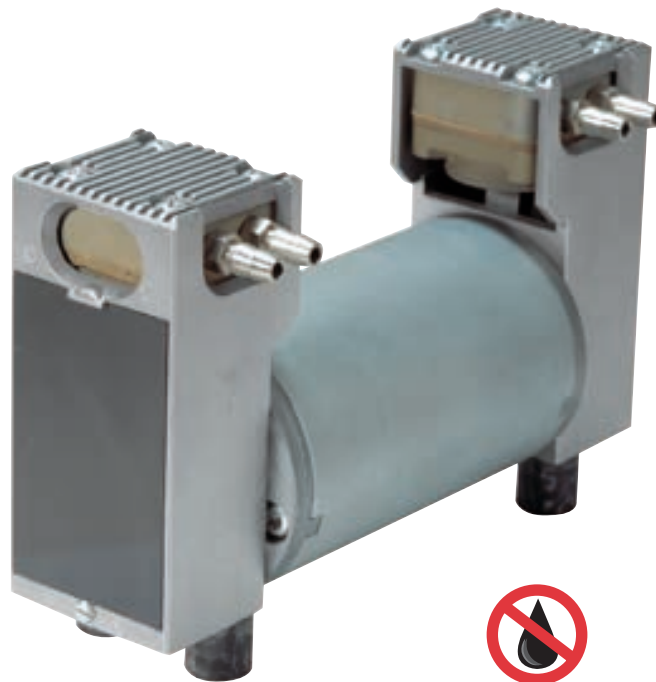




WOB-L™ Piston Air Compressors and Vacuum Pumps

MODELS

8003
8005
8006
8009



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

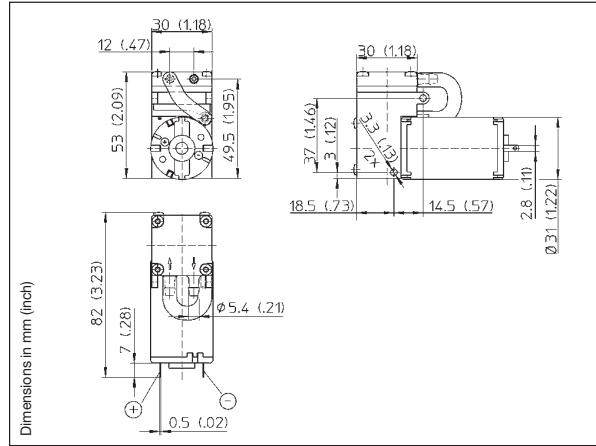
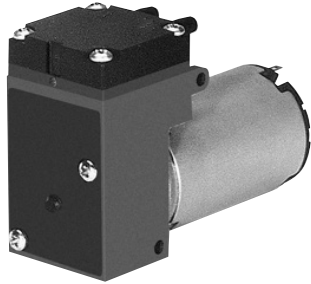
Consult factory for customized solutions



THOMAS
by Gardner Denver

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
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

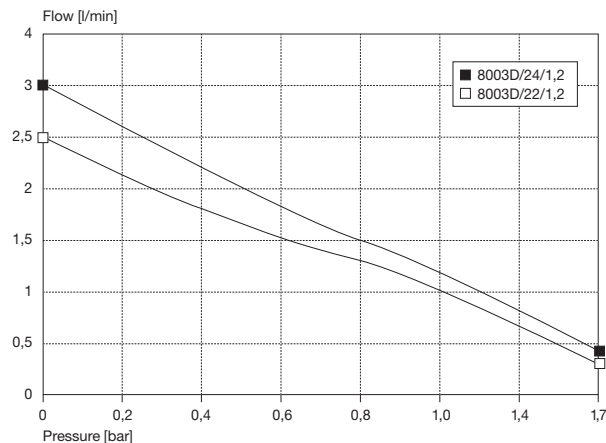
Motor type	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC
Nominal speed	3000 rpm	3000 rpm
Power consumption	7,5 W	8,5 W
Motor insulation class	A	A

General Data

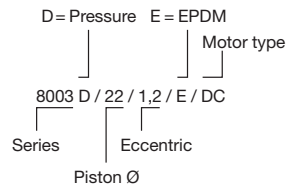
Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	0,19 kg	0,19 kg
Port direction	D	D

All listed values measured at standard atmospheric conditions.

Flow Curves



Model key:



8003... Stock programme

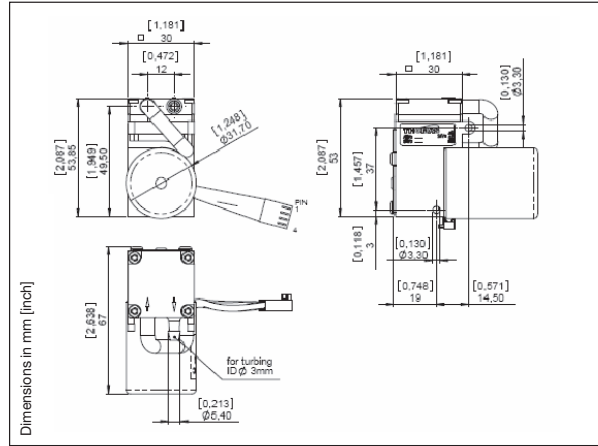
Option:
Low cost DC-motor

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THOMAS
by Gardner Denver

WOB-L Piston Compressor 8003D BLDC

Flow	4,3 l/min
Max. pressure	2,0 bar



Pneumatic Data

Description	8003D/24/1,2/E/BLDC	
Part number	12 V DC	80030802
	24 V DC	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

Wiring diagram

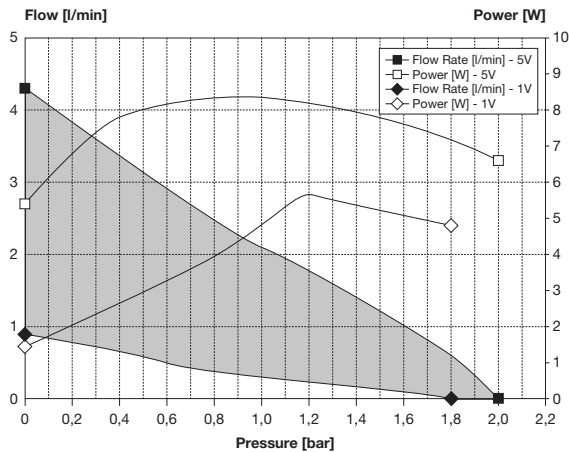
Optional: Adapter for 2-wire duty incl. potentiometer for speed adjustment

	Function	Colour	Control
Pin 1	V Supply	Red	12 VDC (max. voltage range: 10..18 VDC) 24 VDC (max. voltage range: 10..28 VDC)
Pin 2	Ground	Black	Ground for Vsupply (PIN 1) and Speed Control (PIN3)
Pin 3	Speed control	White	analog: 0..5 VDC (max. 28V) PWM: 6..20 kHz - 14..96% Speed voltage input threshold: 0,2 V
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 µs Output level „LOW“: 0 / max. 0,5 V Output level „HIGH“: min. 4 V / max. 5 V

General Data

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

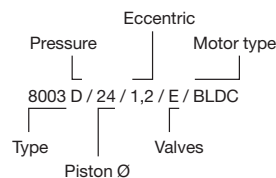
Flow Curves vs. Speed Control Input



Wetted Parts

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

Model key:

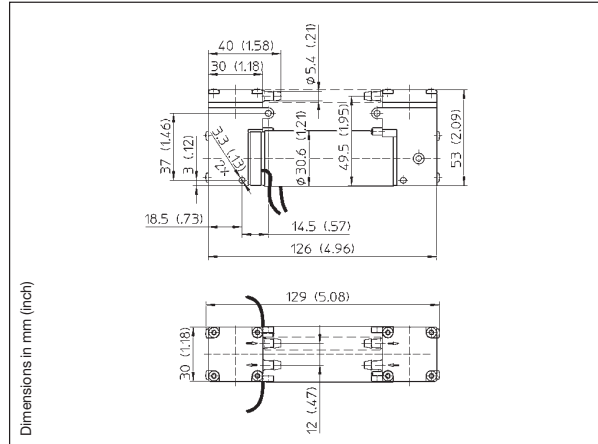
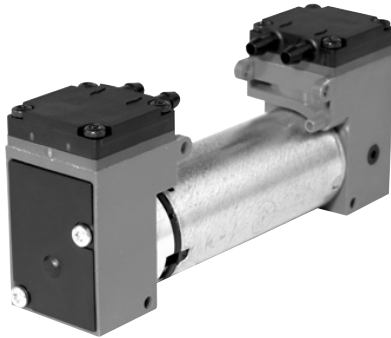


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THOMAS
by Gardner Denver

WOB-L Piston Compressor 8003ZDP DC

Flow	5,4 l/min
Max. pressure	2,0 bar



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

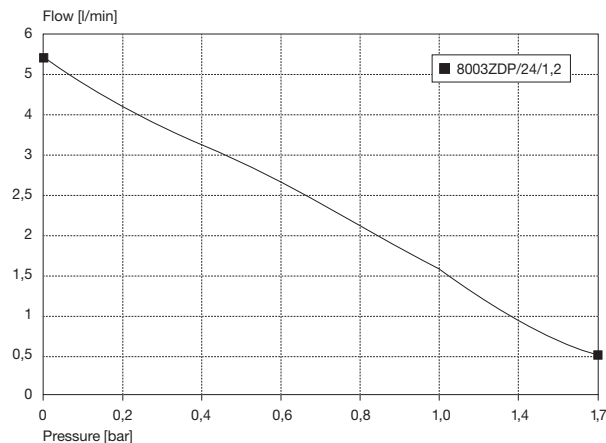
Motor type	Direct current	
Nominal voltage	12 V DC	
Nominal speed	2800 rpm	
Power consumption	13 W	
Motor insulation class	E	

General Data

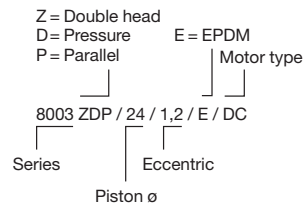
Ambient temperature	10 to 40 °C	
Media temperature	10 to 60 °C	
Weight	0,35 kg	
Port direction	CB	
Configuration	Parallel	

All listed values measured at standard atmospheric conditions.

Flow Curves



Model key:

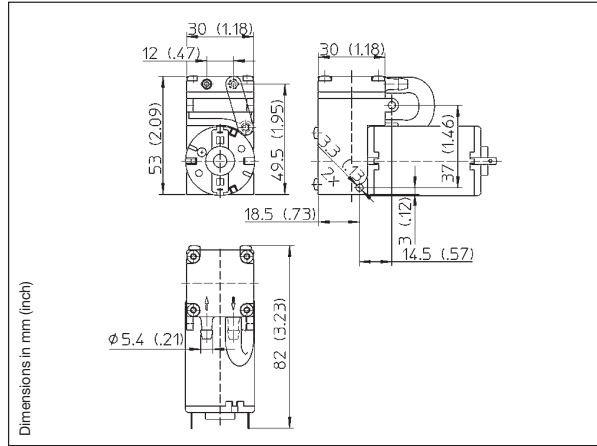
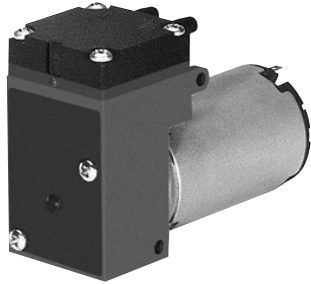


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THOMAS
by Gardner Denver

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
12 V DC	80030067	80030068
24 V DC	80030071	80030072
Max. flow	2,5 l/min	3,0 l/min
Max. vacuum	58 %	59 %
Max. restart vacuum	58 %	59 %

Electrical Data

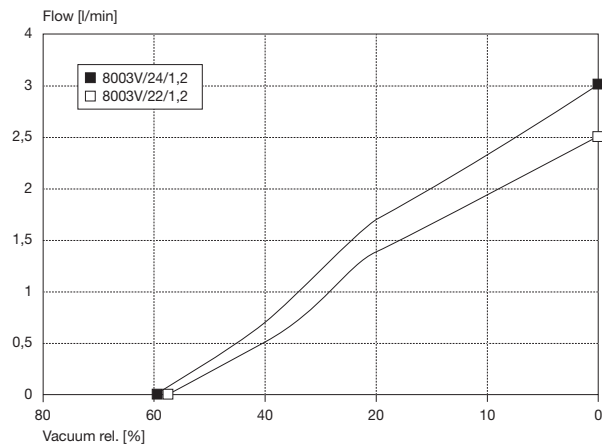
Motor type	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC
Nominal speed	3000 rpm	3000 rpm
Power consumption	5,5 W	6 W
Motor insulation class	A	A

General Data

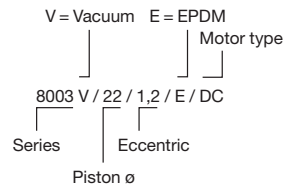
Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	0,19 kg	0,19 kg
Port direction	D	D

All listed values measured at standard atmospheric conditions.

Flow Curves



Model key:



8003... Stock programme

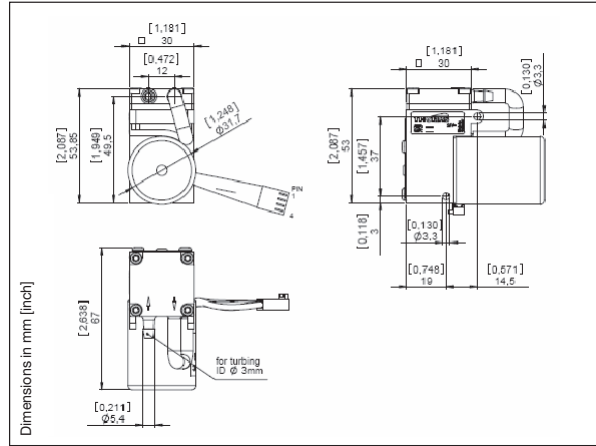
Option:
Low cost DC-motor

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THOMAS
by Gardner Denver

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 %	

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

Wiring diagram

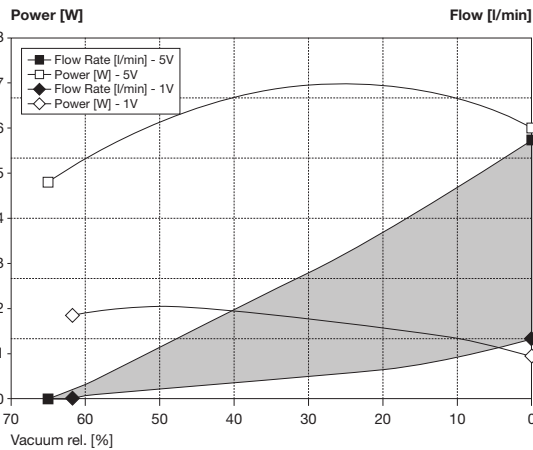
Optional: Adapter for 2-wire duty incl. potentiometer for speed adjustment

	Function	Colour	Control
Pin 1	V Supply	Red	12 VDC (max. voltage range: 10..18 VDC) 24 VDC (max. voltage range: 10..28 VDC)
Pin 2	Ground	Black	Ground for Vsupply (PIN 1) and Speed Control (PIN3)
Pin 3	Speed control	White	analog: 0..5 VDC (max. 28V) PWM: 6..20 kHz - 14..96% Speed voltage input threshold: 0,2 V
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 µs Output level „LOW“: 0 / max. 0,5 V Output level „HIGH“: min. 4 V / max. 5 V

General Data

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

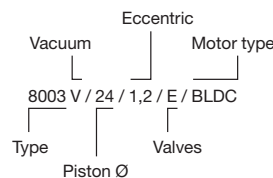
Flow Curves vs. Speed Control Input



Wetted Parts

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

Model key:

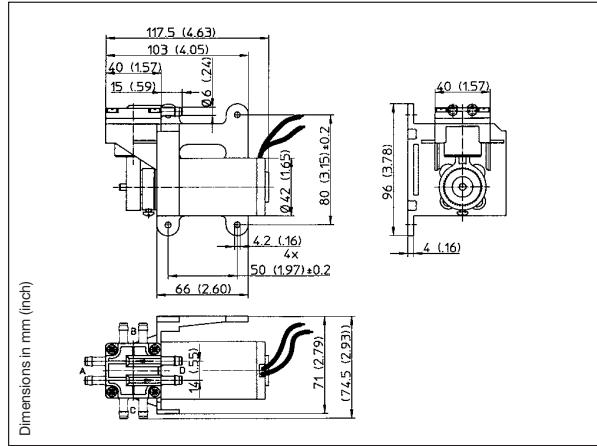
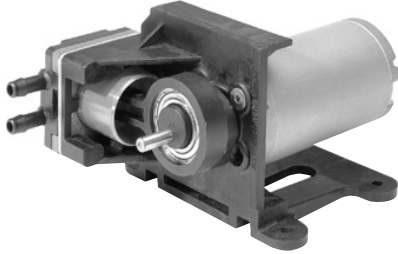


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THOMAS
by Gardner Denver

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* 80050062 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

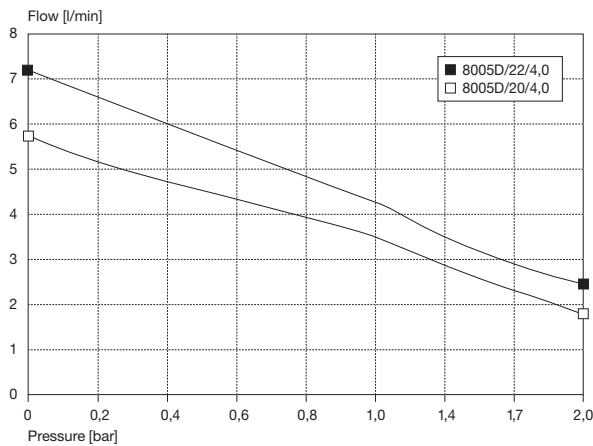
Electrical Data

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

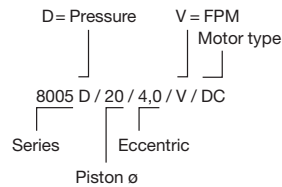
General Data

Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	1,1 kg	1,1 kg
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.



Model key:



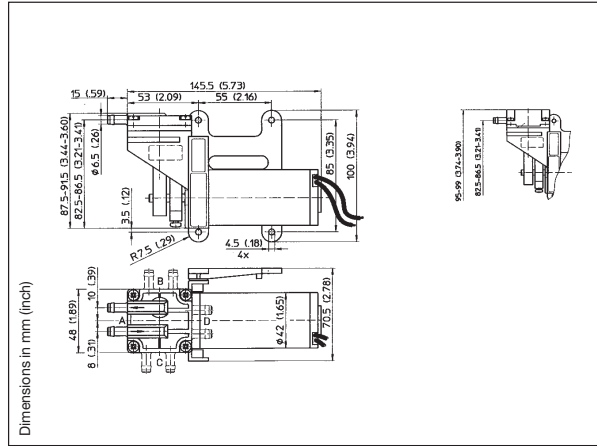
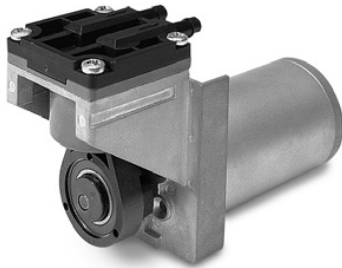
Option:
Noise reduced head
Brushless DC-motor

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THOMAS
by Gardner Denver

WOB-L Piston Compressor 8006D DC

Flow	15,8 l/min
Max. pressure	3,0 bar



Pneumatic Data

Description	8006D/27/4,5V/DC	8006D/30/4,5V/DC
Part number	12 V DC 24 V DC 80060057 80060110	80060071 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

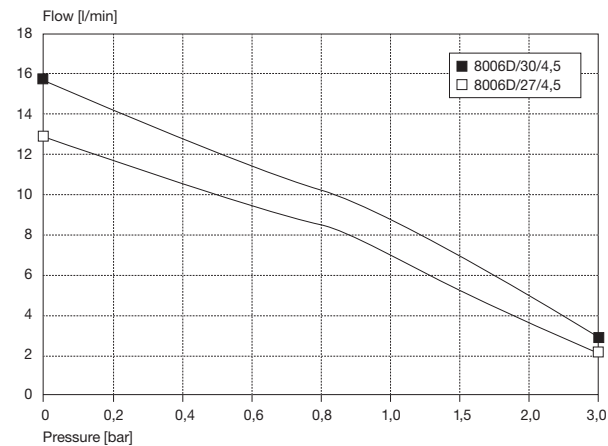
Motor type	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC
Nominal speed	2800 rpm	2800 rpm
Power consumption	40 W	46 W
Motor insulation class	E	E

General Data

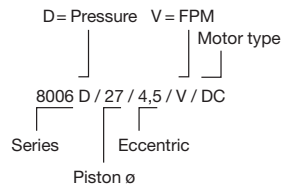
Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	1,2 kg	1,2 kg
Port direction	D	D

All listed values measured at standard atmospheric conditions.

Flow Curves



Model key:



8006... Stock programme

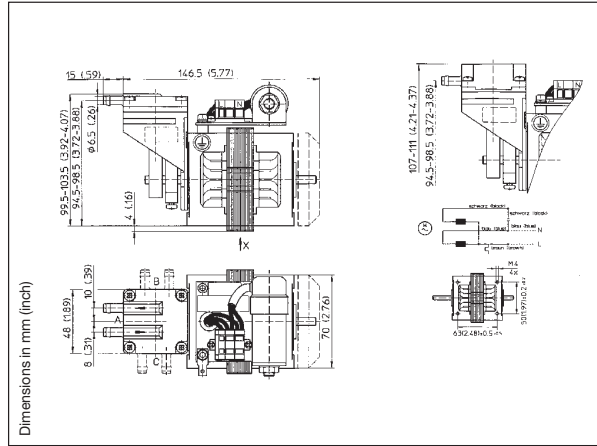
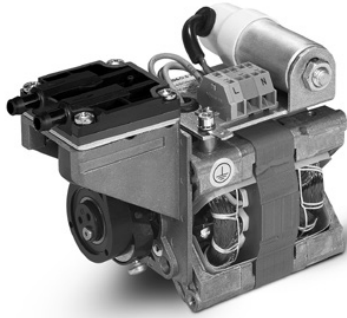
Option:
Noise reduced head
Brushless DC-motor
Con rod cover

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THOMAS
by Gardner Denver

WOB-L Piston Compressor 8006D AC

Flow	15,8 l/min
Max. pressure	3,0 bar



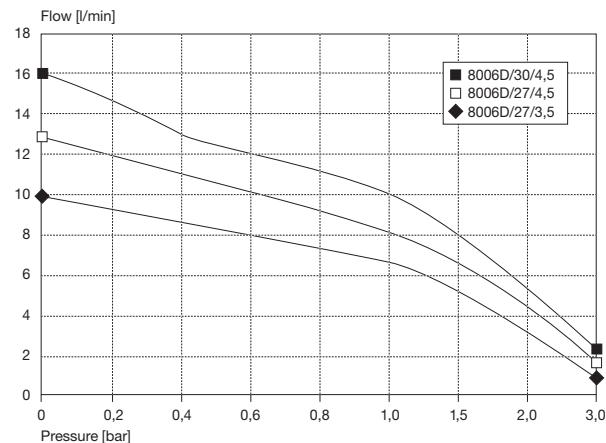
Pneumatic Data				
Description		8006D/27/3,5V/AC	8006D/27/4,5V/AC	8006D/30/4,5V/AC
Part number	230 V/50 Hz	80060096	80060098	80060007
Max. flow		10,1 l/min	13,0 l/min	15,8 l/min
Max. pressure		3,0 bar	3,0 bar	3,0 bar
Max. continuous pressure		1,5 bar	1,2 bar	1,0 bar
Max. restart pressure		Ambient pressure	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		2800 rpm	2800 rpm	2800 rpm
Power consumption		80 W	80 W	80 W
Motor insulation class		F	F	F
Thermal switch		150° C	150° C	150° C

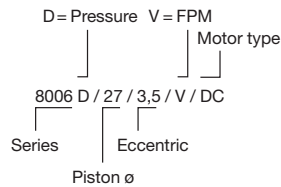
General Data				
Ambient temperature		10 to 40 °C	10 to 40 °C	10 to 40 °C
Media temperature		10 to 40 °C	10 to 40 °C	10 to 40 °C
Weight		1,5 kg	1,5 kg	1,5 kg
Port direction		A	A	A

All listed values measured at standard atmospheric conditions.

Flow Curves



Model key:



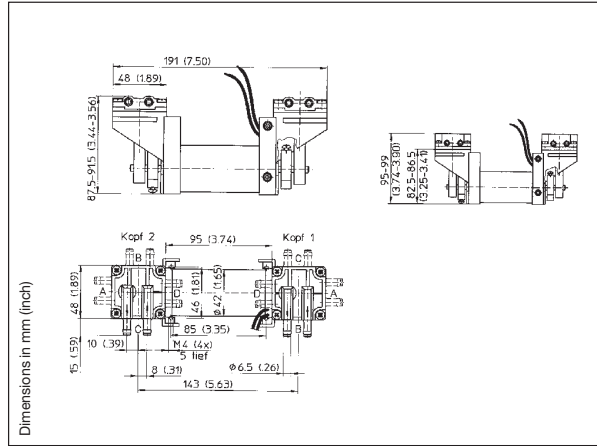
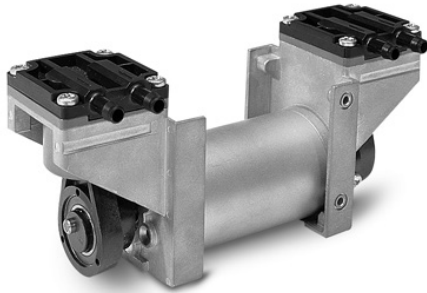
Option:
Noise reduced head
Con rod cover

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WOB-L Piston Vacuum Pump 8006ZV DC

Flow	31,0 l/min
Max. vacuum	80 %



Pneumatic Data

Description	8006ZV/30/4,5V/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

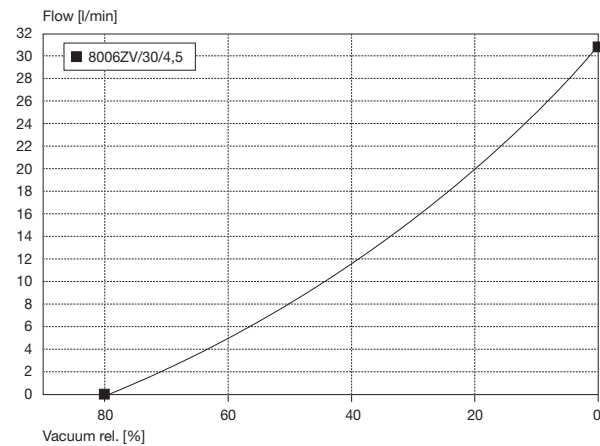
Motor type	Direct current	
Nominal voltage	12 V/24 V DC	
Nominal speed	2800 rpm	
Power consumption	60 W	
Motor insulation class	E	

General Data

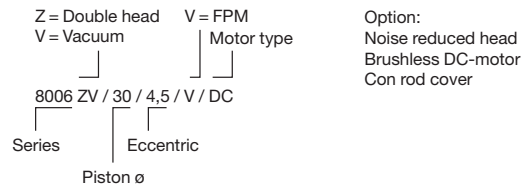
Ambient temperature	10 to 40 °C	
Media temperature	10 to 60 °C	
Weight	0,93 kg	
Port direction	CB	
Configuration	parallel	

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

Flow Curves



Model key:

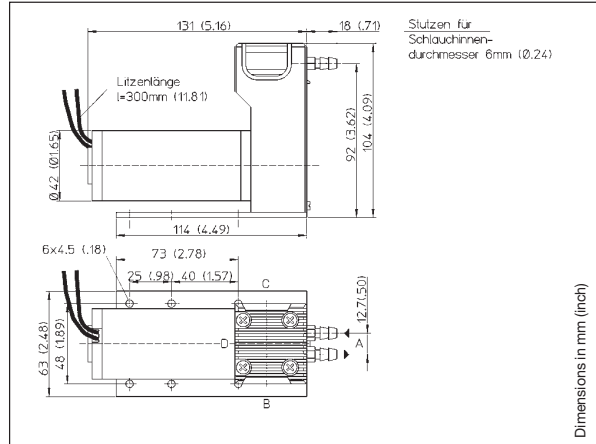


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WOB-L Piston Compressor 8009D DC

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 24 V DC 80091031	80091020 80091032	80091021 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

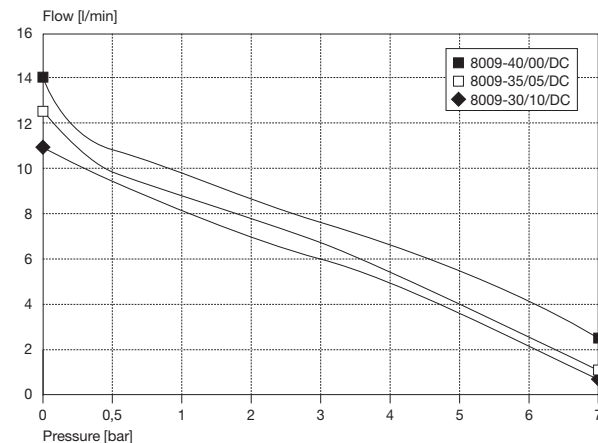
Motor type	Direct current	Direct current	Direct current
Nominal voltage	12 V/24 V DC	12 V/24 V DC	12 V/24 V DC
Nominal speed	2800 rpm	2800 rpm	2800 rpm
Power consumption	50 W	58 W	65 W
Motor insulation class	E	E	E

General Data

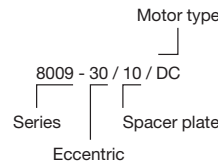
Ambient temperature	10 to 40 °C	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C	10 to 60 °C
Weight	1,1 kg	1,1 kg	1,1 kg
Port direction	A	A	A

All listed values measured at standard atmospheric conditions.

Flow Curves



Model key:



8009... Stock programme

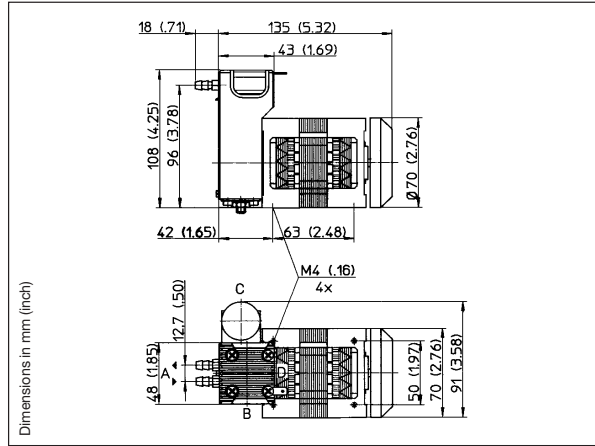
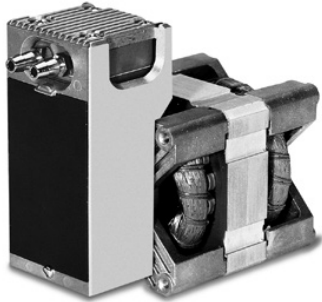
Option:
Different heads and outlet connectors

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THOMAS
by Gardner Denver

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. pressure	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

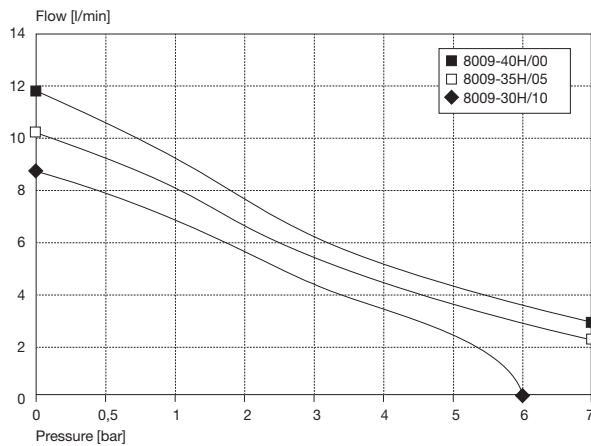
Motor type	Capacitor	Capacitor	Capacitor
Nominal voltage	230 V/50 Hz	230 V/50 Hz	230 V/50 Hz
Nominal speed	2700 rpm	2700 rpm	2700 rpm
Power consumption	78 W	78 W	78 W
Motor insulation class	B	B	B
Thermal switch	130 °C	130 °C	130 °C

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	1,7 kg	1,7 kg	1,7 kg
Port direction	A	A	A

All listed values measured at standard atmospheric conditions.

Flow Curves



Model key:

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

8009... Stock programme

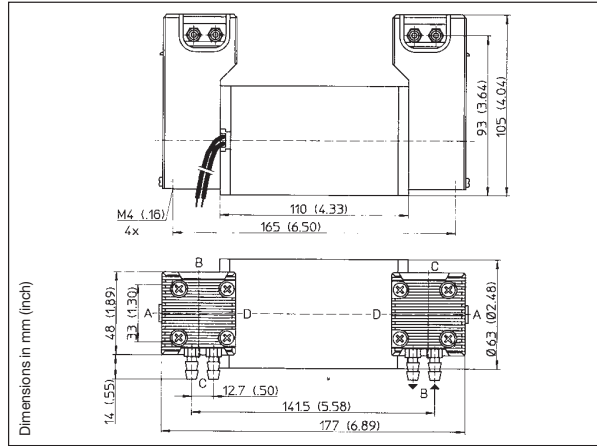
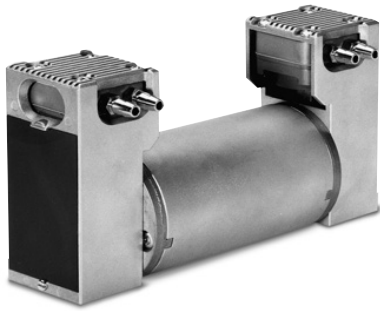
Option:
 Different heads and
 outlet connectors

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THOMAS
 by Gardner Denver

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

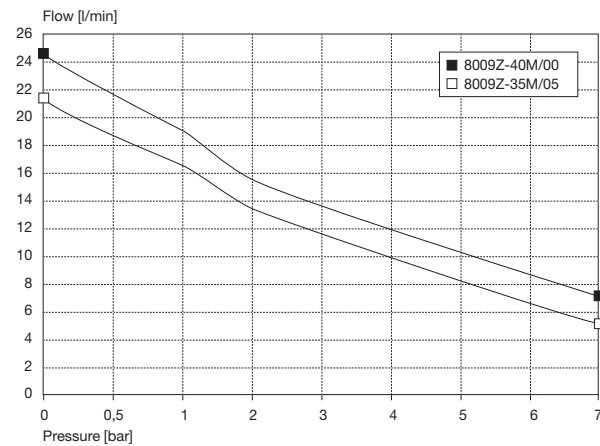
Motor type	Direct current	Direct current
Nominal voltage	24 V DC	24 V DC
Nominal speed	2900 rpm	2900 rpm
Power consumption	115 W	150 W
Motor insulation class	E	E

General Data

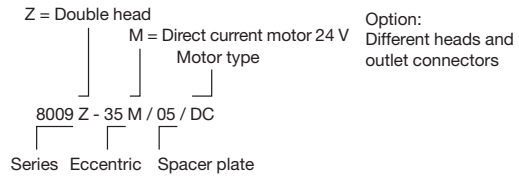
Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 60 °C	10 to 60 °C
Weight	2,1 kg	2,1 kg
Port direction	CB	CB
Configuration	parallel	parallel

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

Flow Curves



Model key:

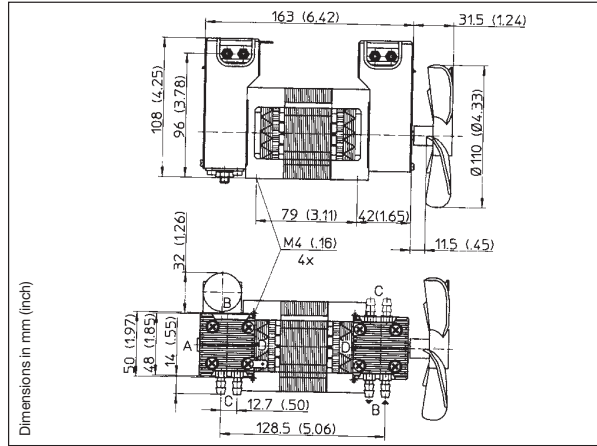
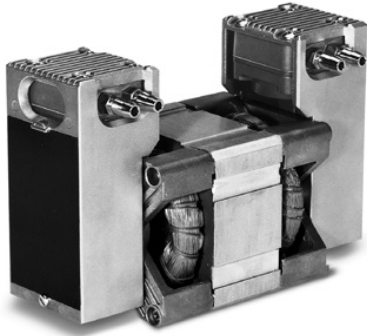


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THOMAS
by Gardner Denver

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

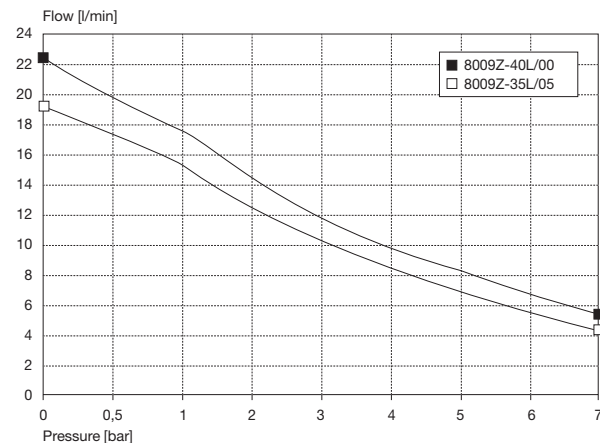
Motor type	Capacitor	Capacitor
Nominal voltage	230 V/50 Hz	230 V/50 Hz
Nominal speed	2700 rpm	2700 rpm
Power consumption	138 W	138 W
Motor insulation class	B	B
Thermal switch	130 °C	130 °C

General Data

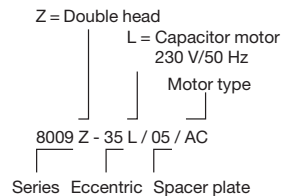
Ambient temperature	10 to 40 °C	10 to 40 °C
Media temperature	10 to 40 °C	10 to 40 °C
Weight	2,5 kg	2,5 kg
Port direction	CB	CB
Configuration	parallel	parallel

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

Flow Curves



Model key:



8009... Stock programme

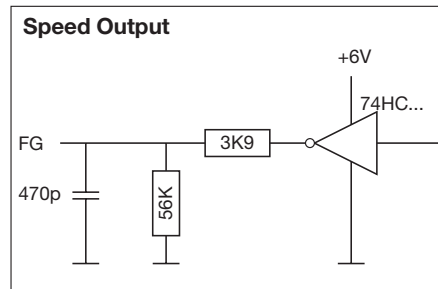
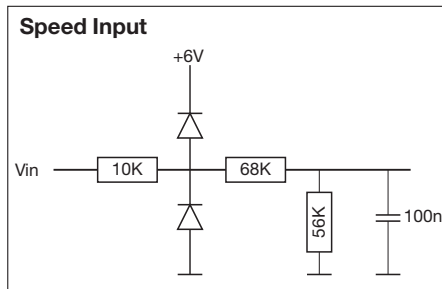
Option:
Different heads and
outlet connectors

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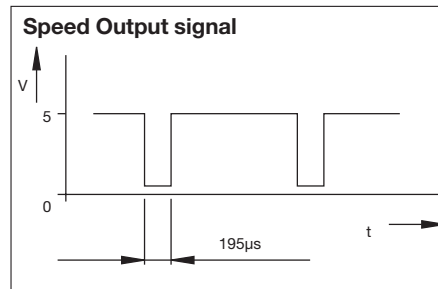
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Wiring diagram (8003 BLDC)

Pin	Function	Colour	Control
Pin 1	V Supply	Red	12 VDC (max. voltage range: 10..18 VDC) 24 VDC (max. voltage range: 10..28 VDC)
Pin 2	Ground	Black	Ground for Vsupply (PIN 1) and Speed Control (PIN3)
Pin 3	Speed control	White	analog: 0..5 VDC (max. 28V) PWM: 6..20 kHz - 14..96% Speed voltage input threshold: 0,2 V
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 µs 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 29011930 **Adapter for BLDC motor**
4-2 wire w/manual speed control
12VDC "red"

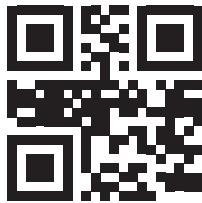
P/N 29011931 **Adapter for BLDC motor**
4-2 wire w/manual speed control
24VDC "black"



THOMAS
by Gardner Denver

Notes





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