

tapflo®

# CTM MAGNETIC DRIVE CENTRIFUGAL PUMPS

2020 | 1



» All about your flow™

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

## » 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.

# 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.

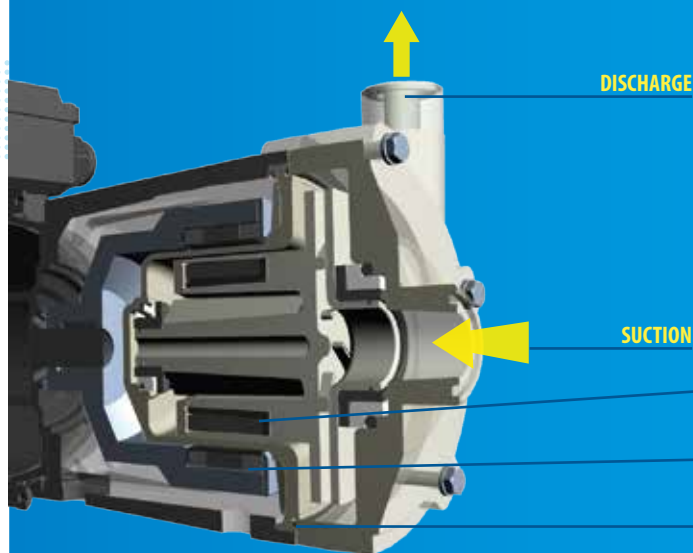
CTM pumps are designed and manufactured for transfer of chemicals and circulation in surface treatment industry.



## 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

Fluid transfer in water treatment installations.

### 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



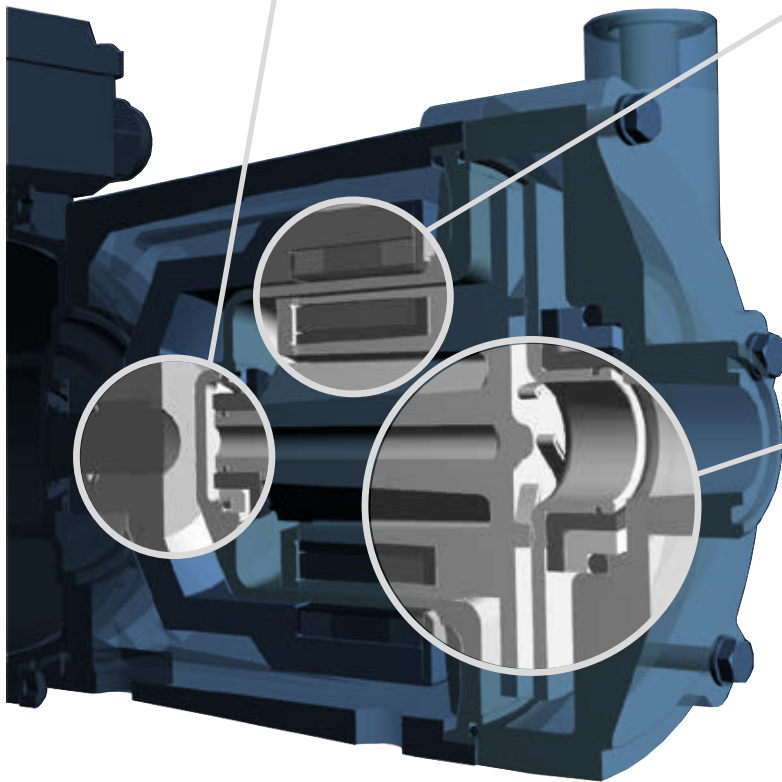
## Compact but powerful

### 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**.

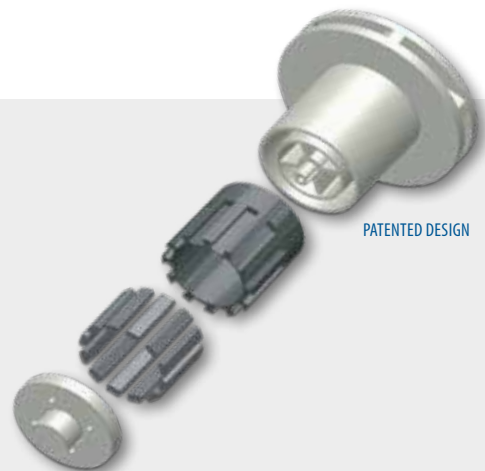
The version in **PP-GF** (glass fibre reinforced polypropylene) provides **great mechanical strength** and allows liquid **temperatures up to 70°C**.

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

### Excellent performance with magnet cage system

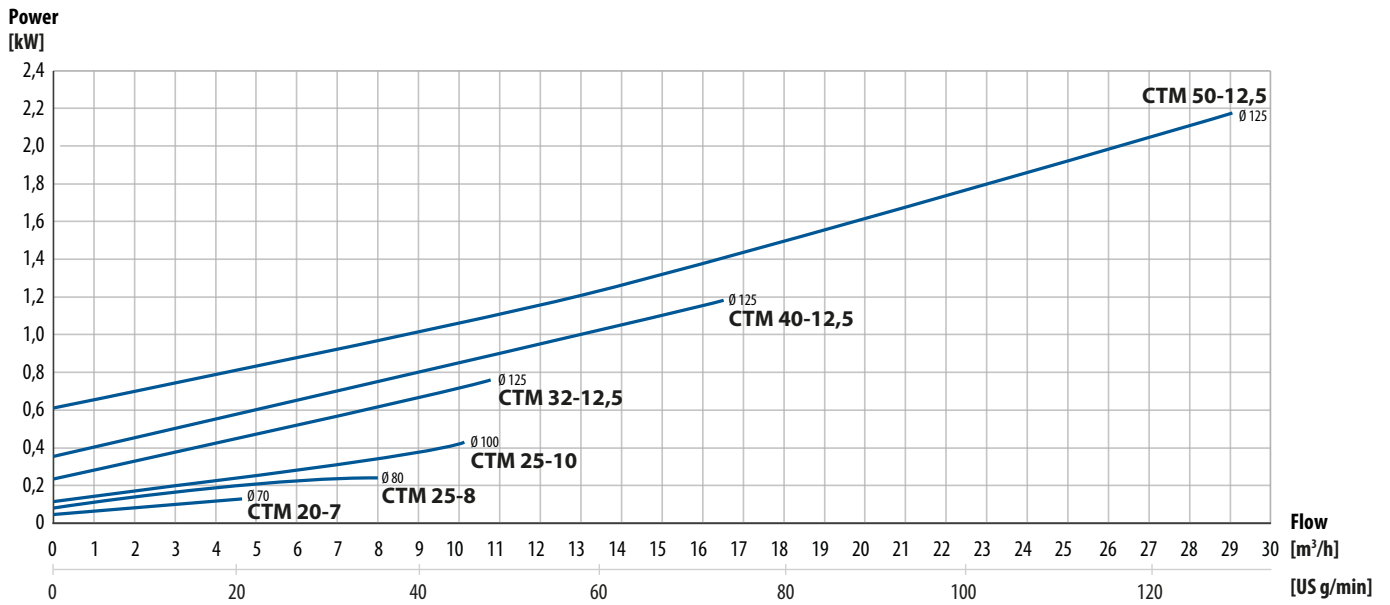
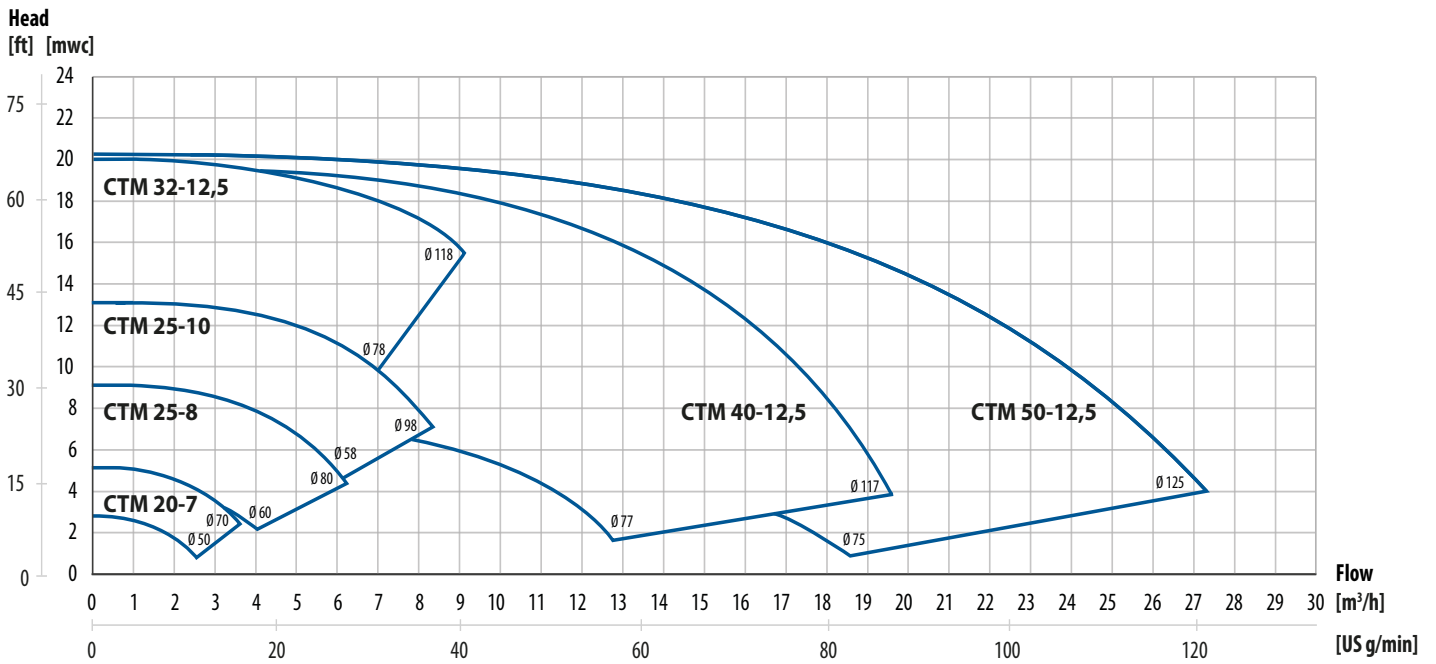
The magnets are encapsulated in their cage with the unique system that avoids the use of resins and glue.

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.



# Performance curves

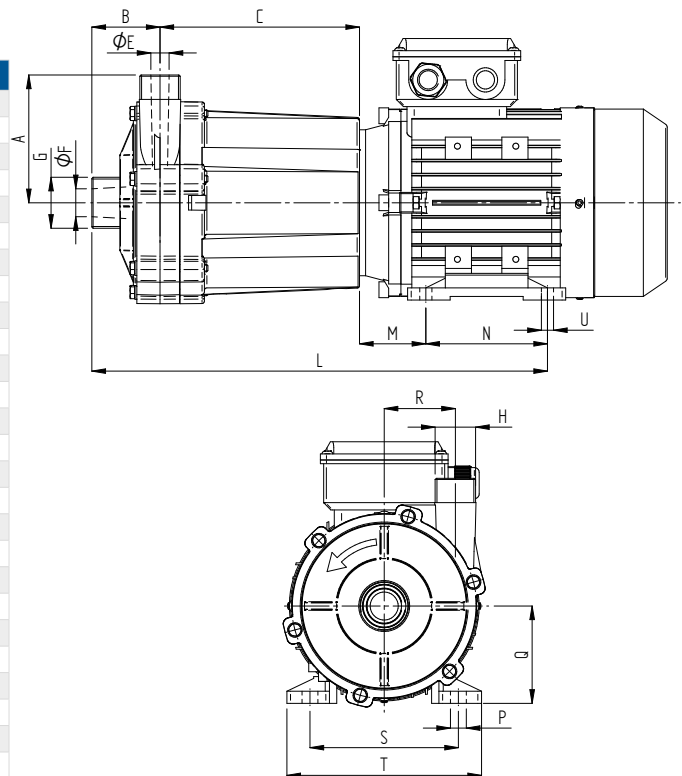
The performance curves are based on water. (T=20 °C, p=1000 kg/m, n=2900 rpm)



# Technical data

## Dimensions

Model	CTM20-7	CTM25-8	CTM25-10	CTM32-12.5	CTM40-12.5	CTM50-12.5	
A	70	90	100	105	105	110	
B	2.76	3.54	3.94	4.13	4.13	4.33	
	48	58.50	63	56	56.5	54	
C	1.89	2.30	2.48	2.20	2.22	2.13	
	93.5	100.5	136.5	164	165	189	
ØE	3.68	3.96	5.37	6.46	6.50	7.44	
	15	18	18	15	23	30.8	
ØF	0.59	0.71	0.71	0.59	0.91	1.21	
	15	18	18	23	30.5	42	
G	0.59	0.71	0.71	0.91	1.20	1.65	
	¾"	1"	1"	1 ¼"	1 ½"	2"	
H	¾	1	1	1 ¼	1 ½	2	
	¾"	1"	1"	1 ¼"	1 ½"	1 ½"	
L	¾	1	1	1 ¼	1 ½	1 ½	
	248.5	279	334.5	374.5	402.5	446	453
M	9.78	10.98	13.17	14.74	15.85	17.56	17.83
	36	40	45	54.5	56	63	70
N*	1.42	1.57	1.77	2.15	2.20	2.48	2.76
	71	80	80	100	125	140	140
P*	2.80	3.15	3.15	3.94	4.92	5.51	5.51
	9	10	10	13	14	15	15
Q	0.22	0.28	0.28	0.51	0.55	0.59	0.59
	56	63	71	80	90	100	112
R	2.20	2.48	2.80	3.15	3.54	3.94	4.41
	35	39.5	43.5	58.5	58.5	52	52
S*	1.38	1.56	1.71	2.30	2.30	2.05	2.05
	90	100	112	125	140	160	190
T	3.54	3.94	4.41	4.92	5.51	6.30	7.48
	112	126	141	160	170	200	230
U*	4.41	4.96	5.55	6.30	6.69	7.87	9.06
	5.5	7	7	10	10	12	12
U*	0.22	0.28	0.28	0.39	0.39	0.47	0.47
	MOTOR						
POWER	0.12 kW	0.25 kW	0.55kW	0.75, 1.1 kW	1.5 kW, 2.2 kW	3.0 kW	4.0 kW
SIZE	56	63	71	80	90	100	112
IMPELLER							
NOMINAL DIAMETER	70	80	98	118	117	125	
OPTIONAL CONNECTIONS							
FLANGE	-	DN25	DN25	DN32 / DN25	DN40 / DN32	DN50 / DN40	
HOSE	-	Ø25	Ø 25	Ø32 / Ø25	Ø40 / Ø32	Ø50 / Ø40	



## 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, CTM42, CTM50)
<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, CTM32, CTM40 and CTM50: 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, 3x400 VAC (other voltage upon request), 2900 rpm, IP55, frame B34

Dimensions in mm (where other is not indicated)

## CTM Pump code

I. CTM II. 25-10 III. P IV. 1V V. 05 VI. P

**I. CTM** = Tapflo magnetically driven centrifugal pump

**II. Pump size:** 20-7 | 25-8 | 25-10 | 32-12.5 | 40-12.5 | 50-12.5

**III. Pump housing material:**

P = PP (Polypropylene)

K = PVDF (Polyvinylidene fluoride)

**IV. Pump options:**

1. All O-ring:

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

F = FEP / FHM

V = FKM

E = EPDM

K = FFKM

2. Static bushing:

blank\* = Al<sub>2</sub>O<sub>3</sub> (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, CTM40, CTM50)

H = Hose connection

A = ANSI flange

\* = standard execution

**5. Other options:**

I = Optional impeller diameter [mm]

M = Motor cover - industrial version

HL = Horizontal pump outlet

**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

15 = 1.5 kW / 90

22 = 2.2 kW / 90

30 = 3.0 kW / 100

40 = 4.0 kW / 112

**VI. Motor options**

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

V = 500 V motor

T = PTC motor protection

F60 = 60 Hz motor

\* = standard execution



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

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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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