

# CHEMICHAL MAGNETIC PUMPS

## TITAN









The separation of liquid chamber/atmosphere by means of an isolation shell is the best solution to pump aggressive chemical, high purity liquids and liquids difficult to seal. Hermetic seal-less injection moulded thermoplastic pumps are the best solution for light duty applications.

Magnet drive centrifugal pumps series titan are made of Polypropylene and PVDF, and are suitable for high corrosive liquids. Thanks to the innovative mag drive system, TITAN series reduce the risks of leakage and emissions and the maintenance costs. The transmission of the motion occurs through magnetic joints without any mechanical seal and this design guarantees the maximum safety and efficiency.

The pumped liquid has to be clean and without solids in suspension

## CHEMICHAL



Titan Pump is a professional-level manufacturer of nonmetallic magnetic pumps, which has continuously launched highperformance chemical process pumps for more than 10 years.

The series of fluorine-lined magnetic pumps and fluoroplastic magnetic pumps have large flow, high head and energy-saving technology ahead of peers, which are widely used for safe and stable transportation of chemical potion under various harsh conditions.

## TITAN 0.5HP-7.5HP



#### **Product Feature**

energy-saving technology breakthroughs bring revolutionary value upgrades;

The volume is reduced by 50%: the application of new technology has completely subverted the structural design of plastic magnetic pump, and the overall size has been greatly reduced;

Non-explosive magnetic patent: the first in China to master the internal magnetic coating integrated injection molding technology to avoid internal magnetic cracking caused by liquid infiltration.

Can be matched with intelligent three-proof device to achieve the effects of anti-dry running, anti-overload and anti-phase shortage, and improve the durability of products.

### CTP-F-20-12-K-G-E-5-V38-A-F-H

Model description























- Model No.: CTP
- Pump material: F-PPH, P-PVDF
- Inlet and outlet caliber: 20-25\*25mm, 25-40\*25mm, 40-40\*40mm; 45-50\*40mm; 50-50\*50mm; 55-65\*50mm; 60-65\*65mm
- Power: 12-1/2HP, 10-1HP, 20-2HP, 30-3HP, 50-5HP, 75-7.5 HP
- Pump shaft material: K-ceramic ,S-SSIC Silicon Carbide ,T-titanium materia
- Bearing material: G-graphite, S-SSIC silicon carbide, E-PTFE
- Sealing material: E-EPDM, V-VITON, F-KALREZ
- Frequency: 5-50Hz, 6-60HZ
- Voltage: V38-30/380V, V41-30/415V, V 44-30/440V, V 48-30/480V, V 66-30/660V, V 32-30/220V, V 22-10/220V
- Specific gravity of liquid: A-1.0-1.2, B-1. 3, C-1. 4, D-1. 5, E-1. 6, F-1. 7, G-1. 8, H-1. 9, 1-2.0 I
- Inlet and outlet form: F-flange, U-union, S-Screw
- Pump type: H-high head ,codeless-universal











## PRODUCT SPECIFICATION LIST

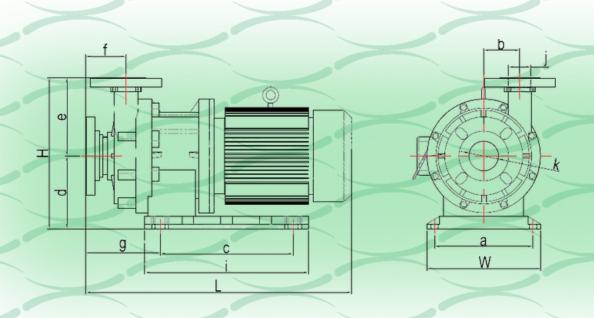
	Model	INLET AND	MAX. HEAD (m)				MAX. OW (L/min)		REFERENCE	POWERT		WEIGHT
-	MODEL	OUTLET (mm)			5	0Hz	60	Hz	SPECIFIC GRAVITY RANG			(Kg)
		, <i>,</i>	50Hz	60Hz	(L/min)	(m3/h)	(L/min)	(m3/h)		HP	KW	
	CTP-2012	25/25	16	17	103	6.2	103	6.2	<1.2	0.5	0.37	12.5
	CTP-2010	25/25	22	24	125	7.5	125	<b>7.</b> 5	<1.2	1	0.75	18.7
	CTP-2020	25/25	33	32	116	7	125	7.5	<1.2	2	1.5	24.8
	CTP-2030	25/25	38	46	125	7.5	125	7.5	<1.2	n	2.2	27.6
	CTP-4012	40/40	12	11	230	13.8	208	12.5	<1.2	0.5	0.37	11.9
	CTP-4010	40/40	18	17	267	16	275	16.5	<1.2	1	0.75	18.8
	CTP-2520	40/25	26	26	200	12	200	12	<1.2	2	1.5	26.4
	CTP-2530	40/25	37	36	233	14	233	14	<1.2	3	2.2	29.2
	CTP-4520	50/40	21	22	363	21.8	367	22	<1.2	2	1.5	25.6
-	CTP-4520H	50/40	27	27	300	18	283	17	<1.2	2	1.5	25.6
ĺ	CTP-4530	50/40	27	28	433	26	433	26	<1.2	3	2.2	28.6
-	СТР-4530Н	50/40	34	35	320	19.2	330	19.8	<1.2	3	2.2	28.6
	CTP-4550	50/40	35	36	483	29	500	30	<1.2	5	4	43.4
I	CTP-5020	50/50	20	23	476	28	467	28	<1.2	2	1.5	25.7
	CTP-5030	50/50	26	28	550	33	533	32	<1.2	3	2.2	28.5
	CTP-5050	50/50	37	37	567	34	625	37.5	<1.2	5	4	44.9
	CTP-5520	65/50	15	15	517	31	495	29.7	<1.2	2	1.5	27.2
	CTP-5530	65/50	21	22	600	36	617	37	<1.2	3	2.2	28.8
	CTP-5550	65/50	28	29	733	44	717	43	<1.2	5	4	30.2
	CTP-6020	65/65	12	12	583	35	567	34	<1.2	2	1.5	28.3
	CTP-6030	65/65	16	16	667	40	667	40	<1.2	3	2.2	31.8
	CTP-6050	65/65	21	21	783	47	750	45	<1.2	5	4	44.9
	CTP-6075	65/65	28	28	833	50	833	50	<1.2	7.5	5.5	51.3
											No.	

Medium temperature: -10 -+120 °C, medium specific gravity: 1-2, working environment temperature: -5 °C™+50 °C, maximum operating altitude: 2000m, maximum working pressure: 5Bar. Test basis: The above performance data corresponds to the normal speed of transportation of clean water at 25 °C. The performance error is 5%. The performance of a pump varies with the specific gravity and temperature of the fluid medium being transported

## PRODUCT SPECIFICATION

	Model	inlet and outlet		Head m)	Max.Capad	city(L/min)	Power(HP)	Weight(kg)	
		diameter (mm)	50Hz	60Hz	50Hz	60Hz			
	CTP-2012	25/25	16.12	15.33	150	150	0.5	14.5	
	CTP-4012	40/40	12.3	13	240	240	0.5	13.3	
	CTP-2010	25/25	22.09	23.46	180	180	1	19.1	
	CTP-4010	40/40	19	19.6	330	330	1	19.0	
	CTP-4520	50/40	24.4	25.2	450	450	2	25.7	
	CTP- 5020	50/50	24.4	25.3	450	450	2	26.5	
	CTP-4520H	50/40	27.6	30.6	250	150	2	25.7	
•	CTP-5020H	50/50	27.6	30.6	250	150	2	26.5	
	CTP-4530	50/40	20.6	21.0	F10	F10	2	27.9	
	CTP-5030	50/50	30.6	31.8	510	510	3	28.0	
	CTP-4530H	50/40	24.2	36.6	200	250	3	27.9	
	CTP-5030H	50/50	34.2	36.6	300	250	2	28.0	
	CTP-4550	50/40	25	20.4	F00	F00	-	38.6	
	CTP-5050	50/50	35	39.4	500	500	5	34.4	
	CTP-5530	65/50	20	20.1	600	600	3	29.6	
	CTP-5550	65/50	27.6	28.1	860	860	5	39.0	
	CTP-6020	65/65	14	15	900	850	2	27.7	
	CTP-6030	65/65	17	18	1050	1000	3	29.2	
	CTP-6050	65/65	21	23	1230	1250	5	39.2	

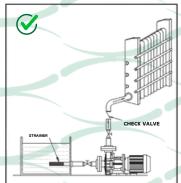
## SIZE SPECIFICATION



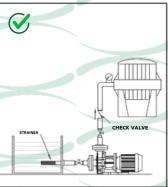
Model	L	Н	W	а	b	С	d	е	f	g	i	j	k
CTP-2012	453	261	191	146	65	132	119	142	88	170	207	20	20
CTP-4012	453	229	157	130	54	130	97	132	87.5	136	200	36.5	36.5
CTP-2010	468	254	191	127	65	131	114	140	90	161	207	20	20
CTP-4010	482	257	194	127	72	135	110	147	105	177	219	36.5	36.5
CTP-4520	536	286	261	207.5	80	200	120.5	165.5	96.5	160	275	36.5	44
CTP- 5020	534	283	261	207.5	80	200	120.5	162.5	95	160	275	44	44
CTP-4520H	536	286	261	207.5	80	200	120.5	165.5	96.5	160	275	36.5	44
СТР-5020Н	534	283	261	207.5	80	200	120.5	162.5	95	160	275	44	44
CTP-4530	536	286	261	207.5	80	200	120.5	165.5	96.5	160	275	36.5	44
CTP-5030	533	283	261	207.5	80	200	120.5	162.5	93	159	275	44	44
CTP-4530H	536	286	261	207.5	80	200	120.5	165.5	96.5	160	275	36.5	44
СТР-5030Н	533	283	261	207.5	80	200	120.5	162.5	93	159	275	44	44
CTP-4550	593	325	250	216	80	295	158	167	96	152	362	36.5	44
CTP-5050	594	323	263	217	80	296	157	166	96	160	355	44	44
CTP-5530	524	333	25	216	80	295	158	175	82	147	363	44	65.5
CTP-5550	590	333	250	216	80	295	158	175	89	159	363	44	65.5
CTP-6020	555	288	261	206	80	200	118	170	96	177	274	65.5	65.5
CTP-6030	550	288	261	206	80	200	118	170	96	177	274	65.5	65.5
CTP-6050	610	333	250	216	80	295	158	175	98	168	360	65.5	65.5

#### **INSTALLATION DIAGRAM**

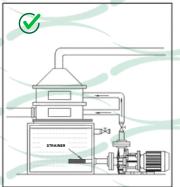
#### JSED IN HEAT EXCHANGER



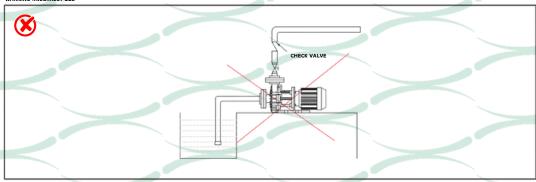
#### JSED IN REACTION TANK OR FILTER COMPRESSOR



#### USED IN WASTE GAS CLEANING TOWER



#### WARNING :INCORRECT USE



#### PRECAUTION FOR SAFE OPERATION

#### 1. Safety warning!

- 1) Running without cutting off the power will cause electric shock!
- ② Do not start the pump without connecting the ground wire and leakage protector!
- ③ Electrician operation should be carried out by professional personnel!
- ① When operating the pump, please wear protective equipment to prevent serious injury caused by chemical solution!
- (5) Operations related to toxic liquids may cause poisoning!
- Use the pump in strict accordance with the instructions and scope of use!
- ⑦ During operation, the surface temperature of motor and pump is very high, do not touch directly!
- It is forbidden to transform the pump without permission, otherwise serious accidents will be caused. If the pump is modified without permission or in accordance with the operating instructions, the company will not bear any loss caused by the user!
- ① There is a strong magnet in the magnetic drive pump. Its strong magnetic field will cause obvious damage to the person wearing the electronic device (i.e. electronic pacemaker, etc.)!

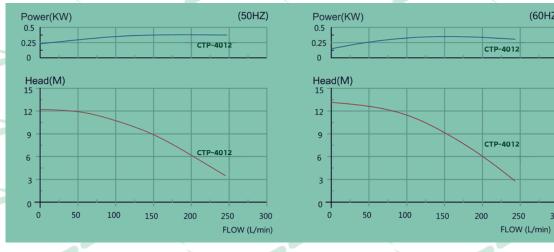
#### 2. Important note!

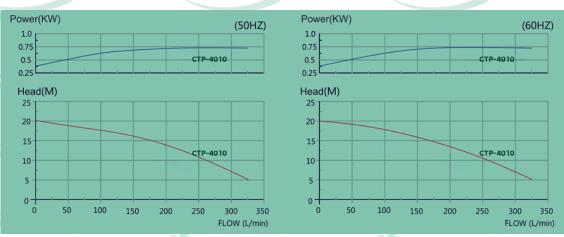
- ① No idling of the pump. The idling of the pump can make the parts inside the pump heat up by friction, which will damage the pump. Pump operation with suction valve fully closed is also considered as idling.
- ② In the process of operation, when dangerous signals and abnormal conditions are found, the operation shall be terminated immediately, and it shall be started after the exception is eliminated.
- ③ The operation and use of the pump must be carried out by qualified operators.
- ① The pump is only allowed to be used under the specified voltage, otherwise the pump will be damaged or fire will be caused.
- The use place of the pump shall be equipped with protective measures to prevent liquid splashing or leakage.
- ® Operations related to toxic liquids may cause poisoning, so it is necessary to ensure adequate ventilation at the operation site.
- $\ensuremath{{\mathbb T}}$  Do not scrape, damage, squeeze or stretch the cable with force. The use of damaged cables is likely to cause fire or electric shock.
- The covered pump is easy to cause fire or mechanical failure due to internal heat accumulation during operation.
- When a pump is under maintenance, pay attention to avoid other operators turning on the power supply switch due to mistakes. It is better to place a warning sign beside the power supply switch to inform that the pump is under maintenance.
  10. The liquid from the pump may be highly toxic and harmful chemicals, which must be drained to a special container for storage

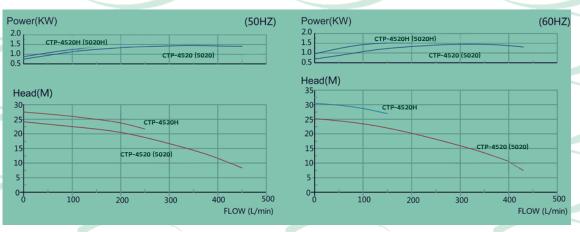
#### **PERFORMANCE CURVE**

(60HZ)

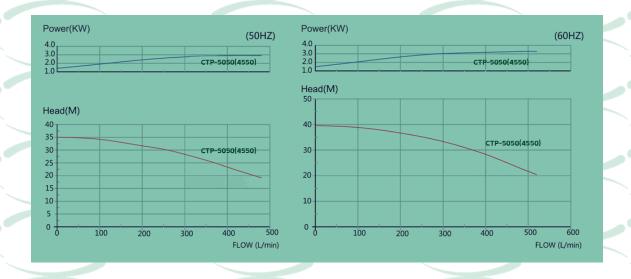
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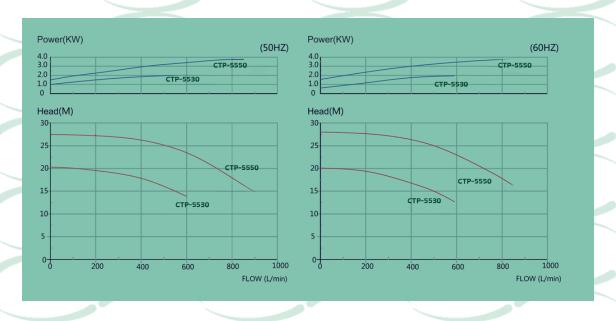


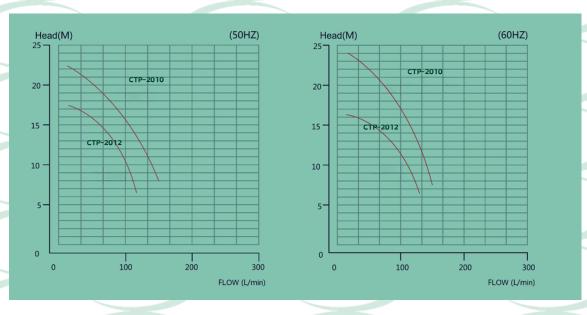


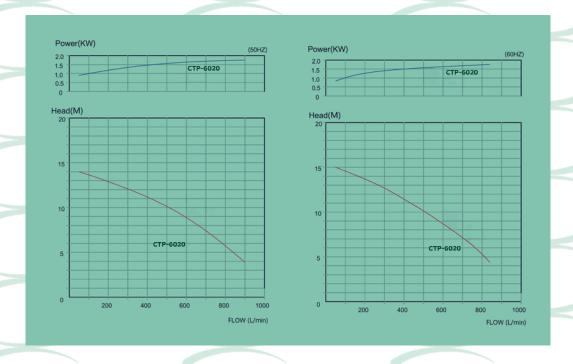


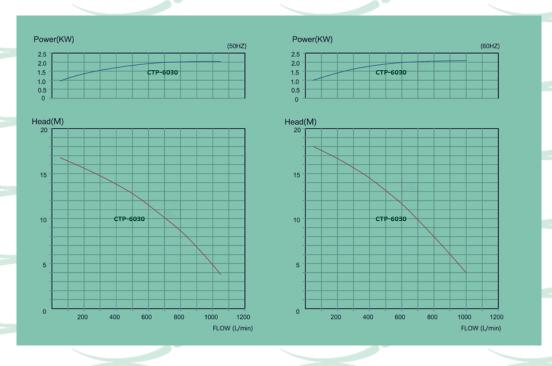


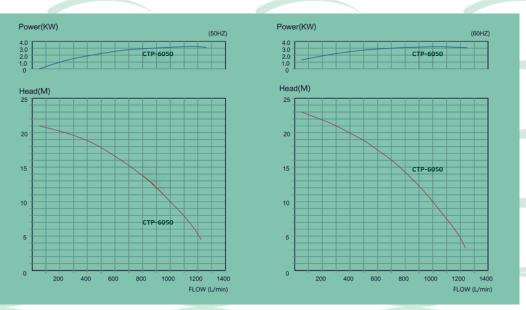












## product characteristics

- 1. The magnetic pump adopts the non-shaft-seal design, and the pump is completely sealed without leakage:
- 2. Equipped with anti idling device, so that the magnetic pump will not be damaged in case of no water idling for a long time, and improve the durability of the product;
- 3. The new design of flow passage can minimize the loss of products and improve the use efficiency
- 4 The applicable temperature shall be determined according to different chemical properties: GFRPP
- below 80  $^{\circ}\mathrm{C}$ , CFRPP below 80  $^{\circ}\mathrm{C}$ , PVDF below 100  $^{\circ}\mathrm{C}$ , CFRETFE below 150  $^{\circ}\mathrm{C}$ .

## product superiority



- 1. A variety of connection modes of front cover inlet and outlet are available;
- 2. The front and rear covers adopt convex point structure and flat gasket sealing ring to ensure excellent sealing effect;
- 3. Impeller deflection is lower than 0.2mm;
- 4. Passive magnets and plastic shells are injection molded at one time to ensure that there is no penetration forever.
- 5. The shaft core is made of 99% alumina and SSIC material;
- The gasket of the back cover is made of SUS304 material to enhance its temperature resistance and pressure resistance;
- 7. The connection between the motor and the pump head is a plastic injection molding integrated structure, which can prevent the corrosion of the connection caused by the leakage of acid and alkali gas and liquid;
- 8. The surface of drive magnet adopts resin paint baking, with better corrosion resistance. After dynamic balance test, the vibration of drive magnet is lower than 2.0mm/s;
- 9. The motor adopts international brand, with stable performance and ultra-quiet operation.

#### **Decomposition diagram of TITAN**



- 1 Inlet flange connector
- 2 Inlet flange
- 3 Inlet seal O-ring
- 4 Outlet flange connector
- 5 Outlet flange
- 6 Outlet seal O-ring
- 7 Front cover
- 8 O-ring

- 9 Impeller assembly
- 10 Bearing
- 11 Spindle
- 12 Rear cover
- 13 Back cover
- 14 Frame
- 15 Drive magnet
- 16 Motor

# Magnetic pumps performance advantage exploded view

The shaft is made of ceramic or SSIC, which is resistant to strong acids and alkalis and has good lubrication performance.

The bearing material is PTFE or SSIC, which is resistant to strong acids and alkalis and has good lubrication performance.

Magnet capsules are one-time plastic injection molded to ensure no penetration.

The impeller deflection is lower than 0.2mm, and the head and capacity are stable

The motor adopts intelligent microelectronic real-time online monitoring technology to achieve the fast circuit break protection of no-load, overload and phase loss to ensure the customer's positive production and operation needs.

7

Front and rear cover bumps, multi-stage sealing structure design to ensure excellent sealing effect.

Adopt high-strength SUS material to improve pressure resistance performance.

The drive magnet vibration is lower than 2.0mm/s, and the surface resin baking process ensures extremely strong anti-corrosion performance.

There are multiple choices of pump inlet and outlet connections

The connecting frame of the motor and the pump head is made of plastic steel, which can avoid the corrosion of the connecting frame caused by the leakage of acid, alkali gas and liquid. The magnetic pump is equipped with a microelectronic protector, and adopts intelligent microelectronic real-time online monitoring technology to achieve fast circuit breaking protection of liquid shortage and no load.



The magnetic pump is equipped with a microelectronic protector, using intelligent microelectronic real-time online monitoring technology, when the pump sucks debris, it realizes overload fast circuit breaking protection.

The magnetic pump is equipped with a microelectronic protector, using intelligent microelectronic real-time online monitoring technology, when the pump is phase loss, to achieve







The motor adopts intelligent microelectronic real-time online monitoring technology to achieve the fast circuit break protection of no-load, overload and phase loss to protect customers' normal production and operation needs.

anti-overload

anti-dry running

anti-phase lose

## **Product Advantage**

1.In case of dry running, overloading, or phase loss, it will power off the electricautomatically and make a beeping voice in 3 seconds.

2.It is small in size and does not take up space.

3. The cost is very small compared with the loss caused by man-made damage.

4. The horizontal pumps complied with the intelligent protection device that give you 100% trust. The motor adopts intelligent microelectronic real-time onlinemonitoring technology to achieve the fast circuit breakprotection of no-load, overload and phase loss to protectcustomers' normal production and operation needs. Product Feature 5