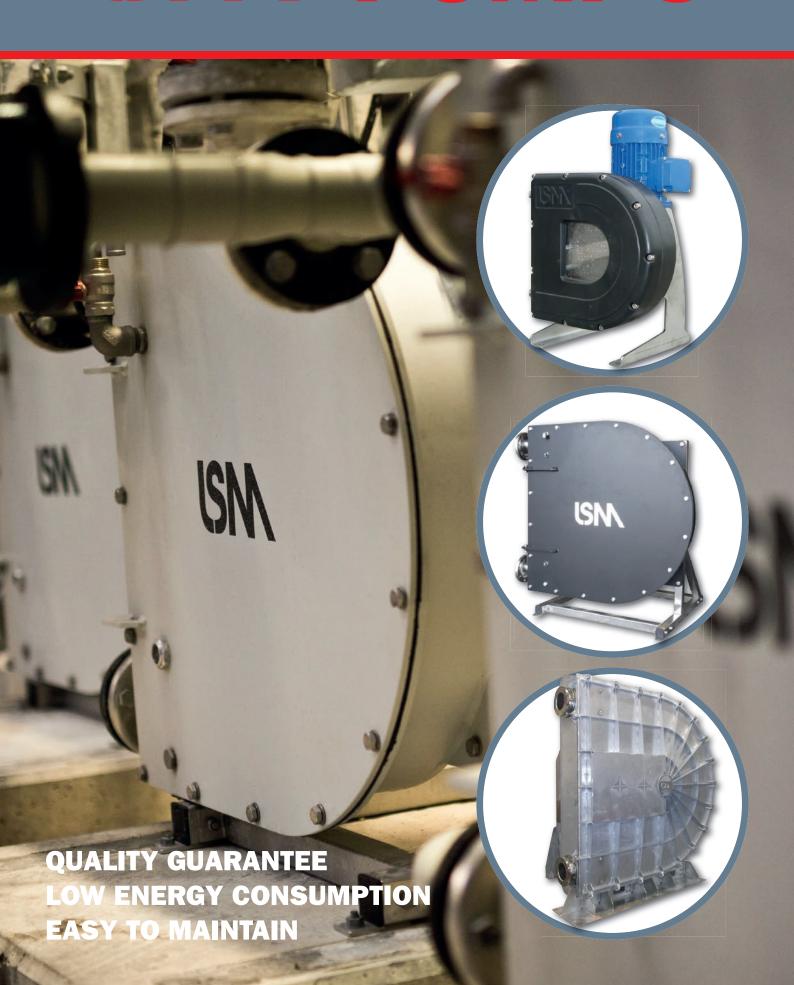
## ISN PUMPS



## OPERATIONAL PRINCIPLES FOR LSM PERISTALTIC HOSE PUMPS

#### ADVANTAGES OF THE LSM HOSE PUMP:

- It is reversible. Depending on what the rotation direction is set to, the influx and outflow for the pump can be either at the top or at the bottom.
- · It is self-priming.
- Easy to service. The pump does not need to be dismantled during hose changes.
- · Can run dry
- Low energy consumption compared to other pumps.
   The glycerine in the pump casing lubricates the hose and the rollers in the pump, which results in a very low energy consumption.
- The pump is sealed and protected against back flow, even when it is not in operation as the rollers always push the hose flat.
- Good hygiene. Only the hose is in contact with the fluid which is being pumped. Bearings and gaskets are not affected. Abrasive fluid does not affect the pump.







- Solid objects can to a certain extent pass through the hose. Depending on the hose's diameter, it is possible to handle foreign objects such as sand, pebbles and similar. It can even handle fish up to a certain size, without damage.
- Is suitable for fluids with a high viscosity and a high dry matter content.

The main components of an LSM hose pump are the pump casing, the hose and the rotor. When the rotor turns, the rollers on the rotor squeeze the hose flat. In front of the roller, pressure builds up and because of the hose's elasticity a vacuum builds up behind the roller. The pressure pushes the fluid out of the hose and the vacuum sucks the new fluid in.

## **APPLICATIONS**

The applications are endless for the versatile LSM hose pumps, and they are used in a wide variety of industries in Denmark and abroad. The industries include:

#### **FOOD INDUSTRY:**

- Abattoirs
- Food production

#### **MINING INDUSTRY:**

- Drilling sludge
- · Residue

#### **CHEMICAL INDUSTRY:**

- Laboratories
- Hygiene products

#### **ON/OFF SHORE:**

- · Waste oil
- Cutting

#### **FISHING INDUSTRY:**

- Transferring
- · Fish farming
- Production

#### **AGRICULTURAL INDUSTRY:**

- Slurry
- Seed dressing
- Feed

#### **BIOGAS:**

- Slurry
- Food waste
- Agro products

#### **OTHER INDUSTRIES:**

- · Production of concrete
- Production of paint
- Etc.







## EQUIPMENT FOR LSM PUMPS

						LSM	model					
	10	15	25	32	40	50	65	80	100	125	150	200
SM pump versions:												
Plastic (PP)	•	•										
Stainless steel (AISI304)			•	•	•	•	•	•	•			
Steel (Galvanised/coated)	•	•	•	•	•	•	•	•	•	•	•	•
lpgrade to an LSM pump:												
Control box for operation							•	•	•	•	•	•
ATEX	•	•	•	•	•	•	•	•	•	•	•	•
Heavy duty version									•	•	•	•
additions for LSM pumps:												
Stainless steel cover over gear/motor			•	•	•	•	•	•	•	•	•	•
Operation monitoring	•	•	•	•	•	•	•	•	•	•	•	•
Vaccum pump							-		•	•	•	•
Air expansion tank			•	•	•	•	•	•	•	•	•	•
Pulsation damper	•	•	•	•	•	•	•	•	•	•	•	•
Coating of connecting pipes	•	•	•	•	•	•	•	•	•	•	•	•
Frequency converter	•	•	•	•	•	•	•	•	•	•	•	•
Pipes, fittings, etc.	•	•	•	•	•	•	•	•	•	•	•	•
Mounting, installation, etc.	•	•	•	•	•	•	•	•	•	•	•	•

## ELECTRICAL BOX FOR OPERATION:

On our larger pump models, we offer electrical control boxes for either manual or automatic operation, in collaboration with additional automation.

#### **ATEX CERTIFICATE:**

All pumps can be supplied with an ATEX certificate.

#### **HEAVY DUTY:**

For demanding industrial applications, we can offer a heavy-duty version.

## STAINLESS STEEL COVER OVER GEAR/MOTOR:

If the pump is placed outdoors, we offer stainless steel covers to protect the gear/motor.

#### **OPERATION MONITORING:**

For many of our users, reliable monitoring of pumps and installations is very important. We can provide sensors and advise about proper fitting and use of sensors to monitor operations.

Possible

#### **VACUUM PUMPS:**

Vacuum pumps are available in many different sizes and are selected according to the specifications for the particular vacuum installation.

#### **PULSATION DAMPER:**

It is a characteristic of hose pumps that they pulsate. Where this is a problem, we can supply different pulsation damper solutions to eliminate the pulsation.

#### **COATING OF CONNECTING PIPES:**

If the fluid erodes the connecting pipes, we can - in cooperation with our supplier - find countless solutions for the surface treatment of the connecting pipes.

#### FREQUENCY CONVERTER:

With a frequency converter, the speed on the pump be regulated as required.

#### **PIPES. FITTINGS. ETC.:**

We have extensive experience in supplying and advising customers regarding their choice of optimal pipe and fittings solutions.

#### **MOUNTING, INSTALLATION, ETC.:**

One of the most important prerequisites for a well-functioning pump installation is the correct set-up and installation. If you would like help with this, we offer various solutions.







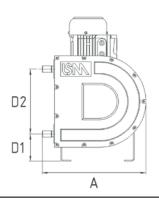


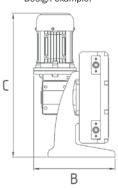


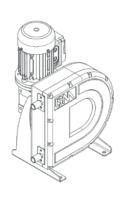
## **DIMENSIONS OF LSM PUMP VARIANTS**

Model:	Size:	Measurement A:	Measurrement B:	Measurement C:	D1:	D2:	Weight:	Motor:
LSM-10	1/4"	338mm / 13 <sup>3</sup> / <sub>8</sub> "	246mm / 9 <sup>3</sup> / <sub>4</sub> "	431mm / 17"	84mm / 3 <sup>3</sup> / <sub>8</sub> "	217mm / 8 <sup>1</sup> / <sub>2</sub> "	25 kg / 55 lbs	0.18 kW/0.25 HP.
LSM-15	1/2"	340mm / 13 <sup>3</sup> / <sub>8</sub> "	270mm / 10 <sup>5</sup> / <sub>8</sub> "	495mm / 19 <sup>1</sup> / <sub>2</sub> "	93mm / 3 <sup>5</sup> / <sub>8</sub> "	208mm / 8 <sup>1</sup> / <sub>4</sub> "	25 kg / 55 lbs	0.37 kW/0.5 HP.



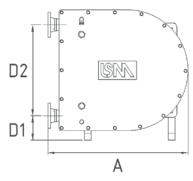


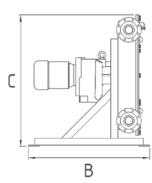


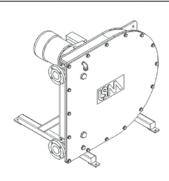


Model:	Size:	Measurement A:	Measurrement B:	Measurement C:	D1:	D2:	Weight:	Motor:
LSM-25	1"	510mm / 20 <sup>1</sup> / <sub>8</sub> "	505mm / 20"	543mm / 21 <sup>3</sup> / <sub>8</sub> "	137mm / 5 <sup>3</sup> / <sub>8</sub> "	339mm / 13 <sup>3</sup> / <sub>8</sub> "	65 kg / 143 lbs	0.37 kW / 0.5 HP
LSM-32	11/4"	640mm / 25 <sup>1</sup> / <sub>4</sub> "	531mm / 20 <sup>7</sup> / <sub>8</sub> "	675mm / 26 <sup>5</sup> / <sub>8</sub> "	162mm / 6 <sup>3</sup> / <sub>8</sub> "	436mm / 17 <sup>1</sup> / <sub>8</sub> "	105 kg / 231 lbs	0.55 kW / 0.75 HP
LSM-40	11/2"	781mm / 30 <sup>3</sup> / <sub>4</sub> "	730mm / 28 <sup>3</sup> / <sub>4</sub> "	763mm / 30"	160mm / 6 <sup>1</sup> / <sub>4</sub> "	520mm / 20 <sup>1</sup> / <sub>2</sub> "	140 kg / 308 lbs	0.75 kW / 1 HP
LSM-50	2"	916mm / 36"	800mm / 31 <sup>1</sup> / <sub>2</sub> "	860mm / 33 <sup>7</sup> / <sub>8</sub> "	165mm / 6 <sup>1</sup> / <sub>2</sub> "	594mm / 23 <sup>3</sup> / <sub>8</sub> "	180 kg / 396 lbs	1.5 kW / 2 HP.
LSM-65	21/2"	1082mm / 3'6 <sup>5</sup> / <sub>8</sub> "	909mm / 2'11 <sup>3</sup> / <sub>4</sub> "	1035mm / 3'4 <sup>3</sup> / <sub>4</sub> "	200mm / 7 <sup>7</sup> / <sub>8</sub> "	720mm / 28 <sup>3</sup> / <sub>8</sub> "	400 kg / 881 lbs	2.2 kW / 3 HP.
LSM-80	3"	1200mm / 3'11 <sup>1</sup> / <sub>4</sub> "	1067mm / 3'6"	1220mm / 4'	235mm / 9 <sup>3</sup> / <sub>8</sub> "	860mm / 2'9 <sup>7</sup> / <sub>8</sub> "	500 kg / 1100 lbs	4.0 kW / 5.5 HP.

Design example:

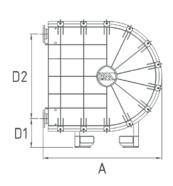


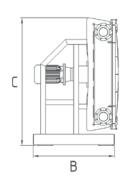


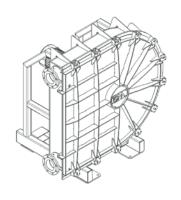


Model:	Size:	Measurement A:	Measurrement B:	Measurement C:	D1:	D2:	Weight:	Motor:
LSM-100	4"	1525mm / 5'	1156mm / 3'9 <sup>1</sup> / <sub>2</sub> "	1642mm / 5'4 <sup>5</sup> / <sub>8</sub> "	367mm / 14 <sup>1</sup> / <sub>2</sub> "	1090mm / 3'6 <sup>7</sup> / <sub>8</sub> "	700kg / 1543 lbs	7.5 kW/10 HP
LSM-125	5"	1717mm / 5'7 <sup>5</sup> /8"	1400mm / 4'7 <sup>1</sup> /8"	1811mm / 5'11 <sup>3</sup> / <sub>8</sub> "	389mm / 15 <sup>3</sup> / <sub>8</sub> "	1200mm / 3'11 <sup>1</sup> / <sub>4</sub> "	1300kg / 2866 lbs	11 kW/15 HP.
LSM-150	6"	1890mm / 6'2 <sup>3</sup> / <sub>8</sub> "	1590mm / 5'25/8"	2132mm / 7"	461mm / 18 <sup>1</sup> / <sub>8</sub> "	1416mm / 4'7 <sup>3</sup> / <sub>4</sub> "	1800kg / 3968 lbs	15 kW/25 HP.
LSM-200	8"	2761mm / 9'3/4"	1921mm / 6'3 <sup>5</sup> / <sub>8</sub> "	2909mm / 9'6 <sup>1</sup> / <sub>2</sub> "	527mm / 20 <sup>3</sup> / <sub>4</sub> "	1970mm / 6'5 <sup>7</sup> /8"	4500kg / 9920 lbs	37 kW/60 HP.

Design example:







## **TECHNICAL DATA**

	LSM10	LSM15	LSM25	LSM32	LSM40	LSM50
Flow	150 l/h - 0.7 gpm	330 l/h - 1.5 gpm	1 m³/h - 4.5 gpm	2 m <sup>3</sup> /h - 9 gpm	3 m³/h - 13 gpm	6 m³/h - 26.5 gpm
Revolutions	50 rpm	50 rpm	28 rpm	28 rpm	28 rpm	28 rpm
Max preasure	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi

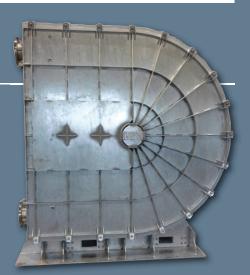
	LSM65	LSM80	LSM100	LSM125	LSM150	LSM200
Flow	12 m³/h - 53 gpm	20 m³/h - 88 gpm	40 m³/h - 176 gpm	70 m <sup>3</sup> /h - 308 gpm	120 m³/h - 528 gpm	300 m <sup>3</sup> /h - 1321 gpm
Revolutions	26 rpm	26 rpm	26 rpm	26 rpm	26 rpm	26 rpm
Max preasure	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi	15 bar/217 psi

The technical specifications referred to in the table are based on our standard installations. It is possible to vary the required flow by changing the revolutions.

## THE WORLD'S LARGEST

LSM Pumps have developed the world's largest models within hose pumps over the past few years. The large hose pumps can be used in several different industries, as they are suitable for pumping viscous fluids or large particles.

The LSM-200 model is the world's largest hose pump. It has been implemented with great success in the fishing industry, where it is used to transfer fish from fishing vessels. The pump can transfer fish up to a certain size, without damage and is at the same time extremely reliable.

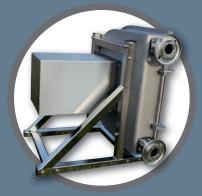


## STAINLESS LSM PUMP FOR THE FOOD INDUSTRY

As the only manufacturer in the world, we also offer pumps made of stainless steel, which, by default are designed for food manufacturers and their suppliers. However, we will gladly deliver to other industries if this need arises. The stainless steel version of the LSM pump possesses the same benefits as the corresponding LSM pump made of steel.

LSM Pumps offers various surface treatments for pumps in stainless steel. The various processes provide special properties and surface finishes. These treatments are of great importance for both quick and efficient cleaning as well as for service life and resistance to corrosion.









## **ABOUT LSM**

LSM is a Danish family-owned company and has existed since 1982. Today, the company is one of the major players within hose pumps.

As a manufacturer of hose pumps, we possess thorough knowledge of our product, and we will gladly offer suggestions for improvements and alternative solutions for your industry.

Our philosophy is to be close to our customers and ensure high quality and on-site service. In 2012, we opened a German department, LSM Pumpen GmbH, and in 2015, we opened a new department, LSM Pumps in Houston, USA. In addition, we have a very well-developed distribution network with a large number of dealers and agents, who cover a great part of the world.











## **WHO WE ARE**

LSM Pumps has always been synonymous with high quality and good service. We do not compromise on our values, and this is appreciated by our customers.

In 2014, LSM Pumps started a generational succession and Simon Sørensen took over the company and the responsibility from his father and founder, Leo Sørensen. The Director and founder, Leo Sørensen, has vast experience in the pump industry, and is still working and advising our customers.

If you are considering acquiring a pump to manage your fluid needs, you should contact us. We have many years of experience in supplying and servicing pumps for various applications, and we will gladly make our expertise available to you to help you find the best solution at the right price.











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