

/ Perfect Welding / Solar Energy / Perfect Charging



# TRANSTIG 170/210

EXPANDED RANGE OF FUNCTIONS  
COMPACT DESIGN

# HIGH DUTY CYCLE. LONG WELD SEAMS.

WHAT DEMANDS DO WELDERS AROUND THE WORLD PLACE ON PROFESSIONAL TIG WELDING SYSTEMS? WHAT ARE THE DESIGN REQUIREMENTS IN TERMS OF FUNCTIONALITY AND HANDLING?

When developing the TransTig 170/210, our focus was entirely on the benefit for our customers.

What is needed is absolutely clear: a perfect, stable arc.

The higher operating frequency of the inverter technology makes this stability possible – due to precise control. Other benefits of this optimized process technology are maximum efficiency in the duty cycle, the output power and the mains voltage supply.

Last but not least, this increased efficiency also makes welding more enjoyable!

What's your  
welding challenge?

Let's get connected.



# EFFICIENT TIG WELDING

## WITH RESONANT INVERTER TECHNOLOGY.

**40%**  
DUTY CYCLE

**40%**  
D.C.

Weld for four minutes without a break at 170 or 210 amperes. On average, weld for one minute longer than the competition.

**30%**  
MAINS VOLTAGE  
TOLERANCE AT  
MAXIMUM OUTPUT  
POWER

**30%**  


The inverter technology can compensate for voltage fluctuations or an input voltage that is too low, so that the maximum output power is always supplied. A huge advantage, especially in poorly protected grids!

**96 V – 265 V**  
MAINS VOLTAGE SUPPLY



The high bandwidth of the power supply makes the TransTig 170/210 compatible with almost any grid – from every part of the world. A real multivoltage device!

## THE HIGHLIGHTS

**9.8 KG**

/ Can be updated via USB

/ Generator-compatible

/ Use of foot remote controls

**MULTIVOLTAGE**



**IP 23**

/ High frequency ignition

/ 40% duty cycle at maximum output power

**TIG WELDING TORCH**  
compatible with LED



## GREEN THINKING

### 400 V PROTECTIVE CIRCUIT

The 400 V protective circuit prevents damage when the device is connected to a power supply that is too high.

### TIME-SHUT-DOWN/ STANDBY MODE

After a defined period of time, the power module switches off and enters standby mode. This mode reduces energy consumption considerably!

### PFC – POWER FACTOR CORRECTION

The Power Factor Correction ensures sinusoidal current consumption, making effective use of the available power – only as much power is drawn from the mains as necessary. In addition to energy savings, this results in longer grid leads, improved generator compatibility, and higher welding currents – without tripping the circuit breaker.

### LOW POWER CONSUMPTION

Thanks to an improved power module design and Power Factor Correction technology, the TransTig 170/210 uses up to 40% less input power than comparable competitor devices – with the same output power.

# THE TRANSTIG 170/210



### FILTER AS STANDARD

/ The vast majority of our devices come with a reusable dust/dirt filter fitted that ensures the power components inside the devices remain free of dirt.





## DIGITAL RESONANT INTELLIGENCE

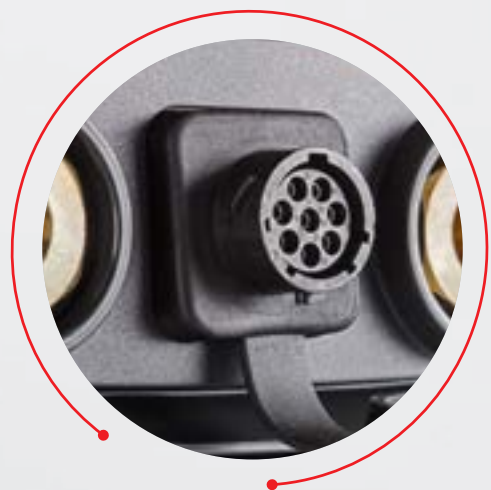
## RESONANT INTELLIGENCE

The digital resonant intelligence reacts optimally to voltage fluctuations, thus ensuring an absolutely stable arc.



### FPP - FRONIUS POWER PLUG

/ With the help of a watertight, lockable connector on the back of the power source, the mains cable or mains plug can be changed quickly and easily depending on the place of use.



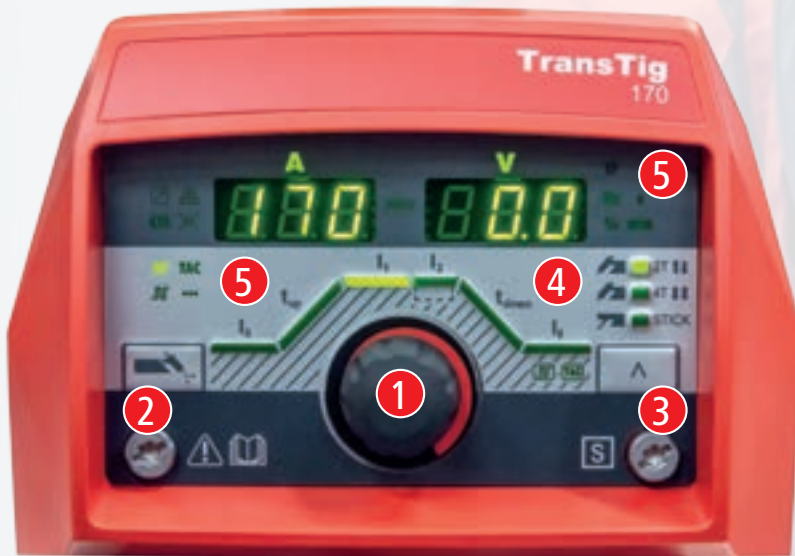
### TMC - TIG MULTI CONNECTOR

/ The universal connection for system components, such as welding torches with special functions (Up/Down, potentiometers) or remote controls, gives the user cross-product advantages.

### ROBUST PLASTIC HOUSING AND FUNCTION CARRIER

/ The function carrier is the central element in the design of the power source. It keeps all the components in place. Like the housing, it is made of durable plastic and tested for mechanical loads that far exceed the standard. The carrier provides for the ultimate in durability, while at the same time maintaining a low weight.

# THE OPERATING CONCEPT



- 1** **KNOB AND PUSH BUTTON**  
To set the most important welding parameters on the function curve
- 2** **GAS-TEST BUTTON**  
To check the gas flow and purge the hosepack after a long period of downtime
- 3** **SETTING BUTTON**  
For welding processes, 2-step, 4-step, and electrode mode
- 4** **WELDING PROCESS STATUS INDICATOR**  
Or 2-step, 4-step, and electrode mode
- 5** **STATUS INDICATOR**  
Remote control mode, electrode overload, CEL mode, Trigger Mode Off, HF, TAC, pulse and spot welding mode



## USABILITY

/ Simple knob and push-button operation to set welding parameters quickly

## SAFETY

/ Protected operating area set into the device

## INDIVIDUALLY ADJUSTABLE

/ Numerous settings in the background menu

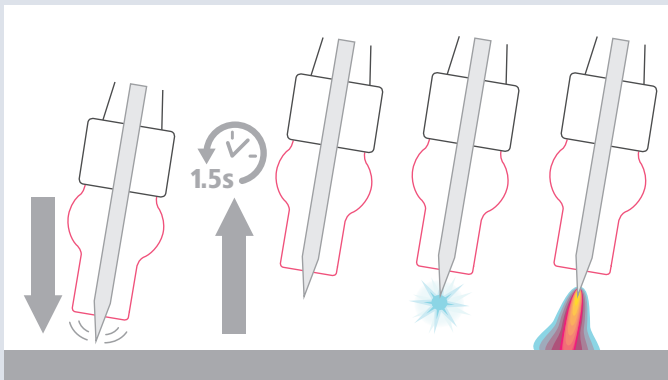


# THE TIG WELDING FUNCTIONS

## TOUCH HF

### HIGH FREQUENCY IGNITION

Should part access limitations necessitates the use of welding torches without a torch trigger, Touch HF ignition is required. The machine detects contact with the workpiece and – after a defined period of time has elapsed – ignites the arc exactly at the desired point.



## GAS TEST FUNCTION/GAS PURGING

Adjust and check the optimum gas flow without igniting the arc or purging the torch hosepack following extended downtimes.

## PTD – PULSE / TAC DISPLAY

### FUNCTION CURVE

This function can be used to add two additional welding parameters – “Pulse” and “TAC” – to the function curve on the control panel.

## WELDING TORCH UP/DOWN (UD)

### OPERATION

The welding current can also be continuously changed during the welding process by using a button on the handle of the welding torch.

## GAS PRE-FLOW TIME/ GAS POST-FLOW

### AUTOMATIC AND MANUAL

Depending on the set welding current, the TransTig 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

At the end of the welding process, the automatic shutdown of the welding current follows a specific change of the arc length.

## TAC – TACKING FUNCTION/ TIG PULSE

### TACKING COMPONENTS TOGETHER

The weld pool is made to oscillate by means of pulse currents. This makes it easier to tack components together and reduces the tacking time. The pulsed arc facilitates the process with very thin materials, since the temperatures are slightly lower in the phases with less current.

- / Time saving of up to 50% for the user compared to conventional tacking
- / Fast tacking points without burning off the edges
- / Minimal temper coloration at the tacking points
- / TAC can be used at the same time as the spot function to consistently achieve tacking points of the same size

## SPOT AND INTERVAL WELDING

### RECURRING WELDED JOINTS

Spot welding mode allows the welder to apply spot welds at even intervals. With the freely adjustable interval pause time, these can also be continued as interval welding.





## LOWERING CURRENT I<sub>2</sub>

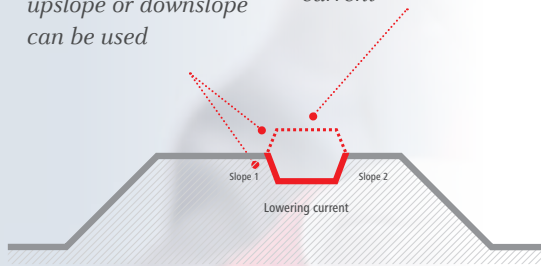
### HIGH FREQUENCY IGNITION

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

- 1 The ability to apply a slope time to the lowering current
  - ✓ when changing the filler metal during welding
- 2 Lowering current can be set up to 200% of the main current
  - ✓ for example, if a tacking point needs 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





**PERFECT  
IGNITION  
RESPONSE**  
/ No sticking  
/ No arc break

## ELECTRODE PULSE WELDING

UNIVERSAL PULSE MODE

Electrode pulse mode enables better weld properties in out-of-position welding 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.

## ANTI-STICK

If a short circuit occurs (electrode sticking during electrode welding), the power source is switched off immediately. This prevents electrode burn-out and/or serious weld seam faults.

## CEL ELECTRODES

Optimum characteristic for welding Cel electrodes. This requires a higher output power.

## ARC-FORCE DYNAMIC

If basic electrodes are welded with coarse droplet material transfer at a low current (underloaded), there is a risk of sticking. To rule this out, more current is supplied for split seconds just before sticking. The electrode burns freely, preventing sticking.

## ELECTRODE PULSE WELDING

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



# TECHNICAL DATA TRANSTIG 170/210

	TRANSTIG 170/EF TRANSTIG 170/NP	TRANSTIG 170/MV/B TRANSTIG 170/MV/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%
Grid 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		
Degree of protection	IP 23		
Dimensions l x w x h	435 x 160 x 310 mm		
Weight	9.8 kg		9.9 kg
Mark of conformity	CE		CE/CSA
Safety symbols	S		

	TRANSTIG 210/EF TRANSTIG 210/NP	TRANSTIG 210/MV/B TRANSTIG 210/MV/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%
Grid 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		
Degree of protection	IP 23		
Dimensions l x w x h	435 x 160 x 310 mm		
Weight	9.8 kg		9.9 kg
Mark of conformity	CE		CE/CSA
Safety symbols	S		



## MORE INFORMATION

on the TransTig 170/210 can be found at:

<https://www.fronius.com/transtig>



## REGISTER YOUR WELDING SYSTEM

to extend your warranty

<https://www.fronius.com/pw/product-registration>

/ Perfect Welding / Solar Energy / Perfect Charging

### THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 4,760 employees worldwide and 1,253 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

Further information about all Fronius products and our global sales partners and representatives can be found at [www.fronius.com](http://www.fronius.com)

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