

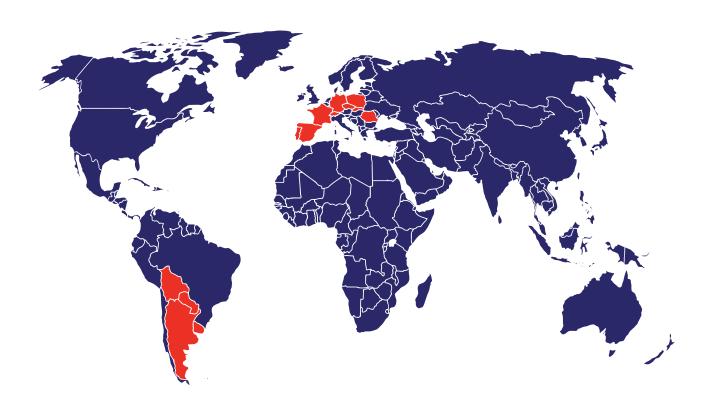
MTDF

General Catalogue

## HIGH TECHNOLOGY IN INDUSTRIAL PROCESSES

**TDF Group** is specialized in offering the best solutions for the transfer of difficult products for the most demanding applications and processes in the world.

Established in 1976, continuous and stable growth has placed TDF Group in a leading position in the manufacture, distribution and installation of pumping equipment and related products. The group currently has delegations in 12 countries: Spain, France, Portugal, Switzerland, Romania, Poland, Germany, Czech Republic, Argentina, Uruguay, Paraguay and Bolivia.



#### 1. Leading international suppliers

We work with major producers of pumps and related products. Guaranteeing Products of High Quality and Reliability, with Reduced Delivery Time, Quality Certifications and the best Customer Service.

#### 2. Technical support

Our commitment is to offer the best support and customer service in the market. Our team of experienced technicians is involved in your project from start to finish, with the main objective of reducing unforeseen events and maximizing profitability.

#### 3. For all sectors

In TDF Group we have always focused on providing a comprehensive service to our customers. Our experience in the most relevant areas of the industry allows us to offer a leading service in all sectors.

#### 4. Customization and SAT

TDF Systems is our division specialized in systems. We provide high quality production and process skids, which are supported by a great technical assistance service that guarantees their reliability and efficiency.





## Magnetic Drive Centrifugal Pumps

Magnetic drive centrifugal pumps highly recommended for transfer of aggressive and hazardous chemicals as sulphuric, soda, hydrochloric and hypochlorite, with no risk of leakage and no need of maintenance.

Flow rates up to 1,500 l/min, discharge pressures up to 50 mcl, working temperatures up to 90°C. Materials: Polypropylene, ETFE, PVDF.

Atex certification available for pumps manufactured in ETFE without aditional costs.

The magnetic driven pumps guarantee very important advantages, among them:

- No leakage due to hermetical design
- · Absence of mechanical seal
- No poisonous or dangerous vapour escape possible; no contamination of pumped product possible
- Low maintenance and high modularity due to very few parts





#### **Compact/OEM Series**

Compact Magnetic Drive Pumps for general use or OEM

- Integrated motor
- Available in 230V (PX, PS) and 12-24V (PI, PX-D)
- Different models with flow rates up to 7m3/h, pressure up to 2 bar
- Hose and threads connections available
- Available in different materials : PP, conductive ETFE, PVDF
- Optional external analogic 0-10V input for speed control for DC models
- · Self priming models as option

## PW, PW-F, PW-C: fluid transfer series

#### Magnetic Drive Pump for General Purpose and for Hazardous liquids

- Transfer pumps with flow rates up to 1500 lit/min and discharge head up to 4 - 5 bar.
- Fitting with IEC Standard motors, 0.37KW to 11KW
- Available in flange and treaded connections
- PW: Glass Fiber-reinforced Polypropylene
- PW-K: PVDF
- PW-F: conductive ETFE
- PW-C: conductive ETFE wit cast iron external cover to improve pump resistance
- F and PW-C (conductive ETFE) are used for the most aggressive and hazardous fluids, and can resist up to 90°C. They can can be certified as Atex pump group II 2GD ck IIB/IIC - IIIB/IIIC T4
- Self priming models as option





## **Applications**





Inks & Paints



Agrochemicals



Nuclear



Food & beverage



Chemical Processing



Fume Scrubber



**Explosives** 



Transfer & Circulation



Cryogenics



Printed circuit **Boards** 



Petrochemical Processing



Effluent Treatment



Medical Cooling



Biofuel



Renewable energy



Fuel cell



Distilling

# TDF SYSTEMS





## Chemical Dosing Skids frameassembled or in closed cabinet

TDF technical department develops and manufactures different customized systems.

Among them, one of the best sales applications are the dosing skids. Depending on the customer's requirements they can be offered assembled on a frame or as close cabinet.

The cabinet can be realized in PP, PVC or PE with transparent PVC doors.

The materials used for the pumps and accessories based on the fluids to be handled are mainly PVC, PP, PVDF or SS.

They can be fully personalized and can include electrical control cabinets, containment tanks, instruments and the needed accesories.



#### The most common applications these systems are used for are:

- Dosing of chemicals in industrial processes
- Dosing of chemical reagents in desalination and water treatment process
- Dosing of reagents in water/vapour cycle



#### **Filtration Skids**

TDF technical department in collaboration with the internal filtration experts offers a wide variety of Pumping and Filtration solutions in both mobile and fixed constructions.

Depending on the physical properties of the liquids to be filtered and the needed grade of filtration, the filtering solution and the needed accessories are prolperly proposed.

#### The more usual applications are:

- Cleaning of recirculating baths
- Loading/unloading of trucks
- Filling/Emptying of reactors and product transfer to packaging machines
- Fluid transfer between deposits





## Skids with centrifugal or positive displacement pumps

TDF technical department offers pumping systems with centrifugal or positive displacement pumps in both mobile or fixed solutions.

On the solutions range are present plastic systems when corrosive chemicals are handled, or metal and stainless steel when required by industrial or higienic standards.

#### Main applications:

- · Trucks filling and empting
- Fluid transfer
- Heat exchangers fluid recirculation
- Independent portable devices
- Dosing/batching applications







Standardized and customoized agitators to improve the mixing processes with differents shear force ratio depending on Customer needings.

This is got through different propeller geometries and motor speed.

Optional the use of multiturbines models.

- Materials: AISI 304 o AISI 316
- Motor: pneumatic or electric (atex under request)





#### **Usual applications**













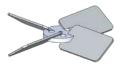
Polymers

Food & beverage

Chemical Industry

#### Impeller geometries















## Industrial use peristaltic Pump

Easy-load type pump head, easy-install tubing, can mount multiple pump heads according to user's requirement, convenient for OEM application too.

- · Assembled with gear motor on anodized aluminium base plate
- Different motorreducer configurations and speeds available to fit the different applications
- Atex versions as option
- Maximum pressure range 2 bar
- · Different tube materials depending on the application (silicone, thermoplastic, fluoroelastomer...)

#### **Features of the Pump Head**

- Change the tube easily and quickly
- Different materials pumpheads
- High precision and stiffness
- 304/316 stainless steel roller material corrosion resistsant
- Available as well in multiheads versions





#### **Industrial Applications**

- Widely used in industrial washing machines, dishwashers, fermentation tanks and in analytical instruments
- Inks, glues, varnishes, adhesives, chemical additives
- Water treatment, flocculant, coagulant, lime slurry, ferric chloride, caustic soda, acids, etc
- Commonly used in environmental protection equipment, online test equipment and medical equipment
- Used in the ice cream machine and in the coffee machine
- Detergents, cosmetics & pharmaceuticals Sauces and derivatives

## Technical Specifications

	SF15/25 SERIES							
	Tubing	IDxwall	ml/rev	Flow Rate	Tubing Max Pressure (Bar)		Material / Head weight (Kg)	
	Size	thickness		ml/min	Intermittent	Continous	PSF	PPS
	13#	0.8 x 1.6	0.07	0.007 ~ 42	2.7	1.7	0.40 (3 rollers)	0.46 (3 rollers)
	14#	1.6 x 1.6	0.27	0.027 ~ 162				
	19#	2.4 X 1.6	0.55	0.055 ~ 330				
SF1515x	16#	3.1 X 1.6	0.82	0.082 ~ 492				
	25#	4.8 x1 .6	1.7	0.17 ~ 1020	2.4	1.4		
	17#	6.4 x 1.6	2.9	0.29 ~ 1740	1.4	1.0	0.44	
	18#	7.9 x 1.6	3.8	0.38 ~ 2280	1.0	0.7	(6 rollers)	(6 rollers)
SF2515X	15#	4.8 x 2.4	1.7	0.17 ~ 1020	0.7	4.7		
	24#	6.4 x 2.4	2.9	0.29 ~ 1740	2.7	1.7		

	SF35 SINGLE HEAD							
	Tuhing	IDxwall m	ml/rev	Flow Rate ml/min (0.1-600rpm)	Tubing Max Pressure (Bar)		Material / Head weight (Kg)	
		thickness			Intermittent	Continous	Aluminium	PPS
	26#	6.4x3.2	6.9	0.69~4200	2.7	2.0		
SF35	73#	9.6x3.2	12.3	12.3~7400	2.7	2.0	4.36	1.50
	82#	12.7X3.2	20	2~120000	1.4	1.0		

	SF45 SERIES								
			Speed (rpm)	Tubing		Flow	Pressure (Bar)		
	Power Supply	Power		Size	ID*Wall thickness (mm)	Flow Rate (ml/min)	Continous	Intermittent	Weight
SF45	AC380V/50HZ	370W	37.5-350	88#	14300	0.5	2.0	20/2	
			12.3	92#	25.4*4.8	3680- 28150	2.5	3.0	30kg



## 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 housed in different filters.

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

#### **Applications**

Filtration of resins, varnishes, organic acids and inorganic, inks, coatings, latex, galvanic solutions, return waters, amines, benzines, lubricating oils, additives, fluids of process.

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

#### **Bag Filters**

Bag filters in the four standard sizes available on the market. The filters have two different closing systems, V-Clamp or Rathmann. Multi-bag filters of 4, 6 or more bags are available depending on the flow rate to be filtered.

The standard housings are manufactured entirely in stainless steel AISI-316L. Other construction materials 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.

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 basic and key point 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.

Stur bags are fully interchangeable with other brands and can be installed in other manufacturers Filters.

We present a new exclusive Starflo design, which folds the filtering surface of the standard size bags only by changing the filter support basket for the Starflo basket and bags.

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



## ST-HC-KTF Series Centrifugal Pumps

The ST-HC-KTF centrifugal pumps serie optimizes the internal structure, the impeller design, the dead angle zone design and the mechanical seal pressure balance.

Furthermore, it optimizes the hygiene of the pump to make it absolutely hygienic as well by reducing the inner dead angle. As result of the absence of the dead zone, it becomes very efficient to clean by CIP, SIP or sterilization.

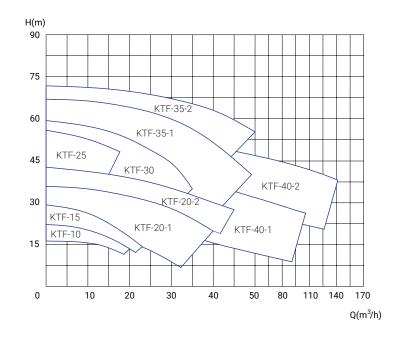
The ST-HC-KTF pump is a competitive and highly efficient centrifugal pump that meets the requirements of sanitary applications, gentle product handling and chemical resistance.

As main applications we highlight the pumping of juice, wine, brine, beer, water, syrups, serums, CIP, etc.

#### **Technical specifications**

- Flow rates: 1m3/h-120m3/h
- Max Pressures: 70m
- Temperature: -20°C to 140°C
- Power:0.3KW-30KW
- Material: 316L
- Single mechanical seal as standard
- Certification: CE; EC/1935/2004
- Input/Output connection: DIN 11851 as standard / SMS / ISO / IDF / RJT / ASME BPE 3A. Type: thread, clamp, flange, aseptic flange.





#### ST-HC-ZLX

# Serie improve-priming centrifugal pump

ST-HC- ZLX Series is a improve priming centrifugal pump. It can be applied to CIP system as self-priming backflow circulating pump, also as centrifugal pump, solids handling. Max. Viscosity 500 CPS (mPas). Advantages of this pump are high efficiency, low noise, high and easy cleanability.









#### ST-HC-CIP

#### Serie improve-priming pump

TECHNICAL SPECIFICATIONS				
Max. Flow rate	40m3/h			
Max. Head	42m			
Temperature	-20°C to 130°C			
Power	2.2-15 KM			
Material	304 /316L, 1.431/1.4404, ASME BPE 316L,1.4435 NB2 Fe ≤ 0.5%			
Surface Treatment	≤ Rao.8 µ m, ≤ Rao.6 µ m, ≤ Rao.4 µ m			
Mechanical Seal	Single seals, double seal (See configuration scheme)			
Inlet/Outlet Connection	Thread, clamp, flange, Aseptic flange			
Certification	CE <b>( E</b> C 1935/2004 <b>) E</b> C 1935/2004			

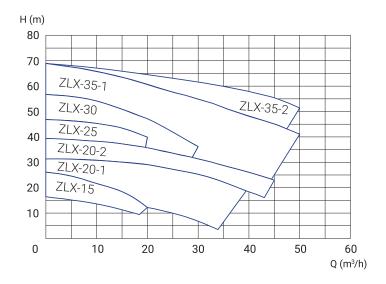
#### ST-HC-KTF, CIP and ZLX Series various application

Brewery	Dairy products	Food	Other Application
Beer	Milk	Edible Oil	CIP solution
Wort	Cream	Soup-sauce	Storage tank empty
Yeast	Yogurt	Soup-stock	
Water	Whey	Saline	
CIP solution	Saline	Flavouring	
	CIP solution	Ice cream mixture	
		CIP solution	

## **ZLX Typical Application**

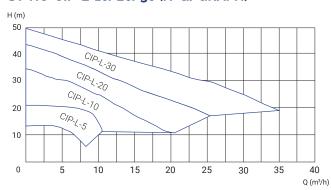


#### **ZLX Curves**

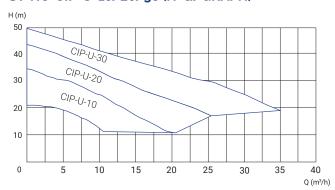


#### **CIP Curves**

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



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



## **Lobe Pumps**

Stursan Lobe Series offers a variety of configurations and the whole pump is made of stainless steel.

They are positive displacement rotary lobe pumps designed according to FDA & EC 1935/2004 standard, very suitable for the conveyance of high-and low-viscosity liquids such as in food processing and pharmaceutical manufacturing. The pump can also be used for the CIP & SIP system to convey materials with solid particles.

This pump offers performance that other volumetric pumps do not have, such as low pulses, high pressure, bi-directional reversible inlet/outlet and flexible function combination.



#### **Typical Application**



Food & beverage

Soup, stew, ketchup, vegetables, condiments, chocolate, fat and oil, cream filling, brewery, wort, soft drink/fruit juice.



Dairy chemical

Cream, milk, cheese curds and whey, cottage cheese, yogurt.



Medicine/Cosmetic

Ointment, syrup, extractive, Serum, Face Creams & Lotions, Hair Styling Gels % Liquids, Dyes and alcohols, Soap, Cosmetic.



Chemical/Industrial

Solvent, paint, fuel, resin, polymer & sludge, oil & lubricant.

TECHNICAL SPECIFICATIONS				
Max. Flow rate	70 m³/h/ 308 GPM			
Max. pressure	15 bar/220 Psi			
Max. temperature	150 °C/302 °F			
Max. rev	500 rpm			
Material	316L,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			
Viscosity	From 1 to 1.000.000 cps			
Certification	CE ( EC 1935/2004			



#### Blender

As well available blenders units in the STUR Range, the perfect solutions for high-efficiency, dispersion, cut, refinement, smash, emulsification, mixing, homogenization, high purity.





#### **Typical Application**



Food & beverage

Juice, jam, ice cream, dairy products, food additives, tea drinks, chocolate, soymilk, essence.



Daily chemical

Liquid detergent, liquid soap, facial cleanser, emulsified silicone oil, fragance compound, skin care product, cosmetics.



Bio-pharmaceutical

Injection, antibiotic, medicine emulsion, medicine emulsifiable paste, health care products, microcapsule emulsification, cell tissue smash, etc.



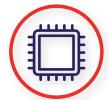
Pesticide

Insecticide, herbicide, pesticide missible oil, fertilizer, inert ingredient, etc. Which media need to be emulsified and homogenized.



Papermaking

Paper pulp, padding, dry strength agent, wet strength agent, sizing agent, retention and drainage aid, antifoaming agents, coating, water treatment chemicals, etc.



Semiconductor

Dispersion & depolymerization of nanometer materials, etc.



#### Fine chemical engineering

Pigment, dyestuft, plastic additive, textile assistant, adhesive, resin emulsification, hot melt adhesive, sealant, glue, sizing agent, finishing agente, surfactant, dye leveller, carbon black dispersion, anti-sticking agent, textile finishing agent, brightener, leather auxiliaries, pigment paste, etc. Which media need tobe emulsified and homogenized.



Coating & ink

Printing ink, oil paint, emulsion paint, coating, nanopaint, photocureable coating, coating abhesive, carbon black dispersion, glaze, benitonite, etc.



## **Peristaltic Pumps**

Peristaltic pumps for chemical, cosmetic, food&beverage, pharmaceutical applications.

Suitable for dosing, recirculation or transfer of liquid products, shear sensitive or with solids presence.

Flow range from microliters, pressures up to 2 bar.

These pumps are self-priming and allow work in dry conditions.







#### **Typical Application**

- · Manual or automatic batching and packaging
- Filtration and separation
- Fermenters
- Electromedical devices
- Pilot plants
- Granulation and coatings
- Chromatography
- Aromas, essences and sauces dosing
- · Chemical products dosing



## **OEM** equipment

Is available a big range of OEM pumpheads and motorized pumpheads to be integrated in automatic machines. Usual applications are medical and diagnostic equipment, reactors, fermenters, analyzer, sampling units.



#### Accessories

Are availabe a lot of different accessories for the different needings.











## Hoses for peristaltic pumps

Different sizes and materials hose are available in our stock, suitable for the different fluids and needed performances.

Widely certified hoses, like USP Class VI, ISO 10993, FDA  $\dots$ 

Standardized dimensions with wall thickness of 1.6, 2.4, 3.2 and 4,8mm.





### NEW!

Under requests we can quote and deliver customized filling machine according Customer requirements.

TDF has a solid experience with these kind of equipments, and supplies solutions to a wide range of industry sectors. The applications field goes from simple single-head manually operated filling machines to fully automated multi-head filling systems, mainly for cosmetics, Food & Drink, Pharma, Healthcare and industry.

#### Send us your request, we will be pleased to send you our best quotation!





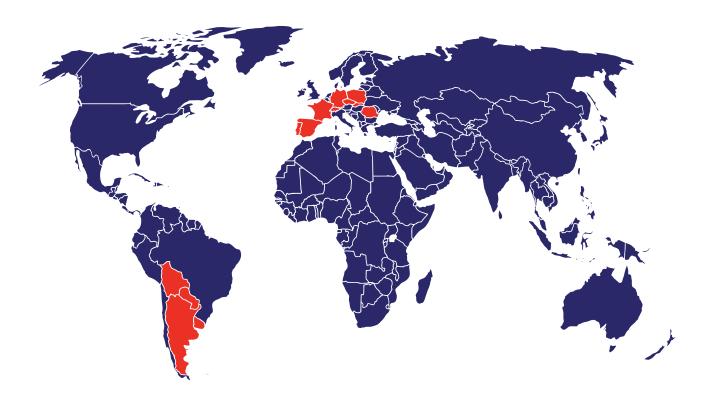
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# Notes


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