

# CTM magnetic drive centrifugal pumps

2012 rev 1



topflo®

# your reliable pumpchoice



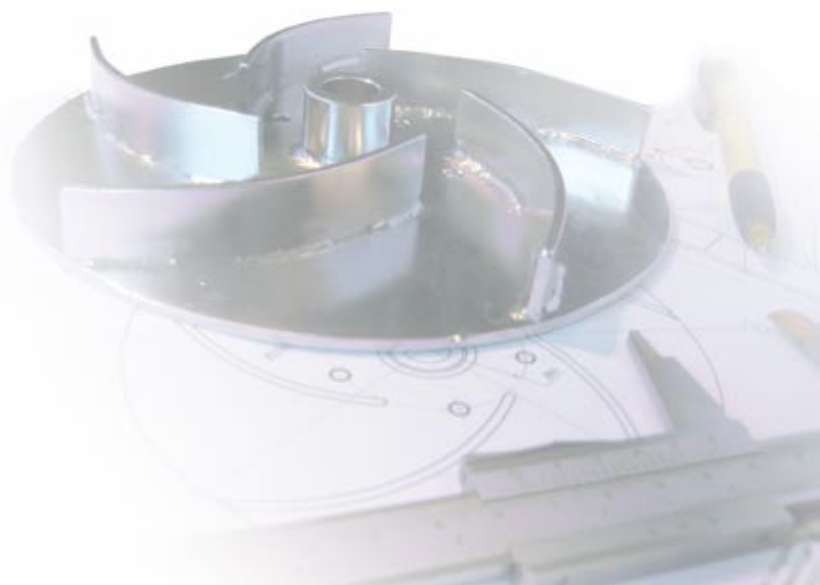
With experience from industrial fluid handling and pump manufacture since 1970, we know what you as a customer require from an industrial pump. Ever since we started our manufacture of air operated diaphragm pumps, we have always had our winning concept in mind: to create pumps for reliable duty and with a minimal number of components enabling easy maintenance. We are always keenly aware of new requirements and ideas from our customers. The products are therefore always in continuous progress with improved detail solutions, new materials and further accessories.

## Tapflo quality

The Tapflo pump is usually an essential part in the process with hazardous fluids. We always strive to supply the safest and most environmental friendly solution for these fluids. As a part of our safety thinking, we are in the frontline following important standards, guidelines and directives. Many of our products comply with the EC ATEX directive for equipment in explosion hazardous environments. All our pumps are of course CE marked and followed by our comprehensive instruction manuals. Tapflo is an ISO 9001:2001 certified company. The EHEDG certification of our aseptic diaphragm pump was achieved in 2009.

## The history of Tapflo

Tapflo was founded in Kungälv (north of Gothenburg), Sweden 1985 and has since then been working with design and manufacture of air operated diaphragm pumps. The product range has grown from a few plastic models, to complete PE & PTFE, metal and sanitary series and lately also with complete ranges of centrifugal pumps. The pumps shown in this brochure are manufactured by Tapflo under licence from CDR Pumps. Tapflo has now established sales offices in 20 countries and independent distributors in another 30 countries - spare parts and pumps are available worldwide.



# ideal for safe fluid handling

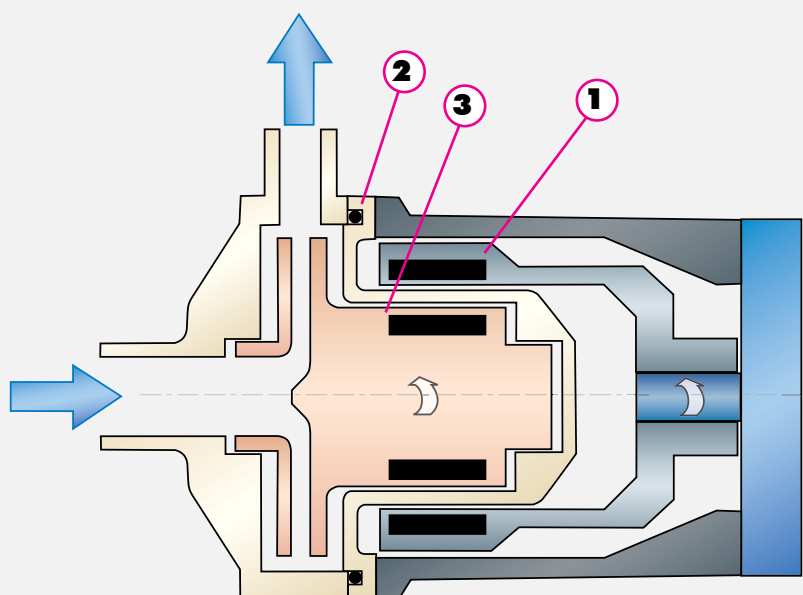


- Magnetic power transmission – no mechanical seal problems
- No leakage – safe working environment and environmental friendly
- Safe handling of hazardous fluids – seal less pump
- No poisonous or dangerous va-pours – hermetic system
- Economical operation – high degree of efficiency and no waste of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

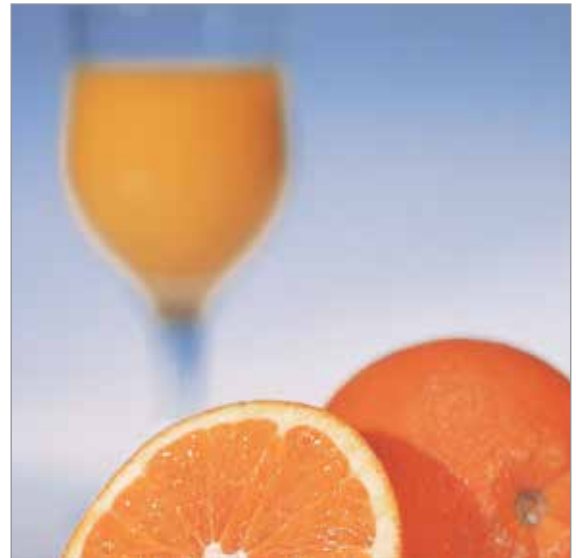
## How the magnetic drive pumps function

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.

1. Drive magnet, connected to the motor
2. Isolation shell (rear housing) separating the liquid side from the atmosphere
3. Impeller magnet assembly, driven by the drive magnet







# Wide range of applications

*CTM pumps are used in most industries where liquids are pumped. The pumps handle many types of low and normal viscous clean liquids such as chemical aggressive and toxic.*

## **Chemical stockists**

Transfer of various chemicals from storage tanks to smaller containers

## **Surface treatment**

Transfer, filtering and circulation of surface treatment baths

## **Food and beverage**

Pumping of CIP detergent used for cleaning of pipes and other food process equipment

## **Water treatment**

Dosing of acids and alkalis used as cleaning chemicals in nanofiltration

## **Chemical manufacture**

Pumping of chemicals in industrial detergent equipment

## **Demineralizing**

Demi-water circulation and transfer in many industrial applications

## **Photo processing**

Transfer of photo develop chemicals and inclusion in processing machines

## **Liquid crystal manufacture**

Pumping of concentrated acids and alkalis

# compact but powerful

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

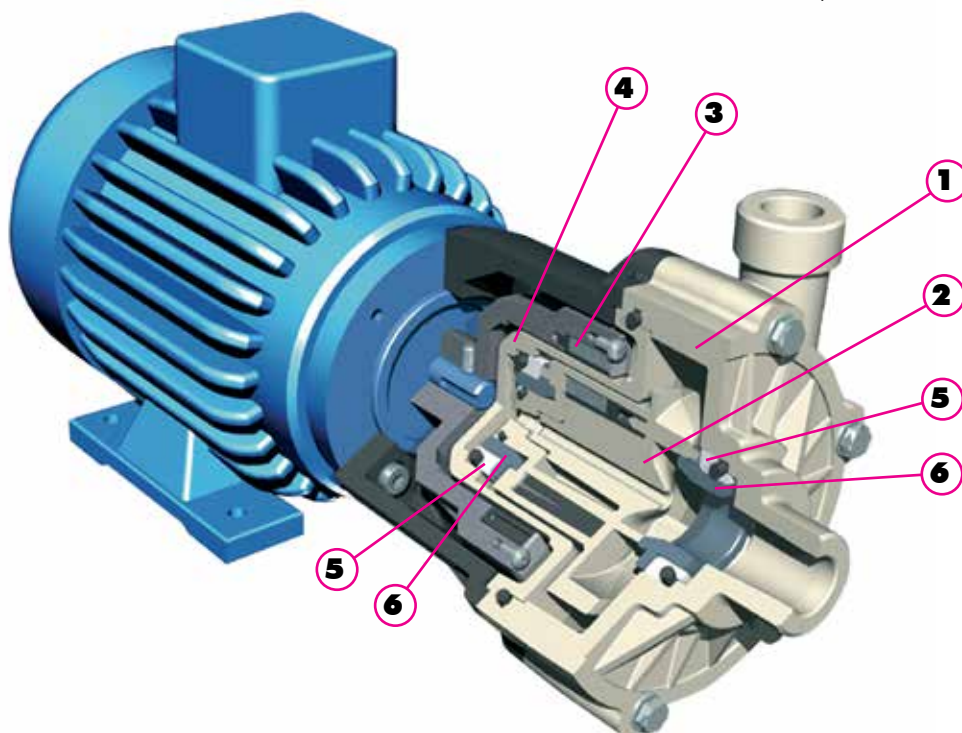
## Non-metallic pumps

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 (Poly-Vinylidene DiFluoride) version has the superior chemical resistance and allows temperatures up to 80°C.

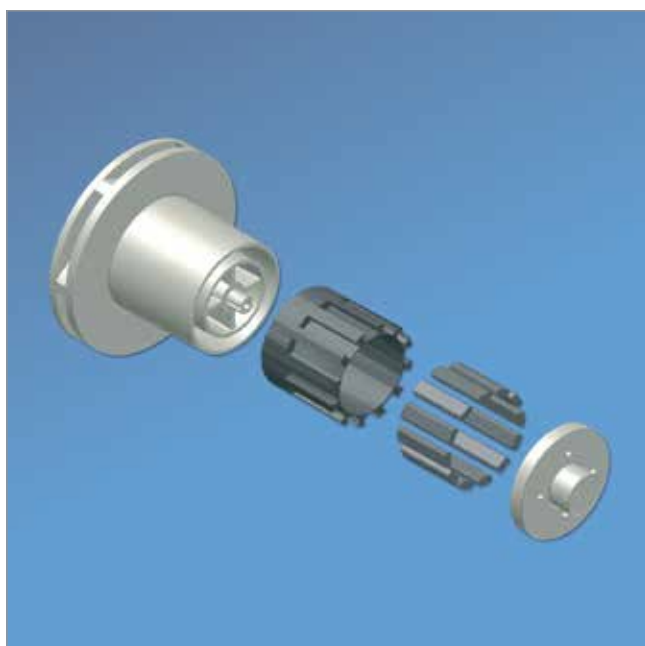
## The reliable design without shaft

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.



### Details of CTM

1. Pump casing
2. Impeller (with magnet)
3. External magnet (drive)
4. Isolation shell (rear casing)
5. Static bushing
6. Rotating bushing



## Excellent performance with magnet cage system

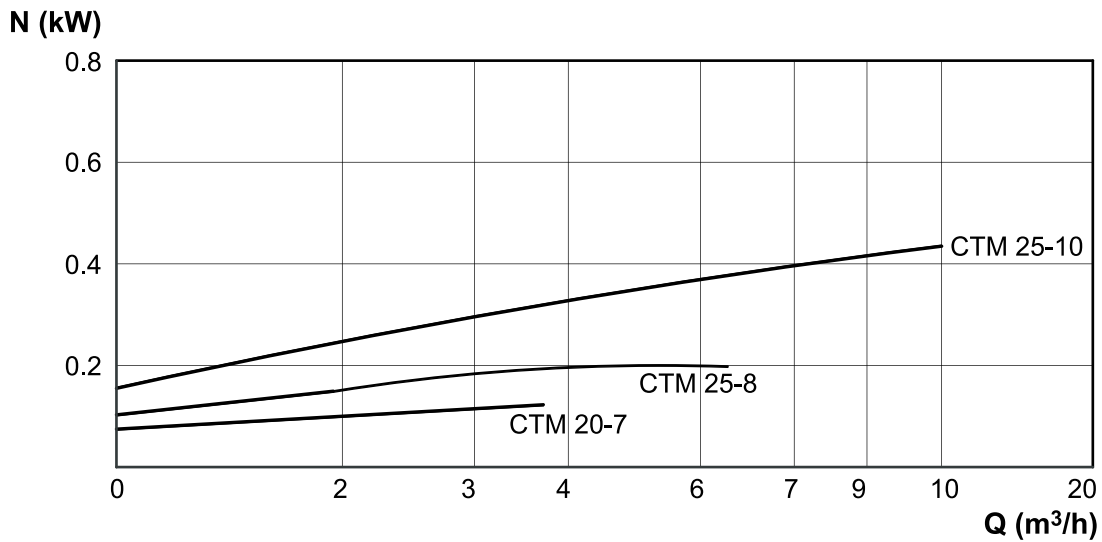
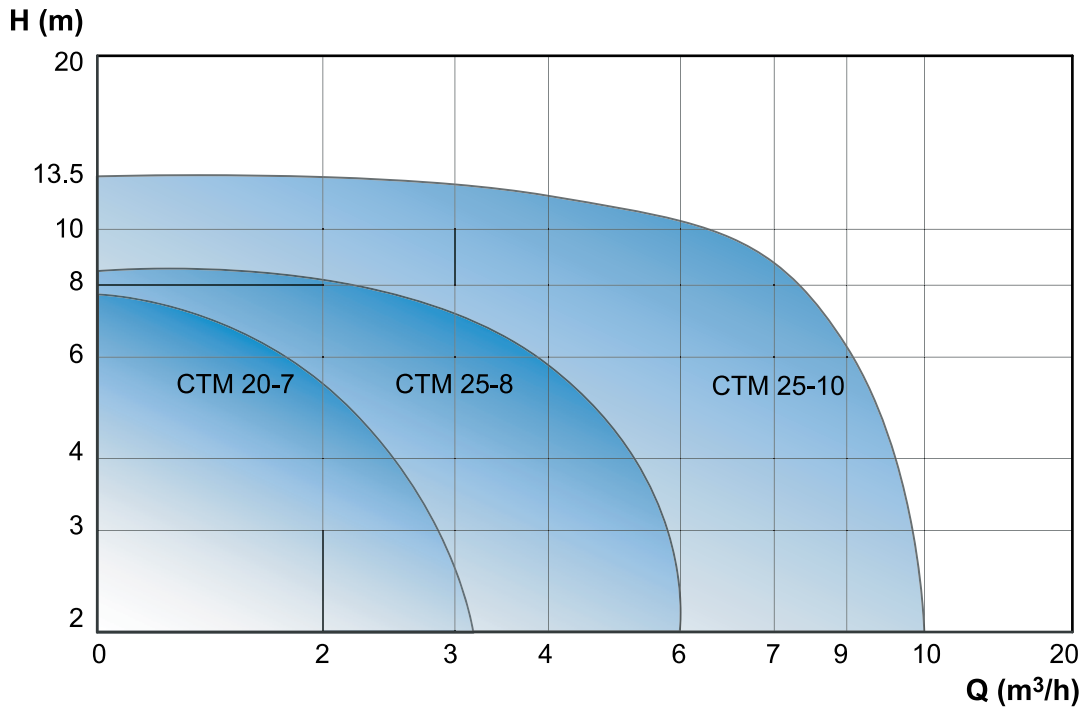
The magnets are totally encapsulated in their cage with the unique system that avoids the use of resins and glue. This grants a safe system with better performance at high temperatures. Furthermore the impeller is injection moulded, resulting in excellent performance and no weak points. CTM 20-7 has an open impeller while models CTM 25-8 and CTM 25-10 have closed impellers.

## The 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.

# performance curves

Performance curves are based on 2900 rpm motor speed.  
Please contact us for individual detailed performance curves.

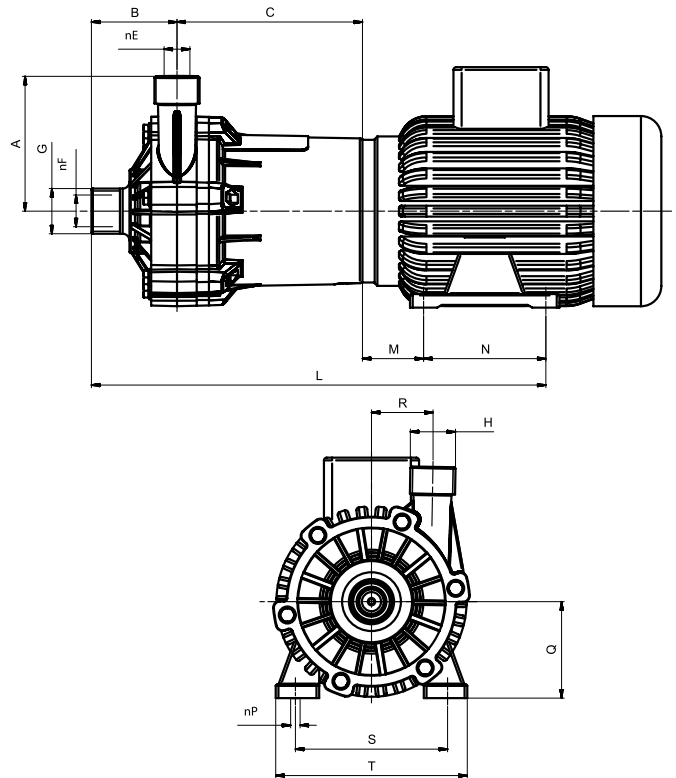


H = Head in meter  
Q = Flow in m³/h  
N = Required motor power in kW

# technical data

## Dimensions

	CTM 20-7	CTM 25-8	CTM 25-10
A	70	90	100
B	48	58.5	63
C	93.5	100.5	136.5
ØE	15	18	18
ØF	15	18	18
G	3/4"	1"	1"
H	3/4"	1"	1"
L	248.5	279	334.5
M	36	40	45
N	71	80	90
ØP	5.5	7	7
Q	56	63	71
R	35	39.5	43.5
S	90	100	112
T	112	126	141
<b>Motor</b>			
Power	0.12 kW	0.25 kW	0.55 kW
Size	56	63	71
<b>Flange connections (optional)</b>			
Inlet	-	DN25	DN25
Outlet	-	DN25	DN25



Dimensions in mm where other is not indicated

## General characteristics

Temperature range	PP pumps: 0°C .... +70°C PVDF pumps: 0°C .... +80°C
System pressure rating	PP pumps: PN4 at 20°C, PN2 at 70°C PVDF pumps: PN4 at 20°C, PN2 at 80°C
Viscosity	200 cSt max
Solids	2% max concentration in weight. Hardness 800 V <sub>k</sub> / size 150 µm
Motor	IEC standard, 3x380 VAC (other voltage upon request), 2900 rpm, IP55, frame B3/B14

## Ordering a CTM pump

CTM magdrive centrifugal pump

Pump size  
(Outlet mm - impeller cm)  
20-7  
25-8  
25-10

Motor power  
01 = 0,12 kW (CTM 20-7)  
02 = 0,25 kW (CTM 25-8)  
05 = 0,55 kW (CTM 25-10)

**CTM 25-10 P 1V**

**05 P 4**

Motor options  
blank\* = 3-phase, 3x380V, IP 55  
P = 1-phase motor

Material pump housing

P = PP (polypropylene)  
K = PVDF (polyvinylidene fluoride)

Special options

1 = Casing O-ring  
blank\* = EPDM for PP pump, FKM for PVDF pump  
E = EPDM (if used in PVDF pump)  
V = FKM

2 = Static bushings

blank\* = Al<sub>2</sub>O<sub>3</sub> (ceramic)  
S = SiC (silicone carbide)

3 = Rotating bushings

blank\* = PTFE-graphite  
S = SiC (silicone carbide)

4 = Connection options

blank\* = BSP external threads  
F = Flanged DIN PN10 or ANSI 150

Poles on motor

blank\* = 2 poles (~2900 rpm)  
4 = 4 poles (~1450 rpm)

# Please contact us at your nearest Tapflo office

Tapflo has approximately 50 sales offices spread over more than 20 countries. In addition to this we are represented by independent distributors in about another 30 countries.

- Australia ■ Belarus ■ Belgium ■ Bosnia ■ Brazil ■ Bulgaria ■ Chile ■ China ■ Colombia ■ Croatia ■ Czech/Slovakia ■ Denmark ■ Ecuador ■ Estonia ■ Finland ■ France ■ Greece ■ Germany ■ Hong-Kong ■ Hungary ■ India ■ Indonesia ■ Iran ■ Ireland ■ Israel ■ Italy ■ Kazakhstan ■ Latvia ■ Lithuania ■ Macedonia ■ Malaysia ■ Montenegro ■ The Netherlands ■ New Zealand ■ Norway ■ Poland ■ Philippines ■ Romania ■ Russia ■ Singapore ■ Slovenia ■ South Africa ■ Spain ■ Sweden ■ Switzerland ■ Syria ■ Taiwan ■ Thailand ■ Turkey ■ Ukraine ■ United Arab Emirate ■ United Kingdom ■ USA

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