

WOB-L[®] Piston Air Compressors and Vacuum Pumps



FEATURES

- > Service free and oil-less
- > Compact design
- > Balanced for smooth, low vibration operation
- > Suitable for continuous running
- > Wetted parts
- > Series 8003/8005/8006
heat resistant high performance plastic, Elastomer valves
- > Series 8009
corrosion resistant aluminium parts, stainless steel valves
- > Long-life, high performance piston seal (PTFE compound)

TYPICAL APPLICATIONS

- > Medical industry
- > Laboratory and Analysis technology
- > Automotive
- > Equipment manufacturing

Consult factory for customized solutions

BASE MODEL

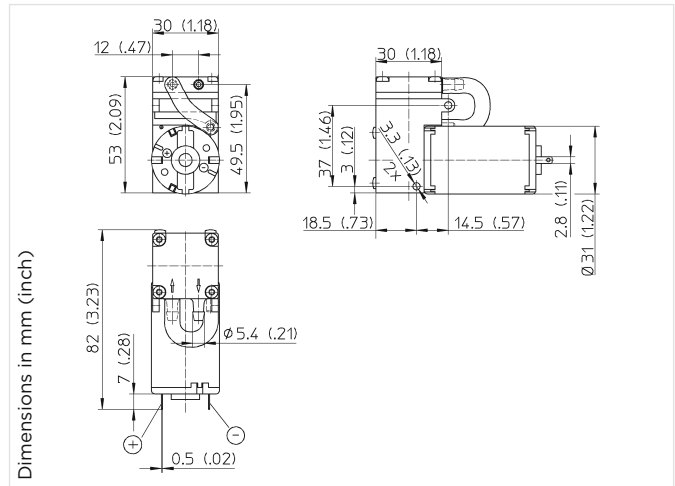
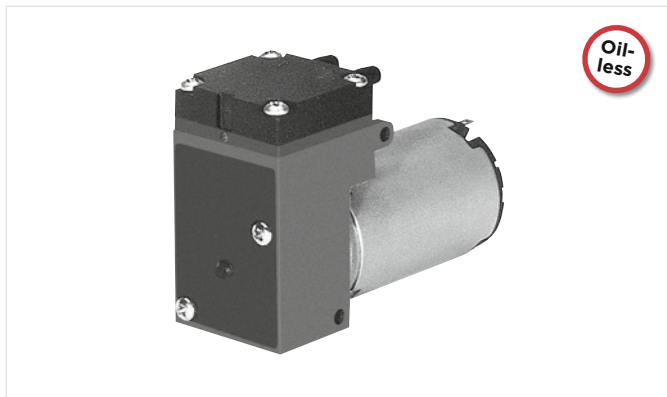
- 8003
- 8005
- 8006
- 8009



WOB-L[®] Piston

WOB-L® Piston Compressor 8003D DC

Flow	3.0 l/min
Max. pressure	2.0 bar



PNEUMATIC DATA

Description	8003D/22/1.2/E/DC		8003D/24/1.2/E/DC	
Part number	12 V DC	80030054	80030055	
	24 V DC	80030057	80030058	
Max. flow		2.5 l/min	3.0 l/min	
Max. pressure		2.0 bar	2.0 bar	
Max. continuous pressure		1.0 bar	0.8 bar	
Max. restart pressure		1.0 bar	0.8 bar	

ELECTRICAL DATA

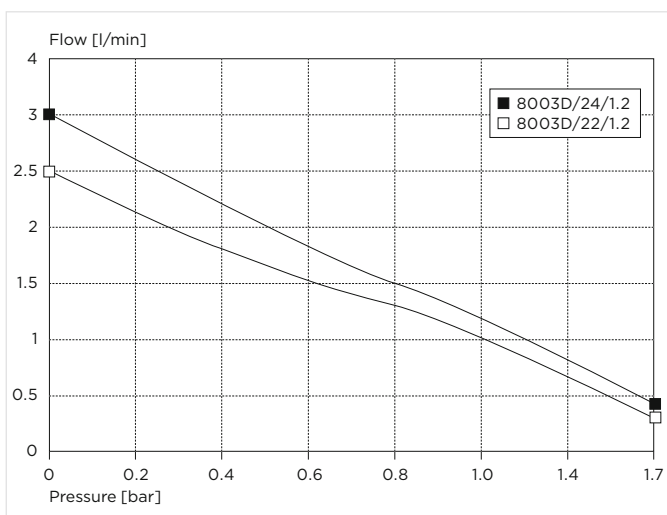
Motor type	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC
Nominal speed	3000 rpm	3000 rpm
Power consumption	7.5 W	8.5 W
Motor insulation class	A	A

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	190 g	190 g
Port direction	D	D

All listed values measured at standard atmospheric conditions.

FLOW CURVES



8003... Stock programme

Model key:

D=Pressure Eccentric Motor type
 8003 D / 22 / 1.2 / E / DC
 Series Piston Ø E = EPDM

OPTIONS

Low cost DC-motor

WOB-L® Piston Compressor 8003D BLDC High Performance

Flow	4.3 l/min
Max. Pressure	2.0 bar



PNEUMATIC DATA

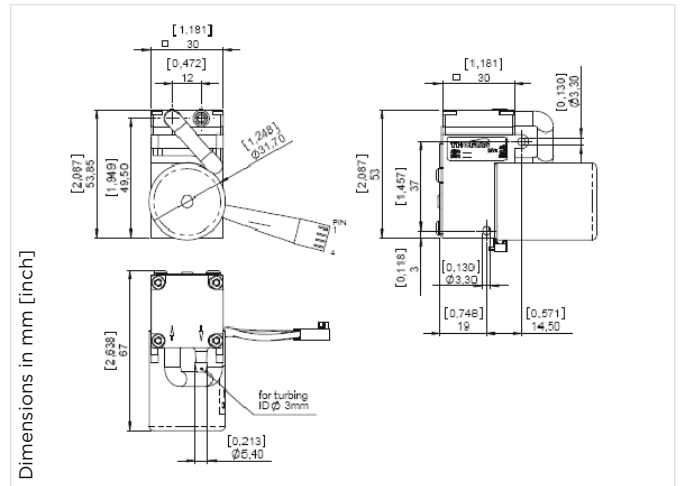
Description	8003D/24/1.2/E/BLDC	
Part number	12 V	80030802
	24 V	80030803
Max. flow	4.3 l/min	
Max. pressure	2.0 bar	
Max. continuous pressure	1.0 bar	
Max. restart pressure	2.0 bar	

ELECTRICAL DATA

Motor type	Brushless DC	
Nominal speed	0.4.600 rpm	
Nominal voltage	12/24 V DC	
Drive electronics	integrated with reverse supply voltage protection	
Max. power consumption	8.5 W	
Motor insulation class	B	
Protection class	IP20	
Connector	Housing:	Molex KK 22-01-2045
	Terminal:	Molex KK 08-50-0031

GENERAL DATA

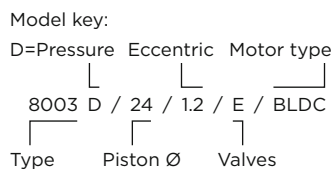
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	160 g
Port direction	D



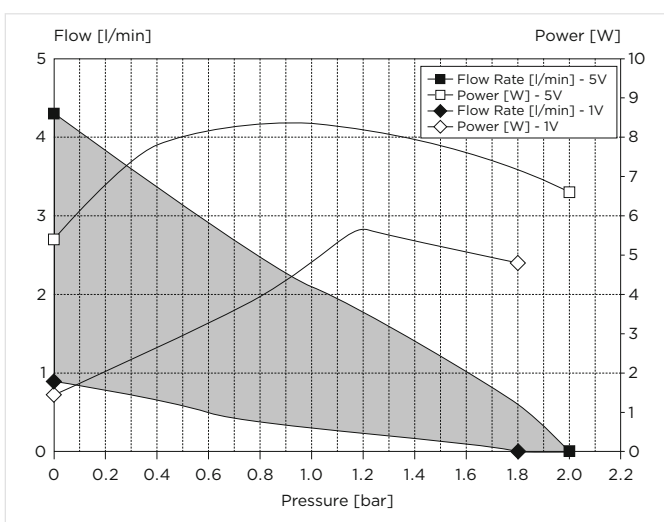
WETTED PARTS

Pump head	PAA (IXEF)
Cylinder sleeve	PPS
Piston sealing	PTFE
Valves	EPDM

Please refer to the wiring diagram on page 22.

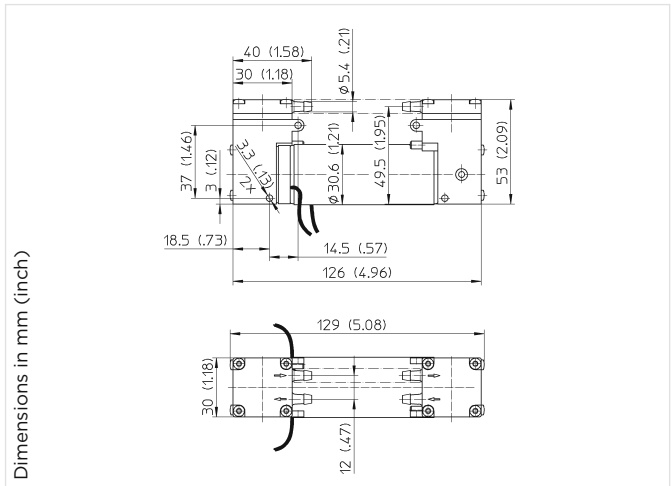
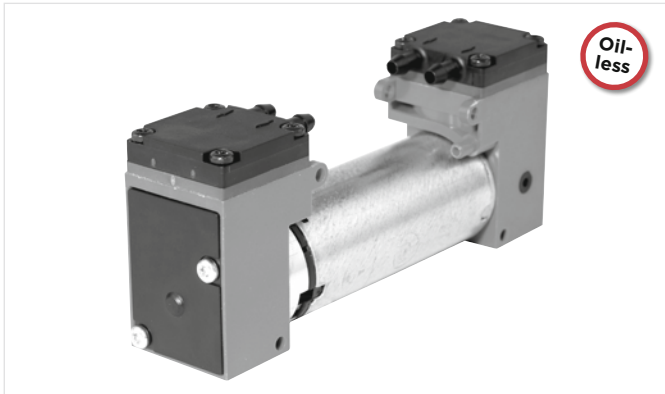


FLOW CURVES



WOB-L® Piston Compressor 8003ZDP DC

Flow	5.4 l/min
Max. pressure	2.0 bar



Model key:
 Z=Double head
 D=Pressure
 P=Parallel Eccentric Motor type

8003 ZDP / 24 / 1.2 / E / DC

Series Piston Ø E=EPDM

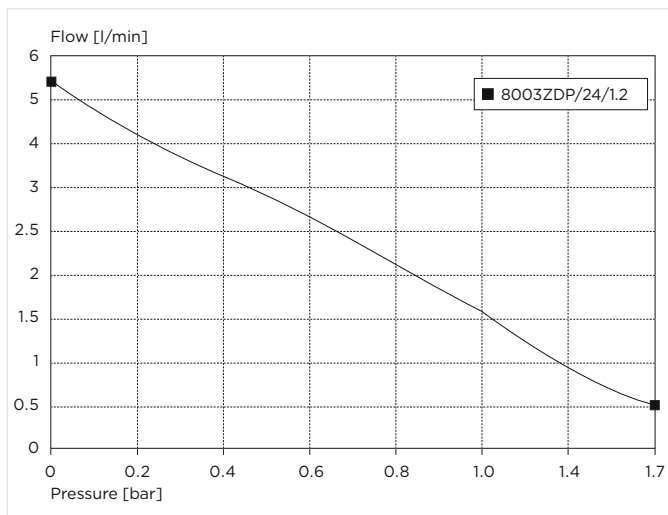
PNEUMATIC DATA		
Description	8003ZDP/24/1,2/E/DC	
Part number	12 V DC	80030300
Max. flow	5.4 l/min	
Max. pressure	2.0 bar	
Max. continuous pressure	0.3 bar	
Max. restart pressure	0.5 bar	

ELECTRICAL DATA	
Motor type	Direct current
Nominal voltage	12 V DC
Nominal speed	2800 rpm
Power consumption	13 W
Motor insulation class	E

GENERAL DATA	
Ambient temperature	10 to 40 °C
Media temperature	10 to 60 °C
Weight	350 g
Port direction	CB
Configuration	Parallel

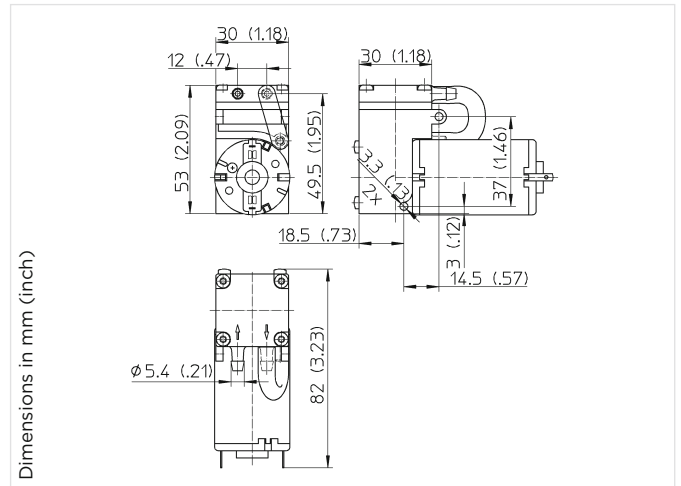
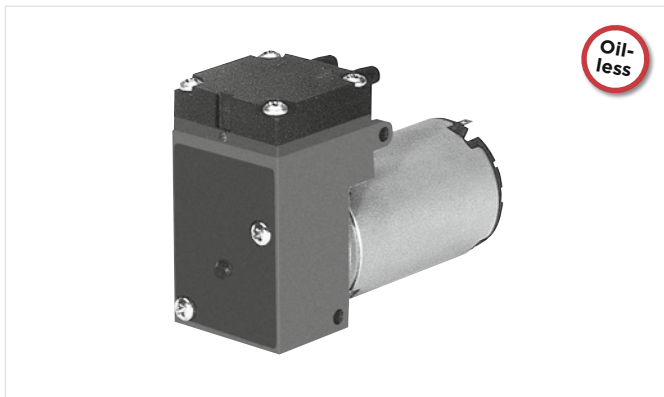
All listed values measured at standard atmospheric conditions.

FLOW CURVES



WOB-L® Piston Vacuum Pump 8003V DC

Flow	3.0 l/min
Max. vacuum	59 %



PNEUMATIC DATA

Description	8003V/22/1.2/E/DC	8003V/24/1.2/E/DC
Part number	12 V DC 80030067 24 V DC 80030071	80030068 80030072
Max. flow	2.5 l/min	3.0 l/min
Max. vacuum	58 %	59 %
Max. restart vacuum	58 %	59 %

ELECTRICAL DATA

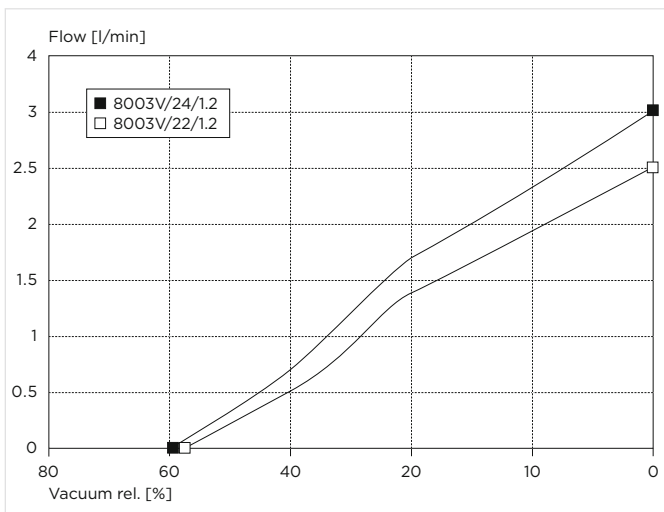
Motor type	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC
Nominal speed	3000 rpm	3000 rpm
Power consumption	5.5 W	6 W
Motor insulation class	A	A

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	190 g	190 g
Port direction	D	D

All listed values measured at standard atmospheric conditions.

FLOW CURVES



8003... Stock programme

Model key:

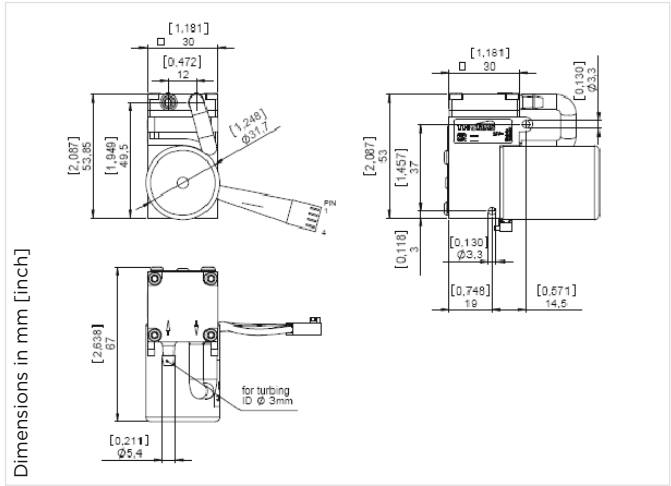
V= Vacuum Eccentric Motor type
 8003 V / 22 / 1.2 / E / DC
 Series Piston Ø E = EPDM

OPTIONS

Low cost DC-motor

WOB-L® Piston Vacuum Pump 8003V BLDC

Flow	4.3 l/min
Final Vacuum	65 %



PNEUMATIC DATA

Description	8003V/24/1.2/E/BLDC	
Part number	12 V DC	80030800
	24 V DC	80030801
Max. flow	4.3 l/min	
Max. intermittent vacuum	65 %	
Max. continuous vacuum	65 %	
Max. restart vacuum	65 %	

WETTED PARTS

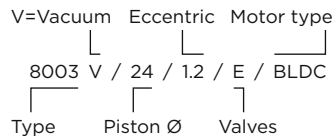
Pump head	PAA (IXEF)
Cylinder sleeve	PPS
Piston sealing	PTFE
Valves	EPDM

Please refer to the wiring diagram on page 22.

ELECTRICAL DATA

Motor type	Brushless DC	
Nominal speed	0..4.600 rpm	
Nominal voltage	12/24 V DC	
Drive electronics	integrated with reverse supply voltage protection	
Max. power consumption	7 W	
Motor insulation class	B	
Protection class	IP20	
Connector	Housing:	Molex KK 22-01-2045
	Terminal:	Molex KK 08-50-0031

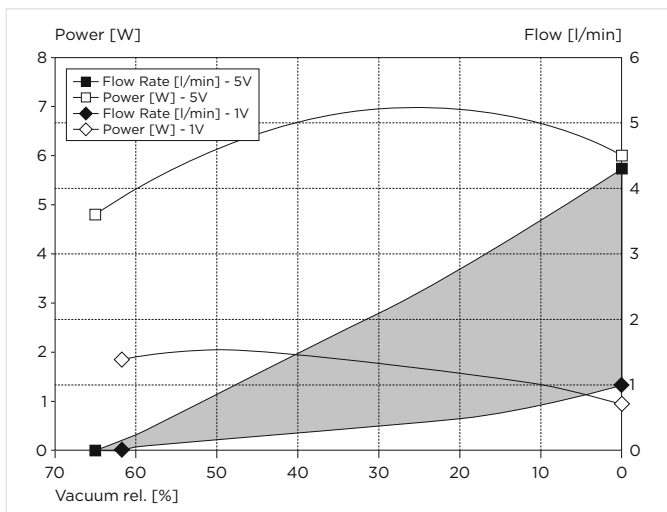
Model key:



GENERAL DATA

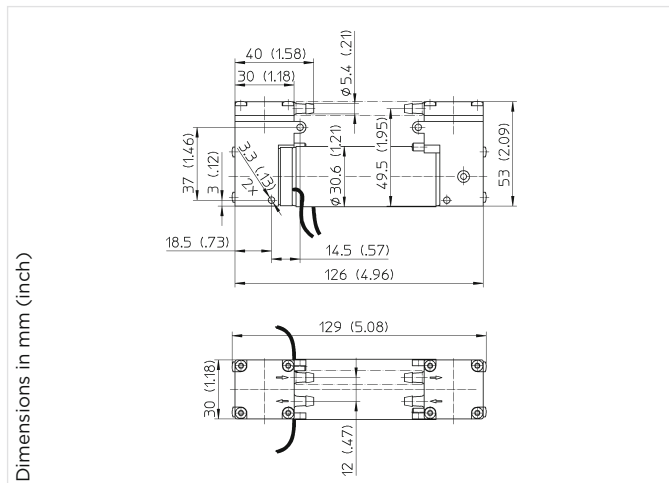
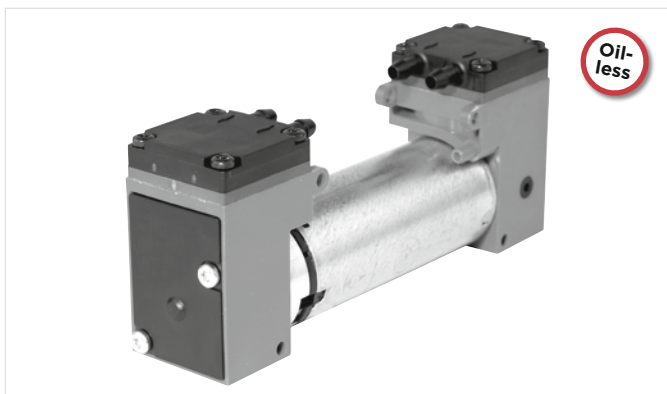
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	160 g
Port direction	D

FLOW CURVES



WOB-L® Piston Vacuum Pump 8003ZVR/ZVP DC

Flow	5.4 l/min
Max. Vacuum	80 %



PNEUMATIC DATA

Description	8003ZVR/24/1.2/E/DC	8003ZVP/24/1.2/E/DC
Part number	12 V DC 80030321	80030320
Max. flow	2.9 l/min	5.4 l/min
Max. vacuum	80 %	59 %
Max. restart vacuum	80 %	59 %

ELECTRICAL DATA

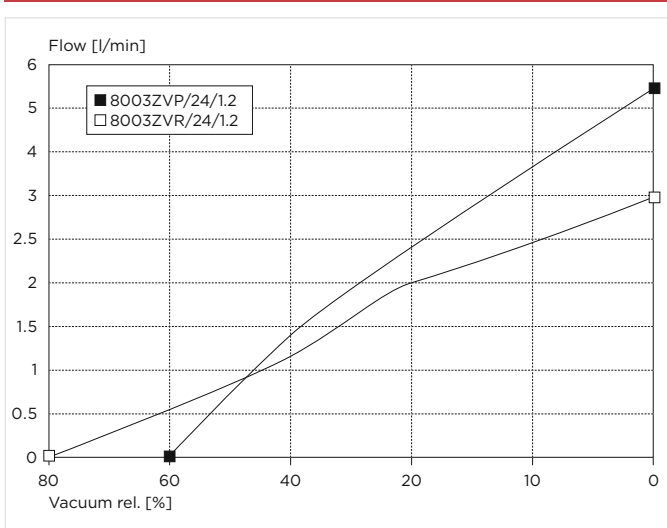
Motor type	Direct current	Direct current
Nominal voltage	12 V DC	12 V DC
Nominal speed	2800 rpm	2800 rpm
Power consumption	11 W	11 W
Motor insulation class	E	E

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	350 g	350 g
Port direction	DD	CB
Configuration	Series	Parallel

All listed values measured at standard atmospheric conditions.

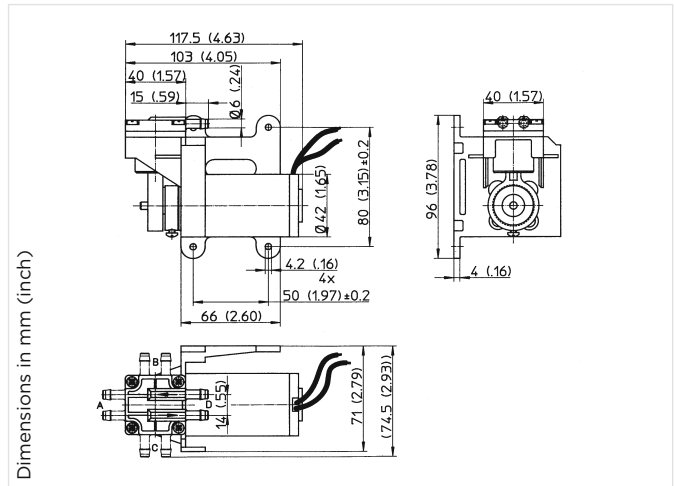
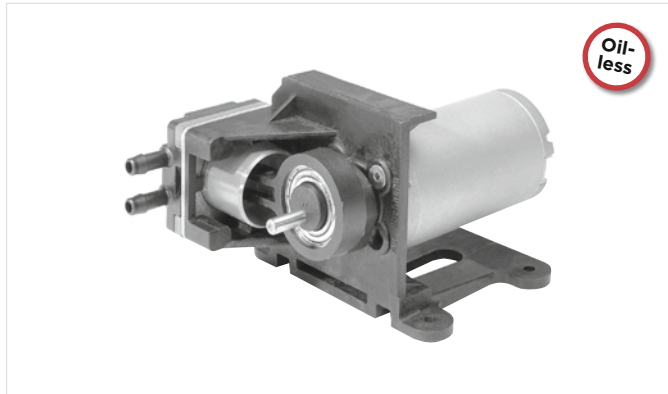
FLOW CURVES



Model key:
 Z=Double head
 V=Pressure
 R=Series
 Eccentric Motor type
 8003 ZVR / 24 / 1.2 / E / DC
 Series Piston Ø E=EPDM

WOB-L® Piston Compressor 8005D DC

Flow	7.2 l/min
Max. pressure	2.5 bar



PNEUMATIC DATA

Description	8005D/20/4.0/V/DC	8005D/22/4.0/V/DC
Part number	12 V DC 24 V DC*	80050064 80050077 80050079
Max. flow	5.8 l/min	7.2 l/min
Max. pressure	2.5 bar	2.5 bar
Max. continuous pressure	1.5 bar	1.5 bar
Max. restart pressure	2.5 bar	2.3 bar

ELECTRICAL DATA

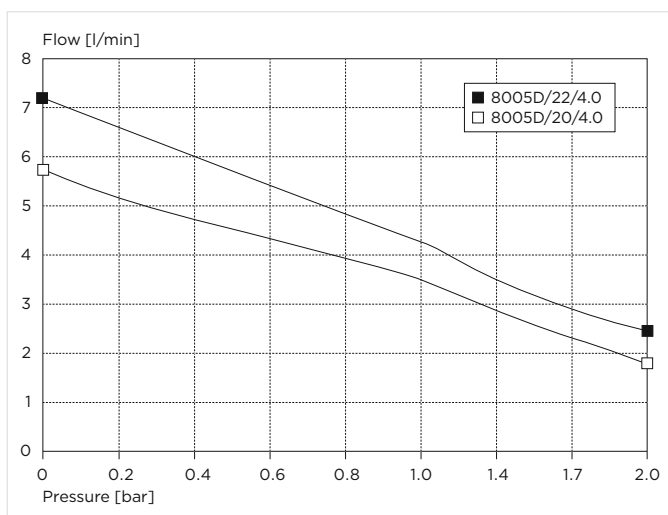
Motor type	Direct current	Direct current
Nominal voltage	24 V DC	12 V/24 V DC
Nominal speed	3200 rpm	3500/3200 rpm
Power consumption	26 W	32 W
Motor insulation class	E	E

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	1100 g	1100 g
Port direction	D	D

* Due to a difference in nominal speeds the 24 V DC units have a 10% reduced flow rate when compared to the 12 V DC units.
All listed values measured at standard atmospheric conditions.

FLOW CURVES



Model key:

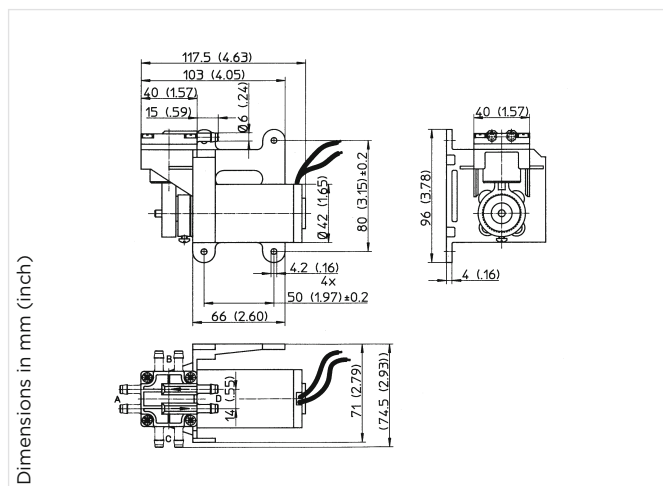
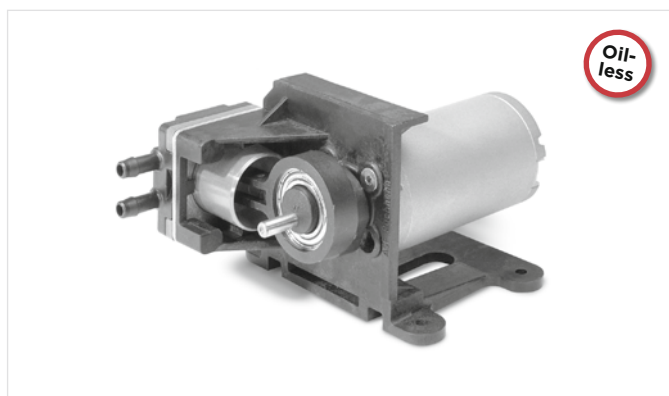
D=Pressure Eccentric Motor type
 8005 D / 20 / 4.0 / V / DC
 Series Piston Ø V = FPM

OPTIONS

- Noise reduced head
- Brushless DC-motor

WOB-L® Piston Vacuum Pump 8005V DC

Flow	7.2 l/min
Max. vacuum	78 %



PNEUMATIC DATA

Description	8005V/20/4.0/V/DC	8005V/22/4.0/V/DC
Part number	12 V DC 24 V DC*	80050044 80050049
Max. flow	5.8 l/min	7.2 l/min
Max. vacuum	73 %	78 %
Max. restart vacuum	73 %	78 %

ELECTRICAL DATA

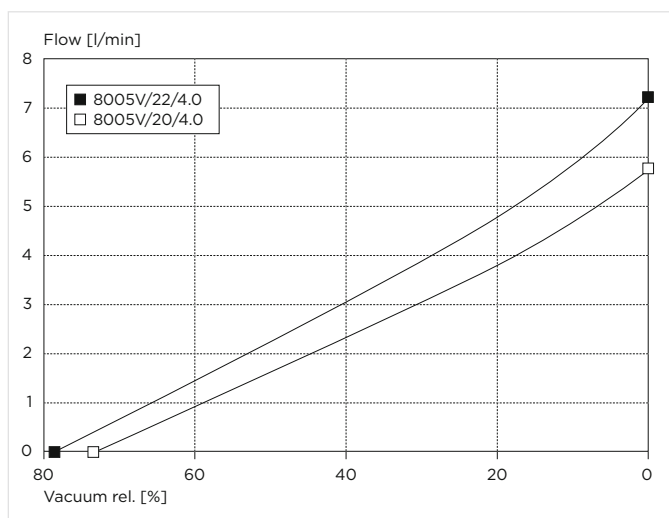
Motor type	Direct current	Direct current
Nominal voltage	24 V DC	12 V/24 V DC
Nominal speed	3250 rpm	3500/3250 rpm
Power consumption	22 W	26 W
Motor insulation class	E	E

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	1100 g	1100 g
Port direction	D	D

* Due to a difference in nominal speeds the 24 V DC units have a 10% reduced flow rate when compared to the 12 V DC units.
All listed values measured at standard atmospheric conditions.

FLOW CURVES



Model key:

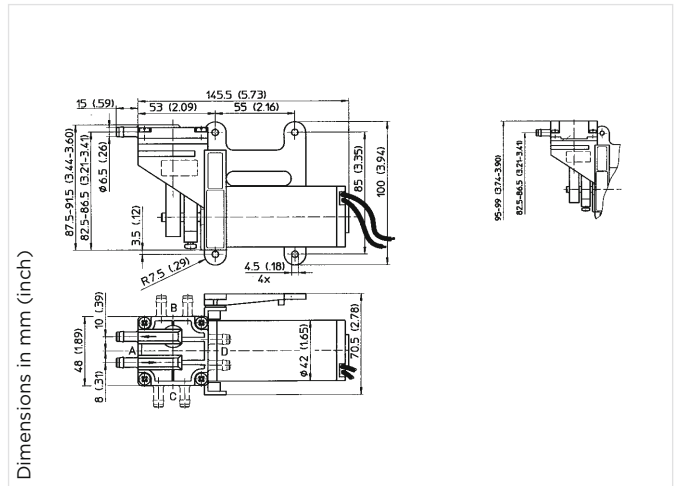
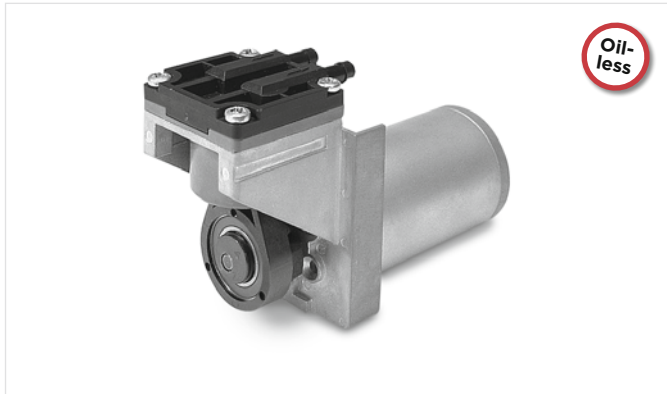
V= Vacuum Eccentric Motor type
 8005 V / 20 / 4.0 / V / DC
 Series Piston Ø V = FPM

OPTIONS

- Noise reduced head
- Brushless DC-motor

WOB-L® Piston Compressor 8006D DC

Flow	15.8 l/min
Max. pressure	3.0 bar



PNEUMATIC DATA

Description	8006D/27/4.5/V/DC		8006D/30/4.5/V/DC
Part number	12 V DC	80060057	80060071
	24 V DC	80060110	80060079
Max. flow	13.0 l/min		15.8 l/min
Max. pressure	3.0 bar		3.0 bar
Max. continuous pressure	1.0 bar		1.0 bar
Max. restart pressure	1.0 bar		0.4 bar

ELECTRICAL DATA

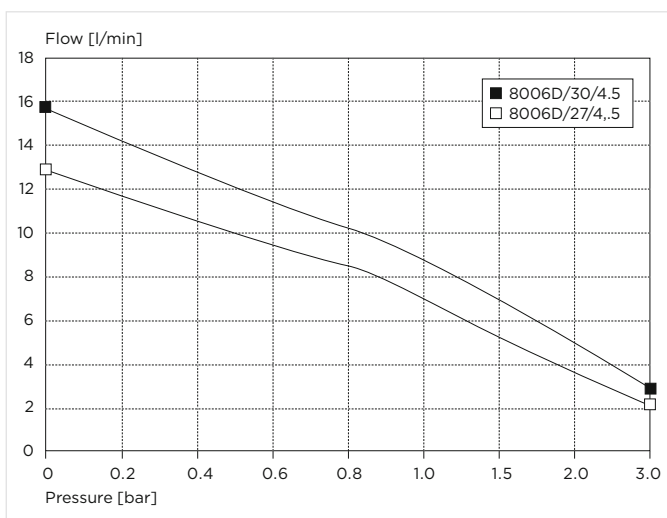
Motor type	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC
Nominal speed	2800 rpm	2800 rpm
Power consumption	40 W	46 W
Motor insulation class	E	E

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	1200 g	1200 g
Port direction	D	D

All listed values measured at standard atmospheric conditions.

FLOW CURVES



8006... Stock programme

Model key:

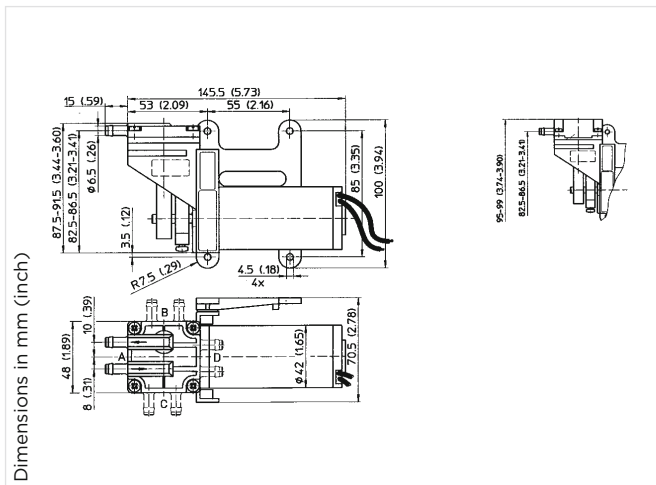
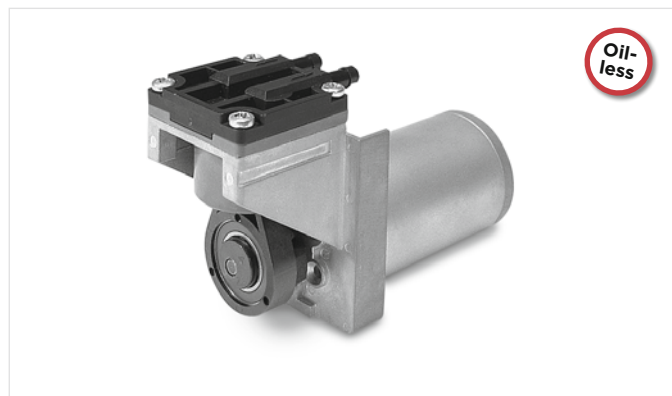
D=Pressure Eccentric Motor type
 8006 D / 27 / 4.5 / V / DC
 Series Piston Ø V = FPM

OPTIONS

- Noise reduced head
- Brushless DC-motor
- Con rod cover

WOB-L® Piston Vacuum Pump 8006V DC

Flow	15.8 l/min
Max. Vacuum	80 %



PNEUMATIC DATA

Description	8006V/30/4.5/V/DC	
Part number	12 V DC	80061068
	24 V DC	80061075
Max. flow	15.8 l/min	
Max. vacuum	80 %	
Max. restart vacuum	Ambient pressure	

ELECTRICAL DATA

Motor type	Direct current
Nominal voltage	12/24 V DC
Nominal speed	2800 rpm
Power consumption	39 W
Motor insulation class	E

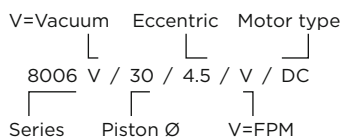
GENERAL DATA

Ambient temperature	10 to 40 °C
Media temperature	10 to 60 °C
Weight	1200 g
Port direction	D

All listed values measured at standard atmospheric conditions.

8006... Stock programme

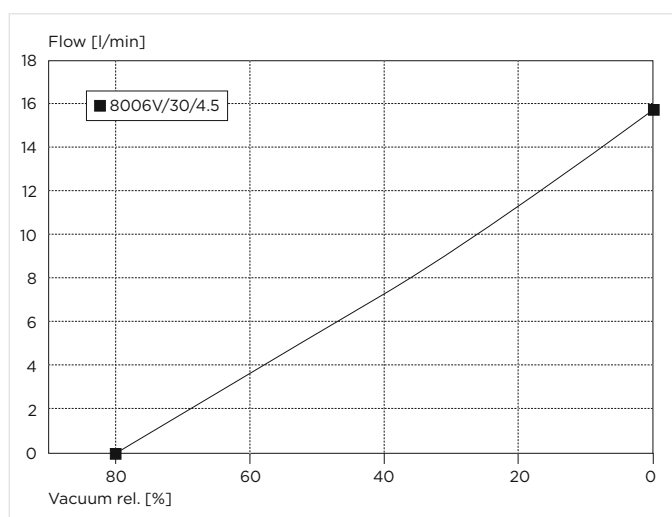
Model key:



OPTIONS

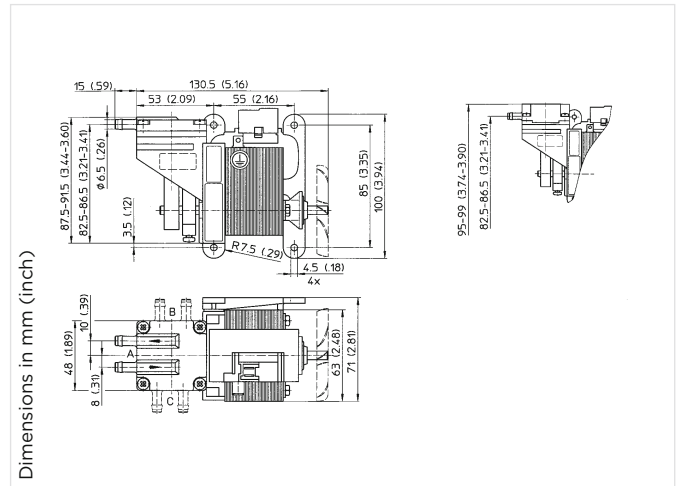
- Noise reduced head
- Brushless DC-motor
- Con rod cover

FLOW CURVES



WOB-L® Piston Vacuum Pump 8006V AC

Flow	14.2 l/min
Max. Vacuum	80 %



PNEUMATIC DATA

Description	8006V/30/4.5/V/AC	
Part number	230 V/50 Hz	80060010
Max. flow	14. l/min	
Max. vacuum	80 %	
Max. restart vacuum	Ambient pressure	

ELECTRICAL DATA

Motor type	Shaded pole
Nominal voltage	230 V/50 Hz
Nominal speed	2800 rpm
Power consumption	95 W
Motor insulation class	F
Thermal switch	150 °C

GENERAL DATA

Ambient temperature	10 to 40 °C
Media temperature	10 to 40 °C
Weight	1500 g
Port direction	A

All listed values measured at standard atmospheric conditions.

8006... Stock programme

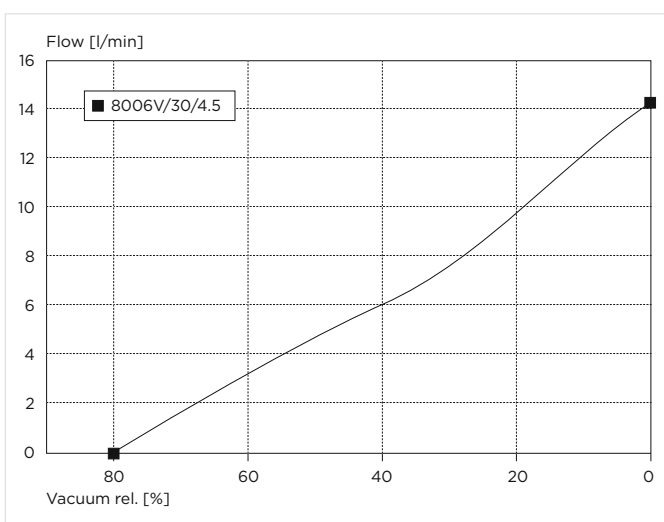
Model key:

V=Vacuum Eccentric Motor type
 8006 V / 30 / 4.5 / V / AC
 Series Piston Ø V=FPM

OPTIONS

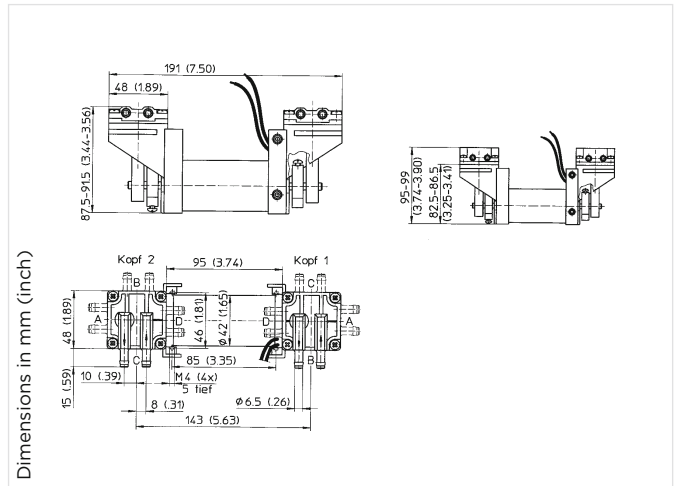
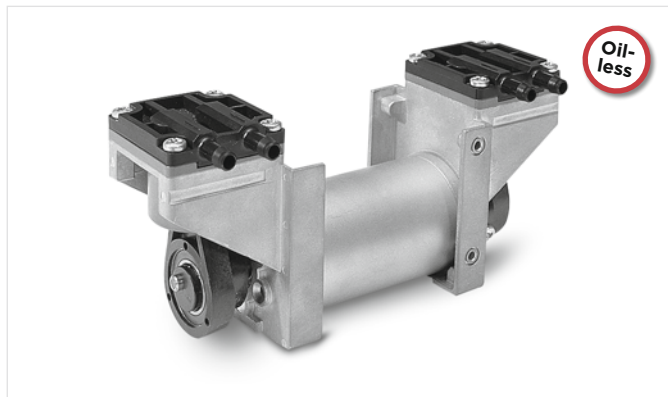
- Noise reduced head
- Con rod cover

FLOW CURVES



WOB-L® Piston Vacuum Pump 8006ZV DC

Flow	31.0 l/min
Max. Vacuum	80 %



PNEUMATIC DATA

Description	8006ZV/30/4.5/V/DC	
Part number	12 V DC	80060131
	24 V DC	80060135
Max. flow	31.0 l/min	
Max. vacuum	80 %	
Max. restart vacuum	Ambient pressure	

ELECTRICAL DATA

Motor type	Direct current
Nominal voltage	12/24 V DC
Nominal speed	2800 rpm
Power consumption	60 W
Motor insulation class	E

GENERAL DATA

Ambient temperature	10 to 40 °C
Media temperature	10 to 60 °C
Weight	930 g
Port direction	CB
Configuration	parallel

All listed values measured at standard atmospheric conditions.
Pneumatic data refer to parallel configuration.

Model key:

Z=Double head
V=Vacuum Eccentric Motor type

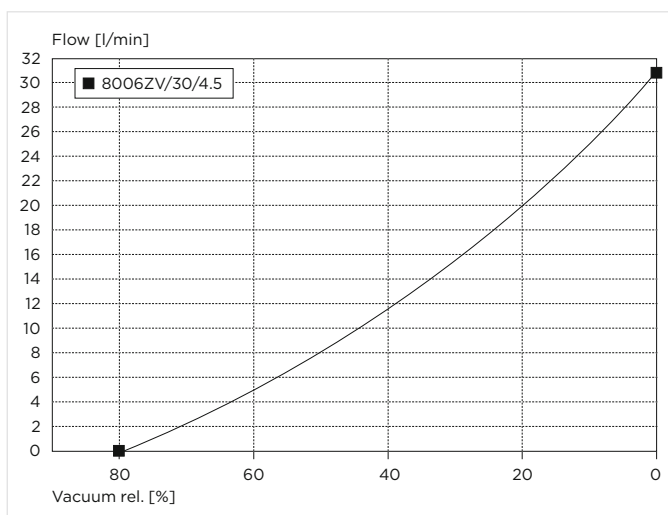
8006 ZV / 30 / 4.5 / V / DC

Series Piston Ø V=FPM

OPTIONS

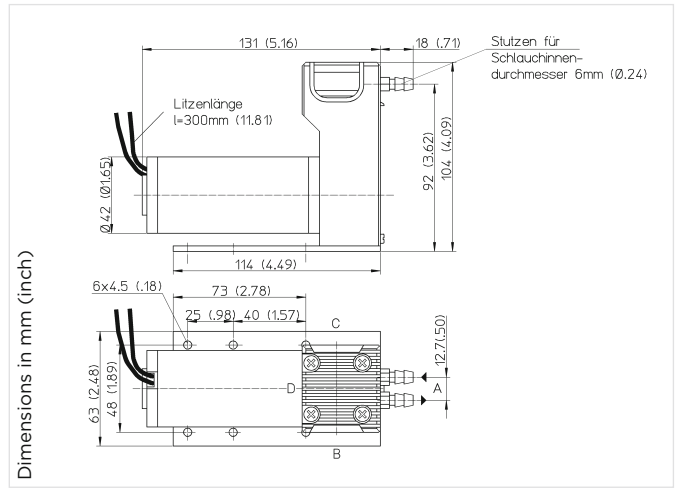
- Noise reduced head
- Brushless DC-motor
- Con rod cover

FLOW CURVES



WOB-L® Piston Compressor 8009D DC

Flow	14.0 l/min
Max. pressure	7.0 bar



PNEUMATIC DATA

Description		8009-30/10/DC	8009-35/05/DC	8009-40/00/DC
Part number	12 V DC	80091019	80091020	80091021
	24 V DC	80091031	80091032	80091033
Max. flow		11.0 l/min	12.5 l/min	14.0 l/min
Max. pressure		7.0 bar	7.0 bar	7.0 bar
Max. continuous pressure		1.5 bar	1.2 bar	1.0 bar
Max. restart pressure		0.8 bar	0.6 bar	0.5 bar

ELECTRICAL DATA

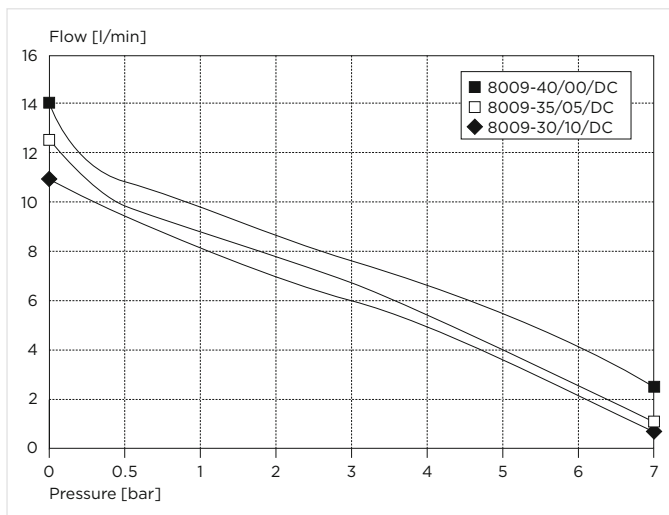
Motor type	Direct current	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC	12 V/24 V DC
Nominal speed	2800 rpm	2800 rpm	2800 rpm
Power consumption	50 W	58 W	65 W
Motor insulation class	E	E	E

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C	10 to 60 °C
Weight	1100 g	1100 g	1100 g
Port direction	A	A	A

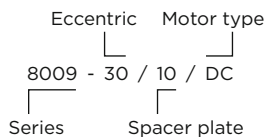
All listed values measured at standard atmospheric conditions.

FLOW CURVES



8009... Stock programme

Model key:

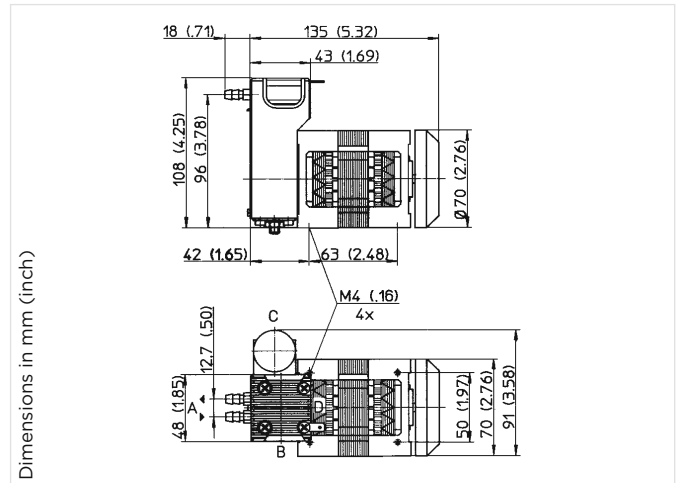


OPTIONS

Different heads and outlet connectors

WOB-L® Piston Compressor 8009D AC

Flow	11.8 l/min
Max. pressure	7.0 bar



PNEUMATIC DATA

Description	8009-30H/10/AC	8009-35H/05/AC	8009-40H/00/AC
Part number	230 V/50 Hz 80091037	80091038	80091039
Max. flow	8.8 l/min	10.3 l/min	11.8 l/min
Max. vacuum	6.0 bar	7.0 bar	7.0 bar
Max. continuous pressure	1.8 bar	1.4 bar	1.0 bar
Max. restart pressure	0.5 bar	Ambient pressure	Ambient pressure

ELECTRICAL DATA

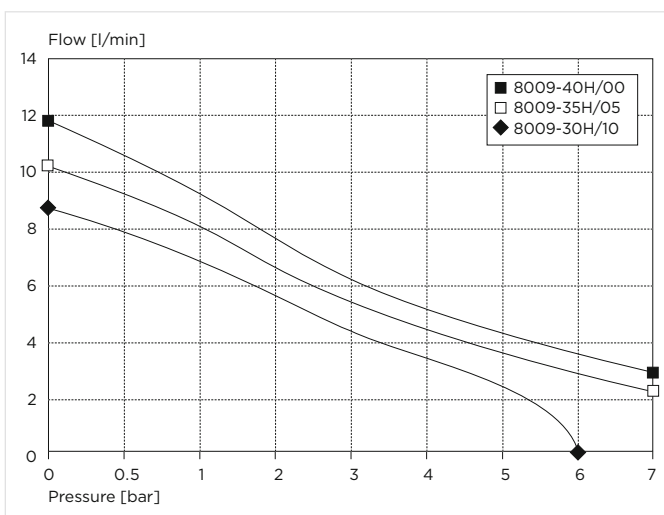
Motor type	Capacitor	Capacitor	Capacitor
Nominal voltage	230 V/50 Hz	230 V/50 Hz	230 V/50 Hz
Nominal speed	2700 rpm	2700 rpm	2700 rpm
Power consumption	78 W	78 W	78 W
Motor insulation class	B	B	B
Thermal switch	130 °C	130 °C	130 °C

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C	10 to 40 °C
Media temperature	10 to 40 °C	10 to 40 °C	10 to 40 °C
Weight	1700 g	1700 g	1700 g
Port direction	A	A	A

All listed values measured at standard atmospheric conditions.

FLOW CURVES



8009... Stock programme

Model key:

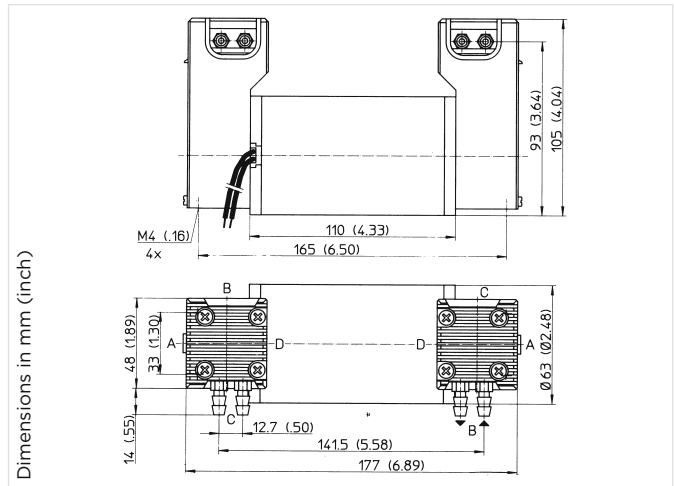
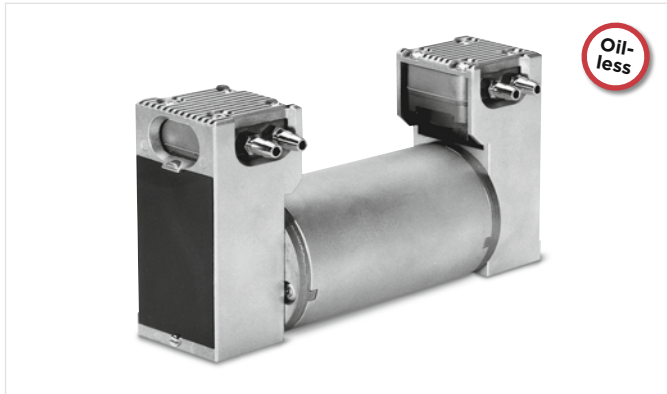
H = Capacitor motor 230 V/50 Hz
 Eccentric Motor type
 8009 - 30 H / 10 / AC
 Series Spacer plate

OPTIONS

Different heads and outlet connectors

WOB-L® Piston Compressor 8009ZD DC

Flow	24.5 l/min
Max. pressure	7.0 bar



PNEUMATIC DATA

Description	8009Z-35M/05/DC	8009Z-40M/00/DC
Part number	24 V DC 80091066	80091067
Max. flow	21.4 l/min	24.5 l/min
Max. pressure	7.0 bar	7.0 bar
Max. continuous pressure	1.2 bar	1.0 bar
Max. restart pressure	2.5 bar	2.0 bar

ELECTRICAL DATA

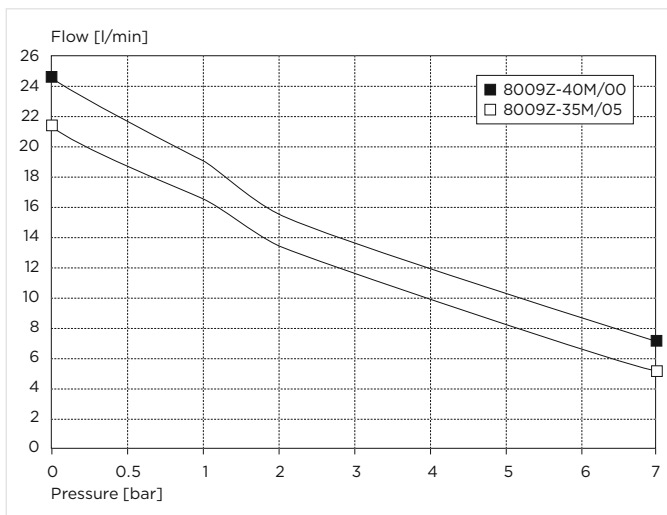
Motor type	Direct current	Direct current
Nominal voltage	24 V DC	24 V DC
Nominal speed	2900 rpm	2900 rpm
Power consumption	115 W	150 W
Motor insulation class	E	E

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	2100 g	2100 g
Port direction	CB	CB
Configuration	parallel	parallel

All listed values measured at standard atmospheric conditions.
Pneumatic data refer to parallel configuration.

FLOW CURVES



Model key:

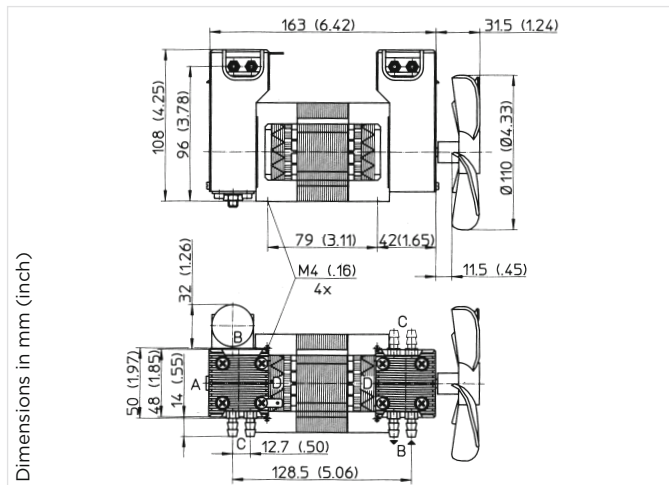
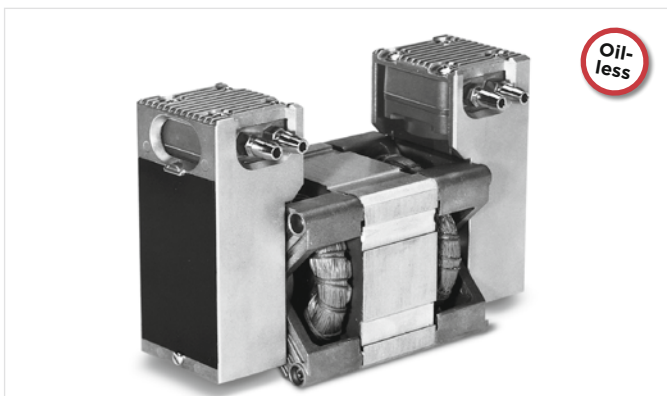
M=Direct current motor 24 V
Z=Double head Motor type
8009 Z - 35 M / 05 / DC
Series Eccentric Spacer plate

OPTIONS

Different heads and outlet connectors

WOB-L® Piston Compressor 8009ZD AC

Flow	22.4 l/min
Max. pressure	7.0 bar



PNEUMATIC DATA

Description	8009Z-35L/05/AC	8009Z-40L/00/AC
Part number	230 V/50 Hz 80090378	80090435
Max. flow	19.6 l/min	22.4 l/min
Max. pressure	7.0 bar	7.0 bar
Max. continuous pressure	1.4 bar	1.0 bar
Max. restart pressure	Ambient pressure	Ambient pressure

ELECTRICAL DATA

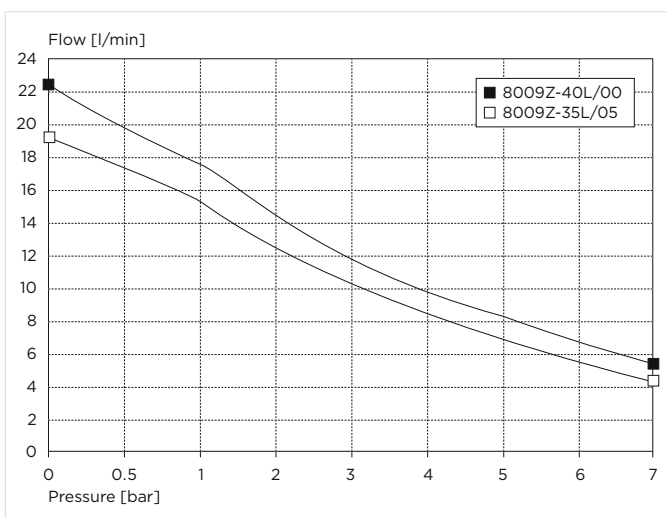
Motor type	Capacitor	Capacitor
Nominal voltage	230 V/50 Hz	230 V/50 Hz
Nominal speed	2700 rpm	2700 rpm
Power consumption	138 W	138 W
Motor insulation class	B	B
Thermal switch	130 °C	130 °C

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 40 °C	10 to 40 °C
Weight	2500 g	2500 g
Port direction	CB	CB
Configuration	parallel	parallel

All listed values measured at standard atmospheric conditions.
Pneumatic data refer to parallel configuration.

FLOW CURVES



8009... Stock programme

Model key:

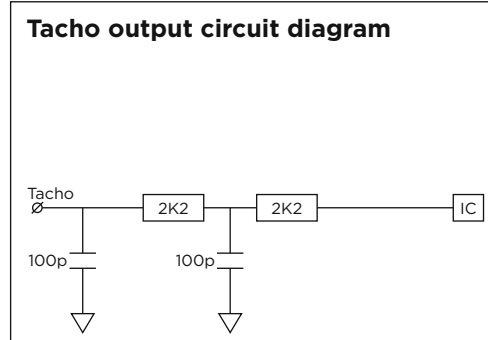
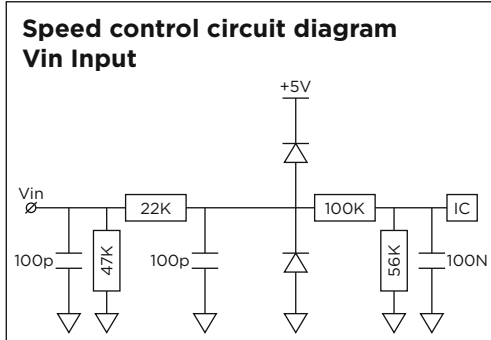
L = Capacitor motor 230 V/50 Hz
 Z=Double head Motor type
 8009 Z - 35 L / 05 / AC
 Series Eccentric Spacer plate

OPTIONS

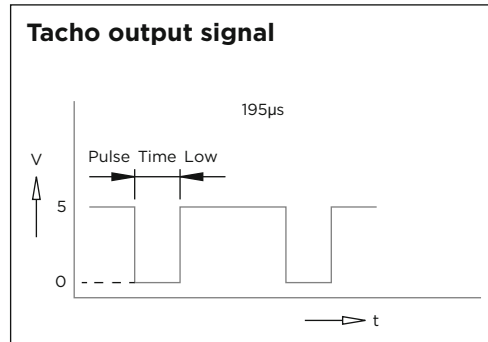
Different heads and outlet connectors

Wiring diagram (BLDC High Performance)

	Function	Colour	Control
Pin 1	V Supply	Red	12 V DC (max. voltage range: 10..18 V DC) 24 V DC (max. voltage range: 10..28 V DC)
Pin 2	Ground	Black	Ground for Vsupply (PIN 1) and Speed Control (PIN 3) analog: 0..5 V DC PWM: 6..20kHz - 14..96% Speed voltage input threshold: 0.2 V
Pin 3	Speed Control	White	
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 μ s Output level „LOW“: 0 / max. 0.5 V Output level „HIGH“: min. 4 V / max. 5 V



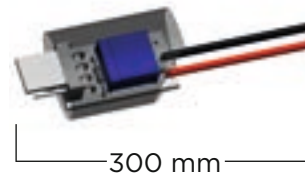
Optional: Adapter for 2-wire duty incl. potentiometer for speed adjustment



Options / Accessories

P/N 29011932 **Adapter for BLDC motor**
4-2 wire w/ manual speed control
12 V DC "red"

P/N 29011933 **Adapter for BLDC motor**
4-2 wire w/ manual speed control
24 V DC "black"



PUMP AND COMPRESSOR SOLUTIONS FOR OEMS WORLDWIDE

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