Quick **Heat** & **Cool** Mold Controller

**RAPID HEAT CYCLE MOLDING**

Molding systems called Rapid Heat Cycle Molding (RHCM) or Heat & Cool molding have been attracting attention from many industries as an epoch-making environmentally friendly technology that enable us to solve various problems around injection molding and to improve productivity.

The mold surface temperature is rapidly raised by compressing steam through the multiple water pipes designed near to surface of the cavity. It is then cooled down rapidly by cooling water. By using specially designed high thermal conductive rapid heat cycle mold (3D weldless mold), it is not only possible to prevent weld lines or sink marks in any configuration of molded parts, but also to offer innovative solutions to difficult problems that used to be impossible to overcome.

**Model**: RHCM - 100G

For more information, please visit

3D WELDLESS ALLIANCE
http://3d-weldless.com/

3D Weldless Molding System
http://www.onosg.co.jp/
New structure pursuit of high-response, high-cycle completely

- Adopt new model 3 directions control valve
- Unify manifold with control valve
- From the possibility of divided set up manifold unit (option), even divided set up after variance of layout rise, it will have no effect on heating cycle.
- Mold will be heated by high efficiency because steam will be supplied to manifold directly.

Steam JET System Flow Sheet

Heat source for heating is steam which will be supplied from boiler and use to rise mold temperature until temperature higher than the softening point of resin in short time. After mold heating complete, resin will be injected to mold. After injection complete, mold will be cooled down quickly by water from cooling tower. Then, product will be took out. Please find out the application of the special mold for weldless injection molding.

Steam JET System Time Chart

Heat & Cool Cycle Chart

T1 = Heating time
T2 = Injection holding pressure time (FILL/PACK)
T3 = Cooling time (COOLING)
T4 = Take out time (EJECT)
T5 = Cycle time

▲ Standard running sequence of the device
Controller

**Touch panel (Built-in)**
- Model 7.5 Using TFT Panel VGA Display.

**Support remote-mobi control panel (Option)**
- The operation ability is unaffected on body install area.
- Compact and would be able to installed everywhere.
- Dedicated adapter.

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**Operation screen**

**Setting screen**
- Setup working of machine such as heating, cooling etc.
- Heating and cooling conversion is possible to set at both of temperature and timer.
- Memory can be made maximum at the condition of 10 mold.
- Show maintenance timing setting.

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**Operating monitor screen**
- Main setting temperature Actual temperature Display.
- Present working conditions such as heating, cooling etc confirmation.
- Temperature display switching °C to °F is possible.

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**Temperature monitor screen**
- Detected temperature of each sensor running and display graph on monitor screen.

**Alarm display screen**
- Alarm display at the lowest step of each screen.
- On the alarm screen, call occurrence time and content of record for confirmation are possible.
**Outer Dimension**

**Standard Specification**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>RHCM-100G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td></td>
</tr>
<tr>
<td>Electric Power</td>
<td>AC 380V 3P</td>
</tr>
<tr>
<td>Breaker</td>
<td>20A</td>
</tr>
<tr>
<td>Steam</td>
<td>180°C MAX</td>
</tr>
<tr>
<td>Air</td>
<td>0.6~0.98 Mpa</td>
</tr>
<tr>
<td>Pump</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>4Kw</td>
</tr>
<tr>
<td>Flow rate</td>
<td>200L/min at 0.4Mpa</td>
</tr>
<tr>
<td>Size</td>
<td></td>
</tr>
<tr>
<td>Body</td>
<td>W 560 x D1000 x H1209 mm</td>
</tr>
<tr>
<td>Manifold</td>
<td>W 560 x D395 x H1500 mm</td>
</tr>
<tr>
<td>Connection Diameter</td>
<td></td>
</tr>
<tr>
<td>Medium Feed</td>
<td>15A (1/2B)</td>
</tr>
<tr>
<td>Medium Return</td>
<td>15A (1/2B)</td>
</tr>
<tr>
<td>Steam Inlet</td>
<td>25A</td>
</tr>
<tr>
<td>Cooling Inlet, Outlet</td>
<td>40A</td>
</tr>
<tr>
<td>Weight</td>
<td>335kg</td>
</tr>
</tbody>
</table>

**New Cooling Water Circulation System "ecobrid System"**

- Cooling method: dried cooling method.
- Characteristics: Heat Exchanger, prevent scale sticking on to piping circulation of clean water, economize on water for cooling at the lowest consumption, maintain the stable cooling efficiency.

**Distributor**

Mitsubishi Corporation Technos Project Team
Shin-Tamachi Bldg.5-34-8 Shiba, Minato-ku, Tokyo.108-0014 JAPAN
TEL: +81-3-3453-7434 FAX: +81-3-3453-5390 http://www.3d-weldless.com/

**Technical Collaboration With**

Ono Sangyo Co., Ltd.
2-1-1, Sunriyoshi, Saka-shi, Saitama, 340-0014 JAPAN

**Manufacturer**

Matsui (Asia) Co., Ltd.
159 Serm-mit Tower 25th Floor, Sukhumvit 21 Road, North Klongtony Sub-district, Wattana District, Bangkok 10110, Thailand
TEL: 02-261-7512 FAX: 02-261-7485 http://www.matsui-asia.com

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**Rev**: 03 | 24JUN10

**Designed for Rapid Heat Cycle Molding & 3D Weldless Molding System**