

FEATURES

- > Speed reduction through frictional connection from the motor shaft to the rollers
- > Very simple construction with the use of few parts only
- > Easy change of the cassette
- > Generally 3 rollers
- > For short time operation only
- > Different motors available (DC, low cost DC, AC and stepper motor)

TYPICAL APPLICATIONS

- > Transfer of fluids in bioprocessing
- > Dispensing of reagents in in-vitro diagnostics (IVD)
- > Dispensing of detergent in washers / disinfectors
- > Dispensing of foods and beverages

BASE MODEL

- DC Standard
- DC Performance
- Stepper



Peristaltic

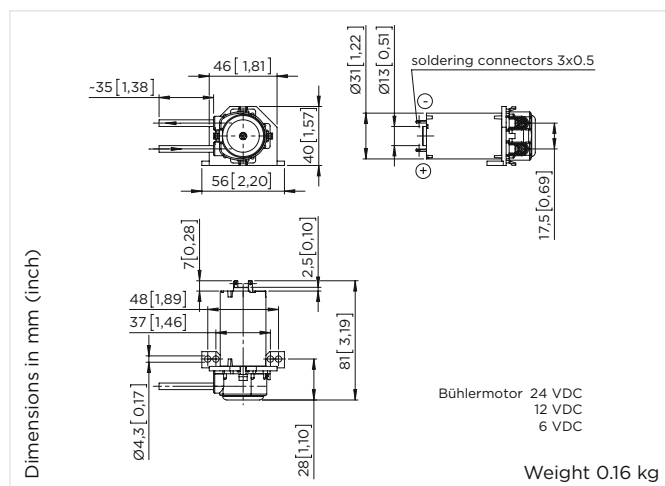
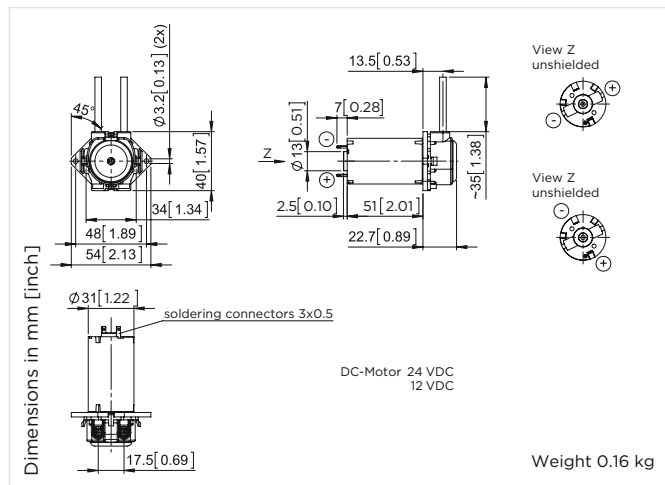
SR10/30 DC Performance

12/24 V

For short time operation only

Flow

20 – 80 ml/min



| Tubing Novoprene ¹⁾ | | Fixing | Inner tubing Ø mm | Flow ²⁾ ml/min |
|--------------------------------|----------|----------|----------------------|------------------------------|
| 12 V DC | 24 V DC | | | |
| | | straight | 1.0 | 20 |
| | | angled | | |
| 20300122 | 20300130 | straight | 1.5 | 37 |
| 20300126 | 20300134 | angled | | |
| 20300123 | 20300131 | straight | 2.0 | 55 |
| 20300127 | 20300135 | angled | | |
| 20300124 | 20300132 | straight | 2.5 | 80 |
| 20300128 | 20300136 | angled | | |

Duty cycles

| Tube lifetime | |
|----------------------|---------------------|
| Novoprene | 500 h ³⁾ |
| PharMed BPT® | |
| Silicone | 200 h ³⁾ |
| Drive | |
| DC Performance Motor | 3000 h |

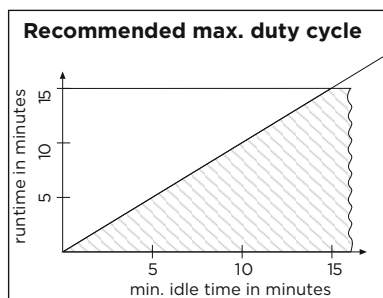
1) other tubing materials on request.

2) Note: The indicated values are average measured with water. The actual values depend on different parameters like quality and age of tubing, pressure of tubing beds, pressure ratios, viscosity.

3) Change the complete cassette. We recommend to roughen the shaft in axial direction when changing the cassette (sand paper grit size 150). If the pump is stored longer than three months, we recommend to take the cassette off the motor shaft and store it separately.

Current consumption depending on the tubing diameter,
at free flow and nominal voltage

| | |
|----------|--------------|
| 12 V DC: | 180 – 300 mA |
| 24 V DC: | 90 – 150 mA |

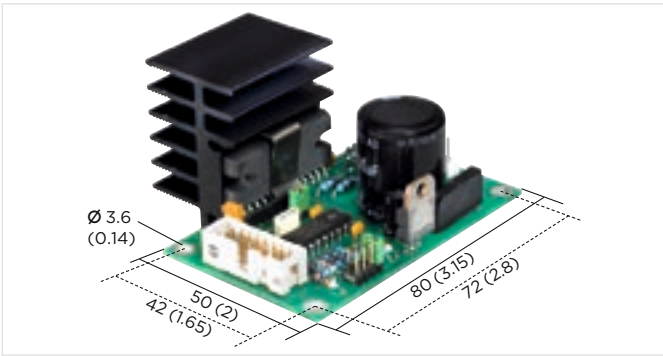


SR10/30 Stepper

24 V DC

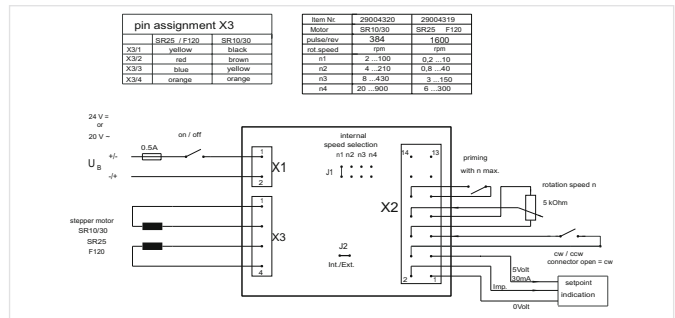
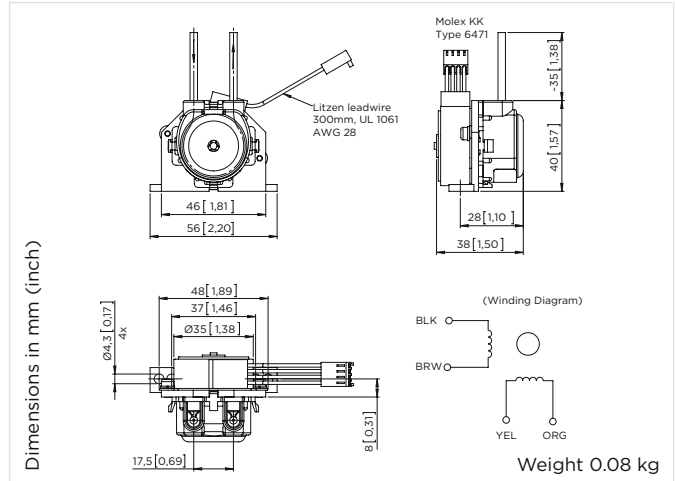
**For short time operation only
Circuit board recommended for test purposes**

Flow **0.5 – 20 ml/min**

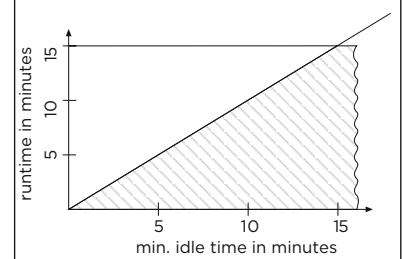


- 4 possible operating methods**
- internal speed selection via jumper – option with wiring set¹⁾
 - external speed selection
 - analog input via pc
 - digital input (clocked pulse)

- Features**
- speed pre-selection
 - clockwise, counter clockwise operation
 - instant priming
 - selective operating method



Recommended max. duty cycle



| Adjustable range | I | II | III | IV |
|------------------|-------------|-------------|--------------|--------------|
| Speed | 4 – 100 rpm | 8 – 210 rpm | 16 – 430 rpm | 40 – 900 rpm |

| tubing PharMed BPT [*] | Max. flow ²⁾ ml/min (adjustable range 4 – 100%) | | | |
|------------------------------------------|------------------------------------------------------------|---|----|----|
| Ph 1.0 x 1.1 | 0.5 | 1 | 2 | 4 |
| Part number – pump without circuit board | 20301012 | | | |
| Part number – pump with circuit board | 20301002 | | | |
| Ph 1.5 x 1.1 | 1 | 2 | 5 | 10 |
| Part number – pump without circuit board | 20301013 | | | |
| Part number – pump with circuit board | 20301003 | | | |
| Ph 2.5 x 1.0 | 2 | 5 | 10 | 20 |
| Part number – pump without circuit board | 20301014 | | | |
| Part number – pump with circuit board | 20301004 | | | |

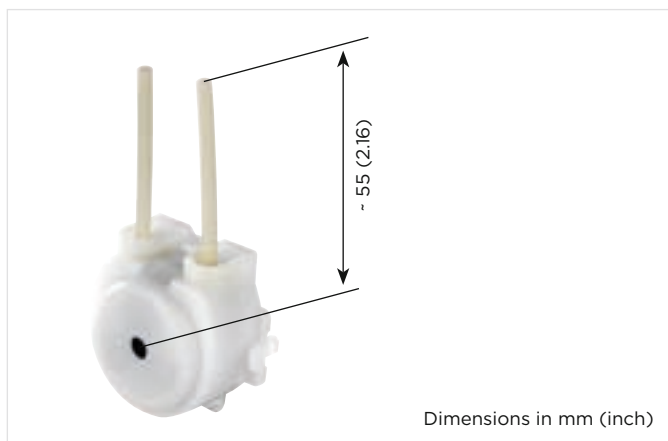
| Electrical Data - Max. flow ²⁾ ml/min (adjustable range 4 – 100%) | |
|------------------------------------------------------------------------------|---------------------------------------------|
| Nominal voltage (drive through electronic board) | 24 V/DC oder 20 V/AC |
| Motor | Stepper motor, bipolar, stepping angle 7.5° |
| Current consumption | 0.4 A |
| Max. restart consumption | 3 A* |
| Inductance at 1 kHz, 1 V | 13 mH |
| Winding resistance | 13 Ω |

* Delay fuse to be used.

| Duty cycles | |
|--------------------------|---------------------|
| Tube lifetime | |
| Novoprene | 500 h ³⁾ |
| PharMed BPT [*] | |
| Silicone | 200 h ³⁾ |
| Drive | |
| Stepper Motor | 3000 h |

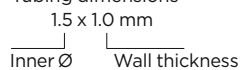
- 1) Option: 14-pole connecting cable with plug, rocker switch for clockwise and lefthanded running Potentiometer and speed-push-button, part number 29000702
- 2) Note: The indicated values are average measured with water. The actual values depend on different parameters like quality and age of tubing, pressure of tubing beds, pressure ratios, viscosity.
- 3) Change the complete cassette. We recommend to roughen the shaft in axial direction when changing the cassette (sand paper grit size 150). If the pump is stored longer than three months, we recommend to take the cassette off the motor shaft and store it separately.

Spare parts SR10/30 series



| | Tubing Inner Ø x Wall thickness | Drive | |
|--------------|------------------------------------|----------|-----------------------------|
| | | DC Std. | DC Performance / Stepper |
| Novoprene | 1.5 x 1.0 mm | 92030703 | 92030514 |
| Novoprene | 2.0 x 1.0 mm | 92030702 | 92030513 |
| Novoprene | 2.5 x 1.0 mm | 92030701 | 92030704 |
| PharMed BPT® | 1.0 x 1.1 mm | 92030548 | 92030604 |
| PharMed BPT® | 1.5 x 1.1 mm | 92030534 | 92030549 |
| PharMed BPT® | 2.5 x 1.0 mm | 92030611 | 92030603 |
| Silicone | 1.0 x 1.0 mm | 92030800 | 92030505 |
| Silicone | 1.5 x 1.0 mm | 92030802 | 92030554 |
| Silicone | 2.0 x 1.0 mm | 92030804 | 92030555 |
| Silicone | 2.5 x 1.0 mm | 92030806 | 92030553 |

Tubing dimensions



General Tubing Information

| Tubing Properties | | |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Tube | Characteristics | Limitations |
| Novoprene | Standard tubing for the SR10/30, SR10/50 and SR25 Long lifetime Wide range of applications | May swell up with oil or oily liquids |
| PharMed BPT™ | High quality for medical, laboratory and research use Homogeneous structure and therefore comparatively better chem. resistance Autoclavable Biocompatible Long lifetime | |
| Silicone | Suitable for polar solvents (with the exception of chlorinated aliphatic and aromatized hydrocarbon) No detachment of softening agents Very stable elasticity over a wide temperature range (-30 bis 180 °C) | Not recommended with strong acids or alkaline solutions Swells up in many organic solutions |

| Choice of tubing depending on flow medium | | | | | |
|-------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------|--|
| | | Novoprene | PharMed BPT | Silicone | |
| Acids | weak medium strong | very good good not recommended | | good unsatisfactory not recommended | |
| Alkaline solution | weak medium strong | very good good not recommended | very good very good good | good unsatisfactory not recommended | |
| Hydro-carbons | aliphatic aromatized halogenated | not recommended | | | |
| Standards/ physiological behaviour | | basis material meets FDA (21 CFR 177.2600) doesn't fulfill the EU food requirement 2002/72/EC | USP, class VI ISO 10993 Parts 4,5 and 11 | physiologically inert | |
| Chemical structure | | thermoplastic elastomer on PP-Basis with cross linked EPDM parts | thermoplastic elastomer on PP-Basis | high cross linked Polysiloxane with anorganic fillers | |

Chemical Compatibility

| Chemical Resistance of Tubing Materials | | | | | | | | |
|--------------------------------------------------------------------------------------|---|--------|---|-----------------------------|---|--------|---|--|
| N = Novoprene Nor = Norprene® Ph = PharMed BPT / Pharm-A-Line™ S = Silicone | | | | | | | | |
| | N | Ph/Nor | S | | N | Ph/Nor | S | |
| Acetaldehyde | C | C | C | Hydrogen peroxide | A | A | C | |
| Acetate | C | B | D | Hydrogen sulphide | A | A | C | |
| Acetic acid | A | A | A | Isopropyl alcohol | A | B | A | |
| Acetic anhydride | A | A | C | Jodine | A | A | C | |
| Acetone | C | C | A | Kaliumhydroxyde | A | A | C | |
| Aluminium chloride | A | A | D | Ketones | C | C | - | |
| Aluminium sulfate | A | A | A | Lactic acid | A | A | C | |
| Ammonia | A | A | C | Magnesium chloride solution | A | A | A | |
| Amyl acetate | C | B | C | Mercury salts | A | A | C | |
| Amyl alcohol | A | C | C | Methanol | A | A | A | |
| Amyl chloride | C | C | C | Methyl ethyl ketone | B | C | C | |
| Aniline | A | B | C | Nitrous acid 10 % | B | A | C | |
| Aqua regia | C | C | C | Oil, animal | B | B | B | |
| Arsenic acid | C | C | A | Oil, hydraulic | C | C | D | |
| Barium hydroxide | A | A | A | Oil, linseed | B | B | A | |
| Benzaldehyde | C | C | C | Oil, mineral | C | C | C | |
| Benzene | C | C | C | Oil, vegetable | C | B | A | |
| Benzoic acid | A | B | B | Oleic acid | C | C | C | |
| Benzylalcohol | - | A | B | Oxalic acid | B | B | B | |
| Bleaching agent | B | A | A | Paraffins | C | C | - | |
| Boric acid | A | A | A | Perchloric acid | C | C | C | |
| Break liquid | A | A | A | Perchloroethylene | C | C | C | |
| Bromine | C | C | C | Petrol | C | C | C | |
| Butane | A | A | C | Phenol | A | A | C | |
| Butanol | B | C | C | Phosphoric acid, 25 % | A | A | C | |
| Calcium hypochlorite | A | A | B | Photographic solutions | B | B | A | |
| Carbon disulphide | C | C | C | Phtalic acid, 9 % | - | A | A | |
| Chloracetic acid | A | B | - | Potassium salts | A | A | A | |
| Chlorine, liquid | C | C | C | Pyridine | C | C | C | |
| Chlorobenzene | C | C | C | Soap solution | A | A | A | |
| Chloroform | C | C | C | Sodium carbonate | A | A | A | |
| Chromic acid 50 % | C | C | C | Sodium chloride | A | A | A | |
| Chromium salts | A | A | C | Sodium hydroxide 40 % | A | A | B | |
| Citric acid | B | B | A | Sodium hypochlorite <5% | A | A | B | |
| Cyclohexane | C | C | C | Sodium hypochlorite 12 % | A | A | B | |
| Diesel fuel | C | C | C | Sodium salt | A | A | A | |
| Ethanol | A | A | C | Stearic acid, 5 % | B | A | B | |
| Ether | C | C | C | Sulphurdioxide, wet gas | A | A | B | |
| Ethyl alcohol | A | A | A | Sulphuric acid, 30 % | A | A | C | |
| Ethyl chloride | A | A | C | Sulphuric acid, 75-100% | C | C | C | |
| Ethylene glycol | - | A | A | Sulphurtrioxide | - | B | - | |
| Ferric sulfate | A | A | A | Tannic acid | A | B | A | |
| Fluor silicium acid | C | C | - | Tetrahydrofurane | C | C | C | |
| Fluoroboric acid, 48 % | B | B | - | Toluole | C | C | C | |
| Formaldehyde | B | C | B | Trichloroethylene | B | B | C | |
| Formamide | A | B | - | Turpentine | C | C | C | |
| Formic acid | A | B | A | Urea | A | A | A | |
| Furfural | C | C | - | Uric Acid | A | A | - | |
| Hydrochloric acid | A | A | C | Xylene | C | C | C | |
| Hydrocyanic acid | A | A | C | Zinc chloride | B | B | B | |

A = small or no effect
 B = minor or moderate effect
 C = severe effect
 D = no reliable data, please test before use
 - = no available data

Norprene®, PharMed BPT®, Norton Co. Reg. TM's,

The material resistance is influenced by temperature and concentration of the medium. The data have to be seen as indications and do not guarantee the material properties.

PUMP AND COMPRESSOR SOLUTIONS FOR OEMS WORLDWIDE

gd-thomas.com



Gardner Denver Thomas GmbH

Livry-Gargan-Str. 10
82256 Fürstenfeldbruck
Germany

T +49 8141 2280 0
F +49 8141 8892136

thomas.de@gardnerdenver.com

Gardner Denver Thomas. Inc.

1419 Illinois Avenue
Sheboygan. WI 53081
USA

T +1 920 4574891
F +1 920 4514276

td.usa@gardnerdenver.com

Gardner Denver Thomas Pneumatic Systems (Wuxi) Co., Ltd.

No. 1 New Dong An Road, Shuofang Town, Wuxi, Xinwu District
Jiangsu 214142
China

T +86 510 6878 2258
F +86 510 6878 2200

thomas.cn@gardnerdenver.com

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 in connection therewith. Thomas does not warrant, guarantee or assume any obligation or liability in connection with this information.

Models presented in this catalog are representative of the product family. Photos of products pictured in this catalog do not necessarily represent a specific model number. To obtain further information for custom options, contact your local Thomas office.

Printed in Germany Form No. SR10/30 10/2021 © Gardner Denver Thomas GmbH. All rights reserved.