The MDC FFS-1 horizontal form fill and seal thermoformer was designed for the Medical Device and Consumer Product industries. The system is capable of producing flexible or semi-rigid packaging with sterile barriers. Built for high volume production environments, the FFS-1 can form films up to 50 mil and seal Tyvek®, paper foil, or poly at production speeds up to 30 cycles per minute. Suitable for a wide range of materials including PETG, RPET, PVC, HIPS, PVDC, Poly, Nylon/Surlyn®

Key Features

- Retractable Form and Seal heads on pneumatic cylinders
- Quick-change tooling for fast change overs
- Top film servo drive eliminates stress to finished package seals and provides superior print registration.
- Menu-driven recipe storage including seal pressures
- Shaft angle control for event timing maximizes throughputs
- Allen-Bradley controls w/ PanelView Plus touchscreen

High Uptime / Low Maintenance Costs
Retractable form and seal heads that don’t require water to cool coupled with quick change tooling enable 15 minute change-overs and ease of maintenance.

Stop Wasting Product
Pre-heat station, plugs and seal head are cylinder driven for precise control and quick retraction safeguarding all work in process during machine stops.

Form Clear and Uniform Packages
FDA validatable – we provide test ports for calibration of gauges and RTD’s for your NIST certs.

Flexibility
Runs flexible or rigid formable webs; choose between contact or radiant heat, clips or piercing transport chains, and match metal dies or guillotine knives.
Every MDC machine is designed and built to your specifications using all U.S. standard measurements and hardware. Your system will include a complete B.O.M. with vendor part numbers, program source code and a complete drawing package.

**Forming Capacity**
- Film widths up to 35 inches
- Index with pre-heat up to 25 inches
- Film draws up to 5 inches
- Machine cycle rates up to 30 CPM

**Mechanical**
- **Film unwind**: Upper servo driven roller and powered bottom; 22" D
- **Film advance/chain**: Servo index with clips or piercing for rigid films
- **Pre-heat station**: Contact or radiant heat with bottom reflector & side heaters, control up to two indexes
- **Forming die**: Toggle press; Lower male plugs with air over vacuum
- **Tooling**: Quick Change (10 mins.)
- **Load Area**: To customer spec with knee free area
- **Seal Station**: Retractable, pneumatic cylinders
- **Cut Station**: Guillotine or match metal die
- **Scrap Removal**: vacuum or scrap rewind

**Construction**
- 1/2" solid aluminum side plates and frame
- Lexan guarding
- Cleanroom Ready

**Controls/Software**
- **Controller**: Allen Bradley CompactLogix
- **HMI**: PanelView Plus 10" touchscreen
- **Indexing Servos**: Ultra3000
- **Temp Controls**: Using PID loops
- **Communications**: Ethernet or DeviceNet

**Resources**
- **Cooling water**: 3 GPM
- **Electric**: 230V/480V, 3 phase, 60 amps
- **Air Supply**: 100 psi, 25 SCFM

**Safety Features**
- Zero tolerance package plus emergency stops; Banner category 3 safety circuits
- Cage safety guards w/ hinge circuit
- Air and electric lockout points
- Under guard packages

**Validation**
- Complete protocols & support (PQ, OQ, IQ) plus calibration ports for gauged inputs such as pressure, vacuum & temperature.

**Options**
- Product in-feed & conveyors
- Flexo and digital top printers
- Vision/inspection systems
- Alternate control systems
- Complete reject tracking system
- Foreign language support
- Hole punch dies

MDC’s HFFS Thermoformer machines maximize uptime with our quick change tooling and retractable heads. Our solution greatly reduces downtime associated with unscheduled machine stops and saves valuable work in process. Simply lift up the seal head for inspection and gasket replacement.

**Specifications subject to change without notice.**