



# THOMPSON DUKE INDUSTRIAL

2020 SE 7th Avenue, Suite 200 • Portland, OR 97214  
503-847-5088 • thompsonduke.com

## MCF1 SEMI-AUTOMATIC VAPORIZER FILLING MACHINE



### SYSTEM DESCRIPTION

The Patented MCF1 Semi-Automatic Vaporizer Filling Machine is a foot-pedal operated oil dispensing system designed and built by expert American automation engineers in Portland, Oregon, USA (United States Patent No. 10,440,989).

- Foot pedal operated pneumatic controls
- Quickly adjust the Oil Delivery System to fill any volume up to 1ml per stroke
- Volumetric product delivery with adjustable flow rate
- Laboratory grade, replaceable components. Switch between oils in under a minute
- Less than 1 mL loss during product changeover
- Flexible for use with different cartridge form factors and other containers
- Dispenses high viscosity oils without using a pressure pot
- The 140ml Oil Reservoir can be filled dynamically during operation
- Heated Oil Delivery System and Product Reservoir up to 200F (93C)
- Automatic digital temperature control
- Integrated pressure regulator and air filter
- Syringe fill adapter included
- Portable benchtop design with adjustable height
- Aluminum and Stainless Steel construction

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## POWER AND FILTERED COMPRESSED CONTROL AIR REQUIREMENTS

The MCF1 requires a 120Vac outlet for system power and draws 150W during operation. The MCF1 requires at least 50 psi of filtered compressed control air for the linear actuators. The MCF1 includes a pressure regulator and an air filter with a quick-disconnect male plug mounted on the rear of the enclosure for connection to your compressed control air system.

## CARTRIDGE SPECIFICATION AND FORM FACTOR

We can provide guidance and supply sourcing of vaporizer cartridges and PODs to minimize cartridge failure modes and maximize the operational efficiency of the MCF1.

## SYSTEM COST

The following is the pricing for the MCF1 Semi-Automatic Cartridge Filling Machine System:

Item	Quantity	Unit Cost
MCF1 Semi-Automatic Cartridge Filling Machine System	1	\$8,000.00
• Glass Dispense Syringe (p/n 3019)	2	Included
• Product Reservoir Tube (p/n 3001)	2	Included
• Heat Lamp Bulb (p/n 3012)	3	Included
• Wrench Set (p/n 5010)	1	Included
• Butterfly Syringe Fill Adapter (p/n 3026)	15	Included
• Luer Caps (p/n 3069)	15	Included
• MCF1 Dispense System Component Kit	1	Included
➤ Tube Assemblies (p/n 3006)	15	Included
➤ Stainless Steel Check Valves (p/n 6046)	2	Included
➤ Needles (p/n 3007)	15	Included

Costs for shipping, on-site startup and training services vary based on the location of your facility. Sales tax will be added to the total system cost if applicable. All prices are subject to change without notice.



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## OPTIONAL COMPONENTS

Most clients request additional components with the MCF1 system order. All optional components are identified in the following table, and can be purchased through our on-line store.

Item	Quantity	Unit Cost
MCF1 Tubing Assemblies (p/n 4058)	15	\$60.00
Glass Dispense Syringe (p/n 3019)	1	\$137.00
Stainless Steel Check Valve	1	\$300.00
Heat Lamp Bulb, 50 Watt Halogen (p/n 3012)	1	\$24.00
Butterfly Syringe Fill Adapter (p/n 3026)	15	\$6.00
140mL Glass Product Reservoir (p/n 3001)	1	\$125.00

## SYSTEM VERIFICATION, SHIPPING, START UP AND ACCEPTANCE

We perform complete pre-operational testing of each MCF1 in our Portland facility. Shipping costs are determined by your location and schedule. Startup and training services are normally not required for your MCF1 purchase. We provide a quick start guide video, an Operations and Maintenance manual and phone support for your initial setup and operation. System acceptance will be achieved upon your beneficial use of the MCF1.

## PAYMENT TERMS

We require 50% down payment for the MCF1 prior to executing the system build. The remaining balance of 50% is due prior to the shipment of the MCF1 and optional components. Payment by credit card requires a 4% fee.

## SCHEDULE AND AVAILABILITY

The assembly and testing of the MCF1 is normally complete within four weeks. However, we usually have the MCF1 in stock, or have systems in a build state with availability within a couple of weeks.

## WARRANTY AND SUPPORT

The MCF1 has a one year warranty and we provide phone support for the lifetime of the machine.

## AUTOMATION AND CONTROL SYSTEM ENGINEERING AND SERVICES

Thompson Duke Industrial provides a full spectrum of Process Control Engineering and System Automation Integration services for any operation, machine or facility.

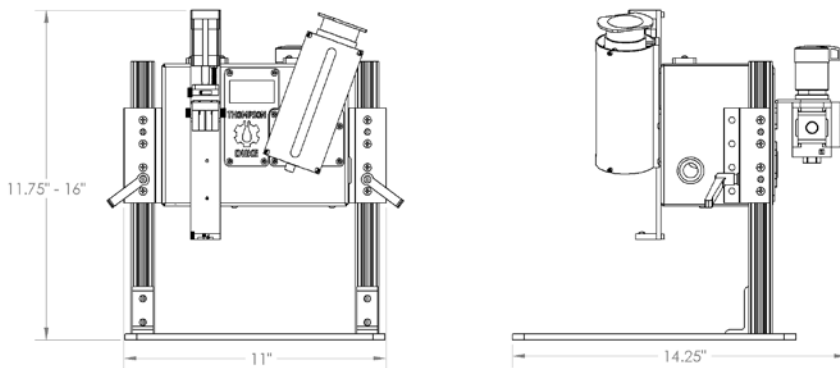
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## MCF1

### Semiautomatic Vaporizer Cartridge Filling Machine

The **MCF1** is a *Semiautomatic Vaporizer Cartridge Filling Machine* that can rapidly fill most personal vaporizer cartridges, dab jars, syringes, and more available on the market today. The **MCF1** is pedal operated, easy-to-use, and precisely dispenses up to 1mL of product per stroke. From topping off large batches to hand filling small batch top shelf distillate and everything in between, the **MCF1** is the perfect tool for the job.



- Quickly adjust the fill volume up to 1ml per stroke
- Less than 1 ml loss during product changeover
- Volumetric product delivery with adjustable flow rate
- Switch between oils in seconds
- Heated reservoir and delivery system support high viscosity oils without using a pressure pot
- The 140ml Oil Reservoir can be filled during operation
- Heated Oil Delivery System and Product Reservoir adjustable up to 200F (93C)
- Automatic digital temperature control
- Syringe fill adapter included
- Integrated pressure regulator and optional Air Filter
- Portable benchtop design with adjustable height
- Aluminum and Stainless Steel construction

Height	16" MAX
Width	11"
Depth	14.25"
Weight	16 LBS
Ambient Temperature	0-45 C (32-113 F)
Reservoir Capacity	140mL
Temperature Range of Reservoir	0-93 C (0 - 200 F)
Working Voltage	120VAC 60Hz Single Phase 3 Prong Outlet Required
Power Consumption	150W
Working Minimum Pneumatic Pressure	40 PSI*
Pneumatic Fitting Connection	Industrial ¼" Male
Volume Per Dispense	Up to 1mL
Fills Per Hour	350-1,000**
Max Cartridge/Syringe Height	6.5"+
Max Cartridge/Syringe Diameter	n/a
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.

\*\*Throughput dependent on cartridge type and product viscosity during continuous operation.