



Metering Bellows Shut-Off Valve Vernier Metering Bellows Shut-Off Valve



Features

Body design :

- Various Fitting configuration.
- Standard Moduline dimensions.
- All tube connection are butt welded.
- Metering position lock system for the Vernier Metering Valve.

Materials :

- Body and Bellows in 316 L Stainless Steel.
- Square gasket in PTCFE.
- Seat in PCTFE (Kefl.F \square).

Verification and Packaging

- 100% inspection with boroscope.
- Vacuum sealed double packaging with N2 purge.
- Individual Calibration Certificate.
- Plastic Plugs on fitting.

Ratings

Number metering turn 16
 Number metering turn for the Vernier Valve..... 10
 Dead volume :2.0 cm³ (0.12 in³).

Temperature

Gas Temperature :-40°C to 150°C.
 Ambient Temperature :-20°C to 90°C.

Pressure rating

Vacuum to 10 bar (145 psi).

Helium Leak Rate :

Individually tested less than 2.10⁻⁹ atm cm³/s.

Accuracy

Accuracy for the Vernier Valve..... 3 digits

Repeatability

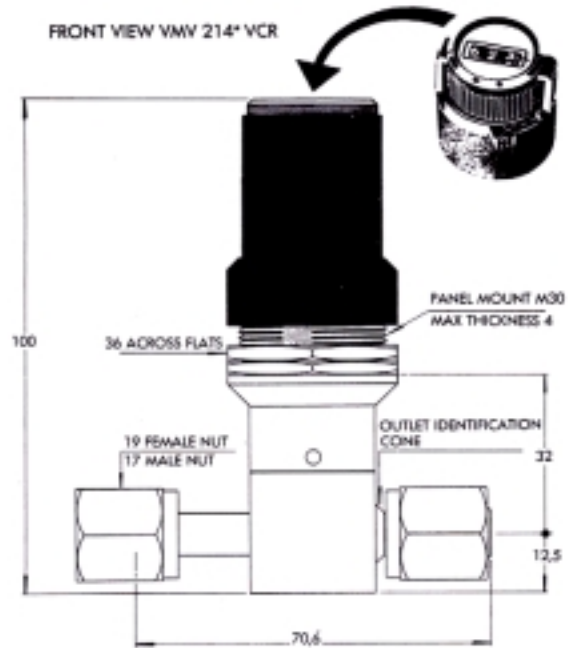
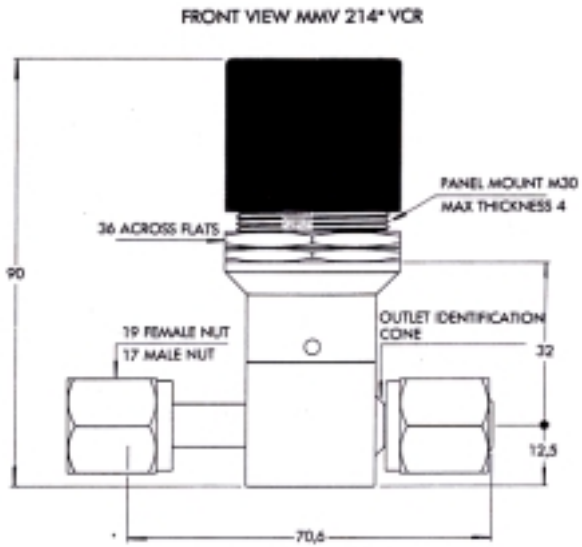
Repeatability for the Vernier Valve +/- 1% F.S.

Table of Dimension (mm)

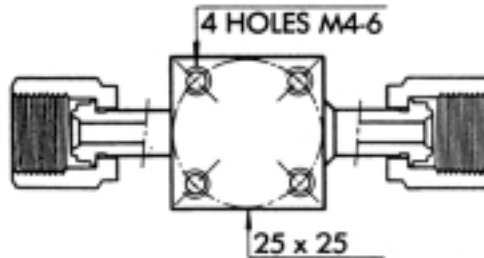
Metering and Vernier Metering Bellows Shut-Off Valve

METERING VALVE

VERNIER METERING VALVE



MOUNTING DIMENSIONS



Flow Range

Needle nr	Diameter Orifice (mm)
1	1.0
2	1.0
3	1.0
4	2.4
5	2.4
6	2.4
7	2.4
8	3.0

Max Flow in L/min (N2 at 21°C - Pout=Atm)		
P 0.3 Atm	P 0.5 Atm	P 1 Atm
0.150	0.200	0.300
0.315	0.400	0.600
1.00	1.30	1.90
1.85	2.40	3.30
3.5	4.80	6.30
4.5	6.00	8.60
9.2	11.90	15.50
22.1	29.60	42.20



Metering & Vernier Metering Bellows Shut-Off Valve Part Number Description

Q [t, t] [s, s] [f, f]

[t, t]- **Valve Type**

- [43] for Metering Valve
- [44] for Vernier Metering Valve

[s, s]- **Needle Size**

Needle Size	Part Number	Max. Flow in L/min (Pout = Atm)		
		P = 0.3 Atm	P = 0.5 Atm	P = 1 Atm
1	45	0.150	0.200	0.300
2	46	0.315	0.400	0.600
3	47	1.000	1.300	1.900
4	48	1.850	2.400	3.300
5	49	3.500	4.800	6.300
6	50	4.500	6.000	8.600
7	51	9.200	11.900	15.50
8	52	22.100	29.600	42.200

[f, f]- **Fittings Type**

- [11] for 1/4" VCR Modu. C
- [12] for 1/4" VCR Female / Female
- [14] for Swagelok 1/4"
- [15] for Swagelok 6mm
- [16] for Welded (on request)