tapflo®

CTS SELF-PRIMING CENTRIFUGAL PUMPS

2025 | 1

All about your flow®

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 µm**
- 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**

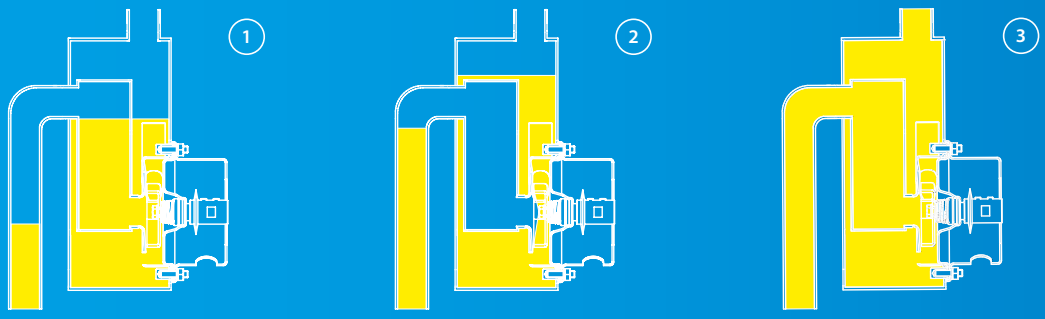
EN 10204 AT

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

Casing	AISI 316L stainless steel electropolished to Ra<0.8 µm
Impeller	Stainless steel AISI 316L electro polished Ra<0.8. open (std) or semi-open
Mechanical seal	Single ceramic/graphite (std), SiC/SiC or SiC/graphite, optional with oil lube
O-rings	EPDM FDA approved (std), FEP/Silicone FDA approved, FKM FDA approved
Motor*	IEC standard, 3-phase, 2-pole, IP55
Pressure rating	PN2,5 (CTS C) at 20 °C; PN4 (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

*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

Casing	Stainless steel AISI 316L glass blasted
Impeller	Stainless steel AISI 316L glass blasted. open (std) or semi-open
Mechanical seal	Single ceramic/graphite (std), SiC/SiC or SiC/graphite, optional with oil lube
O-rings	EPDM (std). FKM, FEP/Silicone or NBR
Motor*	IEC standard, 3-phase, 2-pole, IP55
Pressure rating	PN2,5 (CTS C) at 20 °C; PN4 (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

*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"	⅜"
CTS I D...	2 ½"	2"	⅜"
CTS I E...	2 ½"	2"	⅜"

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.

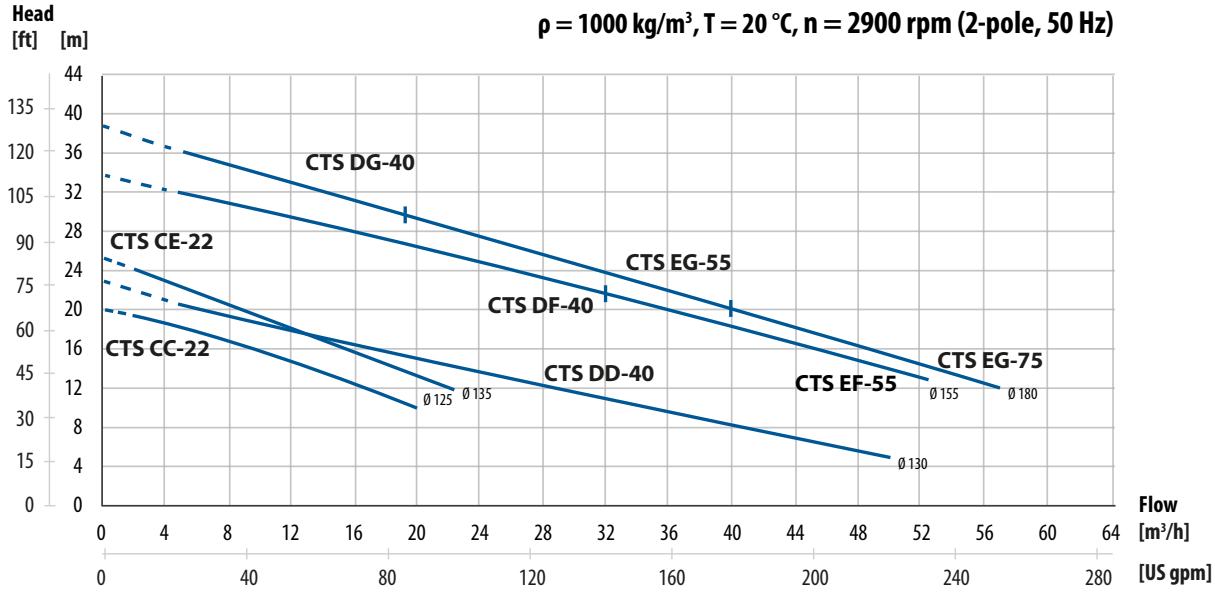
Quench (CTS H, CTS I)

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 crystallize 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
Motor power [kW]	2.2	4.0	5.5	7.5
IEC motor size	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	**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	**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	**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

Other pumps

Hose pumps

Submersible pumps

LPX Lobe pumps*

Mixers

Industrial Mixers

Systems

HVS Quattro Drum Unloading System

Filters

FT Filter units

Accessories

Pulsation dampeners

Control systems

Hygienic valves

Hygienic & Industrial Trolleys

- offered only in: Australia, Austria, Canada, Denmark, France, Germany, Ireland, Italy, Japan, Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom

TAPFLO AB

Sweden

Filaregatan 4 | S-442 34 Kungälv

Tel: **+46 303 63390**
Fax: **+46 303 19916**

E-mail addresses:
Commercial questions: **sales@tapflo.com**
Orders: **order@tapflo.com**
Tech support: **support@tapflo.com**

We began our journey in 1980 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 the foundation, 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.

Tapflo products and services are available worldwide.

Tapflo is represented by own Tapflo Group Companies and carefully selected distributors assuring highest Tapflo service quality for our customers' convenience.

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Tapflo Group Companies

Australia
Tapflo Oceania (Pty) Ltd.
Tel: +61 1800303633
sales@tapflo.com.au

Austria
Tapflo GmbH
Tel: +43 73227292910
sales@tapflo.at

Bahrain
Tapflo Gulf General Trading Co. L.L.C
Tel: +971 58 582 3630
sales@tapflogulf.com

Baltic States
Tapflo SIA
Tel: +371 67472205
sales@tapflo.lv

Belgium
Tapflo Benelux B.V.
Tel: +31 (0) 6 21850664
info@tapflo.nl

Bulgaria
Tapflo EOOD
Tel: +359 886 124 937
office@tapflo.bg

Canada
Tapflo Canada
Tel: +1 514 409 8380
office@tapflo.ca

China
Tapflo (Wuxi) Pumps Co. Ltd.
Tel: +86 51082417072
sales@tapflo.cn

Croatia
Tapflo d.o.o.
Tel: +385 914884666
sales@tapflo.hr

Czech Republic
Tapflo s.r.o.
Tel: +420 513033920
tapflo@tapflo.cz

Denmark
Tapflo Danmark ApS
Tel: +45 36454600
info@tapflo.dk

France
Sarl Tapflo France
Tel: +33188788240
info@tapflo.fr

Hungary
Tapflo Kft.
Tel: +36 30148 8551
office@tapflo.hu

India
Tapflo Fluid Handling India Pvt Ltd.
Tel: +91 9028574063
enquiry@tapflo.in

Ireland
Tapflo Ireland Ltd.
Tel: +353 12011911
info@tapflo.ie

Italy
Tapflo Italia S.r.l.
Tel: +39 0362306528
info@tapfloitalia.com

Japan
Tapflo Japan K.K.
Tel: +81 362403510
tapflojp@tapflo.co.jp

Kazakhstan
Tapflo LLP
Tel: +7 727 327 83 47
sales@tapflo.kz

Kuwait
Tapflo Gulf General Trading Co. L.L.C
Tel: +971 58 582 3630
sales@tapflogulf.com

Netherlands
Tapflo Benelux B.V.
Tel: +31 (0) 6 21850664
info@tapflo.nl

Oman
Tapflo Gulf General Trading Co. L.L.C
Tel: +971 58 582 3630
sales@tapflogulf.com

Poland
Tapflo Sp. z o.o.
Tel: +48 609 995 500
info@tapflo.pl

Qatar
Tapflo Gulf General Trading Co. L.L.C
Tel: +971 58 582 3630
sales@tapflogulf.com

Romania
S.C. Tapflo Rom. S.r.l.
Tel: +40 213451255
sales@tapflo.ro

Saudi Arabia
Tapflo Gulf General Trading Co. L.L.C
Tel: +971 58 582 3630
sales@tapflogulf.com

Serbia
Tapflo d.o.o.
Tel: +381 21445808
sales@tapflo.rs

Slovakia
Tapflo s.r.o.
Tel: +421 911137883
tapflo@tapflo.sk

Slovenia
Tapflo d.o.o.
Tel: +386 68613474
sales@tapflo.hr

Spain
Tapflo Ibérica S.L.
Tel: +34 918093182
avives@tapfloiberica.es

South Africa
Tapflo (Pty) Ltd.
Tel: +27 317015255
sales@tapflo.co.za

Sweden
Tapflo AB
Tel: +46 (0)30314050
info@tapflo.com

Turkey
Tapflo Makina Ltd.
Tel: +90 2164673311
sales@tapflo.com.tr

Ukraine
Tapflo LLC
Tel: +380 442226844
sales@tapflo.ua

United Arab Emirates
Tapflo Gulf General Trading Co. L.L.C
Tel: +971 58 582 3630
sales@tapflogulf.com

United Kingdom
Tapflo (UK) Ltd.
Tel: +44 2380252325
sales@tapflopumps.co.uk

Uzbekistan
Tapflo Uzbekistan
Tel: +998 712370940
sales@tapflo.uz

If your country is not listed please visit
www.tapflo.com/en/contact

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