

Specification: AX 800

The logo features the word "COMEN" in large, bold, white, 3D-style capital letters. The letters are set against a blue background that has a subtle gradient and a faint, repeating pattern of the word "COMEN" in a lighter shade. The letters appear to be resting on a light blue, curved surface that resembles a globe or a lens.

COMEN Share with the world

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Anesthesia Machine

AX 800

=====Technical Specification=====

Physical Characteristics

Size	689 mm × 800 mm × 1400 mm
Weight	125 kg
Maximum Bearing	
Weight	210 kg
Screen Size:	15" TFT touch screen
Resolution	1024 × 768
Handrail Length	750mm
Caster wheel	4 wheels 5", central baking; brakes optional

Operation Environment

Working Temp	10~40°C
Humidity	≤93%
Power Supply	100-240V~, 50/60Hz±1Hz
Battery Type	Rechargeable Lithium-ion battery
Battery Capacity	7000 mAh, 11.1VDC
Battery Recharging	
Time	Maximum 6 hours for charging
Battery backup Trace	2 hours for continuous working
	Waveforms: Pressure-time; Flow rate-time; Capacity-time; ET EtCO2 concentration
	Loops: Pressure-volume; Flow-volume; Pressure- flow

Top Plate

Maximum supporting capacity	20kg
Operational dimensions	508mm×313mm
Dimensions with Additional Accessory	508mm×313mm×380mm

Workbench

Maximum supporting capacity	20kg
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Operational dimensions	472mm×248mm
Dimensions with Additional Accessory	472mm×248mm×380mm

Interface:

USB port
RJ45
4 auxiliary power output
AC power interface
Equal-potential grounding terminal
DB9 interface

Drawers

Top:	Size:462mm×287mm×141mm Bearing Weight: 1Kg
Bottom:	Size: 437mm×287mm×245mm Bearing Weight: 3 Kg

Gas-bag Sway Brace

Length:	400mm
Height:	240mm

Features

Anesthesia process	Open, semi closed, closed circuit
Patients	Adult, pediatric
Mode	Manual, Mechanical, Standby
Compliance	Compliance Correction
Configuration	Possibility of configuration observation

Heating	Available
Bypass	Available
ACGO	Available
Oxygen sensor	Available
Optional	Negative pressure drainage; Isolation transformer; AGSS; BIS; MASIMO EtCO2 (sidestream); MASIMO EtCO2 (mainstream); MASIMO AG (sidestream); Respironics EtCO2 (mainstream); Respironics EtCO2 (Sidestream); MASIMO AG+O2 (sidestream); Artema AG; Artema AG+O2; CPB

PPS (Pressure range (support))	3~60 cmH2O
Respiratory rate	4~100 bpm
Inspiratory /Expiratory ratio	
(I: E) range	4:1~1:10
Apnea I: E	4:1~1:8
Apnea time	10~30s
Apnea pressure	3~60 cmH2O
Freq. Min. (Min. frequency for apnea-ventilation)	2-60 bpm
Inspiratory pause	OFF, 5~60% of inspiratory time
Inspiratory time	0.2~5s

=====Ventilator Specification=====

Ventilation Modes

VCV/VC	Volume-Controlled Ventilation with tidal volume compensation
PCV/VPC	Pressure Control Ventilation
SIMV-VC, SIMV-PC	Synchronized Intermittent Mandatory Ventilation
PSV/ CPAP	Pressure Support Ventilation
Others	Manual and automatic ventilation
Optional	PRVC, SIMV-PRVC, PSVPro
Ventilation principle	Chronometric, volumetric and barometric
Ventilation	Electronically controlled& pneumatically driven
Driven gas	O2(air: optional)
Breathing circuit volume	1000 ml + bag

Ventilator Setting ranges

Monitoring parameter	Tidal volume, Inspiratory, expiratory flow, minute volume, frequency, pressure (Pmean, Pplat, Ppeak, PEEP), Oxygen, CO2, N2O and halogenated expiratory concentration, Pressure, oxygen, CO2, N2O and Halogen numerical values, compliance and patient resistance
Tidal volume range	15 ~1500 mL
MV (Per-minute ventilation amount)	0~100 L/min
Pressure range (limit)	10~100 cmH2O

Inspiratory pressure	5~70 cmH2O
PEEP	OFF, 3~30 cmH2O
Trigger pressure	-20~-1 cmH2O
Trigger window	5~90%
Trigger flow	0.2~15 L/ min
Flush oxygen	25~75 L/ min
Inspiratory stop level	5~80%
Pressure slope	0~2.0s

Ventilator Monitoring Ranges

TV (Inspiratory tidal volume)	0~3000 mL
TV (expiratory tidal volume)	0~3000 mL
MV (Per-minute ventilation amount)	0~100 L/min
FiO2 (Oxygen concentration)	18~100%
Airway pressure	-20~120cmH2O
PEEP	0~70cmH2O
Ppeak (Airway pressure)	-20~120 cmH2O
Pmean (Mean pressure)	-20~120 cmH2O
Pplat (Platform pressure)	0~120 cmH2O
I: E (Inspiratory-expiratory ratio)	4:1~1:12
Freq (Respiratory rate)	0~120 bpm
Compl (Compliance)	0~300 mL/cmH2O
Resistance	0~600 cmH2O/(s/L)

EtCO2

MASIMO EtCO ₂ (sidestream);	0~190mmHg, 0~25% (at 760mmHg) Accuracy: ± (0.3%+4% of reading).
MASIMO EtCO ₂ (mainstream)	0~190mmHg, 0~25% (at 760mmHg) Accuracy: ± (0.3%+4% of reading).
Respironics EtCO ₂ (sidestream);	0~150mmHg, 0~19.7% (at 760mmHg) Accuracy: 0~5.3%: ±0.3%; 5.4~9.2%: ±5% of reading; 9.3~13.2%: ±8% of reading; 13.3~19.7%: ±10% of reading;
Respironics EtCO ₂ (mainstream)	0~150mmHg, 0~19.7% (at 760mmHg) Accuracy: 0~5.3%: ±0.3%; 5.4~9.2%: ±5% of reading; 9.3~13.2%: ±8% of reading; 13.3~19.7%: ±10% of reading;

AG

MASIMO AG	SEV: 0~25% DES: 0~25% HAL/ ISO/ ENF: 0~25% N ₂ O: 0~100% O ₂ : 0~100% CO ₂ : 0~25% (0~190mmHg) Accuracy: SEV: 0~1%: ± 0.15%; 1~5%: ±0.2%; 5~8%: ±0.4%; DES: 0~1%: ± 0.15%; 1~5%: ±0.2%; 5~10%: ±0.4%;10~15%: ± 0.6%; 15~18%: ±1%; ISO, ENF, HAL: 0~1%: ±0.15%; 1~5vol %: ±0.2%; N ₂ O: ± (2% + 2% of the reading) O ₂ : 0~25%: ±1%; 25~80%: ±2%; 80~100%: ±3%; CO ₂ : 0~15%: ± (0.2% + 2% of the reading); 15~25%: unspecified
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Artema AG	SEV: 0~8% DES: 0~18% HAL/ ISO/ ENF: 0~5% N ₂ O: 0~100% O ₂ : 0~100% CO ₂ : 0~10%
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Anesthesia depth

BIS	0.0~100.0
SQI	0.0~100.0%
EMG	0~100dB

ESR	0.0~100.0%
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Ventilator Performance

Pressure range at inlet	0.28~0.6 MPa
Peak gas flow	>100 L/min
Flow valve range	1~100 L/min
Flow compensation	
rage	200 mL/min to 18 L/min
Inspiratory flow	Maximum inspiratory flow shall not be smaller than 100L/min when gas supply pressure is 280KPa.
Range of flow valve	3~100 L/min
Pressure limitation	Controlled by the electronic relief valve fitted inside the ventilator;
Controlling means for ventilator	Controlled by the mechanical relief valve fitted inside the ventilator.

=====**Ventilator accuracy**=====

Control accuracy

TV	15~60 ml: ±10ml; 60~210 ml: ±15ml; 210~1500 ml: ±7% of set value.
PCV	Inspiratory pressure: ±2.5cmH ₂ O or ±7% of set value, whichever the greater. Limiting pressure: ±2.5cmH ₂ O or ±7% of set value, whichever the greater. PEEP: OFF: undefined; 3~30cmH ₂ O: ±2.0cmH ₂ O, or ±8% of set value, whichever is the greater. Supporting pressure: ±2.5cmH ₂ O or ±7% of set value, whichever the greater. Apnea pressure: ±2.5cmH ₂ O or ±7% of set value, whichever the greater. Trigger pressure: ±2.0cmH ₂ O.
Freq	±1 bpm or ±5% of set value, whichever is the greater.
I: E	2: 1~1: 4: ±10% of reading value; Other ranges: ±25% of reading value.
Apnea I: E	2: 1~1: 4: ±10% of set value; Other ranges: ±25% of set value.
Tpause	In the range of 20%~60%: ±15% of set value; Other ranges: undefined.

Inspiratory time	±0.2s	MV	0 L/min~30 L/min: ±1 L/min or ±15% of set value, whichever is greater; >30 L/min: undefined.
Inspiratory pause	20%~60%: ±15% of set value; Other ranges: undefined.		
Trigger window	±10%	Compliance	0 ml/cmH ₂ O~250 ml/cmH ₂ O: ±0.5 ml/cmH ₂ O or ± 15% of reading value, whichever is greater; Other ranges: undefined.
Trigger flow rate	±1 L/ min		
Inspiratory stop level	±10%		
O ₂ / N ₂ O/ Air flow control	10~100% of the full scale: ±10% of the reading value. Other ranges: undefined.	Resistance	0 cmH ₂ O/(L/s) ~20 cmH ₂ O/(L/s): ±10 cmH ₂ O/(L/s); 20 cmH ₂ O/(L/s) ~500 cmH ₂ O/(L/s): ±50% of reading value; Other ranges: undefined.
Total flow control	Air balance gas: ≤±3% N ₂ O balance gas: ≤±3%	Oxygen sensor	±3%
Backup flow control	Pure Oxygen flow rate is 0~10 L/min: <±3%; Others: undefined.	O ₂ / N ₂ O/ Air flow control	10~100% of the full scale: ±10% of the reading value. Other ranges: undefined.
Auxiliary flow control	10~100% of the full scale: ±10% of the reading value. Other ranges: undefined.	Total flow control	Air balance gas: ≤±3% N ₂ O balance gas: ≤±3%
Monitoring accuracy		Backup flow control	Pure Oxygen flow rate is 0~10 L/min: ≤±3%; Others: undefined.
TV (expiratory)	0~60ml: ±10 ml; 60ml ~ 3000ml: ± 20ml or ± 7% of reading value, whichever is greater; Others: undefined.	Auxiliary flow control	10~100% of the full scale: ±10% of the reading value. Other ranges: undefined.
TV (Inspiratory)	60ml ~ 3000ml: ± 20ml or ± 7% of reading value, whichever is greater; Others: undefined.	Alarm Settings	
Paw	-20 cmH ₂ O~120 cmH ₂ O: ±2.0 cmH ₂ O or ± 4% of set value, whichever is greater; Others: undefined.	Tidal volume	High: 5~1600 ml Low: 0 ~1595 ml
PEEP	0 cmH ₂ O~70 cmH ₂ O: ±2.0 cmH ₂ O or ± 4% of set value, whichever is greater; Others: undefined.	MV	High: 2~100L/min Low: 0 ~98L/min
Pmean	-20 cmH ₂ O~120 cmH ₂ O: ±2.0 cmH ₂ O or ± 4% of setting value, whichever is greater; Others: undefined.	Inspired oxygen	High: 20~105% Low: 18 ~ 103%
Pplat	0 cmH ₂ O~120 cmH ₂ O: ±2.0 cmH ₂ O or ± 4% of set value, whichever is greater; Others: undefined.	Ppeak	High: 2 ~100cmH ₂ O Low: 0 ~98cmH ₂ O
Freq	±1 bpm or ±5% of set value, whichever is the greater.	Apnea alarm	Two (2) triggering conditions are satisfied simultaneously: 1. Airway pressure is continuously lower than (PEEP +3) cmH ₂ O for more than 30 seconds. 2. Expiratory tidal volume is continuously lower than 10ml for more than 30 seconds. Increase the set values of tidal volume and respiratory frequency, or set it to Manual/spontaneous mode.
I: E	2: 1~1: 4: ±10% of reading value; 4: 1~2: 1 and 1: 4~1: 12: ±25% of setting value; Others: undefined.	Alarm	Audible and visual alarm;

Alarm access	Easy access by shortcut
Flow meters	
Type	Electronic flow meter
Gas Supply	
Pipeline gasses	O2, N2O, Air
Backup	
gas-cylinder gasses	O2, N2O, Air
Pipeline gas	
connection	NIST
Backup cylinder	
connection	YOKE-CGA
Pressure range at inlet	280~600 kPa
Filter	60-80um
Features	Switch easily to the other gas without interrupting the ventilation
Auxiliary gas supply	O2

=====Breathing Circuit Specification=====

System Pressure Gauge

Range	-20~100 cmH2O
Accuracy	± (4% of full scales reading + 4% of actual reading)

Adjustable Pressure Limiting (APL)valve

Range	1~75 cmH2O
Tactile knob indication	
at	>30 cmH2O
Accuracy:	±1.0 cmH2O
Minimum opening	
pressure	0.3 cmH2O (dry), 0.5 cmH2O (humid)

Breathing Circuit Parameters

Compliance	≤4mL/100Pa Automatically compensates for compression loss with in the breathing circuit in mechanical mode
Volume of CO2 canister	2000ml
Feature	Heated at 134 degree, removable, easy to dismantle and sterilize

=====Gas Monitoring=====

Carbon Dioxide (CO2) Modules

Type	Mainstream ETCO2, Sidestream ETCO2
Method	Infrared absorption

Display	Numeric and curve displayed in screen
Alarm delay	1~10s (step size: 1s)
Sweep	6.25 mm/s,12.5 mm/s
Anesthetic Agent (AG) Module	
Maximum sound	
pressure for low alarm	79dB
Measurement type	Side stream
Module type	Phasin ISA AG module
Accuracy	±10ml/min or ±10%, whichever is greater
Monitored parameters	CO2, N2O, AA, MAC, Paramagnetic O2 and BIS
Active AGSS	
Feature	High flow, low vacuum
Size	535mm×120mm×155mm
Weight	2.2kg
Applies	ISO 80601-2-13 and YY 0635-2
Pressure relief device	Atmospheric pressure compensation port
Connector	ISO9170-2 or BS6834 standard connector
Flow of suction	50-80L/min
Resistance	0.75KPa ,75L/min
Filter	Stainless steel mesh, with pore size of 60~100µm

ACGO

Connector	Taper coaxial fitting of 22mm (outside) and 15 (inside)
Back pressure generated at the rear end of anesthesia vaporizer and the front-end of ACGO during quick oxygen charging	≤2kPa

Flush O2

100% fast oxygen

Vaporizer

Brand	Drager and Penlon available
Locking	Two vaporizers with interlocking system
Automatic recognition	Anesthesia machine able to automatic recognize halogenated gases

=====Power (No isolation transformer)=====

External AC power supply

Input voltage	100~240 V~/ 100~120V~
Input current	3.5~8.5 A/8.5 A
Input frequency	50/60 Hz
Leakage current	< 500μA

Auxiliary output supply

Output voltage	100~240 V~/ 100~120V~
Output frequency	50/60 Hz

=====**Power (With isolation transformer)**=====

External AC power supply

Input voltage	100~120 V~/ 220~240V~
Input current	3.5 A/8.5 A
Input frequency	50/60 Hz
Leakage current	< 500μA

Auxiliary output supply

Output voltage	100~120 V~/ 220~240V~
Output frequency	50/60 Hz

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