

# BM7VET PRO



The BM7 Vet Pro encapsulates over 20 years of our intricate research, development, and design dedicated to serve Animal Health practitioners around the globe. Our core values of functional simplicity, elite performance, and uncompromising value are carefully engineered into what we believe to be the most trusted brand in Veterinary multiparameter monitors on the market today. Because everything we do focuses on the needs and efficiency of the clinic, we include premium data management software (BT-Link and BT-Link Mobile) with all of our monitors at no additional cost.

# **Superior Advantages**

- ► ECG, SpO<sub>2</sub>, NIBP, Respiration, 2 Temperatures (Option: EtCO<sub>2</sub>, Dual Gas, Anesthetic Gas/O<sub>2</sub>, 2 IBP)
- ► 12.1"color TFT touch screen with 6 wave forms (1024x768 pixels)
- ► Individual sweep speed setting for each parameter
- ▶ 168 full hours trend data are stored
- ► Multiple display modes for ease of viewing
- ► Screen freeze ON/OFF
- Extendible Parameters (Option)
  - Mainstream / Sidestream EtCO<sub>2</sub>
  - Mainstream / Sidestream Anesthetic Gas/02
  - Dual Gas (EtCO<sub>2</sub> and anesthetic gas monitoring)

- ► Enhanced data management & connectivity
  - · Easy network connectivity, supports wireless LAN
  - B2B, Up to 8 BM7Vet Pro can be controlled by one of the networked BM Pro Series
  - BT-LINK Pro and BT-LINK Mobile for real-time monitoring and data recording
  - USB memory storage
- ► Advanced Cardiac Parameters
  - · 48 hours of full disclosure waveforms provided
  - ST level, PVC count real-time display
  - 13 kinds of arrhythmia analysis

#### ▶ Versatile

- Li-ion battery with longer lifetime (Up to 2hrs for continuous operation / 4hrs using optional battery)
- External HDMI output for large screen

## **SPECIFICATIONS**

### General

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Display, Resolution	12.1" color TFT, LCD, 1024x768 pixels
Dimension, Weight	322(W)x250(H)x224.8(D) mm, Approx. 4.5kg
Trace	6 waveforms: 2*ECG, SpO <sub>2</sub> , RR or EtCO <sub>2</sub> or MGAS, 2*IBP
	Sweep speed: 6.25, 12.5, 25, 50 mm/sec
Indicators	Categorized alarms (3 priority levels)
	Visual alarm lamp handle
	QRS beep & SpO <sub>2</sub> pulse beep
	Percent(%) SpO <sub>2</sub> pitch tone
	Battery status, external power LED
	Touch screen, rotary knob
Interfaces	Power supply : AC 100-240V(50/60Hz)
	DC input connector : 18VDC, 2.8A
	LAN digital output for transferring data
	Nurse call system connection
	0.3A at 125 VAC, 1A at 24 VDC
	External HDMI monitor connection
	USB barcode reader
	USB memory data storage / Software Upgrade
Battery	Rechargeable Li-ion battery,
•	2 hours for continuous operation
	(Option: using additional battery total of 4 hours)
Thermal Printer (option)	Speed: 25,50mm/sec, paper width: 58mm
Data Storage	168hours trends, 20cases of 10sec alarm waveform
	English, French, Spanish, Italian, German, Chinese,
Language	Russian, Czech, Polish, Turkish, Romanian, Portuguese
Language	Bulgarian, Hungarian, Korean, Japanese, Greek
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#### **Accessory**

NIBP extension tube(3m) 1ea NIBP vet cuff neonate disposable #1-#5 1set NIBP vet cuff infant reusable 1ea SpO₂ extension cable(2m) 1ea Esophageal ECG probe with temperature 1ea Extension cable for esophageal probe 1ea Transflectance SpO₂ probe 1ea Temperature probe (rectal/esophageal) 1ea Reusable multisite SpO₂ probe 1ea DC adapter (18 VDC, 2.5A) 1set BT-Link Pro (automated record keeping software) 1ea  Optional Accessories  Optional Accessories  IBP reusable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO₂ airway adapter set Sidestream EtCO₂ airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories (water Trap, patient sample line/adapter, mount)	Standard Accessories	3 lead vet ECG cable	1ea
NIBP vet cuff infant reusable 1ea SpO₂ extension cable(2m) 1ea Esophageal ECG probe with temperature 1ea Extension cable for esophageal probe 1ea Transflectance SpO₂ probe 1ea Temperature probe (rectal/esophageal) 1ea Reusable multisite SpO₂ probe 1ea DC adapter (18 VDC, 2.5A) 1set BT-Link Pro (automated record keeping software) 1ea Optional Accessories 5 lead vet ECG cable 1emperature probe(skin) 1BP disposable pressure transducer kit 1BP reusable pressure transducer kit Mainstream EtCO₂ airway adapter set Sidestream EtCO₂ airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories	otaliaara 710000001100	NIBP extension tube(3m)	1ea
SpO <sub>2</sub> extension cable(2m) 1ea Esophageal ECG probe with temperature 1ea Extension cable for esophageal probe 1ea Transflectance SpO <sub>2</sub> probe 1ea Temperature probe (rectal/esophageal) 1ea Reusable multisite SpO <sub>2</sub> probe 1ea DC adapter (18 VDC, 2.5A) 1set BT-Link Pro (automated record keeping software) 1ea  Optional Accessories  5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		NIBP vet cuff neonate disposable #1-#5	1set
Esophageal ECG probe with temperature  Extension cable for esophageal probe  Transflectance SpO <sub>2</sub> probe  Temperature probe (rectal/esophageal)  Reusable multisite SpO <sub>2</sub> probe  1ea  Reusable multisite SpO <sub>2</sub> probe  1ea  DC adapter (18 VDC, 2.5A)  1set  BT-Link Pro (automated record keeping software)  5 lead vet ECG cable  Temperature probe(skin)  IBP disposable pressure transducer kit  IBP reusable pressure transducer kit  Mainstream EtCO <sub>2</sub> airway adapter set  Sidestream EtCO <sub>2</sub> airway adapter set  ECG alligator clip (5ea)  3 lead ECG cable (snap type)  Dual gas accessories		NIBP vet cuff infant reusable	1ea
Extension cable for esophageal probe Transflectance SpO <sub>2</sub> probe 1 ea Temperature probe (rectal/esophageal) 1 ea Reusable multisite SpO <sub>2</sub> probe 1 ea DC adapter (18 VDC, 2.5A) 1 set BT-Link Pro (automated record keeping software) 1 ea  Optional Accessories 5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		SpO₂ extension cable(2m)	1ea
Transflectance Sp02 probe 1ea Temperature probe (rectal/esophageal) 1ea Reusable multisite Sp02 probe 1ea DC adapter (18 VDC, 2.5A) 1set BT-Link Pro (automated record keeping software) 1ea  Optional Accessories  5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtC02 airway adapter set Sidestream EtC02 airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		Esophageal ECG probe with temperature	1ea
Temperature probe (rectal/esophageal) 1ea Reusable multisite SpO <sub>2</sub> probe 1ea DC adapter (18 VDC, 2.5A) 1set BT-Link Pro (automated record keeping software) 1ea  Optional Accessories  5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		Extension cable for esophageal probe	1ea
Reusable multisite SpO <sub>2</sub> probe 1ea DC adapter (18 VDC, 2.5A) 1set BT-Link Pro (automated record keeping software) 1ea  Optional Accessories  5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		Transflectance SpO₂ probe	1ea
DC adapter (18 VDC, 2.5Å) 1 set BT-Link Pro (automated record keeping software) 1ea  Optional Accessories  5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		Temperature probe (rectal/esophageal)	1ea
BT-Link Pro (automated record keeping software) 1ea  Optional Accessories  5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		Reusable multisite SpO₂ probe	1ea
Optional Accessories  5 lead vet ECG cable Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		DC adapter (18 VDC, 2.5A)	1set
Temperature probe(skin) IBP disposable pressure transducer kit IBP reusable pressure transducer kit Mainstream EtCO <sub>2</sub> airway adapter set Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		1 0 /	1ea
Temperature probe(skin)  IBP disposable pressure transducer kit  IBP reusable pressure transducer kit  Mainstream EtCO <sub>2</sub> airway adapter set  Sidestream EtCO <sub>2</sub> airway adapter set  ECG alligator clip (5ea)  3 lead ECG cable (snap type)  Dual gas accessories	Optional Accessories	5 lead vet ECG cable	
IBP reusable pressure transducer kit Mainstream EtCO₂ airway adapter set Sidestream EtCO₂ airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		Temperature probe(skin)	
Mainstream ÉtCO₂ airway adapter set Sidestream EtCO₂ airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		IBP disposable pressure transducer kit	
Sidestream EtCO <sub>2</sub> airway adapter set ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		IBP reusable pressure transducer kit	
ECG alligator clip (5ea) 3 lead ECG cable (snap type) Dual gas accessories		Mainstream EtCO₂ airway adapter set	
3 lead ECG cable (snap type) Dual gas accessories		Sidestream EtCO₂ airway adapter set	
Dual gas accessories		ECG alligator clip (5ea)	
		3 lead ECG cable (snap type)	
(water Trap, patient sample line/adapter, mount)		Dual gas accessories	
		(water Trap, patient sample line/adapter, mount)	

#### **Optional Module**

Mainstream EtCO<sub>2</sub> module (sensor) Sidestream EtCO<sub>2</sub> module (sensor) Anesthetic gas/O<sub>2</sub> module (sensor) Dual Gas module (sensor)



# Performance ECG

Leads Type	3-lead, 5-lead(Option)
Lead Selection	3-lead: I,II,III
	5-lead(Option): I,II,III, aVR, aVL, aVF, V
ECG Waveforms	3-lead: 1 channel
	5-lead(Option): 1/2/7 channels
Heart Rate Range	Horse,dog: 30 to 300 BPM,
	Puppy,cat: 30 to 350 BPM
Heart Rate Accuracy	± 1BPM or ± 1%, whichever is greater
Sweep Speed	6.25, 12.5, 25, 50 mm/sec
	· Diagnosis: 0.05 to 150 Hz · Monitoring: 0.5 to 40 Hz
Filter	· Moderate : 0.5 to 25 Hz · Maximum : 5 to 25 Hz
S-T Segment Detection Range	-2.0 to 2.0 mV
Arrhythmia Analysis	ASYSTOLE, VTACH, V-FIB, BIGEMINY, ACCVENT, COUPLET,
-	IRREGULAR, PAUSE, PVC, RONT, TRIGMINY, VBRADY, SHORTRUN
Protection	Against electrosurgical interference and defibrillation

#### Respiration

Method	Thoracic impedance	
Channel Selection	RA-LA or RA-LL	
Measurement Range	5 to 120 breath per minute	
Accuracy	±1 breath per minute	
Apnea Alarm	Yes	

#### SpO<sub>2</sub>

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Saturation Range	0 to 100%	
Saturation Accuracy	70 to 100% ±2 digits, 0 to 69% unspecified	
Pulse Rate Range	30 to 254 BPM	
Pulse Rate Accuracy	±2 BPM	

#### **NIBP-Suntech**

Method	Oscillometric
Operation Mode	Manual / Automatic / Continuous
Pressure Range	0 to 300mmHg (accuracy : ±3mmHg)
Measurement Range	Systolic: 40 – 265mmHg, MAP: 27 – 222mmHg, Diastolic: 20 – 200mmH
Initial Inflation Pressure	Large animal mode: 160 mmHg (default), Variable from 120 - 280 mmHg
	Small animal mode: 160 mmHg (default), Variable from 60 - 280 mmHg
Plus Rate Range	25 to 300 BPM (Beat Per Minute)

#### **Temperature**

Channels	2	
Measurement Range	0 to 50°C (32 to 122°F)	
Accuracy	25 to 50°C: ±0.1°C, 0 to 24°C: ±0.2°C	
Compatibility	YSI Series 400 temperature probes	

#### IBP (Option)

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Channels	2
Measurement Range	-50 to 300mmHg
Accuracy	<100mmHg: ±1mmHg
	>=100mmHg: ±1% of reading
Plus Rate Measurement Range	0 to 300 BPM
Zero Balancing Range :	Range: ±200mmHg
5 5	Accuracy: ±1mmHg
	Drift: ±1 mmHg over 24 hours
Transducer Sensitivity	5μV/V/mmHg

#### Mainstream EtCO<sub>2</sub>, Sidestream EtCO<sub>2</sub> - Respironics (Option)

	- ' ' '	
Measurement Range	0 to 150 mmHg, 0 to 19%	
Accuracy	0-40mmHg ±2mmHg,	
	41-70mmHg ±5% of reading	
	71-100mmHg $\pm$ 8% of reading,	
	$101-150$ mmHg $\pm$ $10\%$ of reading	
Respiration Rate	0 to 150 breath per minute (Mainstream EtCO <sub>2</sub> )	
	2 to 150 breath per minute (Sidestream EtCO <sub>2</sub> )	
Respiration Accuracy	±1 breath per minute	

## Anesthetic Gas / O<sub>2</sub>-Masimo (Option)

Infra-red absorption characteristic
IRMA AX +
ISA OR+ / AX+
CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> O, Des, Iso, Enf, Hal, Sev
Mainstream (IRMA AX+)
Iso accuracy mode : 45s
Full accuracy mode: 60s
Sidestream (ISA 0R+/ AX+) : <20s
50 ± 10ml/min
CO <sub>2</sub> : 0~15%
N <sub>2</sub> O: 0~100%
Hal/Iso/Enf : 0~8%
Sev: 0~10%
Des: 0~22%
0 <sub>2</sub> : 0~100%(ISA 0R+)
0~150BPM ± 1BPM

#### **Dual Gas-Bionet (Option)**

Method	Sidestream
Gas	CO <sub>2</sub> , Iso, Sev, Enf, Hal, Des
Range, Accuracy	CO <sub>2</sub> : 0~10%, ± (0.2 vol% + 4% realative)
	Hal/Iso/Enf /Hal: $0\sim6\%$ , $\pm$ (0.15 vol% + 4% realative)
	Des: $0\sim18\%$ , $\pm$ (0.15 vol% + 4% realative)
Respiration Rate	0~150BPM ± 1BPM

- \* Specifications can be changed without prior notification.
- \* You may have distortion or signal noise when you use nonstandard or other brand's accessories. We strongly recommend you use only the authorized accessories which we supply.
- \*The ST algorithm has been tested for accuracy of the ST segment data.

  The significance of the ST segment changes need to be determined by a veterinarian.