Precision modular opposed and parallel gap weld heads

The modular weld head system offers flexibility, simplicity and high performance for micro joining applications.

The precision ultra low inertia weld head modules can be used standalone mounted on third party application product or may be supplied as bench mounted units either with fixed or variable height back supports.

A large range of custom and standard electrode holders are available to suit almost any application.

The precision modules combine an integral force adjustment control with options to fit force and displacement monitoring transducers for use with process feedback based power supplies.

**Integrated Head options:**
- Opposed electrode - Pneumatic or manual
- Twin (Parallel gap) electrode - Pneumatic or manual
- High Force opposed - Pneumatic

**Weld Head Module Options:**
- Standard module - 2 - 70N force range
- Mini module - 2 - 50N force range
- High Force module - 10 - 500N force range

**Module benefits**
- Very low inertia delivers fast process response and rapid settling.
- Suits all drive systems: motor, pneumatic, manual.
- Proven, rugged design ideal for automation.
- Narrow footprint permits high density mounting in confined areas.
- Options for force and displacement sensing.

**Typical Applications**
- Automotive components
- Hot staking and crimping
- Solar cell assembly
- Lamp manufacture
- Conductive material welding
- Contact welding
- Micro circuit welding
- Sensor and component welding
- Thermode staking applications
- Battery tab & pack assembly
- Gold ribbon welding
# Standard Specifications

## INTEGRATED WELD HEADS*

<table>
<thead>
<tr>
<th>Weld Head Type</th>
<th>Force range</th>
<th>Stroke</th>
<th>Compression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Opposed Weld Head</td>
<td>2 -70N</td>
<td>25mm</td>
<td>10mm</td>
</tr>
<tr>
<td>Pneumatic Opposed Weld Head</td>
<td>2 -70N</td>
<td>25mm</td>
<td>10mm</td>
</tr>
<tr>
<td>Manual Twin (Parallel Gap) Weld Head</td>
<td>2 -70N</td>
<td>25mm</td>
<td>10mm</td>
</tr>
<tr>
<td>Pneumatic Twin (Parallel Gap) Weld Head</td>
<td>2 -70N</td>
<td>25mm</td>
<td>10mm</td>
</tr>
<tr>
<td>Pneumatic High Force Opposed Weld Head</td>
<td>10 -500N</td>
<td>25mm</td>
<td>6mm</td>
</tr>
</tbody>
</table>

## WELD HEAD MODULES

<table>
<thead>
<tr>
<th>Module Type</th>
<th>Force range</th>
<th>Dimensions WxDxH(mm)</th>
<th>Compression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single standard module*</td>
<td>2 - 70N</td>
<td>25x50x179</td>
<td>10mm</td>
</tr>
<tr>
<td>Twin standard module*</td>
<td>2 - 70N</td>
<td>55x60x179</td>
<td>10mm</td>
</tr>
<tr>
<td>Single mini module</td>
<td>2 - 50N</td>
<td>15x50x75</td>
<td>8mm</td>
</tr>
<tr>
<td>Twin mini module</td>
<td>2 - 50N</td>
<td>35x60x75</td>
<td>8mm</td>
</tr>
<tr>
<td>High Force module*</td>
<td>10 - 500N</td>
<td>25x60x115</td>
<td>8mm</td>
</tr>
</tbody>
</table>

* Process monitoring - All integrated weld heads, standard and high force modules have options for force and displacement transducers.

---

## The MacGregor Weld Head Range

### Weld by wire™

The Mach1 is an electronic servo controlled head that delivers programmable force, velocity and displacement for high integrity and automatic applications.

### Constant Force

The constant force head is specifically designed for fine, low force applications. The unit has electronic over force protection.

---

## Accessories & service

MacGregor Systems has a worldwide network of support services and offers a wide range of stock and custom welding electrodes and accessories. Our dedicated engineering team are able to tailor custom weld heads to customer specific applications and are always pleased to discuss your requirements.

---

## Representative / Distributor

**UK OFFICE**
MACGREGOR WELDING SYSTEMS LTD
69 Fred Dannatt Rd, Mildenhall, Suffolk, IP28 7RD, U.K.
Tel: +44 (0)1638 510011 Fax: +44 (0)1638 510329
E-mail: sales@macgregorsystems.com Web: www.macgregorsystems.com

**US OFFICE**
MACGREGOR SYSTEMS LTD
7959 Silverton Avenue, Suite 1021, San Diego, CA 92126-6355
Tel: +1 858 586 9000, Fax: +1 858 586 9291
E-mail: sales@macgregorsystems.com Web: www.macgregorsystems.com

**BENELUX OFFICE**
MACGREGOR WELDING SYSTEMS LTD
Vivaldilaan 5, 5707 RA Helmond, The Netherlands
Tel: +31 492 538 597 Fax: +31 492 538 597
E-mail: sales@macgregorsystems.com Web: www.macgregorsystems.com

---

Approval Certificate №0:910599
Design and manufacture of precision welding equipment and sub-contract micro-welding services