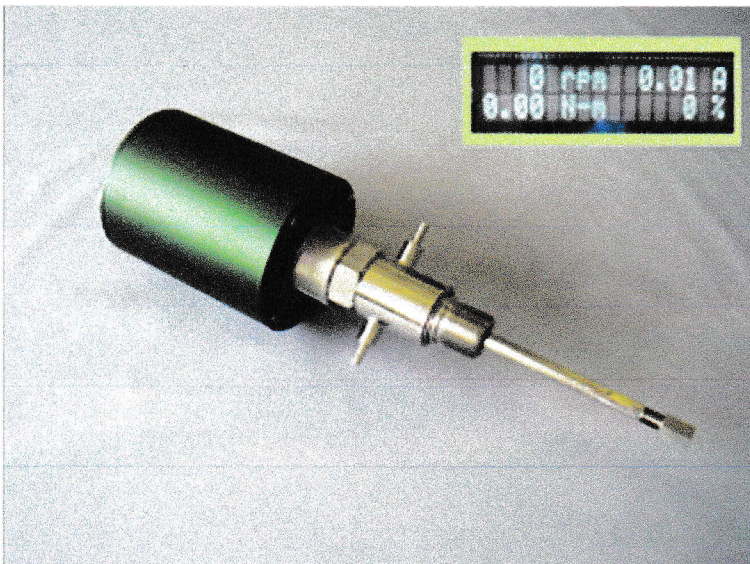
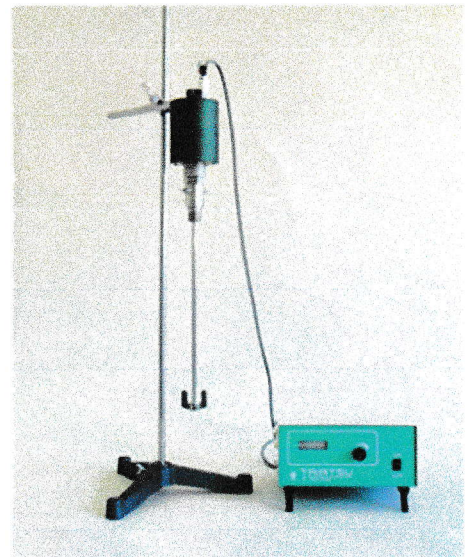


TAIATSU VP MOTOR (AGITATOR) with VP CONTROLLER

VP Motor VP-1
VP Controller VP-C



VP-1
with Chuck Shaft type



VP-1 & VP-C
with Straight Shaft type

■ Introduction

VP Motor is equipped as agitator in TAIATSU Glass Reactors TEM-V300/TEM-V500 and Chemical Pressure Reactors TEM-D300M/TEM-D500M/TEM-D1000M/TEM-D1500M/TEM-D3000M. Agitator motor installs high performance rare earth magnet in the shaft of DC brushless motor and induces the shaft from outside. It is compact design, since one body type agitator of magnetic drive and motor.

■ Features

- It can be used even if the conditions of vacuum, high pressure and high temperature.
- A compact agitator system because a magnetic drive and a motor one body type.
- Unnecessary power transmission mechanism (belt, coupling, etc.) and motor supporter since one body type.
- It can prevent the vibration and noise since there is no power transmission mechanism.
- Safety because the rotation of magnetic drive does not expose.

DC brushless motor is adopted, so there is no occurrence of a dangerous spark, and stator of VP motor is maintenance free. A motor drive and RPM monitoring circuit which adopts the pulse counter system are included in control board of VP controller, so the RPM speed is shown in the LED display of 16 × 60mm size.

When it is in the rated load even if increasing in the load of VP motor by changing in the viscosity, the dropping of setting number of rotations is kept within 2%. And also it is installed a limited current circuit built-in in overload protection of the motor due to the safety. When exceeding the tolerance limit of load, the electric current is restricted, and the RPM speed falls proportional to the load though the revolution is continued, the end stops. When the load was reduced, motor rotates again.

■ Main Specifications

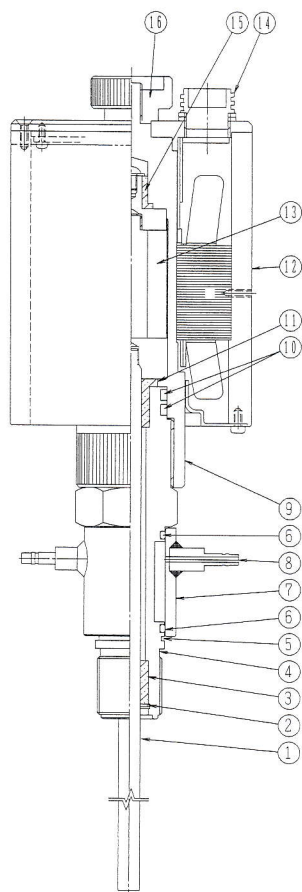
| | | | |
|-----------------------|--|--|-------------------------------|
| VP Motor VP-1 | Pressure working range | Vacumm~20MPa | |
| | Max. working temperature | 300°C | |
| | ※1: at flowing cooling water to the magnetic drive jacket. | | |
| | Motor | DC brushless motor, 40W | |
| | Max. RPM | 1000rpm | |
| | Power torque | 0.43N-m (※1: at flowing the cooling water) | |
| | Threaded screw for fitting on the lid | M24P1.5 | |
| | Stirring shaft | ※2: Straight shaft type (as standard) | |
| VP Controller VP-C | RPM indicator range (variable) | 100~1000rpm, Min.10rpm | |
| | RPM stability for load changing | 0~0.43N-m less than±2% (Rated RPM) | |
| | Indicator | LED digital display | |
| | | RPM speed | less than±1% (Rated RPM) |
| | | Load curret | less than±10% (Rated current) |
| | | Torque | less than±10% (Rated load) |
| | | Load factor | less than±10% (Rated load) |
| | Safety | Overload current protection | |
| Power source | AC100V 1A 50/60Hz | | |

※1: Please flow the cooling water to the magnetic drive jacket during operation to prevent the magnet from the decreased function by frinctional energy of bearing unit.

※2: There is also chuck shaft type as option.

■ Configuration and Components

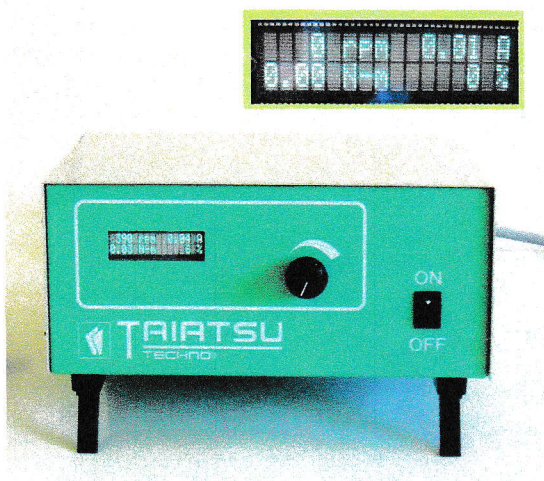
The inner structure of VP Motor is shown. A tube is connected to ⑧ Quick coupling, and VP Motor body is cooled by the flowing of cooling water in magnetic drive jacket.



| No. | Part Name | Q'ty | Material |
|-----|------------------------|------|---------------|
| ① | Stirring shft | 1 | SUS316 |
| ② | C-type Stopping spring | 1 | SUS316 |
| ③ | Bearing unit No.3 | 1 | Carbon teflon |
| ④ | Adaptor | 1 | SUS316 |
| ⑤ | C-type Stopping spring | 1 | SUS304 |
| ⑥ | O-Ring | 2 | Viton |
| ⑦ | Magnetic drive jacket | 1 | SUS304 |
| ⑧ | Quick coupling | 2 | |
| ⑨ | Inner cylinder | 1 | SUS316 |
| ⑩ | O-Ring | 2 | Viton |
| ⑪ | Bearing unit No.2 | 1 | Carbon teflon |
| ⑫ | Stator | 1 | Al |
| ⑬ | Magnet | 1 | Sa-Co |
| ⑭ | Connector receptacle | 1 | Brass |
| ⑮ | Bearing unit No.1 | 1 | Carbon teflon |
| ⑯ | Stopper | 1 | S45C |

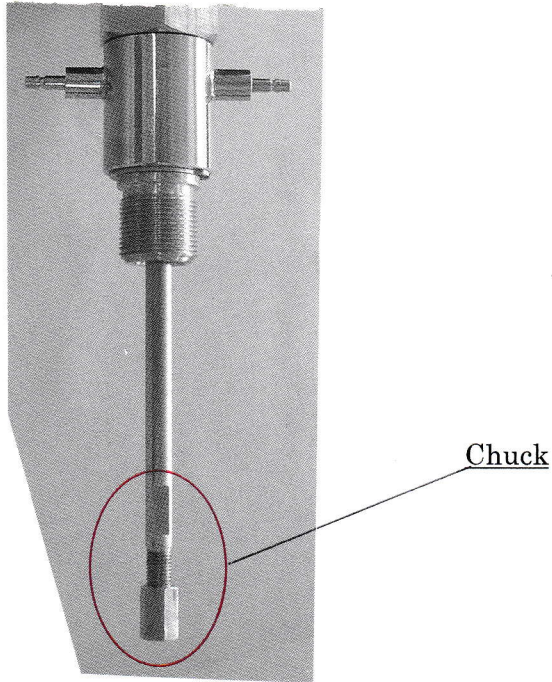
■ VP Controller VP-C

Exclusive VP Controller VP-C attaches to VP Motor. Four kinds of the numerical values are displayed at high luminance LED display part on the controller at one time.



| | | |
|----------------------------------|-----|--|
| Rotation speed | rpm | The rotation speed is displayed at intervals of 10rpm. |
| Load current value | A | The load current value is displayed by (A) ampere. |
| Estimated torque value | N·m | The torque value calculated from the rated output and the load current value is displayed. |
| Load factor against rated output | % | The state of the load compared with the rated output and it displays as a load factor. |

■ Optional Accessories



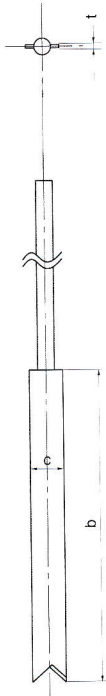
● Chuck Shaft type

The shaft diameter of VP Motor is 8mm, and the diameter of the point from the chuck is changed to 5mm.

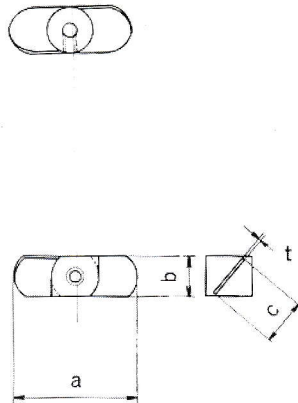
This Chuck Shaft Type is adopted at the following time.

- ① Change of the shaft length
- ② When small stirring blade is installed in thin vessel.

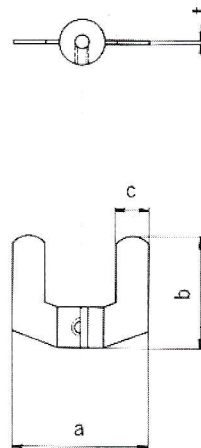
Thin Plate I Type



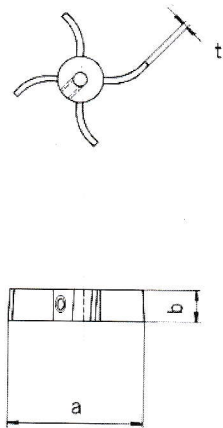
Inclined Paddle E Type



Anchor B Type



Curved Turbine G Type



● Stirring blades

Following stirring blades are generally installed in shaft of VP Motor, and also it is possible to install other stirring blade.

※The specifications may be changed without advanced notice for improvement of the products.

TAIATSU TECHNO CORPORATION
 3-27-9 Hon-Komagome, Bunkyo-Ku,
 Tokyo 113-0021, Japan.
 Tel 03-3827-8211 Fax 03-3827-8218
 URL <http://www.taiatsu.co.jp>
 E-mail : info@taiatsu.co.jp

Contact to
S.T.CORPORATION.
 Toshinao Ishizu
 6-76-9 Hirai, Edogawa-Ku,
 Tokyo 132-0035, Japan.
 Tel 03-6657-5878 Fax 03-6657-5829
 E-mail ishizu@hb.tp1.jp