

/ Perfect Welding / Solar Energy / Perfect Charging



# THE FRONIUS WPS PACKAGES

FOR MANUAL STEEL AND  
CrNi APPLICATIONS

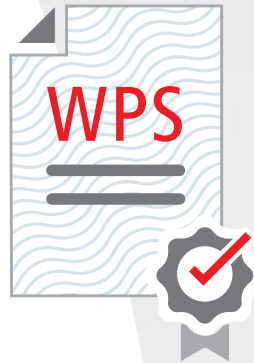
ESPECIALLY FOR THE STRUCTURAL  
STEEL STANDARD EN1090

# CE MARKING IN STEEL CONSTRUCTION MADE EASY.

## THE FRONIUS WPS PACKAGES FOR STEEL AND CrNi.

With our "Steel" and "CrNi" WPS packages for manual applications, you can save up to 85% on costs\* and reduce the time it takes to certify your products to EN 1090 requirements. The welding procedure specifications in accordance with EN 15612 (Qualification by adoption of a standard welding procedure specification) in these WPS packages contain details on various steel grades and material thicknesses as well as filler metals, and are available in digital form on a customer-specific basis.








*\*Assumption: based on a minimum of 5 welding procedure tests*



## WPS PACKAGE FOR MANUAL STEEL APPLICATIONS

- / MAG process
- / Material group: 1.3 (up to grade S460)
- / Filler material: G3Si1, G4Si1
- / The PA, PB, PC, PF positions
- / Sheet thickness range 1.5 mm to 50 mm
- / Suitable for welding equipment from all manufacturers
- / Supported welding processes:
  - MAG dip transfer, intermediate, and spray arc
  - MAG pulsed arc
  - PMC mixed process

## INCLUDED WELDING PROCEDURE SPECIFICATIONS

| DESIGNATION  | WELD ILLUSTRATION   |
|--|---|
| SQUARE BUTT WELD,<br>SINGLE LAYER  | <br>1.5 mm - 3.0 mm                              |
| SINGLE-V BUTT WELD<br>WITH BROAD ROOT<br>FACE, SINGLE LAYER                      | <br>3.0 mm - 5.0 mm                              |
| SINGLE-V BUTT WELD<br>WITH BROAD ROOT<br>FACE, MULTI-LAYER                       | <br>3.0 mm - 5.0 mm                              |
| FILLET WELD,<br>SINGLE LAYER   | <br>2.0 mm - 10.0 mm                             |
| FILLET WELD,<br>MULTI-LAYER  | <br>10.0 mm - 24.0 mm                            |
| SQUARE BUTT WELD,<br>SINGLE-V BUTT WELD<br>WITH BROAD ROOT<br>FACE, SINGLE LAYER | <br>2.0 mm - 4.0 mm,<br>$\varnothing \geq 40$ mm |
| FILLET WELD, PIPE,<br>SINGLE LAYER   | <br>2.0 mm - 4.0 mm,<br>$\varnothing \geq 40$ mm |



**PLANNING**

/ Which welding procedure specifications are required?

**START****QUALIFICATION OF EMPLOYEES**

/ Regular assurance of qualification

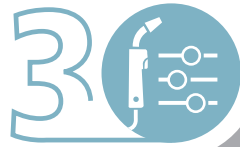
UP TO  
**85%\***  
COST  
SAVINGS

WITH THE  
FRONIUS  
WPS PACKAGE

/ Steps 4-6 are curtailed

**WPS**

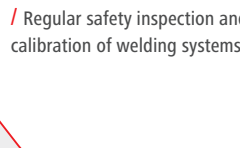
/ Qualification stamp received

**CALIBRATION AND SAFETY INSPECTION**

/ Regular safety inspection and calibration of welding systems

**WPS CREATION**

/ Welding procedure specifications are derived from the welding procedure qualification



**WELD TEST PIECE UNDER TEST SUPERVISION AND CREATE PRELIMINARY WELDING PROCEDURE SPECIFICATION**

**WELDING PROCEDURE QUALIFICATION (WPQR)**

/ Testing by certified testing organization

*\*Assumption:  
based on a minimum of 5 welding procedure qualifications*

## CREATING THE FINISHED WELDING PROCEDURE SPECIFICATION

SINCE EN 1090 CAME INTO FORCE IN 2014, **FACTORY PRODUCTION CONTROL (FPC) IS REQUIRED FOR WELDED CONSTRUCTIONS OF ALL EXECUTION CLASSES.**

This FPC demonstrates that appropriate welding procedure specifications (WPS) are in place at the workplace and work is carried out in line with them.

While the entire process in steps 1 through 3 requires a great deal of planning work, the cost of qualifying the processes in step 4 is huge, especially for small and medium-sized enterprises. This is where Fronius comes in by offering ready-made and cost-effective WPS packages for manual steel and CrNi applications. The organizational costs associated with welding procedure qualification, which would be necessary to create the welding procedure specifications, are completely eliminated.

**What's your  
welding challenge?**

Let's get connected.


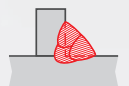

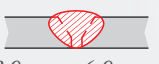







# WPS PACKAGE FOR MANUAL TIG AND MAG CrNi APPLICATIONS



- / TIG + MAG process
- / Material group: 8.1 (1.4301, 1.4541, 1.4550, 1.4401, 1.4571)
- / Filler material: CrNi 19 9 / 18 12 3
- / Sheet thickness range 1.4 mm to 16 mm
- / All welding positions (except PG and J- L045)
- / Suitable for welding equipment from all manufacturers
- / Supported welding processes:
  - TIG DC
  - MAG dip transfer arc
  - MAG spray arc
  - MAG pulsed arc

## INCLUDED WELDING PROCEDURE SPECIFICATIONS

| TIG PROCESS   |  | MAG PROCESS   |   |   |   |
|---|--|---|---|---|---|
| DESIGNATION   | WELD ILLUSTRATION  | DESIGNATION   | WELD ILLUSTRATION   |   |   |
| SQUARE BUTT WELD, SINGLE LAYER                        | <br>1.5 mm - 2.5 mm | FILLET WELD, MULTI-LAYER                              | <br>3.0 mm - 16.0 mm | SINGLE-V BUTT WELD WITH BROAD ROOT FACE, SINGLE LAYER | <br>1.5 mm - 4.0 mm  |
| SINGLE-V BUTT WELD WITH BROAD ROOT FACE, SINGLE LAYER | <br>3.0 mm - 6.0 mm | SINGLE-V BUTT WELD WITH BROAD ROOT FACE, SINGLE LAYER | <br>1.4 mm - 3.0 mm  | SINGLE-V BUTT WELD WITH BROAD ROOT FACE, SINGLE LAYER | <br>1.5 mm - 4.0 mm  |
| FILLET WELD, SINGLE LAYER                             | <br>1.4 mm - 4.0 mm | SINGLE-V BUTT WELD WITH BROAD ROOT FACE, MULTI-LAYER  | <br>3.0 mm - 6.0 mm  | FILLET WELD, SINGLE LAYER SPRAY ARC                   | <br>3.0 mm - 10.0 mm |

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### 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 5,440 employees worldwide and 1,264 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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