

tapflo®

# CTS SELF-PRIMING CENTRIFUGAL PUMPS

2026 | 1



» All about your flow®

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

# CTS Self-priming Centrifugal Pumps

perfectly complement the series of centrifugal pumps

The CTS are open impeller self-priming centrifugal pumps, manufactured from AISI 316L stainless steel. They are capable of creating up to 4,5 m of suction lift. The CTS series maintains all the benefits and strengths of the standard CT pumps. CTS pumps are available in hygienic and industrial execution.

## CTS H - hygienic execution

- » surfaces electropolished to  $Ra < 0.8 \mu m$
- » meet the demands of **food and sanitary applications** (high finish, mechanical strength)
- » mechanical seals and elastomers **FDA and EC1935 approved**
- » **hygienic connections** with DIN 11851 as standard

## CTS I - industrial execution

- » a reliable choice for **industrial applications** (mechanical strength and AISI 316L chemical resistance)
- » **as standard BSPT thread connection** or with flanged connections according to **EN 1092-1** or **ANSI 150 Lbs**

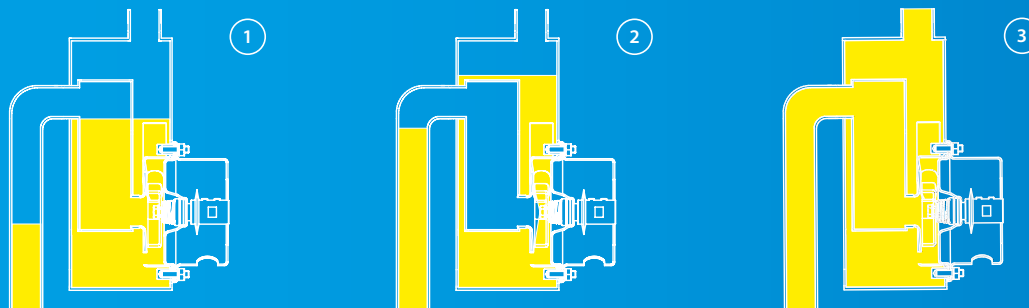


Certificates may vary depending on material execution of particular product.

## Features

- ✓ Self-priming
- ✓ Ideal for highly aerated liquids
- ✓ Easy installation and maintenance
- ✓ Simple and compact design

## 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 slowly sucking out 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.
- (3) In order to achieve the self-priming capability the shut off/regulation valve on the discharge side must be opened. 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. This process continues until the suction line is completely free of air and the pump can operate as a standard centrifugal pump

# Wide range of applications (CTS H & CTS I)

## CTS H

### Industries:

- » dairy
- » ice cream
- » beverage
- » food
- » pharma
- » cosmetics
- » brewery and winery

### Applications:

diary,  
fats,  
juices,  
alcohol,  
semi products,  
food additives,  
ingredients for cosmetic and pharmaceutical,  
products in explosive and safe zones,

mild and aggressive chemicals,  
hot and cold liquids,  
suspensions and emulsions,  
cleaning and washing agents,  
wastewater,  
feeding and unloading of storage tanks,  
containers, filters, sumps,  
powering process equipment, dosing systems,  
dispensing units,



## CTS I

### Industries:

- » chemical,
- » mining,
- » oil & gas,
- » packaging,
- » printing,
- » automotive,
- » machinery,
- wastewater treatments plants,

### Applications:

oils,  
fuels,  
solvents,  
concentrated or diluted acids and alkalis in  
explosives and safe zones,  
mild and aggressive chemicals,  
hot and cold liquids,

suspensions and emulsions,  
cleaning and washing agents,  
wastewater  
cooling and heating media,  
feeding and unloading of storage tanks,  
containers, filters, sumps.  
powering process equipment, dosing systems,  
dispensing units, test rigs,



# CTS H - hygienic series

## Materials, data and limits

<b>Casing</b>	AISI 316L stainless steel electropolished to Ra<0.8 µm
<b>Impeller</b>	Stainless steel AISI 316L electro polished Ra<0.8. open (std) or semi-open
<b>Mechanical seal</b>	Single ceramic/graphite (std), SiC/SiC or SiC/graphite, optional with oil lube
<b>O-rings</b>	EPDM FDA approved (std), FEP/Silicone FDA approved, FKM FDA approved
<b>Motor*</b>	IEC standard, 3-phase, 2-pole, IP55
<b>Pressure rating</b>	PN2,5 (CTS C) at 20 °C; PN4 (CTS D,E) at 20 °C
<b>Temperature</b>	max 90 °C
<b>Viscosity</b>	max ~200 cSt
<b>Particles</b>	max diameter is Ø 6 mm (with standard open impeller), bigger if soft particles

\*other motor options available on request

## Connection dimensions

Model	DIN 11851 male thread		DIN 11851
	Inlet	Outlet	Drain
CTS H C...	DN40	DN40	DN15
CTS H D...	DN65	DN50	DN15
CTS H E...	DN65	DN50	DN15



# CTS I - industrial series

## Materials, data and limits

<b>Casing</b>	Stainless steel AISI 316L glass blasted
<b>Impeller</b>	Stainless steel AISI 316L glass blasted. open (std) or semi-open
<b>Mechanical seal</b>	Single ceramic/graphite (std), SiC/SiC or SiC/graphite, optional with oil lube
<b>O-rings</b>	EPDM (std). FKM, FEP/Silicone or NBR
<b>Motor*</b>	IEC standard, 3-phase, 2-pole, IP55
<b>Pressure rating</b>	PN2,5 (CTS C) at 20 °C; PN4 (CTS D,E) at 20 °C
<b>Temperature</b>	max 90 °C
<b>Viscosity</b>	max ~200 cSt
<b>Particles</b>	max diameter is Ø 6 mm (with standard open impeller), bigger if soft particles

\*other motor options available on request

## Connection dimensions

Model	BSPT male thread (standard)		BSPP (G) female thread
	Inlet	Outlet	Drain
CTS I C...	1 ½"	1 ½"	¾"
CTS I D...	2 ½"	2"	¾"
CTS I E...	2 ½"	2"	¾"



## Options and special executions



### Hygienic shroud (CTS H)

The hygienic motor shroud in polished AISI 304L, **protects the motor from spraying water during pump cleaning procedure.**



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

A great option **when the product tends to solidify or crystalize.** An oil reservoir is connected to the mechanical seal chamber.



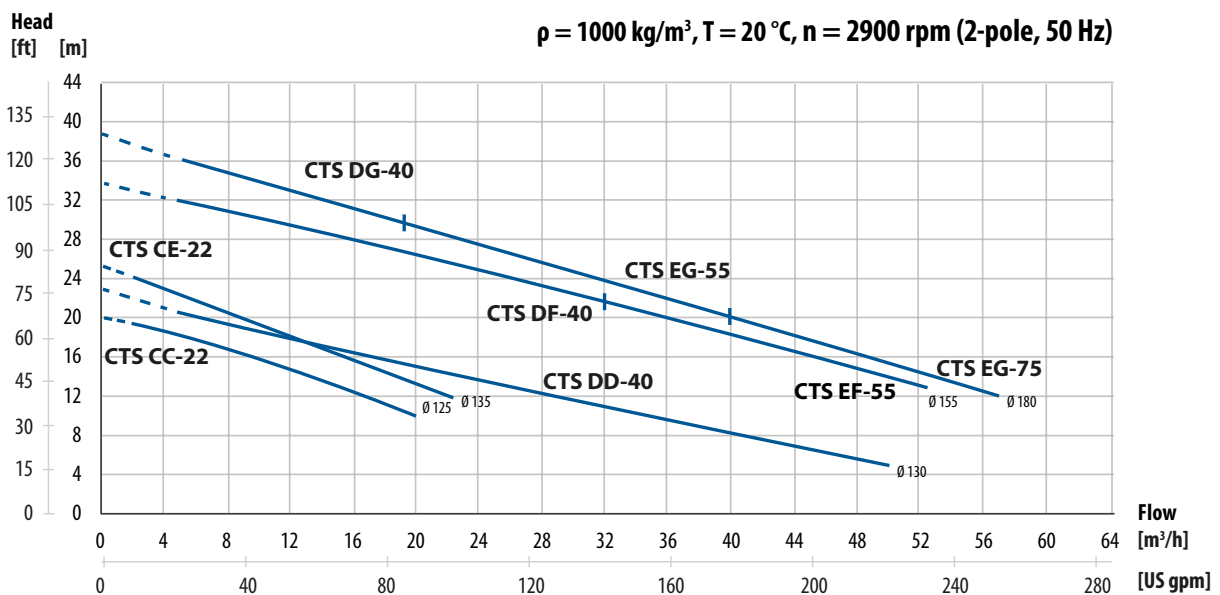
### Quench (CTS H, CTS I)

This option is similar to the lubricated seal option and is **recommended when there is a potential risk of dry running**, or where the product **tends to solidify or crystalize when in contact with air.**

There is however an added value to this option, as circulating quench liquid removes heat from the mechanical seal.

## Performance curves

The performance curves are based on water.



## Available motor powers

2-pole motor	CC-22; CE-22	DD-40; DF-40	EF-55; G-55	EF-75; EG-75
<b>Motor power [kW]</b>	2.2	4.0	5.5	7.5
<b>IEC motor size</b>	90	112	132	132

## 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

# CTS pumps execution versions

Certificate delivered with the pump (for other- on request)



**Standard**



**Option**

**CTS-H**

**CTS-I**



**FDA §21 CFR 177 materials**

FDA (U.S. Food and Drug Administration) §21 CFR 177 lists polymers, e.g. rubber and plastic materials approved for equipment in contact with food products.



**EN 10204**

**EN 10204 material traceability**

The EN 10204 norm gives you a checklist and traceability of materials used in the equipment. 2.1 is a general statement of compliance with material specifications, while 3.1 provides specific track records all the way to the steel mill batch (normally only on metals in contact with the product).



**EC 1935/2004 regulation**

This EU regulation applies to all food contact materials, e.g. metals, plastics and rubber materials. It requires that these materials are safe, are labeled with the glass-and-fork symbol, are traceable throughout the production chain (according to above EN 10204) and that they are produced according to good manufacturing practice (GMP).



**CE compliant**

A product classified as machinery that carries the CE mark fulfill the essential health and safety requirements of the EC Machinery Directive 2006/42/EEC.



**ATEX Directive 94/9/EC**

Equipment intended and approved for safe operation in potentially explosive atmospheres. The equipment is divided in main groups, categories, apparatus groups and temperature classes to define its suitability in the actual zone.



# Mobile Pump Solutions

solve the problem of spread technological processes

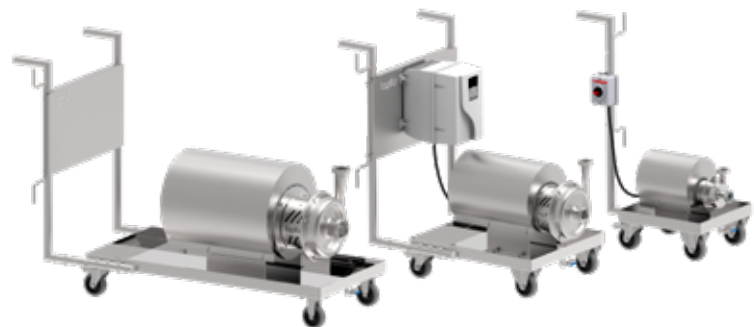
The portability of the units allows easy movement to various locations. This means almost limitless application.

Mobile pump units are available in both hygienic and industrial designs. The great advantage is the compatibility with the majority of Tapflo centrifugal pumps range.

Moreover, it is possible to compose the trolley to your own needs by using a number of accessories such as ON-OFF switches, frequency inverters, or cable holders.

## Hygienic Trolleys

- » Stainless steel polished drip tray
- » Valve for drainage
- » 3 sizes available













## Industrial Trolleys

- » Stainless steel construction
- » Compact and strong baseplate
- » 3 sizes available



# Product range

## Diaphragm pumps

 Electrically operated pumps	 PE & PTFE pumps	 Metal pumps	 Pharmaceutical pumps	 Sanitary pumps
 TC Intelligent pumps	 Powder pumps	 TF Filter press pumps	 Steinle filter press pumps	 Aseptic pumps

## Centrifugal pumps

 CTXH & I, CTH & I pumps	 CTXS H & I, CTS H & I self-priming pumps	 CTV vertical pumps	 CTP plastic pumps	 CTM magnetic drive pumps
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## Other pumps

 Hose pumps
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 Submersible pumps
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 LPX Lobe pumps*
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## Mixers

 Industrial Mixers
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## Systems

 HVS Quattro Drum Unloading System
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## Filters

 FT Filter units
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## Accessories

 Pulsation dampeners
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 Control systems
--------------------------------------------------------------------------------------------------------

 Hygienic valves
---------------------------------------------------------------------------------------------------------

 Hygienic & Industrial Trolleys
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• offered only in: Australia, Austria, Canada, Denmark, France, Germany, Ireland, Italy, Japan, Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom

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