



# Virtual Welding

The training method of the future



PERFECT WELDING

Realistic learning on the simulator

Zero safety risk

Resource-saving



# The success package

## GENERAL REMARKS

The welding education of the future has a name: Fronius Virtual Welding. Trainees can now take course sessions “virtually”, under quasi-realistic conditions.

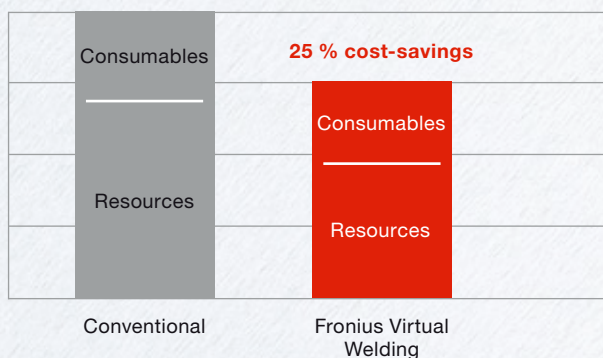
Many firms are faced with a shortage of qualified welders. Fronius Virtual Welding is a step towards enhancing the image of welding, with innovative technology. Without needing any prior knowledge, beginners can start learning what welding is all about under true-to-life conditions – without any safety risks, and using an ergonomically shaped torch, typical workpieces and adjustable welding parameters.

## ECONOMY

Using Virtual Welding brings huge potential savings, consuming up to 25 % fewer materials and resources. The trainer can now concentrate on the essentials.



### Welding-training costs compared



*Fronius Virtual Welding is available in 2 versions: as a terminal and in a compact carry-case for mobile use.*

## UTILISATION

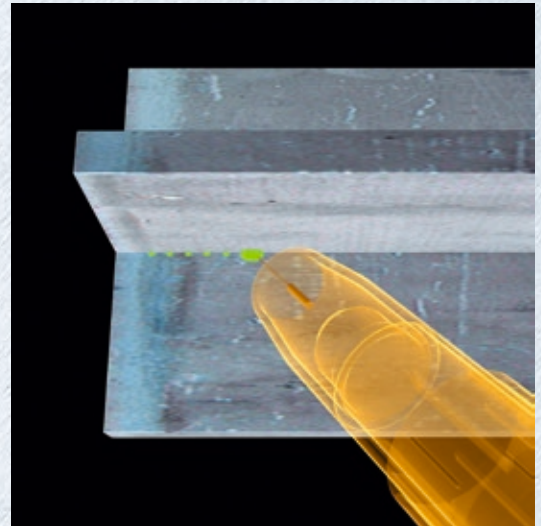
### “Learning while you learn” – Training Mode

The training takes place in two steps. The first step is Training Mode, which is divided into three learning phases.

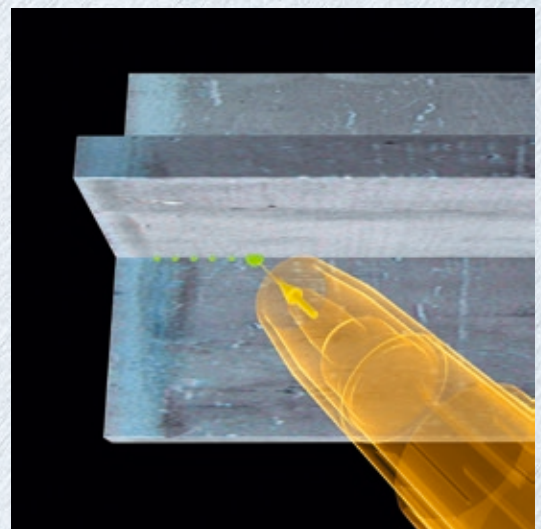
An ideal type of assistance is provided by a “virtual instructor” known as the Ghost. The Ghost shows trainees the optimum welding speed, the tip-to-work distance and the torch tilt angle that they should keep up. Traffic-light colour signals and real-life welding noises give them real-time feedback, showing them where and how they are on-target or deviating from target. In this way, direct and instant correction is possible from right inside the process.



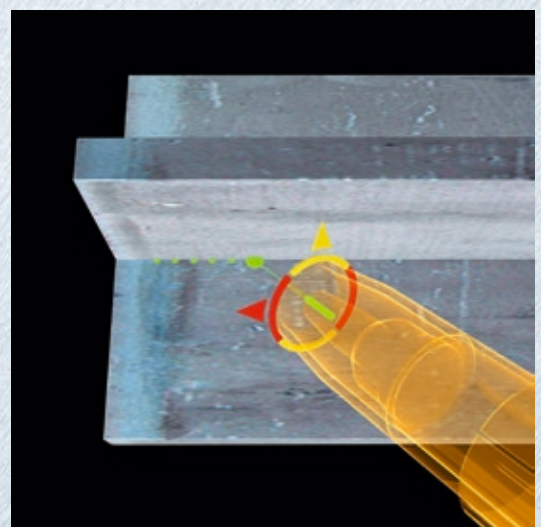
*The system offers a choice of workpieces so that trainees can practise different types of weld-seam and welding positions.*



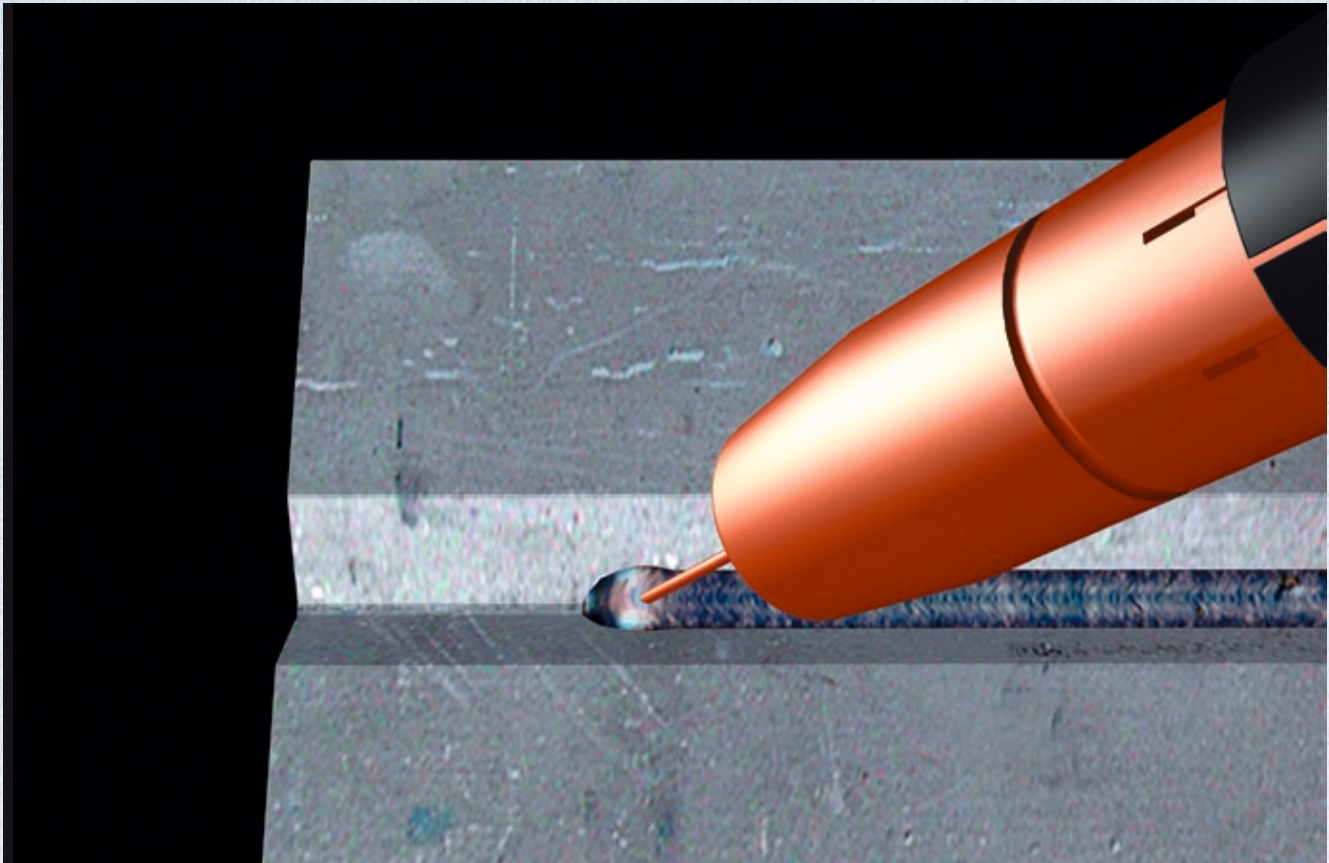
*Three-phase training:  
1. Welding speed.*



*2. Welding speed and tip-to-work distance.*



*3. Welding speed, distance and torch tilt angle.*



The second step, Simulation, shows a real-looking representation of the torch with a workpiece. No more help from the Ghost here.

## Simulation Mode

The sessions in Training Mode are followed by Simulation, in two consecutive learning phases that build upon what has gone before. To begin with, the novice welder practices in a “real” welding situation – with no help from the Ghost. After this, trainees set the necessary parameters themselves. This well thought-out teaching structure ensures a consistently high quality of training.

## Measurable results

A pedagogically sophisticated points system means that comparable training results can be achieved again and again; this in turn allows the trainees to be assessed objectively and transparently. Assessment is made easier by the automatically generated ranking lists. Like in a computer game, these ranking lists show how well the players are measuring up against one another – which makes learning a lot more fun.



Training Mode: three learning phases – Simulation Mode: two learning phases.



Assessment is made easier by the automatically generated ranking lists.



You'll find more product information at [www.virtualwelding.com](http://www.virtualwelding.com)

## SYSTEM

### So easy that it's self-explanatory

Virtual Welding is extremely easy to operate and scores for the self-explanatory structure of its software and its easy-view menu navigation. The touchscreen makes it even easier to select and work through the tutorials. As an optional extra, the helmet is available with a pair of built-in 3D goggles. These make working on the workpiece an even truer-to-life experience – no need to look back and forward between the workpiece and the touchscreen during training. Virtual Welding – an ideal tool for trainees of the young “media generation”.



Be your own trainer – with no risk to yourself or others.

## All-round view

This ingenious training tool uses a magnetic field and magnetic sensors to transmit information about how the torch is being manipulated, the tip-to-work distance and even fine, oscillating movements of the trainee's hand. Another sensor on the helmet enables a 360° view of the workpiece – either on the touchscreen or in the 3D goggles.



*A true-to-life welding feeling is achieved by 3D goggles built into the helmet.*

## Updates

Always up-to-date. The latest training units are available, easily and from anywhere, as online updates. It's also possible to create customised tutorials. As an optional extra, the trainer can communicate with all the training terminals in a network, and configure and control them, from a central Master Unit. Initially launched in 5 basic language versions (English, French, German, Italian and Spanish), the software can thus be used by trainees of many different nationalities. On request, the software can be made available in any desired language.

## Continuous information interchange

Round-the-clock help is available from the integrated online support. In the event of a malfunction, an error report is e-mailed immediately to the responsible network administrator and to System Support. As with all other Fronius products, users benefit here from the worldwide service provided by the VSP teams. All results are automatically backed-up and archived, protecting users from the unpleasant "surprise" of accidental data loss. At the same time, the saved data can be retrieved whenever they're needed.



*Self-explanatory software, simple menu navigation and the touchscreen all combine to make this training tool very easy to use.*



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