



Air Tools

To use in Robots and Automated Machines

Drilling type 80 to 600 Watts

Grinding type 90 to 300 Watts

Milling type 400 to 1000 Watts

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P1V-S - Drilling, Grinding & Milling Air Motors

Introduction

A large number of drilling motors, milling motors and grinding motors have been developed using the P1V-S as the base motor in order to make it easier to install air motors in machining applications. These motors are all equipped with standard vanes for intermittent lubrication-free operation, although it is recommended to use oil mist if you are planning to operate them for extended periods.

NOTE! These motors are not made of 100% stainless steel.

Drilling motors are available with power ratings of 80, 170, 250, 400 and 600 Watts, and several different speeds for the machining of a range of materials. They can be fitted with collet chucks, drill chucks and quick-release chucks. Many of them also have accessories allowing the exhaust air to be removed.

The milling motor, with a power rating of 400 Watts, runs at a relatively high speed, and is fitted with a collet chuck for a shaft diameter of 8 mm. It is equipped with strong bearings able to handle greater shear forces on the spindle.

The grinding motor, with a power rating of 200 Watts, is fitted with a collet chuck for a shaft diameter of 8 mm and runs at a relatively high speed. It is equipped with strong bearings able to handle greater shear forces on the spindle.

The design principle of the 90 Watt grinding motor is different from the others. The turbine principle means that high speeds are possible without the need for lubrication.

Feed movement in drilling, milling and grinding motors

A slow and even feed movement is necessary in machining applications. During drilling, the feed must not uncontrollably speed up once the drill breaks through the material. One good way of solving the problem is to use a pneumatic cylinder for the feed, which is able to provide force during drilling and a rapid approach before the actual drilling phase. Feed during the drilling phase is controlled using a hydraulic brake cylinder (HYDROCHECK) fitted in parallel with the pneumatic cylinder. This provides even, slow and safe feed movement, without the risk of the uncontrolled feed described above.

Order Code Key

(This model code can not be used for creating new part numbers.

All possible combinations between motor size, function and free speed are in the next pages).

P1V-S		017		N	0	Q00	
		Motor size		Function		Free speed per min	
		008	80 W	M	For drill chuck	035	350
		009	90 W	N	With collet	999	9990
		017	170 W			A00	10000
		025	250 W			A000	100000
		030	300 W				
		040	400 W				
		050	500 W				
		060	600 W				
		070	700 W				
		100	1000 W				
		Air motor range					
P1V-S	Drilling, milling and grinding air motor						

P1V-S - Drilling, Grinding & Milling Air Motors

Technical data (all air motors are non reversible, right rotation only)

Air motor size & type	P1V-S008	P1V-S017	P1V-S025	P1V-S040	P1V-S060	P1V-S009*	P1V-S015	P1V-S025	P1V-S030	P1V-S040	P1V-S050	P1V-S070	P1V-S100
Air motor type	Drilling					Grinding				Milling			
Nominal power (watts)	80	170	250	400	600	90	150	250	300	400	500	700	1000
Working pressure (bar)	3 to 7												
Working temperature (°C)	-20 to +110												
Ambient temperature (°C)	-20 to +110												
Air flow required (NI/min)	230	300	350	420	850	120	300	350	380	420	700	900	1100
Min pipe ID, inlet (mm)	4	6	6	10	12	4	6	6	6	10	10	10	10
Min pipe ID, outlet (mm)	4	6	6	10	12	4	6	6	6	10	10	10	10
Choice of treatment unit: recommended min air flow (l/min) at p1 7.5 bar and 0.8 bar pressure drop													
	260	340	400	500	950	140	340	400	440	500	800	1020	1250
Choice of valve: recommended min nominal air flow (l/min) at p1 6 bar and 1 bar pressure drop													
	290	380	450	580	1050	160	380	450	510	580	900	1140	1400
Medium	40µm filtered, oil mist or dry unlubricated compressed air												
Oil free operation, indoor	ISO8573-1 purity class 3.4.1												
Oil free operation, outdoor	ISO8573-1 purity class 1.2.1												
Oil operation	1-2 drop per cube meter, ISO8573-1 purity class 3.-.5												
Recommended oil	Foodstuffs industry Klüber oil 4 UH1- 32 N												
Sound level free outlet (dB(A))	-	-	-	-	-	-	-	-	-	-	-	-	-
With outlet silencer (dB(A))	85	74	76	75	94	72	85	76	-	75	-	-	-
Exhaust air removed with pipes to another room	71	70	71	73	76	-	73	71	79	73	79	79	80

Note: sound levels are measured at free speed with the measuring instrument positioned 1 meter away from the air motor at an height of 1 meter.

* Un lubricated for grinding air motor P1V-S009.

Table and diagram data

All technical data are based on a working pressure of 6 bar and with oil. Oil-free performances are -10 to 15% lower.

Data tolerance accuracy +-10%

Material specification

Air motor size	P1V-S008	P1V-S017	P1V-S025	P1V-S040	P1V-S060	P1V-S009*	P1V-S015	P1V-S025	P1V-S030	P1V-S040	P1V-S050	P1V-S070	P1V-S100	
Air motor type	Drilling					Grinding				Milling				
Housing	Stainless steel X12Cr13	High grade steel (not stainless)		Stainless steel X12Cr13			High grade steel (not stainless)					Stainless steel X12Cr13		
Shaft, collet						Hardened steel (not stainless)								
Shaft for drill chuck						Hardened and tempered steel (not stainless)								
Collet						Hardened and tempered steel (not stainless)								
All internal parts						High grade steel (not stainless)								
Accessories						Surface treated steel, plastic and aluminium								
Accessories						P1V Drilling air motors								
Flange bracket						Stainless steel								
Foot bracket						Stainless steel								
Screws for the mountings						Stainless steel DIN A2								

Permitted shaft loadings**Drilling, milling and grinding motors**

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

Drilling motors with collet

Order code	Fax [N]	Frad [N]	a [mm]
P1V-S008N0***	200	75	25
P1V-S017N0***	380	50	25
P1V-S025N0***	750	220	25

Grinding motors with collet

Order code	Fax [N]	Frad [N]	a [mm]
P1V-S009N0A000	15	30	25
P1V-S015N0AQ0	15	30	25
P1V-S025N0Z00	25	50	25
P1V-S030N0***	20	40	25

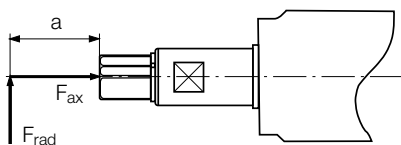
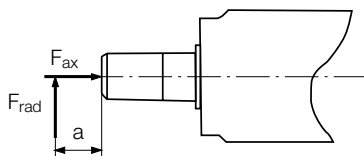
Milling motors with collet

Order code	Fax [N]	Frad [N]	a [mm]
P1V-S040N0L00	750	150	25
P1V-S050N0L00	25	50	25
P1V-S070N0N00	40	90	25
P1V-S100N0F30	55	120	25

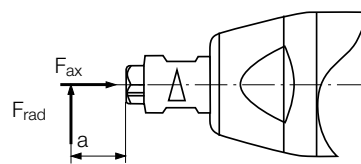
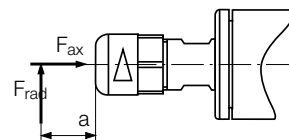
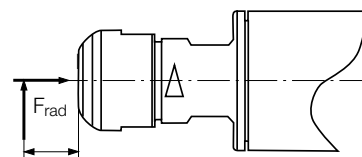
Frad = Radial loading (N)

Fax = Axial loading (N)

a = distance from shaft's end (mm)

Collet**Drill chuck****Drilling motors for drill chuck**

Order code	Fax [N]	Frad [N]	a [mm]
P1V-S017M0***	380	35	60
P1V-S025M0***	750	150	70
P1V-S040M0***	750	150	70
P1V-S060M0350	1100	150	80
P1V-S060M0270	1100	150	80
P1V-S060M0170	1100	150	80
P1V-S060M0063	1100	265	80
P1V-S060M0048	1100	265	80
P1V-S060M0030	1100	265	80
P1V-S060M0015	1100	150	80

Collet**Collet****Collet**

Load on output shaft for drilling, milling and grinding motors.

Drilling motor with collet P1V-S008N

Our smallest and most versatile drilling motor for small-scale drilling operations. The standard collet chuck is for 3 mm shaft diameter. For other diameters, select a different collet chuck as an accessory. The motor has a port for a 6 mm hose to remove the exhaust air to a silencer.



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. Data tolerance accuracy +-10%

Data for drilling motor with collet P1V-S008N

Max power	Free speed	Version	Drilling in steel	Drilling in aluminium	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm		mm	mm	l/s		mm	Kg	
0.080	22000	Collet 3 mm	-	3	3.8	M8 x 0.75*	4	0.20	P1V-S008N0N00
0.080	6000	Collet 3 mm	3	3	3.8	M8 x 0.75*	4	0.20	P1V-S008N0600
0.080	1900	Collet 3 mm	3	3	3.8	M8 x 0.75*	4	0.22	P1V-S008N0190
0.080	1300	Collet 3 mm	3	3	3.8	M8 x 0.75*	4	0.22	P1V-S008N0130

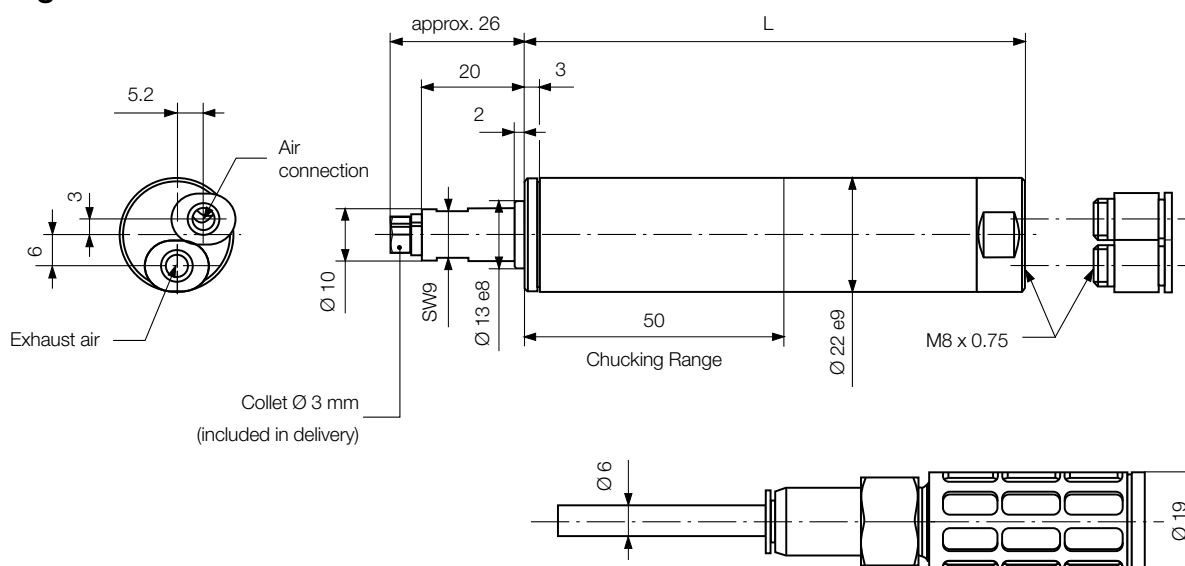
* 2 push in nipples for plastic pipe Ø 6/4 supplied

Accessories for drilling motor with collet P1V-S008N

Name	Order Code
Collet Ø 2 mm	P1V-6/314693
Collet Ø 3 mm	included with the motor
Collet Ø 4mm	P1V-6/3024741
Collet Ø 3/32"	P1V-6/314694
Collet Ø 1/8"	P1V-6/ 314407

Dimensions (mm)

Drilling motor with collet P1V-S008N



	L
P1V-S008N0N00, P1V-S008N0600	96.5
P1V-S008N0190, P1V-S008N0130	105.5

Drilling motor with collet P1V-S017N

A small drilling motor for small-scale, lighter drilling operations.

The standard collet chuck is for 6 mm shaft diameter.

For other diameters, select a different collet chuck as an accessory.

The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.

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. Data tolerance accuracy +10%



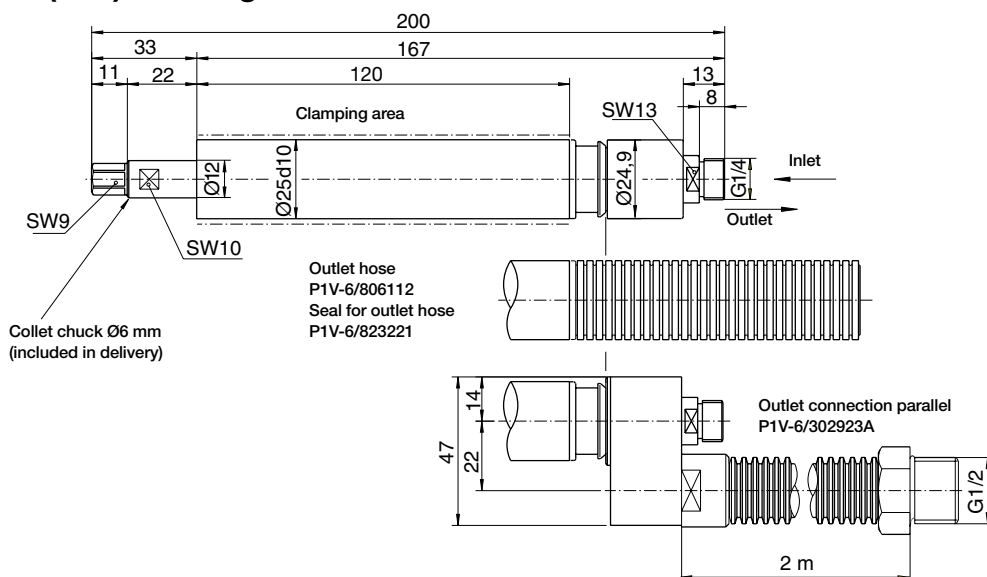
Data for drilling motor with collet P1V-S017N

Max power kW	Free speed rpm	Version	Drilling in steel mm	Drilling in aluminium mm	Air consumption at max power l/s	Conn.	Min Pipe ID mm	Weight kg	Order Code
0.170	24000	Collet 6 mm	-	4	5.0	G1/4o	6	0.38	P1V-S017N0Q00
0.170	6000	Collet 6 mm	3	5	5.0	G1/4o	6	0.38	P1V-S017N0600
0.170	4000	Collet 6 mm	4	6	5.0	G1/4o	6	0.38	P1V-S017N0400
0.170	1500	Collet 6 mm	4	6	5.0	G1/4o	6	0.43	P1V-S017N0150
0.170	1000	Collet 6 mm	4	6	5.0	G1/4o	6	0.43	P1V-S017N0100
0.170	660	Collet 6 mm	4	6	5.0	G1/4o	6	0.43	P1V-S017N0066

Accessories for drilling motor with collet P1V-S017N

Name	Order Code
Collet Ø 2 mm	P1V-6/312679
Collet Ø 3 mm	P1V-6/312681
Collet Ø 4 mm	P1V-6/312684
Collet Ø 5 mm	P1V-6/312686
Collet Ø 6 mm	included with the motor
Collet Ø 1/8"	P1V-6/312682
Collet Ø 1/4"	P1V-6/312689
Collet Ø 3/32"	P1V-6/313742
Other accessories	
Outlet hose	P1V-6/806112
Seal for outlet hose	P1V-6/823221
Outlet connection parallel	P1V-6/302923A

Dimensions (mm) - Drilling motor with collet P1V-S017N



Drilling motor for drill chuck P1V-S017M

A small drilling motor for small-scale, lighter drilling operations.

Select drill chucks as accessories.

The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.



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. Data tolerance accuracy $\pm 10\%$

Data for drilling motor for drill chuck P1V-S017M

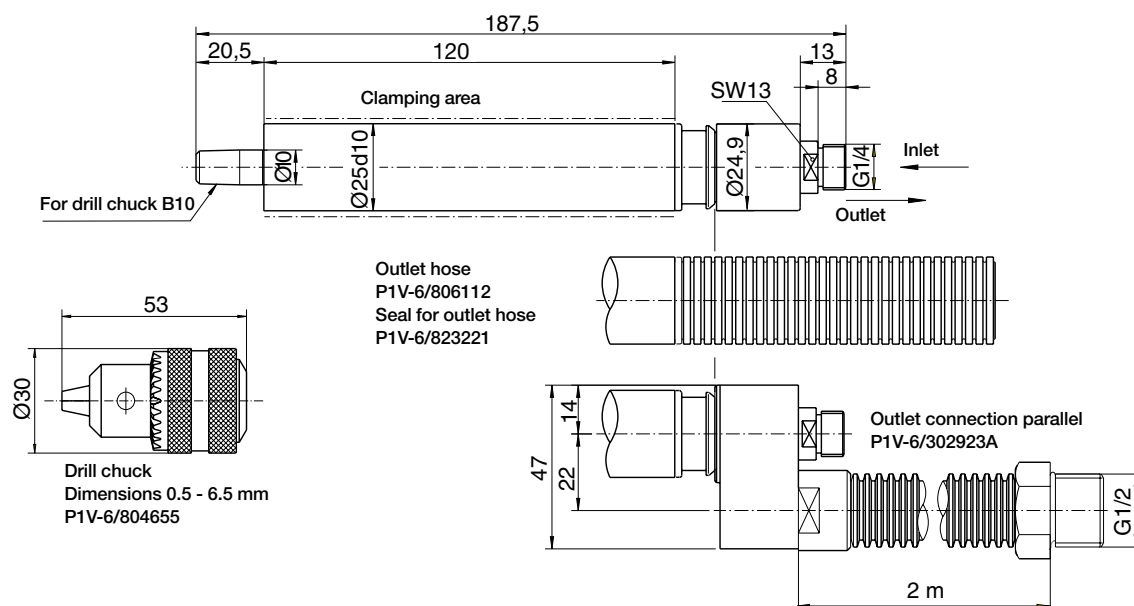
Max power	Free speed	Version	Drilling in steel	Drilling in aluminium	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm		mm	mm	l/s		mm	Kg	
0.170	6000	For drill chuck B10	3	5	5.0	G1/4o	6	0.38	P1V-S017M0600
0.170	4000	For drill chuck B10	4	6	5.0	G1/4o	6	0.38	P1V-S017M0400
0.170	1500	For drill chuck B10	4	6	5.0	G1/4o	6	0.43	P1V-S017M0150
0.170	1000	For drill chuck B10	4	6	5.0	G1/4o	6	0.43	P1V-S017M0100
0.170	660	For drill chuck B10	4	6	5.0	G1/4o	6	0.43	P1V-S017M0066

Accessories for drilling motor for drill chuck P1V-S017M

Name	Order Code
Standard drill chuck	
Diameters 0.5 – 6.5 mm/B10	P1V-6/804655
Quick release chuck	
Diameters 0-6.5 mm/B10	P1V-6/805986
Other accessories	
Outlet hose	P1V-6/806112
Seal for outlet hose	P1V-6/823221
Outlet connection parallel	P1V-6/302923A

Dimensions (mm)

Drilling motor for drill chuck P1V-S017M



Drilling motor with collet P1V-S025N

A small drilling motor for moderately heavy drilling operations.

The standard collet chuck is for 6 mm shaft diameter.

For other diameters, select a different collet chuck as an accessory.

The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.



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. Data tolerance accuracy $\pm 10\%$

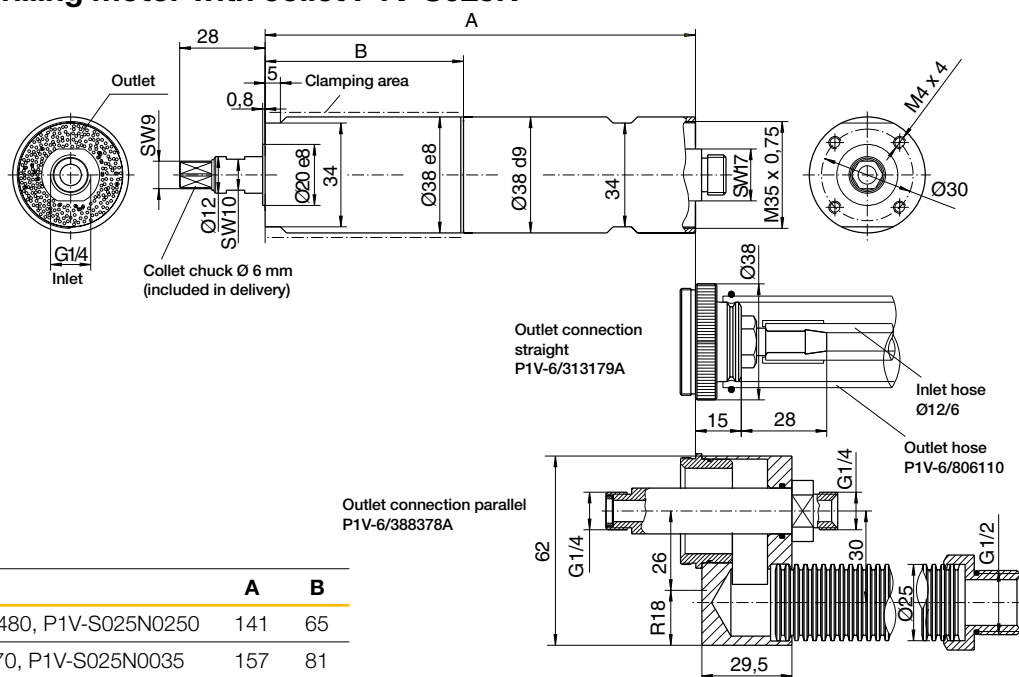
Data for drilling motor with collet P1V-S025N

Max power	Free speed	Version	Drilling in steel	Drilling in aluminium	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm		mm	mm	l/s		mm	Kg	
0.250	17000	Collet 6 mm	-	6	6.3	G1/4o	6	0.80	P1V-S025N0H00
0.250	4800	Collet 6 mm	4	6	6.3	G1/4o	6	0.80	P1V-S025N0480
0.250	2500	Collet 6 mm	6	6	6.3	G1/4o	6	0.80	P1V-S025N0250
0.250	1400	Collet 6 mm	6	6	6.3	G1/4o	6	0.90	P1V-S025N0140
0.250	700	Collet 6 mm	6	-	6.3	G1/4o	6	0.90	P1V-S025N0070
0.250	350	Collet 6 mm	6	-	6.3	G1/4o	6	0.90	P1V-S025N0035

Accessories for drilling motor with collet P1V-S025N

Name	Order Code
Collet Ø 3 mm	P1V-6/312681
Collet Ø 4 mm	P1V-6/312684
Collet Ø 4.5 mm	P1V-6/312685
Collet Ø 5 mm	P1V-6/312686
Collet Ø 6 mm	included with the motor
Collet Ø 1/8"	P1V-6/312682
Collet Ø 1/4"	P1V-6/312689
Other accessories	
Outlet connection straight	P1V-6/3131179A
Outlet hose Ø 23 x 28 mm 0.75 m long	P1V-6/806110
Outlet hose	P1V-6/823221
Outlet connection parallel	P1V-6/388378A

Dimensions (mm) - Drilling motor with collet P1V-S025N



	A	B
P1V-S025N0H00, P1V-S025N0480, P1V-S025N0250	141	65
P1V-S025N0140,P1V-S025N0070, P1V-S025N0035	157	81

Drilling motor for drill chuck P1V-S025M

A small drilling motor for moderately heavy drilling operations.

The standard collet chuck is for 6 mm shaft diameter.

For other diameters, select a different collet chuck as an accessory.

The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.

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. Data tolerance accuracy $\pm 10\%$



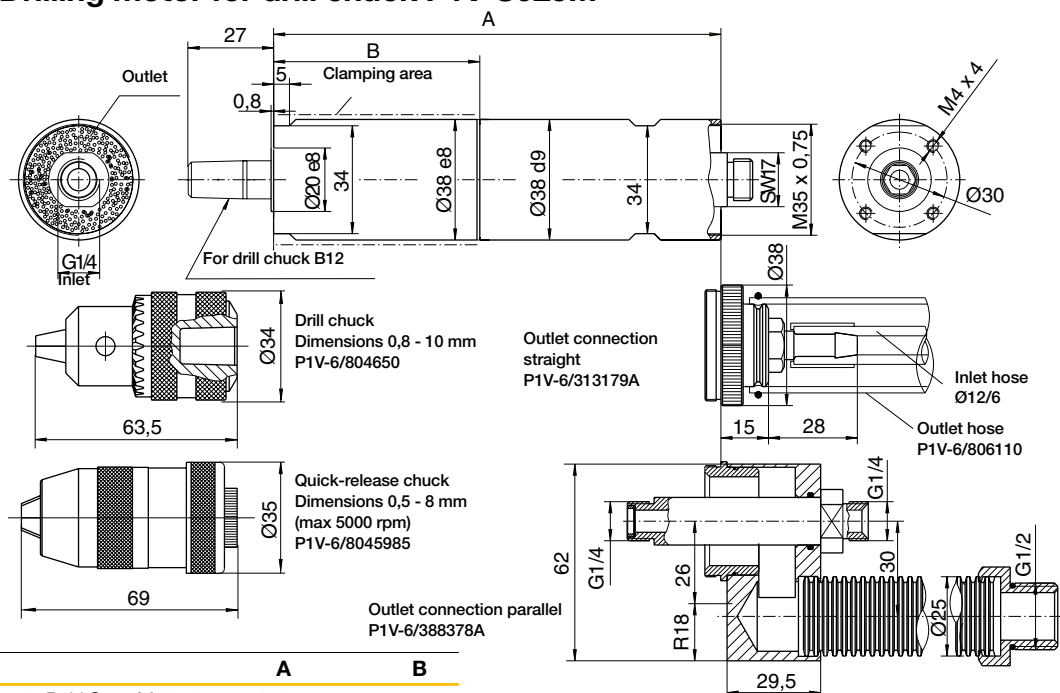
Data for drilling motor for drill chuck P1V-S025M

Max power kW	Free speed rpm	Version	Drilling in steel mm	Drilling in aluminium mm	Air consumption at max power l/s	Conn.	Min pipe ID mm	Weight Kg	Order code
0.250	17000	For drill chuck B12	-	6	6.3	G1/4o	6	0.80	P1V-S025M0H00
0.250	4800	For drill chuck B12	4	6	6.3	G1/4o	6	0.80	P1V-S025M0480
0.250	2500	For drill chuck B12	6	8	6.3	G1/4o	6	0.80	P1V-S025M0250
0.250	1400	For drill chuck B12	8	10	6.3	G1/4o	6	0.80	P1V-S025M0140
0.250	700	For drill chuck B12	10	-	6.3	G1/4o	6	0.80	P1V-S025M0070
0.250	350	For drill chuck B12	10	-	6.3	G1/4o	6	0.80	P1V-S025M0035

Accessories for drilling motor for drill chuck P1V-S025M

Name	Order Code
Standard drill chuck	
Diameters 0.8 - 10 mm/B12	P1V-6/804650
Diameters 1.5 to 13 mm/B12	P1V-6/804694
Quick release chuck	
Diameters 0.5 - 8 mm/B12	P1V-6/805985 (not for P1V-S025M0H00)
Other accessories	
Outlet connection straight	P1V-6/313179A
Collet Ø 1/4"	P1V-6/312689
Outlet hose Ø 23 x 28 mm 0.75 m long	P1V-6/806110
Outlet connection parallel	P1V-6/388378A

Dimensions (mm) - Drilling motor for drill chuck P1V-S025M



	A	B
P1V-S025M0H00, P1V-S025M0480, P1V-S025M0250	141	65
P1V-S025M0140, P1V-S025M0070, P1V-S025M0035	157	81

Drilling motor for drill chuck P1V-S040M

Our large drilling motor is used for small-scale heavy drilling operations requiring considerable feed force.
Select drill chucks or quick-release chucks as accessories as necessary.
The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.

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. Data tolerance accuracy +10%



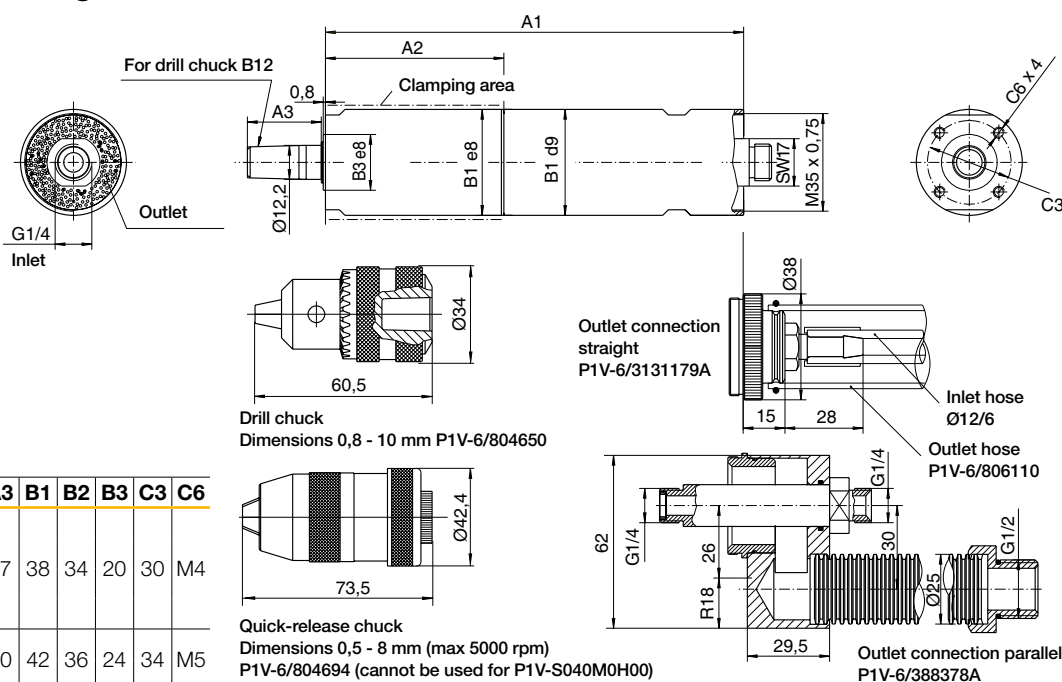
Data for drilling motor for drill chuck P1V-S040M

Max power	Free speed	Version	Drilling in steel	Drilling in aluminium	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm		mm	mm	l/s		mm	Kg	
0.400	17000	For drill chuck B12	-	6	8.0	G1/4o	10	0.82	P1V-S040M0H00
0.400	4800	For drill chuck B12	4	6	8.0	G1/4o	10	0.82	P1V-S040M0480
0.400	2500	For drill chuck B12	6	8	8.0	G1/4o	10	0.82	P1V-S040M0250
0.400	1400	For drill chuck B12	8	10	8.0	G1/4o	10	0.92	P1V-S040M0140
0.400	700	For drill chuck B12	8	10	8.0	G1/4o	10	1.30	P1V-S040M0070
0.400	400	For drill chuck B12	8	12	8.0	G1/4o	10	1.37	P1V-S040M0040

Accessories for drilling motor for drill chuck P1V-S040M

Name	Order Code
Standard drill chuck	
Diameters 0.8 - 10 mm/B12	P1V-6/804650
Diameters 1.5 to 13 mm/B12	P1V-6/804694
Quick release chuck	
Diameters 0.8 - 10 mm/B12	P1V-6/805985 (not for P1V-S040M0H00))
Other accessories	
Outlet connection straight	P1V-6/3131179A
Outlet hose Ø 23 x 28 mm 0.75 m long	P1V-6/806110
Outlet connection parallel	P1V-6/388378A

Dimensions (mm) Drilling motor for drill chuck P1V-S040M



Order code	A1	A2	A3	B1	B2	B3	C3	C6
P1V-S040M0H00								
P1V-S040M0480	152	64	27	38	34	20	30	M4
P1V-S040M0250								
P1V-S040M0140	167	80						
P1V-S040M0070								
P1V-S040M0040	170	82	30	42	36	24	34	M5

Drilling motor for drill chuck P1V-S060M

Our large drilling motor is used for small-scale heavy drilling operations requiring considerable feed force.

Select drill chucks or quick-release chucks as accessories as necessary.

The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.



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. Data tolerance accuracy $\pm 10\%$

Data for drilling motor for drill chuck P1V-S060M

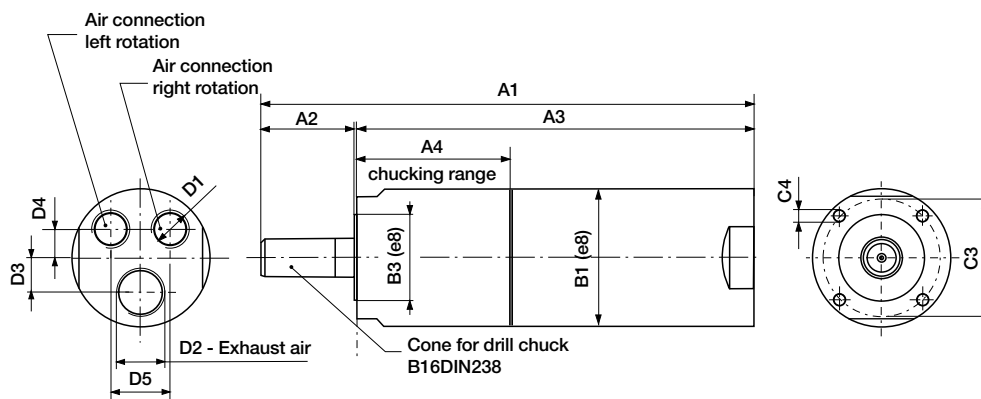
Max power kW	Free speed rpm	Version	Drilling in steel mm	Drilling in aluminium mm	Air consumption at max power l/s	Conn.	Min pipe ID mm	Weight Kg	Order code
0.600	3500	For drill chuck B16	3	3	14.2	G3/8	12	2.1	P1V-S060M0350
0.600	2700	For drill chuck B16	5	5	14.2	G3/8	12	2.1	P1V-S060M0270
0.600	1700	For drill chuck B16	8	8	14.2	G3/8	12	2.1	P1V-S060M0170
0.600	630	For drill chuck B16	13	13	14.2	G3/8	12	2.2	P1V-S060M0063
0.600	480	For drill chuck B16	13	13	14.2	G3/8	12	2.3	P1V-S060M0048
0.600	300	For drill chuck B16	13	13	14.2	G3/8	12	2.3	P1V-S060M0030
0.600	150	For drill chuck B16	13	13	14.2	G3/8	12	2.3	P1V-S060M0015

Accessories for drilling motor for drill chuck P1V-S060M

Name	Order code
Standard drill chuck Diameters 1 – 13 mm/B16	P1V-6/804652
Quick release chuck Diameters 1 – 13 mm/B16	P1V-6/804663

Dimensions (mm)

Drilling motor for drill chuck P1V-S060M



Order code	A1	A2	A3	A4	B1	B3	C3	C4	D1	D2	D3	D4	D5
P1V-S060M0350	204	37.5	166	66	56	35	48	M6	G3/8	G1/2	14	11.5	24
P1V-S060M0270													
P1V-S060M0170													
P1V-S060M0063	222	38	184	84	56	35	48	M6	G3/8	G1/2	14	11.5	24
P1V-S060M0048	219		180	80									
P1V-S060M0030													
P1V-S060M0015													

Mountings for drilling P1V-S air motors

Type	For drilling motor	Weight Kg	Order code
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Flange

P1V-S008	0.04	P1V-S4008B
P1V-S025	0.09	P1V-S4020B
P1V-S040	0.12	P1V-S4030B
P1V-S060	0.25	P1V-S4060B

Foot bracket

P1V-S008	0.08	P1V-S4008F
P1V-S025	0.11	P1V-S4020F
P1V-S040	0.11	P1V-S4030F
P1V-S060	0.30	P1V-S4060F

All brackets supplied with fastening screws for the motor.

Grinding motors with collets 90, 150, 250 & 300 W

The grinding motor 90 W is used for small-scale point grinding and small-scale milling where the high speed is an advantage. It has proved to be very useful for drilling small holes and milling thin slits in PCBs in the electronics industry. In this application, the high speed means that the holes and slits are free of burrs on the underside.

The other grinding motors are used when larger-scale point grinding is required. The motor can also be used for light milling operations. The motor has a built-in silencer for exhaust air.



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. Data tolerance accuracy +-10%

Data for grinding motors with collets 90, 150, 250 & 300 W

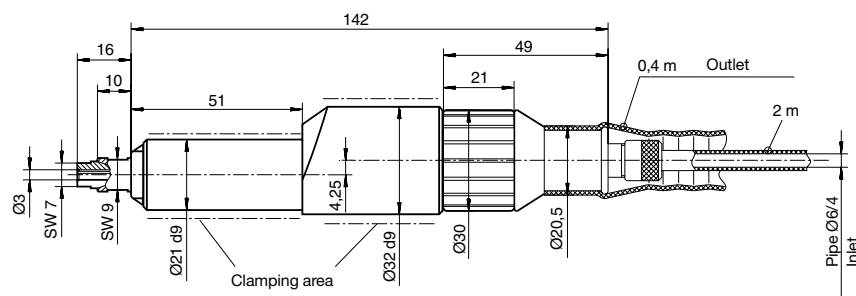
Max power	Free speed	Version	Point grinding diam max	Milling diam. max mm	Air consumption at max power	Conn.	Min Pipe ID	Weight	Order Code
kW	rpm		mm		l/s		mm	kg	
0.09	100000	Collet 3 mm	-	-	x		6	4.0	P1V-S009N0A000
0.150	47000	Collet 6 mm	-	-	x	G1/4o	6	0.36	P1V-S015N0AQ0
0.250	32000	Collet 6 mm	-	-	x	G1/4o	6	0.80	P1V-S025N0Z00
0.300	30000	Collet 6 mm	-	-	x	G1/4o	6	0.70	P1V-S030N0X00
0.300	45000	Collet 6 mm	-	-	x	-	6	0.70	P1V-S030N0AN0

Accessories for grinding motors with collets 90, 150, 250 & 300 W

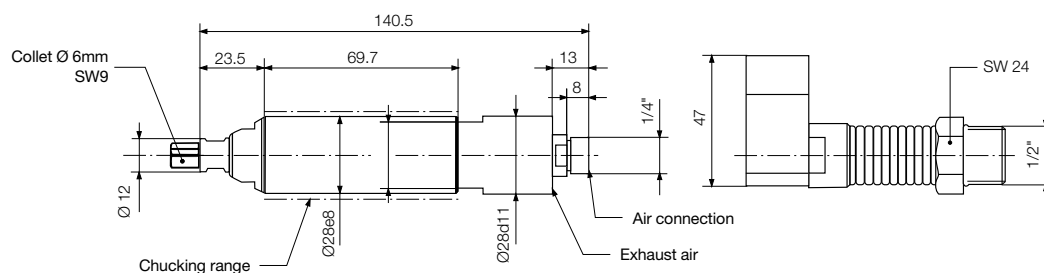
Name	Order Code		
Collet	For P1V-S015	For P1V-S025	For P1V-S030
Collet Ø 3 mm	P1V-6/312681		P1V-6/830650
Collet Ø 4 mm	P1V-6/312684		P1V-6/830702
Collet Ø 5 mm	P1V-6/312686		P1V-6/830703
Collet Ø 6 mm	included with motor		
Collet Ø 1/8" (3, 175 mm)	P1V-6/312682		P1V-6/830651
Collet Ø 3/16" (4,76 mm)	-		P1V-6/830652
Collet Ø 1/4" (6,35 mm)	P1V-6/312689		P1V-6/830653

Dimensions (mm)

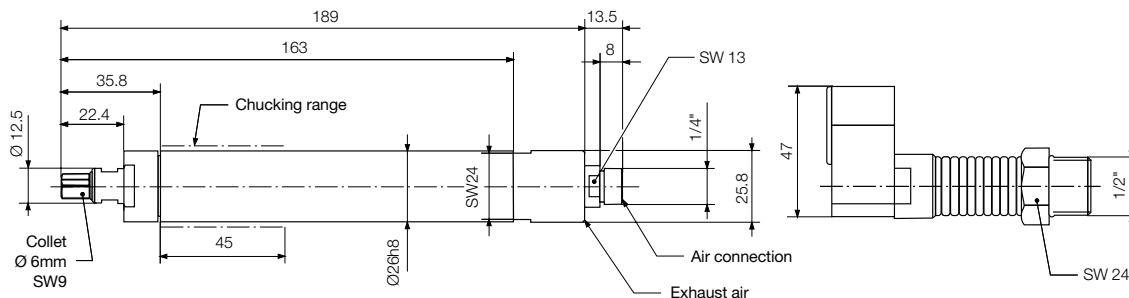
Grinding motor P1V-S009N0A000



Grinding motor P1V-S015N0AQ0

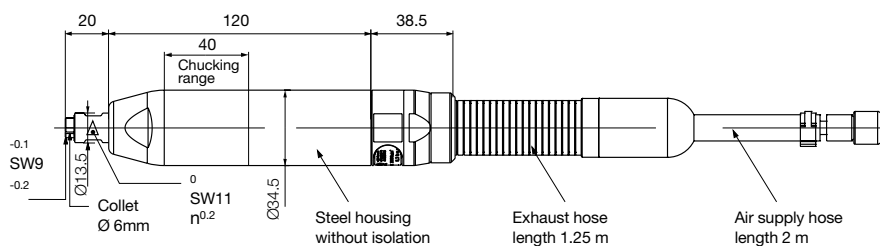


Grinding motor P1V-S025N0Z00



Grinding motor P1V-S030N0X00

Grinding motor P1V-S030N0AN0



Milling motor with collet P1V-S040N

This motor was designed for milling plastic components, but it can also be used for milling other materials. The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.



Note! All technical data are based on a working pressure of 6 bar and with oil. For oil-free performances are -10 to 20% lower. Data tolerance accuracy $\pm 10\%$

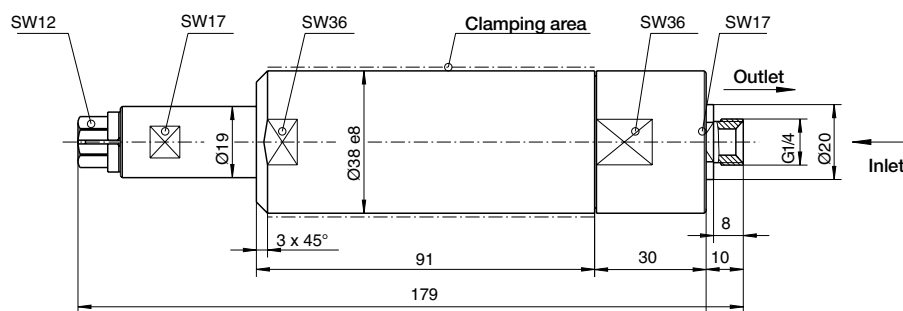
Data for milling motor with collet P1V-S040N

Max power	Free speed	Version	Milling of plastic mill dia. max mm	Milling of wood mill dia. max mm	Air consumption at max power l/s	Conn.	Min pipe ID	Weight	Order code
kW	rpm						mm	Kg	
0,400	20000	Collet 6 mm	8	10	5,0	G1/4o	6	0,80	P1V-S040N0L00

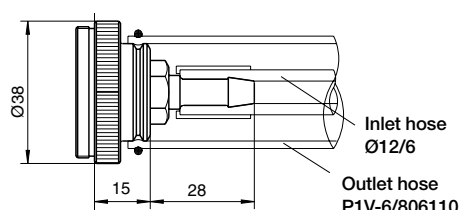
Accessories for milling motor with collet P1V-S040N

Name	Order Code
Collet Ø 3 mm	P1V-6/312690
Collet Ø 4 mm	P1V-6/312692
Collet Ø 5 mm	P1V-6/312693
Collet Ø 6 mm	included with the motor
Collet Ø 7 mm	P1V-6/312739
Collet Ø 8 mm	P1V-6/312696
Collet Ø 9 mm	P1V-6/313137
Collet Ø 1/8"	P1V-6/312691
Collet Ø 1/4"	P1V-6/312695
Other accessories	
Outlet connection straight	P1V-6/3131179A
Outlet hose Ø 23 x 28 mm 0,75 m long	P1V-6/806110
Outlet connection parallel	P1V-6/388378A

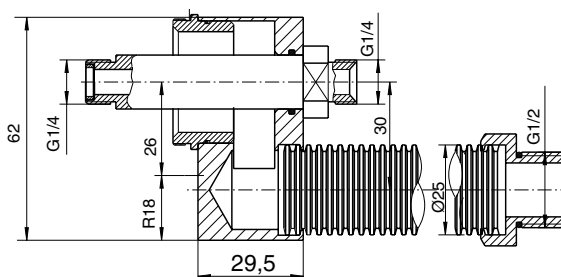
Dimensions (mm) - Milling motor with collet P1V-S040N0L00



Outlet connection straight
P1V-6/3131179A



Outlet connection parallel
P1V-6/388378A



Milling motors with collets 500, 700 & 1000 W

This motor was designed for milling plastic components, but it can also be used for milling other materials.

The motor has a built-in silencer for exhaust air. If lower noise levels are required, or if you want the exhaust air to be collected, the relevant accessories are available.

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. Data tolerance accuracy +-10%

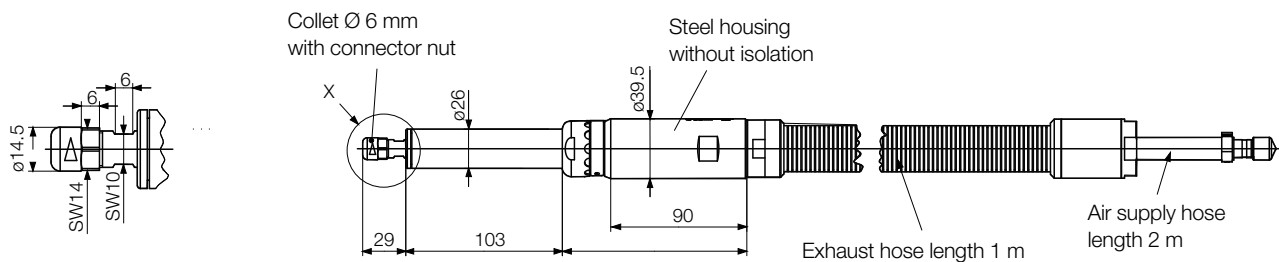
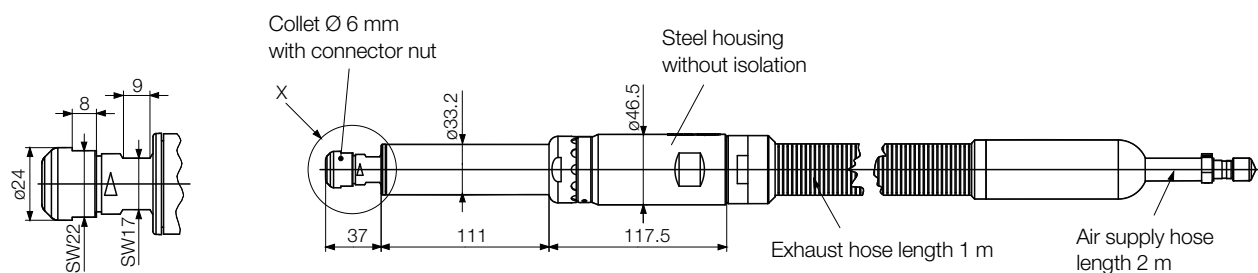
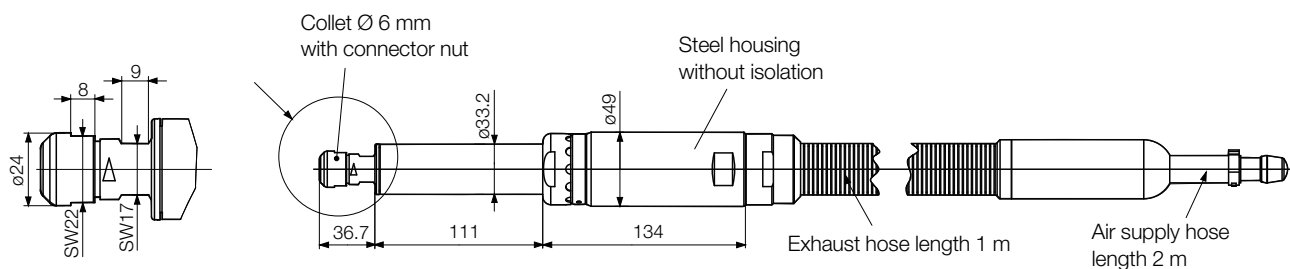


Data for milling motors with collets 500, 700 & 1000 W

Max power	Free speed	Version	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm		l/s		mm	Kg	
0.500	20000	Collet 6 mm	15.0	-	10	1.20	P1V-S050N0L00
0.700	19000	Collet 6 mm	15.0	-	10	1.70	P1V-S070N0N00
1.000	15300	Collet 6 mm	16.7	-	12	1.70	P1V-S100N0F30

Accessories for milling motors with collets 500, 700 & 1000 W

Name	Order Code		
	For P1V-S050	For P1V-S070	For P1V-S100
Collet			
Collet Ø 3 mm	P1V-6/6014320	P1V-6/6014317	
Collet Ø 4 mm	P1V-6/6014321	P1V-6/6017743	
Collet Ø 5 mm	-	P1V-6/6017744	
Collet Ø 6 mm	Included with the motor		
Collet Ø 7 mm		-	
Collet Ø 8 mm	-	P1V-6/315073	
Collet Ø 8 mm (in stainless steel)	-	P1V-6/6014282	
Collet Ø 9 mm	-	P1V-6/315089	
Collet Ø 1/8" (3,175 mm)	P1V-6/6014320	-	-
Collet Ø 3/16" (4,76 mm)	P1V-6/6014321	P1V-6/315088	
Collet Ø 1/4" (6,35 mm)	P1V-6/6014314	P1V-6/315074	
Collet Ø 5/16"	-	P1V-6/315090	

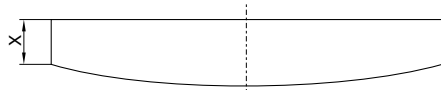
Dimensions (mm)**Milling motor with collet P1V-S050N0L00****Milling motor with collet P1V-S070N0N00****Milling motor with collet P1V-S100N0F30**

P1V-S - Drilling, Grinding & Milling Air Motors

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.



Drilling motors	New dimensions X (mm)	Minimum dimensions X (mm)
P1V-S008	4.3	4.0
P1V-S017	4.2	3.3
P1V-S025	6.5	5.8
P1V-S040	6.8	6.0

Milling motors	New dimensions X (mm)	Minimum dimensions X (mm)
P1V-S040	X	X
P1V-S050	X	X
P1V-S070	X	X
P1V-S100	X	X

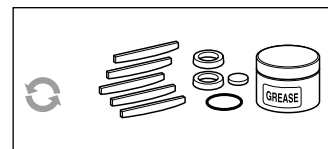
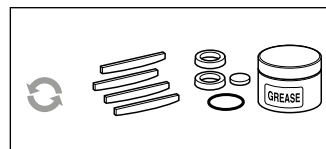
Grinding motors	New dimensions X (mm)	Minimum dimensions X (mm)
P1V-S009	No vanes	No vanes
P1V-S015	X	X
P1V-S025	X	X
P1V-S030	X	X



* 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.

Service kits for drilling, milling and grinding motors

The following kits are available for the motors, consisting of vanes, (springs), silencers, O-rings, seals and 50 g of grease: (USDA-H1 approved)



Service kits

For drilling motors	Order code
P1V-S008N	P1V-6/446085A
P1V-S017N/M	P1V-6/446086A
P1V-S025N/M	P1V-6/446087A
P1V-S040M	P1V-6/446088A
P1V-S060M0350	9121720604
P1V-S060M0270	9121720604
P1V-S060M0170	9121720604
P1V-S060M0063	9121720604
P1V-S060M0048	9121720605
P1V-S060M0030	9121720605
P1V-S060M0015	9121720605

For milling motors	Order code
P1V-S040N	P1V-6/446088A
P1V-S050N	P1V-6/4405021B
P1V-S070N	P1V-6/4405021C
P1V-S100N	P1V-6/4405021D

For grinding motors	Order code
P1V-S009N	Service free
P1V-S015N	P1V-6/4449221A
P1V-S025N	P1V-6/4449211A
P1V-S030N	P1V-6/4405021B