MIG 300 SYNERGIC WELDING MACHINE

MICROPROCESSOR-CONTROLLED MULTI-PROCESS MIG/MAG, TIG & MMA

Technical Data Sheet
Model: MIG-300 SYN

The **MIG 300 Synergic Welding Machine** combines advanced IGBT inverter technology with micro-processor synergic curve control. By automatically adjusting wire feed speed and output voltage based on selected wire diameter, material type, and shielding gas, it drastically simplifies parameter setup while ensuring maximum penetration, reduced spatter, and consistent high-quality welds.

KEY OPERATING FEATURES

- **Synergic & Manual Modes:** Automatic parameter matching for quick setups alongside full manual control over voltage and wire speed.
- **Multi-Process Versatility:** Supports Gas MIG/MAG, Gasless Flux-Cored (FCAW), Lift TIG, and MMA/Stick electrode welding.
- **2T / 4T & Burnback Settings:** Built-in 2T/4T trigger logic and programmable burnback control prevent wire sticking in the weld crater.
- **4-Roll Heavy-Duty Wire Feeder:** Ensures smooth, reliable wire feeding across steel, stainless steel, flux-cored, and soft aluminum wires.
- **Inductance Control:** Adjustable electronic inductance fine-tunes arc softness, bead profile, and spatter level.
- **Spool Gun & Push-Pull Compatible:** Direct interface for optional spool gun operation when welding soft aluminum alloys.

TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION VALUE
Input Power Supply	415 V ± 15%, 3-Phase, 50/60 Hz
Rated Input Power Capacity	11.5 kVA / 9.8 kW
MIG Current Range	30 A – 300 A
MMA / TIG Current Range	20 A – 270 A
Rated Duty Cycle (40°C)	60% @ 300 A / 100% @ 232 A
No-Load Voltage (OCV)	62 V DC
Wire Feed Speed Range	2.5 m/min – 18.0 m/min
Usable Wire Diameters	Ø 0.8 mm / 1.0 mm / 1.2 mm (Solid & Flux-Cored)
Compatible Wire Spool Sizes	15 kg (300 mm spool diameter)
Efficiency / Power Factor	≥ 85% / 0.92
Insulation / Protection Class	Class F / IP21S
Dimensions / Machine Weight	630 mm × 280 mm × 520 mm / 31.5 kg

APPLICATIONS & INDUSTRY USE

Automotive & Transport
Vehicle bodywork, trailer manufacturing, frame fabrication, and repair shops.

Medium Metal Fabrication
Structural steel framing, sheet metal enclosures, agricultural equipment, and tanks.

Maintenance & Field Repair
High-speed productivity for shop maintenance, pipeline brackets, and general engineering.

* Select correct drive roll groove profile (V-groove for steel, U-groove for aluminum, Knurled for flux-cored) before loading wire.