mindray

A8
Anesthesia system

All-round safety

mindray
healthcare within reach

Classic meets high-tech

With appreciation for established ways of working, the A8 retains many traditional features while also introducing some cutting-edge technologies to allow intuitive and safe management of the anesthetic procedure for broad patient populations.

18.5 inch capacitive touchscreen, with flexible rotation for 360 degree angle of view

Electronic flowmeter with traditional ease-to-use knobs, supporting multiple setting methods

Mechanical vaporizer in familiar position, easy to filling and remove

System administrator screen allowing easy viewing of the system status, to help quickly troubleshoot

Integrated breathing circuit with classic panel design

Introducing the new safety

Mindray's innovative electronic platform on the A8 empowers clinicians to ensure the safety of patients throughout peri-operative periods, from induction to recovery, to improve patient outcomes.

Less is more

With deep insights into the clinical workflow of the operating room, the A8's user interface has been designed around clinicians for reduced workloads and maximum patient safety.

Together, stronger

The A8 provides flexible data integration to meet the demands of various clinical scenarios. Compatible with Mindray patient monitors and third-party clinical information systems, the A8 helps significantly enhance the workflow efficiency in the operating room.

All-round Safety

Safe low flow by clinical assist toolkit

Improved plug-and-play Multi-Gas modules provides comprehensive breath-by-breath analysis of FiO_2, EtO_2, CO_2, N_2O, auto-detection of five anesthetic agents, as well as BIS & NMT.

With the Prediction function, it's possible to see the future trend of anesthetic agent and O_2 concentration, making clinicians more confident of adjusting anesthetic agents and the fresh gas.

Inadequate preoxygenation was observed in approximally 56% patients.[1]

[1] Ann Fr Anesth Reanim, 33: e55-8 (2014)
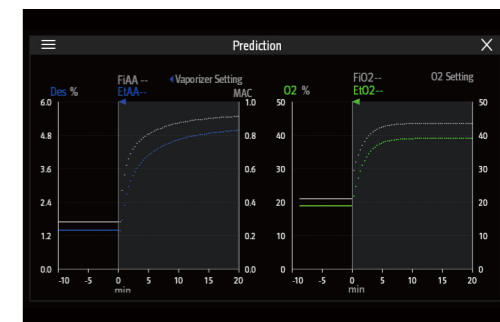
Introducing the new safety

High Flow Nasal Cannula

High flow nasal cannula (HFNC) plays an important role in maintaining safe oxygen saturation of patients as it extends the safe apnoeic oxygenation time to 30min during induction.
HFNC can help clinicians intubate more easily, especially for patients with poor oxygen saturation such as bariatric, pediatric, critical ill or difficult airway.

- Direct setting of total flow and O_2 concentration with maximum flow up to 100L/min.
- Built-in design with no additional gas or power source to remove clutter and save space.
- Quick start-up for emergency situations to improve patient saturation instantly.

With room-air **1-2**min

With traditional pre-oxygenation **8**min

With HFNC **14-30**min

The duration of apnoea without desaturation[2] [3]

[2] British Journal of Anaesthesia, 118 (4): 610–7 (2017)
[3] British Journal of Anaesthesia, 115 (6): 827–48 (2015)

Atelectasis may develop in nearly 90% of patients under general anaesthesia.[6]

[6] *British Journal of Anaesthesia* 91 (1): 61-72 (2003)

Innovative breathing system for ICU-level ventilation

The A8 introduces the volume exchanger (VE) as an innovative breathing system that brings extremely precise and reliable ventilation.

- Quick wash-in & wash-out by small system volume.
- Precise ventilation for all patients, from adults to neonates with tidal volume down to 5 ml.
- Showing the state of breathing system clearly by visual VE indicator.
- Less risk of malfunction with no moving components, providing extremely reliable and a greater service life.

Enjoy maximum performance through all stages of anesthesia

The A8 offers ventilation modes to meet different patient' demands throughout the peri-operative period.

- Adaptive Minute Ventilation Mode (AMV) allows easy switchover between controlled and spontaneous ventilation without extra adjustment.

AMV

Control
VCV/PCV
PCV-VG

Assist
SIMV-VC/
PC/VG

Spontaneous
CPAP/PS
APRV
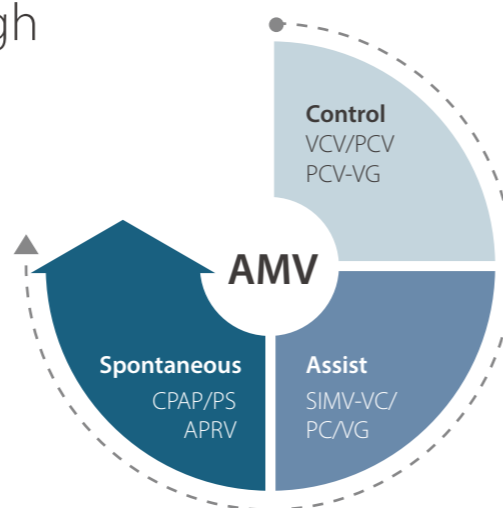
Powerful protective ventilation toolkits to prevent PPCs

Powerful toolkits have been integrated into the A8 to support confident decision-making for protective ventilation, reducing the incidence of post-operative complications (PPCs) and improving patient outcomes.

Transpulmonary pressure monitoring

Independent monitoring for esophageal pressure, to support customized ventilation settings for individual patient.

Lung Recruitment Tool

Two optional maneuvers: stepwise PEEP or sustained inflation. Multiple criteria to evaluate recruitment effectiveness.

A scheduled recruitment manuenver can be performed automatically.

TV/IBW indicator

TV/IBW can be calculated as the TV changes, which offers clinicians clear hint of appropriate tidal volume settings to avoid barotrauma.

Less is more

Automatic system check

Comprehensive

- Follows the ASA guidelines
- Checks various parts automatically to ensure proper functioning

Fast

- All checks completed in 3.5 minutes
- Scheduled system check to save preparation time

Simple

- No manual intervention required during system check
- Graphic display of error correction

1-2s As anesthesiologists look at the monitor in 1- to 2-second glances, displays should be developed to optimize the information.[5]

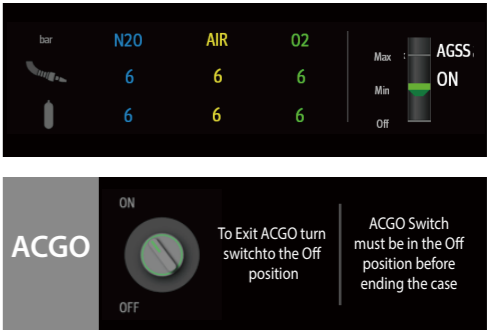[5] Anesth Analg , 111 (3): 653-8 (2010)

Customizable profiles for smart working

Configuration profiles can be customized and loaded easily for different clinical scenarios or use requirements, including default values, screen layout and system configuration.

Clear system status indicators

- Real-time system status display to help address malfunctions quickly.
- Clear prompts for certain scenarios, to allow easy viewing of the current working mode.

ACGO — To Exit ACGO turn switchto the Off position — ACGO Switch must be in the Off position before ending the case

Light up the workspace

- Illumination around APL valve in manual mode, to make the current working mode more obvious.
- Lighting for workspace with adjustable angles and brightness, to safisfy the requirement for working in low light environments.

Using desflurane for 1 hour is equivalent to 235-470 miles of driving.[6]

[6] Anesth Analg.111(1): 92–98 (2010)

A green operating room

The A8 employs anesthetic gas reduction strategies during surgery to provide both environmental and economic benefits.

Optimizer

A series of clinical decision-support tools including Optimizer, AA Prediction and ACA, can advise clinicians of the lower fresh gas flow.

L/min EFFICIENT | L/min HIGH | L/min LOW

AA measurement

This helps the delivery of low flow anesthesia by monitoring real-time anesthetic agent consumption during and after surgery.

Fresh Gas+Agent Usage		
Start:	2019-11-21	9:42
End:	2019-11-21	14:42
SEV	100.0	ml
Iso	50.5	ml
O2	150.5	L
Air	150.5	L
N2O	0.0	L

Flow Pause

Flow Pause prevents unnecessary leaks of anesthetic gases into the operating room during intubation, suction and other operations.

FLOW Pause

Time Remaining
00:36

+30sec   End Flow Pause

e-AGSS system

e-AGSS monitors the scavenging flow rate and indicates abnormalities; automatically switches off when in standby to reduce energy consumption.

Max Max **AGSS**
Min Min **ON**
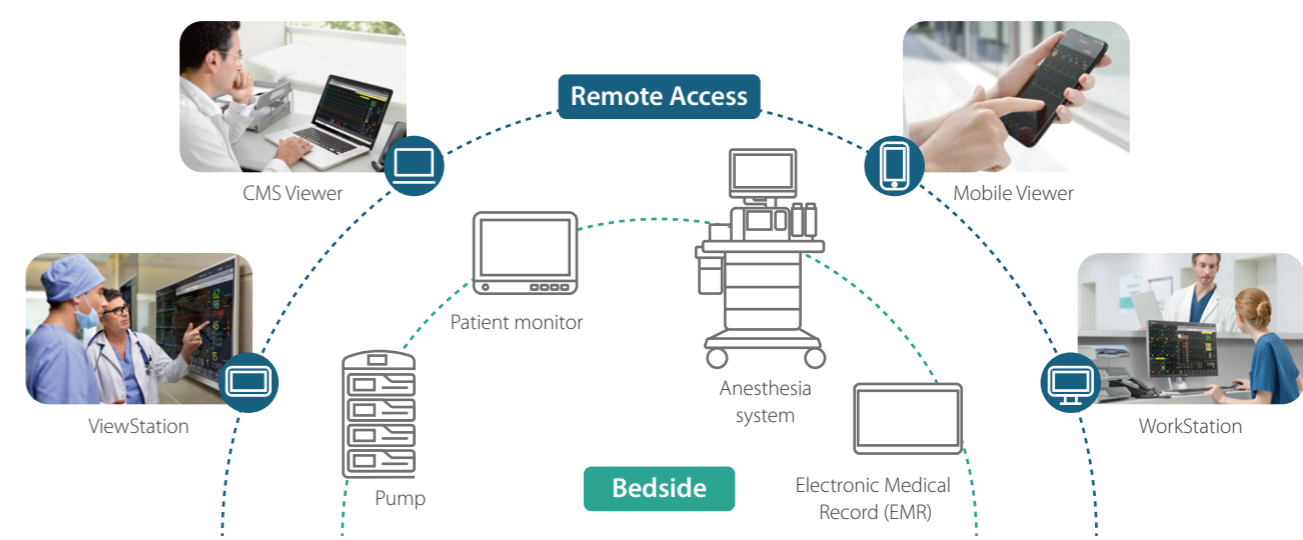Off Off

Together, stronger

Integration

Highly flexible integration options allow the A8 to work together with a variety of devices, including patient monitors, infusion pumps and information systems, to meet diverse clinical needs.

Connectivity

As a part of the IT solution, the A8 offers information connectivity safety and seamlessly to streamline clinical workflows.

Remote Access

CMS Viewer — Mobile Viewer

ViewStation — WorkStation

Pump — Patient monitor — Anesthesia system — Electronic Medical Record (EMR)

Bedside