

PRODUCT OVERVIEW / QUICK SPECS

TIG AC/DC 315-500

Aluminum-capable AC/DC TIG selector from 315A to 500A.

A combined AC/DC TIG family sheet for buyers comparing 315A, 400A, and 500A TIG capability, with air-cooled and water-cooled variants handled as selection rows rather than separate brochure fragments.



OUTPUT CLASS

315/400/500A

AC/DC TIG FAMILY LADDER

PROCESSES

AC/DC TIG

PULSE TIG PLUS MMA

INPUT POWER

3PH 380V

FAMILY WORKSHOP INPUT

OPTIONS

Air / Water

COOLING VARIANTS BY OUTPUT CLASS

QUICK SPECS

FIELD	SPECIFICATION
Product type	AC/DC TIG and MMA welding family for aluminum, stainless, carbon steel, copper, and alloy work
models	TIG-315 AC/DC, TIG-315W AC/DC, TIG-400 AC/DC, TIG-400W AC/DC, TIG-500 AC/DC, TIG-500W AC/DC
Input power	3PH / 380V family input; TIG-315 AC/DC lists AC380V +/-10%
Output range	315: 30-315 A DC / 50-315 A AC; 400: 30-400 A DC / 70-400 A AC; 500-class route shown as the highest family option
Duty cycle	60% family selection value
Key functions	AC/DC TIG, pulse TIG, AC pulse TIG, MMA, clean width, HF arc start, remote / foot-pedal context
Cooling options	Air-cooled and water-cooled variants; 315W / 400W / 500W water package imagery exists

PRODUCT HIGHLIGHTS

FEATURE	BENEFIT
One AC/DC TIG selector	Keeps the buyer in one ladder instead of splitting 315, 400, and 500A aluminum TIG decisions across pages
Aluminum-capable process story	AC/DC TIG, pulse, cleaning control, and HF start are easier to explain together by current class
Variant clarity	Air-cooled and water-cooled variants remain explicit while specification details stay in product pages

TYPICAL APPLICATIONS

- Aluminum and aluminum-alloy TIG welding using AC / AC pulse paths.
- Stainless steel, carbon steel, copper, and alloy TIG work through DC TIG processes.
- Repair and fabrication work that benefits from pulse, slope, crater, and cleaning-control setup.
- MMA secondary welding for repair and maintenance work.

TECHNICAL SECTION

MODEL SELECTOR / DIMENSIONS

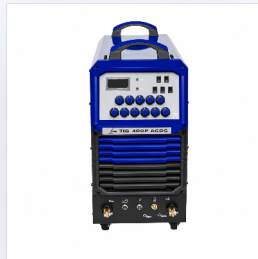
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315-CLASS ROUTE

TIG-315 AC/DC


FIELD	VALUE
Options	Air and 315W water
Input	AC380V +/-10%, 3PH
Duty	60%
Weight	39 kg air; 63 kg water

400-CLASS ROUTE

TIG-400 AC/DC


FIELD	VALUE
Options	Air or 400W water
Input	3PH / 380V
Duty	60%
Weight	42 kg air; 73-75 kg water

500-CLASS ROUTE

TIG-500 AC/DC


FIELD	VALUE
Options	Air or 500W water
Input	3PH / 380V
Role	Highest AC/DC TIG capacity in this selector
Status	Existing TIG-500 sheet upgraded into family context

MODEL SELECTOR

MODEL	COOLING	FEEDER / PACKAGE	MACHINE DIMENSIONS	NET WEIGHT
TIG-315 AC/DC	Air-cooled	Integrated TIG / MMA body	670 x 300 x 640 mm	39 kg
TIG-315W AC/DC	Water-cooled	Water package / trolley context	925 x 445 x 940 mm	63 kg
TIG-400 AC/DC	Air-cooled	Integrated TIG / MMA body	675 x 330 x 690 mm	42 kg
TIG-400W AC/DC	Water-cooled	Water package / trolley context	950 x 475 x 1000 mm	73-75 kg
TIG-500 AC/DC family	Air / water	500-class AC/DC TIG route	500-class package dimensions by option	500-class package weight by option

SELECTOR DECISION

APPLICATION NEED	RECOMMENDED ROUTE	SELECTION
Need entry AC/DC TIG capacity	TIG-315 AC/DC / TIG-315W AC/DC	Use 315-class route
Need mid-capacity aluminum TIG	TIG-400 AC/DC / TIG-400W AC/DC	Use 400-class route
Need highest AC/DC TIG output	TIG-500 AC/DC family	Route to 500-class option inside this family
Need MIG/MAG production welding	MIG / NBC / low-spatter families	Route away from TIG selector

PROCESS CAPABILITY / BUYER FIT

The process story is stronger as one family: AC/DC TIG for aluminum and alloy work, DC TIG for steel and stainless work, pulse control for heat input, and MMA as a secondary process.

PROCESS CAPABILITY

PROCESS / MODE	APPLICATION MEANING
AC TIG	Aluminum and aluminum-alloy welding with cleaning control
DC TIG	Stainless steel, carbon steel, copper, and alloy work
Pulse TIG	Heat-input control and bead-profile adjustment
AC pulse TIG	Aluminum TIG workflow with pulse behavior where supported
MMA	Secondary manual welding route
HF arc start	Non-contact arc start workflow
Remote / foot pedal	Remote and pedal workflows depend on selected package

TECHNOLOGY / CONTROL FEATURES

FEATURE	CUSTOMER BENEFIT
AC clean width / cleaning control	Supports aluminum oxide cleaning and bead appearance tuning
Pre-flow / post-flow	Gas timing controls for TIG start and stop workflow
Up-slope / down-slope	Controls current ramp at arc start and crater finish
Pulse frequency / duty	Pulse parameter controls for heat-input tuning
Water-cooled options	315W, 400W, and 500W variants give buyers a heavier TIG route
Overheat protection	Protection language appears in manuals

RECOMMENDED USE

Aluminum TIG buyers AC/DC and clean-width controls make this the right selector family	Capacity comparisons 315A, 400A, and 500A can be compared without rewriting the process story	Water-cooled duty needs W variants give buyers a clear route for heavier TIG setups	Not a MIG page Route wire-feed production welding to MIG or NBC pages
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MATERIAL / APPLICATION SCOPE

Material rows define the process boundaries for buyer selection by welding mode, material, filler, and shielding gas.

MATERIAL / WIRE / GAS MATRIX

PROCESS	MATERIAL / SCOPE	WIRE / ELECTRODE	GAS / SETUP	APPLICATION
AC TIG / AC pulse TIG	Aluminum and aluminum alloy	TIG filler to application	Argon shielding gas	Core AC/DC TIG story
DC TIG	Stainless steel and alloy steel	TIG filler to application	Argon shielding gas	Core material scope
DC TIG	Carbon steel and copper / alloy	TIG filler to application	Argon shielding gas	Publish with conservative application wording

TECHNICAL SECTION

TECHNICAL SPECIFICATIONS / SITE DATA

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The family table keeps high-value comparison fields together by model and current class.

TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
model pages	TIG-315 AC/DC, TIG-315W AC/DC, TIG-400 AC/DC, TIG-400W AC/DC, TIG-500 AC/DC, TIG-500W AC/DC
Input power	315: AC380V +/-10%, 3PH; 400 / 500: 3PH / 380V family input
Frequency	315 manual says 50/60 Hz; product intro says 50 Hz
Rated input power	315: 8.9 kVA; 400: 12.5 kVA; 500-class values by selected option
Output current range	315: 30-315 A DC / 50-315 A AC; 400: 30-400 A DC / 70-400 A AC
Duty cycle	315: 60%; 400: 60%; 500-class values by selected option
Open circuit voltage	315: 45 V; 400: 65 V
Power factor	315 / 400 specification detail: >=0.85 versus >=0.93
Efficiency	>=85%
Protection class	IP21
Insulation class	F
Cooling	Air-cooled and water-cooled variants
Dimensions / weight	See selector table for 315 and 400; 500-class values by selected option

POWER AND SITE REQUIREMENTS

FIELD	REQUIREMENT
Power supply	Listed voltage: 3PH / 380V family input; other input voltage options depend on order package
Shielding gas	External argon supply required for TIG work
Water cooling	W variants use water-tank / cooler packages
Remote / foot pedal	Compatibility depends on selected package
Environment	Standard dry workshop deployment; protect from rain, dust, and corrosive gas

Input voltage. Listed input voltage values are the standard order setup. Other input voltage options depend on destination and order package.

TECHNICAL SECTION

PANEL CONTROLS / ACCESSORIES

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The control story should focus on AC/DC process selection, pulse setup, clean width, gas timing, slope / crater control, HF start, and optional remote / foot-pedal workflows.

OPERATOR CONTROL AREAS

FUNCTION	DESCRIPTION
AC / DC process selection	Routes aluminum and steel TIG workflows
Pulse setup	Pulse frequency, duty, and current adjustment context
Clean width	AC cleaning control for aluminum TIG
Pre-flow / post-flow	Shielding gas timing around start and finish
Up-slope / down-slope	Ramp control for start and crater finish
HF start	Non-contact arc start workflow
Remote / foot pedal	Package status by selected model
MMA mode	Secondary manual welding mode

OPERATION MODES

MODE	DESCRIPTION
AC TIG	Aluminum and aluminum-alloy workflow
DC TIG	Steel, stainless, copper, and alloy workflow
Pulse TIG	Heat input and bead-control workflow
AC pulse TIG	Aluminum pulse workflow where supported
MMA	Manual welding secondary mode

INCLUDED / OPTIONAL ACCESSORIES

ITEM	STATUS	DETAILS
TIG torch	Package-specific	Torch rating and length depend on selected package
Earth clamp / cable	Package-specific	Cable length and rating depend on selected package
MMA holder	Package-specific	Used when MMA process is part of the package
Foot pedal	Optional	Remote TIG foot-control workflow
Remote box	Optional	Remote machine-control workflow
Water tank / cooler	Water variants only	Included with water-cooled packages when specified
Argon regulator / flowmeter	Package-specific	Gas accessory depends on order package