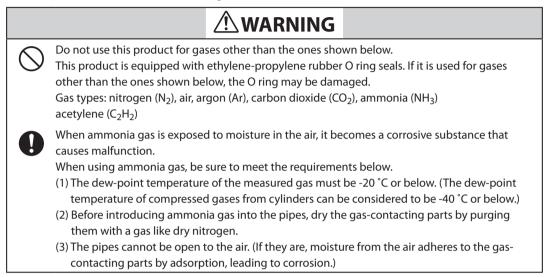
# Digital Mass Flow Controller Further Notes on Semi-Standard Gas Models

This document provides further notes on Digital Mass Flow Controller semi-standard gas models. Use this document together with the user's manual.

All information in this document supersedes the information in the user's manual.



#### How to use this product

If using this product for ammonia or acetylene gas, set the conversion factor (*F*, *F*) as follows.

- 1. In the function setup, change the setting of  $\zeta i \mathcal{B}$  (Gas type selection) to  $\mathcal{D}$  (Conversion factor for each gas type set by the user).
- 2. In the parameter setup, change the user-specified conversion factor (**[**, **F**, **)** for the desired gas type and model according to the table below.

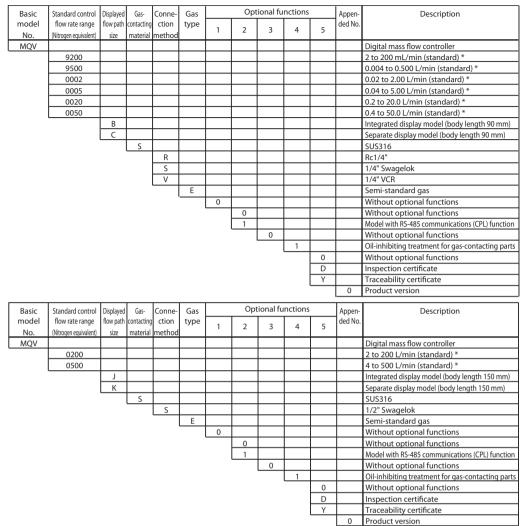
					[Unit: mL/min (sta	nuaru) ior	NQV9200,	L/min (stanuaru) i	brothers
	MQV9200		MQV9500			MQV0002			
Gas type	<i>C.F.</i> *	Control flow rate range	Resolu- tion	ζ.F. *	Control flow rate range	Resolu- tion	ζ.F. *	Control flow rate range	Resolu- tion
Acetylene (C2H2)	0.560	1.0 to 120.0	0.5	0.560	0.003 to 0.300	0.001	0.560	0.010 to 1.200	0.005
Ammonia (NH3)	0.760	2 to 160	1	0.760	0.004 to 0.400	0.002	0.760	0.02 to 1.60	0.01
	MQV0005		MQV0020			MQV0050B/C			
Gas type	ζ. <i>Ϝ.</i> *	Control flow rate range	Resolu- tion	ζ.F. *	Control flow rate range	Resolu- tion	(.F. *	Control flow rate range	Resolu- tion
Acetylene (C2H2)	0.560	0.03 to 3.00	0.01	0.560	0.10 to 12.00	0.05	0.560	0.3 to 30.0	0.1
Ammonia (NH3)	0.760	0.04 to 4.00	0.02	0.760	0.2 to 16.0	0.1	0.760	0.4 to 40.0	0.2
	MQV0200		MQV0500						
Gas type	ζ.F. *	Control flow rate range	Resolu- tion	(.F. *	Control flow rate range	Resolu- tion			
Acetylene (C2H2)	0.560	1.0 to 120.0	0.5	0.610	4 to 400	2			
Ammonia (NH3)	0.760	2 to 160	1	0.770	4 to 400	2			

 Since conversion factors for acetylene and ammonia are simply presumed values based on gas properties, the degree of assured accuracy given in the specifications is not applicable to these gases. However, repeatability is the same as that in the specifications.

If flow rate accuracy is necessary, verify the conversion factor by testing before use.

## Handling Precautions

• For details on function setup and parameter setup, see Chapter 5, ADVANCED OPERATION, in the user's manual.



### ■ Model selection guide (Semi-standard gas models)

\* The notations mL/min (standard) and L/min (standard) indicate the volume flow rate per minute converted to 20 °C, 101.325 kPa (1 atm).

In addition, in function setup 🕻 - 49, the reference temperature can be changed to 0, 25, or 35 °C.

Listed flow ranges are of air/nitrogen.

Refer to the table on page 1 for the flow range of each gas.

#### Specifications (Differences with standard models)

Other than the items shown below, the specifications are the same as those of standard models. See Chapter 7, SPECIFICATIONS, in the user's manual.

	Semi-standard gas models	Standard models
Gas type	Nitrogen (N <sub>2</sub> ), air, argon (Ar), carbon dioxide (CO <sub>2</sub> ), acetylene (C <sub>2</sub> H <sub>2</sub> ), ammonia(NH <sub>3</sub> ) (These gases must be dry gases whose dew-point temperature is -20 °C or below.)	Nitrogen, air, oxygen, argon, carbon dioxide (CO <sub>2</sub> ), natural gas 13A (LNG), 100% meth- ane, 100% propane 100% butane
Gas-contacting material	SUS316, Teflon, ethylene propylene methylene linkage	SUS316, Teflon, Fluorine-containing rubber
Swagelok fitting No.	<ol> <li>MQV9200/9500/0002/0005/0020/0050: SS-400-1-6STAUSC11</li> <li>MQV0200/0500: SS-810-1-8STAUSC11</li> </ol>	<ul> <li>(1) MQV9200/9500/0002/0005/0020/0050: SS-400-1-6STSC11</li> <li>(2) MQV0200/0500: SS-810-1-8STSC11</li> </ul>
VCR fitting No.	MQV9200/9500/0002/0005/0020/0050: SS-4-VCR-1-00032-EP-SC11	MQV9200/9500/0002/0005/0020/0050: SS-4-VCR-1-00032SC11