DRE Integra AV-S

The easy-to-use, advanced anesthesia system

- High levels of workstation integration
- Modular construction
- Open architecture for monitors and accessories
- Up to four gases
- Lockable drawer
- Large work space
- Two or three station Selectatec backbar
- Low cost of ownership

Safe Ultra Low Flow
- Specifically designed for low flow
- 50-75 ml/min minimum oxygen flow
- 27-33% minimum Oxygen / Nitrous Oxide
- Mechanical Anti-Hypoxic Device

Optional Features
- Dual oxygen, nitrous oxide and air flowmeters
- Additional monitor shelf
- Flowmeter and work surface lighting
- Electrical outlets
- Oxygen auxiliary flowmete

DRE

Equipment for the way *you* operate

Advanced. Flexible. Easy-to-use technology.

The DRE Integra AV-S presents all of the most advanced features of a modern low-flow anesthesia machine: contemporary ergonomic design, a mechanical anti-hypoxic device, and air/N_2O interlock. But what differentiates the AV-S from its contemporaries is its open architecture — this progressive design element allows for maximum workstation integration with the unit's standard AVS ventilator and A200SP absorber.

The AV-S ventilator is equipped with volume, PCV, PSV, SIMV and SMMV modes; comprehensive printer/data outputs; integrated oxygen monitor and spirometry; electronic PEEP and a 30-minute battery backup. The modular interconnectivity of the unit has been constructed to utilize the synergy of combining a superior machine with a sophisticated ventilator and an integrated absorber. Beyond capability and economy, the most appealing facet of the new DRE Integra AV-S may be its exceptional ease of use.

The DRE Integra AV-S has large, back-lit flowmeters for its twin oxygen, single nitrous oxide and single air yokes. It also has a large color Touchscreen with an easy to access Com-wheel. And the ventilator's selectable dual waveform display offers a clear, precise depiction of Pressure vs. Time, Volume vs. Time and Pressure vs. Volume (for ventilation analysis).

AV-S Ventilator

The intuitive user interface and comprehensive support modes provide optimum therapy for all patient profiles.

- Combines sophistication and ease of use
- Color Touchscreen and Com-wheel control
- Volume and pressure ventilation, plus three spontaneous support modes: PSV, SIMV and SMMV
- High quality, multi-option product with flexible specification
- Single/dual waveform display
- Built-in oxygen, volume and pressure monitoring
- Electronic PEEP
- Fresh gas flow compensation

A200SP Absorber

Provides advanced system integration and high performance.

- Absorber/ventilator interface provides seamless ventilation mode switching
- Excellent ergonomics with multi-position mounting and adjustable breathing bag arm
- Optional heated circuit
- Protected, integrated spiormetry sensors
- Quick-release canister allows you to change the absorbent while ventilating your patient
- Built-in oxygen monitor sensors
- Autoclavable (excluding covers, manometer and oxygen sensor)

Sigma Delta Vaporizer

The award winning Sigma Delta has evolved from a distinguished line of vaporizers of the highest quality and reliability into the world market leader.

- Selectatec®, Drager Plug-in®, North American Drager, Cagemount
- Superb performance, particularly at low flows
- Halothane, Enflurane, Isoflurane, Sevoflurane
- Keyed Filler, Quik Fil® or Pour Fil
- Low body weight

DRE

Technical Specifications

Integra AV-S

Physical
- Size (H x W x D) .... 54 x 26 x 26 in / 137 x 66 x 66 cm
- Weight .... 75kg / 200 lbs
- Top Shelf .... 24 x 16 in / 61 x 40 cm
- Work Surface .... 24 x 14.5 in / 61 x 37 cm
- Drawers .... 6 x 15 x 17 in / 15 x 38 x 43 cm (maximum of three)
- Power required VAC .... 110 / 220
- Auxiliary Electric Outlets .... (4)13 Amp

Features
- Max Vaporizers 3
- Gases .... Oxygen, Nitrous Oxide, Air
- Cylinder Yokes 4
- Oxygen Fail Safe .... Yes
- Anti-Hypoxic Device .... Mechanical, 27 to 33%
- Integrated A200SP Absorber .... Yes
- Integrated AV-S Ventilator .... Yes
- Standards .... All relevant to markets, including ASTM & CE

A200SP Absorber
Physical
- Size (H x W x D) .... 16.5 x 9 x 16.9 in / 42 x 23 x 43 cm
- Weight .... 15 kg
- Absorbent Capacity .... 1.3 kg

AV-S Ventilator
Physical
Size (H x W x D, control unit) .... 7.3. x 11.4 x 11.8 in
18.5 x 29 x 30 cm
w/ adult bellows (H x W x D) .... 7.3. x 11.4 x 11.8 in
38.5 x 29 x 30 cm
Screen .... 8.4" / 21 cm (8.4") TFT
Weight (control unit only) .... 7.6 kg
Weight (with adult bellows) .... 9.0 kg
Bellows (latex-free) .... 20 to 1600 ml, 20 to 350 ml (pediatric option)
Power .... 90 to 264 VAC, 47 to 63 Hz
Drive Gas .... Oxygen or air

Functional
Tidal Volume (Vt) .... 20 to 1600 ml
Rate (BPM) .... 4 to 100 bpm
I:E Ratio .... 1:0:3 to 1:8
Pressure Limit .... 10 to 80 cmH$_2$0
Fresh Gas Compensation .... Automatic tidal
volume adjustment
Ventilation Modes .... Off, standby, volume, pressure controlled,
spontaneous, SIMV, SMMV, PSV
(for use in anesthesia procedures only)
Sigh Function (volume mode) .... Tidal volume (Vt) x 1.5 is delivered once,
twice, three or four times every 50 breaths
(frequency is user selectable)
Pressure Control .... 10 to 50 cmH$_2$0
Spontaneous Mode .... Active volume and
pressure alarms, patient support
function – automatic switch to
volume cycle mode if
apnea alarm is triggered
Electronic PEEP .... 4 to 30 cmH$_2$0
Oxygen Monitor .... Fuel cell type

SIMV, SMMV, PSV
Trigger .... 0.7 to 4 L/min (PEEP referenced)
Trigger Window .... 60% of Expiratory Time
Tidal Volume (Vt) .... As Volume Mode
Minute Volume (Vm) .... As Volume Mode
Inspiratory Time (Ti) .... 0.5 to 5 Seconds
Support Pressure .... 3 to 20 CmH$_2$0 (PEEP Referenced)

Alarms – Automatic
Alarm Mute .... 30 seconds
Low Drive Gas Pressure .... Less than 235 kPa (34 psi)
High Continuous Airway Pressure .... Above 30 cmH$_2$0 at
start of cycle
Low Pressure .... 4 to 14 cmH$_2$0 PEEP reference
Low Tidal Volume .... 50% of volume set (spirometry)
Incorrect rate or ratio
- Mains Failure .... 30 minutes battery backup
- Low Battery .... 5 minutes use
- Vent Loop .... Internal or battery failure
- Apnea .... Flow referenced

Alarms – Optional User Set
Tidal Volume – Minimum .... 0 to 1600 ml
Tidal Volume – Maximum .... 20 to 1600 ml
Minute Volume – Minimum .... 0 to 10 L
Minute Volume – Maximum .... 0 to 30 L
Low and High O$_2$ Concentration .... 18% to 105%
High Airway Pressure .... 10 to 80 cmH$_2$0 adjustable

Default Settings

Volume	Adult	Pediatric
• Tidal Volume (Vt)	600 ml	150 ml
• Rate (BPM)	10	15
• I:E Ratio	1:2	1:2
• Pmax	38 cmH$_2$0	38 cmH$_2$0

Pressure	Adult	Pediatric
• Tidal Volume (Vt)	600 ml	150 ml
• Rate (BPM)	10	15
• I:E Ratio	1:2	1:2
• P-Target	10 cmH$_2$0	10 cmH$_2$0

SIMV	Adult	Pediatric
• Tidal Wave (Vt)	600 ml	200 ml
• Rate (BPM)	6	10
• Inspiratory Time	2 Seconds	1 Second
• Trigger	-1 cmH$_2$0	-1 cmH$_2$0

SMMV	Adult	Pediatric
• Tidal Wave (Vt)	3.6 L	2 L
• Rate (BPM)	6	10
• Inspiratory Time	2 Seconds	1 Second
• Trigger	-1 cmH$_2$0	-1 cmH$_2$0

PSV	Adult	Pediatric
• Support Pressure	10 cmH$_2$0	10 cmH$_2$0
• Inspiratory Time	2 Seconds	1 seconds