SR25 Series

THOMAS
An Ingersoll Rand Business

FEATURES

> Protection of the tubing due to spring loaded rollers and guiding side rollers
> Quick and easy change of the tubing
> Roller carrier with two rollers
> Also suitable for continuous operation, depending on the drive
> If stored longer than three months, we recommend to remove the tubing.
> Different gear motors available (DC, AC and stepper motor)

TYPICAL APPLICATIONS

> Deaeration of dialysate in dialysis devices
> Condensate removal in environmental emissions monitoring

BASE MODEL

DC Performance
AC Synchronous
Stepper

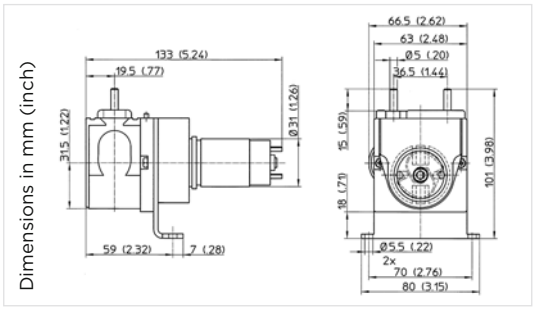
Peristaltic

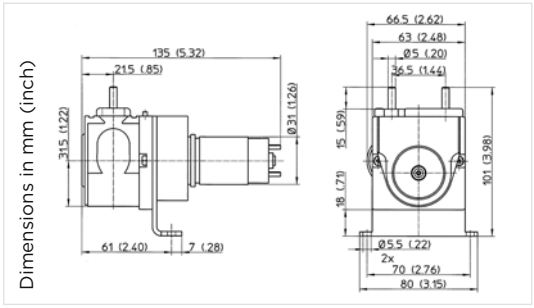
SR25 DC Performance

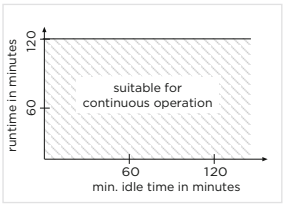
12/24 V, Direct current motor	
Flow	**2 – 287 ml/min**

SR25, 10 to 80 rpm
Direct current motor

SR25 –170 rpm[1)]
Direct current motor







	Nominal speed				
	10 rpm	30 rpm	65 rpm	80 rpm	170 rpm[1)]
Tubing Novoprene		**Flow[2)] ml/min**			
N 1.6 x 1.6 mm		7			
Part number 12 V		20251397			
Part number 24 V		20251401			
N 3.2 x 1.6 mm		25	56		
Part number 12 V		20251398	20251411		
Part number 24 V		**20251255**			
N 4.1 x 1.6 mm		36	82	102	204
Part number 12 V		20251399	20250083		20251261
Part number 24 V		20251402	20250082	20251010	20250396
N 4.8 x 1.6 mm		48	125	132	285
Part number 12 V		20251400	20250426		**20251224**
Part number 24 V		20251403	**20251413**	20250287	**20250130**
Tubing Silicone		**Flow[2)] ml/min**			
S 2.0 x 1.0 mm	3.5				
Part number 12 V					
Part number 24 V	**20251394**				
S 3.0 x 1.5 mm	6.5	19			
Part number 12 V		20251405			
Part number 24 V	20251395	20251408			
S 4.0 x 1.5 mm	13	38		103	
Part number 12 V		20250302			
Part number 24 V	20251396			20251434	
S 5.0 x 1.5 mm	18	54		143	287
Part number 12 V		20251406			20251441
Part number 24 V	20250092	20251366		20251435	20251444

Electrical Data			
Motor		Direct current motor	
Power consumption	2 W	3.5 W	7 W

General Data	
Weight	0.6 kg

1) Pump with counter bearing **2025...** Stock programme

Material of tubing connectors:
Tubing Silicone: for all Ø PVC
Tubing Novoprene: Ø 1.6/3.2 mm – PVC
Ø 4.1/4.8 mm – PP

Option: Recommended inference suppression according to EN 55011 B (CE-conform)
12/24 V DC – with additional circuit board (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.
Please see page 4 for recommended running times and general data.

3) tested at 10 rpm

Duty cycles	
Tube lifetime	
Novoprene	> 5000 h[3)]
PharMed BPT®	
Silicone	500 h[3)]
Other wearing parts	
Roller carrier	5000 h[3)]
Rolling band/lid	
Drive	
DC Performance Motor	3000 h[3)]

SR25 AC Synchronous

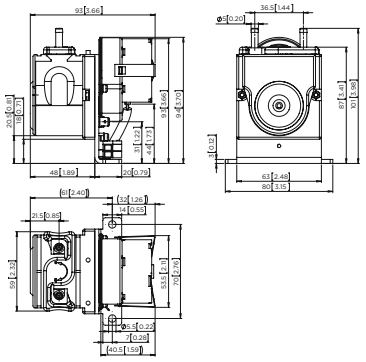
230 V/50 Hz, synchronous motor
Suitable for continuous operation

Flow	0.2 – 14 ml/min

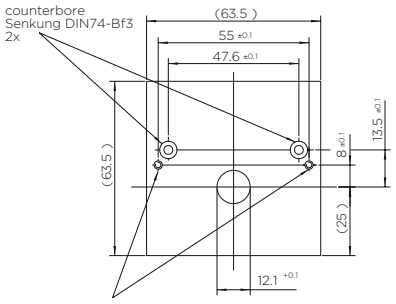
SR25, 1 to 10 rpm
Synchronous motor

Bore pattern to fit in a housing
(not illustrated)

Dimensions in mm [inch]



Dimensions in mm (inch)



2x Gewindebolzen M3x10
2x threated bolt M3x10
Art.-Nr.: 80011110

Benötigte Wandstärke 3 mm
necessary wall thickness 3

Nominal speed			
	1 rpm	5 rpm	10 rpm
Tubing Novoprene	**Flow [2] ml/min**		
N 1.6 x 1.6 mm	0.2		
Part number	20251737		
N 3.2 x 1.6 mm		3.5	7.0
Part number		**20251351**	**20251355**
N 4.1 x 1.6 mm	1.0	5.0	10
Part number	20251739	**20251352**	**20251356**
N 4.8 x 1.6 mm	1.3	6.8	14
Part number	20251740	**20251353**	**20251357**

Electrical Data	
Voltage	230 V/50 Hz
Motor	Synchronous
Power consumption	2 W
Motor insulation class	E

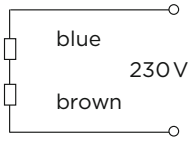
General Data	
Protection class	IP00
Weight	0.39 kg

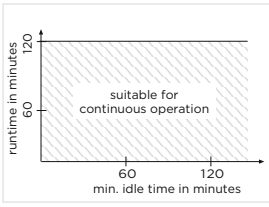
2025... Stock programme

Duty cycles	
Tube lifetime	
Novoprene	> 5000 h [3]
PharMed BPT®	
Silicone	500 h [3]
Other wearing parts	
Roller carrier	5000 h [3]
Rolling band/lid	
Drive	
AC Synchronous Motor	10000 h [3]

3) tested at 10 rpm

Electrical wiring:





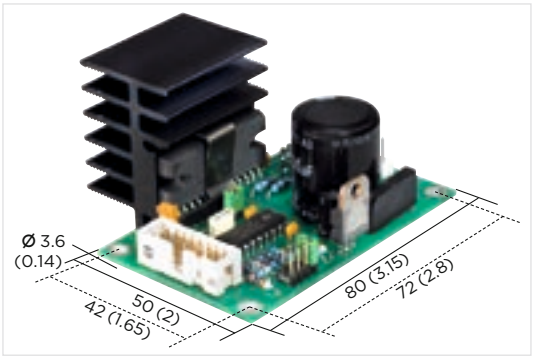
Material of tubing connectors:
Tubing Novoprene: Ø 1.6/3.2 mm – PVC
Ø 4.1/4.8 mm – PP

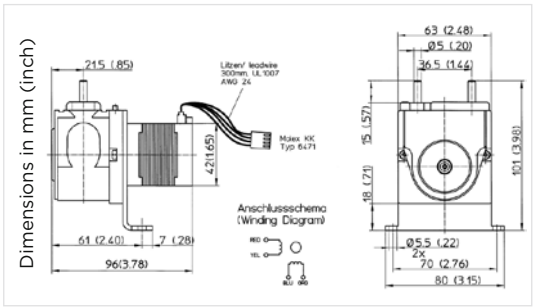
2) Note: The indicated values are average measured with water.
The actual values depend on different parameters like quality and age of tubing, pressure of tubing beds, pressure ratios, viscosity.
Please see page 4 for recommended running times and general data.

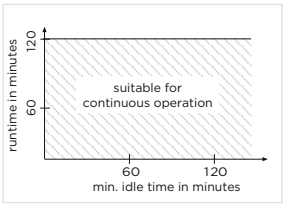
SR25 Stepper

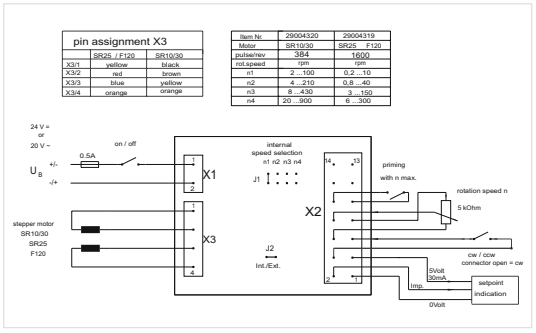
24 V DC with stepper motor
Circuit board recommended for test purposes

Flow	0.1 – 430 ml/min









4 possible operating methods
- internal speed selection via jumper – option with wiring set[1)]
- external speed selection
- analog input via pc
- digital input (clocked pulse)

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

Duty cycles		
Speed	10 rpm	300 rpm
Tube lifetime		
Novoprene	> 5000 h	500 h
PharMed BPT®		
Silicone	500 h	100 h
Other wearing parts		
Roller carrier	5000 h	500 h
Rolling band/lid		
Drive		
Stepper Motor	10000 h	10000 h

Adjustable range	I	II	III	IV
Speed	0.4 – 10 rpm	1.6 – 40 rpm	6 – 150 rpm	12 – 300 rpm

Tubing Novoprene	Max. flow[2)] ml/min			
N 1.6 x 1.6 mm	0.1 – 2	0.3 – 7	1 – 26	2 – 55
Part number – pump without circuit board	20252200			
Part number – pump with circuit board	20252100			
N 3.2 x 1.6 mm	0.3 – 7	1 – 30	4 – 110	9 – 210
Part number – pump without circuit board	20252201			
Part number – pump with circuit board	20252101			
N 4.8 x 1.6 mm	0.6 – 14	2 – 60	9 – 215	20 – 430
Part number – pump without circuit board	20252202			
Part number – pump with circuit board	20252102			

Running Data	
On-time	Continuous operation
Recommended rotating direction at continuous operation	Clockwise

Electrical Data	
Nominal voltage (drive through electronic board)	24 V/DC oder 20 V/AC
Motor	Stepper motor, bipolar, stepping angle 1.8°
Current consumption	0.8 A
Max. restart consumption	5 A*
Inductance at 1 kHz, 1 V	14 mH
Winding resistance	6 Ω
Motor insulation class	B

General Data	
Material of the hose clip	PVDF
Weight of the pump	0.5 kg

* Delay fuse to be used.
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.
Please see page 4 for recommended running times and general data.

Spare parts SR25

Tubing with connectors

Tubing	Diameter x wall thickness	Connectors	Part number
Novoprene	1.6 x 1.6 mm	PVC	92025500
Novoprene	3.2 x 1.6 mm	PVC	92025501
Novoprene	4.1 x 1.6 mm	PE	92025502
Novoprene	4.8 x 1.6 mm	PE	92025503
Test-set with all tubings			92025856
Silicone	2.0 x 1.0 mm	PVC	92025507
Silicone	3.0 x 1.5 mm	PVC	92025508
Silicone	4.0 x 1.5 mm	PVC	92025509
Silicone	5.0 x 1.5 mm	PVC	92025532
Test-set with all tubings			92025857
Option			
PharMed BPT®	4.0 x 1.6 mm	PVDF	92025849
PharMed BPT®	4.8 x 1.6 mm	PVDF	92025843
Novoprene	1.6 x 1.6 mm	PVDF	92025552
Novoprene	3.2 x 1.6 mm	PVDF	92025533
Novoprene	4.1 x 1.6 mm	PVDF	92025549
Novoprene	4.8 x 1.6 mm	PVDF	92025563

Roller carrier

Speed	SR25 12 V DC	SR25 24 V DC	SR25 Synchron
1 rpm	–	–	92025799 2)
5 rpm	–	–	92025799 2)
10 rpm		92025804 1)	92025799 2)
30 rpm	92025803 1)	92025803 1)	–
65 rpm	92025803 1)	92025803 1)	–
80 rpm	–	92025803 1)	–
170 rpm	92025806 1)	92025806 1)	–
300 rpm	–	92025801 1) (Steppermotor)	

Rolling band

Part number
29028215

1) Clockwise direction
2) Counter clockwise direction

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 aromatizised 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 aromatizised 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	Isoprophyl 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, vegatable	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	Photograpic 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	Trichloroehtylene	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

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

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