



# Mass Flow Controller AFC 50 & Meter AFM 55

## Features

The traditional analog Qualiflow AFC 50 and AFM 55 with elastomeric seals and magnetic valve :

- Unique fast and reliable horizontal magnetic valve
- Low pressure drop option for TEOS SDC, TiCl4 etc... Using large sensor diameter, gives very low pressure drop and defeats contamination and clogging.
- Perfect flow splitting through special bypass design, gives optimal linearity and accuracy.
- Good surface finish for ultra clean operation
- Normally open and normally closed versions available with color identification (green for NO, red for NC ).
- Gasketed endplates ; no threading.
- Pulse command.



## Ratings

Flow Range (equivalent N2) :..... from 10 sccm to 30 slm  
 Control Range :..... between 2 and 100% F.S.  
 Valve Type :..... Electromagnetic  
 Valve Rest Position :..... Normally Open or Closed  
 Accuracy :..... +/- 1% of F.S.  
 Linearity :..... +/- 0.5% of F.S.  
 Repeatability :..... +/- 0.2% of F.S.  
 Step Response Time :..... <= 4 sec. typical (SEMI E17-91)  
 Temperature Range :..... between 5 and 50°C  
 Up to 80°C with separated electronic option  
 Temperature Coefficient :..... < 0.1% F.S. /°C  
 Maximum Inlet Pressure :..... 10 bar  
 Minimum Differential Pressure :..... 0.5 bar  
 30 mbar minimum with low DP option  
 Maximum Differential Pressure :..... 3 bar  
 Pressure Coefficient :..... < 0.1% F.S./bar  
 Wetted Materials :..... 316 L Stainless steel, Kel-F, seals material  
 Surface finish :..... 0,4µ (16 µ inch) Ra max  
 Leak Integrity :..... < 2.10<sup>-8</sup> scc/sec (He)  
 Standard Seals :..... Viton, Neoprene  
 Fittings :..... 1/4" VCR, Swagelok

## Power Input Requirement :

Mass Flow Controller :..... +/- 15 VDC, 150 mA  
 Mass Flow Meter :..... +/- 15 VDC, 25 mA  
 Set Point Signal :..... from 0 to 5 VDC  
 Flow Output Signal :..... from 0 to 5 VDC  
 Electrical Connector :..... Sub-D 15 pins Male

## Options :

- Separated electronics
- External Readout
- Kalrez seals
- Low differential pressure
- Card Edge adaptor
- Compatible with AFC261
- Other on request

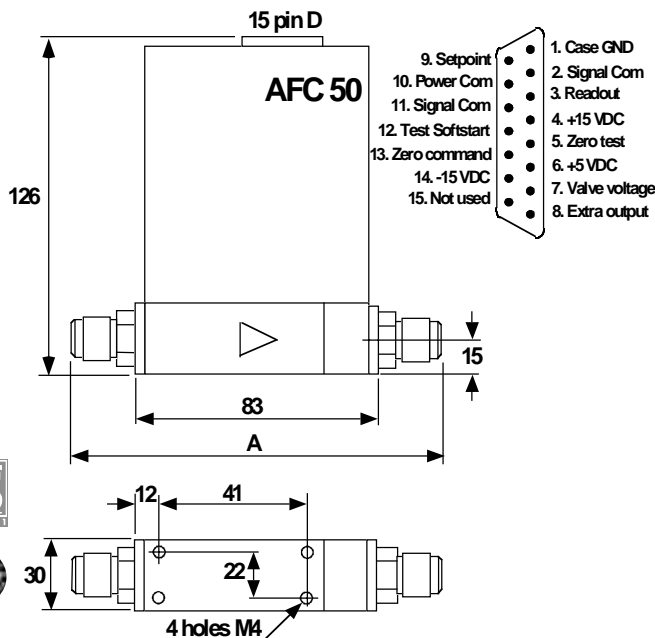


Table of Dimension ( mm )

	VCR 1/4" MM	SWAGelok 1/4"	MODULINE VCR 1/4" FM
A (mm)	124	126,6 (inc Nuts)	141,6

## Gas Process Number

Symbol	Gas Name	Number	Density SEMI E52-0298	Sp. Heat [ g / l ]	C [ cal/g/°C ]
	Air	8	1.2929	0.2401	1.000
NH3	Ammonia	29	0.7710	0.519	0.68
Ar	Argon	4	1.7842	0.1246	1.453
AsH3	Arsine	35	3.481	0.1178	0.666
BCl3	Boron Trichloride	70	5.26	0.130	0.40
CO	Carbon Monoxide	9	1.2500	0.495	1.000
CCl4	Carbon Tetrafluoride	101	6.86	0.141	0.309
Cl2	Chlorine	19	3.209	0.116	0.83
B2H6	Dibirane	58	1.24	0.495	0.44
SiH2Cl2	Dichlorosilane	67	4.54	0.141	0.43
CHF3	Fluoroform	49	3.125	0.173	0.506
CCl2F2	Freon-12	84	5.5	0.149	0.34
CF4	Freon-14	63	3.96	0.167	0.41
GeH4	Germane	43	3.423	0.138	0.58
He	Helium	1	0.1788	1.242	1.454
H2	Hydrogen	7	0.0899	3.400	1.016
HCl	Hydrogen Chloride	11	1.635	0.1937	0.981
C2F6	Hexafluoroethane	118	6.16	0.185	0.24
Kr	Krypton	5	3.73	0.0596	1.45
CH4	Methane	28	0.7166	0.528	0.722
CH3SiCl3	Methyltrichlorosilane	183	6.670	0.164	0.250
N2	Nitrogen	13	1.2503	0.2484	1.000
NO2	Nitrogen Dioxide	26	6.675	0.194	0.41
NF3	Nitrogen Trifluoride	53	3.173	0.178	0.434
N2O	Nitrous Oxide	27	1.98	0.206	0.206
O2	Oxygen	15	1.429	0.2183	0.996
O3	Ozone	30			
PH3	Phosphine	31	1.523	0.2607	0.688
C3H8	Propane	89	1.98	0.392	0.35
SiH4	Silane	39	1.438	0.3188	0.596
SiF4	Silicon Tetrafluoride	88	4.68	0.168	0.35
Si2H6	Disilane	97			
SO2	Sulphur Dioxide	32	2.91	0.149	0.67
SF6	Sulphur Hexafluoride	110	6.5	0.1590	0.27
TiCl4	Titanium Tetrachloride	114	8.465	0.22	0.30
C4F8	Octafluorocyclohexane	129			
SiHCl3	Trichlorosilane	147	6.047	0.130	0.348