

FEATURES

- > Oil-less
- > Low power consumption
- > Low sound level
- > Long lifetime
- > Compact design
- > Lightweight

TYPICAL APPLICATIONS

- > Medical devices
- > Gas detection
- > Analysis
- > Battery operated systems

BASE MODEL

1410 LC
1410 DC
1410 BLDC HP



Diaphragm

Diaphragm Pump 1410V DC

Flow	4.2 l/min
Final Vacuum	75 %



PNEUMATIC DATA		
Description		
Part number	12 V	14100300
	24 V	14100301
Max. flow		4.2 l/min
Max. intermittent vacuum		75 %
Max. continuous vacuum		75 %
Max. restart vacuum		50 %

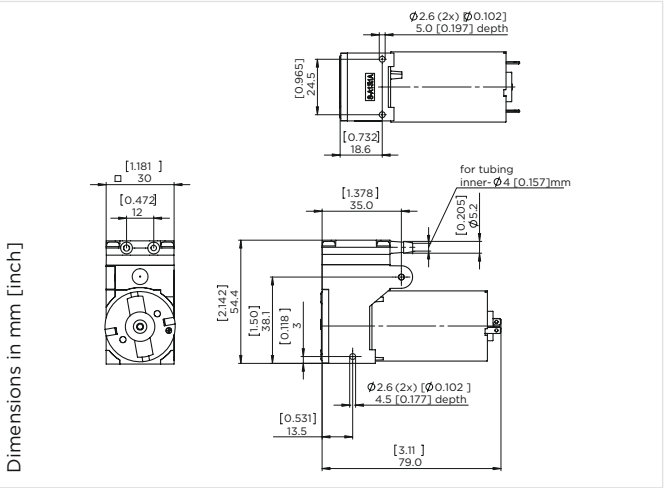
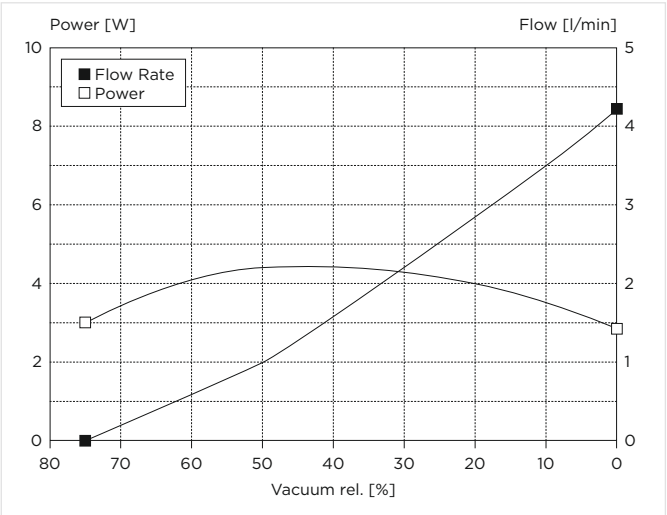
ELECTRICAL DATA	
Motor type	DC brush
Nominal speed	3000 rpm
Nominal voltage	12/24 V DC
Max. power consumption	4.4 W
Motor insulation class	A
Protection class	IP20

GENERAL DATA	
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	190 g
Port direction	D

WETTED PARTS	
Pump head	PARA
Diaphragm	EPDM
Valves	EPDM

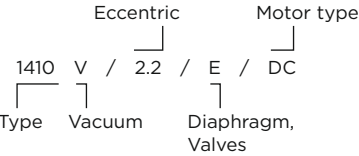
OPTIONS	
PPS	
FKM	
FKM	

FLOW CURVES



1410... Stock programme

Model key:



Diaphragm Pump 1410D DC

Flow	4.3 l/min
Final Pressure	1.0 bar



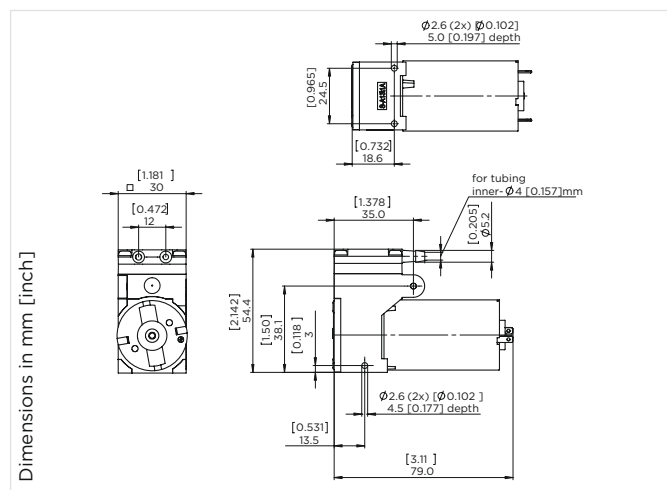
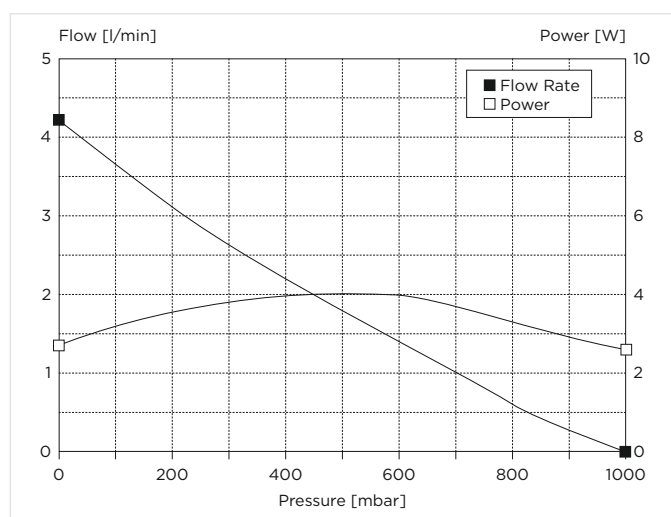
PNEUMATIC DATA		
Description	1410D/2.2/E/DC	
Part number	12 V	14100302
	24 V	14100303
Max. flow	4.3 l/min	
Max. intermittent pressure	1.0 bar	
Max. continuous pressure	1.0 bar	
Max. restart pressure	0.5 bar	

ELECTRICAL DATA	
Motor type	DC brush
Nominal speed	3000 rpm
Nominal voltage	12/24 V DC
Max. power consumption	4.0 W
Motor insulation class	A
Protection class	IP20

GENERAL DATA	
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	190 g
Port direction	D

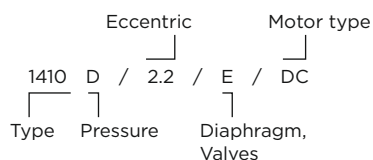
WETTED PARTS		OPTIONS	
Pump head	PARA	PPS	
Diaphragm	EPDM	FKM	
Valves	EPDM	FKM	

FLOW CURVES



1410... Stock programme

Model key:



Diaphragm Pump 1410VD DC

Flow	3.2 l/min
Final Pressure	1.9 bar
Final Vacuum	73 %



PNEUMATIC DATA

Description	1410VD/1.5/E/DC	
Part number	12 V	14100304
	24 V	14100305
Max. flow	3.2 l/min	
Max. intermittent pressure	1.9 bar	
Max. continuous pressure	0.7 bar	
Max. restart pressure	0.5 bar	
Max. intermittent vacuum	73 %	
Max. continuous vacuum	73 %	
Max. restart vacuum	50 %	

ELECTRICAL DATA

Motor type	DC brush
Nominal speed	3000 rpm
Nominal voltage	12/24 V DC
Max. power consumption	4.3 W
Motor insulation class	A
Protection class	IP20

GENERAL DATA

Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	190 g
Port direction	D

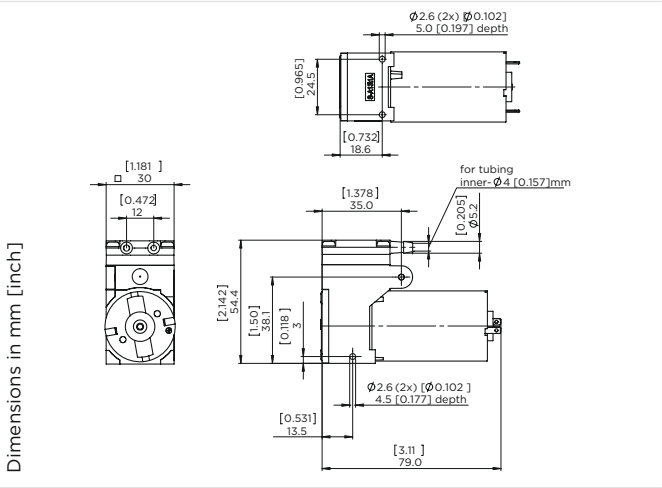
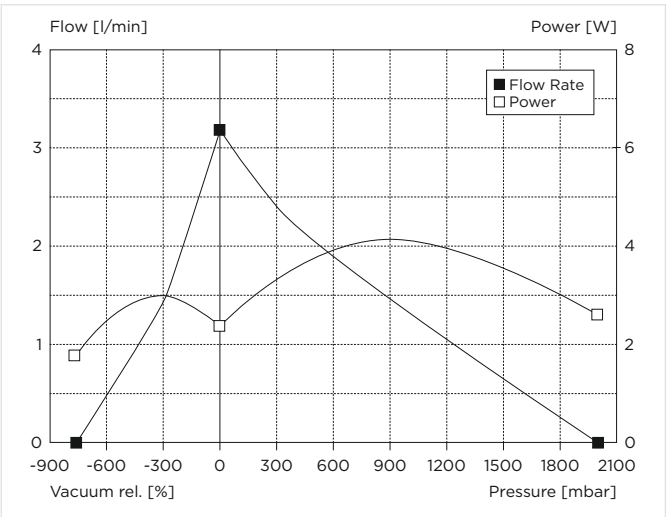
WETTED PARTS

Pump head	PARA
Diaphragm	EPDM
Valves	EPDM

OPTIONS

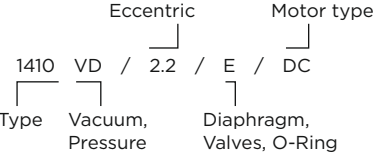
PPS

FLOW CURVES



1410... Stock programme

Model key:



Diaphragm Pump 1410V LC

Flow	3.7 l/min
Final Vacuum	75 %



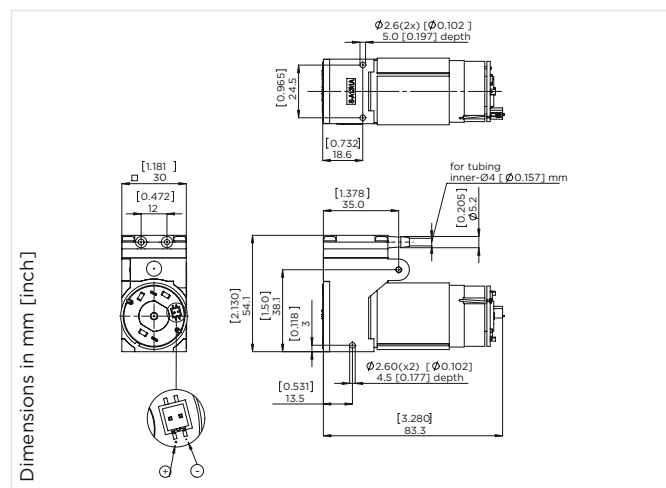
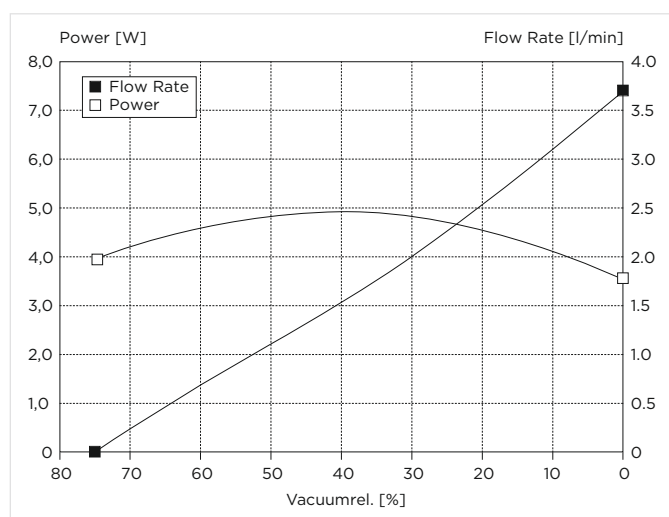
PNEUMATIC DATA		
Description	1410V/2.2/E/LC	
Part number	12 V	14100103
	24 V	14100106
Max. flow	3.7 l/min	
Max. intermittent vacuum	75 %	
Max. continuous vacuum	75 %	
Max. restart vacuum	75 %	

ELECTRICAL DATA	
Motor type	DC brush
Nominal speed	3000 rpm
Nominal voltage	12/24 V DC
Max. power consumption	5.0 W
Motor insulation class	F
Protection class	IP00
* Suitable connector	Housing, receptacle, 1.5mm, pitch Molex P/N: 87439-0200
	2x Crimp receptacle, 1.5mm, pitch Molex P/N: 87421-0000

GENERAL DATA	
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	180 g
Port direction	D

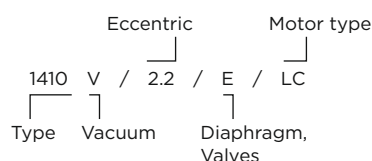
WETTED PARTS		OPTIONS
Pump head	PARA	PPS
Diaphragm	EPDM	
Valves	EPDM	

FLOW CURVES



1410... Stock programme

Model key:



Diaphragm Pump 1410D LC

Flow	3.7 l/min
Final Pressure	1.0 bar



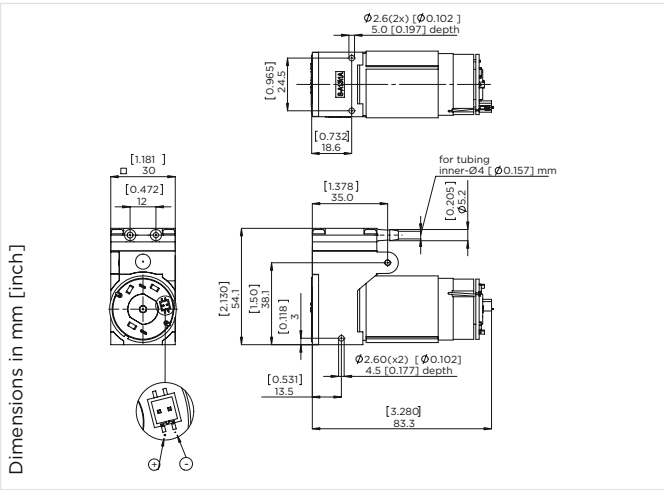
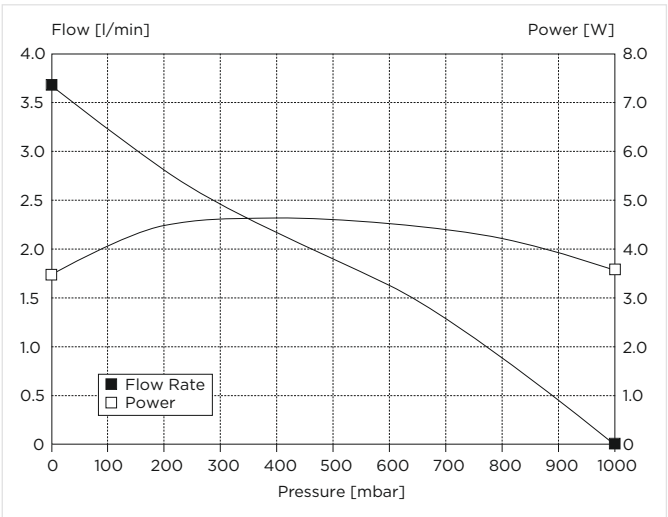
PNEUMATIC DATA		
Description		
1410D/2.2/E/LC		
Part number	12 V	14100104
	24 V	14100107
Max. flow		3.7 l/min
Max. intermittent pressure		1.0 bar
Max. continuous pressure		1.0 bar
Max. restart pressure		1.0 bar

ELECTRICAL DATA	
Motor type	DC brush
Nominal speed	3000 rpm
Nominal voltage	12/24 V DC
Max. power consumption	4.8 W
Motor insulation class	F
Protection class	IP00
Suitable connector	Housing, receptacle, 1.5mm, pitch Molex P/N: 87439-0200
	2x Crimp receptacle, 1.5mm, pitch Molex P/N: 87421-0000

GENERAL DATA	
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	180 g
Port direction	D

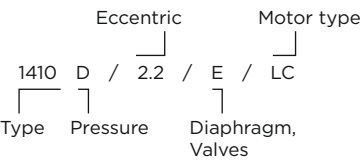
WETTED PARTS		OPTIONS	
Pump head	PARA	PPS	
Diaphragm	EPDM		
Valves	EPDM		

FLOW CURVES



1410... Stock programme

Model key:



Diaphragm Pump 1410VD LC

Flow	2.6 l/min
Final Pressure	1.9 bar
Final Vacuum	75 %

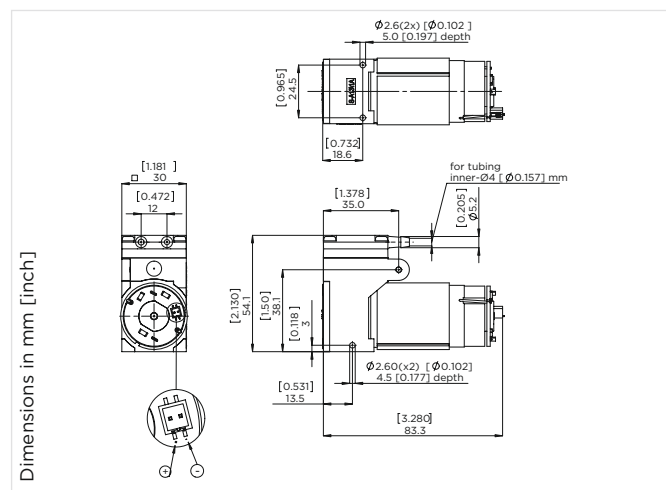
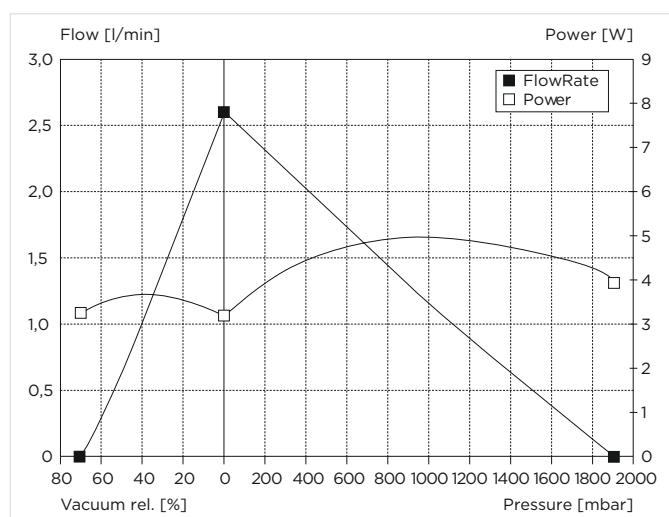


PNEUMATIC DATA		
Description	1410VD/1.5/E/LC	
Part number	12 V	14100105
	24 V	14100108
Max. flow	2.6 l/min	
Max. intermittent pressure	1.9 bar	
Max. continuous pressure	0.7 bar	
Max. restart pressure	1.9 bar	
Max. intermittent vacuum	75 %	
Max. continuous vacuum	75 %	
Max. restart vacuum	75 %	

ELECTRICAL DATA	
Motor type	DC brush
Nominal speed	3000 rpm
Nominal voltage	12/24 V DC
Max. power consumption	5.0 W
Motor insulation class	F
Protection class	IP00
* Suitable connector	Housing, receptacle, 1.5mm, pitch Molex P/N: 87439-0200
	2x Crimp receptacle, 1.5mm, pitch Molex P/N: 87421-0000

GENERAL DATA	
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	180 g
Port direction	D

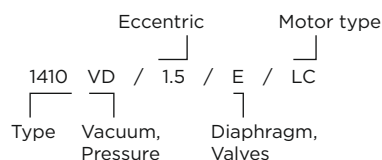
FLOW CURVES



WETTED PARTS		OPTIONS
Pump head	PARA	PPS
Diaphragm	EPDM	
Valves	EPDM	

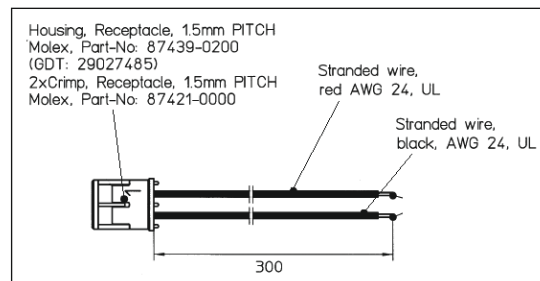
1410... Stock programme

Model key:



OPTIONS / ACCESSORIES

P/N 29027486 Cable harness for LC motor version



Diaphragm Pump 1410V BLDC High Performance

Flow	5.5 l/min
Final Vacuum	75 %



PNEUMATIC DATA		
Description	1410V/2.2/E/BLDC	
Part number	12 V	14100210
	24 V	14100211
Max. flow	5.5 l/min	
Max. intermittent vacuum	75 %	
Max. continuous vacuum	75 %	
Max. restart vacuum	75 %	

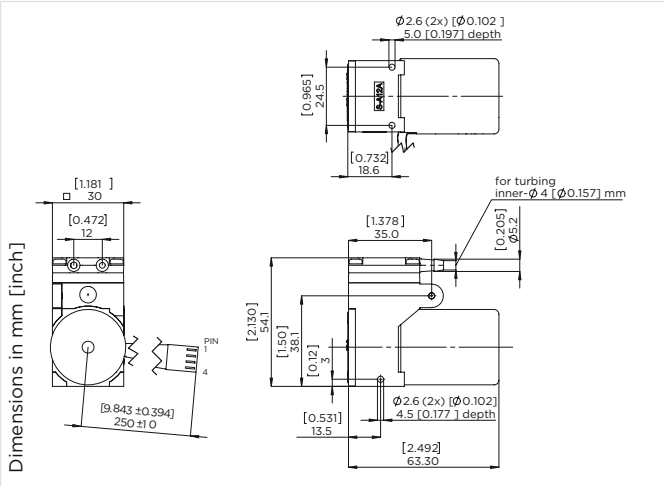
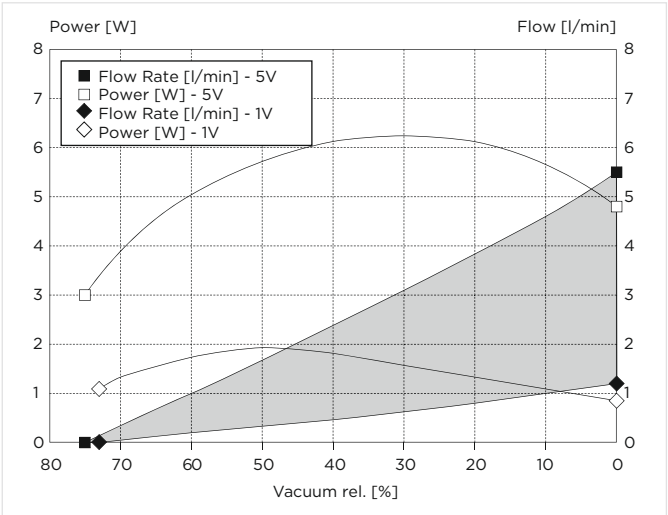
ELECTRICAL DATA		
Motor type	Brushless DC	
Nominal speed	0 - 4600 rpm	
Nominal voltage	12/24 V DC	
Drive electronics	integrated with reverse supply voltage protection	
Max. power consumption	6.3 W	
Motor insulation class	B	
Protection class	IP20	
Connector	Housing:	Molex KK 22-01-3047
	Terminal:	Molex KK 08-50-0031

GENERAL DATA	
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	170 g
Port direction	D

WETTED PARTS	
Pump head	PARA
Diaphragm	EPDM
Valves	EPDM

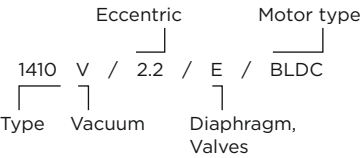
OPTIONS
PPS

FLOW CURVES



Please refer to the wiring diagram on page 11.

Model key:



Diaphragm Pump 1410D BLDC High Performance

Flow	5.5 l/min
Final Pressure	1.0 bar



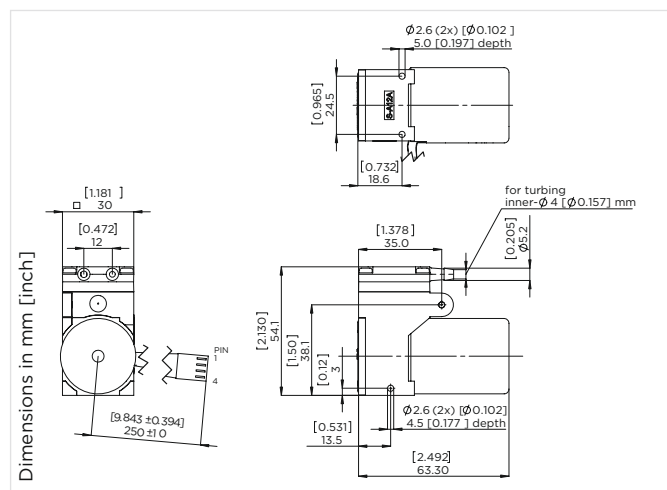
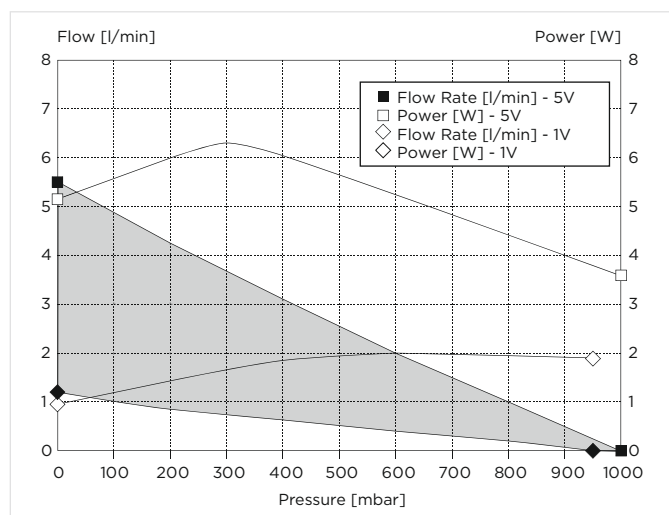
PNEUMATIC DATA		
Description	1410D/2.2/E/BLDC	
Part number	12 V	14100212
	24 V	14100215
Max. flow	5.5 l/min	
Max. intermittent pressure	1.0 bar	
Max. continuous pressure	1.0 bar	
Max. restart pressure	1.0 bar	

ELECTRICAL DATA		
Motor type	Brushless DC	
Nominal speed	0 - 4600 rpm	
Nominal voltage	12/24 V DC	
Drive electronics	integrated with reverse supply voltage protection	
Max. power consumption	6.3 W	
Motor insulation class	B	
Protection class	IP20	
Connector	Housing:	Molex KK 22-01-3047
	Terminal:	Molex KK 08-50-0031

GENERAL DATA	
Ambient temperature	15 to 40 °C
Media temperature	15 to 40 °C
Weight	170 g
Port direction	D

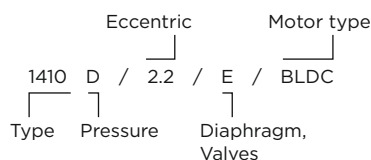
WETTED PARTS		OPTIONS
Pump head	PARA	PPS
Diaphragm	EPDM	
Valves	EPDM	

FLOW CURVES



Please refer to the wiring diagram on page 11.

Model key:



Diaphragm Pump 1410VD BLDC High Performance

Flow	4.3 l/min
Final Pressure	1.9 bar
Final Vacuum	73 %

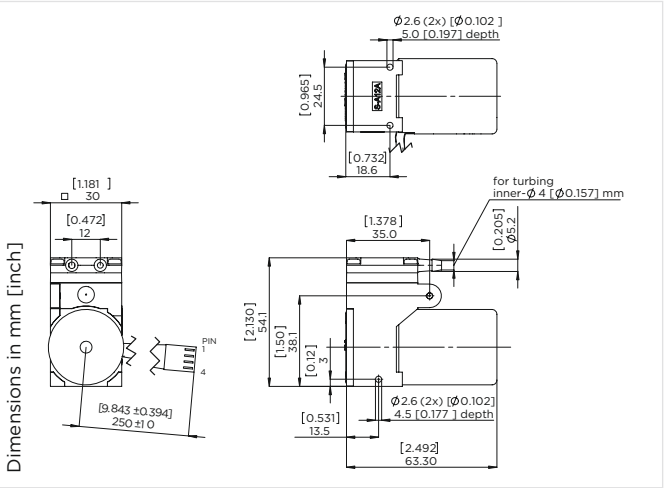
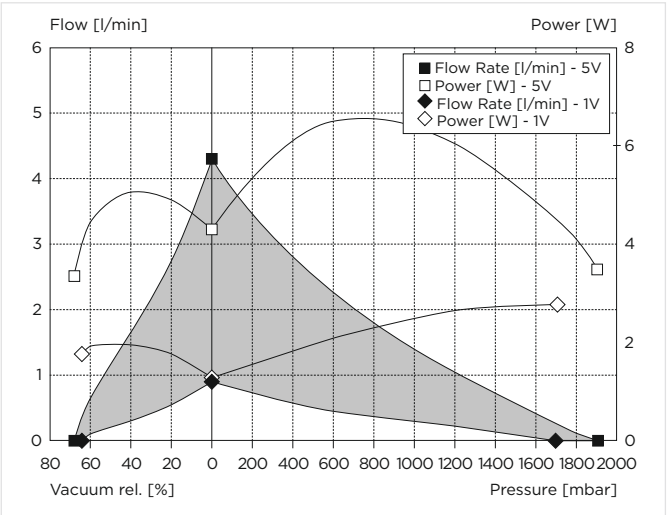


PNEUMATIC DATA		
Description	1410VD/1.5/E/BLDC	
Part number	12 V	14100216
	24 V	14100217
Max. flow	4.3 l/min	
Max. intermittent pressure	1.9 bar	
Max. continuous pressure	0.7 bar	
Max. intermittent pressure	1.9 bar	
Max. intermittent vacuum	73 %	
Max. continuous vacuum	73 %	
Max. restart vacuum	73 %	

ELECTRICAL DATA		
Motor type	Brushless DC	
Nominal speed	0 - 4600 rpm	
Nominal voltage	12/24 V DC	
Drive electronics	integrated with reverse supply voltage protection	
Max. power consumption	7.0 W	
Motor insulation class	B	
Protection class	IP20	
Connector	Housing:	Molex KK 22-01-3047
	Terminal:	Molex KK 08-50-0031

GENERAL DATA		
Ambient temperature	15 to 40 °C	
Media temperature	15 to 40 °C	
Weight	170 g	
Port direction	D	

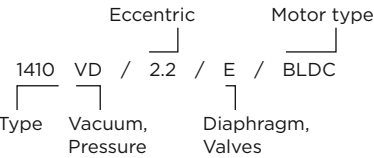
FLOW CURVES



WETTED PARTS		OPTIONS
Pump head	PARA	PPS
Diaphragm	EPDM	
Valves	EPDM	

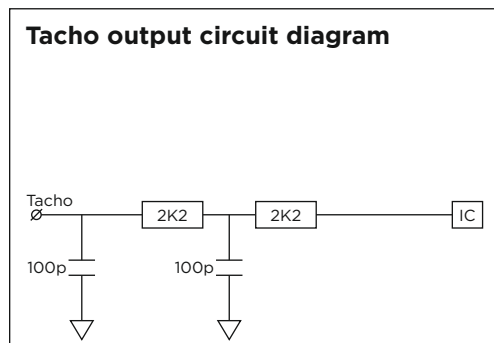
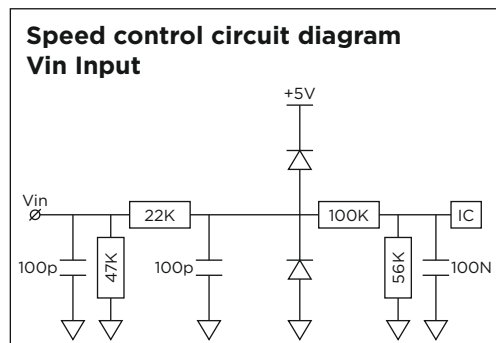
Please refer to the wiring diagram on page 11.

Model key:

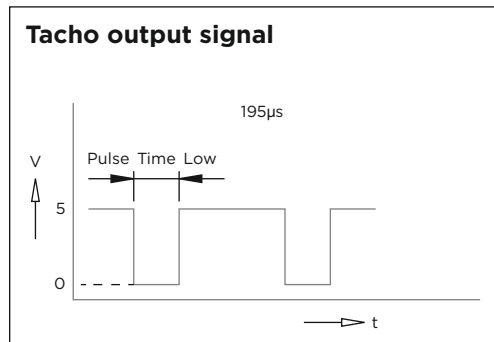


Wiring diagram (BLDC High Performance)

	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)
Pin 3	Speed Control	White	analog: 0..5 V DC PWM: 6..20kHz - 14..96% Speed voltage input threshold: 0.2 V
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



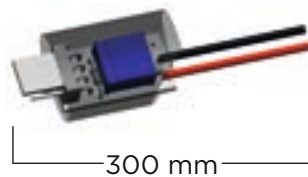
Optional: Adapter for 2-wire duty
incl. potentiometer for
speed adjustment



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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