xQR41 Series MicroDot Needle Valve Technology For precise fluid dispensing control

Featuring unique QR (Quick Release) technology, a 60% smaller form factor, and an exchangeable modular design for a new level of customization specific to your dispensing application needs.



xQR41 Series MicroDot[™] needle valve technology provides precise, consistent deposit control of assembly fluids in a smaller footprint and a unique modular design for optimal performance, value, and benefit.

The patented, tool-free QR clasp design allows for easy removal of the fluid body to replace wetted parts within seconds. Configure the xQR41 MicroDot valve with a BackPack[™], Mounting Block, or 90° low-profile air inlet actuation to quickly meet requirements specific to your applications.

Ideal for automated assembly processes, the smaller dimensions and form factor allow the xQR41 needle valve to dispense in tighter spaces and at more complex angles, creating new manufacturing opportunities. The flexibility to mount more valves per fixture plate provides greater output per batch.

Features

- 60% smaller form factor than conventional needle dispense valves.
- Precision dispensing control. Consistent microdots as small as 150 μm (0.15 mm) (0.006") diameter.
- Exchangeable, modular design.
- Zero dead fluid volume.
- Available with PEEK wetted parts for dispensing reactive adhesives.

Benefits

- Modular design provides infinite configurability for greater flexibility.
- QR (Quick Release) clasp allows fast, easy serviceability.
- Lightweight construction reduces TTA automation motor and belt wear.
- Less retained volume in fluid body reduces fluid waste.
- 360° rotational fluid body movement allows optimal positioning.





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Exchangeable modular design provides a new level of customization for your specific dispensing applications.





xQR41 Valve Series Specify P/N to Order

Standard xQR41	PEEK* xQR41	Description
7360817	7361761	xQR41 Valve with BackPack and Stroke Control Knob
7360824	7361763	xQR41 Valve with Mounting Block and Stroke Control Knob
7360821		xQR41 Valve with BackPack, Stroke Control Knob, and Bullet End Needle
7360823		xQR41 Valve with Mounting Block, Stroke Control Knob, and Bullet End Needle

Note: Use bullet end needle with smaller diameter 30 and 32/33 ga tips for more consistent microdot dispensing. xQR41 valves with PEEK wetted parts resist curing from reactive materials such as anaerobics.

Replacement Parts Partial listing of exchangeable components only. Consult EFD for full listing of available parts.

P/N Description Comment BackPack Actuator complete with air hose, 4 W solenoid, 7361396 xQR41 BackPack Actuator and cable assembly P/N Description Comment Kit, BackPack / mounting block / This kit also includes the mounting bolt, bullet solenoid cable, 7365888 air inlet fitting gray air inlet tubing and all associated O-rings. P/N Description Comment 7361398 90° Swivel Air Inlet Fitting 90° Swivel Air Inlet Fitting (order air hose separately) P/N Description Comment 7020671 M5 x 4.0 mm Barb Fitting For external cartridge or tank feed supply reservoirs P/N Description Comment Select for larger volume dispensing applications not requiring 7361400 Non-Adjustable Cap stroke adjustment P/N Description Comment 7361404 Barrel Support Bracket Select for additional 30/55/70cc syringe barrel support P/N Description Comment 7361411 90° Luer Inlet Fitting Select for direct syringe barrel feed connection P/N Description Comment 7361775 xQR41 PEEK Fluid Body Kit Designed to resist curing from reactive adhesives such as anaerobics (kit includes fluid body, fluid inlet fittings, and tubing) 7361998 PEEK needle-and-piston assembly, bullet end



Specifications

xQR41 Series Valve

Item	Specifications			
Size	66 mm length x 23.7 mm diameter (2.60 x 0.930")			
Weight	Valve with standard fluid body Valve only: 141 g (5.0 oz) With BackPack actuator: 196 g (6.9 oz) With mounting block: 166 g (5.9 oz)			
	Valve with PEEK wetted parts Valve only: 115 g (4.1 oz) With BackPack actuator: 170 g (6.0 oz) With mounting block: 140 g (4.9 oz)			
Actuating air pressure required	4.8–6.2 bar (70–90 psi)			
Maximum fluid pressure	7.0 bar (100 psi)			
Fluid inlet	M5			
Fluid outlet	Luer taper with retaining nut			
Mounting	M4 (BackPack valve actuator or mounting block)			
Cycle rate	Exceeds 400 per minute			
Air cylinder body	303 stainless steel			
Fluid body	303 stainless steel or PEEK			
Piston	303 stainless steel			
Needle	303 stainless steel or PEEK			
Tip retaining nut	Hard-coated aluminum			
SafetyLok [™] collar	Hard-coated anodized aluminum			
Maximum operating temperature	80° C (176° F)			
Warranty	1 year, limited			
US Patent No. 9,816,849 for QR clasp				



Select Your Controller

See the Valve Selection Guide for the valves compatible with this controller — <u>www.nordsonefd.com/ValveGuide</u>.

BackPack Valve Actuator

Item	Specifications
Size	26.2w x 26.7н x 18.4应 mm (1.03w x 1.05н x 0.72应")
Weight	Valve actuator only: 53.8 g (1.90 oz)
Actuating air pressure required	4.8–6.2 bar (70–90 psi)
Electrical input	24 VDC, 4 W
Minimum actuation time	5 ms
Maximum actuation time	Continuous ON
Operating frequency	60-80Hz
Housing	Anodized aluminum
Mounting bolt	Type 303 stainless steel

Mounting Block Actuating Air Inlet

Item	Specifications
Size	18.4w x 21.6н x 21.4p mm (0.72w x 0.85н x 0.84p")
Weight	Mounting block only: 25.0 g (0.90 oz)
Housing	Anodized aluminum
Mounting bolt	Type 303 stainless steel



For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to www.nordsonefd.com.

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