

THOMPSON DUKE INDUSTRIAL IZR

Patented (United States Patent No. 10,440,989)

The Thompson Duke Industrial IZR is an industrial filling machine able to accommodate manufacturer packaging directly out of the box.* The IZR includes an enhanced fill table size for tray arrays of up to 252 carts, a large 500ml reservoir and additional improvements dedicated to improving large scale cartridge filling and capping operations.

Enhanced Versatility

Automatically fill cartridges, pods, capsules, syringes and jars directly in manufacturer packaging.* Featuring a larger tray table able to accommodate up to 252 cartridges. Refill the large 500ml heated glass extract reservoir during operation. Adjust the large 1.420 gram dispense capacity precisely with a simplified, knob-based dispense volume adjustment. Quickly configure tray arrays for new devices introduced into the market with custom designed trays available for non-standard devices.

Dispense High and Low Viscosity Extracts

The new 500ml glass reservoir uses a patented heated extract dispense system that regulates extract viscosity in Fahrenheit or Celsius. Fill high viscosity extracts with extreme accuracy, precision and repeatability. Fine tune dispense speed and force for lower viscosity extracts.

Rapid Extract Formula Changes and System Cleaning

Replace the food-safe, laboratory grade dispense system components in less than one minute to switch extract formulas. Rapidly clean the dispense components with minimal loss. A new larger gantry and double-bearing size make height adjustments smooth and precise.

Optimized Touch Screen Control System

Easily control the filling operation using the simple and intuitive seven inch color touch screen. Updated with a new and improved serpentine filling pattern and the ability to control table speed to increase throughput. Adjust temperature and fill speed on the fly. Monitor operating parameters including cartridge tray fill status, real time diagnostics and alarms with complete alarm history.

Patented and Certified

Patented and cETLus Certified for the USA and Canada (UL 61010-1, UL 61010-2, UL508, CSA C22.2, IEC 61010-1). Adheres to the rigorous Good Manufacturing Practice guidelines required for legal compliance.

American-Made

Designed, manufactured, distributed and patented in the United States of America. Industrial control system with compliant materials and dispense components. Stainless steel check valves custom designed and manufactured specifically for extract filling applications. Exceptional customer support available for the lifetime of the machine.

Portable

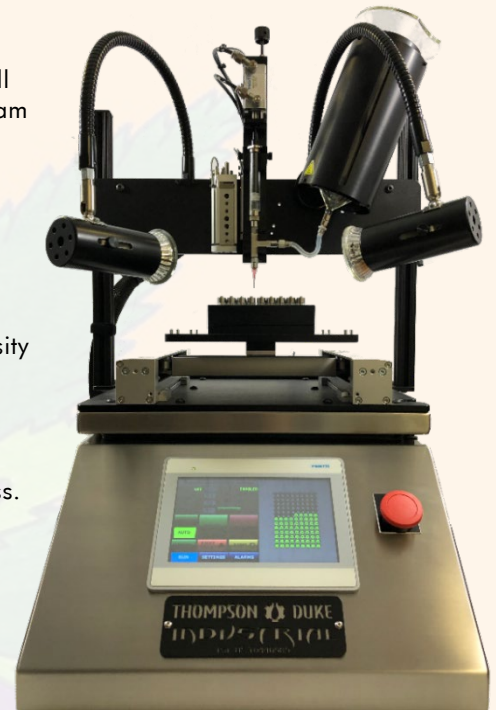
Lightweight and portable benchtop design for quick and easy setup, operation, and cleaning. Requires 120V AC power and 40psi compressed air.

Optional Data Acquisition System

The optional ACF-DA System data historian and reporting solution permanently stores a record for all system process variables for every cartridge or pod filled. The ACF-DA connects to multiple IZR or ACF1 machines.

Backwards Compatible

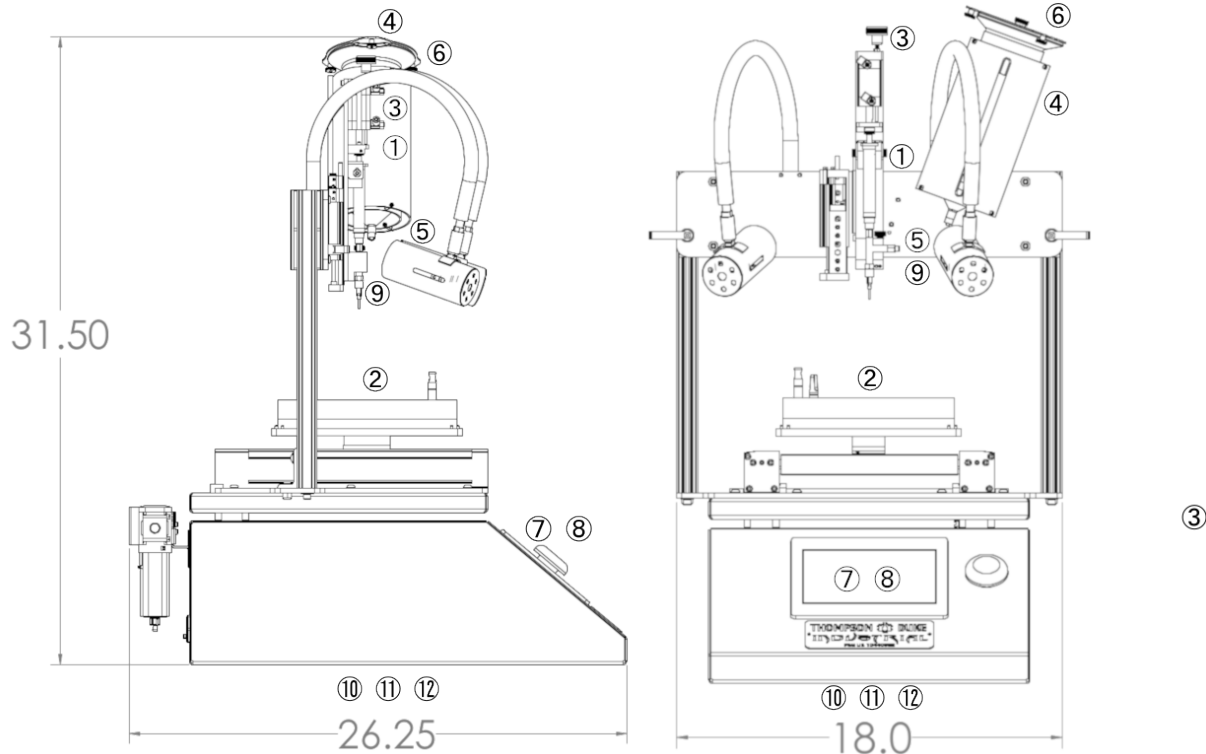
Works with all existing Thompson Duke Industrial ACF1 trays and components. Custom tooling may be required depending on manufacturers' packaging.



THOMPSON DUKE INDUSTRIAL

IZR INDUSTRIAL FILLING MACHINE

The Thompson Duke Industrial IZR is an industrial filling machine able to accommodate manufacturer packaging directly out of the box.* The IZR includes an enhanced fill table size for tray arrays of up to 252 carts, a large 500ml reservoir and additional improvements dedicated to improving large scale cartridge filling and capping operations.



- ① Quickly adjust the angle of the extract delivery system to accommodate any cartridge form factor
- ② Automatically fill cartridges, pods, capsules, syringes and jars directly in manufacturer packaging*
- ③ Adjust the large 1.420 gram dispense capacity precisely with a simplified, knob-based dispense volume adjustment
- ④ Fill high viscosity extracts and distillates with extreme accuracy, precision and repeatability
- ⑤ Minimal product loss during product changeover
- ⑥ Large 500ml glass, heated extract reservoir can be filled during operation
- ⑦ Seven inch touch screen for easy operation and total control of your filling process with new and improved serpentine filling pattern and the ability to control table speed to increase throughput.
- ⑧ System displays for cartridge tray, fill status and real time diagnostic alarms
- ⑨ Laboratory grade, food safe, replaceable components make switching between products quick and simple
- ⑩ Integrated pressure regulator
- ⑪ Portable benchtop design with adjustable height
- ⑫ Aluminum construction and stainless steel enclosure

Height	31.5" MAX
Width	18"
Depth	26.25"
Weight	75 LBS
Ambient Temperature	0-45 C (32-113 F)
Glass Reservoir Capacity	500mL
Temperature Range of Reservoir	Ambient - 93 C (Ambient - 200 F)
Working Voltage	120VAC 60Hz Single Phase
Power Consumption	250W
Working Min Pneumatic Pressure	40 PSI**
Working Max Pneumatic Pressure	210 PSI**
Pneumatic Fitting Connection	Industrial 1/4" Male
Max Number of Cartridges Per Tray	252
Max Cartridge Height	5.25"
Max Cartridge Diameter	N/A
Product Loss	<1g

*Custom tooling may be required depending on manufacturers' packaging

**Air compressor sold separately: use ANSI/ISA-7.0.01-1996 Quality Standard



THOMPSON DUKE INDUSTRIAL

SVH

The American-made, cETLus Certified, and GMP compliant SVH Semi-Automatic Filling Machine is foot pedal operated and designed to fill any extract vaporizer device available in the European Union and other global markets.

Versatile

Fill every type of cartridge and POD as well as capsules, syringes and jars. Refill the glass 500mL heated extract reservoir during operation. Adjust the dispense volume precisely up to 1.420 ml. Optional accessories for dispensing from .05mL to 5.0mL. Custom adapters available for septum pierced devices.

Dispense High and Low Viscosity Extracts

Dual automatic digital temperature control with heated extract dispense system regulates extract viscosity at every point of the filling process. Fill high viscosity extracts with extreme accuracy, precision and repeatability. Fine tune dispense speed and force for lower viscosity extracts

Rapid Extract Formula Changes and System Cleaning

Replace the food safe, laboratory grade, dispense system components in less than one minute to switch extract formulas. Rapidly clean the dispense components with minimal loss. Two full dispense component sets are included.

CE Certified and GMP Compliant

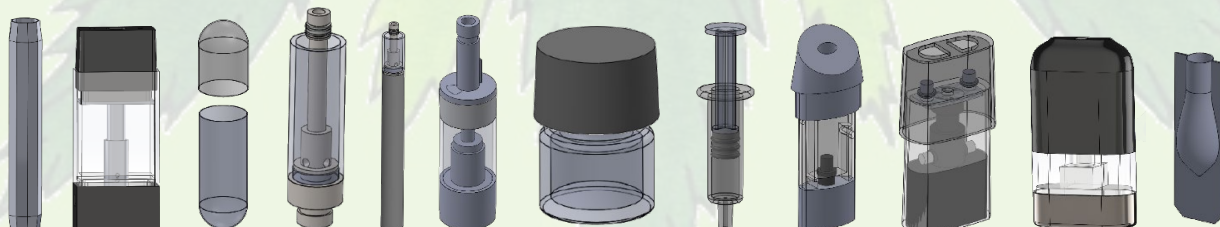
CE Certified for the European Union and other global markets. Adheres to the rigorous Good Manufacturing Practice guidelines required for legal compliance.

American-Made

Designed, manufactured, and distributed from the United States of America. Industrial control system with compliant materials and dispense components. Stainless steel check valves custom designed and manufactured specifically for extract filling applications. Exceptional customer support available for the lifetime of the machine.

Portable

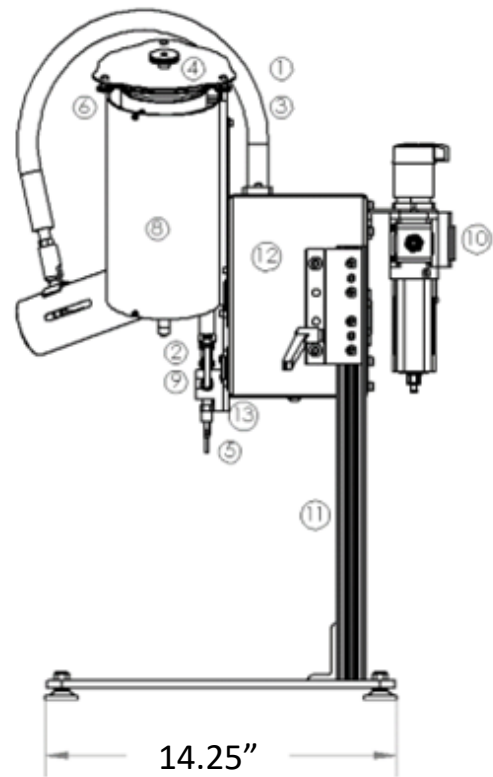
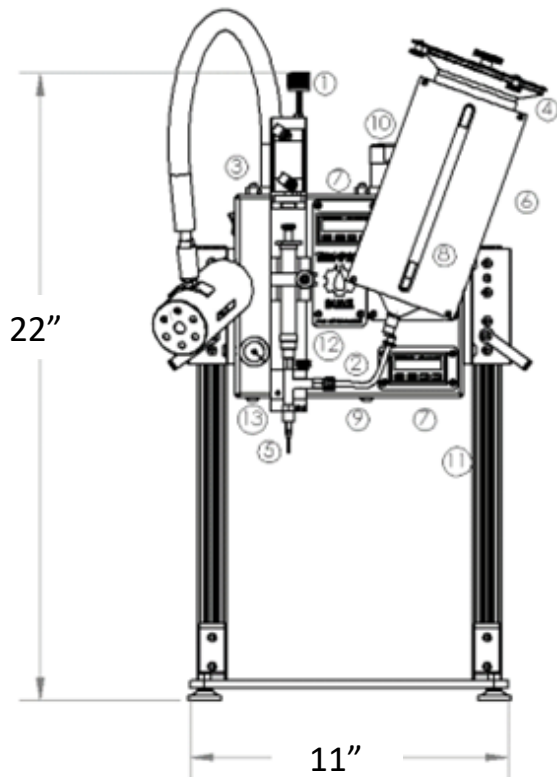
Lightweight and portable benchtop design for quick and easy setup, operation, and cleaning. Foot pedal operated dispense system. Requires 120V/60Hz power and 40psi compressed air.



THOMPSON DUKE INDUSTRIAL

SVH SEMI-AUTOMATIC VAPORIZER FILLING MACHINE

The American-made, CE Certified, GMP compliant SVH Semi-Automatic Filling Machine is foot pedal operated and designed to fill any extract vaporizer device available in the European Union and broader global markets.



- ① Quickly adjust the height and fill volume to accommodate any cartridge form factor
- ② Less than 1 mL loss during product changeover
- ③ Adjust the large 1.420mL dispense capacity precisely with a simplified, knob-based dispense volume adjustment. Optional accessories for dispensing from .05mL to 5.0mL.
- ④ Fill high viscosity extracts and distillates with extreme accuracy, precision and repeatability
- ⑤ Fill high viscosity extracts and distillates with extreme accuracy, precision and repeatability
- ⑥ The 500mL glass extract reservoir can be filled during operation
- ⑦ Automatic digital temperature control
- ⑧ Heated Extract Delivery System and Product Reservoir adjustable with dual temperature control up to 200 F
- ⑨ Laboratory grade, food safe, replaceable components make switching between products quick and simple
- ⑩ Integrated pressure regulator
- ⑪ Portable benchtop design with adjustable height
- ⑫ Aluminum construction and stainless steel enclosure
- ⑬ Heated Duke Valve Mount with integrated temperature control

Height	22" MAX
Width	11"
Depth	14.25"
Weight	16 LBS
Ambient Temperature	32-113 F
Glass Reservoir Capacity	500mL
Temperature Range of Reservoir	0-200 F
Working Voltage	120VAC 60Hz Single Phase
Power Consumption	270W
Working Min Pneumatic Pressure	40 PSI*
Working Max Pneumatic Pressure	210 PSI*
Pneumatic Fitting Connection	Universal Female Adapter
Syringe Filler Connection Type	Luer Lock/Luer Slip
Product Loss	<1g

*Air compressor sold separately; use ANSI/ISA-7.0.01-1996 Quality Standard for Instrument Air.



THOMPSON DUKE INDUSTRIAL I Z R UPGRADE

for the **ACF1 Automatic Filling Machine**

Patented (United States Patent No. 10,440,989)

The Thompson Duke Industrial IZR Upgrade is full system retrofit of your existing ACF1 Automatic Cartridge Filling Machine into an industrial filling machine able to accommodate manufacturer packaging directly out of the box.* The IZR Upgrade includes an enhanced fill table size for tray arrays of up to 252 carts, a large 500ml reservoir and additional improvements dedicated to improving large scale cartridge filling and capping operations.

Serious Throughput

The IZR Upgrade increases your ACF1s filling ability from 117 to 252 devices and accommodates filling of trays that include those directly in manufacturer packaging.* The new open air reservoir volume accepts 500mls of product. The large reservoir eliminates product transfers during filling and ensures that every cart on every run is filled with accuracy, precision and minimal loss. A new, larger table accommodates your range of cartridges while the new, larger dispense capacity of 1.420 grams includes a simplified, knob based dispense volume adjustment.

Improved Features and Operator Controls

The new 500mL glass reservoir uses a patented heated extract dispense system that regulates your extract viscosity in Fahrenheit or Celsius. Operators can easily fill high viscosity extracts with extreme accuracy, precision and repeatability using the new and enhanced automatic and manual controls. The new knob based dispense volume adjustment allows for real time, simple granular adjustments for accurate filling based on mass. Fine tuning dispense speed and force for managing extract viscosity is simple and intuitive while the new larger gantry and double bearing size make small height adjustments smooth and precise.

High Volume Filling

The new and improved 500mL product reservoir means you never run out of extract on full cartridge filling runs even when filling 252 carts. The open air reservoir ensures that as you are able to continuously fill your operators and are able to easily modify how much material is to be filled while ensuring that your system retains the highest degree of precision, accuracy and consistency. Combined with a Thompson Duke TPM, The IZR is capable of filling and capping cartridges at rate that meets benchmark of highest achievable filling and capping based on customer standards on feedback.

Enhanced and Optimized Touch Screen Control System

New and improved controls enhance the ability of operators to fill cartridges how you want. Use the seven inch touch screen to control our new and improved serpentine filling pattern with an enhanced ability for operators to control table speed and increase throughput. Digital and mechanical upgrades provide expanded abilities to adjust your temperature and fill speed on the fly while the new knob based dispense volume adjustment allows operators to control dispense volume easily and immediately to ensure extreme accuracy based on filling by mass.

Patented and Certified

Patented and cETLus Certified for the USA and Canada (UL 61010-1, UL 61010-2, UL508, CSA C22.2, IEC 61010-1). Adheres to the rigorous Good Manufacturing Practice guidelines required for legal compliance.

American-Made

As always, Thompson Duke Industrial products are designed, manufactured, distributed and patented in the United States of America. Industrial control system with compliant materials and dispense components. Stainless steel check valves custom designed and manufactured specifically for extract filling applications. Exceptional customer support available for the lifetime of the machine.

Backwards Compatible

Works with all existing Thompson Duke Industrial ACF1 trays and components.

*Custom tooling may be required depending on manufacturers packaging



THOMPSON DUKE INDUSTRIAL MFP

The Thompson Duke Industrial MFP Press is a benchtop fully pneumatic 6.5-ton industrial press capable of capping all carts that come in 10x10 trays. (For pressing mouthpieces on All-in-One devices, verify the force requirements with the device manufacturer.)

Cap Every 10x10 Tray on the Market

The MFP Press accommodates various cartridge tray array configurations as well as mouthpiece and device cap form factors. Generating up to 130lbs of force per cart means that if your carts require high force the MFP can do it in factory standard 10x10s.

Simple Pneumatic Controls and Interlocks

The MFP is completely air pressure operated with no power required. Connect your air compressor system to the MFP and begin operation. Dial in the required force anywhere between 0.5 and 6.5 tons with full variable force control. Close the door and flip the switch to extend position. The door interlock engages and operation begins. Flip the switch to retract position, the press retracts and the door interlock releases.

Streamlined Performance with Thompson Duke Filling Machines

Place filled Thompson Duke Trays directly from the Big Jim, IZR or ACF1 automatic filling machines into the MFP after setting your mouthpieces with the Thompson Duke Mouthpiece Loader for immediate pressing.

Easy, Safe Operation

Benchtop form factor. All pneumatic – no electronics. Ability to adjust between 0.5 and 4 tons with full variable force setting. Single switch operation. Auto-locking safety door interlock and impact-resistant windows to protect operators.

Made in America

Designed and manufactured in the United States of America. Industrial pneumatic control system with GMP compliant materials and components. One year warranty. Exceptional customer support available for the lifetime of the machine.

Certified

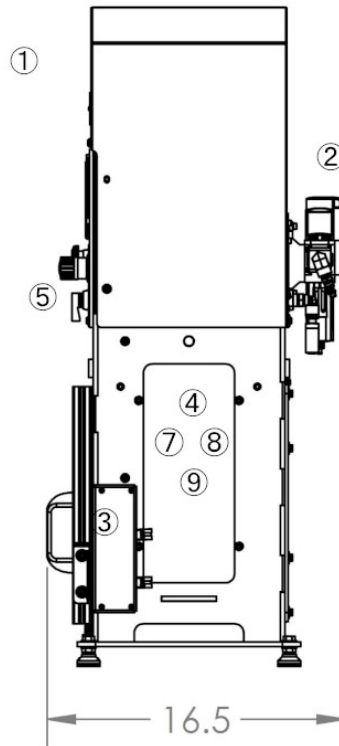
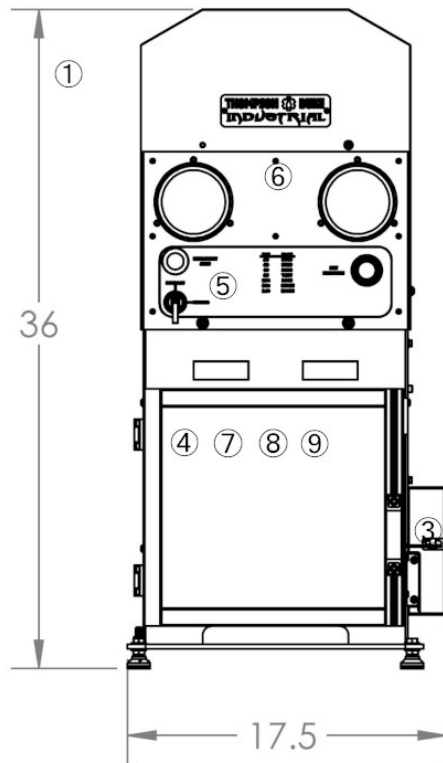
The MFP Automatic Press system is built per CSA Code for Power Press Operation Z142010. Press structure frame evaluated and stamped by Registered Professional Structural Engineer using American Institute of Steel Construction ASD Method.



THOMPSON DUKE INDUSTRIAL

MFP Medium Force Press

The Thompson Duke Industrial MFP Medium Force Press is a benchtop fully pneumatic 6.5-ton industrial press, capable of rapidly capping an entire tray of press-on mouthpieces and caps onto cartridges and other devices.



- ① Benchtop form factor
- ② Completely air pressure operated - no power required
- ③ Auto-locking safety door
- ④ Impact-resistant windows
- ⑤ Single switch operation
- ⑥ Force dial, between 0.5 and 4 tons with full variable force control
- ⑦ Accommodates various cartridge tray array configurations
- ⑧ Built per CSA Code for Power Press Operation Z142010
- ⑨ Evaluated and stamped by Registered Professional Structural Engineer using AISC-ASD Method

Height	36"
Width	17 1/2"
Depth	16 1/2"
Weight	185lbs
Max Press Force	6.5 Tons
Max Cartridge Height	6.5"
Ambient Temperature	10 - 50 C (50 - 120 F)
Minimum Working Pressure	20 PSI
Maximum Working Pressure	150PSI
Precision	Analog Control with Precision Regulator
Pneumatic Fitting Connection	Industrial 1/4" Male

* Consult your manufacturer prior to pressing devices containing batteries.



THOMPSON DUKE INDUSTRIAL LFP

The Thompson Duke Industrial LFP Press is a benchtop fully pneumatic 4-ton industrial press, capable of rapidly capping an entire tray of lower force press-on mouthpieces and caps onto cartridges and other devices. (For pressing mouthpieces on All-in-One devices, verify the force requirements with the device manufacturer.)

Fully Pneumatic Controls and Interlocks

The LFP Press accommodates various cartridge tray array configurations as well as mouthpiece and device cap form factors. The LFP is completely air pressure operated with no power required. Connect your air compressor system to the LFP and begin operation. Dial in the required force anywhere between 0.5 and 4 tons with full variable force control. Close the door and flip the switch to extend position. The door interlock engages and operation begins. Flip the switch to retract position, the press retracts and the door interlock releases.

Streamlined Performance with Thompson Duke Filling Machines

Place filled Thompson Duke Trays directly from the IZR or ACF1 automatic filling machines into the LFP after setting your mouthpieces with the Thompson Duke Mouthpiece Loader for immediate pressing. The LFP is an ideal solution for capping other devices with low force requirements.

Easy, Safe Operation

Benchtop form factor. All pneumatic – no electronics. Ability to adjust between 0.5 and 4 tons with full variable force setting. Single switch operation. Auto-locking safety door interlock and impact-resistant windows to protect operators.

Made in America

Designed and manufactured in the United States of America. Industrial pneumatic control system with GMP compliant materials and components. One year warranty. Exceptional customer support available for the lifetime of the machine.

Certified

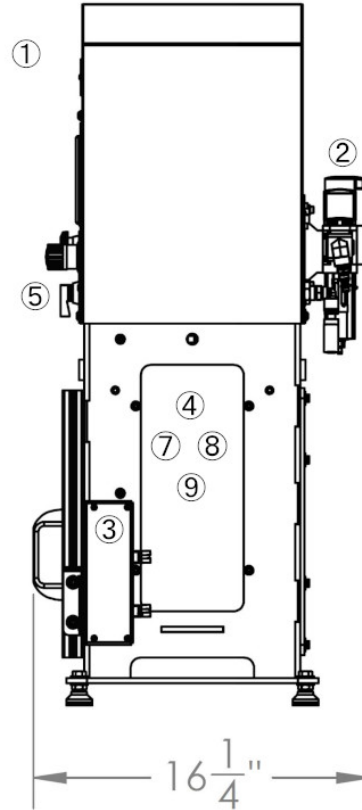
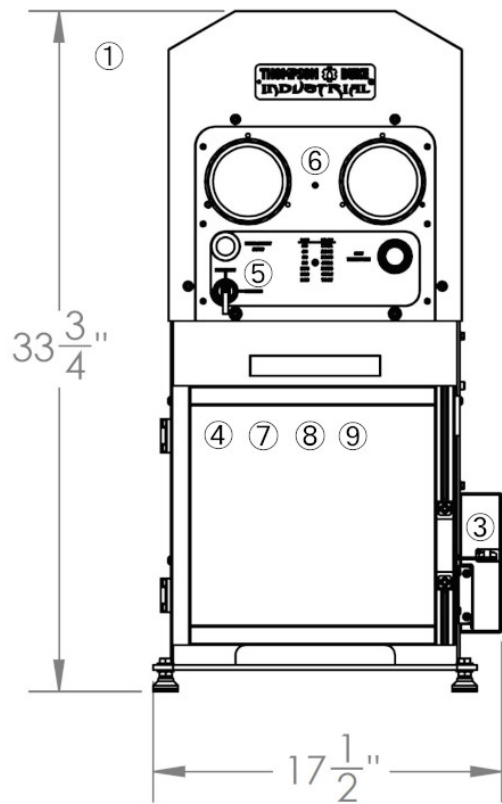
The LFP Automatic Press system is built per CSA Code for Power Press Operation Z142010. Press structure frame evaluated and stamped by Registered Professional Structural Engineer using American Institute of Steel Construction ASD Method.



THOMPSON DUKE INDUSTRIAL

LFP PRESS

The Thompson Duke Industrial LFP Press is a benchtop fully pneumatic 4-ton industrial press, capable of rapidly capping an entire tray of lower force press-on mouthpieces and caps onto cartridges and other devices. (For pressing mouthpieces on All-in-One devices, verify the force requirements with the device manufacturer.)



- ① Benchtop form factor
- ② Completely air pressure operated - no power required
- ③ Auto-locking safety door
- ④ Impact-resistant windows
- ⑤ Single switch operation
- ⑥ Force dial, between 0.5 and 4 tons with full variable force control
- ⑦ Accommodates various cartridge tray array configurations
- ⑧ Built per CSA Code for Power Press Operation Z142010
- ⑨ Evaluated and stamped by Registered Professional Structural Engineer using AISC-ASD Method

Height	33 3/4"
Width	17 1/2"
Depth	16 3/8"
Weight	180lbs
Max Press Force	4 Tons
Max Cartridge Height	6.5"
Ambient Temperature	10 - 50 C (50 - 120 F)
Minimum Working Pressure	20 PSI
Maximum Working Pressure	150PSI
Precision	Analog Control with Precision Regulator
Pneumatic Fitting Connection	Industrial 1/4" Male

* The LFP does not press devices containing batteries.



THOMPSON DUKE INDUSTRIAL

MPM MOUTHPIECE FASTENING MACHINE

The American-made MPM Mouthpiece Fastening Machine is a semi-automatic, foot pedal operated machine designed to rapidly fasten screw style mouthpieces for vaporizer cartridges. The MPM is easy to use with a torque adjustment and clutch to prevent strain to the operator. Increase throughput by fastening duckbill, circular, bullet, or hourglass screw style cartridge mouthpieces.

Increase Overall Process Throughput

Accelerate the entire operating procedure. Significantly increase the mouthpiece fastening rate to match the cartridge filling machine throughput while reducing physical fatigue.

Fasten Any Mouthpiece Form Factor

Change the mouthpiece adapter in less than a minute to switch between duckbill style mouthpieces and circular, bullet, or hourglass style. Two adapters included.

Adjustable Torque

Quickly adjust the torque setting for the proper mouthpiece fastening force. Clutch automatically engages at the torque setting and adapter stops spinning. Proper fastening torque diminishes the potential for extract settling and cartridge leaks.

Variable Speed and Bidirectional

Adjust the front control knob to vary the rotation speed and reduce physical fatigue. Change the adapter spin direction from forward to reverse to remove the mouthpiece from the cartridge.

Quick & Easy Startup

Plug the MPM into a 120Vac outlet, connect the foot pedal, and immediately begin fastening cartridge mouthpieces. Adjust the MPM height for ergonomic comfort.

Certified

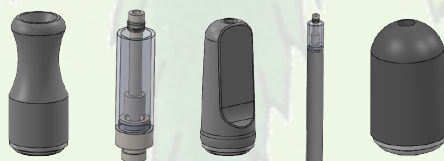
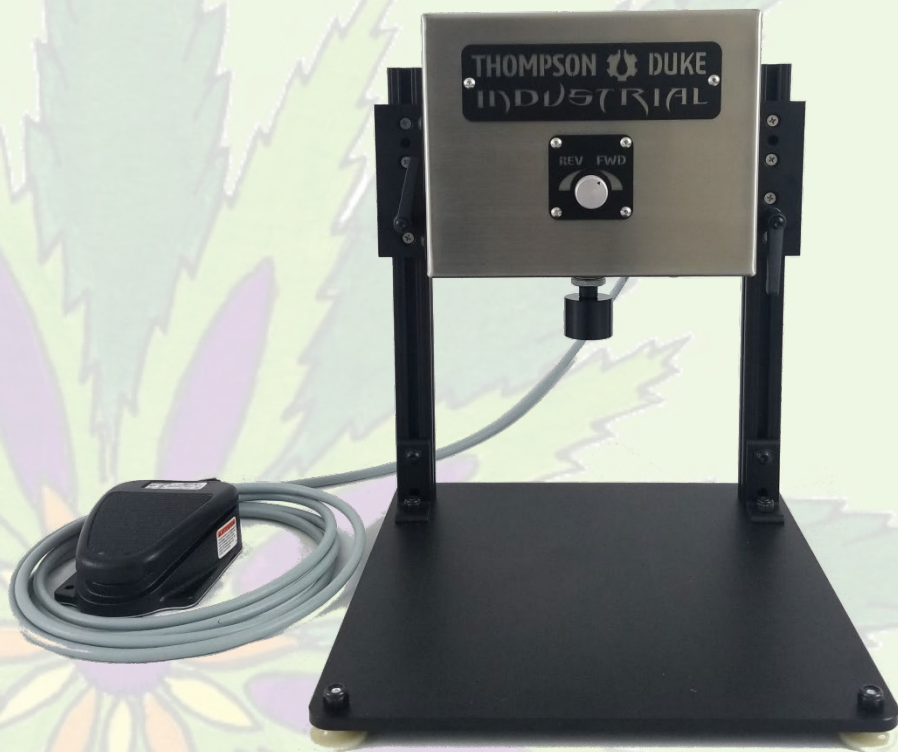
cETLus Certified for the USA and Canada (UL 61010-1, UL 61010-2, UL508, CSA C22.2, IEC 61010-1).

American-Made

Designed and manufactured in the United States of America using the highest quality materials and industrial control components. Exceptional customer support available for the lifetime of the machine.

Portable

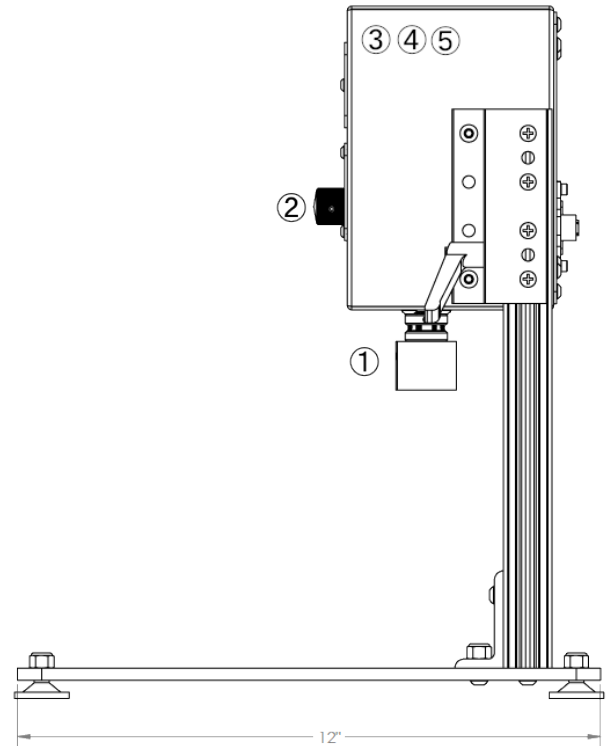
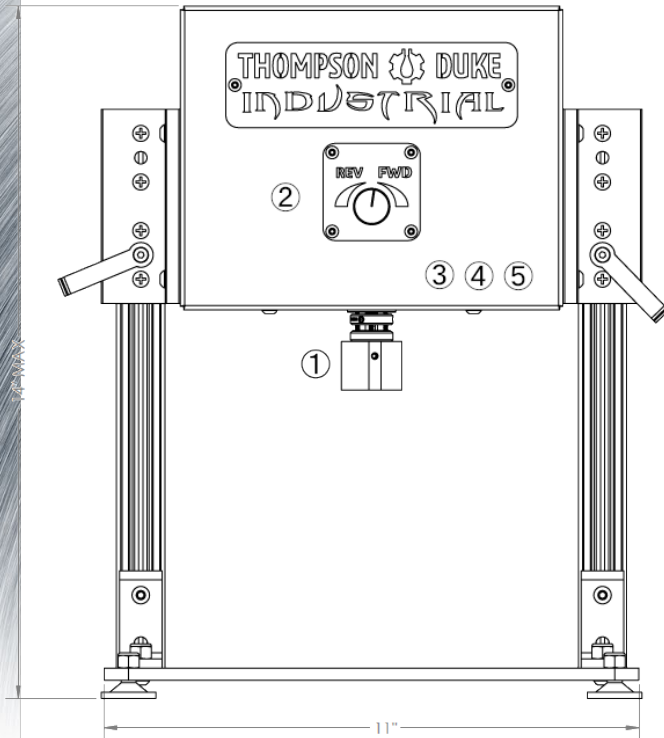
Lightweight and portable benchtop design for quick and easy setup and operation. Foot pedal operated. Requires 120V AC power.



THOMPSON DUKE INDUSTRIAL

MPM MOUTHPIECE FASTENING MACHINE

The American-made, cETLus Certified MPM Mouthpiece Fastening Machine is a semi-automatic, foot pedal operated machine designed to rapidly fasten screw style mouthpieces for vaporizer cartridges. The MPM is easy to use with a torque adjustment and clutch to prevent strain to the operator. Increase throughput by fastening duckbill, circular, bullet, or hourglass screw style cartridge mouthpieces.



- ① Two included adapters support all screw top mouthpieces including round, bullet, duckbill and hourglass
- ② Quickly adjust the speed, torque, direction and height to accommodate any cartridge mouthpiece form factor.
- ③ Simple operation increases throughout put and reduces repetitive stress injuries to operators
- ④ Portable benchtop design takes minutes to set up and begin operation
- ⑤ Aluminum construction and stainless steel enclosure

Height	16" MAX
Width	11"
Depth	12"
Weight	16 LBS
Ambient Temperature	0-45 C (32-113 F)
Working Voltage	120VAC 60Hz Single Phase 3
Cap Rate	800/hr
Max Cartridge Height	8.0"

*Cartridge cap times vary by operator

