



# PUREFLO<sup>®</sup> 21

4-CHAMBER DIAPHRAGM PUMPS

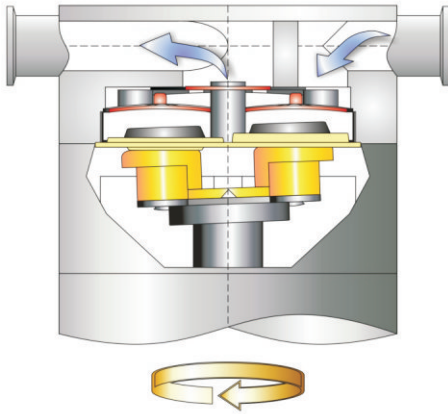


a xylem brand

# PUREFLO® 21 DIAPHRAGM PUMP

JABSCO'S PUREFLO® 4-piston diaphragm pump is designed to be used in pharmaceutical, biotech, food or cosmetic applications. The design complies with the very stringent requirements of these industries.

## Function Principal



The self priming design allows pump to create suction to draw fluid into the pump without manual priming.

The pump principal guarantees a sensitive handling of the product. Minimal thermal effect, even on small volumes.

## Typical Examples:

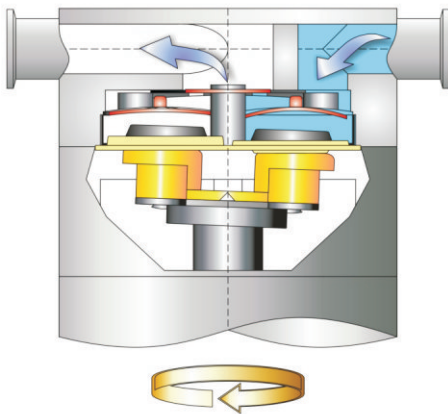
- Protein Solutions
- Cell Suspensions
- Bacteria, yeast, fungi, mammalian cells
- Virus Suspensions
- Polymer Solutions
- Food and cosmetic ingredients

## Used in...

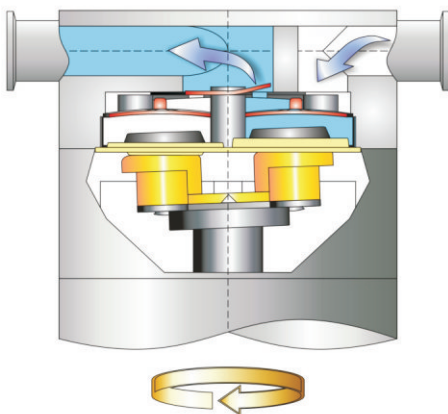
- filtration, chromatography

## Feed pump for...

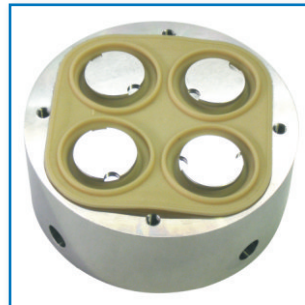
- centrifuges and separators
- for filter systems



Fluid enters inlet port and is drawn through inlet check valve when piston moves away from the check valve assembly.



As piston moves toward the check valve, the fluid is forced through outlet check valve and out of the pump.



# PUREFLO® 21 DIAPHRAGM PUMP

## PUREFLO® 21 Diaphragm Pump with integrated electronic control

The pump controls are mounted in a stainless steel cabinet. The system can be easily cleaned and the simple construction allows safe and trouble free service.

### Features:

- Easy to clean, no shaft seals
- Can run dry, dry self priming
- Low noise, steady flow
- Small and compact
- Adjustable flow min. 6 l/h max. 1,380 l/h
- Maximum pressure 6 bar, 5 bar for continuous duties
- Temperature up to 60° C in constant use, CIP up to 90° C, SIP up to 135° C is possible
- Viscosity up to 250 mPa s

### Parts in contact with fluid:

- Head: Stainless Steel 316L (1.4404)
- Diaphragm: Santoprene®
- Valves / O-Ring: EPDM / Buna
- Valve chamber: Polypropylene
- Pistons: Stainless Steel 316L (1.4404), Ra < 0,5 µm, with electro polish
- Ports: Tri-Clamp ¾"

### Drive:

- Motor: 24 V DC with electronic
- Motor protection: IP 54
- Variable speed: 0 - 3,500 rpm
- Torque: 0.6 Nm at 4,000 rpm
- Motor power: 251 Watt, 12.3 Amp.

### Cabinet with integrated controls:

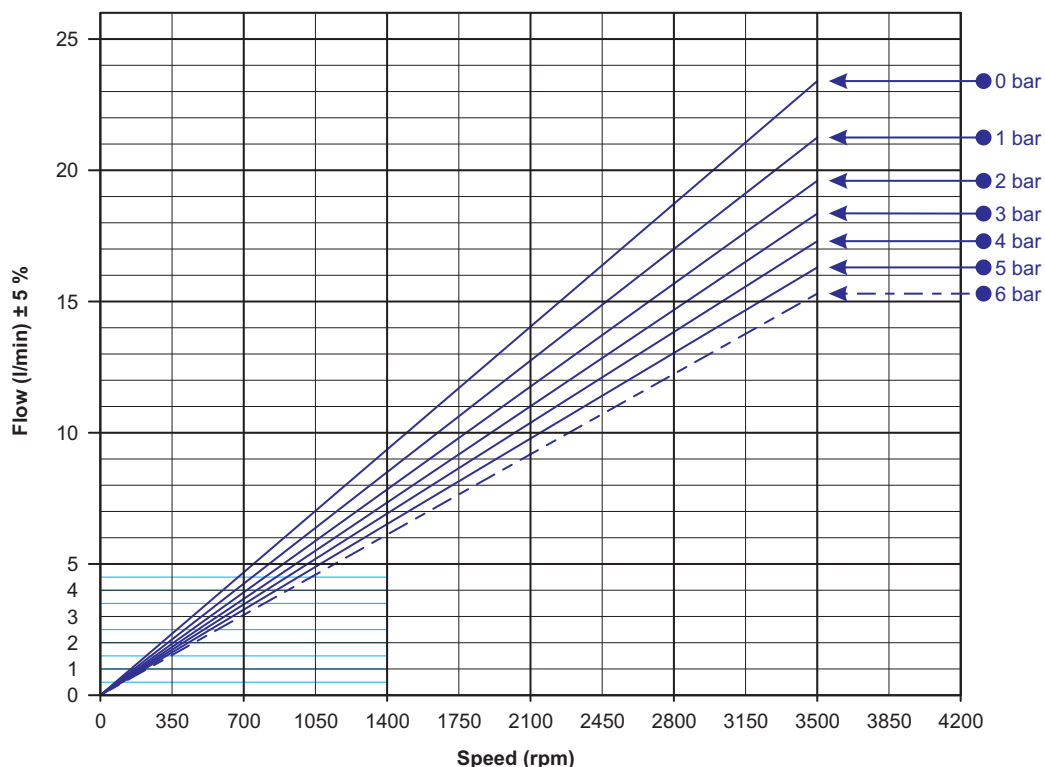
- Power supply, intelligent controls enable operation on most single phase supplies
- 115 V (4,5 A) / 240 V (2,5 A), AC, 50 Hz or 60 Hz
- Controls voltage: 24 V, DC
- Switch: (ON/OFF)
- Touch-Pad: 0-100% can be programmed to different flow rates
- Manual use with Touch-Pad or external signal with 0-10 V DC



### Materials / Surface Finish:

- Liquid contact parts are manufactured from FDA & USP Class VI conforming materials
- Standard: 3.1 B certification
- Standard: Surface finish Ra < 0,8 µm
- Option: Surface finish Ra < 0,5 µm and electro polish

### Performance Data of Pump with integrated electronic



# PUREFLO® 21 DIAPHRAGM PUMP

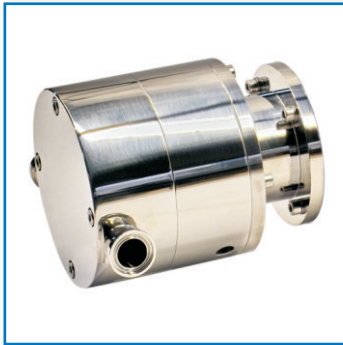
## PUREFLO® 21 Head-Kit

Head-Kit suitable for mounting with IEC-Motor frame size 63.

The simple design, reliable construction and easy handling, are a guarantee for a long and trouble free service.

### Features:

- Easy to clean, no shaft seals
  - Can run dry, dry self priming
  - Low noise, steady flow
  - Small and compact
  - Adjustable flow up to 1,440 l/h
  - Maximum pressure 6 bar, 5 bar for continuous duties
  - Temperature up to 60° C in constant use, CIP up to 90° C, SIP up to 135° C is possible
  - Viscosity up to 250 mPa s



### Parts in contact with fluid:

- Head: Stainless Steel 316L (1.4404)
- Diaphragm: Santoprene®
- Valves / O-Ring: EPDM / Buna
- Valve chamber: Polypropylene
- Pistons: Stainless Steel 316L (1.4404), Ra < 0,5 µm, with electro polish
- Ports: Tri-Clamp ¾"

### Drive:

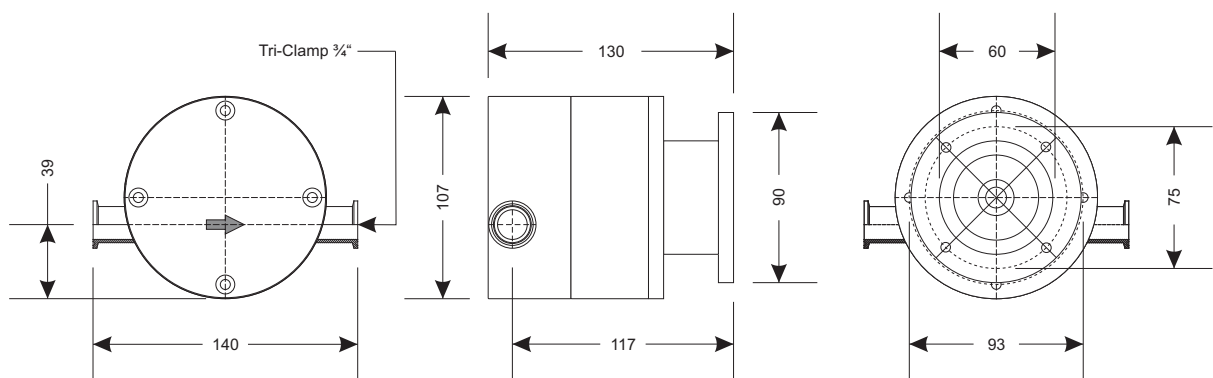
- Without
- IEC-Motors to be used are frame size 63, B34
- (Foot / Flange)
- 2-pole 3,000 rpm
- 4-pole 1,500 rpm

### Materials / Surface Finish:

- Liquid contact parts are manufactured from FDA & USP Class VI conforming materials
- Standard: 3.1 B certification
- Standard: Surface finish Ra < 0,8 µm
- Option: Surface finish Ra < 0,5 µm and electro polish

## Head-Kit to be fitted to IEC-Motor, frame size 63

### Dimensions (mm)



The unit is supplied with all necessary components for direct fitment to the motor.

# PUREFLO® 21 DIAPHRAGM PUMP

## PUREFLO® 21 Diaphragm Pump with IEC-Motor

The pump is supplied with an IEC-Motor. A competitive solution for users, which want to use an external converter for speed control.

The simple design, reliable construction and easy handling, are a guarantee for a long and trouble free service.

### ■ Features:

- Easy to clean, no shaft seals
- Can run dry, dry self priming
- Low noise, steady flow
- Small and compact
- Adjustable flow up to 1,440 l/h
- Maximum pressure 6 bar. 5 bar for continuous duties
- Temperature up to 60° C in constant use, CIP up to 90° C, SIP up to 135° C is possible
- Viscosity up to 250 mPa s

### Parts in contact with fluid:

- Head: Stainless Steel 316L (1.4404)
- Diaphragm: Santoprene®
- Valves / O-Ring: EPDM / Buna
- Valve chamber: Polypropylene
- Pistons: Stainless Steel 316L (1.4404), Ra <0,5 µm, with electro polish
- Ports: Tri-Clamp ¾"

### Drive:

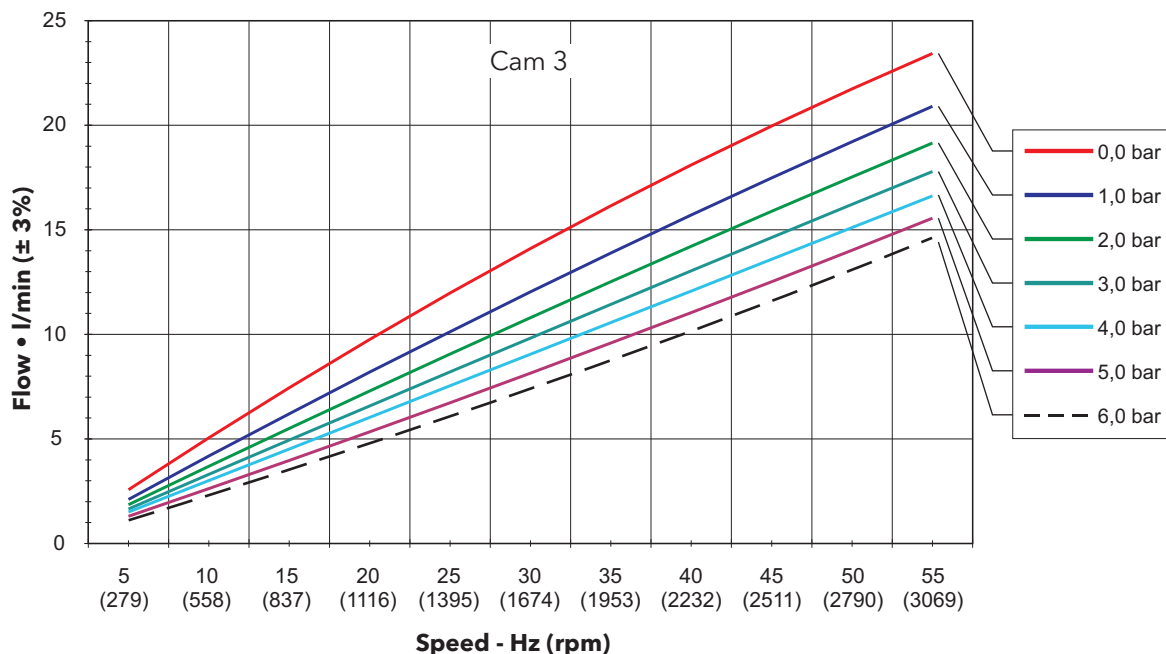
- IEC-Motor: 3 x 230 V, 50 Hz, 0.18 kW, 2,790 rpm, protection IP 55, PTC resistors (60 Hz versions on request)
- IEC-Motors: 1,500, 1,000 and 750 rpm can be supplied as an option
- ATEX 2 and 4 pole versions can be supplied

### Materials / Surface Finish

- Liquid contact parts are manufactured from FDA & USP Class VI conforming materials
- Standard: 3.1 B certification
- Standard: Surface finish Ra < 0,8 µm
- Option: Surface finish Ra < 0,5 µm and electro polish



## Performance of pump with 2-pole IEC-Motor and external converter





# PUREFLO® 21 DIAPHRAGM PUMP

## PUREFLO® 21 Diaphragm Pump with IEC-Motor and integrated frequency converter

The pump with IEC-Motor and integrated converter is a simple and compact solution for a variable speed and flow pump.

The simple design, reliable construction and easy handling, are a guarantee for a long and trouble free service.

### ■ Features:

- Easy to clean, no shaft seals
- Can run dry, dry self priming
- Low noise, steady flow
- Small and compact
- Adjustable flow up to 1,440 l/h
- Maximum pressure 6 bar. 5 bar for continuous duties
- Temperature up to 60° C in constant use, CIP up to 90° C, SIP up to 135° C is possible
- Viscosity up to 250 mPa s



### Parts in contact with fluid:

- Head: Stainless Steel 316L (1.4404)
- Diaphragm: Santoprene®
- Valves / O-Ring: EPDM / Buna
- Valve chamber: Polypropylene
- Pistons: Stainless Steel 316L (1.4404), Ra < 0,5 µm, with electro polish
- Ports: Tri-Clamp 3/4"

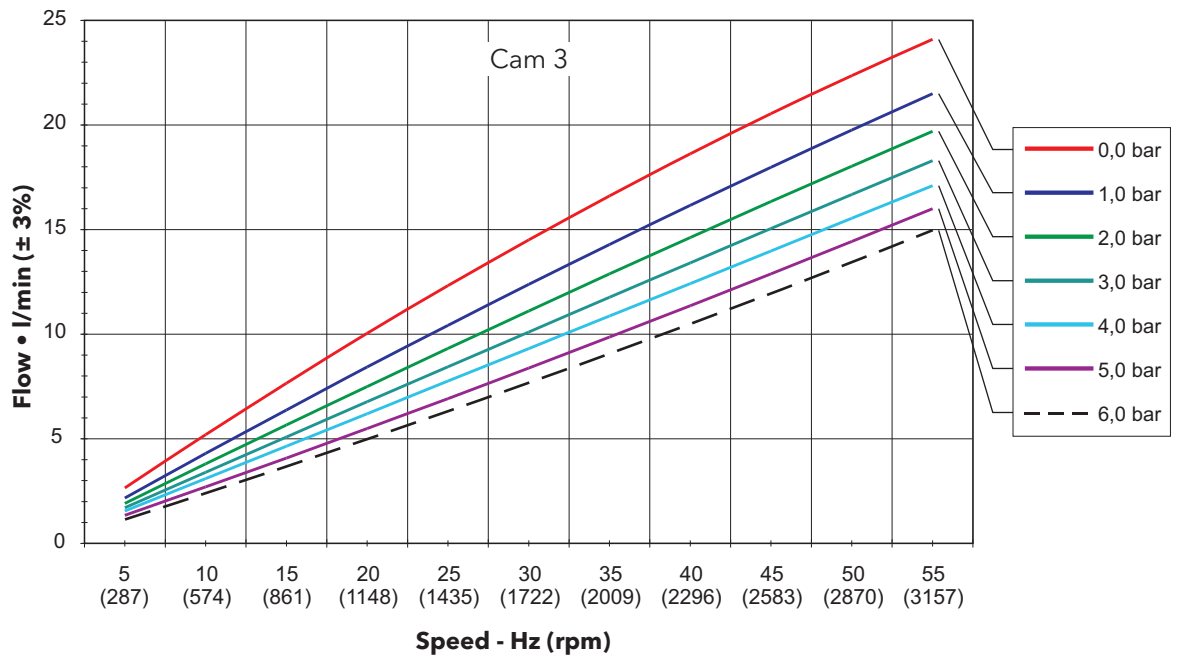
### Drive:

- IEC-Motor with integrated converter 230 V, 50 Hz, 0.25 kW, 2,870 rpm, Motor protection IP 55, inverter with IP 65 (60 Hz versions on request)
- Overload protection of converter and motor

### Materials / Surface Finish:

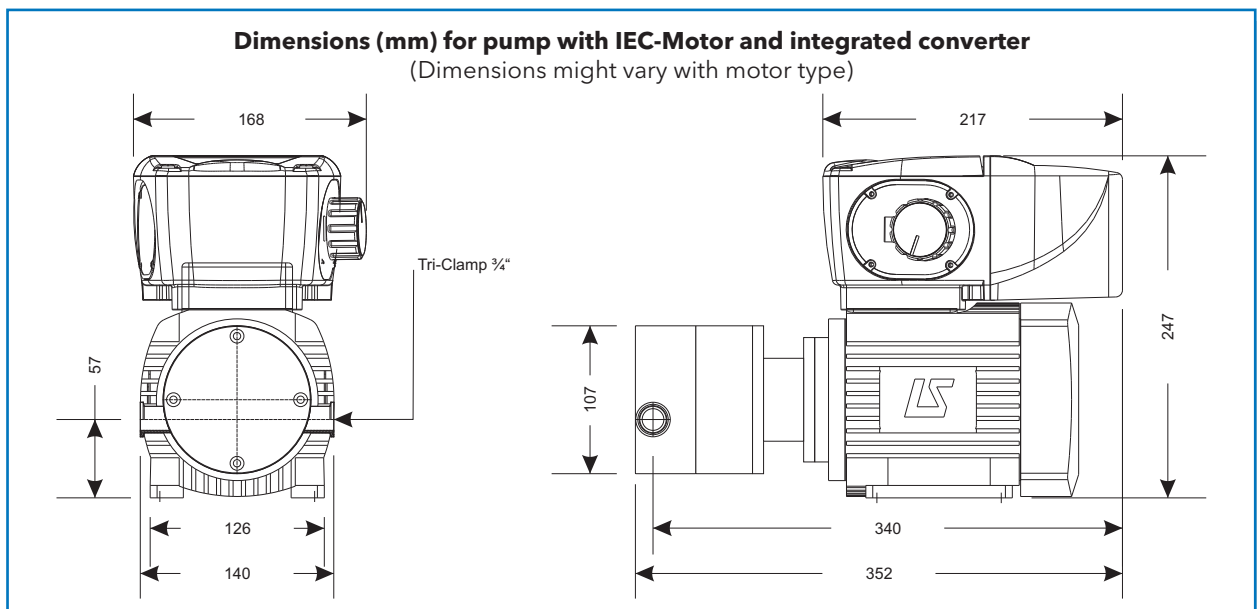
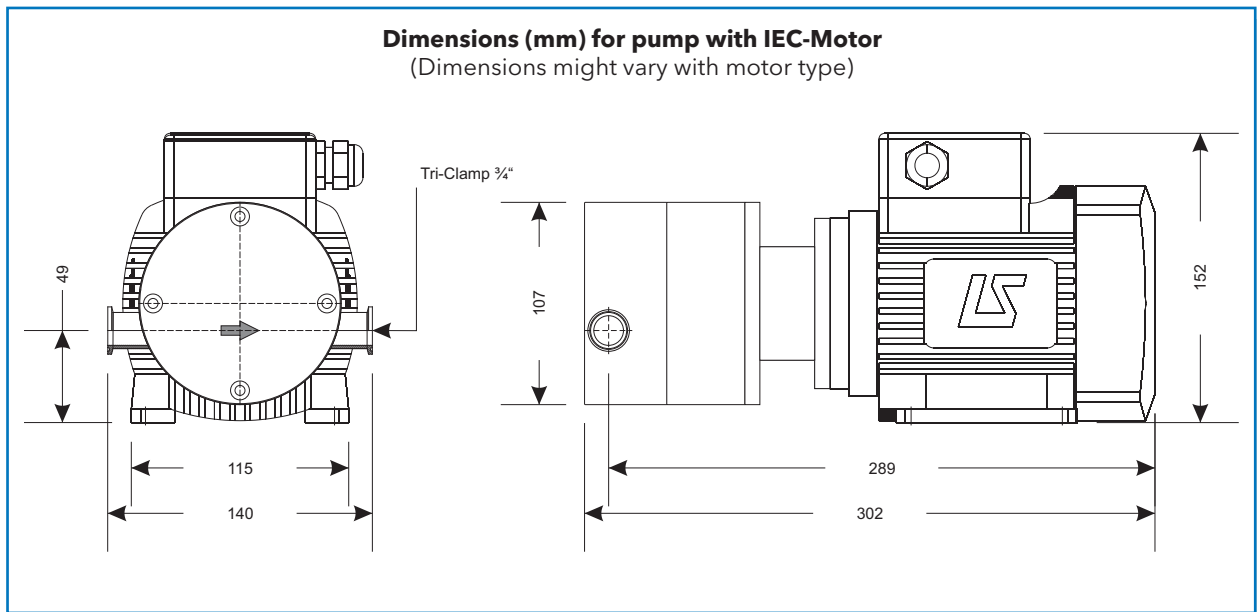
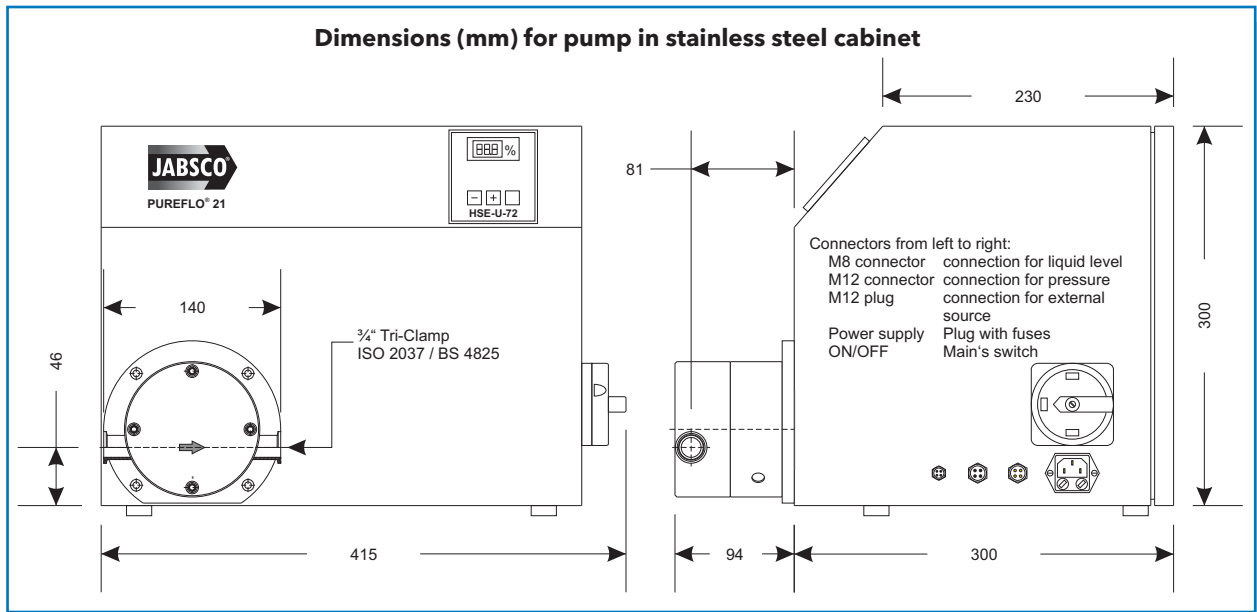
- Liquid contact parts are manufactured from FDA & USP Class VI conforming materials
- Standard: 3.1 B certification
- Standard: Surface finish Ra < 0,8 µm
- Option: Surface finish Ra < 0,5 µm and electro polish

## Performance of pump with 2-pole motor and integrated frequency converter



# PUREFLO® 21 DIAPHRAGM PUMP

## PUREFLO® 21 Dimensions:



# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're 12,000 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyse, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

Product brands like **Jabsco** or **Flojet** are used in the process industry, for food, soft drinks, pharmacy, biotechnology and other industrial applications.

For more information on how Xylem can help you, go to [www.xyleminc.com](http://www.xyleminc.com).



**FLOJET**

**xylem**  
Let's Solve Water



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