KOLARC

BUILDING THE FUTURE

Turkey
Discover
the potential

M SERIES

www.kolarc.com

Turkey
Discover
the potential

Kolarc M Series
Professional Multiprocess Welding Machines

All MIG/MAG processes, One machine, One price!

- Xroot / Xroot Pulse - for perfect root welding
- Xdeep / Xdeep Pulse - high-performance arc with deep penetration
- Position - for positional welding
- Xpulse - %100 penetration even with 15º V preparation
- Xcold / Xcold Pulse - minimises heat input for thin sheet welding
- Pulse and MIG/MAG
- Multi Process TIG, MMA welding and Arc gouging

Operating Status

Digital display indicates the 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.

Site power generators can be used without problem.

Easy lifting by crane

Kolarc 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 prevents shielding gas
   contamination

FM 4X – Brings all functions to the workplace

The wire feed unit is built for daily use
Available in four practical, control panel variants:
Pulse, Rapid Pulse, Synergic and Basic.

100 Program Memory

Increases productivity, prevents misuse.
Saved programs can be called from the front panel or directly
from the torch. The number of memory location 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.
Pulse -300 Job
Rapid Pulse - 30 Job
Synergic - 30 Job
Basic - 4 Job

Advanced Inverter Technology

Delivers energy savings up to 35% against conventional
equipment and superior arc control without spatter.

Wind Tunnel Design

Cooling air is drawn through an internal tunnel which separates the
electrical and electronic components from grinding dust and dirt,
extending the machine's life.

Inteligent Cooling System

Smart fan operates only when needed, reducing noise, energy
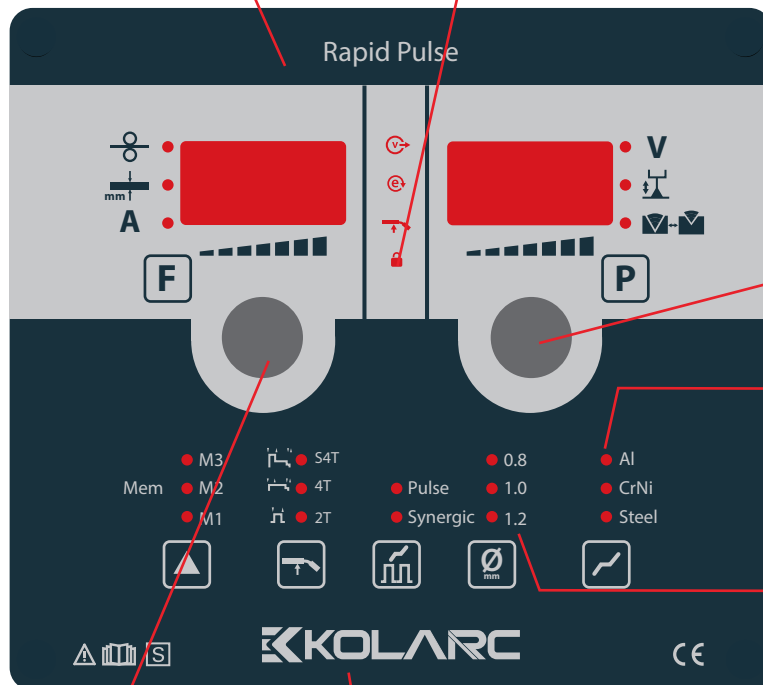consumption and increasing service intervals.

FM 4X
Front Panel

Easy, intelligible Design

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

Access Control

**Right Wheel
to set arc length and
arc dynamics**

Rapid Pulse panel

Material Selection

Rapid Pulse

V

A

F

P

Mem
● M3
● M2
● M1

● S4T
● 4T
● 2T

● Pulse
● Synergic

● 0.8
● 1.0
● 1.2

● Al
● CrNi
● Steel

K KOLARC

CE

Wire Diameter Selection

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

**Welding Parameters
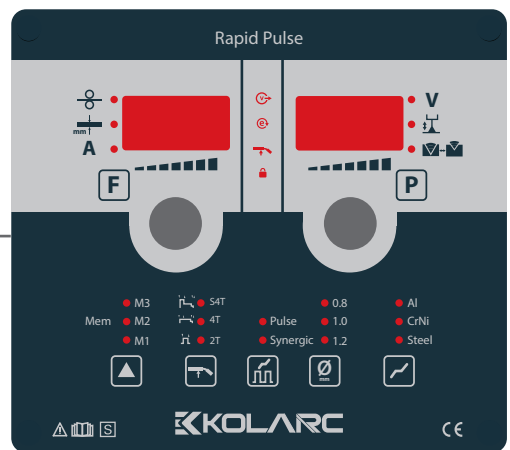Control of the smallest detail**

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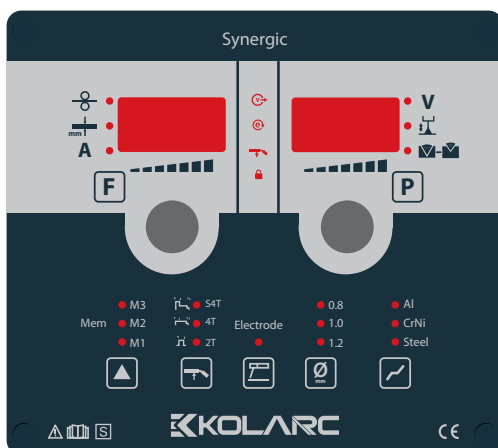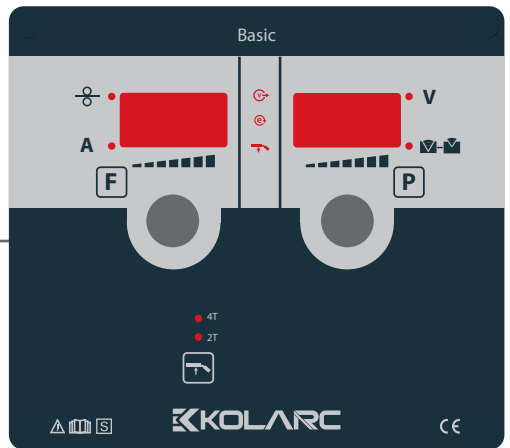Pre- gas, hot start, post gas, crater fill and burn-back

FM 4X

Pulse

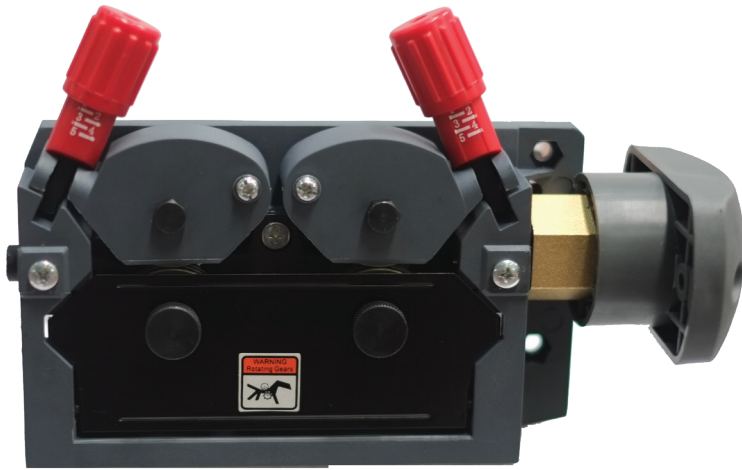**Pulse**

300 Job

Rapid Pulse

Rapid Pulse

30 Job

Synergic

Synergic

30 Job

Basic

Basic

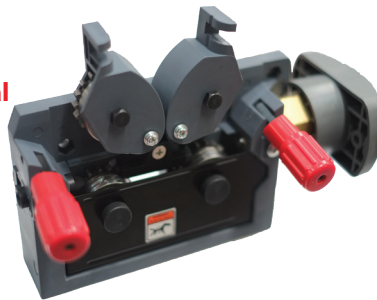**4 Job**

Perfect wire feeding and arc stability
FM 4X

Wire feeding – Precise and practical

37 mm wire-feed rolls, Encoder motolr and 4x4 wire-feed box give a steady 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
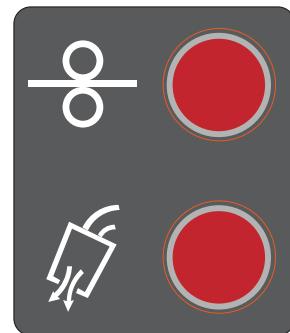
Illuminated feed box

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 four practical control variants:
Pulse, Rapid Pulse, Synergic, Basic

M Series
Water Cooling Unit

## High effciency cooler ensures torch performace

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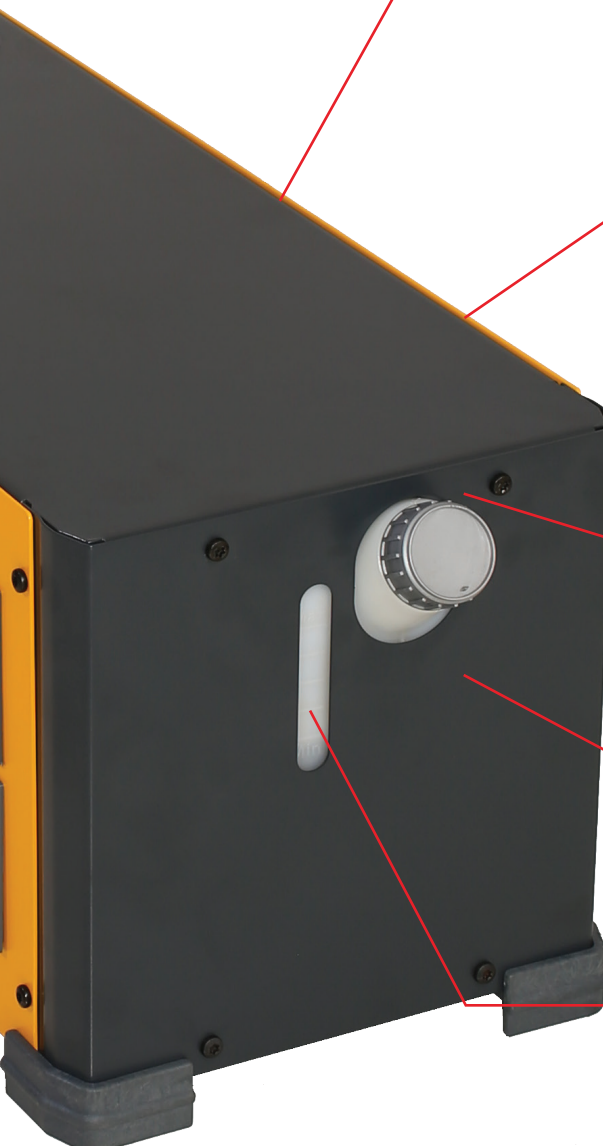enviromental conditions.

Modular structure

Cooling-unit designed as modular and is able to be added or
removes from a 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.
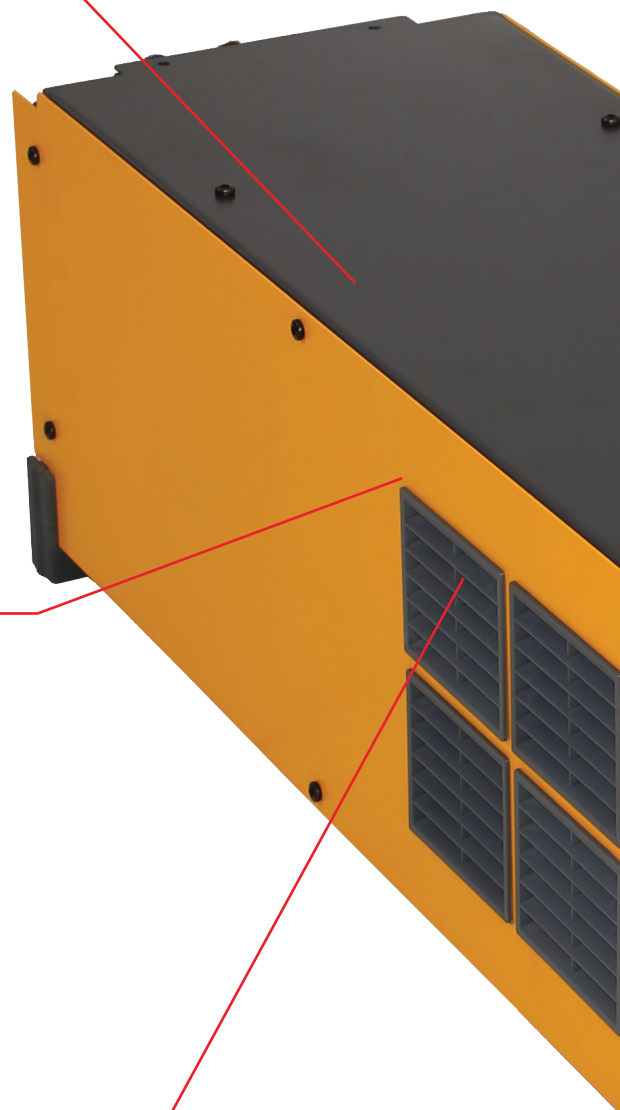
Custom configurable – As your require

Kolarc 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 pakages

Easy service and maintainance

Easy acces to the components in the cooling unit.
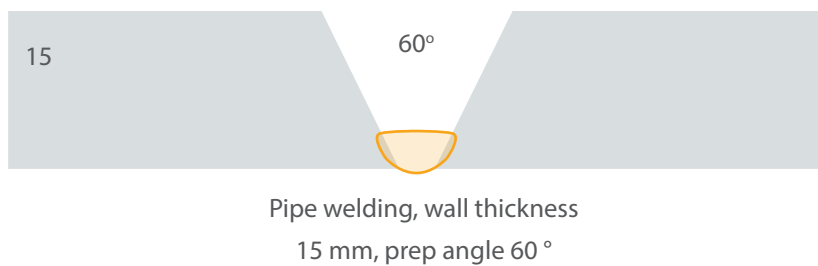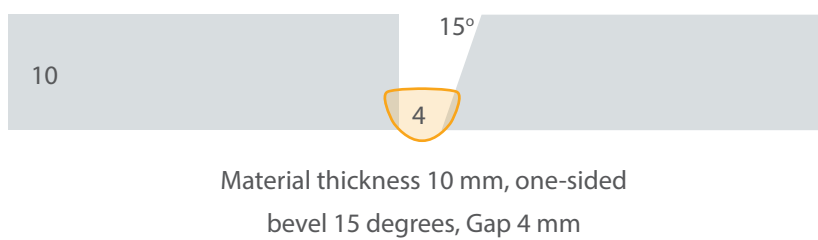Easy to fill up with Kolarc coolants

Coolant level indicator

Easy to read coolant level indicator with min/max scale

Intelligent Cooling System

Operates cooling fan only when needed, reducing noise, energy use and increaseing the service intervals
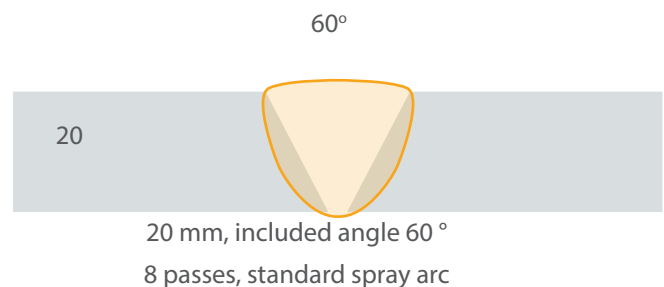
Xroot / Xroot Pulse - Welding of non-alloy and low-alloy steel

■ 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 5 mm
Gap 3 mm

Material thickness 10 mm, one-sided
bevel 15 degrees, Gap 4 mm

Pipe welding, wall thickness
15 mm, prep angle 60 °

Xdeep / Xdeep Pulse - 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 times, suitble 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

30 mm, bevel 35 °
8 passes

20 mm, included angle 30 °
4 passes, Force Pulse

50 mm, included angle 30 °
15 passes

20 mm, included angle 60 °
8 passes, standard spray arc
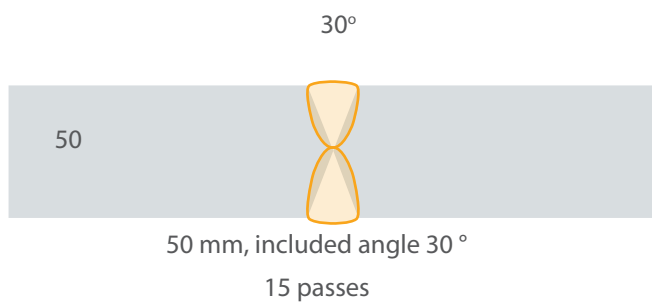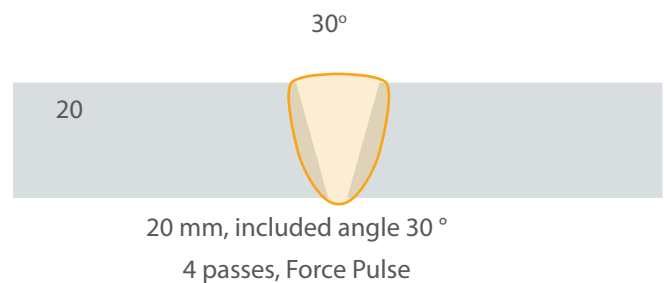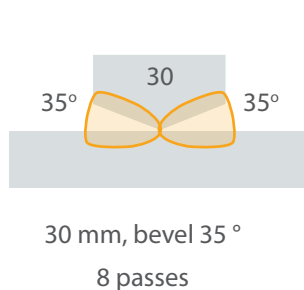
Position – Positional welding
## without using the pine tree technique
on non-alloy, low-alloy and high-alloy

- Higher welding speeds compared with traditional pine wood technique

- Concentrated, digitally modified pulsed arc

- Spatter-free welding results thanks to rapid digital control of the welding process

- Optimum, factory-configured pulsing between low and high welding power

- Reduced heat input with low arc power and energy per metre

- Flat, evenly spaced bead ripples, spatter-free process for reduced finishing

- Easy to set and easy to guide
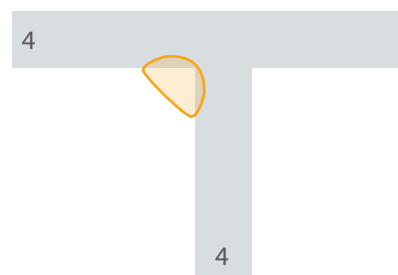
Material thickness 4 mm
AlMg5
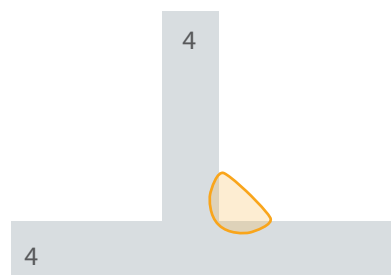
Material thickness 4 mm
AlMg5

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

Xpulse - Welding with consistent penetration and consistent heat input on non-alloy, low-alloy and high-alloy steel

- Welding process with consistent high penetration regardless of alterations to stick-out

- Virtually spatter-free welding results thanks to rapid digital control of the welding process

- Digital process control provides a consistent welding current

- The energy per metre and heat input remain consistent despite changes to stick-out

- Reduced prep angle provides savings in consuamble consumption and welding time

- Flat, smooth weld surface virtually spatter-free for reduced finishing work

- Easy to learn and to control

Xcold / Xcold Pulse - Welding and brazing of thin sheet metal made from nonalloy, low-alloy, high-alloy steel and galvanised sheet metal

- Short-circuit welding with low heat input due to digital control of droplet transfer using high speed inverter

- 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

- High speed digital inverter allows welding with long hose packages without additional voltage measuring leads

- Minimal spatter formation, minimises impact on corrosion resistance even with galvanised materials

Kolarc M Series
Technical Information

POWER UNIT	M 200 C Series	M 300 C Series	M 400 Series	M 500 Series
Input Voltage(VAC)	230 ± %10	400 ± %10	400 ± %10	400 ± %10
Output Range (MIG, A)	20-200	20-300	20-400	20-500
Duty Cycle (40ºC)	%25: 200 A, 23.0 V	%35: 280 A, 26.6 V	-	-
	%60: 110 A, 19.0 V	%60 : 230 A, 24.4 V	%60: 400 A, 32.0 V	%60 : 500 A, 36.5 V
	%100: 90 A, 18.1 V	%100: 180 A, 22.1 V	%100: 300 A, 27.5 V	%100: 400 A, 32.0 V
Max. Input Power (kVA)	7.2	10.8	17.8	24.8
Open Circuit Voltage (VDC)	68	67	90	90
Dimensions (HxWxL, mm)	392 x 242 x 578	632 x 243 x 638	452 x 243 x 701	452 x 243 x 701
Net Weight (kg)	23	36.5	60	60
Standard Accessories	3 m Power Cable (4 x 2.5 mm^2)	3 m Power Cable (4 x 2.5 mm^2)	3 m Power Cable (4 x 4 mm^2)	3 m Power Cable (4 x 6 mm
	2 m Ground Cable (16 mm^2)	3 m Ground Cable (25 mm^2)	3 m Ground Cable (50 mm^2)	3 m Ground Cablei (70 mm
	Gas Regulator	Gas Regulator	Gas Regulator	Gas Regulator
	3 m 200 A Torch	3 m 300 A Torch	3 m 400 A Torch	3 m 400 A Torch

Kolarc reserves the right to make changes without notification.

	KM 501 Series	KM 600
	400 ± %10	400 ± %10
	20-500	40-600
	-	-
	%60: 500 A, 36.5 V	%60 : 600 A, 41.0 V
	%100: 400 A, 32.0 V	%100: 500 A, 36.5 V
	24.8	32.7
	90	90
	453 x 244 x 701	375 x 314 x 721
	60	70
²)	3 m Power Cable (4 x 6 mm²)	3 m Power Cable (4 x 6 mm²)
²)	3 m Ground Cable (50 mm²)	3 m Ground Cable (70 mm²)
	Gas Regulator	Gas Regulator
	3 m 400 A Torch	3 m 400 A Torch

COOLING UNIT	WM 400 / WM 500 WKM 501	WKM 600
Cooling Capacity (W)	1300	1300
Tank Capacity (L)	5	5
Max. Pressure (bar)	5	5
Max. Temperature (Co)	70	70
Standard	CE	CE
Dimensions (HxWxL, mm)	243 x 245 x 700	271 x 313 x 670
Weight (kg)	23	28

WIRE FEEDING UNIT	FM 4X	FKM 4X
Wire Feed Speed (m/min.)	24	24
Max spool Dia (mm)	300	300
Duty Cycle (40oC)	%60 : 600 A	%60 : 600 A
Torch Connection	EURO	EURO
Protection Class	IP 21	IP 21
Standards	CE	CE
Dimensions (HxWxL, mm)	336 x 242 x 509	322 x 223 x 501
Weight (kg)	12	12

KOLARC

BUILDING THE FUTURE