

# TV50

## Fan

### Physical specifications

#### Dimensions and weight

Dimensions (L x H x W) 222 x 294 x 210 mm

Weight	(Excluding the transport cart) Approximately 4.5 kg (Excluding the transport cart)
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### Screen

Screen	7" capacitive touchscreen TFT
Resolution (H x V)	800 x 480 pixels
Glow	Adjustable (manual, automatic)

### Ink screen

Fan ON (activated) Outdoor mode:

Fan OFF (off) Battery indicator

### Assembly method

Mounting handle, fixing base, trolley

### Communication interface

USB port, Ethernet, wireless network, 5G, Bluetooth

### Ventilation specifications

Patient type	Adult, Pediatric, Neonatal
Ventilation mode	VA/C (Volume Assisted/Controlled) PA/C (Pressure Assisted/Controlled) V-SIMV (Synchronized Intermittent Mandatory Ventilation, Volume) P-SIMV (Synchronized Intermittent Mandatory Ventilation, Pressure) DuoLevel (Two-level ventilation) CPAP (Continuous Positive Airway Pressure)  PSV (Pressure Support Ventilation) VS (Volume Support Ventilation) APRV (Airway Pressure Release Ventilation)  PRVC (Pressure Regulated Volume Control)  PRVC-SIMV (PRVp-synchronized intermittent mandatory ventilation) AMV (Adaptive Minute Ventilation) CPRV (Cardiopulmonary Resuscitation Ventilation) NIV (Non-invasive ventilation) Oxygen therapy

### Controlled parameters

Flow (O <sub>2</sub> therapy)	2 to 80 L/min
O <sub>2</sub> %	21 to 100 vol. %
TV (Current Volume)	Adult: 100 to 4000 mL Pediatric: 20 to 300 mL Neonatal: 20 to 100 mL
MV %	25% to 350%
f	1 to 100/min
fsimv (Ventilation frequency in SIMV mode)	1 to 60/min
I:E	1:10 to 4:1
Tinsp	0.10 to 10.00 s
Tpend (Ramp Time)	0.00 to 2.00 s
Talto	0.10 to 30.00 s
Work	0.20 to 30.00 s
Tpause	Off (disabled), 5% to 60%



Flow pattern	Square, 100% deceleration, 50% deceleration
ÿPinsp	1 to 60 cmH <sub>2</sub> O
ÿPsupp	0 to 60 cmH <sub>2</sub> O
Avocado	0 to 60 cmH <sub>2</sub> O
Pbaja	0 to 50 cmH <sub>2</sub> O
PEEP	0 to 50 cmH <sub>2</sub> O
Flow trigger	OFF (disabled), 0.5 to 20.0 L/min
Pressure trigger	Off, -20.0 to -0.5 cmH <sub>2</sub> O
Exp% (Expiration end level)	Auto, 1% to 85%

### Apnea ventilation

TVapnea	Adult: 100 to 4000 mL Pediatric: 20 to 300 mL Neonatal: 20 to 100 mL
ÿPapnea	1 to 60 cmH <sub>2</sub> O
fapnea	1 to 100/min
Apnea Tinsp (Apnea Inspiration Time)	0.10 to 10.00 s

### Sigh

Sigh Button	ON, OFF
Interval	20 sa 180 min
Sigh Cycles ÿint.	From 1 to 20
PEEP	Off, 1 to 40 cmH <sub>2</sub> O

### Automatic leak compensation

Maximum leak compensation flow	Adult: 65 L/min Pediatric: 45 L/min Neonatal: 15 L/min
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### IntelliCycle

Automatic parameter adjustment	Trigger, Tpend, Esp%
IntelliCycle button	ON, OFF

### Monitored parameters

Airway pressure range	Peak, Plateau, Middle Peak (Range -20 to 120 cmH <sub>2</sub> O) PEEP (range 0 to 120 cmH <sub>2</sub> O)
Tidal Volume Range TVi, TVe, TVe spn	(range from 0 to 6000 mL)
Frequency Range ftotal, fmand, fspn,	(Range from 0 to 200/min)
Volume/Minute Range	VM, VMspn, VMleak (range 0 to 100 L/min) 0 ~ 100%
Leakage% (% of leakage)	0 ~ 100%
Endurance	Rinsp, Resp (Range 0 to 600 cmH <sub>2</sub> O/L/s)
Compliance	Cstat, Cdyn (Range 0 to 300 mL/cmH <sub>2</sub> O)
Fraction of Inspired	15 to 100 vol. %
Oxygen (FiO <sub>2</sub> )	
RSBI (Shallow	0 to 9999 1/(min*L)
Respiration Index)	
WOB (breathwork)	From 0 to 100 J/min
P0.1	-20 to 0 cmH <sub>2</sub> O
PEEPi	0 to 50 cmH <sub>2</sub> O
Rcesp	0 to 10 s

I:E	100:1 to 1:150
Tinsp	0.00 to 60.00 s
Waveforms	Airway pressure-time, Flow-time, Volume-time, CO <sub>2</sub> -time
Loops	Paw-Volume, Flow-Volume, Paw-Flow
<b>Alarm settings</b>	
Tidal Volume	Alta Neo: Off (disabled), 21 to 200 mL Ped.: Off, 25 to 600 mL Adu: Off, 110 to 4000 mL Low Neo: Off (disabled), 5 to 195 mL Ped.: Off (disabled), 10 to 595 mL Adu: Off (disabled), 50 to 5995 mL
Volume per Minute	High Ped/Neo: 0.2 to 60.0 L/min Adu: 0.2 to 100.0 L/min Low Ped/Neo: 0.1 to 30.0 L/min Adu: 0.1 to 50.0 L/min (can be disabled in NIV)
Airway pressure	High 10 to 65 cmH <sub>2</sub> O
Frequency	High Off (disabled), 2 to 160/min
Fraction of inspired oxygen (FiO <sub>2</sub> )	Auto High, internal alarm limit: min. (max. adjusted FiO <sub>2</sub> value (7 vol.% or adjusted FiO <sub>2</sub> value x 10%), 100 vol.%).  Under Auto, internal alarm limit: max. (FiO <sub>2</sub> setpoint-max (7 vol.% or setpoint x 10%), 18%).
Apnea alarm time	Low 5 to 60 s

**Tendencies**

Guy	Tabular, graphical
Duration	120 hours
Content	Monitor parameters, configuration parameters

**Record**

Guy	Alarm, operation
Maximum number	10000

**Screenshot**

	50 images
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**O<sub>2</sub> sensor**

Guy	O <sub>2</sub> sensor with no power consumption
Response time	< 18 s

**mainstream CO<sub>2</sub> module**

Numbers displayed	EtCO <sub>2</sub>
Measurement range	0 to 150 mmHg
Resolution	1 mmHg
CO <sub>2</sub> Waveforms/Loop - Time	
Response time	< 2.0 s system
Upper limit of the EtCO <sub>2</sub> alarm	2 to 150 mmHg
Lower limit of the EtCO <sub>2</sub> alarm	0 to 148 mmHg

**Safety specifications**

Classification	Class IIb
IP34 water protection	
Main standards used	IEC 60601-1-12, ISO 80601-2-12, ISO 80601-2-55, ISO 80601-2-61, IEC60601-1-2:2020 EN1789, EN13718-1, RTCA DO-160G, ISO 80601-2-84 (EN 794-3), MIL-STD-461G, MIL-STD-810G

**Environmental specifications**

Temperature	-20 to 50 °C (operating); -20 to 60 °C (storage)
Relative humidity	5 to 95% (in operation); 10 to 95% (storage)
Barometric pressure	37.6 to 110 kPa (operating); 60 to 110 kPa (storage)
Altitude compensation	Automatic compensation

**Oxygen supply**

high pressure O <sub>2</sub>	0.28 – 0.65 MPa
Pipe connector	NIST, DISS
low pressure O <sub>2</sub>	≤ 0.1 MPa
Low pressure O <sub>2</sub> flow	≤ 15 L/min

**Air supply (blower)**

Maximum flow rate	≤ 210 L/min
Maximum pressure	≤ 60 cmH <sub>2</sub> O

**External AC power supply**

Input supply voltage	100 to 240 V
Input power supply frequency	50/60 Hz
Input power supply current	2.2 to 1.0 A

Fuse	T3,15 A/250 V
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**External DC power supply**

Supply voltage of 12 to 28 V entrance	
Input power supply current	15 to 6.5 A

**Internal battery**

Number of batteries	One or two
Battery Type	Built-in lithium-ion battery, 14.4 VAC, 6600 mAh
Battery operating time	300 min (Powered by a new, fully charged battery according to ISO 80601-2-12) 600 min (powered by two new batteries fully charged to standard) ISO80601-2-12)
Charging time	≤ 3 h (One battery, 0 to 90%) ≤ 6 h (Two batteries, 0 to 90%)

**Special functions and procedures**

Sigh	
O <sub>2</sub> flow	
Suction	
Manual breathing	
Inspirational pause	
Screen lock	
Calculation of oxygen consumption	
Storage mode	

Specifications are subject to change without notice. Some features are optional. Not all features/products are available in all markets. For the most up-to-date information, please contact your local Mindray sales representative.