



# Fluid transfer solutions

Agriculture & Food - Chemical & Petrochemical  
Construction & Environment - Industrial Maintenance

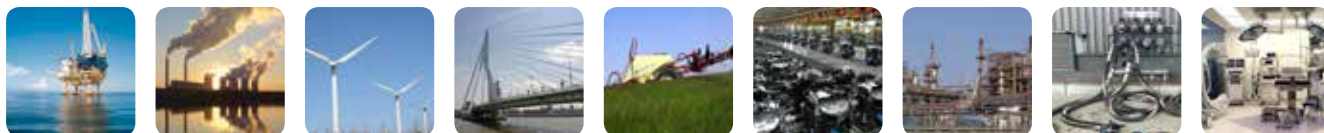
**Fluid transfer solutions**  
Agriculture & Food - Chemical & Petrochemical  
Construction & Environment - Industrial Maintenance  
[www.trelleborg.com/fluidhandling](http://www.trelleborg.com/fluidhandling)

# Trelleborg Fluid Handling Solutions

**Trelleborg Fluid Handling Solutions is part of Trelleborg Industrial Solutions.**

With over 1000 employees and head office located in Clermont-Ferrand (France), Trelleborg Fluid Handling Solutions is a key leading player proposing high performance and optimal solutions for every situation with low and medium pressure Industrial Hose, Oil and Marine Hoses, Rubber Sheeting & Matting and Expansion Joint based on advanced polymer technology with production sites in France, Spain, Sweden and Brazil.

Trelleborg Fluid Handling Solutions offers a very large range of competitive products, solutions and services that meet your needs and requirements for all types of application for your different businesses.



## ► Your Partner for Fluid Handling

Trelleborg Fluid Handling Solutions is organized around 9 applications areas:

- Oil and Gas
- Construction and Mining Equipment
- Energy
- Chemical, Pharma and Food
- Agriculture and Farms
- Environment and Cleaning Waste Water
- Processing Equipment and Machine Tools
- Industrial Transportation
- Life Science

This enables better reactivity to adapt our offer to fast moving application or to design special solutions tailor-made for you. In all cases we follow closely legal requirements or standard evolutions.

## ► Our logistics platform: availability, reactivity and reliability

Over 5000 different items are stored in our 3 logistic platforms in Clermont-Ferrand (France), Trelleborg (Sweden) and Izarra (Spain) to meet your need for immediate and reliable delivery.

## ► Our research and development centers through continuous innovations

Located in France and Brazil for Oil & Marine Hose, France and Sweden for Industrial Hose and Spain for Rubber Sheeting/ Matting and Expansion Joint, our R&D centers provide innovating solutions for compound, finished products and customized solutions.

All production sites are well equipped with laboratory, test bench and calculation centers to provide ready-to-use solutions based on our experience of the applications and competences.

## ► Our couplings technical centers

With location all over Europe (Germany, Norway, Sweden and France), Brazil and China we offer a large range of rubber hose assembly, composite hose, Stainless Steel or PTFE hose with dedicated service (24 hours to 48 hours delivery) and accessories.

## ► Trelleborg Oil & Marine Hoses

**Trelleborg Oil & Marine is the leading supplier of innovative and field-proven large-bore flexible bonded hoses for crude oil, chemicals, and LPG/LNG offshore transfer applications.**

Trelleborg Oil & Marine provides full service worldwide through global life cycle – engineering studies, delivery of complete solutions (hoses and ancillary equipments), on-site supervision, and recommendations for installation, maintenance and repairs. Trelleborg Oil & Marine is a technology and innovation driven company that makes flexible bonded hoses with unrivalled and undisputed performance.

Our products are designed and built with cutting edge solutions used in tire and aerospace industry, with high resistance to extreme operating environments and severe fatigue conditions. The acquisition of a Brazilian company in 2011 in Sao Paulo enlarged and completed the range of products and technologies. In Brazil, the business focuses on specially designed oil hoses for floating and submarine applications in order to answer the strongly growing local offshore oil and gas extraction industry.

**Trelleborg Oil & Marine provides a wide range of products specifically designed for demanding applications with long service life and high level of reliability:**

**One team, two world class factories,  
in France and Brazil,  
serving the global Oil & Gas transfer and offloading business**

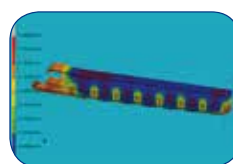
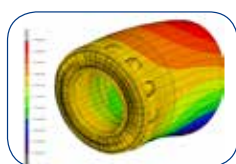


São Paulo, Brazil



Clermont-Ferrand, France

**In order to help you to accelerate the development of your business, our service list also covers**



| Compounding formulation | Hose configuration modeling | Finite element calculations | Hose design

| Hose testing (pressure, bending, elongation resistance, ...) | Hose certification (PED, ADR, REACH, ...) | Handling and storage instructions

| Installation instruction and supports | Hose inspection and refurbishment | Hose failure analysis

| After sales support | Training for sales team | Training for assembly workshop operators

# Agriculture & Food

A complete range of rubber hoses and assemblies for liquid and solid food products transfer, **without phthalates** and complying with the most stringent requirements for contact with foodstuffs products (European legislations and FDA).

## GUARANTEE HYGIENE, SAFETY, RELIABILITY

**Food:** Milk collection/Food transfer/Cleaning/Bulk tank truck discharge

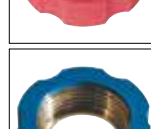
**Agriculture:** Spraying/Fish farm

### Food range

Applications	Product name	Diameter range (mm)	WP (bar)	Max. vacuum (bar)	Temp. (°C)	
<b>Milk collection</b>						
	<b>LACTADIAL</b>		51 - 76	6	0.7	- 30 to + 80 °C
	<b>CITERDIAL</b>		25 - 150	6	0.9	- 30 to + 80 °C
<b>Food transfer</b>						
	<b>CITERDIAL</b>		25 - 150	6	0.9	- 30 to + 80 °C
	<b>ALIKLER G2</b>		25 - 150	10	0.9	- 30 to + 100 °C
	<b>ALIKLER D</b>		32 - 100	15	0.7	- 30 to + 100 °C
	<b>MILLESIME</b>		25 - 150	10	0.9	- 30 to + 100 °C
	<b>TRELLVIN</b>		38 - 63	10	0.7	- 30 to + 100 °C
	<b>TRELLVIN L</b>		75 - 150	10	-	- 30 to + 100 °C
	<b>ALCODIAL</b>		25 - 76	6	0.9	- 30 to + 80 °C
	<b>VINITRELL</b>		38 - 75	10	0.9	- 30 to + 80 °C
	<b>VENDANGE</b>		100 - 150	6	-	- 30 to + 80 °C
<b>Cleaning</b>						
	<b>KLENET</b>		13 - 25	10	-	- 20 to + 95 °C
	<b>BIOCLEAN</b>		7.9 - 15.9	60	-	- 20 to + 100 °C
	<b>BIOVAST</b>		13 - 25	20 Steam 6 bar	-	- 20 to + 100 °C Steam 165 °C
	<b>BERGALAV</b>		10 - 25	10 Steam 6 bar	-	- 30 to + 160 °C Steam 165 °C
	<b>TRELLJET 681</b>		9.5 - 12.7	200	-	- 40 to + 120 °C
<b>Bulk tank truck discharge</b>						
	<b>SUPERVRAC AL EC</b>		75 - 125	7	-	- 30 to + 80 °C
<b>Agriculture range</b>						
<b>Spraying</b>						
	<b>ALTIPLUS</b>		8 - 25	60/40	-	- 30 to + 70 °C
	<b>PULVEDUC</b>		8 - 25	60/40	-	- 30 to + 70 °C
<b>Fish farm</b>						
	<b>FP 2007</b> <b>FP 3010</b>		254 - 457	2/3	-	- 40 to + 80 °C



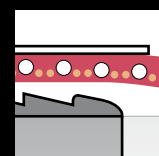
SMS, DIN, RJT, CLAMP, GUILLEMIN 1/2 symmetrical, spherical, etc.



### Advantages of the crimped solution



- No retention area, preventing bacterial growth ⇔ crimping guarantees smoothness hose/coupling
- No risk of disconnection ⇔ no risk of product loss
- Elimination of prominent parts ⇔ safe and easy handling



# Chemical & Petrochemical

Whatever the chemical you want to transfer, there is a hose in Trelleborg range which characteristics (especially the nature of the tube, the essential selection criterion: EPDM, UPE, FEP, NBR, etc.) will meet all your needs and satisfy all your requirements.

Steam - Oil and petroleum transfers - Transfer of chemical and corrosive products

## Chemical & Petrochemical range

Applications	Standard Approval	Product name		Diameter range (mm)	WP (bar)		Temp. (°C)
<b>Steam</b>							
	EN 6134	<b>TRELLVAST</b> EPDM/SBR		9.5 - 60	6	Water -40 to +120 °C	Steam 164 °C / 6 bar
	EN 6134	<b>PETROVAST</b> EPDM		9.5 - 51	18 Steam 60 Water	Water -40 to +120 °C	Saturated steam: 210 °C / 18 bar Superheated steam: 230 °C
	EN 6134	<b>SUPERVAST</b> EPDM		19 - 25	18 Steam 60 Water	Water -40 to +120 °C	Saturated steam: 210 °C / 18 bar Superheated steam: 230 °C
<b>Oil and petroleum</b>							
<b>Petrol pumps</b>							
	EN 1360	<b>VOLUKLER</b> NBR		16 - 25	16	-	-25 to +65 °C
<b>Discharge</b>							
		<b>TRELLOIL D/D EC</b> NBR		30 - 250	10	-	-30 to +80 °C
	EN 1360	<b>VOLUDEC</b> NBR/PVC		32 - 50	16	-	-30 to +55 °C
	EN 1360	<b>VOLUDEC RED</b> NBR/PVC		35 - 38	16	-	-30 to +55 °C
	EN 1360	<b>VOLUDEC EVO</b> NBR/PVC		32 - 50	16	-	-30 to +55 °C
	EN 1762	<b>BUTANE PROPANE E/E+</b> NBR		12.7 - 150	25	-	-30 to +100 °C
	EN 1761 EN 12115	<b>PUMPADUKT D</b> NBR		19 - 100	16	-	-40 to +100 °C
<b>Tank truck suction and discharge</b>							
	EN 1761 EN 12115	<b>PUMPADUKT S</b> NBR		19 - 150	16	0.9	-40 to +100 °C
		<b>TRELLOIL S/S EC</b> NBR		25 - 250	10	0.9	-30 to +80 °C
	BS 5842 EN 13765	<b>TRELLFLEX OIL</b> 10/14 bar		25 - 250	10/14	0.9	-30 to +80 °C
<b>Aircraft refueling</b>							
	ISO 1825	<b>AEROKLER C/NBR</b>		19 - 100	20	0.15	-40 to +200 °C
	ISO 1825	<b>AEROKLER F/NBR</b>		32 - 100	20	0.65	-40 to +100 °C
<b>Dock applications</b>							
	EN 1765	<b>MAGDALA/ATLANTIS</b> NBR		50 - 300	10	-	-20 to +100 °C
	EN 1765	<b>DOCKER/DOCK S</b> NBR		75 - 300	15	0.9	-20 to +82 °C
<b>Transfer of chemical and corrosive products (tank truck suction and discharge)</b>							
	EN 12115	<b>PHARMAKLER</b> UPE		25 - 50	10	0.9	-40 to +100 °C
	EN 12115	<b>PHARMAKLER</b> FEP		19 - 50	10	0.9	-40 to +150 °C
	EN 12115 *	<b>CHEMIKLER</b> EPDM		19 - 100	16	0.9	-40 to +100 °C
	EN 12115 *	<b>CHEMIKLER</b> UPE		19 - 150	16	0.9	-40 to +100 °C
	EN 12115	<b>CHEMIKLER</b> FEP		19 - 100	16	0.9	-40 to +150 °C
		<b>TRANSACID</b> UPE		25 - 100	10	0.8	-30 to +100 °C
	* BS 5842 EN 13765	<b>PERFORMER</b> EPDM		100 - 400	10	0.9	-30 to +100 °C
		<b>TRELLFLEX</b> CHEM		25 - 250	10	0.9	-30 to +80 °C

\* Also available without helix for discharge only.



### Crimping

Notched ferrule®: this Trelleborg patented system makes the recovery of existing couplings easy.
























# Construction & Environment

Result of long term cooperation between Trelleborg, end-users and OEMs, the Construction & Environment range has developed technical, specialized and innovative products.

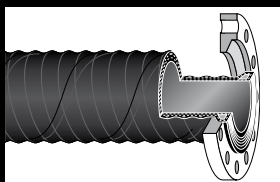
**Drain and sewer cleaning:** specific products, high pressure resistance - **Industrial waste collection:** for fixed or mobile installations by suction, discharge - **Air protection:** hydraulic discharge of abrasive products - **Sandblasting and mortar:** for spraying of mortar and mixed concrete as well as dry products - **Concrete placement:** high pressure and abrasive resistance - **Bulk tank truck discharge**

## Construction & Environment range

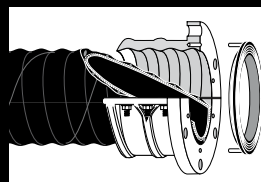
Applications	Product name		Diameter range (mm)	WP (bar)	Max. vacuum (bar)	Temp. (°C)
<b>Drain and sewer cleaning</b>						
	Flexible CANALKLER 250 S		13 - 38	250	-	-30 to +80 °C
	KLERIX		13 - 32	200	-	-30 to +80 °C
	ASPIKLER N		100 - 150	6	0.9	-30 to +80 °C
	ASSAINIX		90 - 150	4	0.8	-30 to +60 °C
<b>Industrial waste collection</b>						
	ZEPHIR S		30 - 150	-	0.8	-30 to +70 °C
	TRELLVAC		38 - 204	-	-	-40 to +90 °C
	ASPIVRAC S		50 - 200	1.5	0.8	-30 to +80 °C
<b>Abrasive materials hydraulic and pneumatic handling</b>						
	PERFORMER AR10		100 - 500	-	-	-30 to +70 °C
	PERFORMER		25 - 400	-	-	-30 to +100 °C
<b>Sandblasting and mortar</b>						
	TRELLBLAST S		13 - 32	10	-	-30 to +70 °C
	SABLEX		13 - 102	12	-	-30 to +70 °C
	SILEX		20 - 125	10	-	-30 to +70 °C
	PROJECTOR 40/100		25 - 75	10/20/40	-	-30 to +70 °C
<b>Concrete pump and placement</b>						
	PULSOR 170		50 - 150	85	0.8	-30 to +80 °C
	PULSOR 200		50 - 150	85	0.8	-30 to +80 °C
<b>Bulk tank truck discharge</b>						
	SUPERVRAC		75 - 152	7	-	-30 to +90 °C



## END FLEX® flange/BLOC END® safety clamps



END FLEX® flange system is specially designed for PERFORMER AR, AD, CR or CD ranges.



BLOC END® coupling (with its special gasket), is specially designed for PERFORMER GL AD range.

Tube continuity: there is no contact between the product and the coupling's metal parts.

# Industrial Maintenance

A complete range of hoses, assemblies and industrial ducting to meet all your industrial maintenance needs.

**Water:** discharge/suction/high pressure jetting/cooling systems - **Compressed air - Breathing air - Welding:** compliant with the relevant standard to maximize the user safety - **Oil:** for demanding fluid such as oil, fuel and solvents - **Solvents/Paints/Lacquer and varnish - Hydraulic:** textile reinforced hydraulic hoses for special and demanding applications - **Industrial ducting:** a large range for all products conveyed

## Industrial Maintenance range

Applications	Product name	Diameter range (mm)	WP (bar)	Max. vacuum (bar)	Temp. (°C)
<b>Water</b>					
	RED WATER	13 - 152	10	-	- 25 to + 70 °C
	CASCADE	12.7 - 25.4	10	-	- 30 to + 70 °C
	STARKLER	12.7 - 38	20/10	-	- 30 to + 100 °C
	COLORADO S	40 - 120	10/5	-	- 30 to + 100 °C
	AP BLUE/AP RED	19 - 200	16/3	-	- 10 to + 40 °C
	AQUAKLER 15	40 - 254	15/8	-	- 30 to + 70 °C
	OSL/OSX	12 - 150	8/2	0.8 - 0.9	- 5 to + 60 °C
	OSM II	20 - 100	5	0.8	- 30 to + 60 °C
	OSS IV	25 - 200	5/3	0.8	- 30 to + 60 °C
	OST	25 - 152	10	0.9	- 30 to + 60 °C
	OST EPDM 16 bar	25.4 - 152.4	16	0.9	- 40 to + 120 °C
	KLERHEAT	13 - 50	10	-	- 30 to + 100 °C
	TRELLJET 561/581	6 - 13	400/350	-	- 40 to + 150 °C
	TRELLJET 560/580	8 - 13	650/500	-	- 40 to + 150 °C
	TRELLJET 681 ANTIMICROBIAL PROTECTION	10 - 13	200	-	- 40 to + 120 °C
<b>Compressed air</b>					
	MAXAIR	6 - 100	15/10	-	- 30 to + 70 °C
	NORMINES II	6 - 100	20	-	- 40 to + 70 °C
	SUPERMINES	7 - 80	20	-	- 30 to + 70 °C
	AIRFLAT	19 - 152	20/15	-	- 20 to + 80 °C
	CRISAL AL	6 - 50	15/6	-	- 15 to + 60 °C
	VULCAIN +	6 - 12	20	-	- 40 to + 100 °C
<b>Automotive industry</b>					
	PUSH-LOCK HOSE BLACK/BLUE/GREEN/RED	6 - 19	16	-	- 20 to + 125 °C
<b>Breathing air</b>					
	BREATHING AIR EN 14593	7.2 - 20	10	-	- 40 to + 120 °C
<b>Welding</b>					
	PLUTON 20 RED/BLUE	5 - 20	20	-	- 30 to + 80 °C
	PLUTON TWIN	5 - 10	20	-	- 30 to + 80 °C
	PLUTON 2G	6.3 - 12.5	20	-	- 30 to + 80 °C
	VULPANE	6.3 - 10	20	-	- 30 to + 80 °C
<b>Oil</b>					
	POLYOIL	6 - 25	20	-	- 30 to + 100 °C
	HYDRO'K	5 - 25	16	-	- 25 to + 100 °C
	HYDRO'ECO	3 - 10	10	-	- 30 to + 100 °C
	BOAT FUEL HOSE ISO 7840 A1	5 - 63	10	-	- 30 to + 100 °C
<b>Solvents/Paints/Lacquer and varnish</b>					
	SOLVYKLER	6 - 25	20	-	- 30 to + 100 °C
	MULTIKLER	6 - 16	20	-	- 20 to + 100 °C
<b>Hydraulic</b>					
	DIN 1 TE	4.8 - 25.4	25/12	-	- 40 to + 100 °C
	DIN 2 TE	4.8 - 32	80/35	-	- 40 to + 100 °C
	DIN 3 TE	4.8 - 50.8	160/33	-	- 40 to + 100 °C
	SAE 100 R6	6.4 - 19	28/21	-	- 40 to + 100 °C
	SAE 100 R4	38 - 76	10/4	-	- 40 to + 100 °C
<b>Industrial ducting (PVC, PUR, TPE)</b>					
	Range KLEGAINE	12 - 1000	-	-	- 10 to + 650 °C

# Trelleborg group, **leader in polymer solutions**

Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments.

Its innovative engineered solutions accelerate performance for customers in a sustainable way.

The Trelleborg Group has annual sales of about SEK 21 billion (EUR 2.3 billion, USD 3.2 billion) in over 40 countries.

In addition, Trelleborg owns 50 percent of Trelleborg Vibracoustic, a global leader within

antivibration solutions for light and heavy vehicles, with annual sales of approximately SEK 14 billion (EUR 1.55 billion, USD 2.2 billion) in about 20 countries.

The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on NASDAQ OMX Stockholm, Large Cap.

[www.trelleborg.com](http://www.trelleborg.com)

## The group comprises **5** business areas

► Trelleborg Coated Systems



► Trelleborg Offshore & Construction



► Trelleborg Wheel Systems



► Trelleborg Industrial Solutions

► Trelleborg Sealing Solutions



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SAS au capital de 10 412 700 € - RCS Clermont-Ferrand B 391 933 397  
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