

ServoTorch™

FANUC
Robotics

Basic Description

FANUC Robotics' ServoTorch is a fully-integrated, servo-controlled, wrist-mounted, four-roll (4) "Pull" wire feeder controlled by the ARC Mate® series robots. The design is optimized to feed aluminum and soft wire. The drive motor is a proven FANUC high torque servo motor with a pulling capacity suitable for unassisted wire feeding from conventional spools or pay-off packs. When used in combination with an assist de-reeler, larger spools can be used thus increasing the efficiency and minimizing down time associated with wire replenishments. Integration of the wire feed motor with the motion control of the robot results in a close coupling of the welding process. Wire response time is controlled; therefore, no synchronization issues arise when controlling an external wire feeder with unknown speed regulation and communication latency. The seamless integration of the wire drive to robot motion allows controlled and consistent wire feeding which is essential for successful arc initiation of the soft wire Mig/Mag processes.

Features

- Proven industry-leading FANUC servo technology.
- Optimized for aluminum and soft wire feeding applications, using 0.9 mm to 1.6 mm diameter wires.
- High torque pull system (10 kgf) eliminates "bird nesting" which commonly occurs when pushing small diameter weld wire.
- Pull-style wire feed drive offers consistent wire feed at speeds up to 35m/min (1379 IPM).
- 4-roll J6 mounted drive is located close to the arc; this reduces feeding friction and allows for reliable and consistent arc starting and weld deposition.
- Industry leading multiple robots synchronized touch retract starting, critical when welding with coordinated configuration.



- Inherent wire brake eliminates wire flips and stick out changes due to robot repositioning and maintains a constant TCP.
- Touch Retract Arc Starting overcomes starting difficulties of aluminum alloys and provides a smooth spatter free ignition of the arc.
- Compact integrated performance driven design. Protected through arm weld utility routing, unrestricted J6 motion.
- Quick change non-proprietary torches and consumables, supported by North American torch manufacturers.
- Continuous or incremental wire jog reduces programming time and maintains consistent wire stick out.
- Integrated into the control architecture of the robot, reduces setup time, eliminates complexity, adds reliability.
- High sensitivity collision detection eliminates clutches and break-away mounts and adds an additional level of safety by protecting the robot as well as the torch.

Benefits

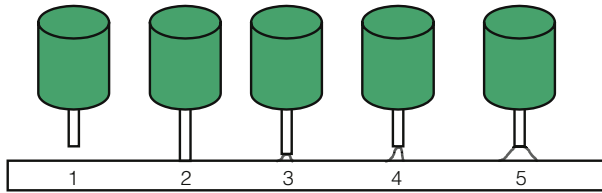
- Single source of control, Robot, Servo Drive, Welding, all from the teach pendant.
- No second party communication latency or push-pull synchronization procedures.
- "Plug and play" simplicity with Lincoln Electric's PowerWave™ products.
- Positive wire placement optimizing touch sensing and arc starting.
- Compatible with all major brands of welding equipment.
- No tools required to service, quick-change drive rolls and weld consumables.

Options

- HeatWave advanced weld process control.
- User-defined North American torches and consumables.
- Standard ArcTool® options.

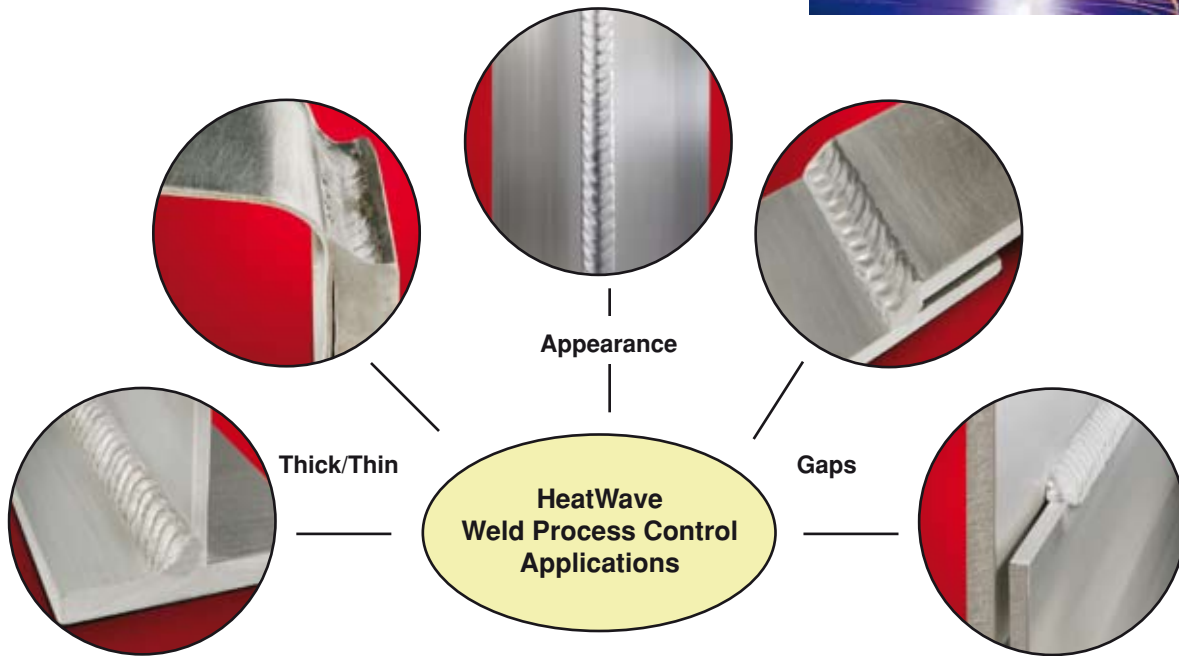
Note: ARC Mate® is a registered trademark of FANUC LTD.

Aluminum Welding – Touch Retract Arc Starting



Touch Retract Advantages

- Starting Stability
- Contact Tip Longevity
- Reduced Maintenance
- No Impact to Cycle Time



HeatWave Process Advantages

- Industry-leading weld application control
- Supports all modes of welding
- Solution for problem welds
- TIG appearance with MIG process

Specifications

Weight	4.5 kg
Wire Diameters	.035" - .9 mm .045" - 1.2 mm .062" - 1.6 mm
Wire Feed Speed	Max. 35 m/min
Weld Current	500A
Cooling	Water or Air
Pulling Force	10 kgf
Drive Rolls	U or V Groove
Torch Safety	Collision Guard

Intelligent Robot Solutions

FANUC Robotics America, Inc.
3900 W. Hamlin Road
Rochester Hills, MI 48309-3253

Charlotte, NC
(704) 596-5121

Toronto, Canada
(905) 812-2300

Chicago, IL
(847) 898-6000

Montréal, Canada
(450) 492-9001

For sales or technical information, call:
1-800-iQ-ROBOT

Cincinnati, OH
(513) 754-2400

Aguascalientes, Mexico
52 (449) 922-8000

Los Angeles, CA
(949) 595-2700

Sao Paulo, Brazil
(55) (11) 3619-0599

marketing@fanucrobotics.com
fanucrobotics.com

Toledo, OH
(419) 866-0788

