

TDF Deutschland GmbH

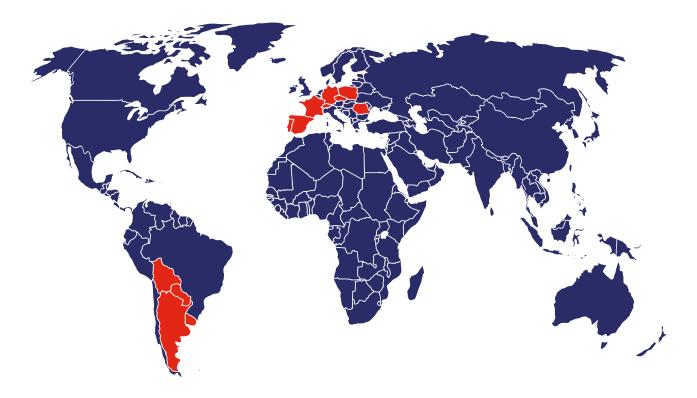
# Katalog

### About us

# LEADING-EDGE TECHNOLOGY FOR INDUSTRIAL PROCESSES

**Técnica de Fluidos** is specialised in providing the best solutions for conveying difficult products for the world's most demanding applications and processes.

Due to the continuous and stable growth of the company, which was founded in 1976, Técnica de Fluidos has achieved a leading position in the manufacture, distribution and installation of pumps and related products. The group currently has subsidiaries in 12 countries: Spain, France, Portugal, Switzerland, Germany, Romania, Poland, Czech Republic, Argentina, Uruguay, Paraguay and Bolivia.



#### 1. Leading suppliers at international level

We cooperate with the most important manufacturers of pumps and related products. This way we guarantee the high quality and reliability of our products, with shortened delivery times, quality certificates and the best customer service.

#### 2. Technical support

We provide the best possible support and service to our clients. Our experienced team of technicians is committed to minimising unforeseen problems and optimising profitability from the start to the completion of your project.

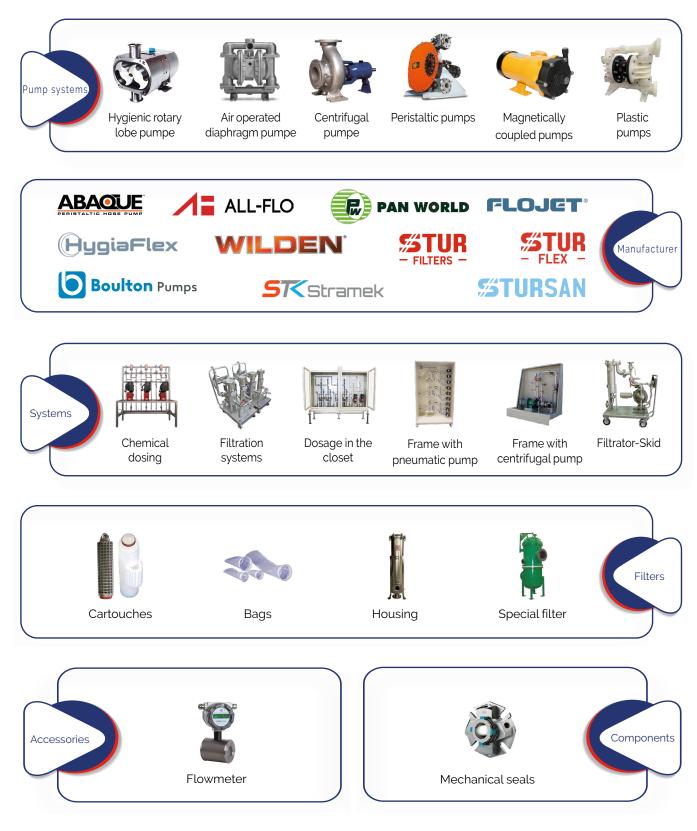
#### 3. Across all sectors

At Técnica de Fluidos, we strive to offer our customers a comprehensive service. Thus, our customers also benefit from our first-class service thanks to our experience in the most important areas of the industry.

#### 4. Individual service and customer support

TDF Systems is our systems specialist department. We offer high quality process and production skids and comprehensive technical support to ensure reliability and efficiency.

Our aim is to offer the widest range of pumps and related products. This way, our product range covers all the needs of your project:





**Large selection and stock availability:** We have the widest range of industrial pumps and related equipment and accessories, as well as the largest stock volume throughout Europe.



**Support and training:** We provide comprehensive advice, from equipment selection and problem solving to planning and commissioning.



**Engineering and Industrial Design:** Our technical departments accompany your projects from start to finish, with the aim of maximising the profitability of your installation.



**Professional tools:** We work with the most modern equipment, media and workshop tools on the market and have our own testing and calibration laboratory.



**Manufacturing and own assembly:** We carry out all types of manufacturing and assembly of industrial systems. We offer high quality and comprehensive solutions for dosing, diversion and filtration.



**Technical customer service and repairs at local level:** Our technical customer service carries out any kind of repair, commissioning or maintenance at the customer's site.



**Test systems for demonstration purposes:** To guarantee successful use, we have a wide range of demonstration units.



The Wilden Pro-Flo® SHIFT series pumps are the leading air-operated diaphragm pumps in their class. The innovative yet simple

Pro-Flo SHIFT design features an air control piston that automatically optimises air consumption and prevents overfilling, which can overload the air chamber, without compromising flow rate. This leads to reduced air consumption and operating costs while maintaining maximum operating efficiency and volumetric consistency.

Pro-Flo SHIFT pumps fit precisely into existing fluid transfer systems from the mounting base to the suction and discharge connections.









- More yield per Nm3 than other air-operated diaphragm pumps
- Longer lasting membrane
- ATEX compatible for use in explosive atmospheres
- Suitable for wet/dry air
- Fewer functional parts, thus less downtime and simplified maintenance
- Silent operation



## **Specialty Pumps**

We offer a variety of specialty pumps to suit your application needs. FDA and Hygienic Pumps are ideal for many common food and beverage fluid transfer applications. Solids handling capabilities are offered in hygienic pumps (1-1/2 in. and larger) and 1/2 in. and 1 in. plastic and metal pumps. Our PTFE pumps are recommended for applications containing highly corrosive process fluids or applications requiring higher temperature resistance.







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	_	ALL-PUR™ FDA – F SERIES	ALL-PUR™ FOOD GRADE – G SERIES	MAX-PASS® SOLIDS HANDLING – S SERIES
CONNECTABILITY	Fluid Connection Type	ASTM A270 Tri-Clamp <sup>®</sup>	Tri-Clamp <sup>®</sup>	FNPT FBSPT ANSI/DIN Flange
	Fluid Connection Size (inches)	F100: 1-1/2 F150: 2 F200: 2-1/2	G075: 1 G125: 1-1/2 G200: 2	Plastic: S038: 3/8, S050: 1/2, S075: 3/4, S100: 1 Metal: S050: 1/2, S075: 3/4, S100: 1
	Air Inlet Connection (inches)	F100: 1-1/2 F150: 2 F200: 2-1/2	G075: 1/4 G125: 1/4 G200: 1/2	1/4
	Pump Style		Bolted	
_	Materials of Construction- Fluid End	Polished & Passivated Stainless Steel	316 Stainless Steel	Aluminum, Anodized Aluminum, Stainless Steel, Polypropylene, PVDF
CONSTRUCTION	Materials of Construction - Air End	F100: Aluminum, PTFE Coated Aluminum F150 & F200: Aluminum, PTFE Coated Aluminum, Stainless Steel	Conductive Polyethylene	S050 & S075: Aluminum, PTFE Coated Aluminum, Polypropylene (Glass-Filled) S100 Metal: Aluminum, PTFE Coated Aluminum, Polypropylene (Glass-Filled) S100 Plastic: Polypropylene (Glass-Filled)
	Available Elastomers	Santoprene <sup>®</sup> , Hytrel <sup>®</sup> , PTFE	FDA EPDM, Integral PTFE	Geolast <sup>®</sup> , Santoprene <sup>®</sup> PTFE, FKM
NCE	max. Lift ft-H <sub>2</sub> O (m-H <sub>2</sub> O)	Dry: 17 - 24.4 (5,2 - 7,4) Wet: 30 - 31,7 (9,1 - 9,7)	Dry: 3,3 - 9,8 (1 - 3) Wet: 29,5 (9)	Dry: 15 - 18 (4,6 - 5,5) Wet: 26 - 31 (7,9 - 9,4)
PERFORMANCE	Maximum Solids inches (mm)	1/4 (6,4)	7/20 – 1/2 (9 - 13)	1/4 - 3/4 (6,4 - 19)
	max. Flow Rate gpm (lpm)	48 - 190 (182 - 719)	20 - 106 (75 - 400)	9 - 46 (34 - 174)

Certificates: (Depending on the material selection)  $\langle \xi {\tt x} 
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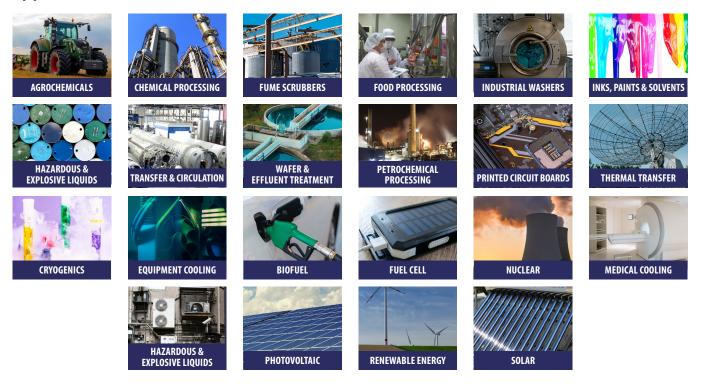




### Advantages of a magnetically coupled Pan Wold pump

- No poisonous or dangerous vapour escape possible; no contamination of pumped product possible
- Absence of mechanical seal
- No leakage due to hermetical design
- No contamination of the pumped product, as no atmosphere can reach the product can reach the product
- Plastic pumps with very high chemical resistance
- Low maintenance and high modularity due to very few parts
- The capacity range is between 4 and 1000 l/min
- Dry suction possible
- Atex approval

### **Applications**



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Dosing with a peristaltic dosing pump is an optimal solution for the pharmaceutical and biotech industry: easy validation, little to no cleaning effort due to "single-use" option, avoidance of cross-contamination and easy product change.

In this context, TDF is the ideal supplier for peristaltic pumps, as it has a very wide range of equipment on the market thanks to the distribution of Hygiaflex with its complete product range. Hygiaflex includes a complete line of sector solutions for industry, food as well as biotechnology, and here with controllable, analogue, digital and OEM versions.

The pumps are very reliable, which is underlined by a 3-year warranty. Suitable for all types of liquids, very variable, the same pump head allows different flow rates and volumes, and thus areas of application, just by changing the hose diameter, while maintaining optimum precision.

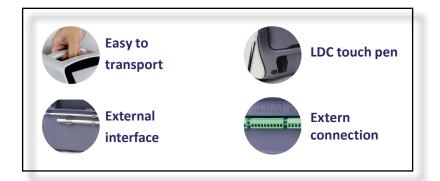


### 17 different pump heads



### Easy to use and very intuitive touch screen

Hygiaflex peristaltic dosing pumps facilitate daily use with well thought-out and manageable details. Our silicone and thermoplastic tubing is available FDA and pharma certified. We can provide you with a test pump on request.





### **Compact** series

Our Hygiaflex Compact series enables dosing from 0.004ml/min up to 1500ml/min.





## Multi-channel peristaltic pumps

Thanks to our wide Hygiaflex product range, we can select and offer the ideal device for every application.

The HFLAB V-series is designed for dispensing liquids with laboratory micro tubing with the possibility of expanding up to 48 dispensing channels.

Flow rates: from 0.000166 to 2280 ml/min.

The HF-V6 series operates at flow rates from 0.211ml/min up to 12l/min for transfer and dispensing applications.



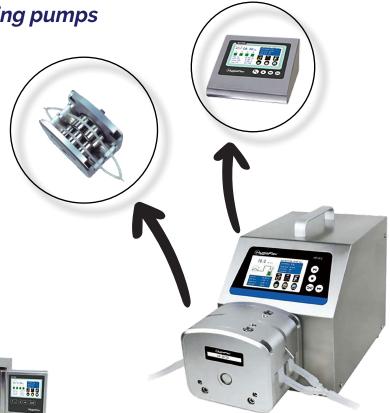
### Low pulsation peristaltic dosing pumps

HygiaFlex has a wide range of stepper and servo motors, offering several options with, for example, special designed low-pulsation heads for performing all kinds of precision.

It is possible to adapt different pump heads with their corresponding drives and controls to our integrated filling systems.

Available materials are PPS and stainless steel.









With more than 20 years of experience in pumping and transferring difficult chemicals and liquids, the ABAQUE peristaltic pump range meets the most demanding pumping requirements - from abrasive and aggressive to shear-sensitive and viscous fluids. Abaque pumps are used under tough operating conditions, e.g. in mining, in water and wastewater treatment, in the energy industry, in chemical process engineering and in customised plant engineering applications.

#### **Durable and robust**

The housing of the Abaque pump is made of sturdy nodular cast iron and steel and is designed for continuous operation. The pump has a robust, direct-flanged gearbox.

### Abaque™ Peristaltic pumps (hose pumps)

#### Durable

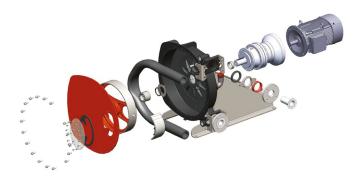
The nodular cast iron and steel construction allows high differential pressures up to 15 bar g (218 psi). The robust design and modern construction also reduce the need for maintenance and repair.

#### Reliable

Pumps of the Abaque series are self-priming up to a suction height of 9 m. The pump can also run dry in continuous operation without any consequential damage. It can be operated in both directions.

#### **Sealless**

The sealless design prevents leakage and contamination; only the inside of the hose is in contact with the product. The main maintenance part is only the hose.



			HD10	HD15	HD20	HD25	HD32	HD40	HDX40	HD50	HD65	HDX65	HDX80	HD80	HD100
ame	inter- mittent operation	l/h	135	450	750	2,670	5,300	7,200	9,600	15,300	18,200	26,000	37,300	39,000	54,000
		gpm	0,59	1,98	3,30	11,76	23,34	31,70	42,27	67,36	80,13	114,47	164,23	171,71	237,75
max. volume current	permanent operation	l/h	105	340	580	1,670	3,200	4,650	6,400	9,300	12,150	17,500	21,300	26,000	36,000
e a		gpm	0,46	1,50	2,55	7,35	14,09	20,47	28,18	40,95	53,49	77,05	93,78	114,47	158,50
		bar	7,5	7,5	7,5	15	15	15	15	15	15	15	15	15	15
		psi	109	109	109	218	218	218	218	218	218	218	218	218	218

### Technische Daten



# Peristaltic pumps for industrial use

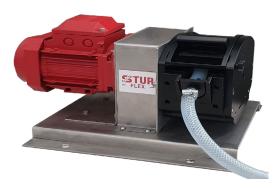
With easy to mount and dismount pump heads and easy to change hoses. Depending on requirements, several pump heads can be mounted. Can also be used for OEM solutions.

- With gear motor mounted on anodised aluminium base plate
- Various motor gear configurations and speeds available for different applications
- Atex versions as option
- Maximum pressure range 2 bar
- Different tubing materials depending on the application (silicone, TPEs, fluoroelastomer, etc.)
- · Also available as multi-channel version (several pump heads)

## Pump head features

- Simple and quick hose change
- Pump heads made of different materials
- High precision and strength
- Rollers made of corrosion-resistant steinless steel (304/316l)
- Also available as multiple head version





## Use in industry

- Commonly used for industrial washing machines, dishwashers, fermentation tanks and analytical instruments
- Inks, glues, varnishes, adhesives, chemical additives
- Water treatment, flocculants, milk of lime, ferric chloride, caustic soda, acids, etc.
- Widely used in environmental protection equipment, online testing equipment and medical equipment
- Used in ice and coffee machines
- Detergents, cosmetics and pharmaceutical products, sauces and derivatives



### Filter Housing and Consumables

### **Cartridge Filters**

Filters of one or several cartridges, of 10, 20, 30, 40 and up to 50". In combinations of 3, 5, 9 or any number of cartridges necessary according to the conditions of the process.

Capable of accommodating cartridges type DOE, with both ends open or type 222 with two O-rings.

The standard housings are completely made of stainless steel AISI-316L. Other construction materials are available on request (Hastelloy, AISI- 304, Inconel 600, etc.).

All filters are designed in compliance with the 94/9/CE "ATEX" directive, with protection level II 2 GD-X.





### **Filter Cartridge**

Metal mesh cartridges, sintered or fibre sintered in 316L stainless steel. They can be manufactured either plain or pleated, with the lids stapled or welded and with multiple endings to be inserted into different filters.

Polypropylene melt-blown or pleated filter cartridges, with different constructions and designs, as well as with absolute filtration degrees.

### **Applications**

Suitable for the filtration of resins, varnishes, organic and inorganic acids, inks, coatings, latex, galvanic solutions, waste waters, amines, petrol, lubricating oils, additives, fluids of process.

Shampoo, perfumes, mouthwashes, detergents, solvents. Fluids at high temperature and high viscosity. Toxic or dangerous fluids, frozen fluids.

### **Filter housings**

Sturfilters offers filter housings in the four standard sizes available on the market. The filters have two different closing systems, V-Clamp or Rathmann. Depending on the flow rate, multi-bag filters with 4, 6 or more bag units are available.

The standard housings are manufactured entirely in stainless steel AISI-316L. Other construction materials are available on request (Hastelloy, AISI-304, Inconel 600, etc.). All filters are designed in accordance with the 94/9/CE "ATEX" directive, with protection level II 2 GD-X.

Suitable for filtration of solvents, varnishes, coatings, resins, enamels, latex, cataphoresic baths, inks, process water, acids, intermediate chemicals, detergents, mineral oils, additives, amines, etc.







### **Filter Bags**

Stur Filter Bags are manufactured in Canada under the highest quality standards.

TDF Group has a large stock in its warehouses. This is a fundamental and decisive advantage that allows us to give the best service to all our customers, who can have the confidence and security that their needs will always be covered.

We present a new, exclusive Starflo design, which increases the filter area of the standard bags only by replacing the filter support basket with the Starflo basket and folding the bags accordingly.

Available in multiple materials according to the applications: polyester, polypropylene, nylon monofilament, etc. Degrees of filtration from 1 to 1000 microns.



# Centrifugal pumps

Centrifugal pumps according to DIN 24255, ISO 2858, split, multi-stage, vertical chamber.

The Boulton centrifugal pump range offers solutions for a wide range of applications, from water transfer to chemical pumping.



For flow rates from 5 up to 10,000 m<sup>3</sup>/hour and pressures up to 40 bar.

Made of:

- Cast iron
- AISI 316
- Duplex, ...
- Atex certification available on request



A comprehensive product range of mechanical seals. We offer every type of sealing system for various industries such as chemical, pharmaceutical, water treatment, food, energy and petrochemical.

- Component seals (Sealmek<sup>™</sup> series)
- Engineered agitator seals
- Cartridge seals (Auro<sup>™</sup>-series)
- Complete sealing systems
- OEM mechanical seals







### Centrifugal pumps of the ST-HC-KLX series

The ST-HC-KLX centrifugal pump series optimises the internal structure, impeller design, dead angle range design and pressure compensation for the mechanical seals.

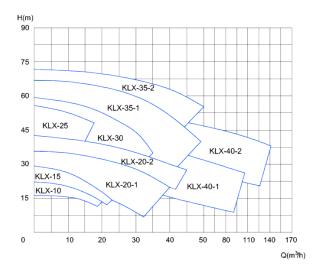
It also optimises pump hygiene and makes it absolutely hygienic by reducing the internal dead zone. By eliminating the dead zone, the pump can be easily cleaned by CIP, SIP or sterilisation.

The ST-HC-KLX pump is a competitive, highly efficient centrifugal pump that meets the requirements for hygienic applications, gentle product handling and chemical resistance.

Main applications include pumping juice, wine, brine, beer, water, syrup, serum, CIP, etc.

Atex certification available on request.





Technical specifications					
Flow rates	1m <sup>3</sup> /h-120 m <sup>3</sup> /h				
Max. Pressure	70 m				
Temperature	-20°C bis 140°C				
Power	0,3 kW-30 kW				
Material	316l				
Mechanical seal	Standard mechanical seals				
Connections	DIN 11851 as standard/SMS/ISO/IDF/RJT/ASME/BPE 3A				
Version Gewinde, Klemme, Flansch und aseptischer Flansch					
Certification CE CE CE LO35/2004					



# ST-HC-ZLX

# Self-priming centrifugal pump

The ST-CH-ZLX series is a self-priming centrifugal pump. It can be used for the CIP system as a selfprimingreturn circulation pump, but also as a centrifugal pump for processing solids.

Max. Viscosity 500 cps (mPas). The advantages of this pump are its high efficiency and low noise as well as the good and easy cleaning.

# ST-HC-CIP Technical data of the self-priming pump series

Technical specifications					
Max. Flow rate	40 m³/h				
Max. Head	42 m				
Temperature	-20 °C bis 130 °C				
Electricity supply	2,2-15 KW				
Material	304/316L, 1.431/1.4404, ASME BPE 316L, 1.4435 NB2 Fe < 0,5 %				
Surface treatment	< Ra 0,8 μm, < Ra 0,6 μm, < Ra 0,4 μm				
Mechanical seal	Einfachdichtung. Doppeldichtung (siehe Konfigurationsschema)				
Input/output connections	Faden, Klemme, Flansch, aseptischer Flansch				
Certification	CE CE EC 1935/2004				

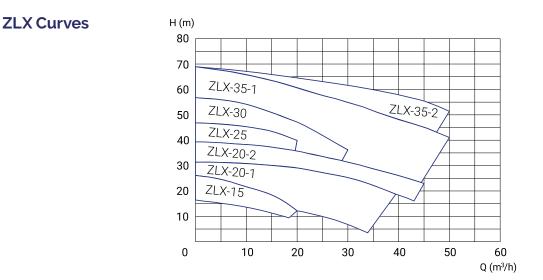


# ST-HC-KLX-, CIP- und ZLX-Serien, verschiedene Einsatzbereiche

Brewery	Dairy products	Food	Other Application
Breweries	Milk products	Food products	CIP solution
Beer	Milk	Cooking oil	Storage tank emty
Beer spice	Cream	Soups, sauces	Others
Yeast	Joghurt	Soup-stock	
Water	Whey	Saline	
CIP-solution	Saline	Flavouring	
	CIP-cleaning solution	Ice cream mixture	
		CIP-solution	

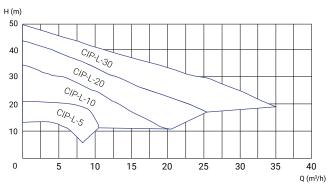
# Typische ZLX-Anwendung



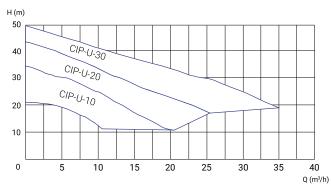


### **CIP Curves**

### ST-HC-CIP-L-10/20/30 (H-Q/GRAPH)



#### ST-HC-CIP-U-10/20/30 (H-Q/GRAPH)





# **Customised systems and constructions**

Our systems department, TDF Systems, is specialised in skid design, development and installation. We offer complete, high quality and customised solutions for dosing, transfer and filtration. The benefits to the customer are many, from the simplicity of a single supplier, to the elimination of assembly work with connection problems, to the assurance of a leak-free system tested and assembled by qualified technicians.

### Chemical dosing skids on chassis/base frame

Depending on the customer's requirements, the chemical dosing system is available in a lightweight frame. This is completely customised and can be equipped with tanks, control cabinets and protective containers.





### Chemical Dosing Skids in the Cupboard

TDF offers you the possibility of housing your chemical dosing systems in a cabinet made of PP/PE with doors made of transparent PVC. This type of system allows completely safe working in case of any pressure loss. The skids are completely manufactured according to the customer's specifications and can be completed with a wide range of accessories.

### **Filtrations-Skids**

TDF Systems offers a variety of pump and filtration solutions in mobile and stationary design in cooperation with the filtration department.

Depending on the physical properties of the liquids to be filtered and the degree of filtration, the appropriate filters, filter elements, materials and the necessary and required instrumentation are selected.





### Skids with pneumatic pumps

TDF distributes the versatile Wilden pneumatic pumps. In combination with pre-assembled skids made of various materials, systems can be supplied for a wide range of applications.





# Skids with centrifugal pump

TDF-Systems offers pump systems with centrifugal pumps in mobile and stationary versions and related products. We supply systems made of plastic for corrosive chemicals, stainless steel for industrial water and hygienic designs for the food industry.

### Systems with double spindle pumps

TDF Systems offers the possibility to design and configure systems with Jung pumps according to the application. Both mobile and frame units can be manufactured with the most critical elements of the respective processes.

We customise flow and pressure meters, safety valves, flow monitors, all hygienic. Furthermore, we offer the possibility of leaving the units completely autonomous and automated by also manufacturing configurable control cabinets.







### G57/G70 ATEX Series

### Air-operated diaphragm pump

- Highest performance of all pumps with comparable dimensions
- · Easy installation with quick-release fasteners
- Robust design
- Hygienic design of the diaphragm
- Leak-free radial seals, no O-rings
- · Low noise level due to large damper at the air outlet
- Solids up to 3.2 mm (1/8") can be conveyed without the risk of clogging
- Dry self-priming up to 4.5 mm
- G70 in ATEX-version

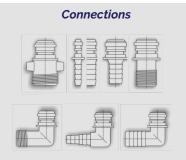
Pump	Air-operated double diaphragm pump
Performance	ab to 26,5 l/min
Conveying pressure	1,4 - 6,9 bar
Compressed air	1,4 - 6,9 bar
Temperature	max. 49° C
Connectors	Liquid: ¾", ½", ¾" Air: ¼"
Housing	Polypropylen
Diaphragm	Santoprene® Viton® (Sandwich design with Santoprene support diaphragm) Kalrez® (Sandwich design with Santoprene support diaphragm)
Valves	Santoprene® / Viton® / Viton®-Extreme
Springs	Hasteloy
Weight	0,6 kg

FLOJET air-operateddiaphragm pumps



Compact and lightweight compressed air diaphragm pumps with capacities up to 26.5 I/ min and pressures up to 6.9 bar. Because of their self-priming capability, they can be mounted above the liquid level.

FLOJET designs them for general, commercial and industrial applications. They can be easily adapted to any task. The patented control valve virtually prevents the pump from stalling. The large number of connection variations offered allows mounting without additional fittings and adapters.

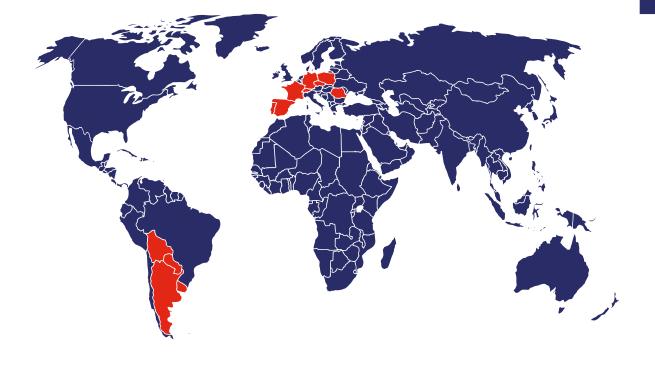


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