

# A5 MIG Orbital System 1500

THE MOST EFFICIENT MECHANIZED SYSTEM FOR MIG  
ORBITAL WELDING





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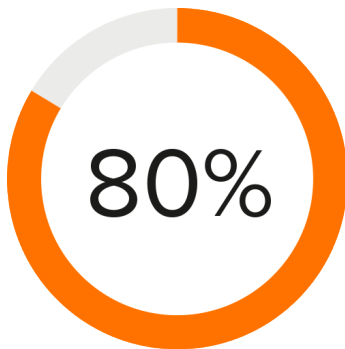


### THE MOST EFFICIENT MECHANIZED SYSTEM FOR MIG ORBITAL WELDING

A5 MIG Orbital System 1500 is a complete set of welding mechanization and welding equipment for circumferential joint welding. Suitable for pipe and tube sizes up to an outer diameter of 1500 mm. With integrated Kemppi special processes the system is efficient from root pass to all filler layers, saving up to 50 % in labor and filler costs. All relevant welding parameters can be handled from one single integrated remote controller.

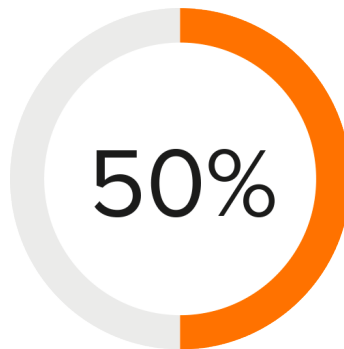


## KEY BENEFITS



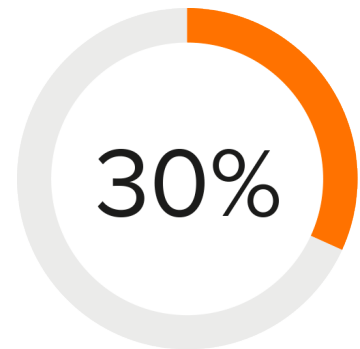
### WELD MORE

per day with the integrated  
WiseRoot+ process



### SAVE COSTS

WiseRoot+ process saves 50 %  
in labor and filler costs



### LESS FILLER MATERIALS

with simultaneous use of  
WiseFusion and  
WisePenetration processes

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## BENEFITS

- Increased welding productivity
- Pre-defined programs for different pipe sectors
- Two separate wirefeeders can be connected, to be used at different times
- Use of WiseRoot+ means no slag or spatter
- Carriage can also be used for horizontal and vertical joints with or without weaving
- Simultaneous control of carriage programs and power source channels makes control easy
- One button for starting, stopping, and changing the welding parameters
- Light and durable Remote Control Unit makes operation simple and fast
- Accurate speed control and two drive motors
- Multiple weaving patterns possible with integrated Weaving Unit
- Flexible adjustment of the tilt and push/pull angle enabled by the welding gun holder
- Only one power cable needed



## PRODUCT OPTIONS



### FastMig X 450 Power source

Provides 450 A with 60% duty cycle. Suitable for generator use.



### WFX 300 P-T Wire feeder

For Ø 200/300 mm wire spools. No pre-installed software. Durable double-skin plastic casing with a strong two-motor GT04 wire feed mechanism. Built-in arc voltage measurement.



### WiseRoot+

Optimized short arc process for productive root pass welding. Excellent weld quality through control of arc voltage and timing of filler metal droplet transfer. Gives higher speed than MMA, TIG or MIG/MAG short arc welding.



### WiseFusion

A welding function that ensures consistent weld quality in all positions by automatically regulating arc length. Creates and maintains an optimal short-circuit characteristic in pulsed MIG/MAG and spray-arc welding.

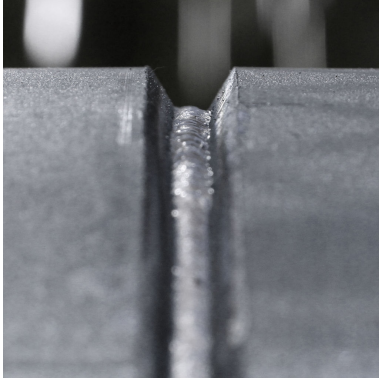


### WisePenetration

A welding function for ensured penetration in synergic MIG/MAG welding. Delivers constant power to the weld pool regardless of changes in welding gun orientation or distance between the welding gun and work piece.



## FEATURES



### Save 50 % in root pass labor and filler costs with WiseRoot+

With WiseRoot+ you can achieve 50 % lower labor and filler costs for root pass welding per welded meter for butt welds with plate thicknesses less than 12 mm. This is a result of faster travel speed and the ability to decrease the groove angle. The WiseRoot+ process also allows for fluctuation of the root gap, and the after-work costs are lower thanks to the limited amount of slag and spatter.



### Weld root passes 80 % faster with WiseRoot+

You can complete more than 80 % more root pass welding per day with WiseRoot+ compared to MIG/MAG welding. WiseRoot+ is notably faster than 1-MIG or TIG: The welding travel speed with WiseRoot+ is 20-25 cm/min when compared with 1-MIG 8-12 cm/min, and with TIG 5-9 cm/min, depending on the application.



### 30% savings on labor and filler costs by using WiseFusion and WisePenetration simultaneously

When combined, the WiseFusion and WisePenetration processes can save up to 30 % in filler material and welding time because a narrower groove angle can be used for butt joints up to 25 mm plate thickness from one side.



## ACCESSORIES



### MMT 42C

MMT 42C is a welding gun for mechanized welding. This gun is available in 3 m (6254205) and 4 m (6254207). Gas cooled, 420 A.



### MT51MWC

MT51MWC is a 500A water cooled welding gun for mechanized welding. Two length options 4,5 m ( 6255162) or 6,0 m (6255163).



### MMT MN 32C

MMT MN 32C is a 5 m gas-cooled multi-neck, 320A welding gun for mechanized welding.



### Cool X Cooling unit

Cool X cooling unit for liquid-cooled setups is the ultimate choice providing 1 kW of cooling power with 3 liters of cooling liquid.



### A5 MIG Orbital Welding Carriage 1500

Welding carriage driven by two robust electronic motors and equipped with welding gun holder and integrated gun weaving unit, with several optional weaving patterns. Gun weaving unit allows flexible adjustment of the tilt and push/pull angles.



### A5 MIG Remote Control Unit

Light and durable remote controller for welding parameter control and immediate change of program. Seamlessly integrated with Kempfi power sources. Starting, stopping, and changing the welding parameters is very quick and simple. Easy to learn and use.



### Ring

A robust guide ring for pipe diameters from 6" to 70". Adjustable support legs. Clamping in the position with a locking lever.



### A5 carriage carrying and storage box

Wooden storage box for A5 MIG Carriages.



### A5 MIG carriage transformer



A5 MIG carriage control cable





## TECHNICAL SPECIFICATIONS

### POWER SOURCES

#### FastMig X 450 Power source

Product code	6103450
Connection voltage 3~ 50/60 Hz	400 V, (-15...+20%)
Fuse (delayed)	35A
Minimum generator power	35 kVA
Output 60% ED	450 A
Output 100% ED	350 A
Open circuit voltage MMA	U <sub>0</sub> = 70-98 V U <sub>av</sub> = 50 V
Open circuit voltage MIG/MAG	U <sub>0</sub> = 80 - 98 V
Operating temperature range	-20 ... +40 °C
External dimensions LxWxH	590 × 230 × 430 mm
Degree of protection	IP23S
Standards	IEC 60974-1, IEC 60974-5, IEC 60974-10

### WIRE FEEDERS

#### WFX 300 P-T Wire feeder

Product code	6103535
Output 60% ED	520 A
Output 100% ED	440 A
Wire feed mechanism	GT04
Gun connection	Euro
Filler wire sizes (Ss)	0.6 - 2.0 mm
Filler wire sizes (Al)	0.8 - 2.4 mm
Filler wire sizes (Fe)	0.6 - 2.0 mm
Filler wire sizes (Cored wire)	0.8 - 2.4 mm
Wire feed speed	0.5 - 25 m/min
Software	WiseFusion WiseRoot+ MatchLog Pipe Steel pack Fe (25pcs) Pipe Stainless pack Ss (17pcs)
Operating temperature range	-20 ... +40 °C
External dimensions LxWxH	590 × 240 × 445 mm
Degree of protection	IP23S
Standards	IEC 60974-5
Wire spool weight, max.	20 kg
Weight (empty)	13.1 kg
Wire spool diameter, max.	300 mm





## SOFTWARE

### WiseRoot+

Product code	9990418 (FastMig X) X8500003 (X8 MIG Welder)
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### WiseFusion

Product code	9991014 (FastMig M, FastMigX) X8500000 (X8 MIG Welder) A7500000 (A7 MIG Welder)
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### WisePenetration

Product code	9991000 (FastMig M, FastMigX) A7500001 (A7 MIG Welder)
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## ACCESSORIES

### MT51MWC

Product code	4,5 m - 6255162 6,0 m - 6255163
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### MMT MN 32C

Product code	6250405
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### Cool X Cooling unit

Product code	6068200 Cooling liquid - 10 liter can - SP9810765
Operating voltage (safety voltage)	400 V -15 ...+20 %
Maximum pressure	0.4 Mpa
External dimensions LxWxH	570 x 230 x 280 mm
Weight (no accessories)	11 kg
Degree of protection	IP23S
Tank volume	~3 L
EMC class	A
Cooling power	1 kW
Storage temperature range	-40 ...+60 °C
Operating temperature	-20 ...+40 °C



## A5 MIG Orbital Welding Carriage 1500

Product code	6190715 6190735 (-ES model)
Carriage speed	5 - 150 cm/min
Input power	30 - 55 V DC or 24 - 50 V AC
Transport speed	200 cm/min
Weaving speed	10 - 50 mm/s
Weaving width	0 - 30 mm
Weaving displacement	± 40 mm
Dwell time (Adjustable on both sides separately)	0 - 2.0 s
Weaving patterns	3
Torch horizontal adjustment (manual)	± 40 mm
Weight	9.0 kg
External dimensions (Height from pipe surface)	365 × 385 × 300 mm

## A5 carriage carrying and storage box

Product code	6190717
External dimensions LxWxH	555 x 285 x 300 mm

## A5 MIG carriage transformer

Product code	6190714
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## A5 MIG carriage control cable

Product code	6190716
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**Kemppi** is the pioneering company within the welding industry. It is our role to develop solutions that make you win business. Headquartered in Lahti, Finland, Kemppi employs over 800 welding experts in 17 countries and has a revenue of more than 150 MEUR. Our offering includes welding solutions - intelligent equipment, welding management software and expert services - for both demanding industrial applications and ready-to-weld needs. Local expertise is available via our global partner network covering over 60 countries.

