

Certificate No. 24PTP\_0103240002

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### **Certificate of Calibration**

EQUIPMENT : VENTILATORS, INTENSIVE CARE

ID CODE : PTP00279

MANUFACTURER : CAREFUSION

MODEL : VELA

SERIAL No. : BFT01189

LOCATION : I.C.U

SUBMITTED BY : PHYATHAI PHAHOLYOTHIN HOSPITAL

670/1 Phaholyothin Road, Samsen Nai, Phaya Thai, Bangkok 10400

Tel: 02-271-7000 Fax: -

CALIBRATED DATE : 21 MARCH 2024

ISSUE DATE : 3 MAY 2024

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PEERANUT SIRISOMBOON

Performed by : \_\_\_\_\_ Approved by : \_\_\_\_

PHUWASIN YIWKIM

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### **CONDITION OF THIS RESULT OF TEST**

#### 1. REFERENCE STANDARD INSTRUMENT:

MASTERMANUFACTURERMODELSERIAL NO.CERTIFICATE NO.DUE DATEGas Flow AnalyzerFluke BiomedicalVT650606972523MD115827 Aug 2024

#### 2. THIS CERTIFICATION IS TRACEABLE TO:

- Technology Promotion Association (Thai-Japan)

# 3. THIS RESULT OF TEST WAS FOUND ACCURATE AS SHOW ON DATE AND PLACE OF TEST ONLY



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# **Calibration Report**

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DATE OF CALIBRATION : 21 MARCH 2024

ENVIRONMENT : TEMPERATURE 25 °C

RELATIVE HUMIDITY 50 %

### **PROCEDURE USED:**

This instrument was calibration by comparison with standard

### **MEASURMENT RESULT:**

/	Without Adjustment		Before Adjustment		After Adjustment
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TIDAL VOLUME					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(mL)	(mL)	(mL)	(%)	(mL)	
400	382.65	-17.35	-4.34	± 14.4057	
600	569.55	-30.45	-5.08	± 21.7222	
800	775.45	-24.55	-3.07	± 29.2577	

BREATH RATE					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(BPM)	(BPM)	(BPM)	(%)	(BPM)	
30	30.00	0.00	0.00	± 0.3464	
20	20.00	0.00	0.00	± 0.2309	
15	15.00	0.00	0.00	± 0.1732	

I:E RATIO					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
((1:x))	((1:x))	((1:x))	(%)	((1:x))	
1	1.01	0.01	1.00	± 0.0231	
2	1.97	-0.03	-1.50	± 0.0462	
3	2.94	-0.06	-2.00	± 0.0693	

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# **Calibration Report**

EQUIPMENT : VENTILATORS, INTENSIVE CARE

ID CODE : PTP00279 SERIAL No. : BFT01189

PIP					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(cmH <sub>2</sub> O)	(cmH <sub>2</sub> O)	(cmH <sub>2</sub> O)	(%)	(cmH <sub>2</sub> O)	
20	19.04	-0.96	-4.80	± 0.3200	
30	28.52	-1.48	-4.93	± 0.3200	
40	38.29	-1.71	-4.28	± 0.3200	

PEEP					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(cmH2O)	(cmH2O)	(cmH2O)	(%)	(cmH2O)	
5	5.36	0.36	7.20	± 0.0577	
10	9.88	-0.12	-1.20	± 0.1155	
15	14.92	-0.08	-0.53	± 0.1732	

% OXYGEN					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(%O <sub>2</sub> )	(%O <sub>2</sub> )	$(\%O_2)$	(%)	(%O <sub>2</sub> )	
21	21.48	0.48	2.26	± 0.4876	
60	60.78	0.77	1.29	± 1.3866	
100	101.00	1.00	1.00	± 2.3095	

### **UUC\***: Unit Under Calibration

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95%

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