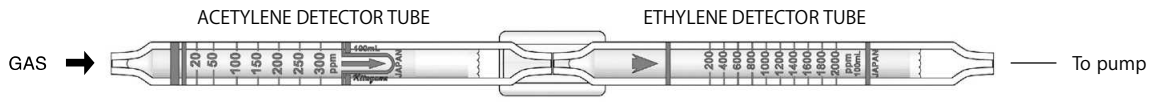
Tube No.
280S

ACETYLENE • ETHYLENE



1. PERFORMANCE

1) Measuring range：
- Acetylene 20-300 ppm
- Ethylene 200-2000 ppm
- Number of pump strokes 1（100mL）

2) Sampling time ： 3 minutes / 1 pump stroke with a flow control orifice

3) Detectable limit：
- Acetylene 0.1 ppm
- Ethylene 1 ppm

4) Shelf life ： 1 year

5) Operating temperature ： 10～40℃

6) Temperature compensation：
- Acetylene No temperature correction is necessary
- Ethylene Necessary (See "TEMPERATURE CORRECTION TABLE")

7) Reading ： Direct reading from the scale calibrated by 1 pump stroke

8) Colour change：
- Acetylene Yellow → Dark brown
- Ethylene Pale yellow → Blue

2. RELATIVE STANDARD DEVIATION

RSD-low：10%　RSD-mid.：10%　RSD-high：10%

3. CHEMICAL REACTION

Acetylene detector tube：$HC \equiv CH + K_2Pd(SO_3)_2 \rightarrow Pd$

Ethylene detector tube：$H_2C = CH_2 + PdSO_4 + (NH_4)_2MoO_4 \rightarrow Mo_3O_8$

4. CALIBRATION OF THE TUBE

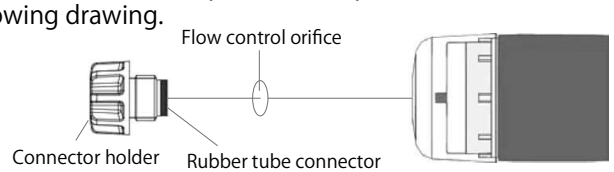
STANDARD GAS CYLINDER METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Acetylene detector tube			
Carbon monoxide		10	Higher readings are given.
Hydrogen		5000	〃
Ethylene		2000	〃
Ethylene detector tube			
Carbon monoxide		1350	Higher readings are given.
Acetylene		370	〃
Propylene	Blue stain is produced.	—	〃

6. NOTE

A flow control orifice(optional) is required to attach as shown in the following drawing.



TEMPERATURE CORRECTION TABLE FOR ETHYLENE

Tube Readings (ppm)	Corrected Concentration (%)		
	10℃ (50℉)	20℃ (68℉)	30～40℃ (86～104℉)
2000	1550	2000	———
1800	1400	1800	2050
1600	1300	1600	1900
1400	1150	1400	1600
1200	1000	1200	1400
1000	900	1000	1200
800	750	800	950
600	600	600	700