



Schweisstechnik
Weldingsystems

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APT ADVANCED POWER TECHNOLOGY

PULSE MIG MACHINES



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 and prevents machine damage.

Access Control

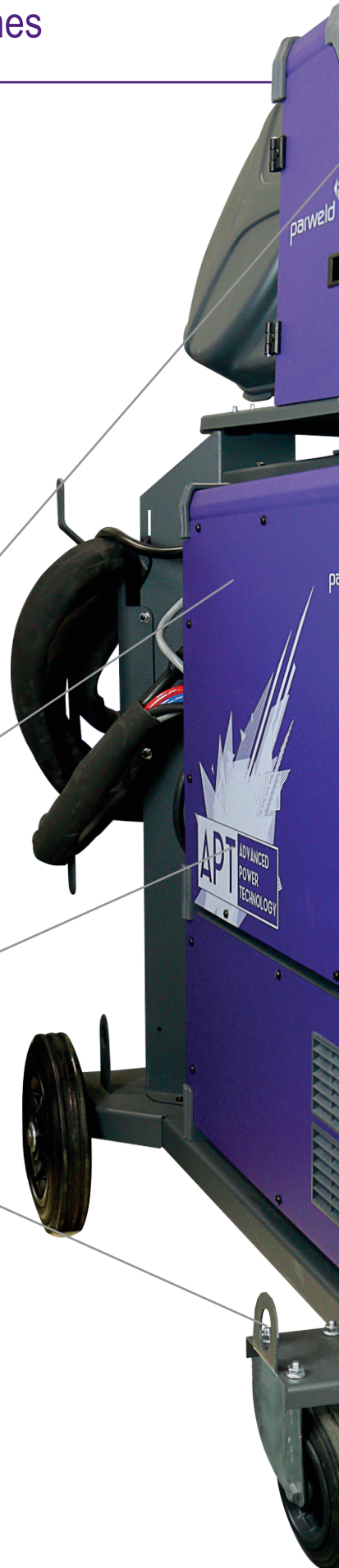
Welding parameters can be locked by supervisor preventing tampering,
ensuring quality is maintained.

Site Power Generators and can be used without problem

Easy lifting by crane

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





Pro Panel brings all functions to the workplace

Industrial quality wire feeder.
Available in two practical, control panel variants:
Pro and Rapid.

100 Program Memory

Increases productivity.
Saved programs can be called from the front panel or directly from the torch. The number of memory locations can be limited to allow rapid access to the correct program.

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*

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 through 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.

* Dependent on model

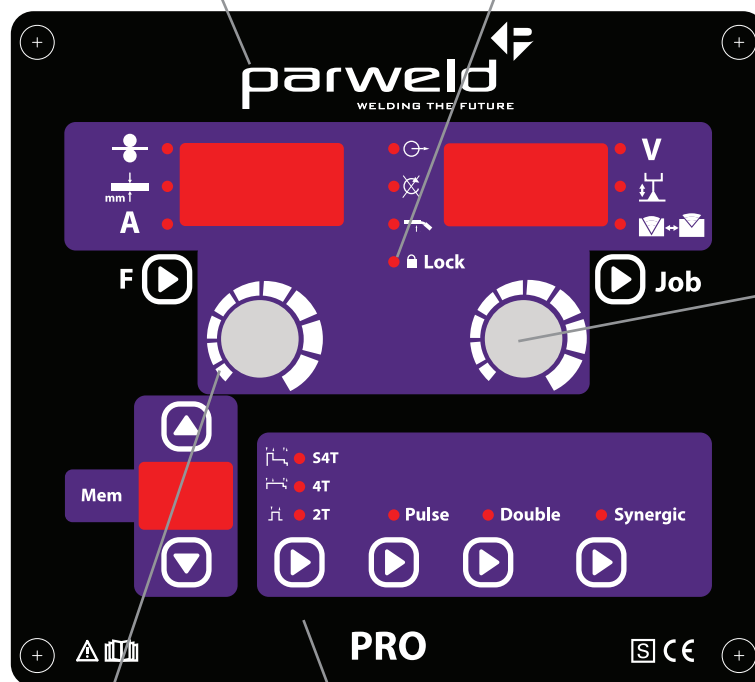
Two user interfaces to suit any application

Easy, intelligible design

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

Access Control

Pro panel

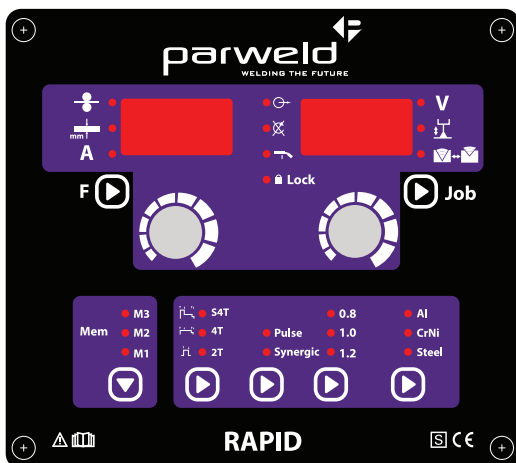


Right Wheel
to set arc length
and arc dynamics

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

Welding Parameters
Control of the smallest detail

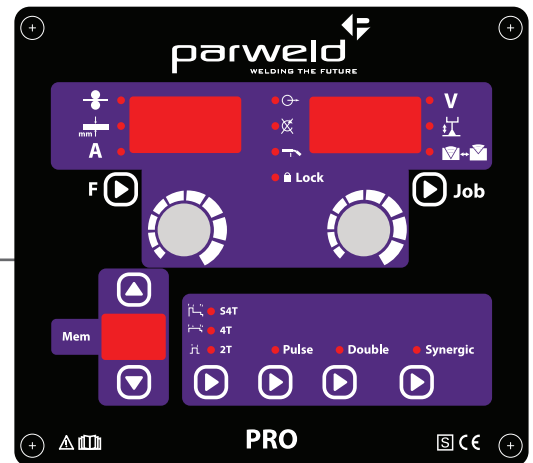
Quick and easy adjustment of many features such as
Pre-gas, hot start, post gas, crater fill and burn-back



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.

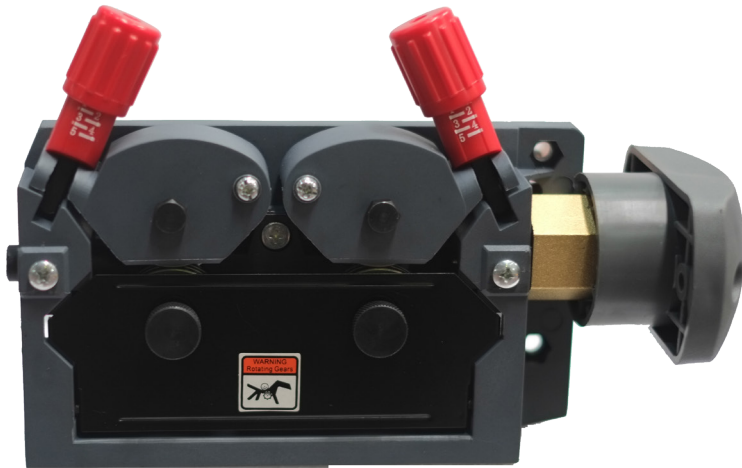


Pro panel

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



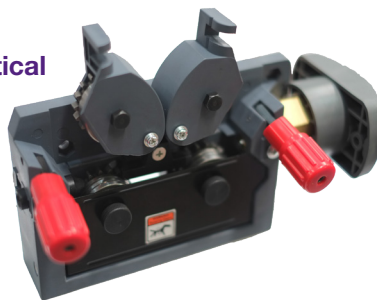
Wire feeding – Precise and practical

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

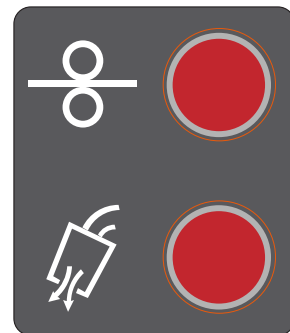
Changing wire and operating the machine is easy even in poor lighting





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**

APT-M Series Water Cooling Unit

High efficiency cooler ensures torch performance

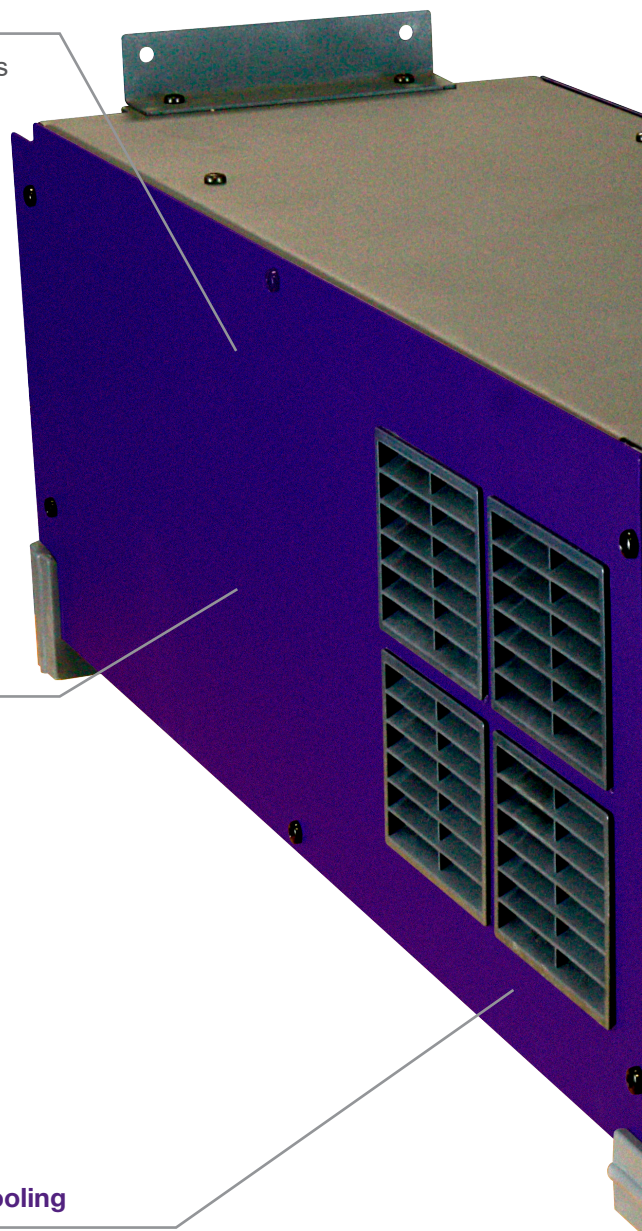
High efficiency torch water cooling. High-performance arcs need cool running torches. Cool running torches result in lower costs for consumables and torch maintenance, even under demanding environmental conditions

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

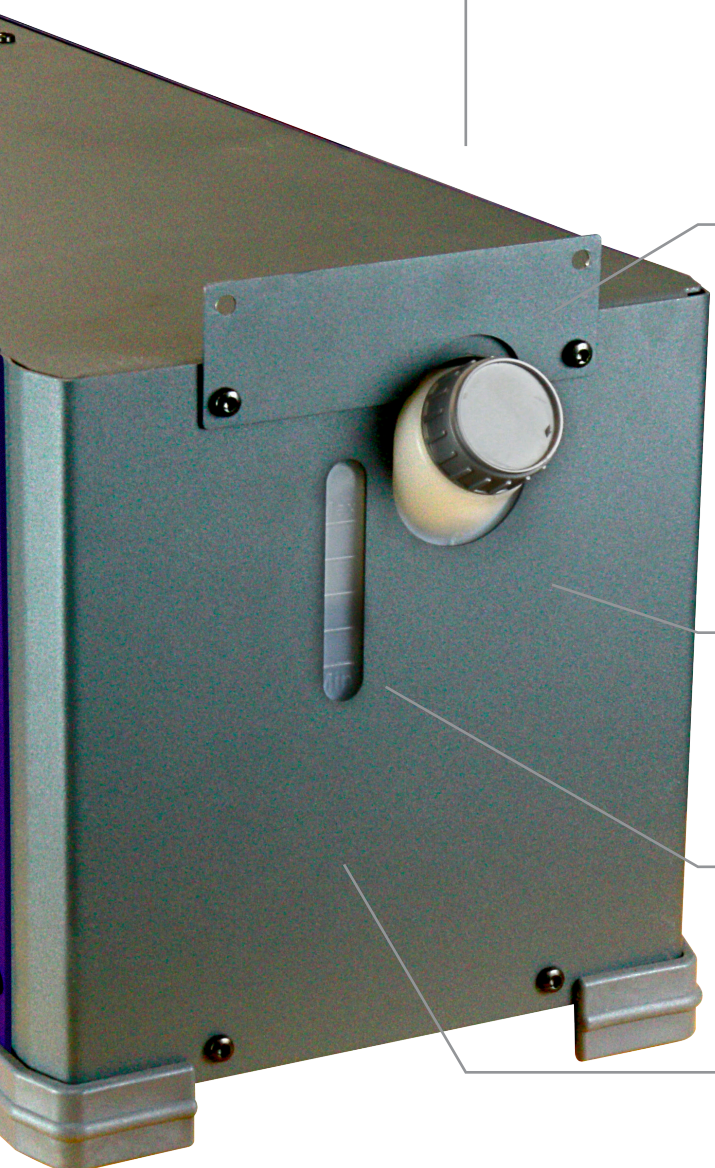
Easy access to the components in the cooling unit

Coolant level indicator

Easy to read coolant level indicator with min/max scale

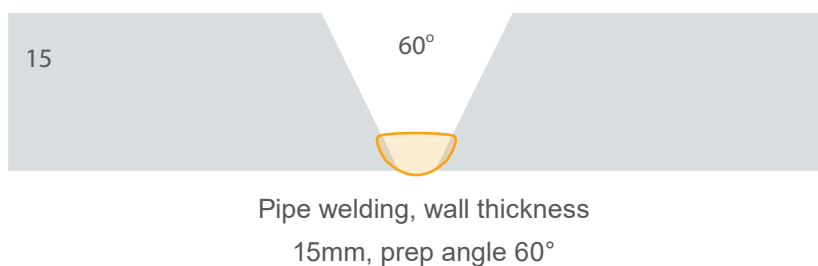
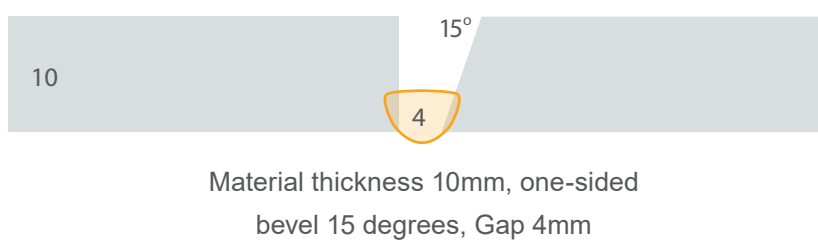
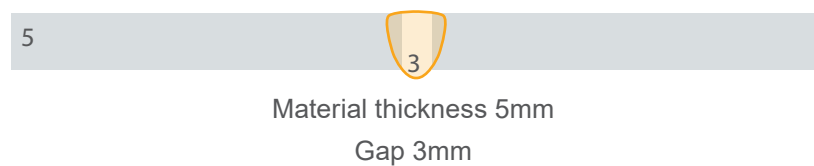
Intelligent Cooling System

Operates cooling unit only when needed, reducing noise, energy use and increasing service intervals



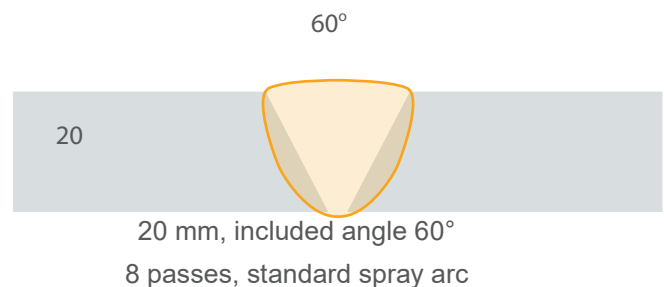
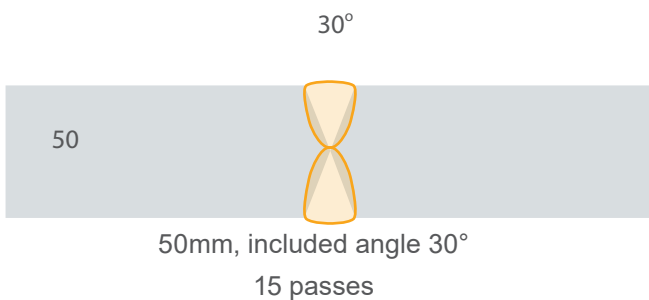
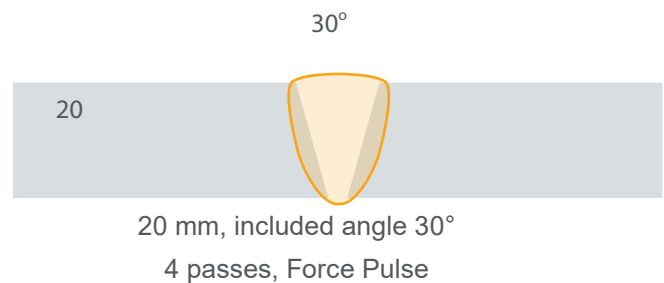
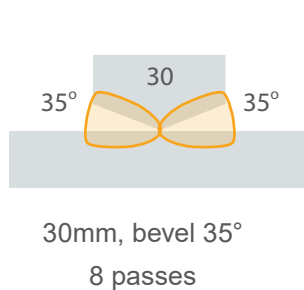
APT-M Root - Welding of non-alloy and low-alloy steel

- 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



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



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

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



POWER UNIT	APTМ 201С-Р APTМ 201С-R	APTМ 353С-РТ APTМ 353С-RT	APTМ 353СW-РТ APTМ 353СW-RT	APTМ 403S-РТ APTМ 403S-RT
Input Voltage(VAC)	230 ± 10%	400 ± 10%	400 ± 10%	400 ± 10%
Output Range (MIG, A)	20-200	20-350	20-350	20-400
Duty Cycle (40°C)	25% : 200 A, 23.0 V 60% : 110 A, 19.0 V 100% : 90 A, 18.1 V	- 60% : 350 A, 29.8 V 100% : 250 A, 25.3 V	- 60% : 350 A, 29.8 V 100% : 250 A, 25.3 V	- 60% : 400 A, 32.0 V 100% : 300 A, 27.5 V
Max. Input Power (kVA)	7.2	14.7	14.7	17.8
Open Circuit Voltage (VDC)	68	62	62	90
Dimensions (HxWxL, mm)	392 x 242 x 578	632 x 243 x 638	632 x 243 x 638	452 x 243 x 701
Net Weight (kg)	23	36.5	36.5	60
Standard Accessories	3m Power Cable (4 x 2.5 mm ²)	3m Power Cable (4 x 2.5 mm ²)	3m Power Cable (4 x 2.5 mm ²)	3m Power Cable (4 x 4 mm ²)
Accessories	2m Ground Cable (16 mm ²)	3m Ground Cable (25 mm ²)	3m Ground Cable (25 mm ²)	3m Ground Cable (50 mm ²)
Interconnection				5m A/C
Trolley		✓	✓	✓
Water Cooler			✓	

Parweld reserves the right to make changes without notification.



APT 403SW-PT APT 403SW-RT	APT 503SW-PT APT 503SW-RT
400 ± 10%	400 ± 10%
20-400	20-500
-	-
60% : 400 A, 32.0 V	60% : 500 A, 36.5 V
100% : 300 A, 27.5 V	100% : 400 A, 32.0 V
17.8	24.8
90	90
452 x 243 x 701	453 x 244 x 701
60	60
3m Power Cable (4 x 4 mm ²)	3m Power Cable (4 x 6 mm ²)
3m Ground Cable (50 mm ²)	3m Ground Cable (50 mm ²)
5m W/C	5m W/C
✓	✓
✓	✓

COOLING UNIT	APT 906
Cooling Capacity (W)	1300
Tank Capacity (L)	5
Max. Pressure (bar)	5
Max. Temperature (C°)	70
Standard	CE
Dimensions (HxWxL, mm)	243 x 245 x 700
Weight (kg)	23

WIRE FEEDING UNIT	APT-PRO APT-RAPID
Wire Feed Speed (m/min.)	24
Max spool Dia (mm)	300
Duty Cycle (40°C)	60% : 600 A
Torch Connection	EURO
Protection Class	IP 21
Standards	CE
Dimensions (HxWxL, mm)	336 x 242 x 509
Weight (kg)	12

APT

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parweld 
WELDING THE FUTURE

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