mandals
since 1775
A Michelin Group Company

World Class Lay-Flat Hoses

Construction

www.mandals.com
Legacy Through Innovation

Made in Norway

Content

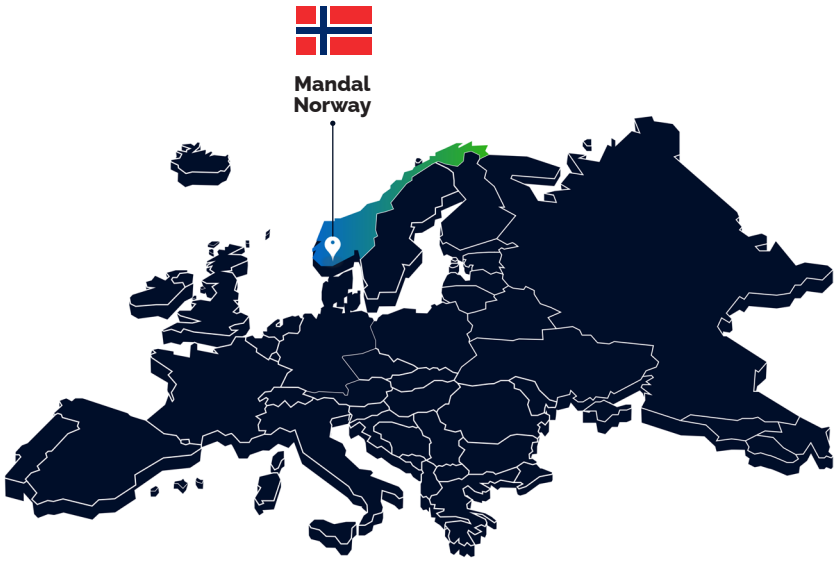
Abbreviations

HVT	High Volume Transfer
NBR	Nitrile Rubber
TPU	Thermoplastic Polyurethane

About us

Mandals specializes in the manufacturing of high quality lay-flat hoses, liners, and circular shuttle looms. We are based in Mandal, on the southern coast of Norway and have been in business in the same location for nearly 250 years.

We have come a long way since our establishment in 1775, and today we are one of the world's most recognized manufacturers of lay-flat hoses and looms. 90% of our products are exported and are found across the globe thanks to our long-standing partners and distributors.



1775 One of Norways oldest companies

100 Employees

2 Product lines

20 Products

90% Export of our products

40 Distributors

50 Countries

12 Industries

Why Mandals

We strive to grow long-term, loyal partnerships. Our core values are People, Planet and Profit and we will always focus on people first. As a partner with Mandals we will do our best to put you first, aiming to offer you the best service in all aspects of the partnership. We expect active partners that will challenge, inspire, and help us grow and build business together.

We define ourselves as a trustworthy supplier with high focus on quality in the production process and products. All lay-flat hoses and looms are produced in-house, meaning that you can be assured we produce quality without compromise.

Our Materials

Rubber Hoses

Mandals rubber hoses are made from a blend of nitrile rubber and PVC, with an added UV barrier. The rubber is fully extruded through the circular woven fabric, ensuring excellent bonding between cover and lining to prevent delamination. Thanks to the interlocking between the warp yarns and the weft of the circular weave, the hose has a high lengthwise stability and a full diameter recovery after use. The abrasion and puncture resistance of Mandals rubber hose is by far superior to any regular uncovered textile hose.

Rubber Hoses

TPU Hoses

Our TPU hoses are among the most innovative lay-flat hoses in the world, which are made from extruded thermoplastic polyurethane (TPU) with excellent wear and tear properties. The TPU is extruded through the weave, which is made of high tenacity filament polyester yarns. This method gives a very strong bonding between cover and lining as well as firmly encapsulating the woven polyester yarn. The abrasion resistance of the Mandals TPU hoses is among the highest available, and our TPU hoses also have excellent resistance against the most commonly used chemicals, UV radiation, hydrolysis, and fungus degradation.

Thermoplastic Polyurethane (TPU) Hoses

Our Construction Hoses

Mortar

TPU concrete boom-end hose

Mantex HP & Extra

TPU compressed high-pressure air hose

Mantex

Rubber compressed air hose

Advantages of Mandals Hoses

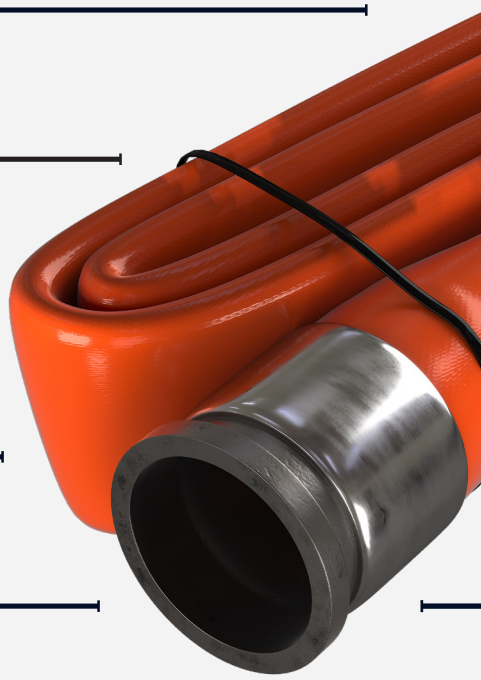
Long lasting hoses for demanding use require **durability** and **wear resistance**

Quick deployment and retrieval, combined with **excellent flow rates** and long lifetime, **reduces operation cost**

High abrasion resistance and tensile strength

Excellent mechanical adhesion between the layers provide the best quality hose with a long lifetime

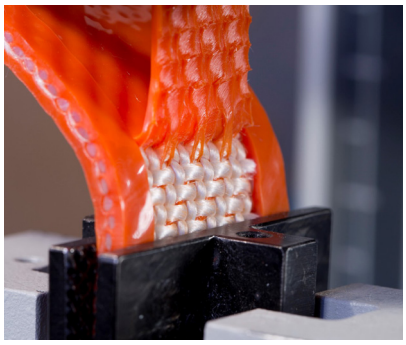
Highly flexible hoses = Kink resistant and minimal pressure loss

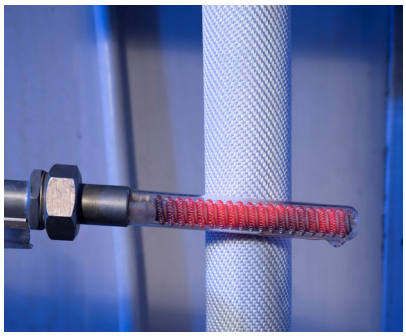


Quality

One of the values we live by is **"Legacy Through Innovation"**, meaning that we will always work to further develop our products, our production processes and the way we do business with our partners. We are following the trends in the market and continuously working to develop new products and solutions for our customers' unique challenges.

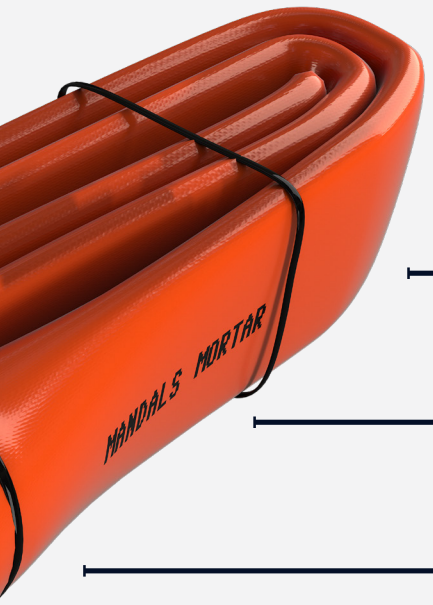
Raw materials and finished products are tested and documented according to international standards.





Examples:

ISO 4671 - Wall Thickness
ISO 1402 - Hydrostatic testing
ISO 8033 - Adhesion
BS 6391 - Abrasion
BS 6391 - Heat Resistance



Resistant to most industrial chemicals, ozone, and UV-rays

Durable even in the **roughest environments**

Small logistical footprint required for transport and storage

Unique weave design that is specially developed for each hose

Easy to handle - less heavy lifting

Looms & Spares

We pioneered the lay-flat hose a century ago and developed our first circular loom in 1935. Today you can find our machines in over 30 countries, some of which have been in service for over 50 years. Our machines continue to define the standard for quality and reliability in circular looms.

Scan the QR code if you would like to know more about our looms

Construction Lay-Flat Hoses

Reliability in Demanding Situations

The construction industry is one of the most demanding in terms of safety. Our lay-flat hoses are specifically designed for this industry that requires efficient, and modern techniques. The lay-flat design allows better flow control and lower placement rates while being designed for safe use.

Our concrete boom end hose is a lightweight and flexible lay-flat hose with many advantages in the construction industry. It is operator friendly, makes it easy to pour concrete, and has a long lifespan, meaning it will not wear out as quickly as other hoses.

Our market-leading compressed air hoses combine lightweight and flexibility with the highest pressure ratings and safety. The long lengths mean it can easily be deployed and moved around in otherwise inaccessible areas. All hoses are designed for longitudinal failure mode, with a minimum safety factor of 4:1 between burst pressure and maximum working pressure. The dual-layer Mantex HP series is additionally designed so that failure of a layer still ensures the structural integrity of the second layer.

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Mortar

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Mantex

Cost-Efficient

Incorporating our easily deployable hoses with your existing equipment saves you money.

Quick

Get the work done in a shorter time frame, with a more effective solution, less manual labor, and equipment.

User-friendly

Our hoses have been designed with the operator in mind, making them easy to use and simplifying the job.

Safety First

Our hoses are made with the highest pressure ratings, and will always split longitudinally for safety reasons.

Concrete Boom-End Hose

Mortar

TPU hose
Pouring of concrete in tight places for formwork.

Mortar is a lightweight and flexible boom end hose perfect for the construction industry. It is operator friendly, making it easy to pour concrete, and has a long lifespan, ensuring it will last long after you stop using it.

- **High Diameter and Dimension Stability**
- **Easy to Deploy and Store**
- **Great Adhesion and Tensile Strength**
- **Improved Safety – No Hose Whip**
- **Light Weight and Flexible**
- **High Puncture Resistance**
- **Long Lifetime and Low Maintenance**
- **High Quality Materials**

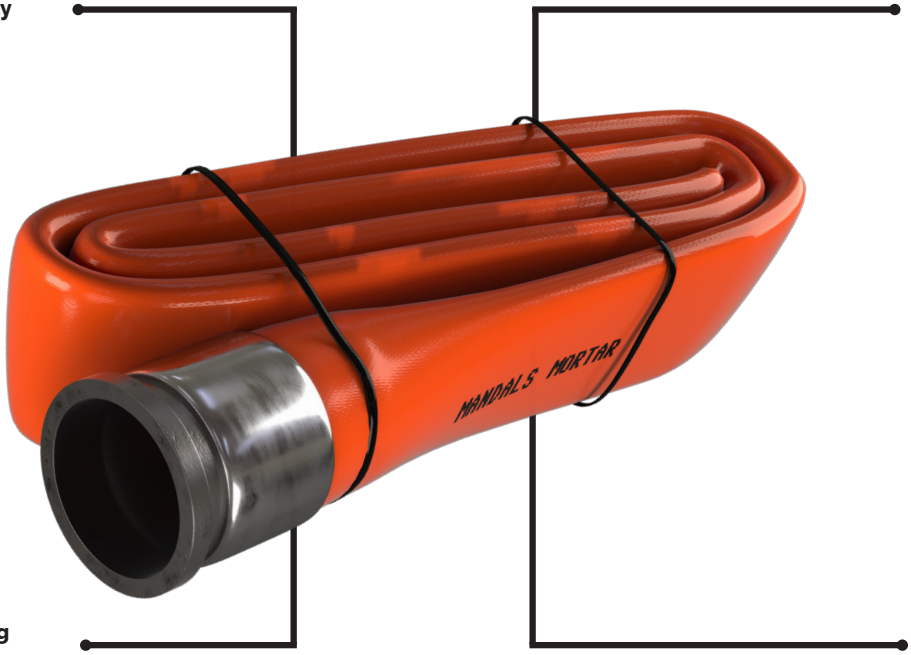
Key Features

- Light-weight, safe, and easy-to-use concrete boom hose.
- Ideal for ICF forms as well as tall walls, and columns with limited space.
- Improved flow control and placement rates compared to conventional concrete discharge hoses.
- Excellent abrasion resistance.
- Operating temperature from -50°C to + 65 °C (-58°F to +149°F).

Advantages

- 1/3 lighter than the traditional flexible boom hose.
- Safer operations and excellent maneuverability.
- Outstanding abrasive resistance.
- Custom various lengths.
- Easy pouring in high areas.
- Bright color for visibility and safety.
- Simple maintenance and cleaning operations.
- Coils up for storage and transportation.

The design prevents hose whip, an important safety feature.



The bond is very strong between cover and lining and encapsulates the reinforcement

"Through the weave extruded hose" of TPU and ultra-strong awramid yarns

Mortar

Inner diameter		Wall Thickness		Weight		Burst Pressure		Tensile Strength	
Inch	mm	Inch	mm	Lbs / ft	Kg / m	Psi	Bar	X1000 lbs	Tons
4"	110.5 + 2.0	0.17	4.2	1.16	1.73	2500	172	178	80
5"	13.5.5 + 2.0	0.18	4.5	1.64	2.45	2500	172	218	98

Note: Safety BP/WP is 2:1 (50%) for all non-hazard and/or non-flammable liquids. Internal diameter stated in inch refers to nominal hose diameter.
Do not apply a higher longitudinal load than 25% of the listed Tensile Strength.

Compressed Air

Mantex HP

TPU hoses
Compressed air for power tools and compressors.
Borehole drilling.

The Mantex family is designed to be a flexible and lightweight hose for compressed air. It adapts to the terrain, making it possible to easily operate in difficult areas. For your convenience, the hose has been designed to be easy to coil for storage and transportation.

- **High Burst Pressure**
- **Easy to Deploy and Store**
- **Great Adhesion and Tensile Strength**
- **Improved Safety – No Hose Whip**
- **Light Weight and Flexible**
- **High Puncture Resistance**
- **Long Lifetime and Low Maintenance**
- **High Quality Materials**

Key Features

- Light, yet rugged and hard-wearing hose.
- Low weight combined with a high-pressure rating.
- The hose does not stretch when pulled and has a very high-pressure rating versus wall thickness.
- Excellent puncture resistance.
- Field proven design with long track record.
- Dual reinforcement ensures safety against failure.

Properties & Construction

- Operating temperature up to +110°C (+230°F).
- Lengths up to 40 meters.
- Color options: Orange (standard).
- Different coupling options available.
- Double high tensile polyester jacket hose solution.
- High tensile polyester weaves covered with an abrasion resistant TPU and lined with an oil resistant TPU.

Double Jacket hose with TPU in the outer layer / Inner layer

Covered and lined with high-tenacity polyester weaves for maximum abrasion resistance

Lengths up to 40 meters

Mantex HP

Article Number	Inner Diameter		Wall Thickness		Weight		Maximum Working Pressure		Burst Pressure		Nom. Tensile Strength	
-	inch	mm	inch	mm	lbs/ft	kg/m	psi	bar	psi	bar	X1000 lbs	X1000 kg
HPY051	2"	51.0 + 2.0	0.17	4.4	0.55	0.82	600	41	2535	175	31.7	14.3
HPY076	3"	75.0 + 2.0	0.18	4.5	0.83	1.24	435	30	1740	120	46.6	21.0

Note: Minimum safety factor burst to maximum working pressure is 4:1 for compressed air.

Mantex HP Extra

Article Number	Inner Diameter		Wall Thickness		Weight		Maximum Working Pressure		Burst Pressure		Nom. Tensile Strength	
-	inch	mm	inch	mm	lbs/ft	kg/m	psi	bar	psi	bar	X1000 lbs	X1000 kg
HPZ076	3"	75.0 + 2.0	0.22	5.5	1.05	1.55	600	41	2400	165	71.0	32.0

Note: Minimum safety factor burst to maximum working pressure is 4:1 for compressed air.

Warning:
Improper use and misuse of the hose may cause serious injury.
Safety instructions can be found on: mandals.com/safety.
Whipsocks (heavy duty restraint grips) are mandatory.

Compressed Air

Mantex

Rubber hose

For smaller compressors and handheld jackhammers.

Mantex combines lightweight and flexibility with the highest pressure ratings and safety. The hose is designed for high burst pressure compressed air applications and is highly resistant to abrasion and kinking. Nitrile rubber and PVC are blended together to create a high-quality hose with a UV barrier to prevent UV damage.

- **High Burst Pressure**
- **Easy to Deploy and Store**
- **Great Adhesion and Tensile Strength**
- **Improved Safety – No Hose Whip**
- **Light Weight and Flexible**
- **High Puncture Resistance**
- **Long Lifetime and Low Maintenance**
- **High Quality Materials**

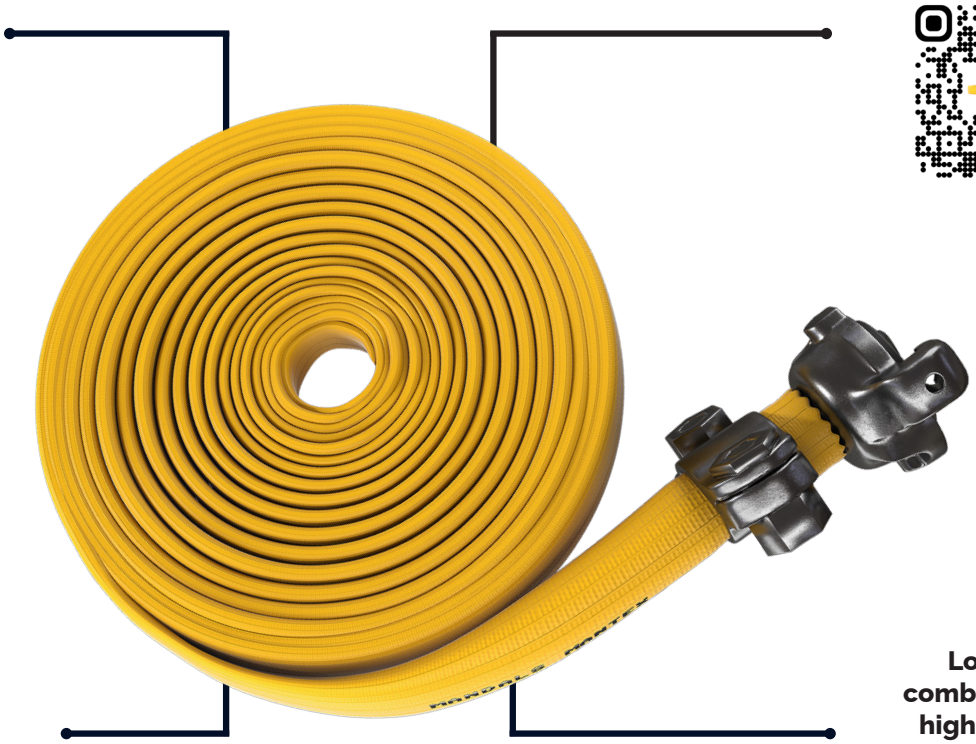
Key Features

- Low weight combined with high-pressure ratings.
- High strength, added UV barrier, high quality materials and excellent adhesion between the weave and the outer rubber layer gives a hose with a long life expectancy.
- Operating temperature from -30°C to +75°C (-22°F to +167°F). Intermittent use up to +80°C (+176°F).

Advantages

- Field-proven hose with a long track record.
- Lengths up to 200 meters.
- Color options: Black (standard), yellow (optional).
- Made from a blend of nitrile rubber with added UV barrier to prevent damage from UV radiation.
- A strong weave completely embedded in the nitrile rubber gives a very solid hose.

The weave is fully embedded in the nitrile rubber, giving the product its strength



Made from a blend of Nitrile rubber with added UV barrier to prevent damage from UV radiation

Low weight combined with high pressure ratings

Mantex

Inner diameter		Wall Thickness		Weight		Burst Pressure		Tensile Strength	
Inch	mm	Inch	mm	Lbs / ft	Kg / m	Psi	Bar	X1000 lbs	Tons
3/4	20.0 + 1.6	0.09	2.3	0.14	0.21	1450	100	4.2	1.9
1	25.4 + 1.6	0.10	2.5	0.18	0.27	1450	100	5.1	2.3
1 1/2	38.0 + 1.6	0.10	2.5	0.25	0.38	1235	85	7.7	3.5
2	51.0 + 2.0	0.10	2.5	0.35	0.53	870	60	10.4	4.7
2 1/2	65.0 + 2.0	0.11	2.9	0.45	0.68	725	50	14.8	6.7
3	76.0 + 2.0	0.12	3.1	0.63	0.95	725	50	17.9	8.1

Note: Minimum safety factor burst to maximum working pressure is 4:1 for compressed air.

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Construction

Let us contact you

By scanning the QR code below, you will be able to fill in your information and choose the products you would like to learn more about. One of our sales managers will get in touch with you shortly to help you with your challenges and suggest appropriate solutions for your needs.

NO (+47) 38 27 24 00

sales@mandals.com

Mandals AS
Nordre Banegate 26
4515 Mandal , Norway

www.mandals.com