Parweld APT-M Series
Professional Multi-process Pulse MIG Welding Machines

All MIG / MAG Processes
- APT-Root Gap - for perfect root and gap filling applications
- APT-Deep - high-performance arc with deep penetration
- Pulse and Double Pulse MIG/MAG
- Multi-Process TIG, MMA welding and Arc gouging
- APT-Pipe specifically for pipe welding
- APT-Cold Pass for low heat input applications
- APT-Cold Braze

Operating Status
Digital display indicates error codes for blocked air flow. Thermal Overload Protection prevents machine damage.

Access Control
Welding parameters can be locked by supervisor preventing tampering, ensuring quality is maintained.

Steel / NiCr / Copper and Aluminum
A wide range of welding programs (Jobs) that provide the best performance on all metals available as standard.
- Pro - 300 Job*
- Rapid - 40 Job*

Pro Panel brings all functions to the workplace
- Industrial quality wire feeder
- Available in two practical, control panel variants: Pro and Rapid.

Advanced Power Technology
- Delivers energy savings of up to 35% against conventional equipment and superior arc control arc without spatter.

Cooling Tunnel Design
- Cooling air is drawn thorough an internal tunnel which protects the electrical and electronic components from grinding dust and dirt, extending the machine’s life.

Intelligent Cooling System
- Smart fan and pump operates only when needed, reducing noise, reducing energy consumption and increasing service intervals.

APT interconnection hose packages
- High quality materials for long service life
- Industrial-quality control plugs
- Highly flexible cable bundle
- Fabric-sheathed hoses can handle high pressure and temperature loads
- Gas hoses in accordance with EN 559 prevent shielding gas contamination
- Upto 40m interlink

* Dependent on model
Two user interfaces to suit any application

Easy, intelligible design
- Easy to read interface
- Intuitive self-explanatory operation
- Only Active functions are shown

Welding Parameters
- Control of the smallest detail
- Quick and easy adjustment of many features such as Pre-gas, hot start, post gas, crater fill and burn-back

Access Control

Right Wheel to set arc length and arc dynamics

Pro panel
- Left Wheel to set Synergic value (wire speed, material thickness or current)

Rapid panel
- Multi process capability MIG, TIG, MMA, MIG Programs provide user with MIG Program’s for use with the most common Steels, Stainless Steels and Aluminium. These can be used in pulse and double pulse modes as well as APT Deep program for Steels. Default operating mode is synergic welding with pulse, double pulse and manual control options. Depending on the model up to 40 specific JOBs are available, ideally suited to users performing general fabrication

Pro panel
- Provides a full range of programs covering all materials and common gas mixtures. It also includes APT Deep, APT Pipe, APT Root Gap, APT Cold Pass and brazing programs. Offers the specialist fabricator an extensive range of programs that will enhance weld quality and reduce production time. Depending on the model up to 300 specific JOBs are available, ideally suited to users performing specialist fabrication work, positional welding and specialist materials.
Perfect wire feeding and arc stability

Wire feeding – Precise and practical
37 mm wire-feed rolls, encoder motor and 4x4 wire-feed box give stable arc characteristic without spatter
Automatic wire inching saves time
Simple, tool-free roll changing
Long-lasting rolls with two different wire diameters on the same roll

Illuminated feed box
Changing wire and operating the machine is easy even in poor lighting

Hardware - Strong and easy to use
Tool-free changing of interconnection hose packages
Externally accessible connections
Strain-relieved hose package with clamp and swivel system
Protected hose package connections

Gas test-button
Gas flow can be checked safely

Wire inching-button
Load the wire quickly without wasting gas

Wire feed unit available in two practical control variants:
Pro and Rapid
High efficiency cooler ensures torch performance

High efficiency torch water cooling. High-performance arcs need cool running torches. Cool running torches result in lower costs for consumables and torch maintenance, even under demanding environmental conditions.

Modular structure

Cooling-unit modular is able to be added or removed from welding system as required.

High capacity heat exchanger and independent fan cooling

The fans of the motor and the heat exchanger are separate, improving water cooling efficiency.

Custom configurable – As your require

Parweld machines are available optionally with air or water cooling.

Built for heavy industrial applications

High pressure 4.5 bar water pump for use with long hose packages.

Easy service and maintenance

Easy access to the components in the cooling unit.

Coolant level indicator

Easy to read coolant level indicator with min/max scale.

Intelligent Cooling System

Operates cooling unit only when needed, reducing noise, energy use and increasing service intervals.
**APT-M Root - Welding of non-alloy and low-alloy steel**

- Perfect gap bridging
- Good root formation and excellent sidewall fusion
- High arc force for root welding in all positions
- High welding speed and melt rate compared to TIG or MMA welding
- Low-spatter process
- Rapid digital control of the process, easy to guide and to control
- Uses standard welding torches
- For manual and mechanised applications
- Flat, smooth weld surface and virtually spatter-free process for reduced post-weld finishing

**Material thickness 5mm**

**Gap 3mm**

**Material thickness 10mm, one-sided**

bevel 15 degrees, Gap 4mm

**Pipe welding, wall thickness**

15mm, prep angle 60°

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**APT-M Deep - Welding of filling passes and cover passes in non-alloy and low-alloy steel**

- Easy to learn, even for inexperienced welders, thanks to rapid digital control of the process, virtually spatter-free, reduced undercuts
- Deep penetration for excellent root and sidewall fusion
- Reduced heat, directionally stable pulsed arc
- Enables weld seam volume to be reduced, potential for over 50% reduction of welding time, suitable for manual and automated welding
- Perfect welding even with very long stick-outs
- Excellent gap bridging even at high power
- Excellent wetting of the material surface, smooth weld surface even on heavily oxidised or dirty sheet metal

**Pipe welding, wall thickness**

15mm, prep angle 60°

**50mm, included angle 30°**

15 passes

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**30°**

20 mm, included angle 60°

8 passes, standard spray arc
APT-M Cold Pass - Welding and brazing of thin sheet metal made from non-alloy, low-alloy, high-alloy steel and galvanised sheet metal

- Short-circuit welding with low heat input due to digital control of droplet transfer using APT
- Reduced discolouration and distortion
- Flat, smooth weld surface, virtually spatter-free, reduced post weld finishing work, excellent wetting of surfaces when brazing
- Rapid digital control of the arc ensures the arc is easy to guide and control
- APT inverter allows welding with long hose packages without additional voltage measuring leads
- Minimal spatter formation, minimises impact on corrosion resistance even with galvanised materials

Pulse - Welding of Steel / NiCr / Copper and Aluminum alloy

- Superior process control thanks to the use of the latest micro-electronics
- Minimised weld spatter
- Customise the weld bead appearance with adjustable double pulse function

APT-M Advanced Power Technology

Advanced Power Technology (APT) uses advanced power components with Ultra-fast switching of to ensure precise control of the arc to ensure outstanding weld quality on all materials and in all applications.

APT improves the efficiency of the power components reducing wasted heat by up to 50% and delivers long-term reliability.

APT uses high speed communication to ensure perfect synchronisation between wire feeding and welding power levels even when using long cable sets.
## Parweld APT-M
### Technical Information

<table>
<thead>
<tr>
<th>POWER UNIT</th>
<th>APTM 201C-R</th>
<th>APTM 201C-RT</th>
<th>APTM 303C-PT</th>
<th>APTM 303C-RT</th>
<th>APTM 403S-PT</th>
<th>APTM 403S-RT</th>
<th>APTM 403SW-PT</th>
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<td>400 ± 10%</td>
<td>400 ± 10%</td>
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<td>60%: 110 A, 19.0 V</td>
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<td>Standard Accessories</td>
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Parweld reserves the right to make changes without notification.