Chemical Mixer
CCM Type

CEMCO

PE square 1m³ tank MT type

In the process of patent application

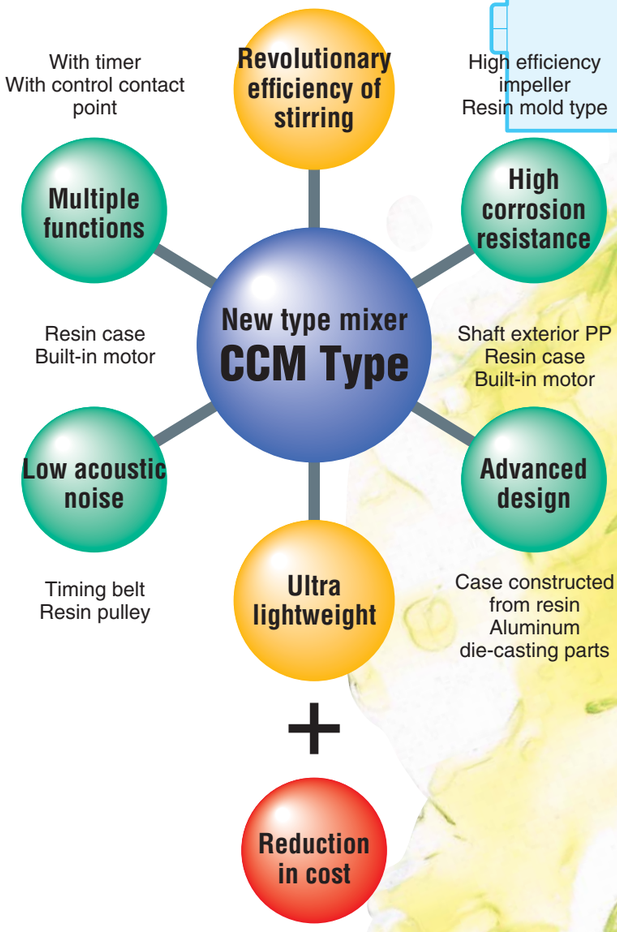
We present a new type of mixer.

The new CCM type of mixer is a mixer which was brought into development thanks to the unique design introduced by CEM CORPORATION and has a wide number of varied features.
We feel strongly that this product can make a significant contribution to a number of facilities such as all kinds of experimental facilities and water treatment plants.
We are sure you will be satisfied with this product.

The size of this product is approximately half of the size of that of conventional mixers

High efficiency impeller

Consisting of a body constructed from aluminum and resin, the weight is half or less than that of conventional mixers



Feature

● It has a large stirring capability thanks to a high efficiency impeller
The newly developed high efficiency impeller produces a large amount of stirring power.
By a combination of theory and experiment as well as the integration of ingenious manufacturing technologies from little known domestic high tech companies, the high efficiency new type impeller was born.

● Light weight
This product is of a weight which allows the mixer to be placed on polyethylene tanks and polyvinyl chloride tanks. The combination of engineering plastic and aluminum enables a reduction in the weight of the product.

● Corrosion resistance
In the case of conventional mixers, the corrosion resistance was increased by the application of a lining on the shafts and impellers.
In the case of this unit the realization of excellent corrosion resistance capability without a lining is achieved, by using a combination of Hastelloy C and PPS.

● Mixer with additional functions
Products for which various built in functions are available:
Timer (installed on controlling device)
Control of rotation speed (control by dials on the controller and external signals)
Switching of ON - OFF, etc. with the use of external contact points.

● High cost performance
In order to keep the product unit price low while also ensuring that the level of performance is not lowered, a number of varied innovations were introduced.

● Unique design
Timing belts were introduced on the mixer.
As a result, that has allowed the realization of low acoustic noise as well as a long belt life.

Uses

■ Reactions and mixing in various industrial fields
- Stirring of plastic reaction tanks (1 to 2m^3)
- Stirring of corrosive liquid
- Stirring of strong acid and strong alkali liquid
- Dissolution of powder and granulated and flaky chemicals
- Reaction stirring such as PH neutralization at water treatment plants
- Homogenization of liquid

Name	Conventional mixer		Chemical Mixer	
Mixing capacity	1000 L	2000 L	1000 L	2000 L
Output	0.2 kW	0.4 kW	0.1 kW	0.15 kW
Weight	25 kg	37 kg	Approx.10 Kg	Approx.10 Kg

※ The mixing capacity is determined according to a water filling test.
※ Comparison to the TV type of our company

An industry first, this is a new design which directly installs the mixer on the tank

Most suitable for dissolution tanks and reaction tanks

The use of inserts enables the easy installation of the

※The product color is different from the actual color. (The standard color is black.)

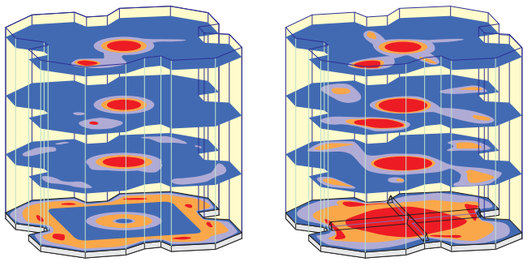
A baffle effect on the bottom part enables the realization of stirring efficiency

The cross shape baffle on the bottom part enables the stirring efficiency to be increased

This baffle effect on the bottom part helps the mixer to stir, which leads to a reduced use of electric power and serves to increase the level of energy saving.

Details of the analysis
(An example … Analysis results of turbulence dissipation factor)

Location where stirring is difficult ⇦ ■ ⇦⇨ ■ ⇦⇨ ■ ⇦⇨ ■ ⇨ Location where stirring is easy



Tank without a cross shape baffle at the bottom part

Tank with a cross shape baffle at the bottom part

Feature

- Space can be efficiently used thanks to the square structure of the product
- The thickness of the material of the tanks is 10mm, which enables the realization of excellent shock resistance
- The effect of the basement baffle increases the stirring efficiency, which helps with the stirring.
- Stainless inserts which are used for the installation of mixers and other equipment are attached to the tanks to enable easy installation.
- A large transparent input port enables the interior portion to be easily checked.

Uses

- For dissolution and reaction of chemicals at chemical plants
- For reaction tanks of various water treatment equipment
- For melting tank of food industries
- For tanks for the dissolution and reaction of liquid in other various industrial fields

In combination with our company mixer with attached stirrer (JIS10K65A flange) the efficiency of the stirring is increased.

PE square 1m³ tank MT type

In the process of patent application

Model selection

In each blank column fill in the item number, such as the power supply suitable for your company.

CCM-①-②-③-④-⑤

①Output(W)
100 : 100 W
150 : 150

②Frequency(Hz)
5 : 50 Hz
6 : 60 Hz

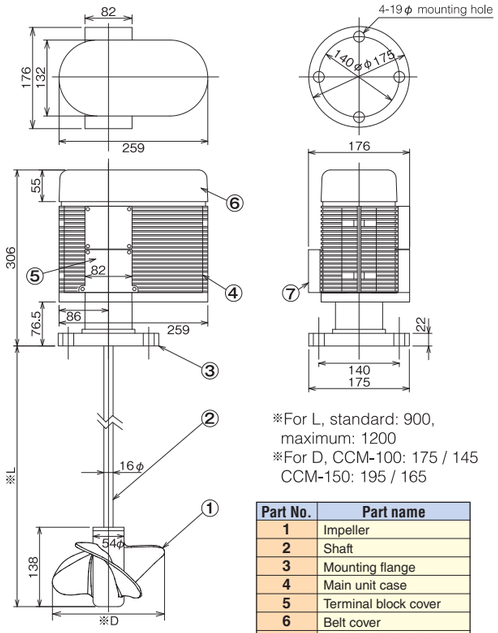
③Power supply(V)
1 : 100 V
2 : 200 V (single phase)
3 : 200 V (3 phases)
4 : 380 V (3 phases)

④Shaft material
SS : SUS316 (standard)
HC : Hastelloy C
P : Pipe exterior

⑤Impeller material
C : PPC (standard)
S : PPS
F : PVDF

※Other materials can be made available by special order.
※Only 150W model for 380V.

Outline drawing



Mounting flange

※For L, standard: 900, maximum: 1200
※For D, CCM-100: 175 / 145
CCM-150: 195 / 165

Part No.	Part name
1	Impeller
2	Shaft
3	Mounting flange
4	Main unit case
5	Terminal block cover
6	Belt cover
7	Cover for fixed shaft part

Mixer specifications

Model	CCM-100 Type			CCM-150 Type	
Output (W)	100			150	
Electrical voltage (V)	100 V	200 V (Single phase)	200 V (3 phases)	200 V (3 phases)	380 V (3 phases)
Rotating speed (rpm)	370/450				
Maximum mixing capacity (L)	1.000			2.000	
Operating ambient temperature (°C)	40°C				
Maximum operating temperature (°C)	80°C				
Maximum liquid viscosity (cP)	300cP				
Maximum liquid density	1.3				
Deceleration method	Timing belt				
Protection level	IP54				
Mounting	JIS 10K65AF				
Shaft	φ16 × 900 L × SUS316 (standard)				
Impeller	φ175 / φ145 / PPC, 3 bladed propeller			φ195 / φ165 / PPC, 3 bladed propeller	
Weight of main unit (kg)	Approx. 10 Kg				

※The maximum mixing capacity is determined by the test data obtained by a water filling test. When the viscosity and specific gravity are higher than when fully filled with water, the capacity will be reduced.
※Standard materials for the wetted parts are SUS316 shafts and PPC impellers.
※Stirring of solvents, etc. can not be carried out.
※The product can not be used inside an explosion proof area.

Option

High accuracy diaphragm quantitative pump Type T

This is high accuracy diaphragm quantitative pump which boasts a small size, a light weight, as well as a low price

- **Simple flow control dial**
- **Corrosion resistant materials which can handle chemicals**
- **Hose connection or pipe connection can be selected**

Specifications
Discharge rate: 8 to 1200 mL / min (Single type)
Discharge pressure: 3 to 10 Kg / cm²
Materials for wetted part: PVC / EPDM (standard)
Power supply: 100 V / 200 V / 200 V (single phase)
※The capability varies depending on each model.


■Single type T-300N


■Dual type TW-300N

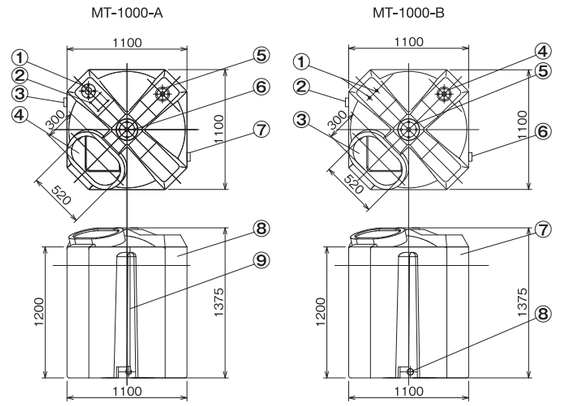
MT-1000-①-②

In each blank column fill in the item number, such as the power supply suitable for your company.

①Insert
A: Chemical tank
B: Reaction tank
C: Without inserts

②Color
W: White
B: Black (standard)
G: Green
S: Others

Outline drawing



Parts list of MT-1000A

Part No.	Part name
1	Suction guide
2	Pump mounting seat
3	Drain plug
4	Manhole
5	Level seat
6	Mixer seat
7	Drain plug
8	Tank main unit
9	Level gauge

Parts list of MT-1000B

Part No.	Part name
1	Chemical feeding port
2	Drain plug
3	Manhole
4	Sensor seat
5	Mixer seat
6	Drain plug
7	Tank main unit
8	Plug

Specifications

Model		MT-1000-A	MT-1000-B
Main usage		Chemical tank	Reaction tank
Mounting process		Mixer seat / pump mounting seat / level gauge	Mixer seat / sensor mounting seat / chemical feeding port
Internal volume		1,000 L	
Shape		Square type	
Material	Main unit	PE	
	Cover	Transparent PVC	
	Insert	SUS304	
Heat resistance		40°C (continuous)	
Standard color		Main unit …Black, Cover … transparent	
Empty weight		Approx. 80 Kg	

※Standard color of tanks is black.
※As far as possible, the color of main unit can be ordered separately.
※The standard mounting seat for the mixer is JIS10K65AF. However, by attaching adapters, it can also be possible to allow the mounting of the JIS10K100AF mixer.

Float type level sensor Type TL / TLK

Due to all resin float type level sensor, this is well suited for automatic control of liquid level.

- **The AES terminal box has an excellent weather resistance**
- **Movable union type mounting flange**
- **HIPVC which is strongly shock resistant is standard equipment**
- **Low price and short delivery time**

Specifications
Materials for wetted part: PVC / PP
Maximum working current: 1.0 A
Maximum working voltage: 100 V AC / 200 V DC
Maximum detecting points: 5 points
Temperature range: 0 to 50°C (standard)
※Heat resistance type of 0 to 80°C is also available.

■TL-101 type

■TL-200 type

■TLK-200S type
Separate type which can be remotely controlled at office, etc.

System products presented by CEM CORPORATION

PE tank PH neutralization unit Type CPU

■ **Throughput capacity: 0.5 to 4.0m³/h**

PE tank chemical feeding unit

■ **Tank capacity: 50 to 500 L**

Also well suited to water treatment plants, etc

PE tank PH neutralization unit Type TPH

■ **Throughput capacity: 100 to 200L/h**

For neutralization of the discharged water of experiments, etc.

We are certain you will be satisfied with the design and construction of the system products.

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※Specifications and appearance may change without prior notice due to improvements.
※The actual color of the products may be slightly different from that shown in the brochure due to issues of color during printing.

For inquiry

http://www.cemco.jp

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