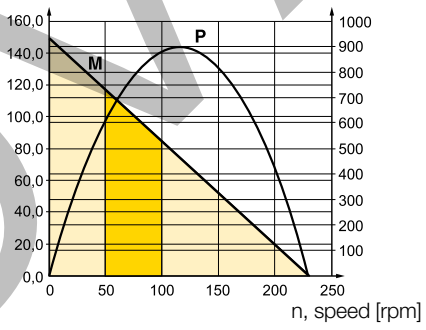
P1V-M090C0058



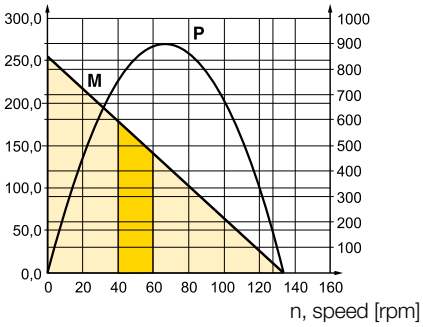
P1V-M090C0036



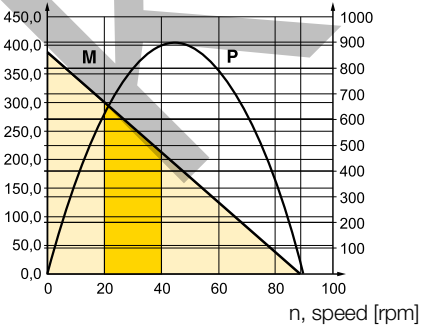
P1V-M090C0023



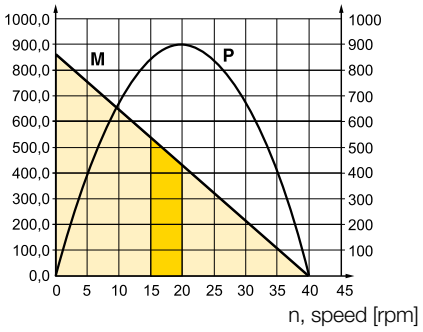
P1V-M090C0013



P1V-M090C0009



P1V-M090C0004

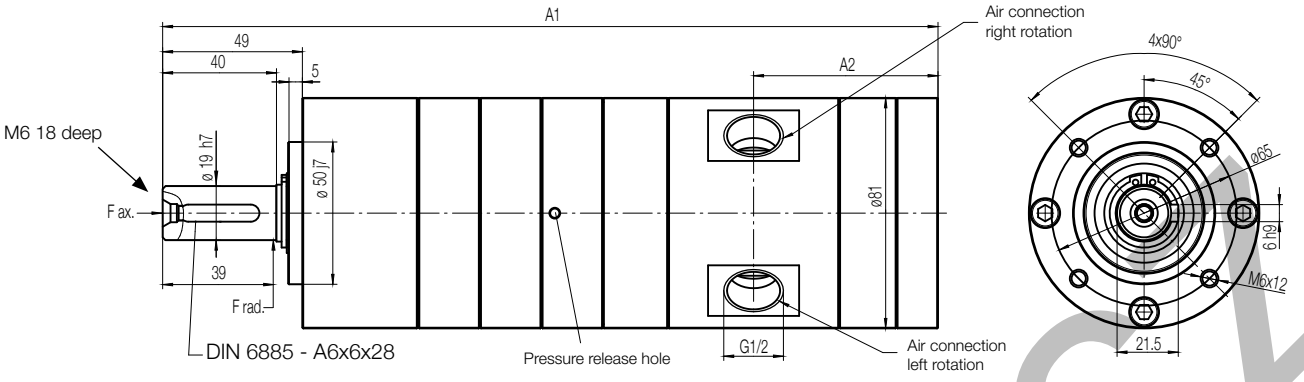


Possible working range of motor.

Optimum working range of motor.
Higher speeds = more vane wear
Lower speeds with high torque = more gearbox wear

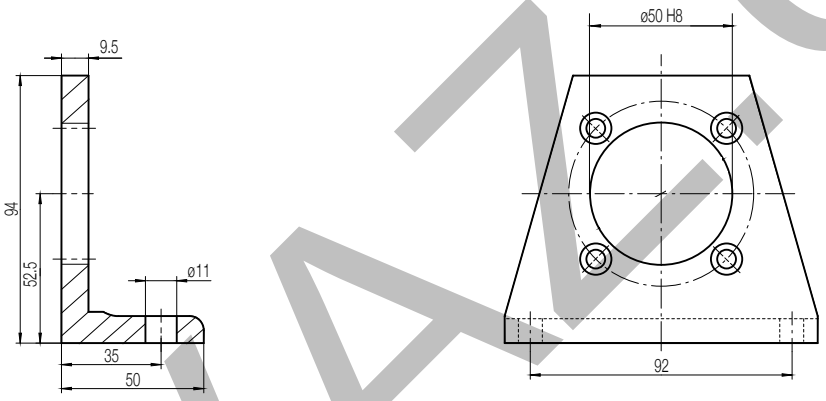
Dimensions (mm)

Motor P1V-M090C

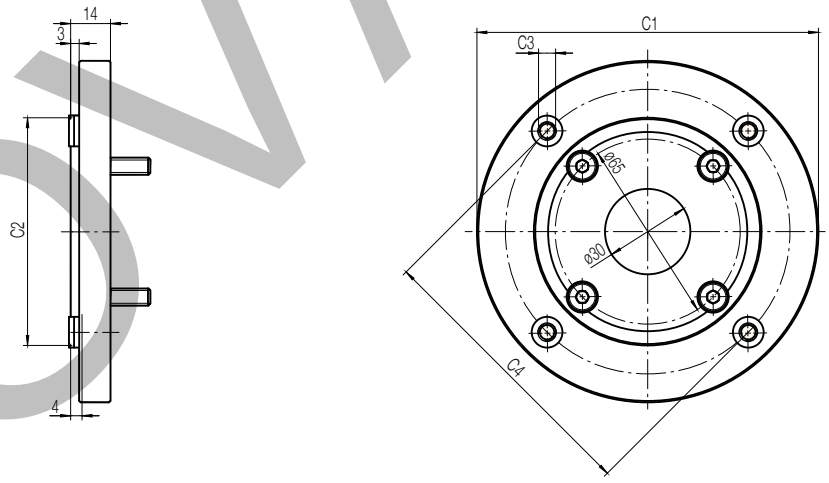


Motors have 2 or 3 openings at the ouside of the gearbox which must stay open in order to guarantee troublefree operation.

Foot bracket
P1V-MF5



Flanges
P1V-MF6, P1V-MF7



Motor size				Dimensions (mm)	
				A1	A2
900 watts	**P1V-M090C0245**	**P1V-M090C0156**		209	55
	P1V-M090C0058	**P1V-M090C0036**	**P1V-M090C0023**	231	55
	P1V-M090C0013	**P1V-M090C0009**	**P1V-M090C0004**	252.5	55

Motor type		Dimensions (mm)			
		C1	C2	C3	C4
P1V-M090C	**(IEC80 B5) P1V-MF7**	200	130f7	11	165
	(IEC80 B14) P1V-MF6	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

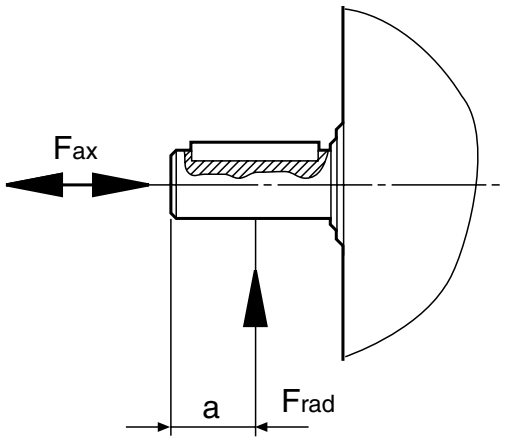
Motors P1V-M120C0245, P1V-M120C0156		
39	400	80
Motors P1V-M120C0058, P1V-M120C0036, P1V-M120C0023		
39	600	120

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

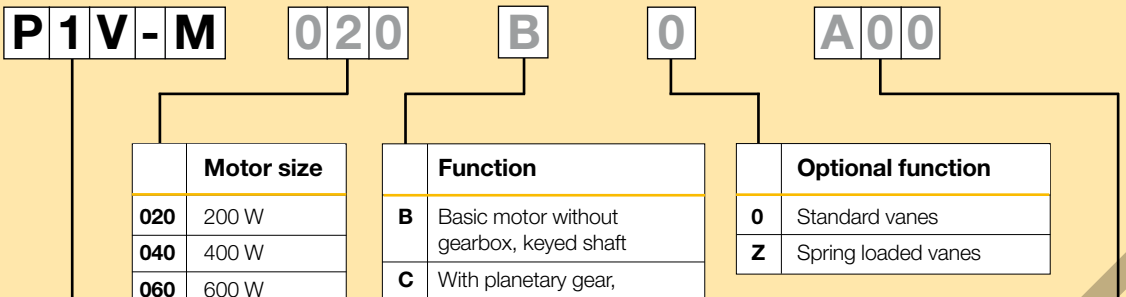
Frad = Radial loading (N)

Fax = Axial loading (N)



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

Order key



	Motor size
020	200 W
040	400 W
060	600 W
090	900 W
120	1200 W

	Function
B	Basic motor without gearbox, keyed shaft
C	With planetary gear, keyed shaft

	Optional function
0	Standard vanes
Z	Spring loaded vanes

	Air motor range
P1V-M	Robust Air Motor

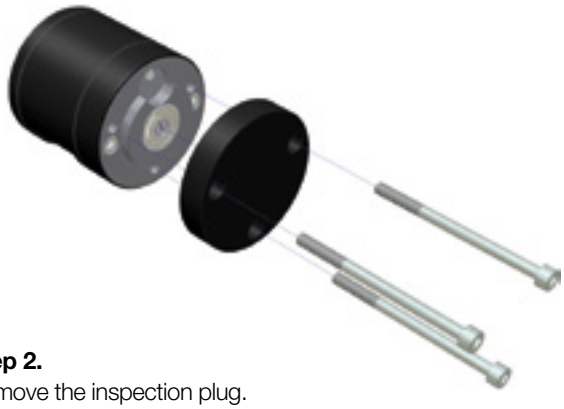
Free speed (rpm)									
P1V-M020	10000	2300	1460	540	340	210	120	80	32
P1V-M040	10000	2300	1460	540	340	210	120	80	
P1V-M060	10000	2300	1460	540	340	210	120		
P1V-M090	10500	2450	1560	580	360	230	134	90	
P1V-M120	10500	2450	1560	580	360	230			

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.

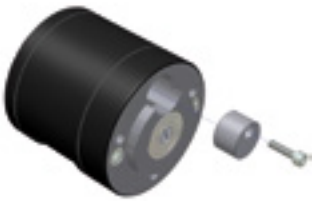
Service – Easier - Faster - Cheaper

Replacing vanes - step by step.

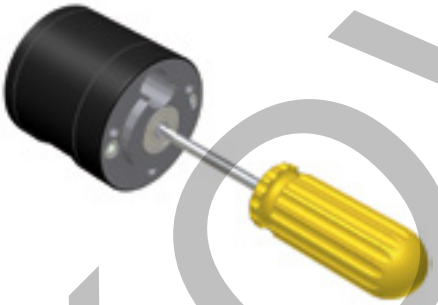
Step 1.
Remove the rear piece.



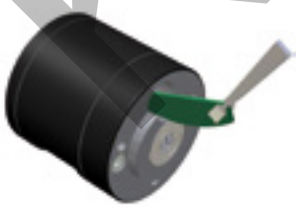
Step 2.
Remove the inspection plug.



Step 3.
Use a screwdriver to rotate the motor until you can see a vane in the centre of the inspection hole.

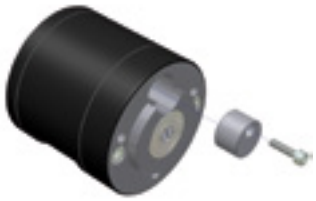


Step 4.
Remove the old vane and replace it with a new one.

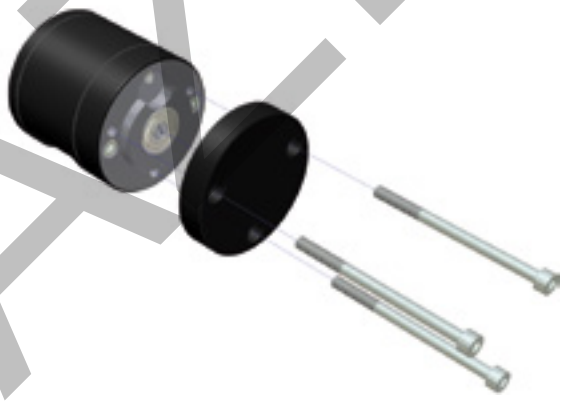


Repeat steps 3 and 4 until all the vanes have been replaced.

Step 5.
Replace the inspection plug.



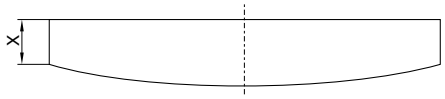
Step 6.
Replace the rear piece.



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 to 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.