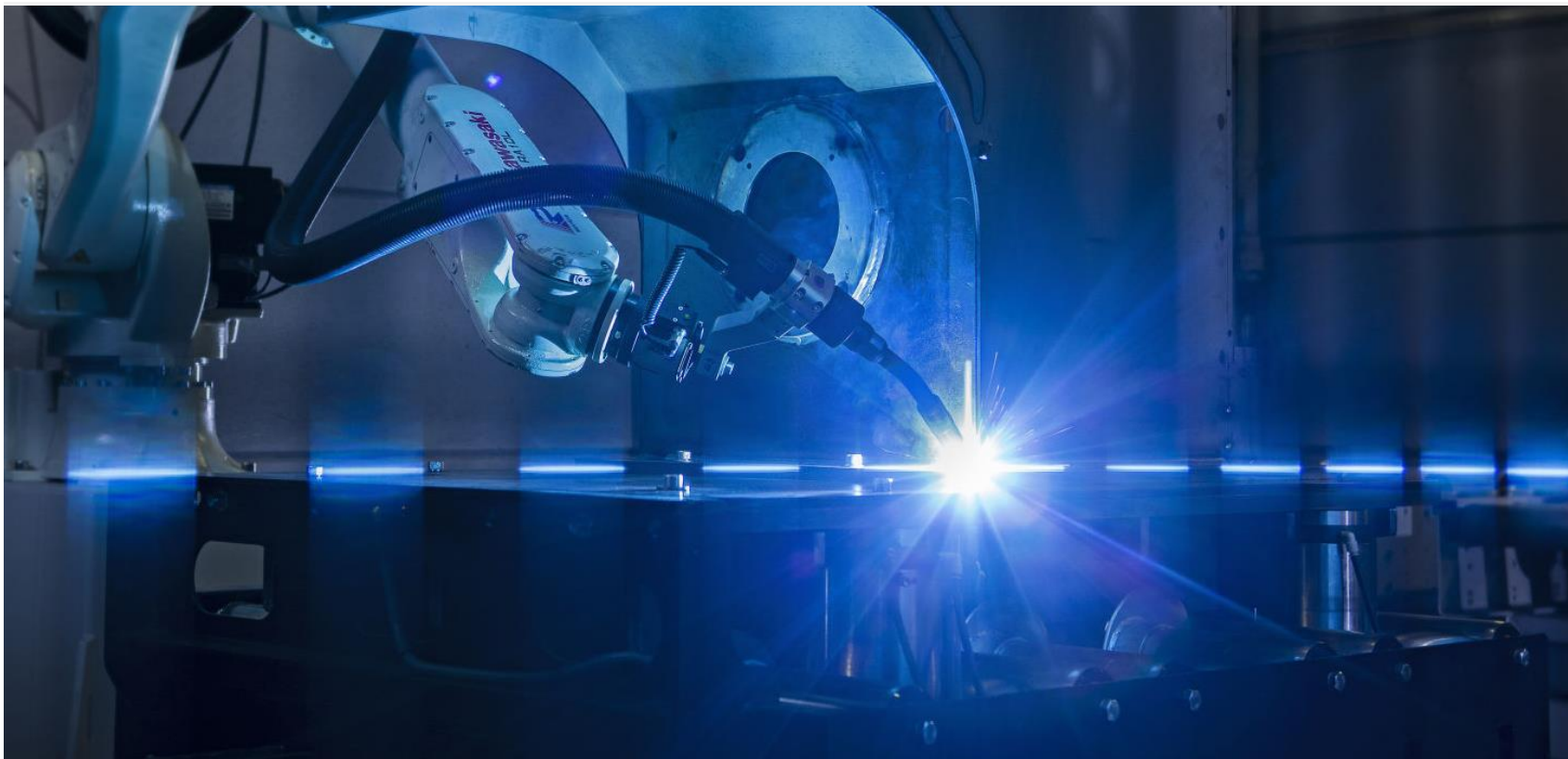




A7 MIG Welder 350/450



A7 MIG Welder 350/450 / Author



A7 MIG Welder 350/450

The most intelligent Robotic MIG welder

- Complete arc welding process function packages for MIG welding applications
- Ideal for integration with any robot brand
- Versatile solution serves different customer segments
- Kemppi welding know-how and special processes



Perfectly balanced process package for robotized arc welding

End user industry examples:

- Automobile components
 - Mobile machinery components
 - Steel construction
 - Process equipment manufacturing
 - General fabrication
 - Shipbuilding
 - Offshore
- Any industry using robotic welding for thin and thick mild steel, stainless steel and aluminum components.



Complete process package from one source

- All process equipment, including welding gun, wire feeder, power source and cooling units, are designed and delivered by Kemppi.
- Significant savings in time and effort when integrating the process package to the robot application.
- All pieces fall in place with minimum effort, system start-up is easy and perfect functionality and upgradability of the system later on is guaranteed.



Increased productivity with Kemppi application software

- Better welding production efficiency with Kemppi **synergic curves** and **WISE** processes.
- Fine tuned and pre-set to give optimum productivity **also with higher welding speeds** typically used in automated welding.
- Same Kemppi equipment can be used for a variety of demanding welding tasks, like root pass welding (WiseRoot+), thin sheet welding (WiseThin+), Securing penetration (WisePenetration) and fusion (WiseFusion).



**INCREASED
WELDING SPEED
WITH WISE FUSION***



**LOWER HEAT
INPUT WITH
WISE FUSION***

*Example: (8 mm) steel fillet-weld joint, (Fe solid wire 1,2 mm)



Radical savings in set up time

- Modern web-browser based user interface gives an easy access to the power source.
 - Savings in set up time.
 - Monitoring benefits in quality control through whole lifecycle.
- Simply connect your laptop directly to Kemppi power source and
 - easily configure the initial system set up (fieldbus configurations, cable lengths, water unit, emergency stops, gas pre-flow and post-gas parameters, touch sensor settings)
 - Copy system set up from one machine to another
 - Read logbook from power source
 - Create and modify memory channels.



System components 1/3

A. Kemppi A7 MIG Gun 500 G/W

- Ordering based on information on robot type and welding application
- Covering all common robot brands and models
- Hollow wrist/non-hollow wrist versions
 - With/without shock sensor modules
- Gas/Water cooled versions
- Wire/Gas-nozzle search voltage versions
- Wire brake option available



System components 2/3

B. Wire feeder – features

- KeBus communication to power source
 - Integrated WF controller electronics in the WF casing
- Robust casing designed for industrial use
- Comes with suitable adapter plate for the robot 3rd joint attachment
- Integrated and handy gas test, wire feed and wire retract buttons integrated to casing
- Integrated gas flow sensor with flow rate min level monitoring
- Integrated compressed air blow valve
- Euro/Power pin -connector versions available
- 4 wheel drive – max. Feed speed 25 m/min
- Back light provided behind drive wheels
- Support for push/pull torches



System components 3/3

C. Power source – features:

- KeBus communication to WF
- Optimized welding processes for automated welding
- Enhanced arc ignition feature for less spatter generation
- Through the arc seam tracking functionality also with pulse modes
- Seam searching voltage available with adjustable voltage level
- Integrated water cooling unit with water flow sensor
- Logbook functionalities
- Modern fieldbus interfaces for different robot types with HMS CompactCom modules: DeviceNet, EtherCAT, EtherNet/IP, Profibus, Modbus
- Ability to work with Web browser based UI

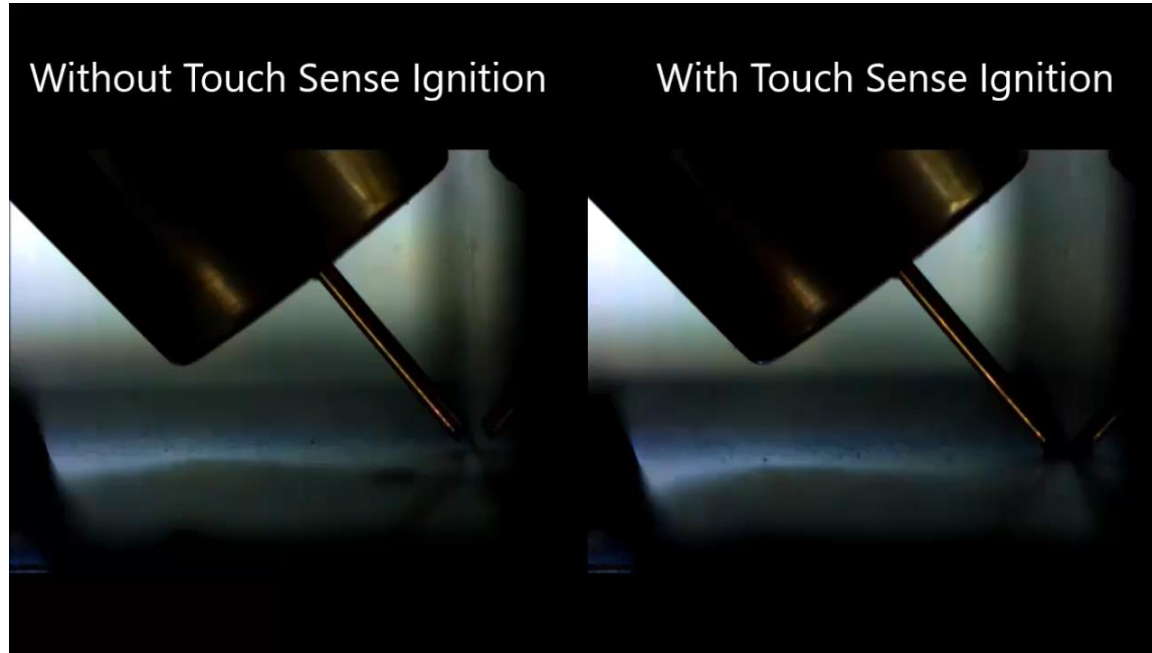


Additional Accessories:

- Torch cleaning station
- Wire feeding kits for feeding from coil or from drum



Arc ignition feature



Appendix A7 MIG Welder 350/450 calculation: WiseFusion in robotized welding

Welding production figures

Manufacturer: Contract manufacturing workshop

Products: Boom structures for container cranes

Joint: T joint, throat thickness 5 mm

Welding: Mechanized MAG welding, duty cycle 50 %

Number of welders: 10 welders x 2 shifts per day = 20 welders

Man hours per year: 20 welders x 1800 hours per person a year = 36000 man hours/year

Welding cost: 2,5 €/meter (including labor cost, filler material, shielding gas, energy, equipment etc.)

Present technology

Arc-on time: 36000 h x 50 % duty cycle = 18000 h/year

Amount of welding: 18000 h x 0,6 m/min (welding speed) x 60 = **648 km**

Benefit with WiseFusion

Amount of welding : 36000 h x 52 % x 0,72 cm/min (welding speed) x 60 = **809 km**

Benefit: 809 km - 648 km = 161 km = **25% more welding**

Value of the benefit: 161 km x 1000 x 2,5 €/m = 402,5 k€

Benefits of WiseFusion in this application

- 20 % higher welding speed than in conventional spray arc welding (60 cm/min -> 72 cm/min)
- 4 % higher arc-on time because no need for arc length adjustments (50 % -> 52 % duty cycle)
- 25% more welding / year



And you know.

