

# Datasheet

## CR-150

# Stent Crimping Machine

for self-expandable stents



### INNOVATIVE DESIGN

Innovative stent loading cradle for easy product loading without touching the stents.

### HIGH QUALITY BUILT

The CR-150 is built with a very high-quality benchmark resulting in a stable and robust design with minimal cost of ownership.

### EASY CALIBRATION

The CR-150 stent crimper can be easily calibrated using the one-point automatic diameter calibration function built into the system. Calibration in seconds.

### CONTACT

Mulderspark 9-1  
9351 NR Leek  
The Netherlands  
T +31 594 51 91 51  
www.mpteuropa.com



- Automatic stent loading with cradle system
- Servo controlled stent crimping head with Zero Gap technology
- Exchangeable pusher rods and delivery system holders for various stent diameters
- 10" user interface with recipe control

The CR-150 Stent Crimping Machine is developed for the crimping and transfer into the delivery system of self-expandable stents up to 120 mm length with a maximum diameter of approx. 20 mm.

The accurate 150 mm long, Medical Production Technology Europe BV designed servo-controlled stent crimping head is very stable and can deliver forces up to 1000 N radial while maintaining an even diameter all over the length of the head.

The innovative stent cradle system allows operators to load the stents into the delivery systems without the need for touching the stent. Simply drop the stent from the container or vial into the cradle. The machine will position the stent to the proper position inside the stent crimping head.

The stent pusher system is stepper controlled and has a loadcell to accurately measure the stent transfer

The delivery system is placed in a holder. A small light sensor detects the presence of the delivery system in the holder and detects if the system is fully advanced to the transfer plate.

The stent crimping head has stainless tool steel blades that have a special high wear resistant very low friction coating. The transfer forces measured inside the head and in the delivery system are typically at the same magnitude.

The Medical Production Technology Europe BV design stent crimp head is unique in its design and during the crimping action the blades have very little relative motion to the products. That prevents damaging of any fragile cover materials, and make that the products crimped with the CR-150 crimper are not damaged in the crimping and the transfer process.

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### Technical Specification CR-150 Stent Crimping Machine

|                               |                                                                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stent crimping length         | 150 mm head. Maximum 120 mm length stents                                                                                                                          |
| Stent type                    | Self-expandable stents (also for covered stents)                                                                                                                   |
| Maximum diameter auto loading | 20 mm (optionally larger sizes possible)                                                                                                                           |
| Maximum opening crimp head    | 35 mm                                                                                                                                                              |
| Minimum closing diameter      | 0.1 mm (software limit)                                                                                                                                            |
| Crimp head control            | Servo controlled position / force                                                                                                                                  |
| Diameter accuracy             | +/- 0.02 mm @ 100 N                                                                                                                                                |
| Maximum crimp force           | 1000 N radial. Dynamic Diameter Compensation possible                                                                                                              |
| Crimping speeds               | 0.1 mm/s – 10 mm/s                                                                                                                                                 |
| Maximum transfer force        | 200 N with loadcell measurement on the pusher                                                                                                                      |
| Stent loading                 | Fully automatic with stent cradle system                                                                                                                           |
| GUI                           | 10" colour touch panel                                                                                                                                             |
| Control software              | Zoomable process graphs<br>Recipe based<br>Password levels (operator, engineer, calibrator)<br>Remote support option<br>Data logging with USB transfer possibility |
| Ethernet                      | 2x                                                                                                                                                                 |
| USB                           | 4x                                                                                                                                                                 |
| Required air pressure         | 7 bar minimum                                                                                                                                                      |
| Power supply                  | 115 / 240VAC / 0.5kW                                                                                                                                               |
| UPS                           | Optional power supply backup to finish current cycle                                                                                                               |
| Safety systems                | Covers with coded magnets and safety PLC system                                                                                                                    |

#### SAFETY

Standard equipped with a safety cover with coded magnets.

#### DATA COLLECTION

Full process data logging to the internal PC system and transfer possibly to external USB for registration or analysis.

#### USER INTERFACE

Large 10" full color touch screen user interface for easy overview of the machine behavior and managing of the recipes.

#### UPS

Optionally supplied with a UPS power supply to prevent shutdown during power failure enabling the machine to finish the product processed before controlled shutdown.

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