



# Artis

170  
210

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Increased  
arc stability  
to unleash your  
welding potential



# Your Craftsmanship

## Our Technology

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Tungsten Inert Gas  
welding (TIG) is  
considered to be the  
supreme discipline  
of joining processes:  
demanding manual  
dexterity and  
experience in equal  
measure. The welds  
must meet the highest  
standards both in  
terms of appearance  
and quality.

We provide you with the right technology to allow you to concentrate fully on your TIG weld. Our compact Artis-170/210 product family offers a wide range of functions, helping you unleash your full welding potential.



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# Top Quality

on Every Weld

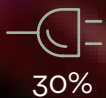
In TIG welding, the focus is entirely on achieving a high weld quality. In doing so, it is just as important to maintain a stable arc at all times as it is to have a wide range of functions on the welding system.

The Artis-170/210 generation masters this balancing act perfectly, combining both in a compact, robust system design. Despite its lightweight and easy-to-handle design, weighing in at less than ten kilograms, it offers all the key adjustment options that are otherwise found only on the larger professional TIG systems. Our main focus has been to ensure that the welding system makes the best possible use of the input voltage. This not only makes the Artis energy-efficient, but also extremely reliable and productive, which will ultimately make your welding experience more enjoyable!

# More Efficient TIG Welding

40%

40% duty cycle  
at maximum  
output power



30% mains voltage  
tolerance at maximum  
output power



96 V–265 V  
mains voltage  
supply

Weld for four minutes without  
a break at 170 or 210 amperes,  
depending on the model.

This is an enormous advantage, especially in  
poorly protected grids. The inverter technology  
perfectly compensates for voltage fluctuations or  
input voltage that is too low, so that the maximum  
output power is always supplied.

The high bandwidth of the power supply  
makes the Artis 170/210 compatible with  
almost any grid worldwide.

## The Highlights



9.8 kg

IP23 protection

Multi-voltage

TIG welding torch  
with LED as an option



- Can be updated via USB
- Generator compatible
- Matching foot pedal remote controls available in the range
- High frequency ignition
- 40% duty cycle at maximum output power

# High-Tech

on Every Weld



## Intelligent Welding

The digital resonant intelligence reacts optimally to voltage fluctuations, thus ensuring a perfectly stable arc.







# Energy-Efficient, Robust, and Reliable

## Filter Comes as Standard

We equip our systems with a reusable dust/dirt filter, ensuring that the power components inside the systems remain free of dirt.



## FPP—Fronius Power Plug

With the help of a watertight, lockable connector on the back of the welding system, you can change the mains cable/plug, depending on the place of use, quickly and easily.



## TMC—TIG Multi Connector

The universal connection for peripheral devices such as welding torches with special functions (up/down, potentiometer) or remote controls, provides the user with cross-product advantages.



## Robust, Lightweight, and Functional

The function carrier is the central element in the structural design of the welding system. It keeps all components in place. Like the housing, it is made of durable plastic and tested for mechanical stresses that far exceed the standard. This guarantees the highest level of robustness possible while at the same time keeping the weight to a minimum.



For Intuitive and Safe Operation

# Sophisticated Operating Concept

Not just packed with technology, the Artis also has a user-friendly operating concept incorporating a simple rotary push button and a clear, illuminated function display.

Focusing on Your Welding Potential

The ingenious technology within the Artis ensures that you can concentrate fully on your weld, regardless of voltage fluctuations and always with a stable arc.



Easy and Intuitive Operation

For setting the welding parameters quickly

Optimal Protection

Thanks to the recessed operating area



1

### Rotary Push Button

For setting the key welding parameters on the function curve

2

### Gas Test Button

For checking the gas flow and purging the hosepack after a long period of downtime

3

### Welding Process Setting Button

For 2-step, 4-step, and electrode mode

4

### Welding Process Status Indicator

For 2-step, 4-step, and electrode mode

5

### Individually Adjustable

Various settings in the background menu



For Today, Tomorrow, and Beyond

# The Future is in Your Hands







## 400 V Protective Circuit

Prevents damage when the system is connected to a power supply that is too high.

## PFC—Power Factor Correction

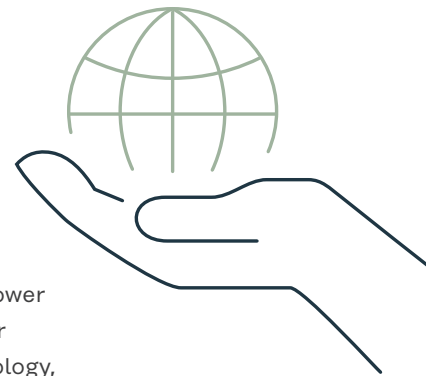
Ensures sinusoidal current consumption, thus making effective use of the available power: Only the power required is drawn from the grid. This saves energy, makes it possible to use longer grid leads, improves generator suitability and leads to higher welding currents, all without tripping the automatic circuit breaker.

## Time Shutdown/ Standby Mode

After a defined period of time, the power module switches off. The system enters standby mode to reduce energy consumption during this time.

## Low Power Consumption

Thanks to an improved power module design and Power Factor Correction technology, the Artis 170/210 uses up to 40% less input power than comparable competitor systems while maintaining the same output power.





## Gas Pre-Flow Time/Gas Post-Flow Automatic and Manual

The welding system that thinks with you. Depending on the set welding current, the Artis automatically calculates the duration of the optimal gas post-flow time. This improves the gas shield of the weld seam end and tungsten electrode.

## Trigger Mode OFF: Automatic Shutdown

Once the welding process is complete, the welding current switches off automatically after a specific change in the arc length.

## TAC Function for Time Savings of up to 50% When Tacking Materials

Pulse currents are used to make the weld pool oscillate. This makes it easier for you to tack components together and reduces the tacking time. There are little to no annealing colors on the tacking points.

## PTD—Pulse/TAC Display Function Curve

This allows you to add two additional welding parameters, "pulse" and "TAC", to the function curve on the control panel.

## TIG Pulse Function: Welding Even with Thin Sheet Thicknesses

Pulse welding is used primarily for welding in tight spaces or for welding particularly thin materials. The setting range for pulsing is 1 Hz to 990 Hz.

## Touch High-Frequency Ignition

When limited component accessibility requires the use of torches without a trigger, HF touch ignition is used. The machine detects contact with the workpiece and, after a defined period of time, ignites the arc precisely at the desired point.

## TIG Welding Torch with Different Operating Options

We offer TIG welding torches with standard, Up/Down function, long trigger or potentiometer, depending on your requirements.



## Spot and Stitch Welding: Recurring Welded Joints

The spot welding mode allows you to apply welding spots at even intervals. With the freely adjustable stitch pause time, you can also continue this as stitch welding.



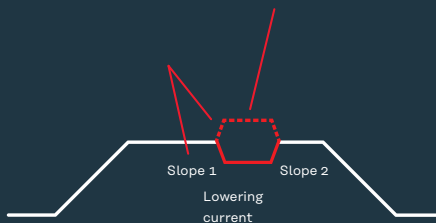
# The TIG

## Welding functions

### Lowering current $I_2$

The lowering current is only used for TIG 4-step welding. It allows you to reduce or increase the main current as required during the welding process.

- If you need to change filler metal during welding, you can add a slope time to the lowering current.
- The lowering current can be set up to 200% of the main current if, for example, a tacking point has to be welded over.

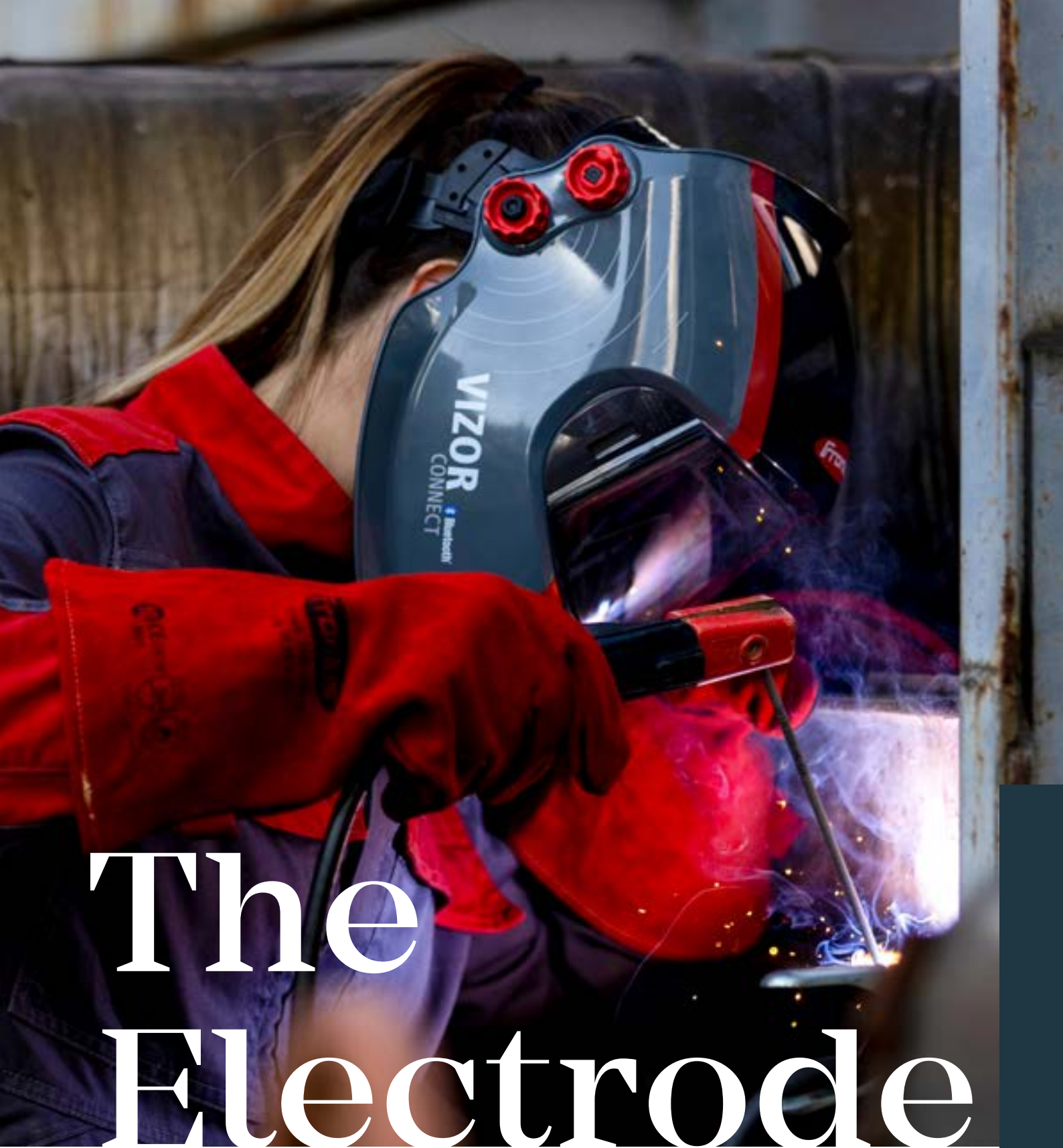


Depending on the lowering current set, an upslope or downslope can be used.

Lowering current up to 200% of the main current.







# The Electrode

Welding  
functions



## Electrode Pulse Welding

The electrode pulse mode enables better weld properties in tight spaces and increased gap-bridging ability. It is ideally suited to welding vertical-up seams.

### HotStart Function when Igniting the Arc

In order to make the electrode easier to ignite, the current is increased for a split second during ignition on the welding system.

### Cel Electrodes

Optimum characteristic for welding cel electrodes. This requires a higher open circuit voltage or ignition power.

### Arc-Force Dynamic

If basic electrodes are welded with coarse droplet material transfer at a low current (underloaded), there is a danger of sticking. To prevent this, more current is applied for fractions of a second shortly before sticking. The electrode burns freely, which prevents sticking.

### Anti-Stick

If a short circuit occurs (electrode sticks during electrode welding), the welding current is interrupted. This prevents annealing of the electrode and serious weld defects.

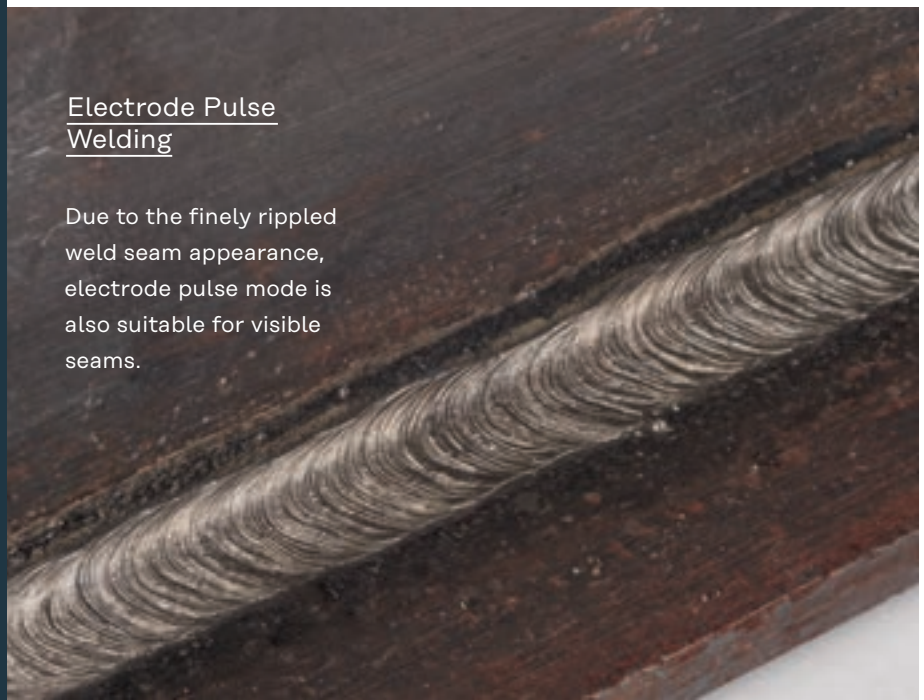
## Perfect Ignition Response

- No sticking
- No arc break



### Electrode Pulse Welding

Due to the finely rippled weld seam appearance, electrode pulse mode is also suitable for visible seams.



# Technical Data

	Artis 170/EF Artis 170/NP	Artis 170/XT*/B Artis 170/XT*/NP	
Mains voltage U1	1 x 230 V	1 x 120 V	1 x 230 V
Mains voltage tolerance	-30%/+15%	-20%/+15%	-30%/+15%
Mains frequency	50/60 Hz		
Mains fuse protection (slow-blow)	16 A	20 A	16 A
Maximum primary power (100% D.C.)	2.7 kVA (140 A TIG)	1.75 kVA (100 A TIG)	2.7 kVA (140 A TIG)
Cos phi	0.99		
TIG welding current	10 min/40 °C (104 °F), U1 = 230 V		
40% D.C.	170 A	140 A	170 A
60% D.C.	155 A	120 A	155 A
100% D.C.	140 A	100 A	140 A
Electrode welding current	10 min/40 °C (104 °F), U1 = 230 V		
40% D.C.	150 A	100 A	150 A
60% D.C.	120 A	90 A	120 A
100% D.C.	110 A	80 A	110 A
TIG open circuit voltage (pulse)	35 V		
Electrode open circuit voltage (pulse)	97 V		
TIG output voltage range	10.4–16.8 V		
Electrode output voltage range	20.4–26.0 V		
Protection class	IP 23		
Dimensions l x w x h	435 x 160 x 310 mm		
Weight	9.8 kg (21.6 lb)	9.9 kg (21.8 lb)	
Mark of conformity	CE	CE/CSA	
Safety symbols	S		

	Artis 210/EF Artis 210/NP	Artis 210/XT*/B Artis 210/XT*/NP	
Mains voltage U1	1 x 230 V	1 x 120 V	1 x 230 V
Mains voltage tolerance	-30%/+15%	-20%/+15%	-30%/+15%
Mains frequency	50/60 Hz		
Mains fuse protection (slow-blow)	16 A	20 A	16 A
Maximum primary power (100% D.C.)	3.1 kVA (160 A TIG)	1.75 kVA (100 A TIG)	3.1 kVA (160 A TIG)
Cos phi	0.99		
TIG welding current	10 min/40 °C (104 °F), U1 = 230 V		
40% D.C.	210 A	170 A	210 A
60% D.C.	185 A	130 A	185 A
100% D.C.	160 A	100 A	160 A
Electrode welding current	10 min/40 °C (104 °F), U1 = 230 V		
40% D.C.	180 A	120 A	180 A
60% D.C.	150 A	100 A	150 A
100% D.C.	120 A	90 A	120 A
TIG open circuit voltage (pulse)	35 V		
Electrode open circuit voltage (pulse)	97 V		
TIG output voltage range	10.4–18.4 V		
Electrode output voltage range	20.4–27.2 V		
Protection class	IP 23		
Dimensions l x w x h	435 x 160 x 310 mm		
Weight	9.8 kg (21.6 lb)	9.9 kg (21.8 lb)	
Mark of conformity	CE	CE/CSA	
Safety symbols	S		

\*XT formerly MV (multivoltage)

## Warranty Activation of Your Welding System



Benefit from our Fronius manufacturer's warranty for 3 years. More at: <https://warranty.fronius.com/>



**Further Information**

on the Artis 170/210 can be found here: <https://www.fronius.com/artis>



## Unleash your welding potential



To ignite the welding potential of our customers: That is our mission. As the innovation leader for arc welding and global market leader for robot-assisted welding, we create both advanced and profitable welding solutions, which are inspired by our sustainable mindset. We enjoy long-standing relationships with our customers. We understand their challenges and perspectives and maintain a close relationship with them through our regional service teams throughout the world. We listen, understand, and therefore shape the mindset of the welding industry. Our strengths lie in combining our customers' knowledge with our expertise, which allows them to unleash their full welding potential.

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