

**3 YEARS  
WARRANTY**

Torch and cables  
are excepted

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# Askaynak SUPERMIG® 505SP

**SYNERGIC - PULSE  
EXCELLENT PERFORMANCE**



# SYNERGIC PULSE MIG/MAG WELDING MACHINE

## Processes

- GMAW (MIG/MAG)
- Pulsed MIG
- Synergic MIG
- SMAW
- FCAW
- Gouging

## Materials

- Unalloy steels
- Low alloy steels
- Stainless steels
- Aluminium alloys
- Copper alloys

## Applications

- General fabrication
- Heavy fabrication
- Steel construction works
- Automotive industry
- Chemical processing
- Maintenance and repair
- Shipbuilding
- Transportation
- Power generation
- Pipe lines
- Railway industry
- Offshore

**Askaynak SUPERMIG® 505SP** is a 500A @ 50% semi-automatic and synergetic pulsed GMA welding machine used in the most demanding welding applications in various segments such as automotive industry, metal furniture production, shipbuilding, pressure vessel production, general and heavy steel manufacturing industry.

Thanks to its energy-saving inverter technology and its robust structure that shows high durability, it is suitable for use even under heavy working conditions.

**Askaynak SUPERMIG® 505SP** power source consists of SuperFEED SF5P separate wire feeder, SuperCOOL SC5 high efficiency cooler and 4-wheels solid metal undercarriage. With a wide range of connection cable and accessories it is ready to use in even the most demanding environmental conditions.

In addition to obtain a clean weld surface, well sound weld beads and high welding efficiency, as well as smooth and precise adjustment of welding current, welding voltage and other dynamic functions are the most important features of the machine. Thanks to the protective circuits that eliminate the negative effects such as overheating and overcurrent, the machine ensures the adaptability and reliability of the welding method selected.

## FIRST CHOICE of the PROFESSIONAL WELDERS



# SYNERGIC - PULSE EXCELLENT PERFORMANCE

## PERFECT PRODUCTIVITY

- Dynamic characteristic control circuit
- Electronic structure consisting of parallel connection of different energy modules reduces the risk of fluctuation in output current
- Closed-loop feedback control feature that provides a stable output voltage
- Continuous welding voltage adjustment feature providing precise compatibility with different welding currents



## HIGH RESISTANCE to INDUSTRIAL CONDITIONS

- Powerful cooling system (6 liters)
- High strength 70x95 mm welding sockets
- Robust metal structure resistant to heavy working conditions
- 3 (three) years warranty (welding torch and cables are excepted)



## MODULAR DESIGN

- Modular design suitable for use in all kinds of industrial conditions
- Ergonomic design makes it easy to work for all welders
- User friendly control panel



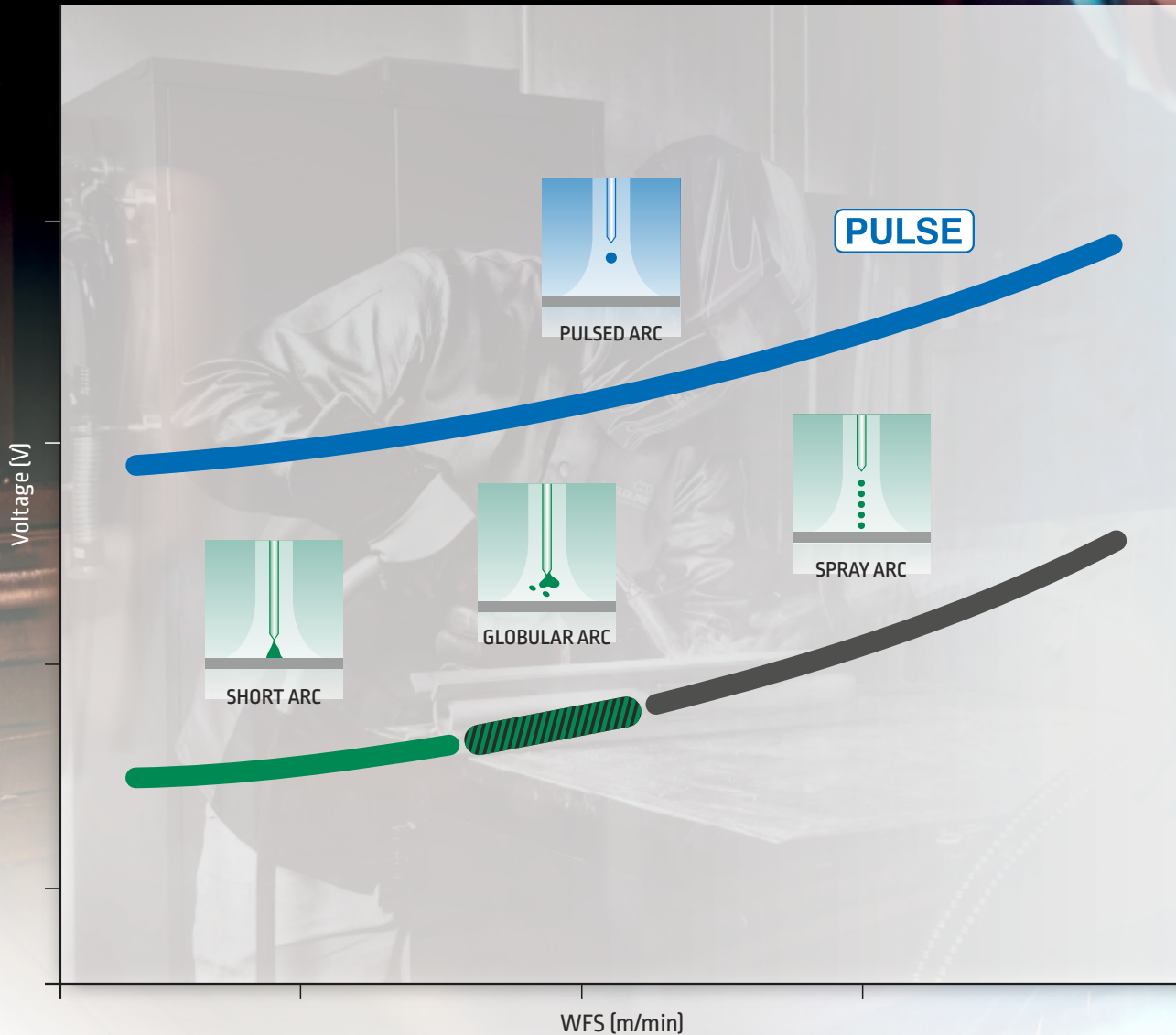
**SUPERMIG  
505SP**



**3 YEARS  
WARRANTY**

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# PULSE TECHNOLOGY

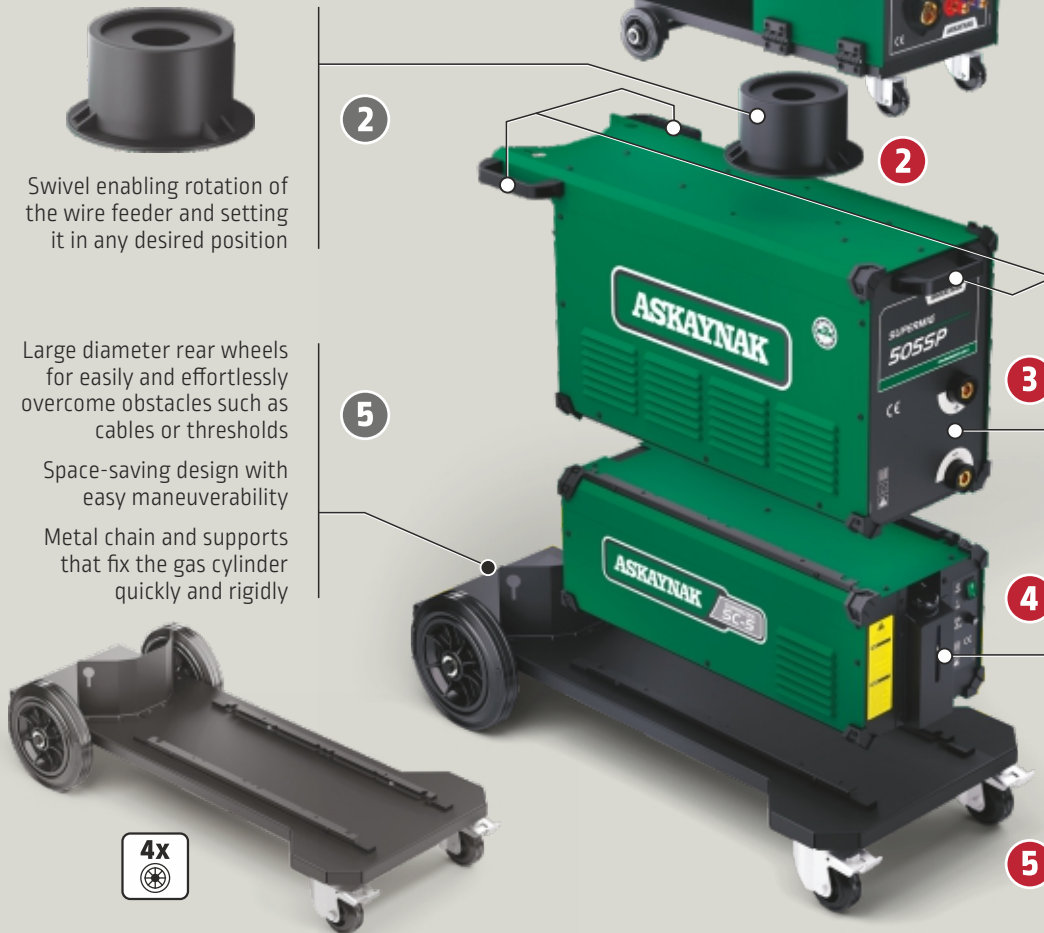


## Pulsed MIG/MAG Welding

Pulsed welding technology has been developed to remove high density oxide layer consisted especially on the surface of aluminum alloys by burning it. "Peak current" removes the oxide layer, while "Background current" provides penetration and reduces heat input.

In pulsed arc, melted drop breaks from the wire and passes into the weld pool without creating a short-circuit. Thanks to pulse feature, it is possible to realise welding operation without spatter problem.

# MODULAR DESIGN EASE OF USE FLEXIBILITY



Swivel enabling rotation of the wire feeder and setting it in any desired position

Large diameter rear wheels for easily and effortlessly overcome obstacles such as cables or thresholds

Space-saving design with easy maneuverability

Metal chain and supports that fix the gas cylinder quickly and rigidly



Easy mode selection and parameter setting even when using welding gloves

Ideal control panel height for quick access and easy-to-view settings

Protective cover for front control panel

3 handles for effortless and safe movement of the machine group even with gloves

All cables can be easily connected to the sockets without using any tools

Large volume coolant tank with inlet on front for easy fill up

Flow sensor connection for torch protection

Coolant hose connection couplings located on the rear panel



# SUPERFEED SF5P WIRE FEEDER

## Quick welding mode selection

- Quick and easy welding mode selection by pushing only one button

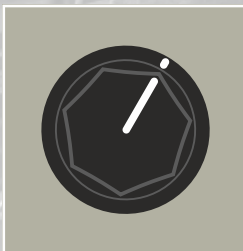


## Easy access to welding parameters and quick setting

- Pre-flow and post-flow time settings
- Arc force setting (only in MMA mode)
- Hot start setting (only in MMA mode)
- Wire feed speed (WFS) adjustment
- Inductance selection
- Burnback time adjustment
- Upslope current time setting
- Downslope current time setting

## Other features

- 2-step / 4-step trigger mode selection
- Wire diameter selection (0.8-1.0-1.2-1.6)
- Digital displays for welding current and welding voltage
- Shielding gas selection
- Gas flow and wire feed tests
- Easy-to-understand icon language for main commands
- 4 memories where custom settings are saved and recalled
- Material selection for unalloy and low-alloy steels, stainless steels, aluminum-silicon and aluminum-magnesium alloys for pulsed GMAW mode.
- Warning LEDs for power input, thermal protection and error alert
- LED lights indicating selected parameters

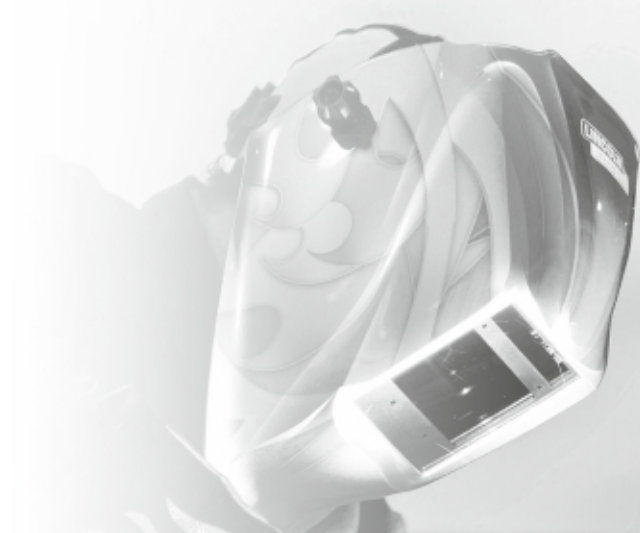
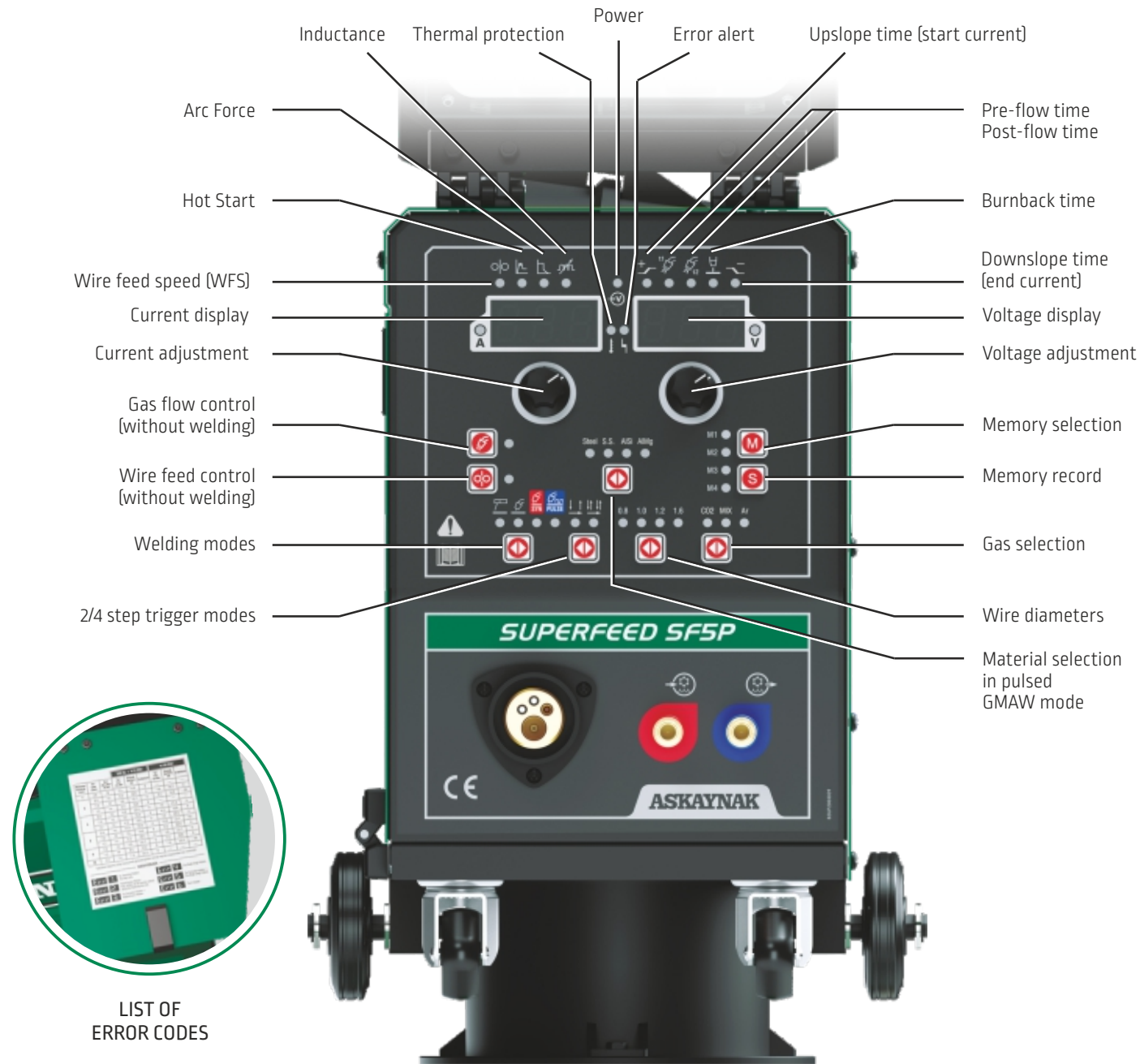


### ROTATING ENCODERS

Simple and easy navigation also when using welding gloves.

## EASY SELECTION and ADJUSTMENT



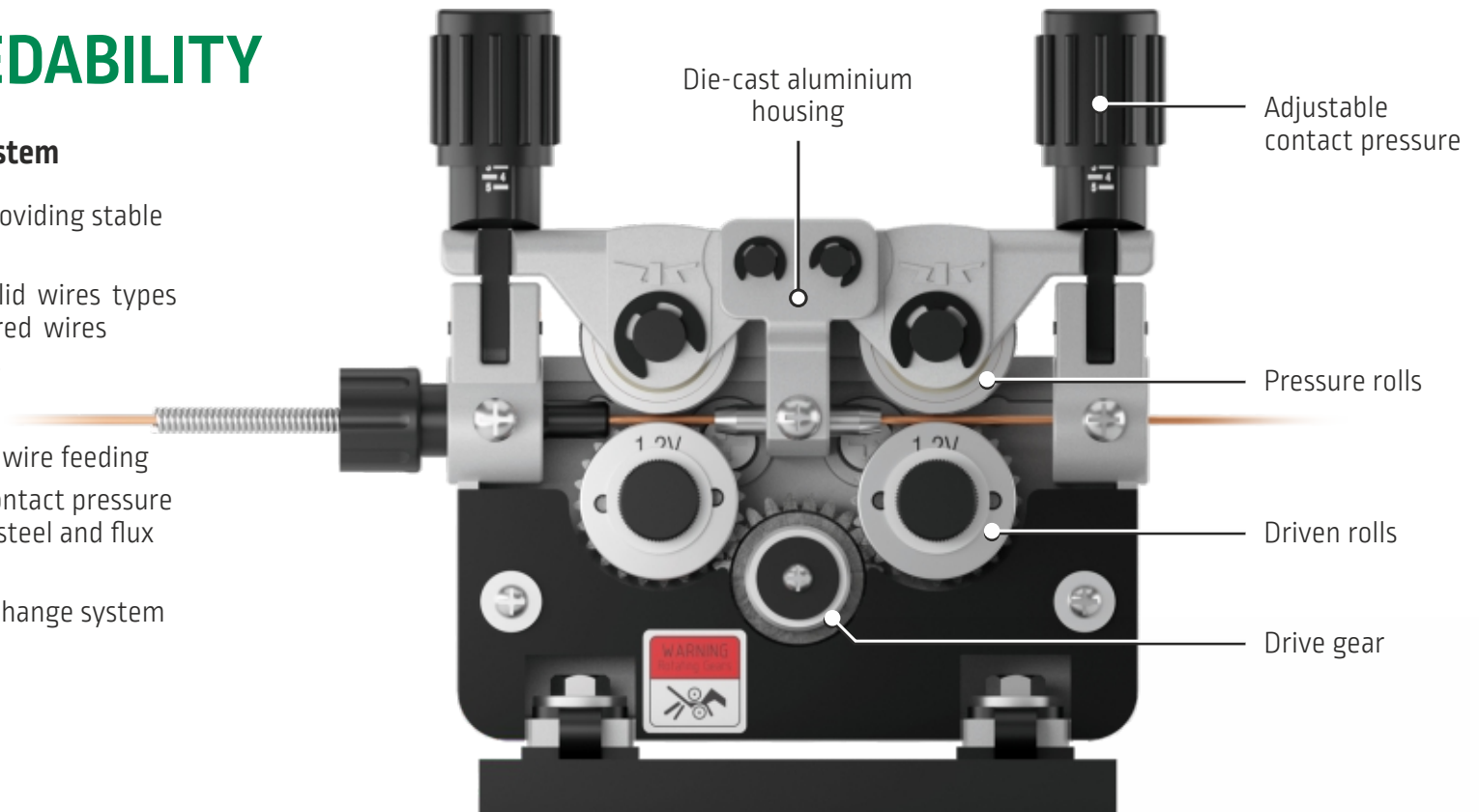


FRONT PANEL FUNCTIONS	
User interface (UI) type	LED
2/4 step trigger mode	✓
Synergic mode	✓
Pulse feature	✓
Memory	4
Pre-flow and post-flow time	✓
Gas test	✓
Wire test	✓
Run-in	✓
Upslope current control	✓
Downslope current control	✓
Burnback time	✓
Hot start	✓
Arc force	✓
Software information	✓

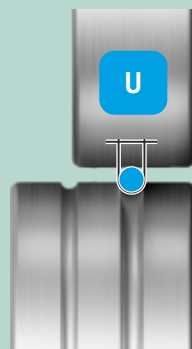
# ULTIMATE FEEDABILITY

## Professional wire feeding system

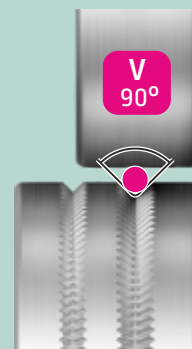
- 4-roller wire feeding system providing stable and continuous wire feeding
- Possibility to drive various solid wires types (steel, aluminum) and flux cored wires
- Die-cast aluminum housing for long service life and durability
- Ø30 mm drive rolls for optimal wire feeding
- Individually adjustable roller contact pressure for aluminium, steel, stainless steel and flux cored wire
- Simple and fast, tool-free roll change system in just few steps



V-groove driven rolls for steel and stainless steel welding wires (standard)



U-groove driven rolls for aluminium welding wires (optional)



V-groove and knurled driven rolls for flux cored welding wires (optional)





# SUPERMIG 505SP POWER SOURCE

## 500A @ 50% duty cycle

- High production efficiency
- Digital welding current control

## Industrial design resistant to heavy working conditions

- Robust and strong metal body
- IP21S protection class

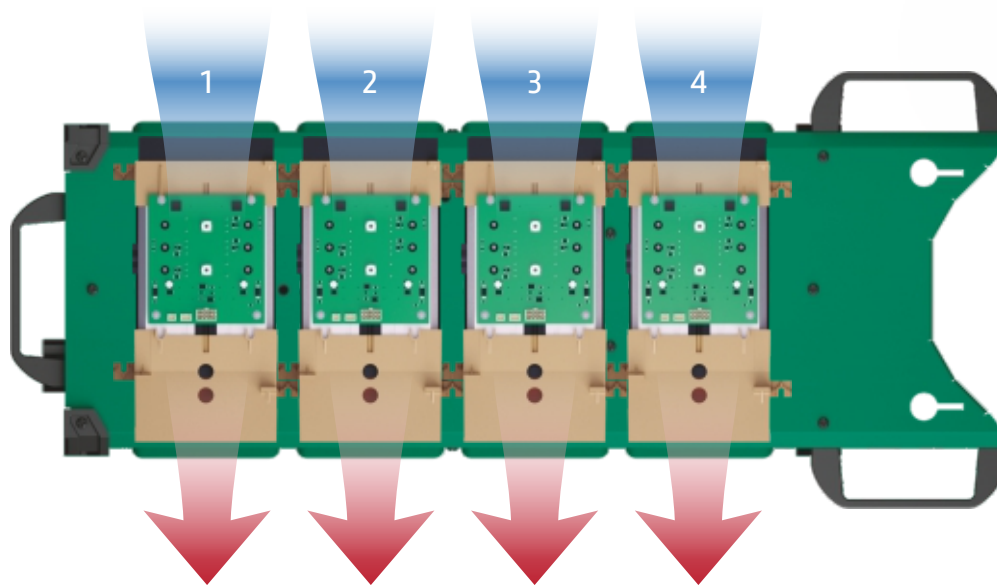
## Inverter engine technology

- Lower power consumption
- Energy cost saving

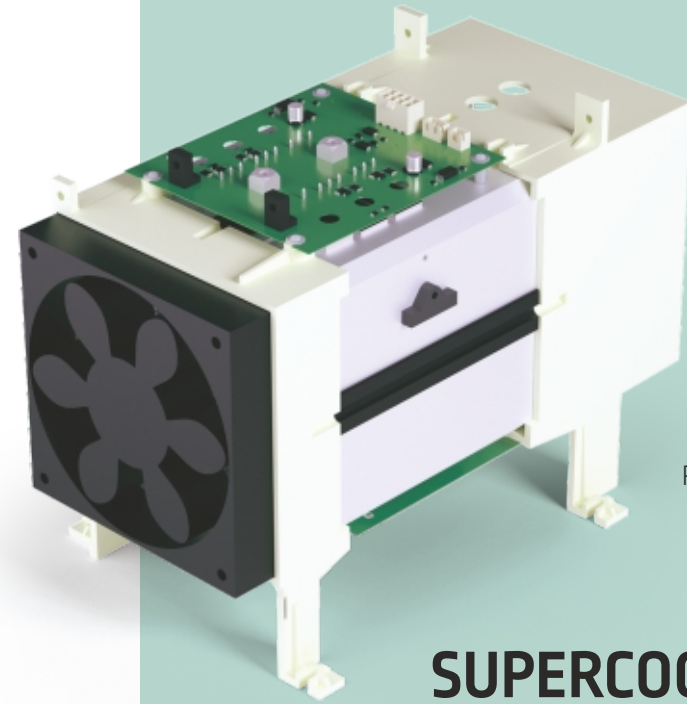
## Easy maintenance and servicing

- Parallel connected inverter power modules
- Easy access to all components inside
- Powerful cooling system consisting of 4 fans

### INTELLIGENT F.A.N. (FAN AS NEEDED) SYSTEM



Each module is cooled by separate fan (4 pcs). Fans and heatsink blocks are designed and placed to prevent the electronic cards from dust.

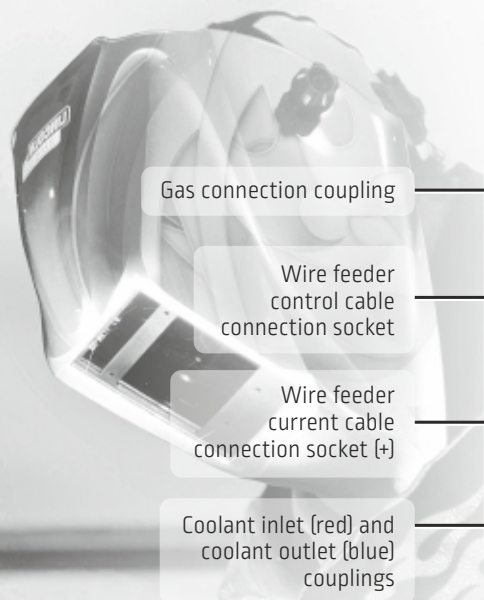


Inverter Power Module [4 pcs]

## SUPERCOOL SC-5 COOLER

- High cooling power (0,79kW)
- Large reservoir capacity (6 liters)
- Strong pump for proper cooling (max. 0,49 MPa)
- IP21S protection class
- Coolant level indicator gouge
- Robust and strong metal body
- Coolant filter





Gas connection coupling

Wire feeder control cable connection socket

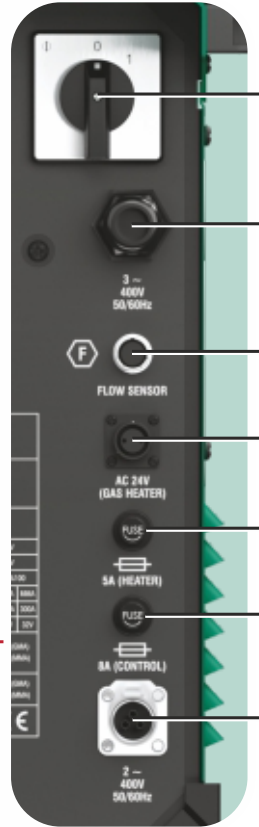
Wire feeder current cable connection socket (+)

Coolant inlet (red) and coolant outlet (blue) couplings



Power source control cable connection socket

Power source current cable connection socket (+)



Power source ON / OFF switch

Power source energy supply cable

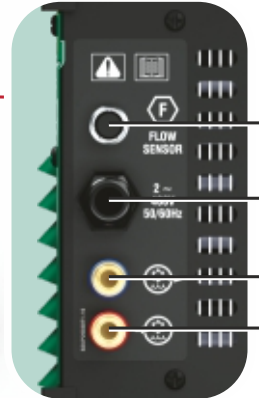
Coolant flow sensor connection socket

Gas heater connection socket

Gas heater fuse (5A)

Power unit fuse (8A)

Cooler energy supply cable connection socket



Coolant flow sensor connection socket

Cooler energy supply cable

Coolant outlet (blue) coupling

Coolant inlet (red) coupling

# TECHNICAL SPECIFICATION

## POWER SOURCE

Product	Primary Voltage Frequency Phase	Fuse Size (A)	Max. Input Power (kW)		Rated Output (A) at +40°C			Welding Voltage Range (V)		Welding Current Range (V)	Open Circuit Voltage (V)	Protection Class	Weight (kg)	Dimensions L x W x D (mm)
			MIG/MAG	Electrode	50%	60%	100%	MIG/MAG	Electrode					
SUPERMIG 505SP	400 V 50/60 Hz 3 Ph	63	20.4	22.3	500	400	300	15.5 - 39	21.2 - 40	30 - 500	30	IP21S	41.9 without cables	440 x 295 x 740

## WIRE FEEDER

Product	Primary Voltage and Power	Gun Connection	Wire Feed Mechanism	Feed Rolls Diameter (mm)	WFS (m/min)	Filler Wires Diameter (mm)			Wire Spool Weight (max) (kg)	Wire Spool Diameter (max) (mm)	Protection Class	Weight (kg)	Dimensions L x W x D (mm)
						Fe / Ss	Mc / Fc	Al					
SUPERFEED SF5P	42 V (DC) 147 W	Euro Socket	4-rolls Single motor	30	1.27 - 18	0.8 - 1.6	0.8 - 1.6	1.0 - 1.6 (AlMg) 1.2 - 1.6 (AlSi)	15	300	IP21S	173 without torch and cables	480 x 335 x 655

## COOLER

Product	Primary Voltage Frequency Phase	Cooling Power @ 1 l/min	Recommended Coolant	Reservoir Capacity (liter)	Coolant Flow Rate (l/min)	Maximum Pressure (MPa)	Protection Class	Weight (kg)	Dimensions L x W x D (mm)
SUPERCOOL SC5	400 V 50/60 Hz 2 Ph	0.79 kW	FREEZCOOL (W000010167)	6	9	0.49	IP21S	16.6 without coolant	265 x 295 x 740

## CART

Product	Gas Cylinder Diameter (mm)	Gas Cylinder Height (mm)	Front Wheels Diameter (mm)	Rear Wheels Diameter (mm)	Weight (kg)	Dimensions L x W x D (mm)
—	max. 240	max. 1500	100 x 35	250 x 50	23	400 x 490 x 1100



# 701ASSM505SP-W – SUPERMIG® 505SP Welding Machine

## Standard Parts and Accessories

SuperMIG 505SP power source	Roll kit for solid wires (0.8-1.0-1.2-1.6 mm)
SuperFEED SF5P wire feeder	Weldline anti-spatter spray
SuperCOOL SC5 cooler	Welding wire spool adapter
Cart	Gas hose clamp
Ground cable ve pensesi (500A) - 4 m	Gas cylinder fixing chain
Coolant flow sensor connection cable	Glass cartridge fuse (3A)

## Optional Accessories

82ASMG500-4MW	MIG/MAG welding gun, 500A, Water cooled, 4 m
702KKSM505W-5M	Control cable, Water cooled, 5 m
702KKSM505W-10M	Control cable, Water cooled, 10 m
702KKSM505W-15M	Control cable, Water cooled, 15 m
82HNR2455W	Focusweld CO2 gas heater, 24 V

### CUSTOMER ASSISTANCE POLICY

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