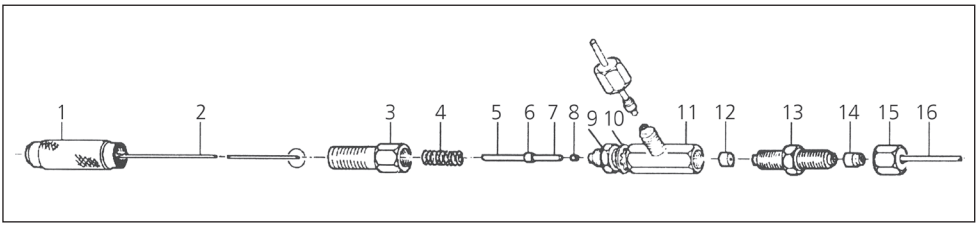
SGE Analytical Science

BMCV-A and BMCV-1

Micro Control Valves



IMPORTANT

Turn off all flows before installing the valve or when replacing parts. The BMCV-A and the BMCV-1 are designed to accept 1/16" OD flow lines and the base connecting line(16) must be over 0.5 mm ID.

PART NO. 1236281 and 1236282

Finer Control

To obtain finer control at low flows (10-15 mL/min) the following procedure is necessary:

(i) Connect a test gas at, 200 kPa (30 psi) to side arm.

(ii) Screw down control knob to shut-off point then open one half of one turn. If flow is detected tighten the union (13) further until flow stops.

Vespel® Seat (12) Replacement

Remove 1/16" line and disconnect double ended union (13) then fully tighten knob (1) onto assembly (3). This action pushes the Vespel® seat from a support shoulder inside the valve body (11).

To protect needle, unwind the control knob (1) to the extremity of thread on the assembly (3).

The Vespel® seat (12) should then dislodge from the valve body (11). If not remove assembly (3) from body (11) and dislodge seat using valve seat remover tool. Insert tool through male threaded section of body (11) to dislodge seat.

To fit seat reconnect assembly (3) on valve body (11) and wind control knob (1) down so that needle (2) protrudes beyond the end of the valve body. Then place seat (12) on needle (2). Invert valve and again unwind control knob approximately five turns to allow seat to fall into position. Reconnect double ended union (13) and firmly tighten.

Install PSR/16 (14), connect 1/16" line (16) and screw on nut (15).

PTFE Seal (8) Replacement

Two spare seals are provided in the unlikely event replacement is required. The seal is simply a small PTFE tube 1.6 mm OD x 1mm ID x 2.6 mm long and is located inside the valve body (11). The method for replacement is as follows: Unwind the control knob (1) to the extremity of thread on assembly (3).

Unscrew assembly (3) and withdraw thrust tube (5) and compression spring (4). Remove seal (8) with the tool provided. Place new seal into top of male thread and push into place with thrust tube (7).

The shorter length beneath the stop (6) on the thrust tube should be pushed into the valve body and when the thrust touches the seal the stop should be a nominal 2 mm above the face of the male thread. Place compression spring (4) onto other exposed (longer) end (5) of the thrust tube. Thread needle (2) into thrust tube and tighten assembly (3). Reset control knob.

Packing List for BMCV-A Valve: 1236281

Part No.	Description	Qty
-	BMCV-A Valve	1
072650	PSR/16 1/16" PTFE Sealing Rings PK5	1
123688	PTFE seals PK2	2
1236101	Seal-seat remover tool	1
123681	VSV-6 Valve Seat	1

Packing List for BMCV-1 Valve: 1236282

Part No.	Description	Qty
-	BMCV-1 Valve	1
072650	PSR/16 1/16" PTFE Sealing Rings PK5	1
123688	PTFE seals PK2	2
1236101	Seal-seat remover tool	1
123681	VSV-6 Valve Seat	1

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