

tapflo®

# CTM MAGNETIC DRIVE CENTRIFUGAL PUMPS

edition 2015 rev 1



» All about your flow

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

## All about your flow. Everywhere.

Tapflo is a leading pump manufacturer with the ambition to provide a wide range of premium products for various industrial applications. Tapflo is represented by own companies and independent distributors in more than 60 countries spread over the world on 6 continents – products and spare parts are available worldwide. The headquarters are situated in Sweden.



### About Tapflo

Tapflo Group is an independent, Swedish, family owned, manufacturer and global supplier of Air operated diaphragm pumps, centrifugal pumps and other industrial process equipment.

The company was founded in Kungälv, Sweden in 1980 and has since then been working with design and manufacture of thermoplastic, metal and sanitary series diaphragm pumps and also with complete range of centrifugal pumps and industrial equipment. After years of dynamic development the company evolved into Tapflo Group with worldwide operations.

### Quality certified

At Tapflo we believe that quality is one of the highest values, both for our customers as well as our employees. As a result, we comply with various globally recognised certification and quality control institutions. Many of our products comply with EC ATEX directives for equipment intended for use in explosion hazardous environments.

The aseptic series is EHEDG certified (European Hygienic Engineering & Design Group), the pharmaceutical series has USP VI approval.

All our products are obviously CE marked and followed by our comprehensive instruction manuals. Tapflo manufacturing process is certified according to ISO 9001:2009.



### Our values

#### ■ Long term engagement is our core

Our aim is to continuously provide premium products according to evolving needs of our customers. That is why we see each customer relationship as a long term commitment.

#### ■ Local means on your terms

Tapflo is your global partner providing local support. No matter where your plant is located you can expect us to support you locally.

#### ■ Flexibility the foundation of good service

We are prepared to deal with reality, knowing that in practice this means answering questions, offering solutions and supplying spare parts with a minimal loss of time.

#### ■ Customizing to bring the product to the needs

Our intention is always to help our clients find the most cost effective solutions to increase their company's efficiency.

If this means changing the design of the pump we see it as a challenge - not a problem.

#### ■ To produce is to develop

When you are actively involved in the manufacturing of a product, it is almost impossible not to discover ways to improve it. This allows us to frequently offer solutions that are even more sustainable and efficient.

# CTM Magnetic Drive Pumps

## ideal for safe fluid handling

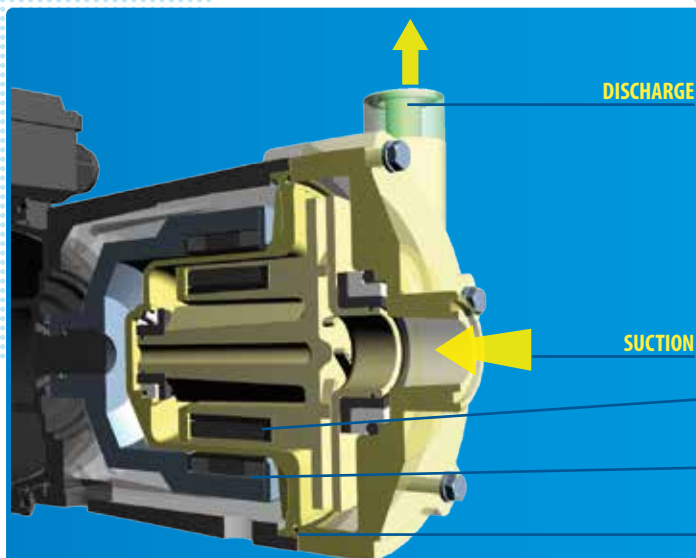
Tapflo CTM horizontal centrifugal pumps are pumps of centrifugal type where the power from the motor is transmitted to the centrifugal impeller by means of a magnetic coupling.

CTM pumps are designed and manufactured for chemical transfer and circulation surface treatment industries.

CTM is a perfect choice for a chemically corrosive and toxic liquids.

### ■ Features & Benefits

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



### ■ 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



### Perfect pump

for clean and thin liquids like pure chemicals, acids and alkalis.



## 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.

### Transfer of chemicals

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

### Demineralization

Demi-water circulation and transfer in many industrial applications

### Photo processing

Transfer of photo development 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.

### 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

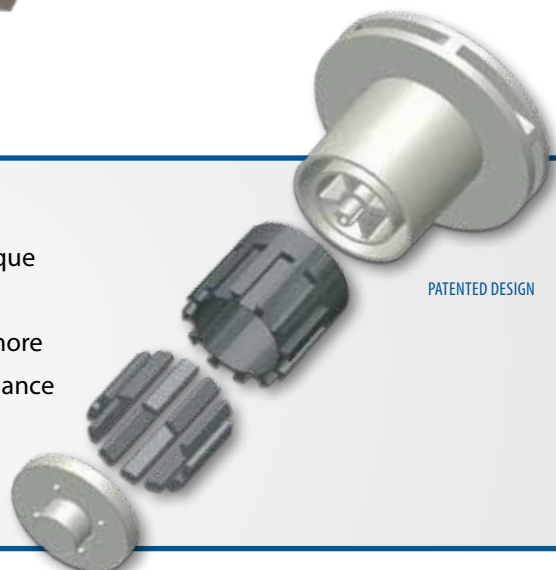
Our magnets in NdFeB (Neodymium-iron-boron) with our unique magnet cage system have a superior strength also under demanding circumstances. The power from the drive is transmitted even at high temperatures and with high specific gravity liquids. Furthermore the robust steel frame for the external magnet 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 DiFluoride) version has superior chemical resistance and allows temperatures up to 80°C.

### Excellent performance with magnet cage system

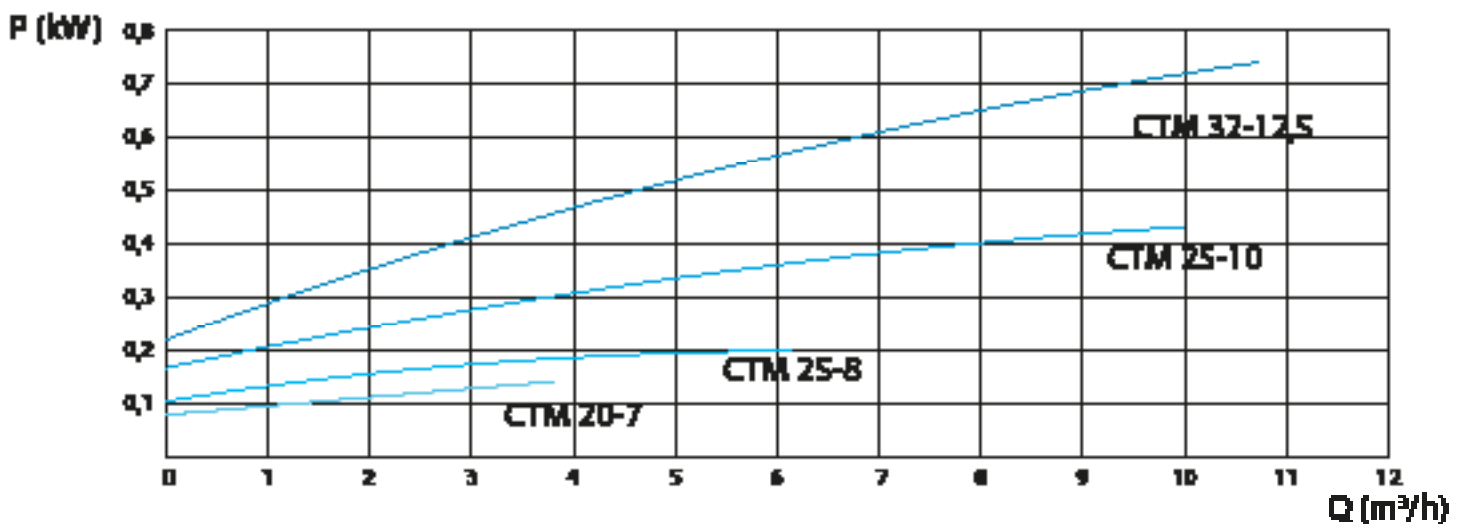
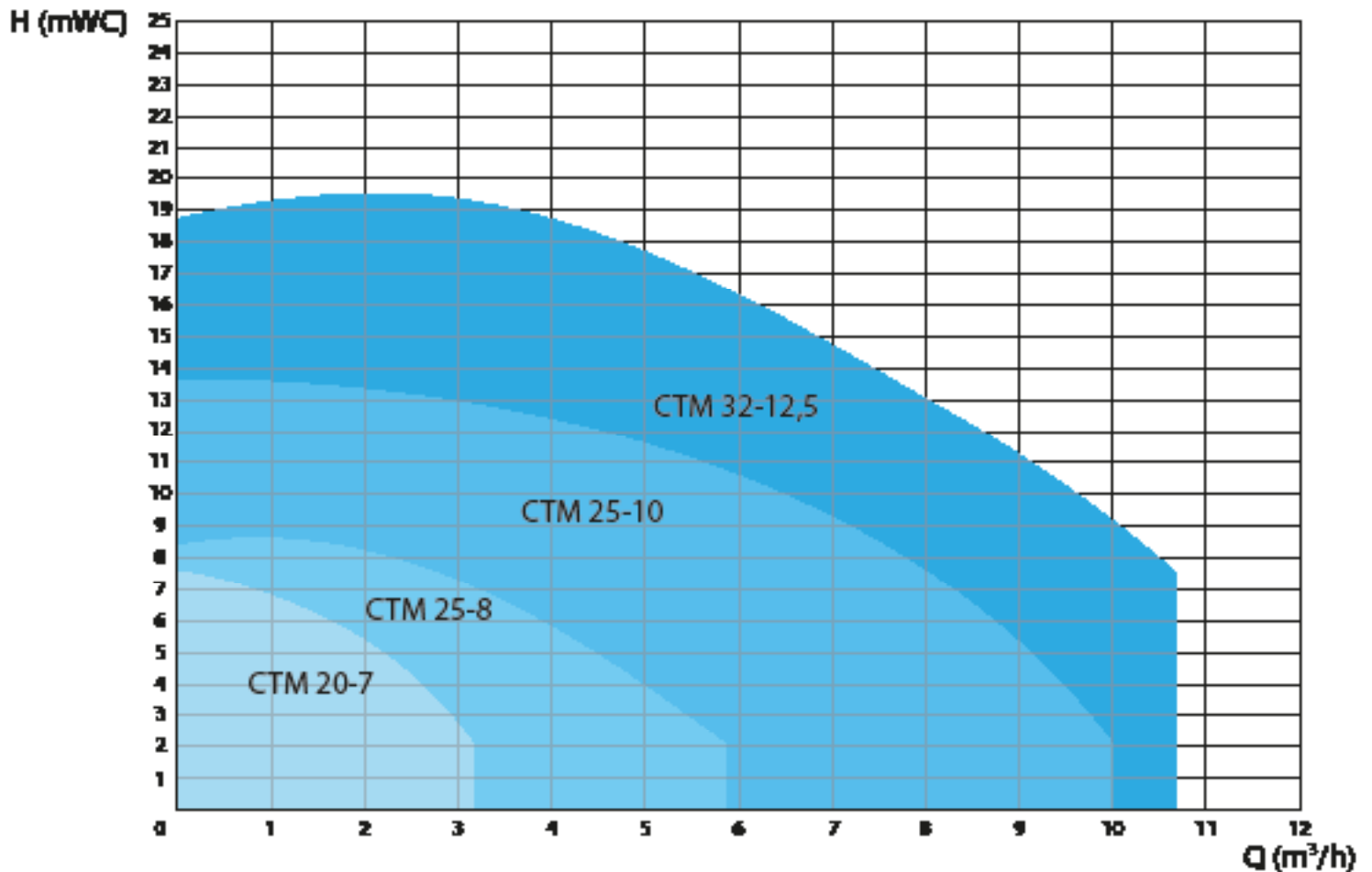
The magnets are totally encapsulated in their cage with the unique system that avoids the use of resins and glue. This grants a safe system with better performance at high temperatures. Furthermore the impeller is injection moulded, resulting in excellent performance and no weak points. CTM 20-7 has a semi-open impeller while models CTM 25-8, CTM 25-10 and CTM 32-12,5 have closed impellers to obtain best pumping parameters.



## Performance curves

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

H = Head in mWC  
Q = Flow in m<sup>3</sup>/h  
N = Required motor power in kW



Changes reserved without notice



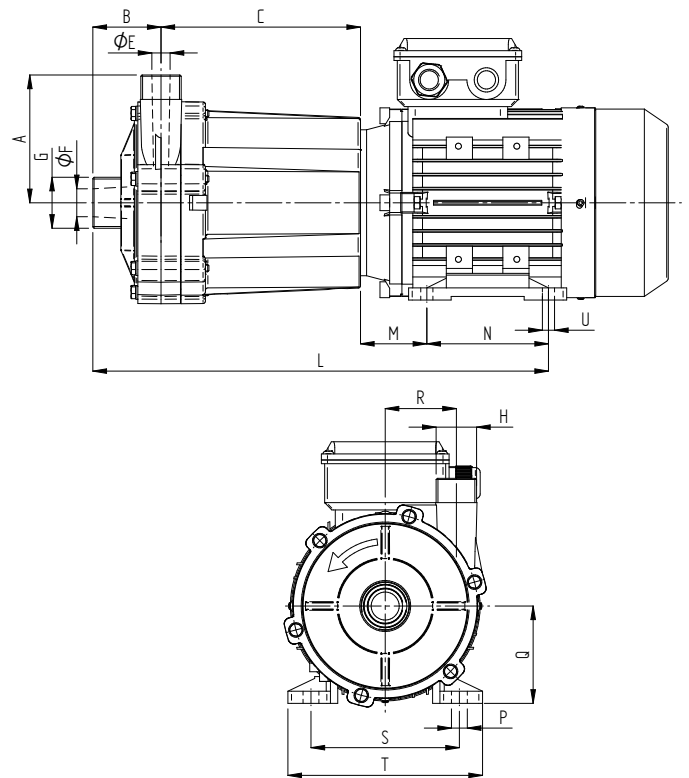
**NEW CTM 32-12,5**  
Currently the all new, more powerful  
CTM pump is being introduced

# Technical data

## Dimensions

	CTM 20-7	CTM 25-8	CTM 25-10	CTM 32-12.5 <small>NEW</small>
A	70	90	100	105
	2.76	3.54	3.94	4.13
B	48	58.50	63	56
	1.89	2.30	2.48	2.20
C	93.5	100.5	136.5	164
	3.68	3.96	5.37	6.46
ØE	15	18	18	15
	0.59	0.71	0.71	0.59
ØF	15	18	18	23
	0.59	0.71	0.71	0.91
G	¾"	1"	1"	1 ¼"
	¾	1	1	1 ¼
H	¾"	1"	1"	1"
	¾	1	1	1
L	248.5	279	334.5	374.5
	9.78	10.98	13.17	14.74
M	36	40	45	54.5
	1.42	1.57	1.77	2.15
N*	71	80	80	100
	2.80	3.15	3.15	3.94
P*	9	10	10	13
	0.22	0.28	0.28	0.51
Q	56	63	71	80
	2.20	2.48	2.80	3.15
R	35	39.5	43.5	58.5
	1.38	1.56	1.71	2.30
S*	90	100	112	125
	3.54	3.94	4.41	4.92
T	112	126	141	160
	4.41	4.96	5.55	6.3
U*	5,5	7	7	10
	0.22	0.28	0.28	0.39
MOTOR				
POWER	0.12 kW	0.25 kW	0.55, 0.75 kW	0.75, 1.1 kW
SIZE	56	63	71	80
OPTIONAL CONNECTIONS				
FLANGE	-	DN25	DN25	DN32 / DN25
HOSE	-	Ø20	Ø 20	Ø32 / Ø20

Dimensions in mm (where other is not indicated) | Dimensions in inch (where other is not indicated)



## General characteristics

<b>Temperature range</b>	PP pumps: 0°C - 70°C PVDF pumps: 0°C - 80°C (CTM20); 0°C - 90°C (CTM25, CTM32)
<b>System pressure rating</b>	CTM20: PP pumps: PN4 at 20°C, PN2 at 70°C PVDF pumps: PN4 at 20°C, PN2 at 80°C CTM25 and CTM32: PP pumps: PN6 at 20°C; PN2 at 70°C PVDF pumps: PN6 at 20°C; PN2 at 90°C
<b>Viscosity</b>	200 cSt max
<b>Motor</b>	IEC standard, 3x380 VAC (other voltage upon request), 2900 rpm, IP55, frame B3/B14

## 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

I. CTM = Tapflo magnetic drive centrifugal pump

II. Pump size: 20-7 | 25-8 | 25-10 | 32-12.5

III. Pump housing material:

P = PP (Polypropylene)

K = PVDF (Polyvinylidene fluoride)

IV. Pump options:

1. Casing O-ring:

blank\* = EPDM for PP, FKM for PVDF pump

F = FEP / Silicone

V = FKM

2. Static bushing:

blank\* = Al2O3 (ceramic)

S = SiC (silicone carbide)

3. Rotating bushing:

blank\* = PTFE-graphite

S = SiC (silicone carbide)

4. Connection options:

blank\* = BSP external thread

F = Flange DIN PN10 (CTM20, CTM25); PN16 (CTM32)

H = Hose connection

\* = standard execution

V. Motor power / IEC mechanical size:

01 = 0.12 kW / 56

02 = 0.25 kW / 63

05 = 0.55 kW / 71

07 = 0.75 kW / 80

11 = 1.1 kW / 80

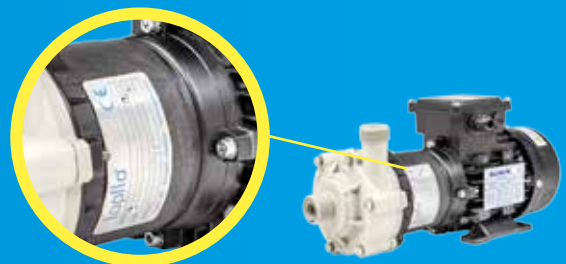
VI. Motor options

P = 1-phase motor (220/230 VAC)

V = 500 V motor

T = PTC motor protection

F60 = 60 Hz motor



Ask us for complete pump code with all available options and executions. Changes reserved without notice.



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## Tapflo products and services are available in 64 countries on 6 continents.

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

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