

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 patent pending, 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.

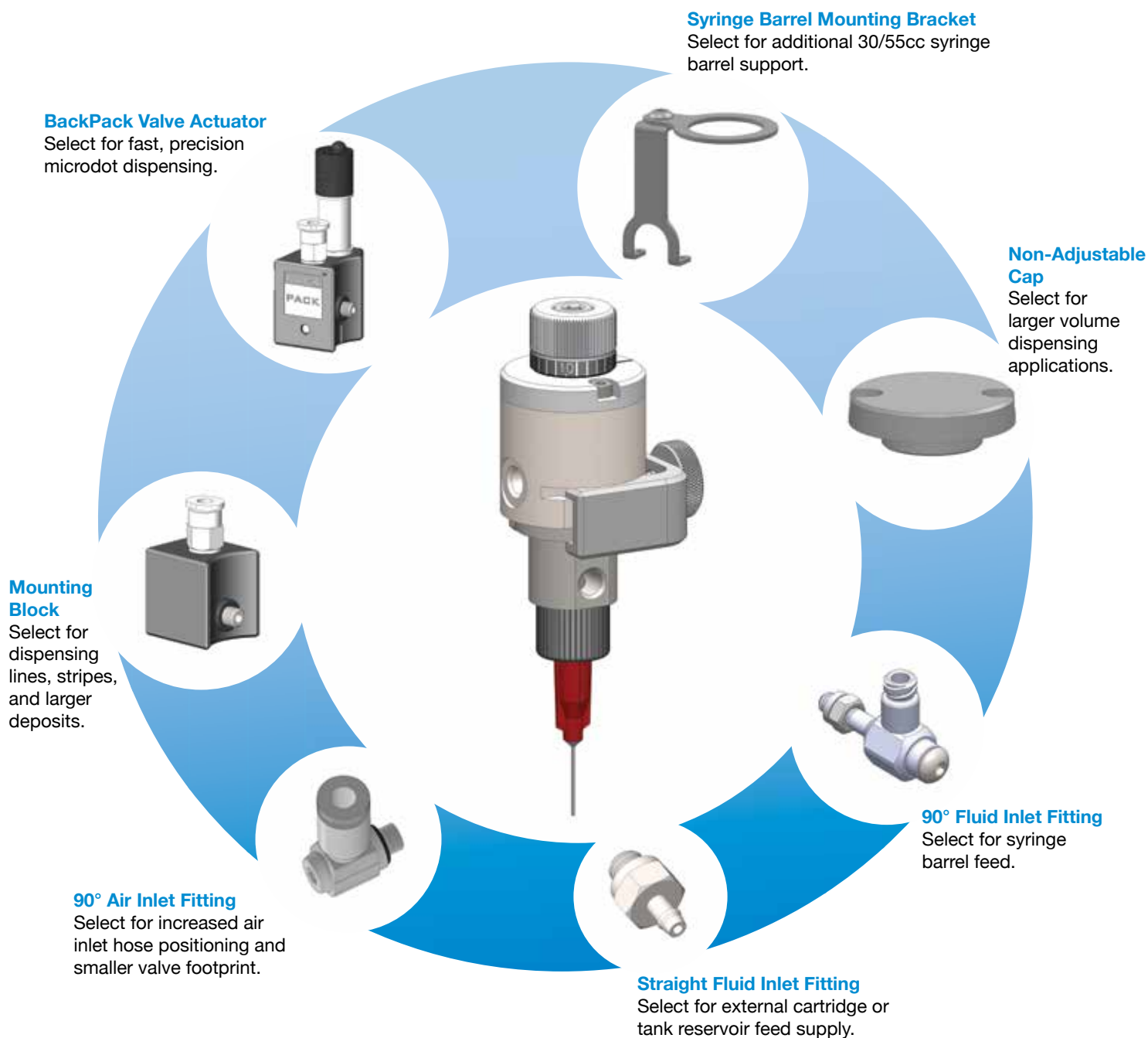
Benefits

- 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.



xQR41 Series MicroDot™ Needle Valve Technology

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



xQR41 Valve Series

Specify P/N to Order

P/N	Comment
7360817	xQR41 Valve with BackPack and Stroke Control Knob
7360819	xQR41 Valve with BackPack and Non-Adjusting Cap
7360824	xQR41 Valve with Mounting Block and Stroke Control Knob
7360825	xQR41 Valve with Mounting Block and Non-Adjusting Cap
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.
Not recommended for use with 22, 23, or 25 ga general purpose tips.

Replacement Parts

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



xQR41 BackPack Actuator

P/N	Description	Comment
7361396	KIT V xQR41 BACKPACK	BackPack Actuator complete with air hose, 4 W solenoid, and cable assembly



xQR41 Mounting Block

P/N	Description	Comment
7361397	KIT V xQR41 MOUNTING BLOCK	Mounting Block complete with 4 mm push-in fitting and air hose



90° Swivel Air Inlet Fitting

P/N	Description	Comment
7361398	KIT V xQR41 AIR ELB	90° Swivel Air Inlet Fitting (order air hose separately)



M5 x 4.0 mm Barb

P/N	Description	Comment
7020671	FITTING – M5 X 1/8 ID BARB SS	For external cartridge or tank feed supply reservoirs



Non-Adjustable Cap

P/N	Description	Comment
7361400	KIT V xQR41 CAP-NON ADJUST	Select for larger volume dispensing applications not requiring stroke adjustment



Barrel Support Bracket

P/N	Description	Comment
7361404	KIT V xQR41 BARREL SUPPORT	Select for additional 30/55cc syringe barrel support



90° Luer Inlet Fitting

P/N	Description	Comment
7361411	KIT V xQR41 FITTING LUER ELB	Select for direct syringe barrel feed connection

Specifications

xQR41 Series Valve

Item	Specifications
Size	66 mm length x 23.7 mm diameter (2.60" x 0.930")
Weight	Valve only: 141.35 g (5.0 oz) Valve with Backpack actuator: 196.10 g (6.90 oz) Valve with mounting block: 166.35 g (5.90 oz)
Maximum operating temperature	80° C (176° F)
Actuating air pressure required	4.8–6.2 bar (70–90 psi)
Maximum fluid pressure	6.9 bar (100 psi)
Fluid inlet thread	M5
Fluid outlet	Luer taper with retaining nut
Mounting	M4 (BackPack valve actuator or mounting block)
Cycle rate	Exceeds 400 per minute
xQR41 valve material	Air actuator body: 303 stainless steel Fluid body: 303 stainless steel Piston: 303 stainless steel Needle: Nickel- / PTFE-coated 17/4 stainless steel Retaining nut: Hard-coated aluminum

BackPack Valve Actuator

Item	Specifications
Size	26.2W x 26.7H x 18.4D mm (1.03"W x 1.05"H x 0.72"D)
Weight	Valve actuator only: 53.8 g (1.90 oz) Installed on xQR41 valve: 196.10 g (6.90 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
Cycling frequency	60–80 Hz
BackPack material	Housing: anodized aluminum Mounting bolt material: Type 303 stainless steel O-rings: Buna-N

Mounting Block Actuating Air Inlet

Item	Specifications
Size	18.4 mm width x 21.6 mm height x 21.4 mm length (0.72" x 0.85" x 0.84")
Weight	Mounting block only: 25.0 g (0.90 oz) Installed on xQR41 valve: 166.35 g (5.90 oz)
Mounting block material	Housing: anodized aluminum Mounting bolt material: Type 303 stainless steel O-rings: Buna-N

NOTE: Specifications and technical details are subject to engineering changes without prior notification.



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