

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

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



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.

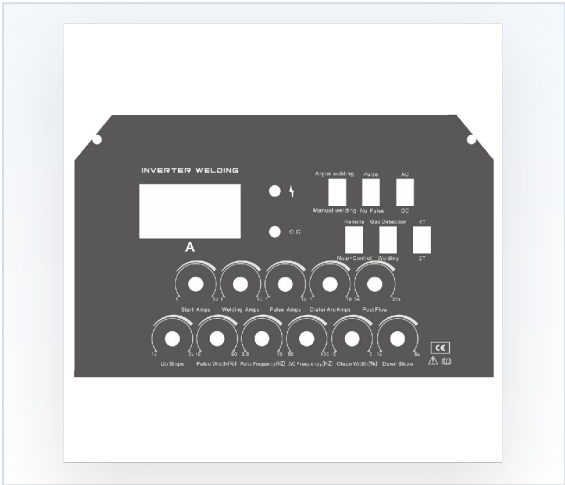
## TECHNICAL SPECIFICATIONS

| 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.



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             |