



Screwdriving technology

Automation

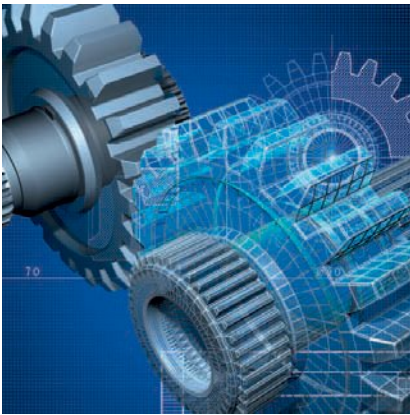
Air motors

Air tools

**DEPRAG**

## POWER LINE

high performance air motors  
from 1.6 to 18 kW



The high starting torque on this machine, its unrivalled light weight, as well as its robust and reliable design are clear advantages in comparison with any electric drive.

The product line of versatile high performance foot and flange motors is in a class of its own.

high performance  
long life-span

robust  
reliable

low weight  
high starting torque



# OVERVIEW PRODUCT SPECTRUM POWER LINE MOTORS

## POWER LINE High performance motors



POWER LINE High performance motors with integrated planetary gears provide highest torque.

They are available in

- flange design (FM)
- foot design (KM)

### Reversal via external valve

#### Performance classes:

1.6 kW	Page 28
2.6 kW	Page 28
3.6 kW	Page 28
5.1 kW	Page 32
9 kW	Page 32
18 kW	Page 32

### Reversal via lever

#### Performance classes:

1.9 kW	Page 30
3.3 kW	Page 30
4.6 kW	Page 30

## The Design of your Air Motor:

### Calculating the motor performance:

$$P = \frac{M \times n}{9550}$$

**P = Power Output in kW**  
**M = Nominal Torque in Nm**  
**n = Nominal-Speed in rpm**

**Power [HP] = P [kW] x 1.34**  
**Torque [in.lbs] = M [Nm] x 8.85**

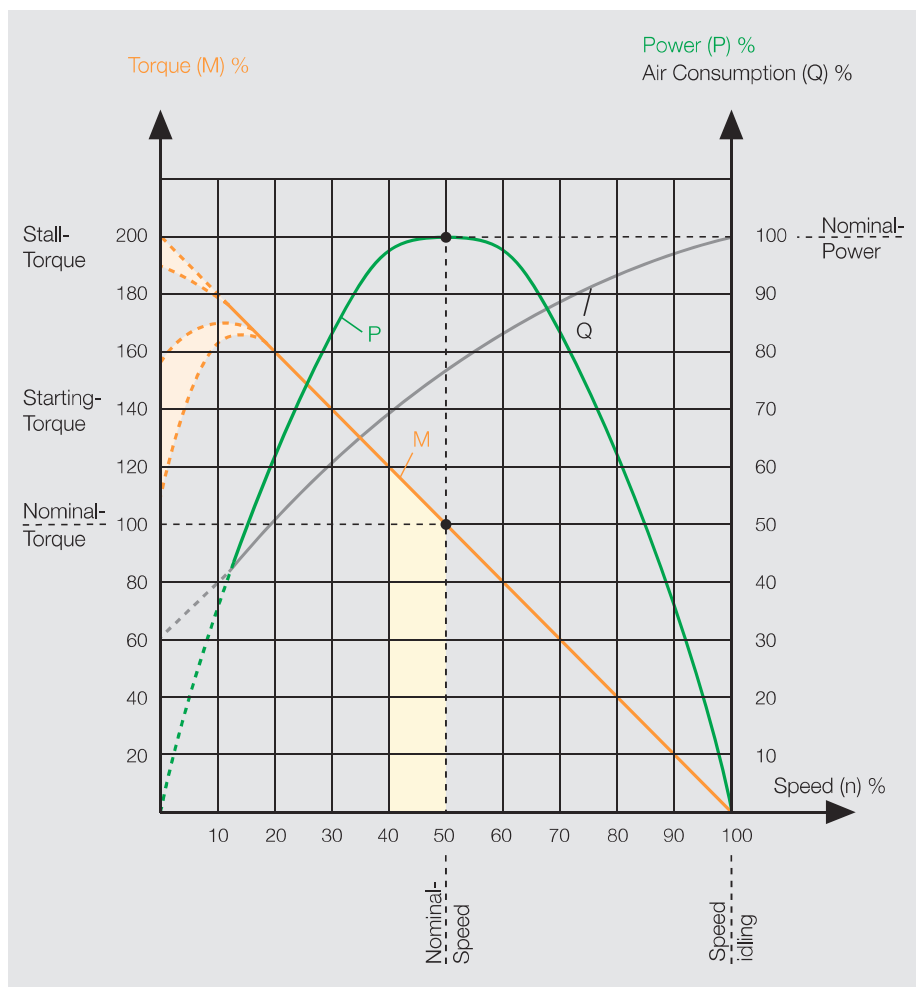
The optimal working range of an air motor is close to the nominal speed.

If you require lower speeds than those mentioned in the catalogue then you can reduce the speed smoothly by throttling the exhaust air without significant loss of performance or torque.

By throttling the supply air or decreasing the operating pressure the speed, the torque and the performance of the motor can be reduced.

All performance data for DEPRAG air motors is based on operating pressure of 6 bar and the minimum allowable opening cross-section of the feed hose as stated in each motor's data.

If your surrounding conditions vary from this you will find a comprehensive guide to our motors in brochure D 6000 E. We will also be happy to answer any questions directly.



= optimal working range of the air motor

## 1.6 kW / 2.6 kW / 3.6 kW POWER LINE HIGH PERFORMANCE MOTORS

The motors in this design series can be operated in either right- or left rotation. Alternatively, the motor can also be reversed by two external 3/2-way valves or one 5/3-way valve (each with sufficiently large cross-sections).

Motor size 32 with planetary gear		Flange motor				Bracket motor			
Motor, reversible by external valve	Type order no.	FM 32 SF	FM 32 LF	FM 32 LLFA	FM 32 LLFB	KM 32 SF	KM 32 LF	KM 32 LLFA	KM 32 LLFB
Nominal-Power	kW / HP	1.6 / 2.1	1.6 / 2.1	1.6 / 2.1	1.6 / 2.1	1.6 / 2.1	1.6 / 2.1	1.6 / 2.1	1.6 / 2.1
Nominal-Speed	rpm	3400	340	170	100	3400	340	170	100
Speed (idling)	rpm	6800	680	340	200	6800	680	340	200
Nominal-Torque	Nm / in.lbs	4.5 / 40	45 / 398	90 / 796	153 / 1354	4.5 / 40	45 / 398	90 / 796	153 / 1354
Start-Torque min.	Nm / in.lbs	6.7 / 59	67 / 593	135 / 1195	229 / 2027	6.7 / 59	67 / 593	135 / 1195	229 / 2027
Air consumption	m <sup>3</sup> /min / cfm	1.9 / 67	1.9 / 67	1.9 / 67	1.9 / 67	1.9 / 67	1.9 / 67	1.9 / 67	1.9 / 67
Weight	kg / lbs	10 / 22	15 / 33	18 / 40	18 / 40	11 / 24	16 / 35	19 / 42	19 / 42
Hose I.D.	mm / in.	15 / 5/8	15 / 5/8	15 / 5/8	15 / 5/8	15 / 5/8	15 / 5/8	15 / 5/8	15 / 5/8

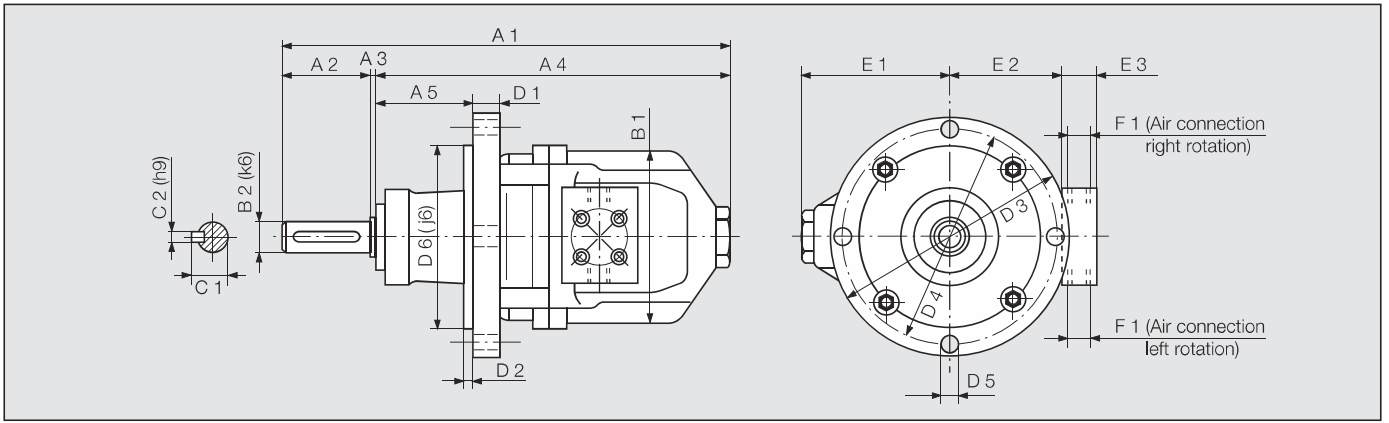
Performance data relate to an air pressure of 6 bar (85 PSI)

Motor size 50 with planetary gear		Flange motor				Bracket motor			
Motor, reversible by external valve	Type order no.	FM 50 SF	FM 50 LF	FM 50 LLFA	FM 50 LLFB	KM 50 SF	KM 50 LF	KM 50 LLFA	KM 50 LLFB
Nominal-Power	kW / HP	2.6 / 3.5	2.5 / 3.3	2.5 / 3.3	2.5 / 3.3	2.6 / 3.5	2.5 / 3.3	2.5 / 3.3	2.5 / 3.3
Nominal-Speed	rpm	3000	240	100	75	3000	240	100	75
Speed (idling)	rpm	6000	480	200	150	6000	480	200	150
Nominal-Torque	Nm / in.lbs	8.3 / 73	99 / 876	239 / 2115	318 / 2814	8.3 / 73	99 / 876	239 / 2115	318 / 2814
Start-Torque min.	Nm / in.lbs	12 / 106	148 / 1310	358 / 3168	477 / 4221	12 / 106	148 / 1310	358 / 3168	477 / 4221
Air consumption	m <sup>3</sup> /min / cfm	3.6 / 127	3.6 / 127	3.6 / 127	3.6 / 127	3.6 / 127	3.6 / 127	3.6 / 127	3.6 / 127
Weight	kg / lbs	15 / 33	20 / 44	23 / 51	23 / 51	16 / 35	21 / 46	25 / 55	25 / 55
Hose I.D.	mm / in.	19 / 3/4	19 / 3/4	19 / 3/4	19 / 3/4	19 / 3/4	19 / 3/4	19 / 3/4	19 / 3/4

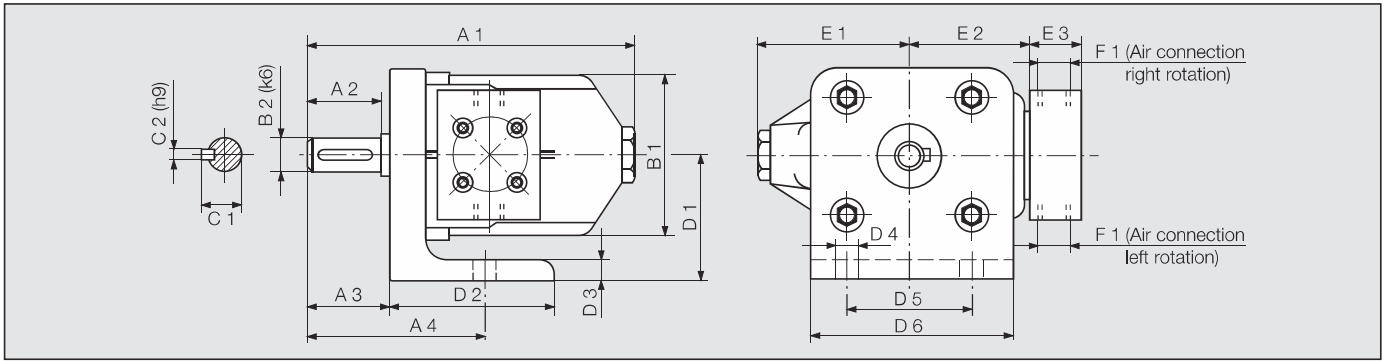
Performance data relate to an air pressure of 6 bar (85 PSI)

Motor size 52 with planetary gear		Flange motor				Bracket motor			
Motor, reversible by external valve	Type order no.	FM 52 SF	FM 52 LF	FM 52 LLFA	FM 52 LLFB	KM 52 SF	KM 52 LF	KM 52 LLFA	KM 52 LLFB
Nominal-Power	kW / HP	3.6 / 4.8	3.5 / 4.7	3.5 / 4.7	3.5 / 4.7	3.6 / 4.8	3.5 / 4.7	3.5 / 4.7	3.5 / 4.7
Nominal-Speed	rpm	2800	240	100	75	2800	240	100	75
Speed (idling)	rpm	5600	480	200	150	5600	480	200	150
Nominal-Torque	Nm / in.lbs	12 / 106	139 / 1230	334 / 2956	446 / 3947	12 / 106	139 / 1230	334 / 2956	446 / 3947
Start-Torque min.	Nm / in.lbs	18 / 159	208 / 1841	500 / 4425	670 / 5930	18 / 159	208 / 1841	500 / 4425	670 / 5930
Air consumption	m <sup>3</sup> /min / cfm	5 / 176	5 / 176	5 / 176	5 / 176	5 / 176	5 / 176	5 / 176	5 / 176
Weight	kg / lbs	17 / 37	22 / 48	25 / 55	25 / 55	18 / 40	23 / 51	27 / 59	27 / 59
Hose I.D.	mm / in.	25 / 1	25 / 1	25 / 1	25 / 1	25 / 1	25 / 1	25 / 1	25 / 1

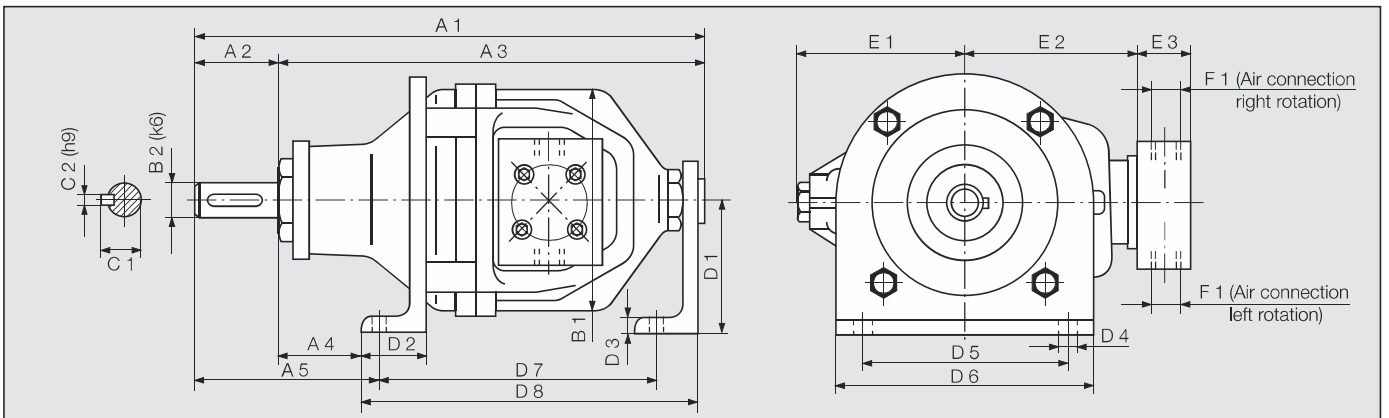
Performance data relate to an air pressure of 6 bar (85 PSI)



Motor size	Type	Dimensions of Flange motor (mm)																		
		A1	A2	A3	A4	A5	B1	B2	C1	C2	D1	D2	D3	D4	D5	D6	E1	E2	E3	F1
32	FM 32 SF	200	50	3	147	4	132	25	27.9	8	22	4	190	160	14	138	110	118	50	1"
	FM 32 LF	289	50	2	237	64	132	25	27.9	8	22	5	190	160	14	138	110	118	50	1"
	FM 32 LLFA/B	371	50	2	319	105	132	30	32.9	8	22	5	190	160	14	138	110	118	50	1"
50	FM 50 SF	245	60	3	182	5	158	30	32.9	8	22	5	220	195	14	165	108	130	50	1"
	FM 50 LF	367	60	-	307	96	158	35	38.3	10	22	5	220	195	14	165	108	130	50	1"
	FM 50 LLFA/B	437	60	-	377	114	158	40	43.1	12	22	5	220	195	14	165	108	130	50	1"
52	FM 52 SF	266	60	3	203	5	158	30	32.9	8	22	5	220	195	14	165	108	130	50	1"
	FM 52 LF	388	60	-	328	96	158	35	38.3	10	22	5	220	195	14	165	108	130	50	1"
	FM 52 LLFA/B	458	60	-	398	114	158	40	43.1	12	22	5	220	195	14	165	108	130	50	1"



Motor size	Type	Dimensions of Bracket motor (mm)																	
		A1	A2	A3	A4	B1	B2	C1	C2	D1	D2	D3	D4	D5	D6	E1	E2	E3	F1
32	KM 32 SF	200	50	53	118	132	25	27.9	8	105	115	13	14	90	150	110	118	50	1"
50	KM 50 SF	245	60	63	143	158	30	32.9	8	120	130	13	14	116	182	108	130	50	1"
52	KM 52 SF	264	60	63	143	158	30	32.9	8	120	130	13	14	116	182	108	130	50	1"



Motor size	Type	Dimensions of Bracket motor (mm)																				
		A1	A2	A3	A4	A5	B1	B2	C1	C2	D1	D2	D3	D4	D5	D6	D7	D8	E1	E2	E3	F1
32	KM 32 LF	306	50	255	41	106	132	25	27.9	8	93	50	13	13	120	160	163	213	110	118	50	1"
	KM 32 LLFA/B	386	50	336	74	139	132	30	32.9	8	93	50	13	13	120	160	210	260	110	118	50	1"
50	KM50 LF	384	60	324	66	141	161	35	38.3	10	100	50	13	13	150	190	204	254	108	131	50	1"
	KM50LLFA/B	454	60	394	32	122	161	40	43.1	12	100	45	13	13	120	160	264	359	115	131	50	1"
52	KM 52 LF	406	60	346	66	141	161	35	38.3	10	100	50	13	13	150	190	226	276	108	131	50	1"
	KM 52 LLFA/B	474	60	414	32	122	161	40	43.1	12	100	45	13	13	120	160	284	379	115	131	50	1"

## ACCESSORIES

### Spare Parts Kit

Appropriate for each motor	Type	68-009	68-0011	68-0013
Spare Parts Kit	order no.	445033 A	445034 A	445035 A
Consisting of: Bearing, Vanes, Springs and Seal rings				

### Silencer

Appropriate for each motor	Type	68-009	68-0011	68-0013
Silencer Set including connection	order no.	440021 A	440022 A	440023 A

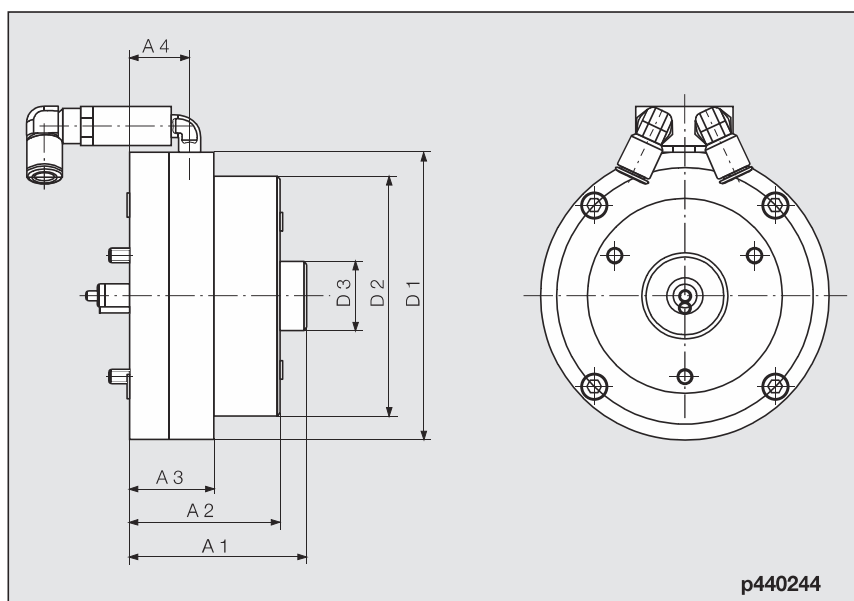
### Holding brake

Our holding brakes are designed for the motors 68-009, 68-0011 and 68-0013 and can be ordered fully mounted together with the motors.

In addition the holding brake is also suitable for upgrading the motor type 68-009. We can carry out this upgrade for you on request.

Appropriate for each motor	Type	68-009	68-0011	68-0013
Holding brake	order no.	445709 B	on request	on request
Brake-Torque		12 Nm*)	28 Nm*)	46 Nm*)

\*) The holding brake is not designed for use with a different drive system. Please only use it in combination with the stated motor types.



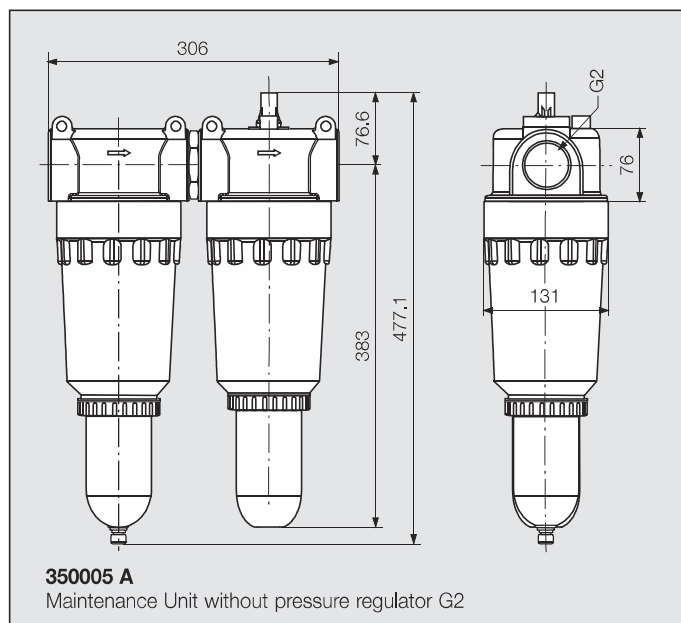
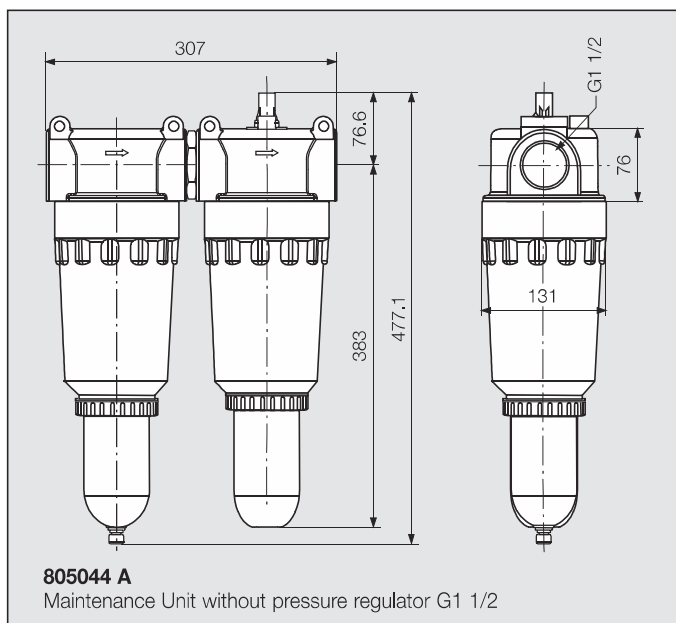
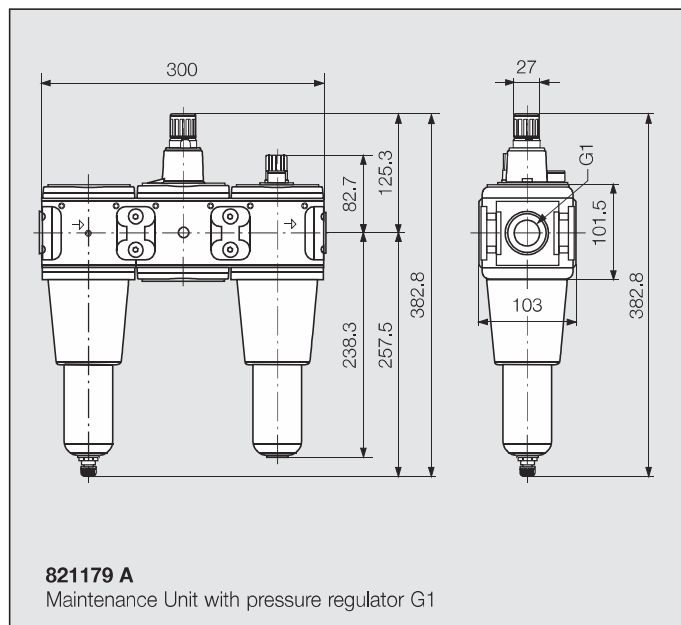
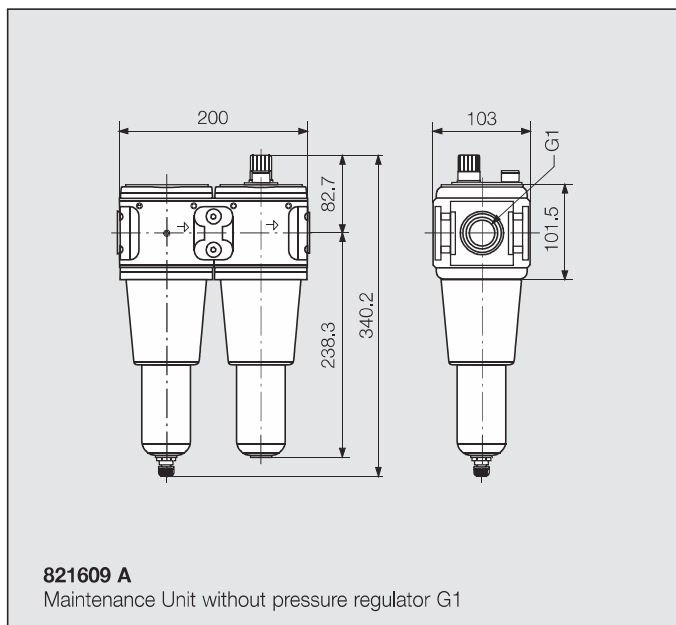
Type	Dimensions of braking device (mm)						
	A1	A2	A3	A4	D1	D2	D3
M9U	72,5	61,5	34,5	24,5	118	98	28
M11U	107	98	43,5	35,5	190	162	28
M13U							

## ACCESSORIES

### Maintenance Unit

Maintenance Unit consisting of filter, oiler and double nipple  
alternatively available with or without pressure regulator

Type of Motor	Thread Size	Air Flow	order no. without pressure regulator	order no. with pressure regulator
68-009	G 1	0,8 - 6 m <sup>3</sup> /min	821609 A	821179 A
68-0011	G 1	0,8 - 6 m <sup>3</sup> /min	821609 A	821179 A
68-0013	G 1 1/2	5 - 16 m <sup>3</sup> /min	805044 A	-
FM 32 / KM 32	G 1	0,8 - 6 m <sup>3</sup> /min	821609 A	821179 A
FM 50 / KM 50	G 1	0,8 - 6 m <sup>3</sup> /min	821609 A	821179 A
FM 52 / KM 52	G 1 1/2	5 - 16 m <sup>3</sup> /min	805044 A	-
KM 54	G 1 1/2	5 - 16 m <sup>3</sup> /min	805044 A	-
KM 55	G 1 1/2	5 - 16 m <sup>3</sup> /min	805044 A	-
FM 65	G 2	7 - 20 m <sup>3</sup> /min	350005 A	-



## Do you need support in selecting the right drive system?

Tell us your operational conditions and our application consultants will be happy to help:

<b>Application:</b>	<input type="text"/>		
<b>In what kind of environment will the motor be installed?</b>	<b>ATEX requirement / explosion safety?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
	if yes, which safety class:	<input type="text"/>	
	<b>food industry conformity?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
	<b>sterilisable?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
	<b>acid resistant?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
	<b>steam resistant?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
<b>Application conditions:</b>	<b>constant operation (24 hrs, non-stop)</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
	<b>duty cycle in hrs/day:</b>	<input type="text"/>	
	<b>days/year:</b>	<input type="text"/>	
	<b>cycle time (s):</b>	<input type="text"/>	
	<b>motor loaded to stall?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
	<b>self-locking?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
<b>Required turn direction:</b>	<input type="checkbox"/> left	<input type="checkbox"/> right	<input type="checkbox"/> reversible
	(view from air inlet)		
<b>Motor performance:</b>	<b>power:</b>	<input type="text"/>	W
	<b>nominal torque:</b>	<input type="text"/>	Nm
	<b>nominal speed:</b>	<input type="text"/>	rpm
<b>Performance influencing application conditions:</b>	<b>operating pressure (at motor inlet):</b>	<input type="text"/>	bar
	<b>operation with lubricated air possible?</b>	<input type="checkbox"/> yes	<input type="checkbox"/> no
	<b>smallest opening cross-section of connection pieces and hoses?</b>	<input type="text"/>	mm
<b>External motor design:</b>	<input type="checkbox"/> standard steel	<input type="checkbox"/> non-corrosive	<input type="checkbox"/> aluminium
	<input type="checkbox"/> plastics	<input type="checkbox"/> ceramics	
	<b>other:</b>	<input type="text"/>	
<b>Drive spindle design:</b>	<b>drive shaft requirements:</b>	<input type="text"/>	
	(e. g. keyed shafts, square end, hexagonal, collet, drill chuck taper, etc.)		
	<b>required dimensions:</b>	<input type="text"/>	
<b>Motor fixture design:</b>	<b>mounting requirements:</b> (bracket, flange, etc.)	<input type="text"/>	
	<b>required dimensions:</b>	<input type="text"/>	
<b>Additional components:</b>	<input type="checkbox"/> holding brake	<input type="checkbox"/> operational brake	
	<b>gear box:</b>	<input type="text"/>	
<b>Price range:</b>	<input type="text"/>		
<b>Annual requirement:</b>	<input type="text"/>		

# DEPRAG

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CERTIFIED AS PER DIN EN ISO 9001

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