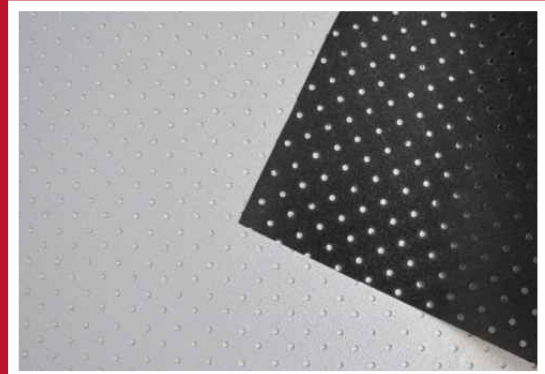


# CRYSTAL

**Automated Traveling Head High Frequency Welder**  
for crystal clear PVC windows, projection screens

- Designed for invisible seam crystal clear PVC and cinema screens
- Frequency inverter drive HF welding head
- High precision rails with linear guide
- 6 m work table length / 4 m long open work space (with machine parked)
- Two independent weld heads for (1) weld/cut/pre-press and (2) full-press
- Universal usage for Crystal PVC, PVC film, PU, TPU
- Easy material positioning with 2 back troughs, one in front and laser guide
- 680 mm weld/cut and press electrodes (tools) length
- 10" touch screen color HMI panel with expanded memory functionality



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HF Welders - Impulse Welders - Heat Sealers - Boxmakers - Die Cutters  
Thermoformers - Hydraulic and Pneumatic Presses - Custom machines

CE Made in EU



## Quick overview

- CRYSTAL HF welder is created for the production of crystal clear PVC windows and cinema and projection screens with Invisible Seam technology. With the use of special tools the CRYSTAL HF welder creates a strong and very thin linear weld to join crystal clear PVC film.
- Machine has a 6 m work table. A special back and front trough configuration and fabric layout during welding provides effective and an automatic weld/cut/press cycle to make the thin-line weld virtually invisible. The final pressing (if needed) is achieved with a separate, independent welding bar which can be used for omega profiles and standard linear welds as well.
- Fully advanced programming functionality, including ATSTM auto-tuning and WCSTM systems is achieved thanks to an onboard PLC integrated with a 10" touch screen HMI. CRYSTAL machines have smooth HF power output 1-4 kW with high precision down stroke mechanism and a pressure control.
- The vacuum section of the work table with special magnetic attachments allow for easy positioning of films/fabrics and welding of zippers with the use of optional tools.
- The CRYSTAL HF machine is a ready to use solution. There is no need for assembly and special installation.

## Applications

- Clear PVC windows, rollup crystal clear PVC walls, curtains
- Cinema and movie projection screens, home theatre sceens
- Pergolas with Omega profiles and zippers
- Awnings, shades, blinds
- Small and large format technical textiles PVC or PU coated

## Features

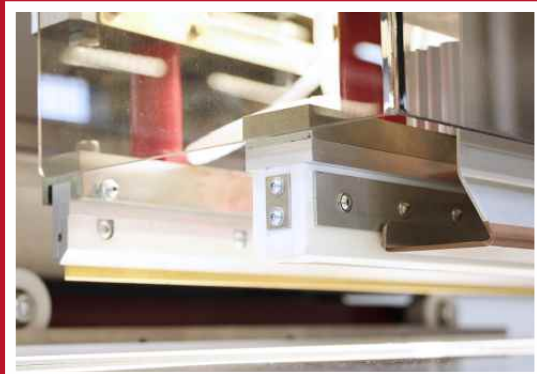
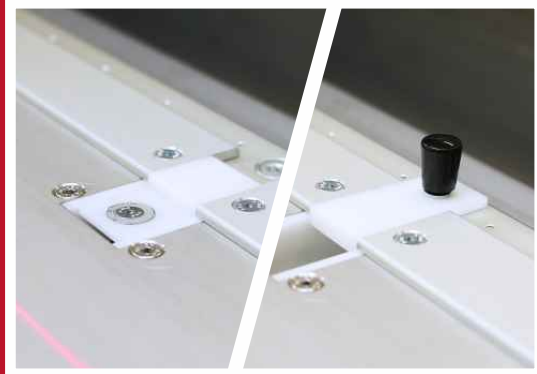
- Unlimited recipes memory storage and USB, WAN/LAN IO
- Optical safety curtain on the work table
- Omega profile welding (optional with additional tooling)
- Zipper welding functionality, overlap, hem, pocket and Keder welding (optional with additional tooling)
- Built in electrode illumination and optional linear laser guide
- Fully automated weld cycles
- ATSTM Autotuning HF power output system
- WCSTM Weld Check System - verifying quality of welds with preset parameters
- Simple to setup and easy to operate, intuitive 10" color touch screen HMI
- High production capacity with fully programmable PLC
- Backflow HF emission protection and EMI grid filter
- QuickGRIP on front HF electrode (680mm length and 25mm wide)
- Hi-Q5 EcoHF - new generation stable and efficient HF generator
- Ultra-fast sensitive ARC protection
- CE, EMC, UL, FCC and OSHA compliant

Custom built tooling and electrodes available upon request. Each machine is built according to customers needs. Parameters can be modified or adjusted - if required - at additional cost.

## Technical specification

## Crystal

HF output power	1 - 4 kW
Power supply	3 x 400 V ; 50 Hz
Main fuse	25 A
Working frequency	27,12 MHz ± 0,6%
Electron tube	air cooled metal-ceramic triode
Antiflash system	ultra-fast solid state ZTG AntiFlash™
Autotuning system	standard, ATSTM
Control system	PLC and 10" touch screen HMI
Max. sizes of electrodes	680 x 0,7 mm (weld/cut); 680 x 25 mm (press)
Compressed air consumption	7 nl/cycle ( 400 nl/cycle with vacuum suction on)
Electrode pressure control	50 - 180 kg
Electrode stroke	up to 50 mm (ability to stop at any height)
Work table width (without trough)	380 mm
Work table length	5600 mm (4100 mm open space)
Front trough size	160 x 120 mm
Electrode mount	QuickGRIP, pneumatic
Grounding foot	standard, pneumatic drive
HF welding head drive	automatic, inverter-controlled electric motor; linear speed up to 0,5 m/s
Weight	700 kg (welding head) + 800 kg (track)
Dimensions	5640 x 1901 x 1682 mm (L x W x H)



Zemat Technology Group Ltd.

60 YEARS STRONG  
1957-2017

📍 Brukowa 26, Lodz, Poland

☎ +48 42 632 84 84

✉ zemat@zemat.com

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