



Robust. Precise. Low-Maintenance. PERIDOS FXM Peristaltic Pumps

For low-maintenance conveying and dosing processes
in harsh industrial contexts



safety is our concern



Lutz-Jesco and Lutz Pumpen – your partner for conveying and dosing from a single source

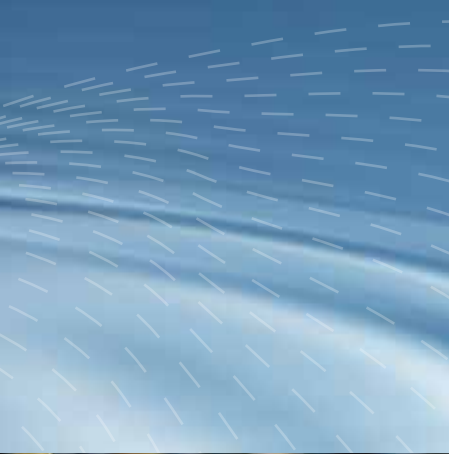
Increase process stability and reduce downtime in the conveying and dosing of liquids – with the system solutions from Lutz-Jesco and Lutz Pumpen, two companies of Lutz Holding.

Our joint portfolio comprises precise dosing pumps, eccentric screw pumps, drum pumps, hose and chemical centrifugal pumps and modular conveying systems for various viscosities, chemical resistances and temperature ranges.

Our range also includes dosing pumps and measurement and control technology for water treatment. Upon request, Lutz-Jesco will deliver these components ready-to-use, mounted on a carrier plate for wall mounting. This reduces the on-site installation requirement and shortens project times.

Our systems find deployment in a range of sectors such as the chemicals, food, pharmaceuticals, environmental engineering, water treatment, electroplating and machine construction sectors. A global service and sales network ensures fast commissioning, maintenance, and support. This keeps your systems reliably available and your processes stable.

Lutz-Jesco and Lutz Pumpen are synonymous for complete solutions that satisfy high quality and environmental standards. The systems are designed to ensure a long service life and short downtimes – all from a single source.



PERIDOS FXM peristaltic pumps from Lutz-Jesco

Do you convey aggressive and abrasive media on a daily basis? Would you like a pump that does its job reliably and requires low maintenance – even in three-shift operation?

Then find out about the new PERIDOS FXM series from Lutz-Jesco – peristaltic pumps for harsh industrial contexts, that impress through their longevity, process reliability and low total cost of ownership.

Peristaltic pumps from the PERIDOS FXM series are suitable for the precise dosing of aggressive and abrasive media. They are ideal for the following industries:

- **Water and wastewater treatment**

Applications including the dosing of precipitants and flocculants, pH control agents and disinfection chemicals.

- **The chemicals industry**

Applications including the conveying and dosing of corrosive and viscous reagents and those containing solids.

- **The food and beverage industry**

Applications including the hygienic conveying and dosing of aromas, additives, concentrates or viscous products.

- **The paper and pulp industry**

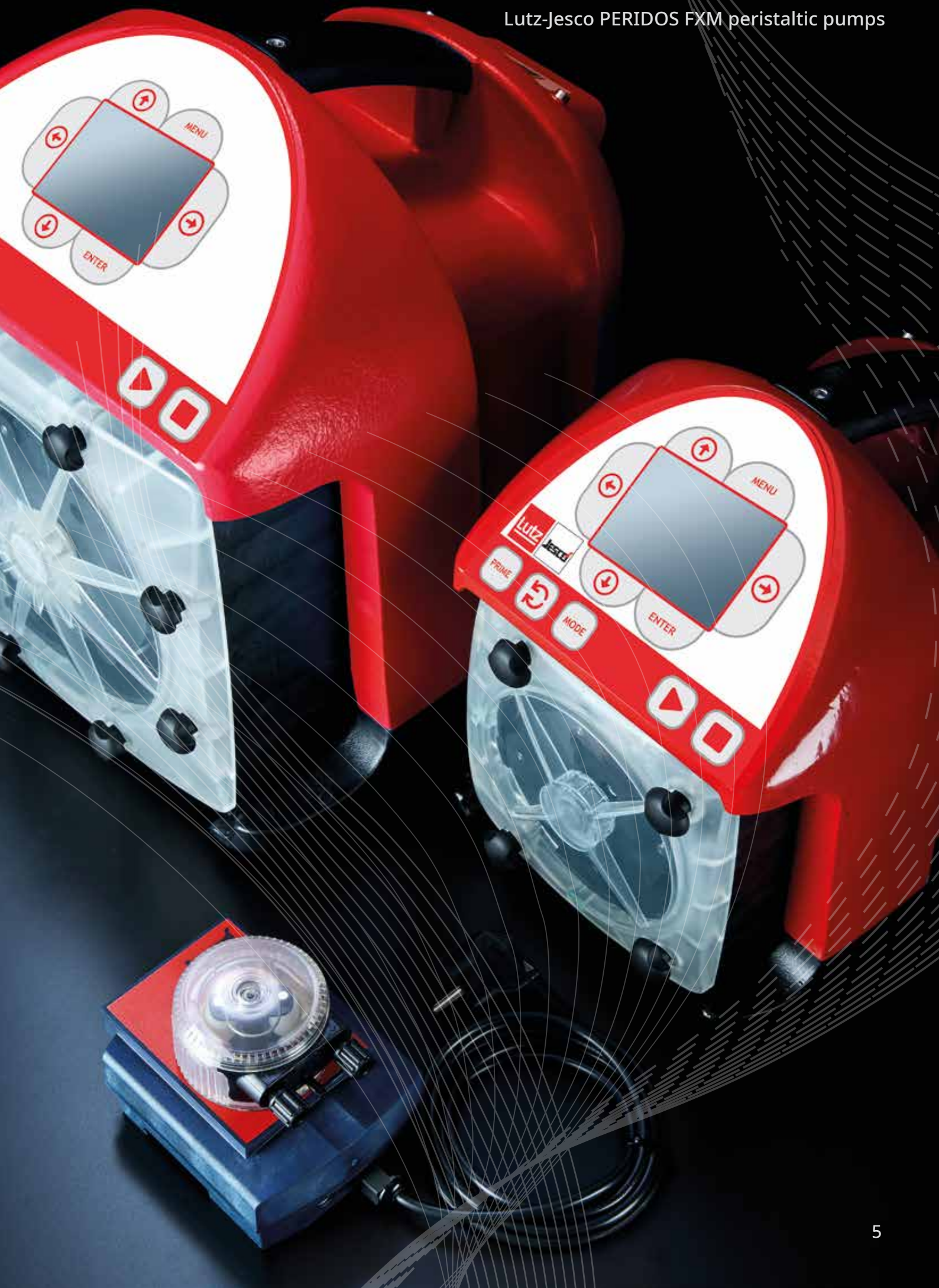
Applications including the addition of dyes, starch or chemical additives in the production process.

- **Mining and construction**

Applications including the dosing of chemicals. Up to max. 5,000 cP.

- **Agriculture and agricultural engineering**

Applications including the dosing of liquids fertilisers, vaccines, animal hygiene products and disinfectants.



Good to know: the function and advantages of a peristaltic pump

Peristaltic pumps convey liquids by compressing a flexible hose from the outside using rotating rollers.

This pushes the medium in the hose forward in the direction of flow. The liquid only comes into contact with the hose, which makes the pump hygienic, non-sensitive and low-maintenance when dealing with aggressive media.

The advantages of a peristaltic pump

- **Chemical resistance:** the medium conveyed comes into contact only with the hose and not the pump itself. Selection of the hose material enables the system to be adapted easily to aggressive, abrasive and corrosive materials.
- **Susceptibility:** a non-return or control valve is not required, as the medium is transported in the hose. This reduces fault susceptibility.
- **Gas-insensitive:** peristaltic pumps also ensure the reliable transport of liquids with gas bubbles. They are thus suitable for media such as sodium hypochlorite which tend to gas formation.





Lutz-Jesco PERIDOS FXM peristaltic pumps

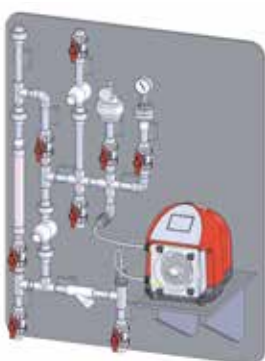


- **Self-priming:** Peristaltic pumps generate a strong vacuum in the hose. This enables them to draw liquid even from lower-lying or empty lines – without additional components such as non-return valves or priming aids. The closed conveying prevents siphon effects, vapour barriers or conveying loss resulting from air in the line.

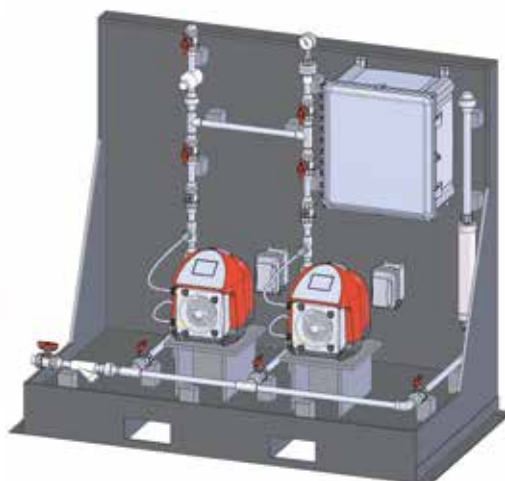
This ensures that peristaltic pumps deliver a reliable and stable conveying process even under difficult operating conditions.

- **Reversible:** Users can reverse the pumping process by simply changing the direction of rotation. This allows the medium to be returned if necessary, which is helpful when emptying or cleaning.

**Continuous flow system
(wall mounting) with a pump**



**Chemical feed system
with two pumps**



**Chemical feed system
with three pumps**



PERIDOS FXM – compact peristaltic pumps in three performance levels.

The peristaltic pumps from the PERIDOS FXM series are available in three performance levels:

All models are designed to save space. The drive, gear, electronics and pump head are integrated in a compact housing. This obviates the need for separate drives or controls, producing a space-saving and easy-to-operate solution.

PERIDOS FXM 1:

The entry-level version of the peristaltic pump has a delivered volume of 2.8 l/h (0.74 GPH) at a delivery pressure of 1.5 bar.





Lutz-Jesco PERIDOS FXM
peristaltic pumps



PERIDOS FXM 2:

The peristaltic pump reaches a maximum delivered volume of 176 l/h (46.5 GPH), a delivery pressure of up to 8.6 bar and a maximum suction lift of 9 m (30 ft.) water.

PERIDOS FXM 3:

The high-performance brother of the FXM 2 reaches a maximum delivered volume of 840 l/h (221.9 GPH), a delivery pressure of up to 4.5 bar and a maximum suction lift of 9 m (30 ft.) water.



The advantages of the PERIDOS FXM at a glance

- **Above-average turndown ratio for precise dosing:** users can control the delivery capacity over a very wide range (5,000:1 turndown ratio) – for example, the PERIDOS FXM 2 has a maximum delivery capacity of 176 l/h (46.5 GPH) which enables control down to 0.035 l/h (0.0093 GPH).
- **Precise conveying:** two CNC precision-machined pinch rollers and two alignment rollers ensure maximum accuracy during conveying ($\pm 1\%$ repeat accuracy). The quality rolls extend the service life of the hose, thereby reducing spare part costs and downtime.
- **Real time monitoring of the delivery rate:** the peristaltic pumps of the PERIDOS FXM series (models 2 and 3) can be combined with a flow verification sensor (FVS) to monitor delivery rates and detect deviations immediately – for reliable dosing processes and maximum product quality.
- **Greater safety with less outlay:** a contact-free capacitive hose leak detection (TLD) system with a sensor in the pump head detects leaks at an early stage, thereby providing protection against costly outages and environmental damage.
- **Specially developed hoses for high pressures and a long service life:** various hose materials – Norprene (for chemicals), polyurethane (for oils and grease) and fabric-reinforced Norprene (for higher pressures) – suitable for fluids with viscosities up to 5,000 cP are available to ensure minimal wear.
- **Maintenance in minutes instead of hours:** the hose is the only wear part that comes into contact with the medium, and can be changed in just a few simple steps – without the need to dismantle the pump and without special tools. This reduces downtime and maintenance costs.



Lutz-Jesco PERIDOS FXM peristaltic pumps



Robust and wear-resistant materials:

● **Components not in contact with the media**

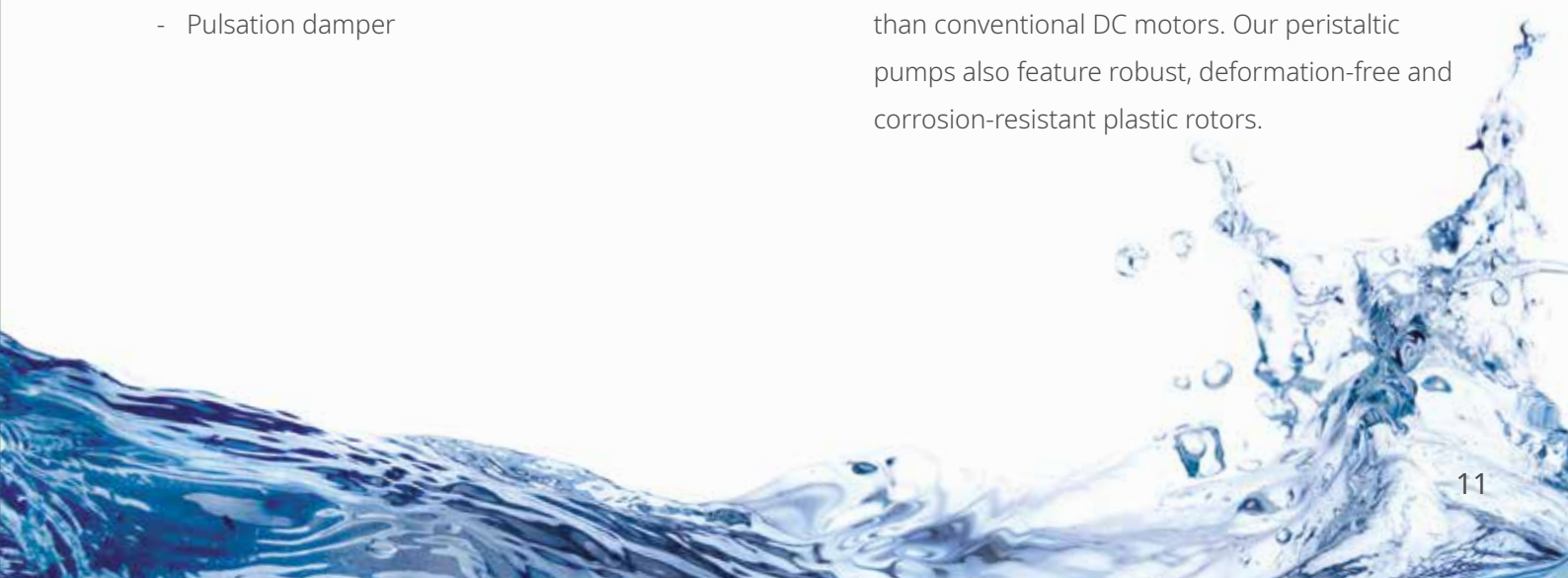
- Pump head: PBT GF30 (fibre glass reinforced)
- Housing: Powder-coated aluminium
- Pump head cover: Clear acrylic
- Star-knob screw: Zinc
- Motor shaft: Stainless steel
- Rotor: PBT GF30
- Pinch roller: POM (polyacetal)
- Bearing: ball bearing

● **Accessory components in contact with the media**

- Suction hose: PVC
- Foot valve: PP
- Pressure hose: PE
- Injection nozzle with non-return valve
- Pulsation damper

- **Certifications:** peristaltic pumps from the PERIDOS FXM series comply with the highest international standards. They are certified in accordance with UL 778 (6th edition – motor-driven water pumps) and the Canadian standard CAN/CSA C22.2 no. 109-14 (5th edition). They also comply with the requirements of the Water Quality Association (WQA) in accordance with NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372 – the latter specifically for versions with Norprene hoses.

- **Robust motors and rotors:** the peristaltic pumps from the PERIDOS FXM series work with brushless motors. As they operate without carbon brushes and commutators, they are more wear-resistant than conventional DC motors. Our peristaltic pumps also feature robust, deformation-free and corrosion-resistant plastic rotors.



PERIDOS FXM – ready for industry 4.0



Modern production environments require intelligent, networked systems. The peristaltic pumps from our PERIDOS FXM series are ready for the Industry 4.0 era.

- **Simple integration in control systems:** the support provided for common industrial communication protocols (EtherNet/IP, Modbus TCP, PROFINET) facilitates the seamless integration of our peristaltic pumps in modern control systems.



- **Easy integration in SCADA and control systems:** the wide range of interfaces (4–20 mA, 0–10 V DC, pulse) allows easy integration into existing SCADA and control systems, which increases flexibility and reduces implementation costs.
- **Seamless monitoring of critical processes:** the pump is equipped with a wide range of output signals and relays. This enables up to 17 different pump functions and states to be monitored and transferred to a control system or control (including temperature and motor status). This enables the seamless monitoring of critical processes.
- **Intuitive operating interface for quick configuration:** the digital touchpad with menu-driven software enables quick and error-free configuration. This reduces the training requirement and commissioning time.





PERIDOS		FXM 1			FXM 2				FXM 3			
Delivery capacity	l/h	2.8	11	92	176	162	165	269	529	840	350	300
	gal/h	0.74	2.9	24.3	46.5	42.8	43.6	70	139.7	221.9	94.5	81.2
Max. delivery pressure	bar	1.5	8.6	8.6	2.1	4.5	3.5	2.1	3.4	2.1	4.5	2.1
	PSI	22	125	125	30	65	50	30	50	30	65	30
Hose material		Tygon®/ Norprene	Tygon®/ Norprene	Tygon®/ Norprene	Tygon®/ Norprene	Versilon®/ polyurethane	Tygon®/ fabric-reinforced Norprene	Tygon®/ Norprene	Tygon®/ Norprene	Tygon®/ Norprene	Versilon®/ polyurethane	Tygon®/ fabric-reinforced Norprene
Suction lift (dry)	mWs	3	9									
	ft	8	30									
Hose size inside		DN4 1/4"	DN3 1/8"	DN4 1/4"	DN10 3/8"	DN10 3/8"	DN10 3/8"	DN10 3/8"	DN15 1/2"	DN20 3/4"	DN10 3/8"	DN10 3/8"
Viscosity range	mPas/cp	2,000	5,000									
Solid contents		up to 5 % (depending on particle size)										
Motor output	W	5	190									
Power supply		230 V AC 50 Hz	96 – 264 V, 50/60 Hz									
Protection class		IP 65	NEMA 4X/IP 66									
Ambient temperature	°C/°F		0 – 46/32 – 115									
Temperature of the medium	°C/°F	50/122	54/130									
Air humidity	%		max. 95									
Weight	kg/lbs	0,75/1.65	14/31					22/48.5				

Pump control range	5,000 : 1
Siphon protection	Present due to design
Direction of transport	Bi-directional
Leak detection	TLD (capacitive)
Protection mechanism	Auto-Stop, Auto-Restart
Inputs	4 – 20 mA, 0 – 10 V DC, pulse, 2 × release inputs
Outputs	4 – 20 mA, pulse, 4 × alarm outputs, 1 × alarm relay, digital contacts
Extended communication	EtherNet/IP, Modbus TCP, PROFINET



Contact us!

Do you have questions about our peristaltic pumps from the PERIDOS FXM series? Do you need expert assistance in their design and integration? Then get in touch:

- Give us a call: +49 51305802-0
- Visit our website: www.lutz-jesco.com
- Contact us by mail: info@lutz-jesco.com

We look forward to learning about your project!
The Lutz-Jesco team.



More about our peristaltic pump programme.

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