

Model 455

Disposable Fluid Path Valve Dispensing Systems

- Ideal for low- to medium-viscosity fluids
- Features a disposable fluid path that carries materials from the material reservoir to the dispense tip, preventing contamination and air entrapment
- Stroke adjustment for precise, micrometer control over dispensing volumes
- Valve design allows for easy product changeover with minimal cleanup
- Fluid never comes into direct contact with the valve, reducing valve maintenance and extending the life of the valve
- Over-pinch adjustment prevents damage to the tube, extending its life, and cutting down on necessary replacement
- Shot-to-shot consistency when used with the DVC-345 valve controller
- Compatible with most standard fluid packages and delivery systems
- Lightweight, easy-to-handle and mount in automated or bench-top systems

The Model 455 dispensing valve is a pneumatically operated, normally closed pinch valve with a disposable fluid path. It was designed to dispense a variety of low- to medium-viscosity materials with extreme precision. The valve's micrometer control feature allows users to precisely adjust the material flow, insuring that materials are dispensed consistently and accurately.

The Model 455's disposable fluid path carries materials from the material reservoir to the dispense tip. Fluids are sealed within the fluid path, preventing contact with the valve's inner components and ensuring a contaminate-free dispensing process. The fluid path is easy to replace and requires minimum clean-up, allowing for rapid material changeover. This valve can be supplied with fluid paths of varying materials and sizes for optimum material compatibility.

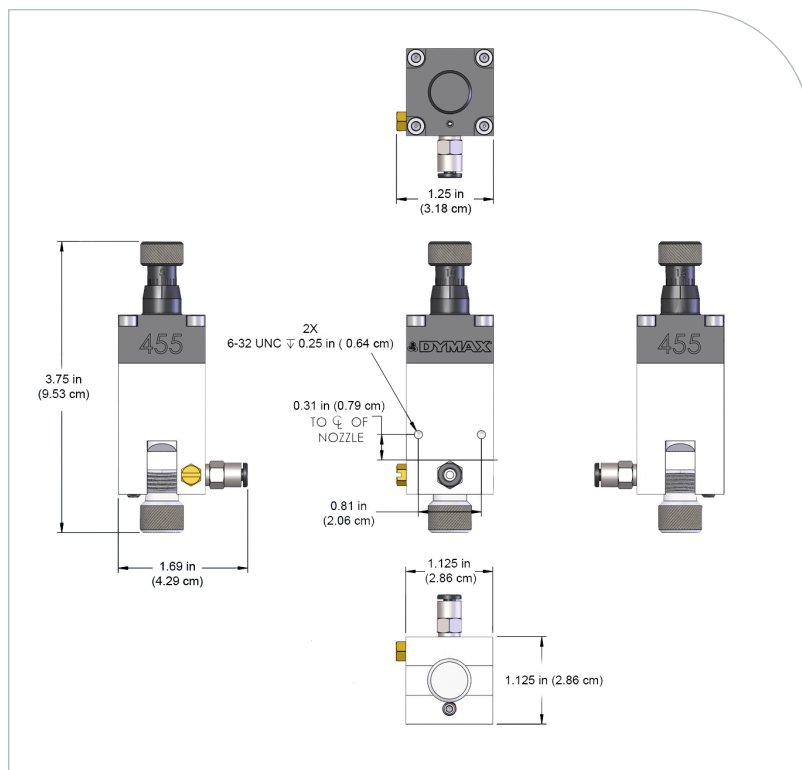
The dispensing valve can be integrated into an automated dispensing system or can be paired with the Dymax DVC-345 Digital Valve Controller and a material reservoir to create a bench-top dispensing system.



Specifications

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Valve Type	Pinch valve with disposable fluid path
Construction Materials	Anodized aluminum
Operating Air Pressure	60-90 psi [4.14 - 6.21 bar]
Activation	Valve controller or 3-way solenoid valve
Maximum Inlet Fluid Pressure	Tubing dependent; 100 psi [6.89] typical
Maximum Operating Temperature	350°F (177°C) w/PTFE tubing
Maximum Tubing Size	0.25" (6.35 mm) OD
Typical Flow Rates with Water	0.125" (3.17 mm) ID tubing- 30 mL/second 0.095" (2.41 mm) ID tubing- 15 mL/second
Dimensions (W x H x D)	3.75" x 1.125" x 1.125" [9.53 cm x 2.86 cm x 2.86 cm]
Weight	5.5 oz [146 g]
Unit Warranty	1 year from purchase date






Figure 1. Model 455 Dimensions



Available System Packages

Systems Include:

- Model 455 Disposable Fluid Path Valve
- Selected Reservoir for Fluid Package Used
- DVC-345 Digital Valve Controller
- Air Filter/Regulator - 0-100 psi (0-6.9 bar)
- Controller Air Line Kit
- Tube Assembly - 3/8 to 1/4 NPT
- Valve Stand and Mounting Assembly
- Reservoir Air Line Kit
- Dispense Tip Kit
- Air Precision Regulator - Includes three pressure gauges:
 - 0-30 psi (0-2 bar) for very low- to medium-viscosity materials
 - 0-60 psi (0-4.1 bar) for medium-viscosity materials
 - 0-100 psi (0-6.9 bar) for high-viscosity materials

System Part Numbers Based on Fluid Package Used						
Valve Only	Cartridge Drop-In			Large Bottle Drop-In	Pail Drop-In	
	6 oz [160 mL]	12 oz [300 mL]	20 oz [550 mL]	Up to 1 Gallon	Up to 15 Liters Straight or Taper	
						
Model 455 with 0.066" PTFE Tubing	T16029	T17415	T17417	T17419	T17421	T17738
Model 455 with 0.095" PTFE Tubing	T17552	T17739	T17740	T17741	T17742	T17743
Model 455 with 0.125" PE Tubing	T17555	T17744	T17745	T17746	T17747	T17748



6 oz (160 mL)



12 oz (300 mL)



20 oz (550 mL)

Cartridge Drop-In Reservoirs



Bottle Drop-In Reservoir



Pail Drop-In Reservoir

Spare Parts & Accessories

T11146	DVC-345 Digital Valve Controller
T16307	Filter Regulator
T16629	High Precision Regulator
T15279	Lab Stand - 24" [60.96 cm]
T15449	Lab Stand - 8" [20.32 cm] with Mounting Rods