

# CENTRIFUGAL PUMPS

2020 | 1



## » All about your flow™

*We began our journey 40 years ago in Kungälv, a small town on the Swedish west coast, as a family company with an ambition to one day become a global player on the pump market.*

Since 1980, we have taken pride in delivering a wealth of knowledge and passion for pumps to the industry, whilst supplying a wide range of premium products for various industrial applications.

Over the years, the company has developed into a global Tapflo Group with branches and distributors present in nearly every region of the world.

One thing did not change - we are still a family company.

Our solutions are designed and manufactured in Europe and distributed globally to offer the best service and flow solutions to our customers for a variety of applications.

Our values, Commitment, Quality and Simplicity are reflected both in our product and business approach.



**For fast and flexible service and high-quality products readily available worldwide, choose Tapflo.**

## Quality commitment

At Tapflo we are simply committed to quality. As a result, our production standards, as well as products quality, comply with various globally recognised certification and quality control standards. The Tapflo manufacturing process is certified according to ISO 9001:2015, confirming that our processes are appropriate, effective, customer-focused and continuously improved.



## Tapflo values

Our culture is concluded in Our values

### Commitment

We are different from our competitors because of our willingness to exceed the customers' expectations, move fast and be flexible. Our culture is based on the spirit of togetherness, enthusiasm and integrity. We come from all over the world but we share the same values and we respect each other. We are committed.

### Quality

We understand that the quality in our work is never better than the weakest link, that's why we focus on every small detail. We share a common passion for continuously finding more efficient and effective ways to provide value to our customers. As a manufacturer we have control of the complete process both in terms of our products and the way we operate internally. That is why we manufacture the highest quality pumps in our segment.

### Simplicity

We have a saying, "Simple is art" which means we try to find smooth and uncomplicated solutions in everything. By keeping it simple we can focus on the essential, like designing uncomplicated pumps with few components. For us it is a key to success; strive to simplify what is complex.

# Centrifugal Pumps

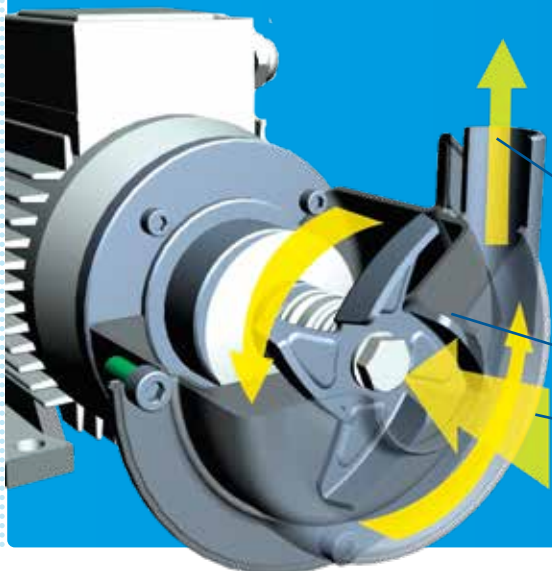
## Versatile solution for various industries.

Tapflo Centrifugal pumps are some of the most versatile pumps on the market today. They can be used in a variety of installations in numerous applications. Thanks to the simple operating principle, with a compact and reliable design. The pump range has a very wide spectrum of applications – from transfer of water, to pumping chemicals.

Types of centrifugal pumps produced by Tapflo:

- » CTI & CTH centrifugal pumps
- » CTS (CTS-I, CTS-H) self-priming centrifugal pumps
- » CTV vertical centrifugal pumps
- » CTP plastic centrifugal pumps
- » CTM magnetic drive centrifugal pumps

## Working principle



The key component of a centrifugal pump is an impeller.

It is connected to a motor through a drive shaft and rotated at high speed.

The fluid enters the pump housing along the rotating impeller which provides centrifugal acceleration to the liquid.

The fluid flows radially outward through the pump casing, from where it exits into the discharge piping.

DISCHARGE

IMPELLER

SUCTION

## Impeller types

CT series pumps from Tapflo are available with all major types of rotors: closed, semi-open and open.

### ■ Closed impeller

Designed for clean liquids, without impurities. Has high efficiency.

### ■ Semi-open impeller

Liquids with slight impurities or non-aggressive wastewater. Efficiency almost as good as closed impeller.

### ■ Open impeller

Possibility of pumping liquids with solid particles without adversely affecting pump operation.



Closed impeller (CTM)



Closed impeller (plastic CTV)



Semi-open impeller (CTP)



Semi-open impeller (CTI, CTH)



Open impeller (CTM20 only)



Open impeller (CTI, CTH, CTS, CTV)



# Wide range of applications



## Food & beverage

(CTH, CTS-H, CTM, CTP)

Transfer of various ingredients and products like edible oil, flavour, alcohol, dairy products and juice, transfer of cleaning agents and water.



## Research & pharma

(CTI & CTH, CTS-I & CTS-H, CTV, CTP, CTM)

Transfer of a variety of high grade chemicals and solvents.



## Water treatment

(CTI, CTV, CTP, CTM)

Fluid transfer in water treatment installations.



## Sewage treatment

(CTI, CTV)

Emptying sumps.



## Surface treatment

(CTV, CTP, CTM)

Transfer and circulation in galvanizing, hot-dip, pickling and oxidation processes.



## Mechanical industry

(CTI, CTS-I)

Sampling, dosing acids and alkalis for pH-control. Transfer of flocculent, suspensions, chemical reagents and sludges.



## Demineralization

(CTP, CTM)

Demi-water circulation and transfer in many industrial applications.



## Heat exchangers

(CTI & CTH, CTV)

Circulation in heat exchangers.



## Paint industry

(CTP, CTM)

Transfer of water and solvent based paints, ink, varnish, glue, adhesives and solvents. Transfer, recirculation and blending of ink.



## Paper mills

(CTI, CTV)

Dosing various chemicals.

# CTI & CTH Centrifugal Pumps

The pump range meets the demands of a variety of today's industries.

The CT pumps are open or semi-open impeller single stage centrifugal pumps. They are manufactured in high finish and mechanically strong material - AISI 316L stainless steel.

## Features & Benefits

- |                             |                              |
|-----------------------------|------------------------------|
| ✓ Simple and compact design | ✓ Competitive price          |
| ✓ Few parts                 | ✓ Low maintenance cost       |
| ✓ Open impeller             | ✓ Multiple options           |
| ✓ High grade materials      | ✓ Solids handling            |
| ✓ High capacity             | ✓ Wide range of applications |

## CTI - industrial series

The CTI industrial series pump casing is glass blasted, both external and wetted parts.

A variety of connection types, mechanical seal options and other executions are available to satisfy most industrial duties.



## CTH - hygienic series

The CTH hygienic series is supplied with electro polished pump casing and internals.

This series is specially designed for hygienic duties in food, beverage and pharmaceutical industries, where cleanability are important factors.



## Big choice of sealing solutions

To suit most type of liquids the CTI & CTH pump range features top brand mechanical seals in a variety of materials:

- » ceramics / graphite,
- » graphite / SiC
- » SiC / SiC

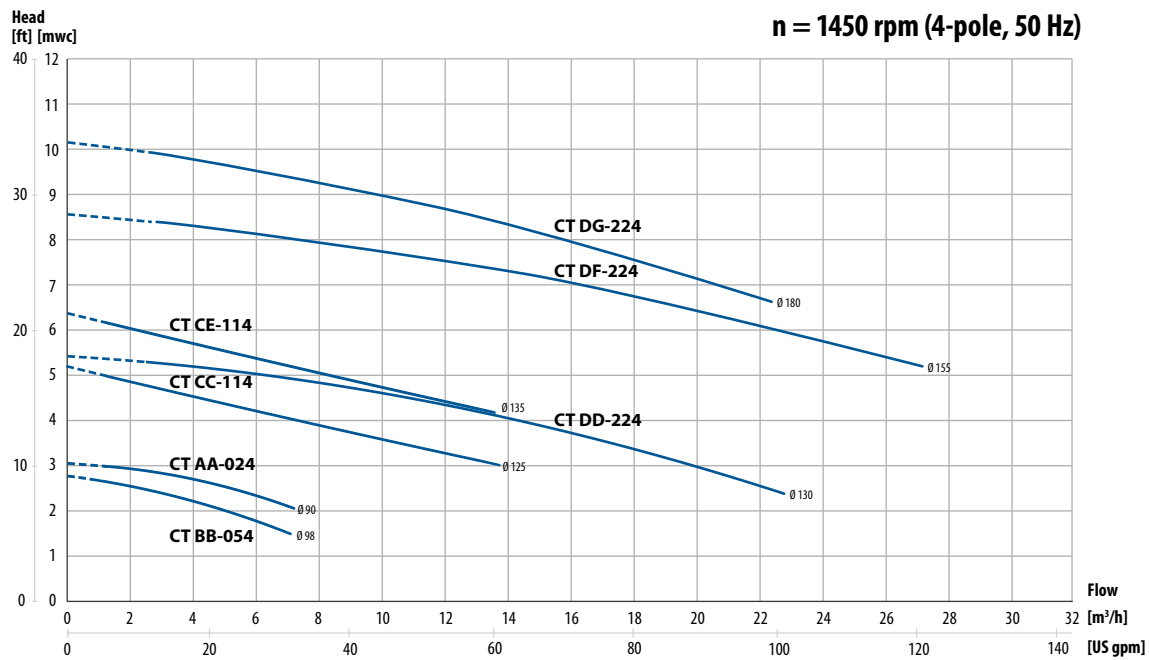
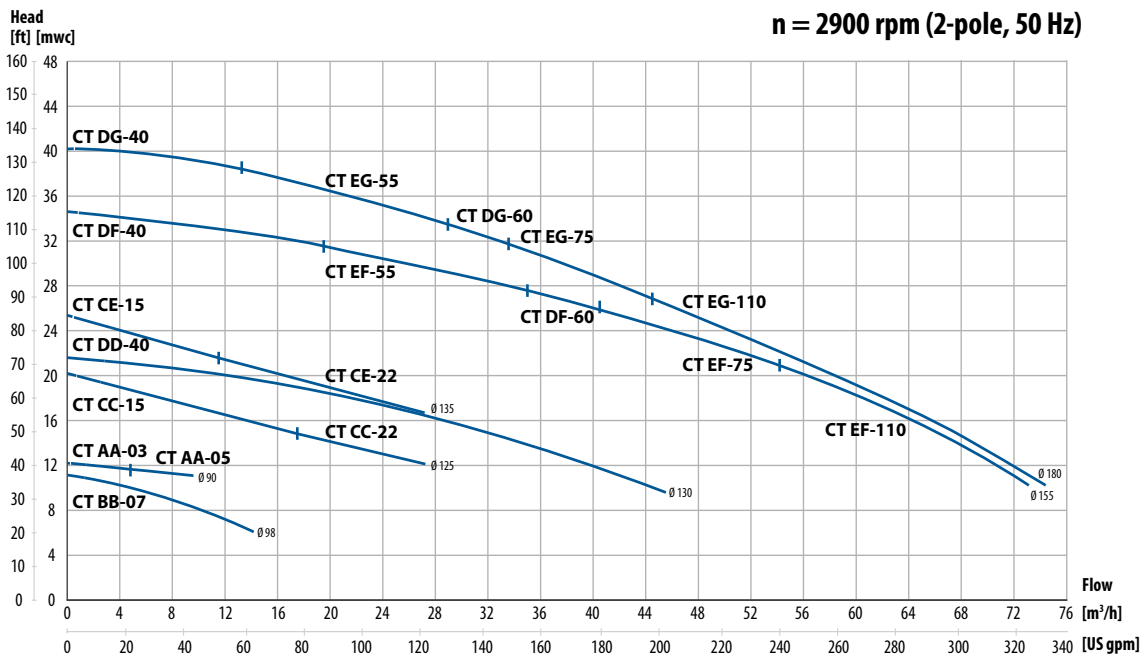
and elastomer part made of EPDM (standard), FKM, FEP / silicon or NBR.



# Technical data

## Performance curves

The performance curves are based on water. (T=20 °C, ρ=1000 kg/m<sup>3</sup>)



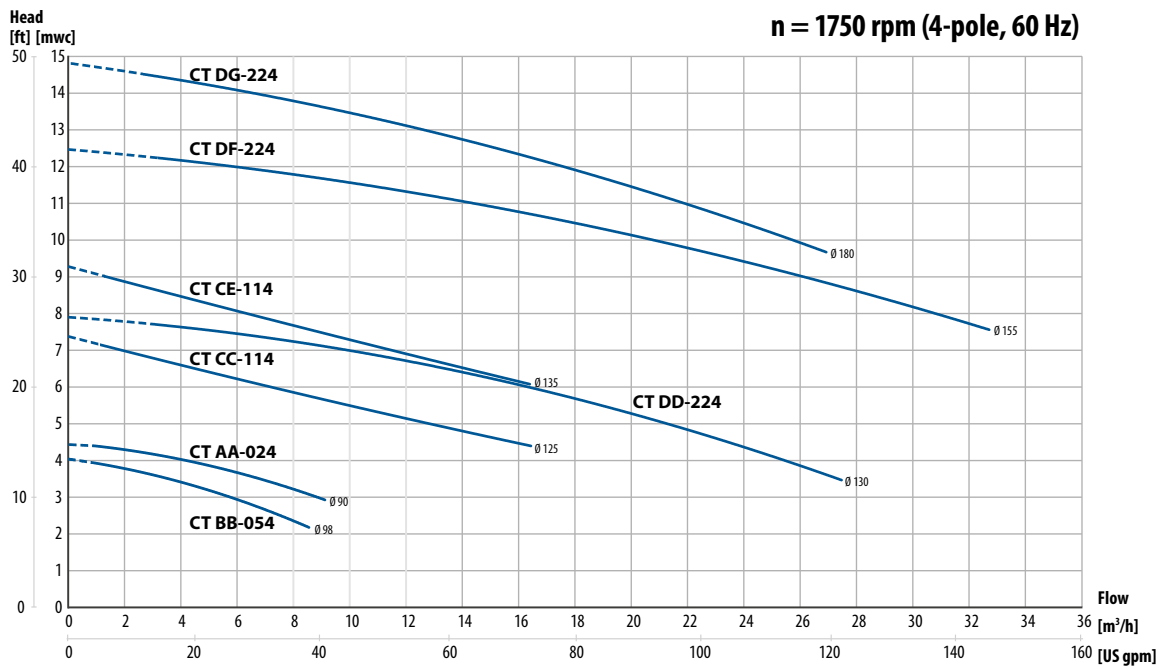
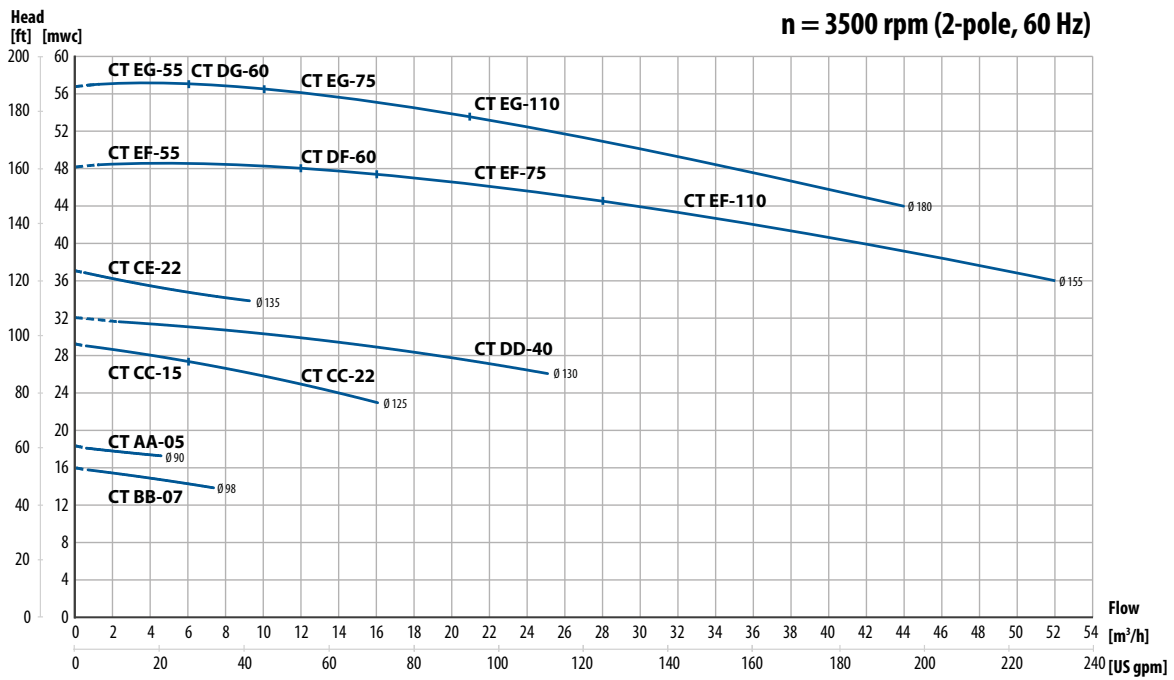
2-pole motor	Pump model CT									
	AA-03	AA-05	BB-07	CC-15	CC-22 CE-22	DD-40 DF-40	DF-60 DG-60	EF-55 EG-55	EF-75 EG-75	EG-110 EF-110
Motor power [kW]	0.37	0.55	0.75	1.5	2.2	4.0	6.0	5.5	7.5	11*
IEC motor size	71	71	80	90	90	112	112	132	132	160

\* Long coupled execution

4-pole motor	Pump model CT			
	AA-024	BB-054	CC-114 CE-114	DD-224; DF-224 DG-224
Motor power [kW]	0.25	0.55	1.1	2.2
IEC motor size	71	80	90	100

# Performance curves

The performance curves are based on water. (T=20 °C, ρ=1000 kg/m<sup>3</sup>)



## CT Pump code

I. Tapflo centrifugal pump

**CT**

II. Pump execution

**I**

III. Casing size

**C**

IV. Impeller size

**C**

V. Pump options

**1CGV3F**

VI. Motor power

**03**

VII. Motor options

**M**

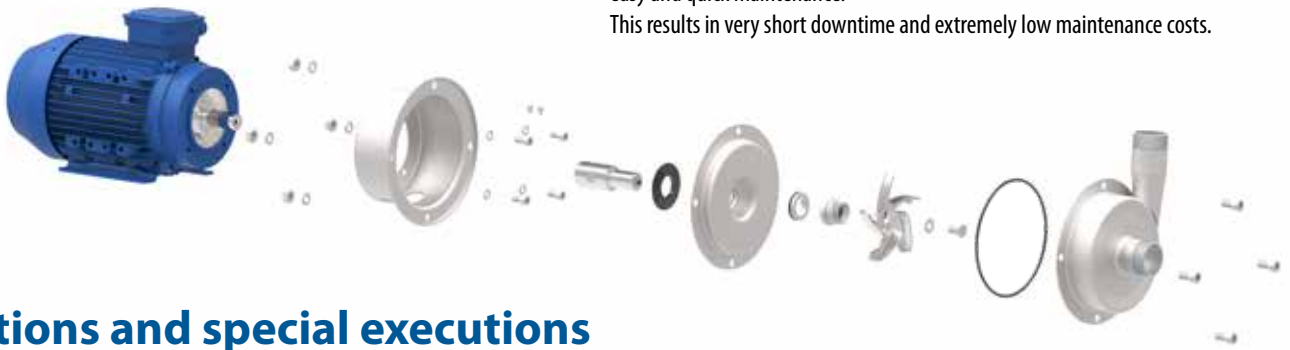
Ask us for complete pump code with all available options and executions.



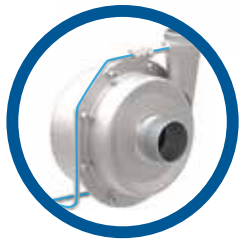
# CTI - industrial series



A very simple and ingenious design, with only 17 different components allows easy and quick maintenance.  
This results in very short downtime and extremely low maintenance costs.



## Options and special executions



### ■ Flushed seal

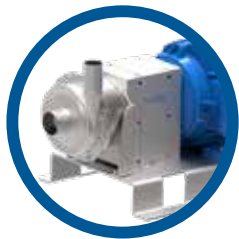
Ideal **when abrasive or sticky particles are present**. System where a small amount of the pumped product is recirculated from the discharge side to the seal chamber through a strainer, will protect the mechanical seal and seal chamber from excessive wear.



### ■ Buffer fluid system

A great option **when the product tends to solidify or crystalize**.

A lube reservoir is connected to the air side of the mechanical seal.



### ■ Long coupled execution

The perfect solution **when pumping hot products** like oil at temperatures **up to 180°C**. Complete pump unit **mounted on baseplate, with coupling and cover**.



### ■ Casing drainage

Plug at the bottom of the pump casing **allows draining**.



### ■ Flanged connections

**Instead of the standard BSPT** threaded connections, you can order CTI pumps with flanged connections according to **DIN (2633) or ANSI 150**.

## Connections

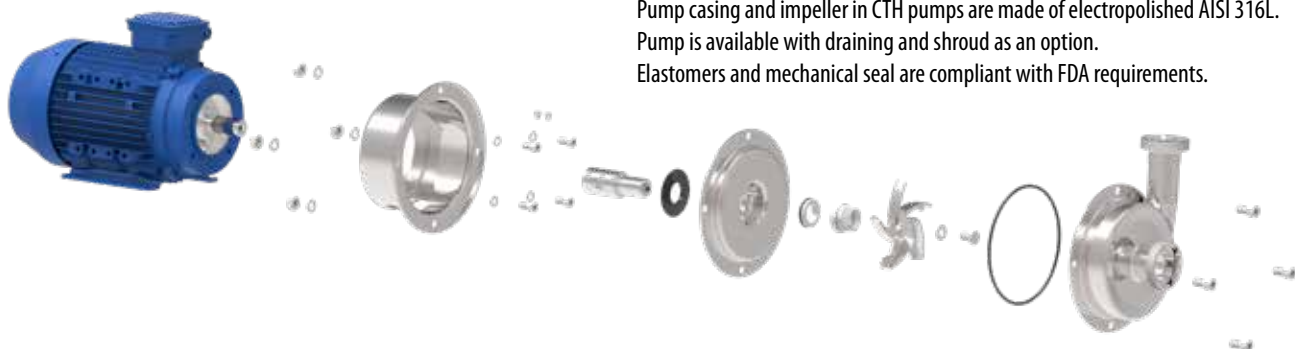
Connection type		Pump model CTI				
		A...	B...	C...	D...	E...
BSPT male thread (standard)	Ra	1"	1 1/2"	1 1/2"	2 1/2"	2 1/2"
	Ri	3/4"	1"	1 1/2"	2"	2"
DIN 2633/PN16 flange	Ra	DN25	DN40	DN40	DN65	DN65
	Ri	DN20	DN25	DN40	DN50	DN50
ANSI 150 flange	Ra	1"	1 1/2"	1 1/2"	2 1/2"	2 1/2"
	Ri	3/4"	1"	1 1/2"	2"	2"

## Materials and limits

<b>Casing</b>	Glass blasted AISI 316L stainless steel
<b>Impeller</b>	Electro polished AISI 316L stainless steel, open (standard) or optional semi-open type
<b>Mechanical seal</b>	Single ceramic/graphite (standard), SiC/SiC or SiC/graphite, optionally with buffer fluid system or flushing
<b>O-rings</b>	EPDM (standard), FKM, FEP/silicone or NBR
<b>Motor</b>	IP55, IEC frame B3/B14 (B3 on long coupled version). Available with ATEX cat 2 or 3, Ex e or Ex d motor
<b>Max pressure</b>	10 bar (PN10)
<b>Temperature</b>	max 90°C, max 180°C for long coupled version
<b>Viscosity</b>	max ~200 cSt
<b>Particles</b>	max diameter Ø 6 mm (with standard open impeller), bigger if soft particles

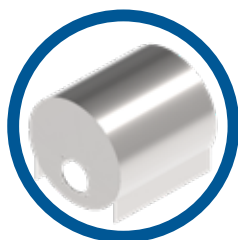


# CTH - hygienic series



Pump casing and impeller in CTH pumps are made of electropolished AISI 316L. Pump is available with draining and shroud as an option. Elastomers and mechanical seal are compliant with FDA requirements.

## Options and special executions



### ■ Hygienic shroud

The hygienic motor shroud in polished AISI 316L **protects the motor from spraying water during pump cleaning procedure.**



### ■ Buffer fluid system

A great option **when the product tends to solidify or crystallize.**

A lube reservoir is connected to the air side of the mechanical seal.



### ■ Long coupled execution

The perfect solution **when pumping hot products** like edible oil. Complete pump unit **mounted on baseplate, with coupling and cover.**



### ■ Casing drainage

Plug at the bottom of the pump casing **allows draining** of the pumped liquid.



### ■ Heating jacket

Great **protection for the mechanical seal** in cases where there is a **risk for solidifying of the product.**

The heating jacket is also **used when the pumped product has to maintain a specific temperature**, high or low. A heating or cooling medium is continuously circulated in the jacket.

## Connections

Connection type		Pump model CTH				
		A..	B..	C..	D..	E..
DIN 11851 thread (standard)	Ra	25	40	40	65	65
	Ri	25	32	40	50	50
DIN 32676 clamp	Ra	25	40	40	65	65
	Ri	20	25	40	50	50
ISO 2852 clamp	Ra	25	38	38	70	70
	Ri	21.3	25	38	51	51
SMS 1145 thread	Ra	38	51	51	63	63
	Ri	25	38	38	51	51
RJT thread	Ra	1 1/2"	1 1/2"	2"	3"	3"
	Ri	1"	1 1/2"	2"	2"	2"

## Materials and limits

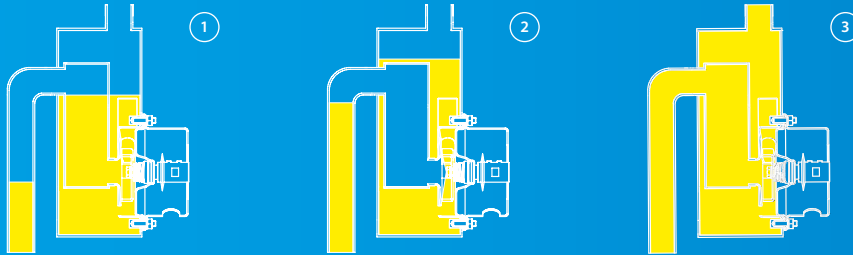
<b>Casing</b>	Electro polished Ra <0.8 AISI 316L stainless steel
<b>Impeller</b>	Electro polished Ra <0.8 AISI 316L stainless steel, open (standard) or optional semi-open type
<b>Mechanical seal</b>	Single ceramic/graphite (standard), SiC/SiC or SiC/graphite, optionally with buffer fluid system or flushing
<b>O-rings</b>	EPDM, FKM, NBR, FEP compliant with FDA and EC1935 requirements
<b>Motor</b>	IP55, IEC frame B3/B14 (B3 on long coupled version). Available with ATEX cat 2 or 3, Ex e or Ex d motor
<b>Max pressure</b>	10 bar (PN10)
<b>Temperature</b>	max 90°C, max 180°C for long coupled version
<b>Viscosity</b>	max ~200 cSt
<b>Particles</b>	max diameter Ø 6 mm (with standard open impeller), bigger if soft particles

# CTS Self-priming Pumps

The self-priming feature allows to use the pump in applications where standard CT pumps do not prove useful.

CTS is an open impeller self-priming centrifugal pump, manufactured from AISI 316L stainless steel. It is capable of creating up to 4,5 m of suction lift.

## Working principle



- (1) In order for the priming action to be achieved, the pump casing has to be filled with liquid to a level above the impeller.
- (2) When the pump starts its operation, it is evacuating the air from the suction line thus creating negative pressure and lifting the product. The air is mixed with the liquid in the pump casing. The air escapes the casing through the discharge line while the liquid returns to the impeller as it has a higher specific gravity than the liquid/air mixture.
- (3) This process continues until the suction line is completely free of air and the pump can operate as a standard centrifugal pump.

## Features & Benefits

- ✓ No need for additional pumps or equipment for self-priming.
- ✓ Easy installation and maintenance.
- ✓ Replace only one part on your CT pump to achieve the self-priming ability.
- ✓ Ideal for highly aerated liquids.

## CTS-I - industrial series

CTS I with AISI 316L chemical resistance and mechanical strength is a reliable choice for industrial applications.

## CTS-H - hygienic series

CTS H with excellent electro polished surfaces, FDA compliant seals, high finish and mechanical strength, meet the demands from food and sanitary applications.



# Ingenious design

The CTS series maintains all the benefits and strengths of the standard CT pump.

A very simple and ingenious design, easy and quick maintenance, in many cases completely maintenance free.



## Self-priming vs. standard centrifugal pump comparison

The CTS pump is a great alternative to our standard CT pumps when the self-priming ability is needed.

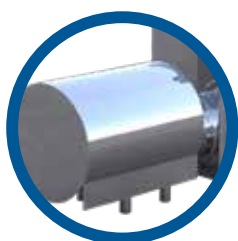
**By replacing only one element - the casing with a self-priming chamber – we can achieve various advantages for our pump.**

The pump can now suck the liquid from a lower level than it is positioned or handle liquids with high content of air.

The construction of the pump chamber ensures that there is always enough liquid left inside in order to prime the pump after stoppage.



## Options and special executions



### ■ Hygienic shroud (CTS-H)

The hygienic motor shroud in polished AISI 316L, **protects the motor from spraying water during pump cleaning procedure.**



### ■ Buffer fluid system (CTS-I, CTS-H)

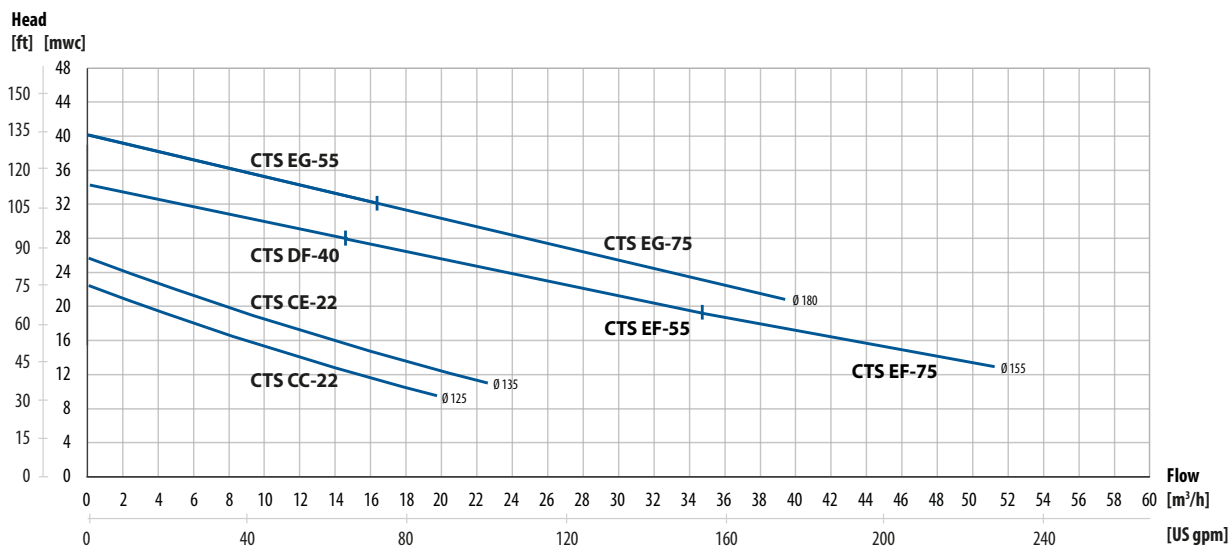
A great option **when the product tends to solidify or crystalize.**

A lube reservoir is connected to the air side of the mechanical seal.

# Technical data

## Performance curves

The performance curves are based on water. (T=20 °C, ρ=1000 kg/m<sup>3</sup>, n=2900 rpm)



## Motor power

2-pole motor	Pump model CTS			
	CC-22 CE-22	DD-40 DF-40	EF-55 EG-55	EF-75 EG-75
Motor power [kW]	2.2	4.0	5.5	7.5
IEC motor size	90	112	132	132

## Connections

Connection type		Pump model CTS-I		
		C..	D..	E..
BSPT male thread (standard)	Ra	1 ½"	2 ½"	2 ½"
	Ri	1 ½"	2"	2"

Connection type		Pump model CTS-H		
		C..	D..	E..
DIN 11851 male thread	Ra	DN40	DN65	DN65
	Ri	DN40	DN50	DN50

## Materials and limits

Characteristics	Pump model CTS	
	CTS-I	CTS-H
Casing	Glass blast AISI 316L stainless steel	Electro polished Ra <0.8 µm AISI 316L stainless steel
Impeller	Glass blast AISI 316L stainless steel, open (standard) or optional semi-open type	Electro polished Ra <0.8 µm AISI 316L stainless steel, open (standard) or optional semi-open type
Mechanical seal	Single ceramic/graphite (standard), SiC/SiC or SiC/graphite, optional with oil lube	Single ceramic/graphite (standard), SiC/SiC or SiC/graphite optional with oil lube
O-rings	EPDM (standard), FKM, FEP/silicone or NBR	EPDM FDA requirements compliant (standard), FEP/silicone FDA requirements compliant or FKM FDA requirements compliant
Motor	IP55, IEC frame B3/B14 (B3 on long coupled version). Available with ATEX cat 2 or 3, Eex e or Eex d motor	
Pressure rating	PN 2,5 bar (CTS C) at 20°C; PN 4 bar (CTS D,E) at 20°C	
Temperature	max 90°C	
Viscosity	max ~200 cSt	
Particles	max diameter is Ø 6 mm (with standard open impeller), bigger if soft particles	

## CTS Pump code

I. Tapflo self-priming centrifugal pump   II. Pump execution   III. Casing size   IV. Impeller size   V. Pump options   VI. Motor power   VII. Motor options

**CTS** - **I** - **C** - **C** - **1CGV3F** - **02** - **P**

Ask us for complete pump code with all available options and executions.



# CTV Vertical Pumps

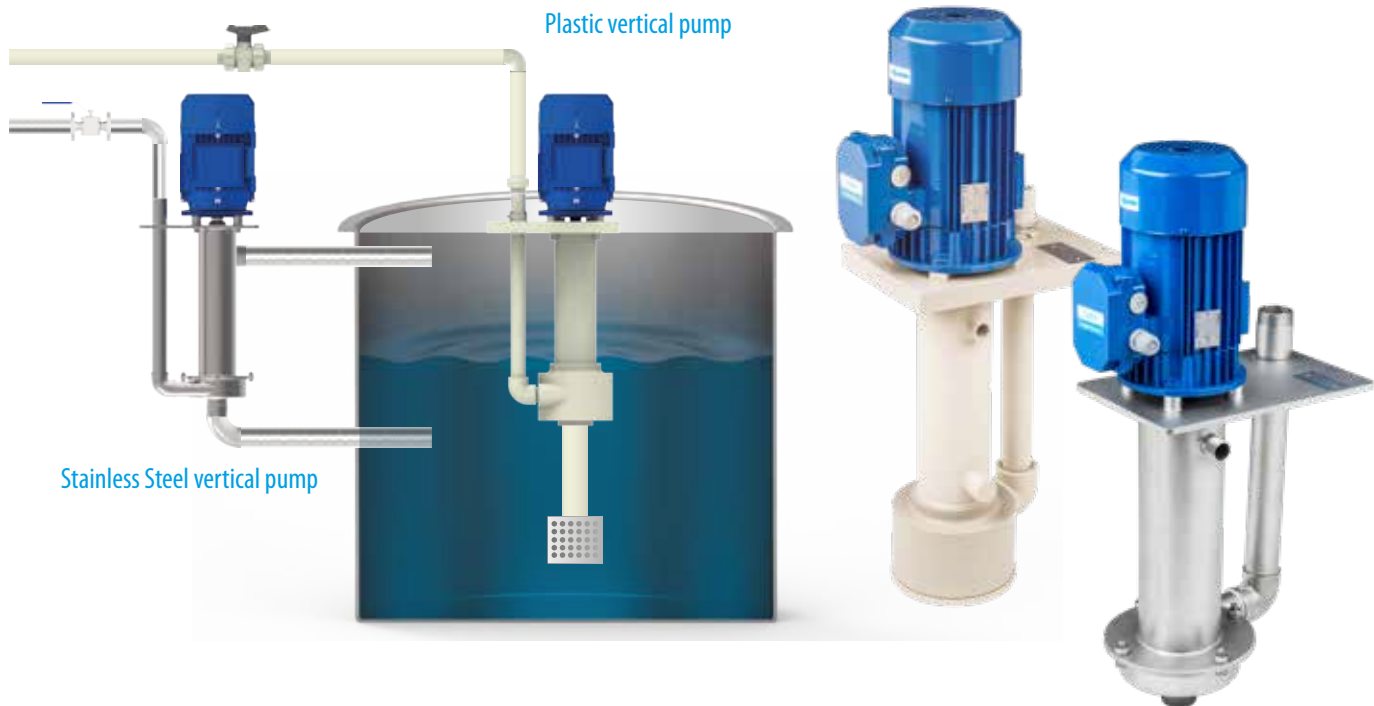
The superior solution for a reliable fluid circulation & transfer.

CTV is a single stage vertical centrifugal pump that is simple but very reliable in duty.

It is manufactured from:

- » plastic (PP or PVDF)
- » stainless steel (AISI 316L).

The pump is specialized for transfer and circulation of various liquids from containers, sumps and tanks.



## Features & Benefits

### ✓ Leakage free and dry running safe

CTV is installed vertically with the motor above the liquid surface. In this way the pump does not need any mechanical seal that usually is a source for leakage problems. Furthermore the pump is designed to be dry running safe.

### ✓ Replacing self priming pumps

In many installations the CTV pump replaces a self-priming pump. The CTV pump head is submersed in the liquid. The pump operates more reliably compared to a self-priming pump. The submersion depth is up to 425 mm (depending on model), but may also be equipped with a suction extension.

### ✓ Maintenance free

The simple design without bearings or mechanical seals grants for a pump that is usually maintenance free. CTV is also insensitive of solids, particles up to  $\varnothing$  6 mm are allowed.

## PP

PP (polypropylene) is suitable for variety of chemicals at temperatures up to 70°C. Ideal for pickling baths and acidic degreasing solutions.

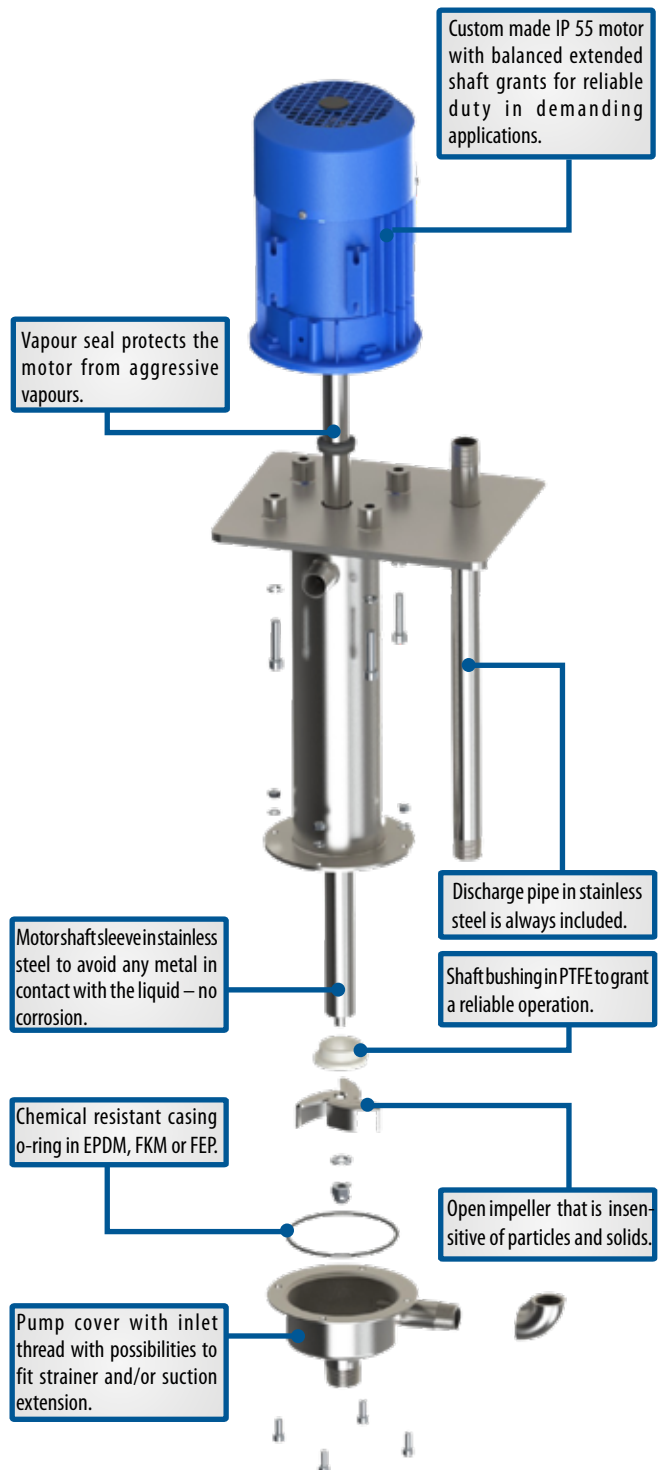
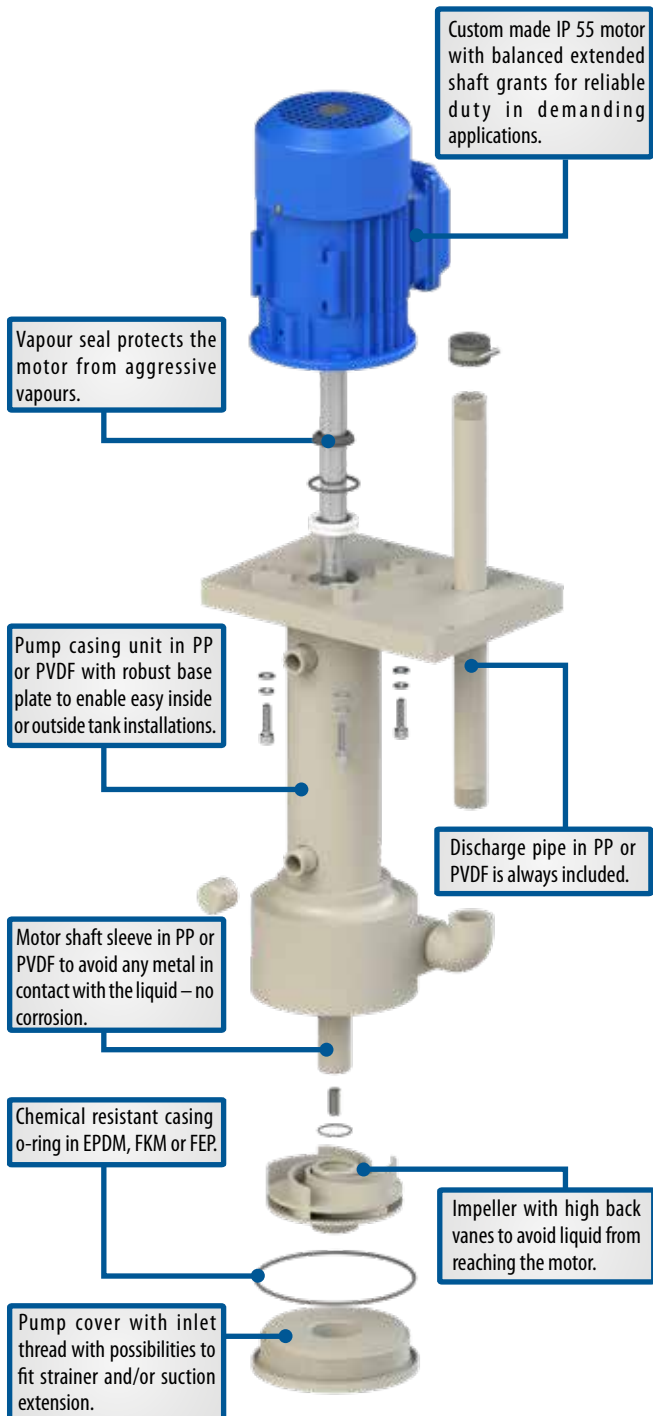
## PVDF

PVDF (polyvinylidene fluoride) has superior chemical and mechanical features. Ideal with hot acids up to 100°C, for example hot hydrofluoric acid.

## Stainless steel pumps

The stainless steel version is ideal at higher temperatures, up to 100°C and for special applications like transfer hot sodium hydroxide.

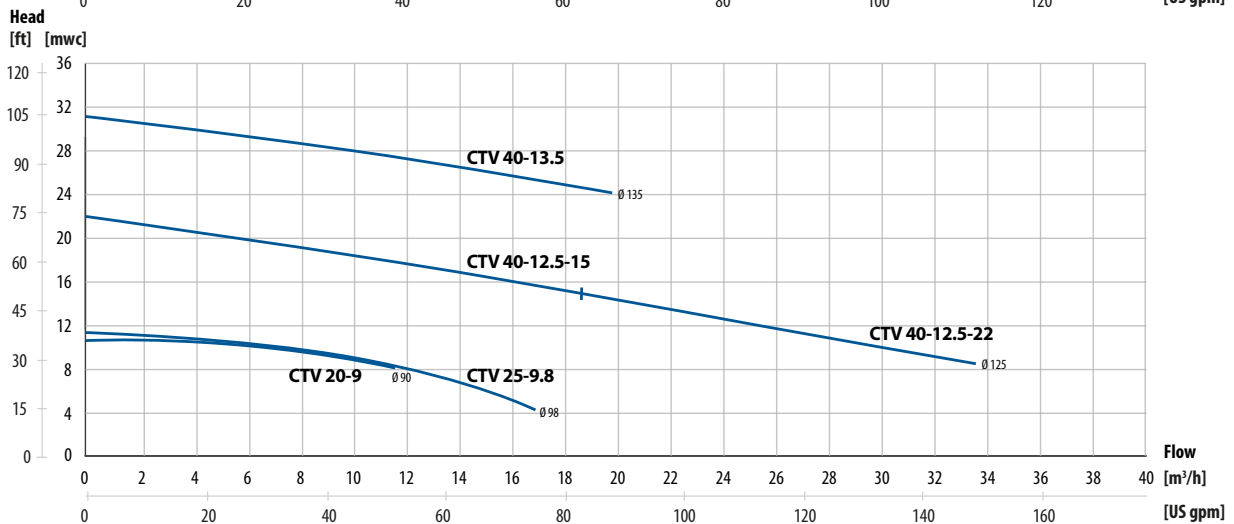
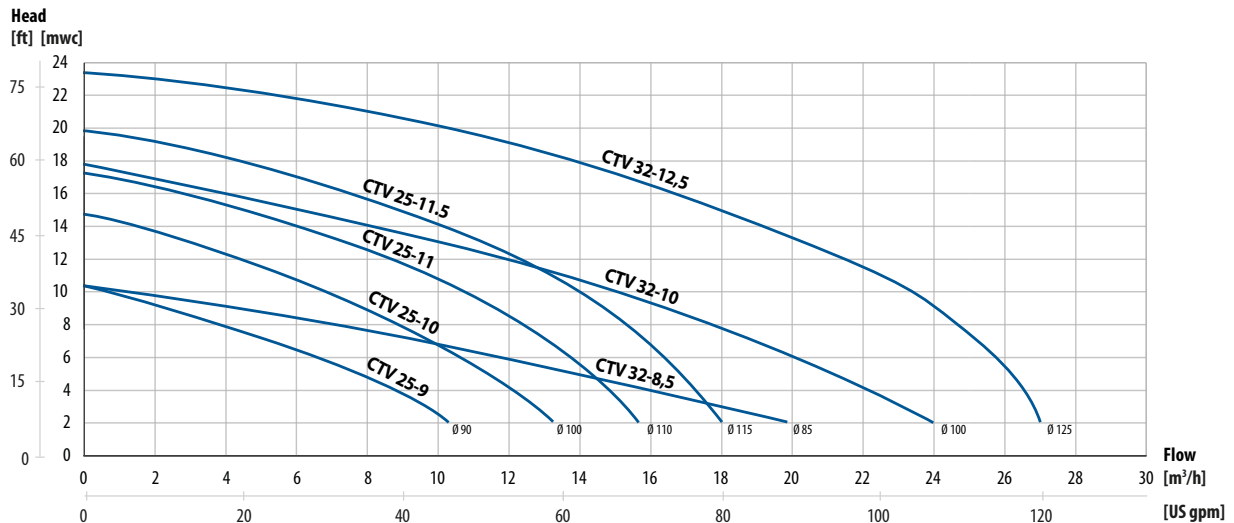
All wetted metal components are made of corrosion resistant stainless steel AISI 316L.



# Technical data

## Performance curves

The performance curves are based on water. (T=20 °C, ρ=1000 kg/m<sup>3</sup>, n=2900 rpm)



## Motor power

2-pole motor	Pump model CTV						
	25-9 20-9	25-10 25-9.8	25-11 25-9.8	25-11.5 40-12.5-15	32-8.5	32-10	32-12.5 40-12.5-22 40-13.5
Motor power [kW]	0.55	0.75	1.1	1.5	1.1	1.5	2.2

## Connections

Connection type	Pump model CTV - PP	Pump model CTV - SS		
		20-9	25-9.8	40-12.5 40-13.5
Discharge connection (BSPT)	1 1/2"	3/4"	1"	1 1/2"

## Materials and limits

Characteristic	Pump model CTV - PP	Pump model CTV - SS
Pump casing and impeller	PP or PVDF	AISI 316L stainless Steel
Motor data	3-phase, 2-pole (~2900 rpm), 380-420 VAC, 50 Hz, IP 55	3-phase, 2-pole (~2900 rpm), 380-420 VAC, 50 Hz, IP 55
Casing o-ring	EPDM, FKM or FEP	EPDM, FKM or FEP
Temperature	PP pump: max 70°C, PVDF pump: max 100°C	max 100°C

## CTV Pump code

I. Tapflo vertical centrifugal pump    II. Pump size    III. Impeller size    IV. Pump housing material    V. Pump options    VI. Motor power    VII. Motor options

**CTV** - **25** - **10** - **P** - **2V** - **07** - **R**

Ask us for complete pump code with all available options and executions.

# CTP Plastic Pumps

Ideal solution for strong acids also containing solid particles.

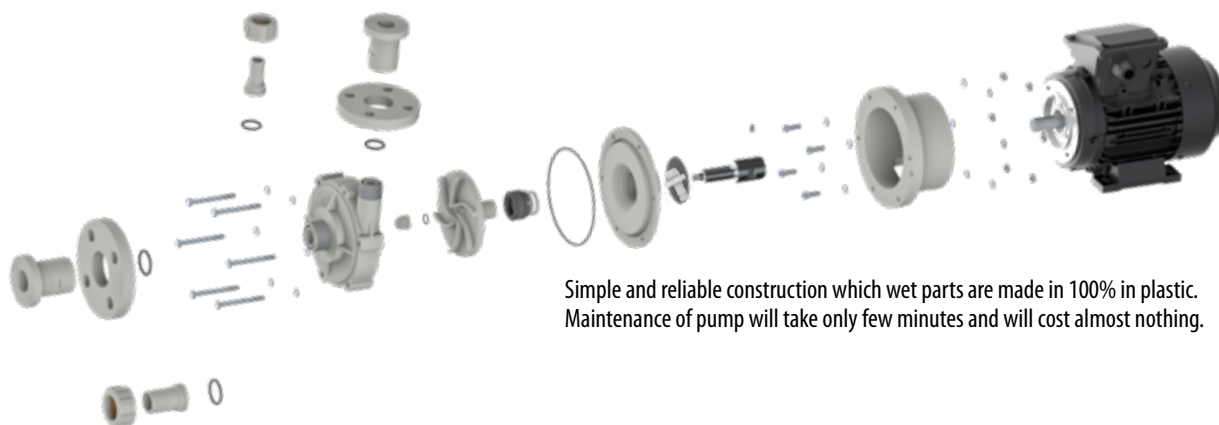
The CTP pumps are semi-open impeller single stage centrifugal pumps. Since there are no metal parts on the liquid side, the pumps are ideal for chemical transfer and circulation duties.

CTP is a compact and reliable mechanically sealed centrifugal pump made in:

- » polypropylene (PP)
- » polyvinylidene fluoride (PVDF).

## Features & Benefits

- ✓ **Mechanical seal**  
spring on dry side and thereby not exposed to the pumped liquid; different seal face materials available to suit various applications
- ✓ **Optional flange and hose connections**
- ✓ **No metal parts in contact with the liquid**
- ✓ **Semi-open impeller**  
Allows pumping liquids with particles up to Ø 3mm
- ✓ **PP & PVDF wetted materials**  
Can handle highly corrosive acids
- ✓ **Few parts**  
Low maintenance, easy to handle



Simple and reliable construction which wet parts are made in 100% in plastic. Maintenance of pump will take only few minutes and will cost almost nothing.

### PP

CTP pump made from PP (polypropylene) is temperature resistance up to 70°C.

Perfect solution for circulation of pickling baths and degreasing processes.

### PVDF

CTP pump made from PVDF (polyvinylidene fluoride) has a great mechanical properties and chemical resistance.

Very good solution for hot medias up to 90°C i.e. hot HF.





# Robust and compact design

## PP & PVDF wetted materials

Can handle highly corrosive liquids also containing solids and metallic particles. Pumps can handle high temperature liquids alkali and acids. The version in **PP-GF** (glass fibre reinforced polypropylene) provides great mechanical strength and allows liquid temperatures **up to 70°C**. The **PVDF** (polyvinylidene fluoride) version has superior chemical resistance and allows temperatures **up to 90°C**.

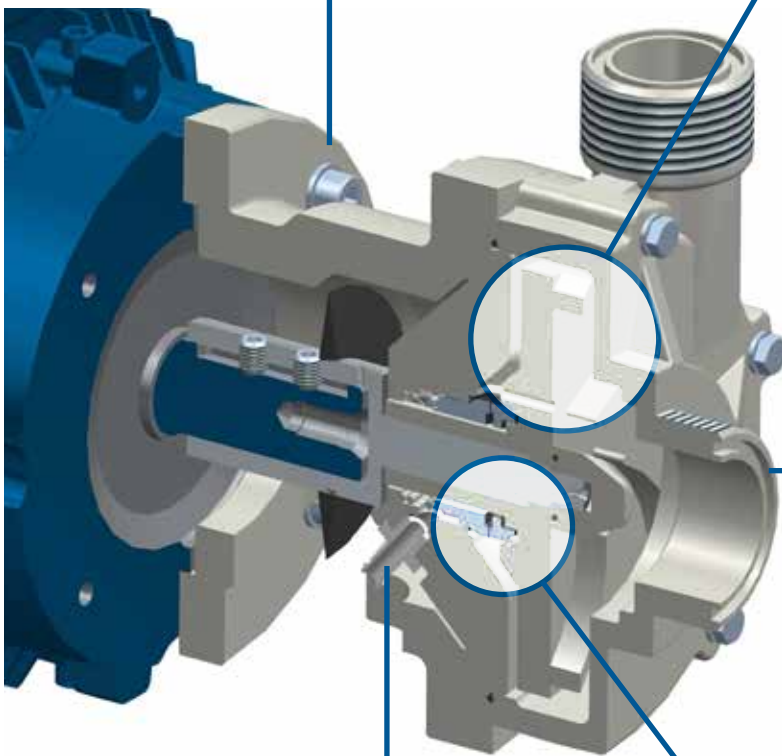
## Semi-open impeller

Allows pumping liquids with particles up to **Ø 3 mm and 10% in concentration**. A semi open impeller also **improves the transfer of liquids with higher viscosity**.



## Chemically resistant pumps

The wetted components are non-metallic injection moulded thermoplastics enabling **excellent corrosion resistance**. The **shaft is protected by means of a plastic sleeve** and nut compatible with the pump housing material.



## Safety drain

The special revision hole in the back casing provides a **drainage from the mechanical seal in case any leakage occurs**. This prevents the motor and shaft from getting into contact with the pumped liquid. The PVDF barb connector allows plug a hose and route the liquid out of the pump.

## Mechanical seal

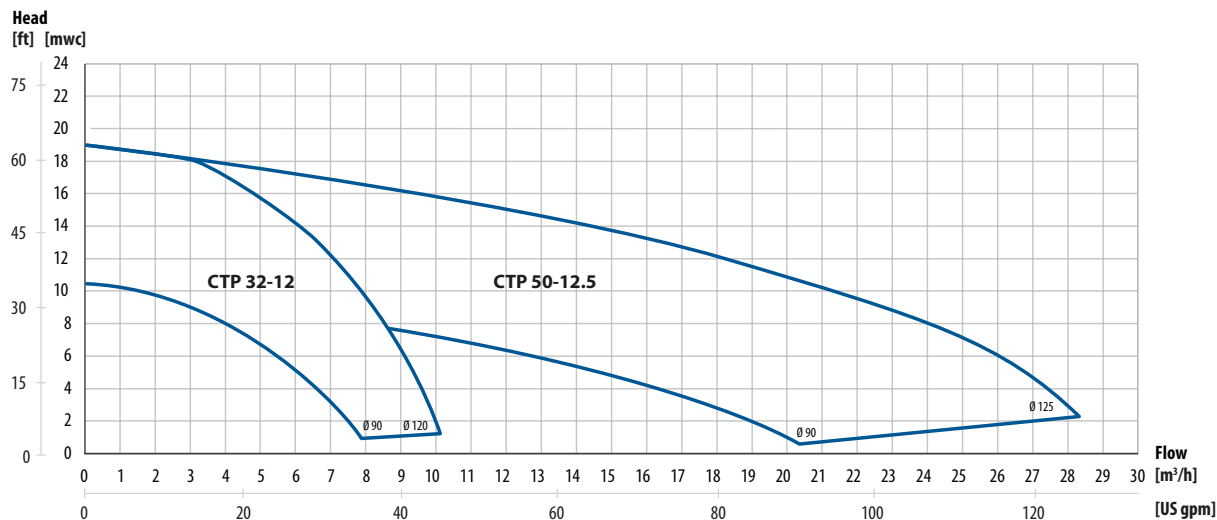
The **spring is located on the dry side of the pump** therefore all metallic parts are protected against contact with the liquid. This means no elastic bellows is required.



# Technical data

## Performance curves

The performance curves are based on water. (T=20 °C, ρ=1000 kg/m<sup>3</sup>, n=2900 rpm)



## Motor power

2-pole motor	Pump model CTS			
	32-12		50-12.5	
Motor power [kW]	0.75	1.1	3.0	4.0
IEC motor size	80		100	112

## Connections

Connection type		Pump model CTP	
		32-12	50-12.5
DIN 2633/PN16 flange	Ra	DN32	DN50
	Ri	DN25	DN40
ANSI 150 flange	Ra	1 ¼"	2"
	Ri	1"	1 ½"
Hose	Ra	Ø32	Ø50
	Ri	Ø25	Ø40

## Materials and limits

Casing	PP-GF (30%) or PVDF
Back casing	PP or PVDF
Impeller	PP or PVDF
Lantern (not wetted)	PP
Mechanical seal	Rotating part: SiC or Graphite, Stationary part: SiC, Spring: Hastelloy C-276 <sup>1</sup>
O-rings	EPDM, FFKM, FEP/FKM
Shaft	AISI 316L stainless steel (standard) or Hastelloy® C-276
Motor	Standard IEC, 3x400 VAC, 2900 rpm, IP55, B34 frame
Pressure rating	PP pumps: PN6 at 20°C; PN2 at 70°C; PVDF pumps: PN6 at 20°C; PN2 at 90°C
Temperature	PP pumps: 0°C - 70°C; PVDF pumps: 0°C - 90°C
Viscosity	max ~200 cSt

<sup>1</sup>Hastelloy® C is a registered trademark of Haynes International, Inc.

## CTP Pump code

I. Tapflo mechanically sealed plastic centrifugal pump II. Pump size III. Impeller size IV. Pump housing material V. Pump options VI. Motor power VII. Motor options

CTP

32

12.5

P

-

1SSV

-

07

P

Ask us for complete pump code with all available options and executions.

# CTM Magnetic Drive Pumps

Perfect choice for chemically corrosive and toxic liquids.

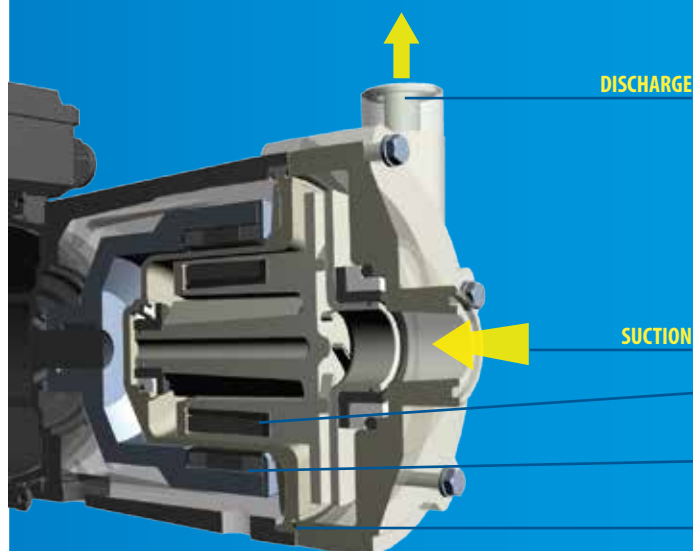
CTM is a compact close coupled pump perfect for service in little spaces like in OEM installations.

Tapflo CTM magnetic drive pumps are centrifugal pumps where the power from the motor is transmitted to the impeller by means of a magnetic coupling.

CTM pumps are designed and manufactured for transfer of chemicals and circulation in surface treatment industry.



## Working principle



The power from the motor is transmitted to the centrifugal impeller by means of a magnetic coupling.

A so called isolation shell between the drive magnet and the impeller magnet separate the liquid side from the drive.

### IMPELLER MAGNET ASSEMBLY

Driven by the drive magnet assembly

### DRIVE MAGNET ASSEMBLY

Connected to the motor

### ISOLATION SHELL

(Rear housing) separating the liquid side from the atmosphere

## Features & Benefits

- ✓ No leakage  
safe working environment  
and environmental friendly
- ✓ Magnetic power transmission  
no mechanical seal problems
- ✓ Hermetic system  
no poisonous or dangerous  
vapours
- ✓ Economical operation  
high degree of efficiency and no waste  
of product
- ✓ Safe handling of hazardous fluids  
seal less pump

# Compact but powerful

## Reliable design without shaft

The **impeller magnet assembly** is designed **with very powerful bushings** where a conventional crack sensitive shaft is not needed. This results in a **pump that has fewer parts** and is **very reliable in service**.

## Powerful magnet couplings

Our magnets in NdFeB (neodymium-iron-boron) with our unique magnet cage system **have a superior strength also under demanding circumstances**.

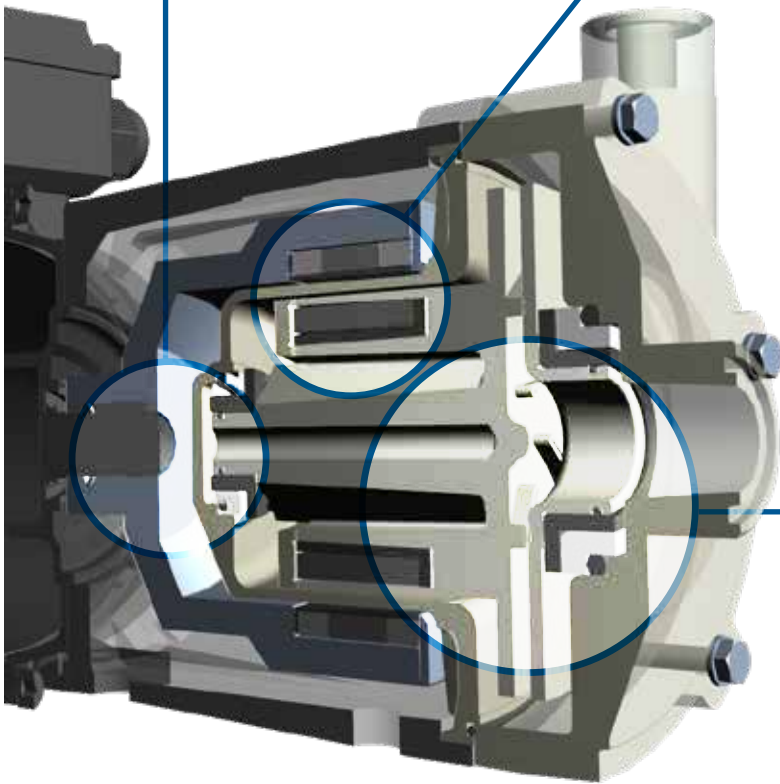
The power from the drive is transmitted **even at high temperatures** and with high specific gravity liquids. Furthermore the robust steel frame for the external magnet increases the magnet power and grants a gentle startup of the pump.

## Non-metallic pumps

The wetted components are non-metallic injection moulded thermoplastics enabling **excellent corrosion resistance**.

The version in **PP-GF** (glass fibre reinforced polypropylene) provides great mechanical strength and allows liquid **temperatures up to 70°C**.

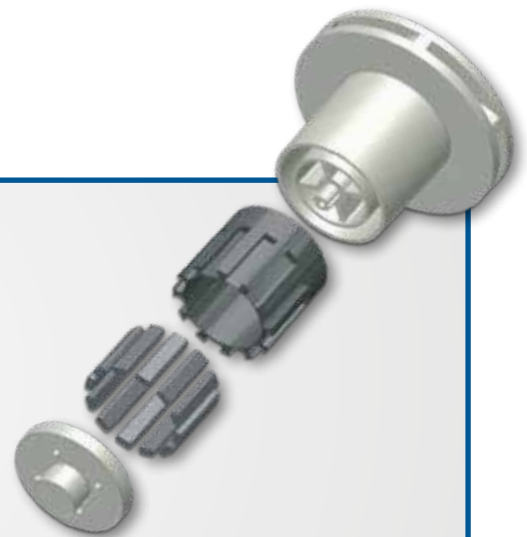
The **PVDF** (polyvinylidene fluoride) version has superior chemical resistance and allows temperatures up to **90°C**.



## Excellent performance with magnet cage system

The magnets are encapsulated in their cage with the unique system that avoids the use of resins and glue.

This grants a safe system with better performance at high temperatures. Furthermore the impeller is injection moulded, resulting in excellent performance and no weak points. CTM20-7 has a semi-open impeller while models CTM25-8, CTM25-10, CTM32-12,5, CTM40-12,5 and CTM50-12,5 have closed impellers to obtain best pumping parameters.

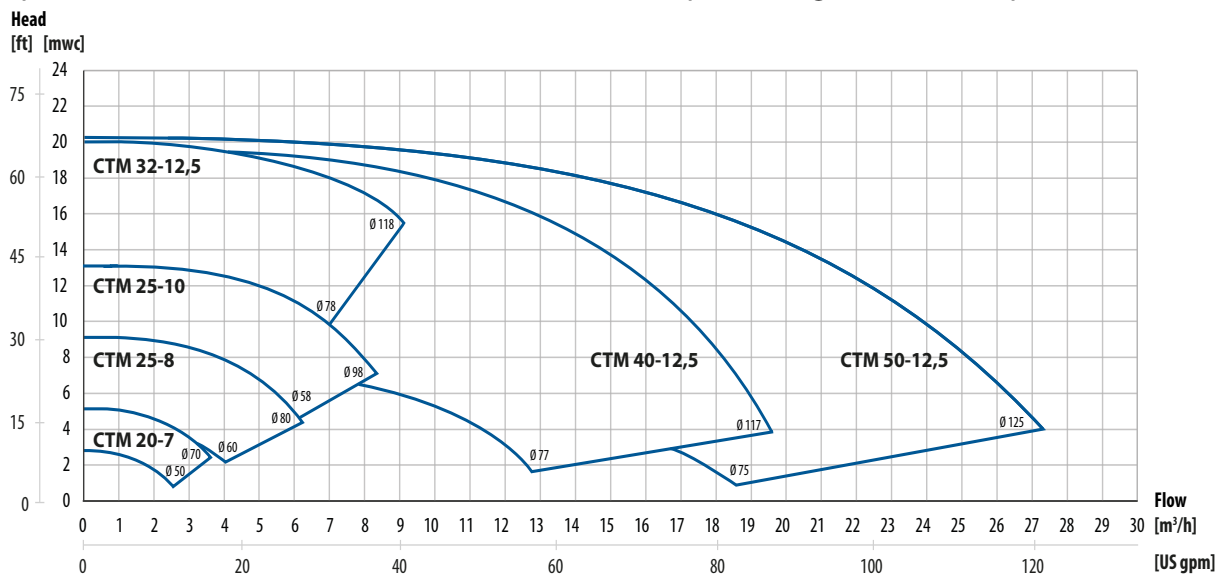




# Technical data

## Performance curves

The performance curves are based on water. (T=20 °C, ρ=1000 kg/m<sup>3</sup>, n=2900 rpm)



## Motor power

2-pole motor	Pump model CTM								
	20-7	25-8	25-10	32-12.5	40-12.5	50-12.5			
Motor power [kW]	0.12	0.25	0.55	0.75	1.1	1.5	2.2	3.0	4.0
IEC motor size	56	63	71	80	90	90	100	100	112

## Connection types and dimensions

Connection type		Pump model CTM					
		20-7	25-8	25-10	32-12.5	40-12.5	50-12.5
BSPT male thread (standard)	Ra	¾"	1"	1"	1 ¼"	1 ½"	2"
	Ri	¾"	1"	1"	1"	1 ¼"	1 ½"
DIN 2633/ PN16 flange	Ra	-	DN25	DN25	DN32	DN40	DN50
	Ri	-	DN25	DN25	DN25	DN32	DN40
Hose	Ra	-	Ø25	Ø25	Ø32	Ø40	Ø50
	Ri	-	Ø25	Ø25	Ø25	Ø32	Ø40

## Materials and limits

Characteristics	Pump model CTM		
	20-7	25-8 25-10 32-12.5	40-12.5 50-12.5
Motor	Standard IEC, 3x380 VAC (other voltages on request), 2900 rpm IP55, B3/B14 flange		
Pressure rating	PP pump: PN4 at 20°C, PN2 at 70°C PVDF pump: PN4 at 20°C, PN2 at 80°C	PP pump: PN6 at 20°C; PN2 at 70°C PVDF pump: PN6 at 20°C; PN2 at 90°C	-
Temperature	PP pump: 0°C - 70°C		
	PVDF pump: 0°C - 80°C	PVDF pump: 0°C - 90°C	-
Viscosity	max ~200 cSt		

## CTM Pump code

I. Tapflo magnetic drive centrifugal pump    II. Pump size    III. Pump housing material    IV. Pump options    V. Motor power    VI. Motor options

**CTM**    **25-10**    **P**    **1V**    **-**    **05**    **P**

Ask us for complete pump code with all available options and executions.

# Mobile solutions

The best solution for the spread technological processes.

The portability of the units allows easy movement to various locations. This means almost limitless application. There are 2 types of standard mobile solutions on offer for centrifugal pumps. The size and functional function correspond to specific types of pump sets.

## Trolley- type S



- » 2 - wheel
- » Application recommend for monoblock pumps with output power up to 4,0 kW

## Trolley- type M



- » 4 - wheel
- » Application recommend for monoblock pumps with output power up to 7,5 kW

## Options and special executions

- » unit with a dedicated control system
- » unit with a VFD (Variable-frequency drive)
- » ATEX approved unit
- » pneumatic wheels for uneven surfaces
- » special frames for pump units



CTH pump on special trolley with control cabinet



CTH pump on trolley with frequency inverter



CTH on M trolley with frequency inverter

# Product range

## Diaphragm pumps & accessories

**NEW**



**Electrically operated pumps**



**PE & PTFE pumps**



**Metal pumps**




**Pharmaceutical pumps**



**Sanitary pumps**



**TC Intelligent pumps**



**Powder pumps**



**TF Filter press pumps**

**NEW**



**Steinle filter press pumps**



**Aseptic pumps**

**CERTIFIED**  
**ehedg**  
EUROPEAN HYGIENE ASSOCIATION  
 TYPE EL  
 CLASS I  
 SEPTEMBER 2020

## Peristaltic Pumps



**Active pulsation dampeners**



**Systems & accessories**



**Trolleys**



**PT pumps**



**PTL pumps**

## Centrifugal pumps, filter units & accessories

**NEW**



**CTX centrifugal pumps**



**CTI & CTH centrifugal pumps**



**CTS self-priming centrifugal pumps**



**CTV vertical centrifugal pumps**



**CTP plastic centrifugal pumps**



**CTM magnetic drive centrifugal pumps**



**Trolleys**



**FT Filter units**

## Sweden

Filaregatan 4 | S-442 34 Kungälv

Tel: +46 303 63390

Fax: +46 303 19916

E-mail addresses:

Commercial questions: [sales@tapflo.com](mailto:sales@tapflo.com)

Orders: [order@tapflo.com](mailto:order@tapflo.com)

Tech support: [support@tapflo.com](mailto:support@tapflo.com)

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## Tapflo Group Companies

### Australia

Tapflo Oceania (Pty) Ltd  
Tel: +61 1800 303 633  
[sales@tapflo.com.au](mailto:sales@tapflo.com.au)

### Austria

Tapflo Austria  
Tel: +43 732 27292910  
[sales@tapflo.at](mailto:sales@tapflo.at)

### Baltic States

Tapflo Latvia  
Tel: +371 67472205  
[sales@tapflo.lv](mailto:sales@tapflo.lv)

### Belarus

Tapflo Belarus  
Tel: +375 17 3934609  
[sales@tapflo.by](mailto:sales@tapflo.by)

### Belgium

Tapflo Benelux B.V.  
Tel: +31 (0)85 00 743 00  
[info@tapflo.nl](mailto:info@tapflo.nl)

### Bulgaria

Tapflo EOOD  
Tel: +359 (0)2 974 18 54  
[office@tapflo.bg](mailto:office@tapflo.bg)

### Canada

Tapflo Canada  
Tel: +1 514 813 5754  
[canada@tapflo.com](mailto:canada@tapflo.com)

### Croatia

Tapflo d.o.o.  
Tel: +385 91 4884 666  
[sales@tapflo.hr](mailto:sales@tapflo.hr)

### Czech Republic

Tapflo s.r.o.  
Tel: +420 513 033 924  
[tapflo@tapflo.cz](mailto:tapflo@tapflo.cz)

### China

Tapflo (Wuxi)  
Tel: +86 510 8241 7072  
[sales@tapflo.cn](mailto:sales@tapflo.cn)

### Denmark

Tapflo Danmark  
Tel: +45 36 454600  
[info@tapflo.dk](mailto:info@tapflo.dk)

### France

Tapflo France  
Tel: +33 1 34 78 82 40  
[info@tapflo.fr](mailto:info@tapflo.fr)

### Hungary

Tapflo kft.  
Tel: +36 30 148 8551  
[office@tapflo.hu](mailto:office@tapflo.hu)

### India

Tapflo Fluid Handling India Pvt Ltd  
Tel: +91 20 65000215  
[ac@tapflo.in](mailto:ac@tapflo.in)

### Ireland

Tapflo Ireland Ltd  
Tel: +353 1 2011911  
[info@tapflo.ie](mailto:info@tapflo.ie)

### Italy

Tapflo Italia  
Tel: +39 0362 306528  
[info@tapfloitalia.com](mailto:info@tapfloitalia.com)

### Japan

Tapflo Japan K.K.  
Tel: +81-3-6240-3510  
[tapflojp@tapflo.co.jp](mailto:tapflojp@tapflo.co.jp)

### Kazakhstan

Tapflo Kazakstan  
Tel: +7 727 3278347  
[sales@tapflo.kz](mailto:sales@tapflo.kz)

### Netherlands

Tapflo Benelux B.V.  
Tel: +31 (0)85 00 743 00  
[info@tapflo.nl](mailto:info@tapflo.nl)

### Poland

Tapflo Sp. z o.o.  
Tel: +48 58 530 42 12  
[info@tapflo.pl](mailto:info@tapflo.pl)

### Romania

S.C. Tapflo Rom. S.r.l.  
Tel: +40 21 3451255  
[sales@tapflo.ro](mailto:sales@tapflo.ro)

### Russia

Tapflo Company  
Tel: +7 495 232 18 28  
[sales@tapflo.com.ru](mailto:sales@tapflo.com.ru)

### Serbia

Tapflo d.o.o.  
Tel: +381 21 44 58 08  
[sales@tapflo.rs](mailto:sales@tapflo.rs)

### Slovakia

Tapflo s.r.o.  
Tel: +421 911 137 883  
[tapflo@tapflo.sk](mailto:tapflo@tapflo.sk)

### Slovenia

Tapflo GmbH  
Tel: +386 68 613 474  
[sales@tapflo.hr](mailto:sales@tapflo.hr)

### Spain

Tapflo Iberica  
Tel: +34 91 8093182  
[avives@tapfloiberica.es](mailto:avives@tapfloiberica.es)

### South Africa

Tapflo (Pty) Ltd  
Tel: +27 31 701 5255  
[sales@tapflo.co.za](mailto:sales@tapflo.co.za)

### Turkey

Tapflo Makina Ltd  
Tel: +90 216 467 33 11  
[sales@tapflo.com.tr](mailto:sales@tapflo.com.tr)

### Ukraine

TOB Tapflo  
Tel: +380 44 222 68 44  
[sales@tapflo.ua](mailto:sales@tapflo.ua)

### Uzbekistan

Tapflo Uzbekistan  
Tel: +998 712370940  
[sales@tapflo.uz](mailto:sales@tapflo.uz)

### United Kingdom

Tapflo (UK) Ltd  
Tel: +44 2380 252325  
[sales@tapflo pumps.co.uk](mailto:sales@tapflo pumps.co.uk)



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