

Modular design welding heads by MacGregor

FLEXIBILITY, SIMPLICITY AND FUNCTION

The modular weld head concept by MacGregor Welding Systems, Ltd. offers the ultimate in flexibility, simplicity, and function. The innovative design allows for a welding head to be configured specifically for individual applications without prohibitive costs. The integrated head range offers a low cost bench mounted option for each of the module styles. A large range of custom and standard electrode holders maximize unit flexibility and allow for a process focussed configuration. The modular design allows for simple reconfiguration with a minimum of time and effort.



Standard Weld Head Models Available

Integrated Heads:

- Opposed electrode, pneumatic actuation
- Opposed electrode, manual actuation
- Twin (parallel electrode) head, pneumatic actuation
- Twin (parallel electrode) head, manual actuation
- High Force opposed electrode, pneumatic actuation

Weld Head Modules:

- Standard Module (2-70N force range)
- Mini Module (2-50N force range)
- High Force Module (10-500N force range)
- Twin Standard Modules, mounted on single back plate
- Twin Mini Modules, mounted on single back plate

SUPERIOR PERFORMANCE

- Ultra Light moving mass for rapid electrode follow through and settling
- Wide range of weld head configurations allowing for the optimum choice for all applications

SUPERIOR DESIGN

- Low friction design for long life and improved performance
- Simple, rugged construction for high duty use without frequent servicing
- Narrow footprint and profile allows for multiple heads to be used in small areas

SUPERIOR MAINTAINABILITY

- Simple spring changes and reconfiguration
- Modular design allows for simple servicing and replacement of weld head and components

SUPERIOR FLEXIBILITY

- Module units ideally suited for automation and integration
- Functional design allows for simple attachment with preferred actuators. (Pneumatics, motor driven, cam driven, etc.)
- Full range of sizes and configurations allow for use of multiple heads in confined spaces
- Wide range of available springs (6), allow for precise and repeatable force settings

when repeatability and precise control are required, the choice is clear...

HOW TO CHOOSE THE RIGHT WELD HEAD FOR YOUR APPLICATIONS

Electrode access and geometry

- **Opposed Electrodes:**
Opposed electrode welding is used when the electrodes are able to gain access from both the top and the bottom of the assembly.
- **Parallel / Series Electrodes**
Parallel or series welding allows for materials where access is only available to one of the two materials to be welded.
- **Step Electrodes**
Step electrode welding requires that a pair of series electrodes is used, each electrode contacting one of the materials to be welded.
- **Required Force Range**
The selection of the required welding force can be accomplished by trials or by past record. Once the force is established, a head with a suitable force envelope can be selected.

Actuation Method

- **Manual Actuation:-** manual systems
- **Pneumatic Actuation:-** manual and automatic systems
- **Motorised Actuation:-** high speed automation and applications requiring precise control of weld force and displacement

For feasibility studies, process development services, prototype contract manufacturing, or to schedule an equipment demonstration, please contact the total solutions experts at MacGregor Welding Systems Ltd.

Technology, expertise and dedication, working to provide 'the total solution' for the micro joining industry.



MacGregor Welding Systems, Ltd. offers a complete design and manufacturing service for custom welding heads and system solutions. The standard, mini, and high force modules are used as the centre of most custom systems allowing for uniformity of design, simple service and part availability. The exceptional performance of the welding module combined with the easily integrated design features allow for a custom weld head to be designed and built. This allows maximum welding performance and functionality to be achieved for a particular application rather than adapting an existing design to a new process.

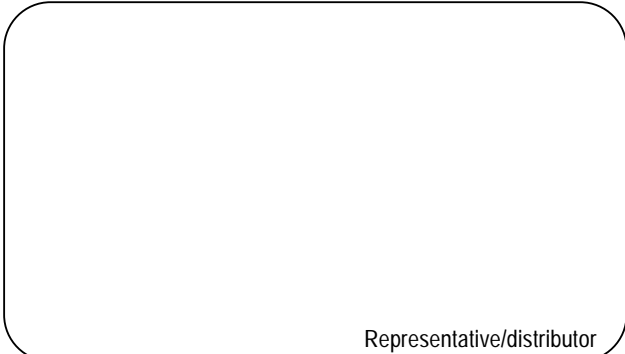


PRODUCT SPECIFICATIONS

Integrated Weld Heads	Force Range	Actuation	Stroke	Compression	Displacement Capability
Opposed Welding Head (Manual Actuation)	2-70 N	Cable	25mm	10mm	Yes
Opposed Welding Head (Pneumatic Actuation)	2-70 N	Pneumatic	25mm	10mm	Yes
Twin (parallel) Welding Head (Manual Actuation)	2-70 N	Cable	25mm	10mm	Yes
Twin (parallel) Welding Head (Pneumatic Actuation)	2-70 N	Pneumatic	25mm	10mm	Yes
High Force Opposed Welding Head	10-500 N	Pneumatic	25mm	6mm	Yes
Weld Heads Modules	Force Range	Dimensions WxDxH(mm)	Stroke	Compression	Displacement Capability
Standard Module	2-70 N	25x50x179	N/A	10mm	Yes
Twin Standard Module	2-70 N	55x60x179	N/A	10mm	Yes
Mini Module	2-50 N	15x50x75	N/A	8mm	No
Twin Mini Module	2-50 N	35x60x75	N/A	8mm	No
High Force Module	10-500 N	25x60x115	N/A	6mm	Yes



Approval Certificate NO:910599
Design and manufacture of precision welding equipment and sub-contract welding services



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