

## FEATURES

- > Excellent aspiration performance
- > Valve system optimized for gas/liquid mixtures
- > High efficiency
- > Excellent reliability and durability even with corrosive and abrasive media
- > Flexible design for customized solutions

## TYPICAL APPLICATIONS

- > In-vitro diagnostics
- > Inkjet printers
- > Condensate removal

## BASE MODEL

6313 BLDC S

6313 DC S



Diaphragm

# Diaphragm Liquid Pump 6313 BLDC Standard

<b>Max. liquid flow</b>	<b>350 ml/min</b>
<b>Max. gas flow</b>	<b>2.3 l/min</b>
<b>Pressure height (liquid)</b>	<b>1000 mbar (rel.)</b>
<b>Final vacuum (gas)</b>	<b>-700 mbar (rel.)</b>

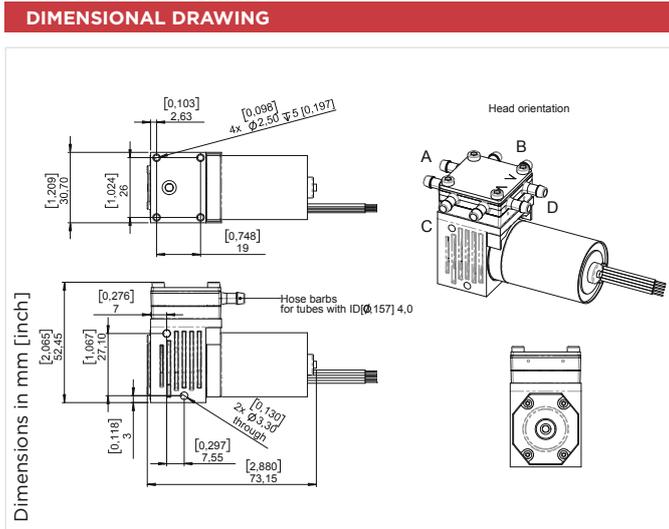


HYDRAULIC DATA	
Max. flow [ml/min]	350
Max. cont. pressure [mbar rel.]	1.000
Max. suction height [mbar rel.]	-700

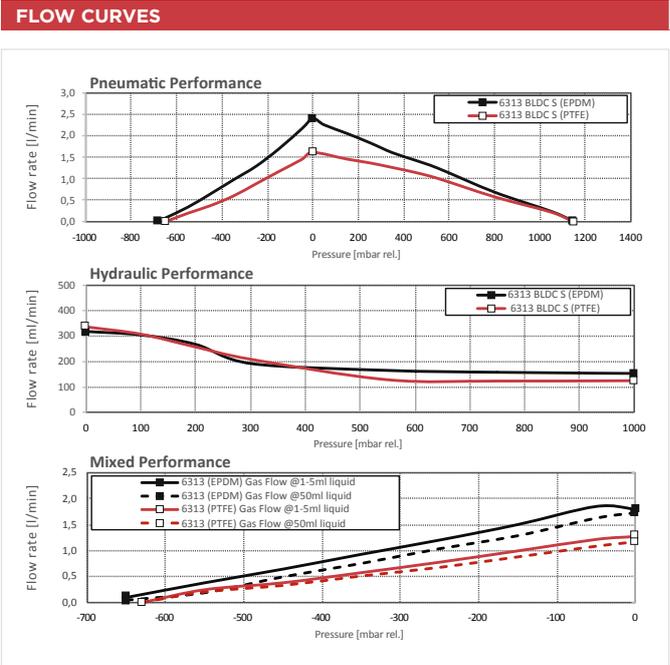
PNEUMATIC DATA	
Max. flow [l/min]	2.3 (EPDM) / 1.5 (PTFE)
Max. cont. pressure [mbar rel.]	1.100
Max. vacuum [mbar rel.]	-700

OPERATING CONDITIONS	
Media temperature (liquid) [°C]	5 to 80
Ambient temperature [°C]	5 to 40
Storage temperature [°C]	-30 to +70

PHYSICAL DATA	
Dimensions l x w x h [mm]	73 x 31 x 52
Weight [g]	150
Mounting on side [mm]	Through hole Ø 3.3



ORDER INFORMATION	
<b>Part Number</b>	<b>Model Key</b>
63130002	6313-F-O-D-24V-BLDC S-4200-13-EEE-PP-HB
63130004	6313-F-O-D-24V-BLDC S-4200-10-PFF-PP-HB
63130102	6313-F-O-D-12V-BLDC S-4200-13-EEE-PP-HB
63130104	6313-F-O-D-12V-BLDC S-4200-10-PFF-PP-HB
Other configurations	Upon request



ELECTRICAL DATA	
Motor type	Brushless DC
Nominal voltage	12/24 V DC
Max. power consumption [W]	5.2 (liquid operation)
Insulation class	A
Protection class	IP30
Drive electronics	Integrated

ELECTRICAL CONNECTION			
<b>Pin 1</b>	<b>V Supply</b>	<b>Red</b>	12 V DC (max. range 8.0 - 14.0 V) 24 V DC (max. range 8.0 - 26.4 V)
<b>Pin 2</b>	<b>Tacho out</b>	<b>Green</b>	3 pulses / cycle, signal current 2mA
	Output level		,Low': min. 0V / max. 0.5V
	Output level		,High': min. 2V / max. 6V
<b>Pin 3</b>	<b>Rot. direction</b>	<b>Yellow</b>	Input voltage range 0 - 5.5V
	Input level		,Low': min. 0V / max. 0.5V (CW)
	Input level		,High': min. 2V / or open (CCW)
<b>Pin 4</b>	<b>Ground</b>	<b>Black</b>	Power Ground
<b>Pin 5</b>	<b>Speed control</b>	<b>Blue</b>	Input voltage range 0 - 5.5V
	PWM freq.		10 - 30 kHz
	PWM amplit.		,Low': min 0V / max. 0.5V (ON)
	PWM amplit.		,High': min. 2V or open (OFF)

MODEL KEY		
<b>6313 - F - O - D - 24V - BLDC S - 4200 - 13 - EEE - PP - HB</b>		
Pos	Options	Description
1	<b>6313</b>	Product Line
2	<b>F</b>	Fluid operation
3	<b>O</b>	Tubing: no tubing included
4	<b>A / B / C / D</b>	Port position: standard D over motor
5	<b>12V / 24V</b>	Nominal voltage
6	<b>BLDC S</b>	Motor: BLDC Standard
7	<b>4200</b>	Nominal motor speed (motor dependent)
8	<b>10 / 13</b>	Eccentric: e.g. 13 ⇒ 1.3 mm
9	<b>EEE / PFF</b>	Diaphragm, valve / sealing: EPDM / PTFE / FFKM
10	<b>PP</b>	Pump head material: Polypropylene
11	<b>HB / DN</b>	Hose Barbs / DN 4/6 compression fittings

The information presented in this material is based on technical data and test results of nominal units. It is believed to be accurate and reliable and is offered as an aid to help in the selection of Thomas products. It is the responsibility of the user to determine the suitability of the product for the intended use and the user assumes all risk and liability whatsoever in connection therewith. Thomas does not warrant, guarantee or assume any obligation or liability in connection with this information.

# Diaphragm Liquid Pump 6313 DC Standard

Max. liquid flow	550 ml/min
Max. gas flow	2.3 l/min
Pressure height (liquid)	1000 mbar (rel.)
Final vacuum (gas)	-700 mbar (rel.)



## HYDRAULIC DATA

Max. flow [ml/min]	550
Max. cont. pressure [mbar rel.]	1.000
Max. suction height [mbar rel.]	-700

## PNEUMATIC DATA

Max. flow [l/min]	2.2 (EPDM) / 1.4 (PTFE)
Max. cont. pressure [mbar rel.]	1.100
Max. vacuum [mbar rel.]	-700

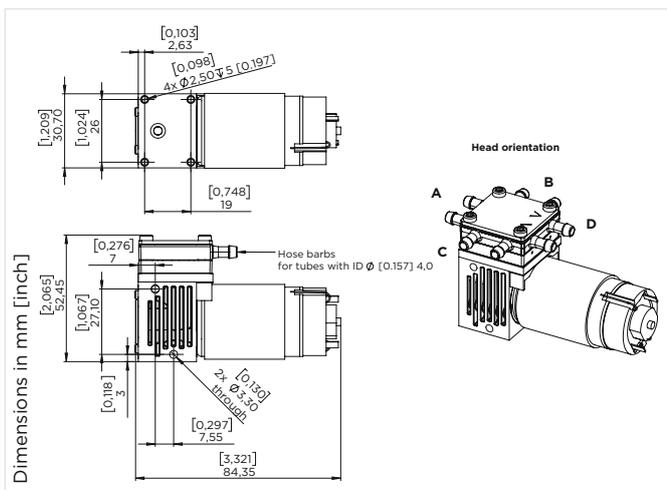
## OPERATING CONDITIONS

Media temperature (liquid) [°C]	5 to 80
Ambient temperature [°C]	5 to 40
Storage temperature [°C]	-30 to +70

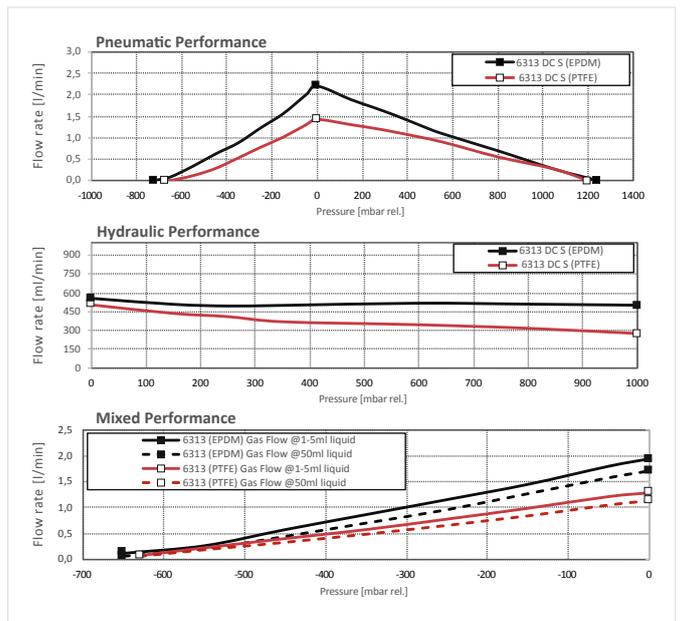
## PHYSICAL DATA

Dimensions l x w x h [mm]	73 x 31 x 49
Weight [g]	150
Mounting on side [mm]	Through hole Ø 3.3

## DIMENSIONAL DRAWING



## FLOW CURVES



## ELECTRICAL DATA

Motor type	Brushed DC
Nominal voltage	12/24 V DC
Max. power consumption [W]	9.2 (liquid operation)
Insulation class	F
Protection class	IPO0

## MODEL KEY

**6313 - F - O - D - 24V - DC S - 3200 - 13 - EEE - PP - HB**

Pos	Options	Description
1	<b>6313</b>	Product Line
2	<b>F</b>	Fluid operation
3	<b>O</b>	Tubing: no tubing included
4	<b>A / B / C / D</b>	Port position: standard D over motor
5	<b>12V / 24V</b>	Nominal voltage
6	<b>DC S</b>	Motor: DC Standard
7	<b>3200</b>	Nominal motor speed (motor dependent)
8	<b>10 / 13</b>	Eccentric: e.g. 13 ⇒ 1.3 mm
9	<b>EEE / PFF</b>	Diaphragm, valve / sealing: EPDM / PTFE / FFKM
10	<b>PP</b>	Pump head material: Polypropylene
11	<b>HB / DN</b>	Hose Barbs / DN 4/6 compression fittings

## ORDER INFORMATION

Part Number	Model Key
63130005	6313-F-O-D-24V-DC S-3200-13-EEE-PP-HB
63130007	6313-F-O-D-24V-DC S-3200-10-PFF-PP-HB
63130105	6313-F-O-D-12V-DC S-3200-13-EEE-PP-HB
63130107	6313-F-O-D-12V-DC S-3200-10-PFF-PP-HB
Other configurations	Upon request

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