

# NUCLEUS



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## Advance Anesthesia Technology With User-Friendly Interface

The [Nidek Anesthesia Workstation Nucleus](#) is a medical device designed for delivering anesthesia to patients during surgery. It integrates various functions and components to ensure safe and effective anesthesia delivery.

Notable Key Features :

### [Ventilator](#) :

Provides mechanical ventilation to support or replace spontaneous breathing in patients. It allows for precise control over ventilation parameters such as tidal volume, respiratory rate, and inspiratory/expiratory ratio.

### [Vaporizers](#) :

Used to vaporize liquid anesthetics into a gas form that can be inhaled by the patient. These vaporizers ensure accurate delivery of the anesthetic agent.



### Patient Monitoring (Optional) :

Includes monitors for vital signs such as heart rate, blood pressure, oxygen saturation (SpO<sub>2</sub>), end-tidal CO<sub>2</sub> (ETCO<sub>2</sub>), FiCO<sub>2</sub>, NiBP, and inhaled anesthetic concentration. This monitoring is crucial for assessing the patient's condition during surgery.

### Gas Flow System :

Supplies medical gases like oxygen(O<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), and air to the patient. It includes flow meters, regulators, and alarms to ensure proper gas flow and mixture.

### Safety Features :

Includes various alarms and safety mechanisms to detect and alert the operator to issues like low oxygen levels, high airway pressure, or equipment malfunctions.

# Technical Specifications

1	Patient scope		Adult + Pediatric
2	Vaporizer positions		Double selectatec with interlocking function
3	Pneumatic Specifications	Pipeline gas supply	O2+N2O+Air
4		Backup cylinder yokes	1 O2 + 1 N2O
5		Fresh gas flowmeter type	Mechanical O2, N2O & Air
6		Auxiliary O2 flow flowmeter	Yes
7		Pressure source monitor	Mechanical pressure gauges
8	Patient Breathing System	Highly integrated, fewer connections, ease of mounting (no tools required)	Yes
9		Automatic CO2 By-pass, change of soda lime without interruption of ventilation	Yes
10		Built-in inspiratory and expiratory spirometry sensors	Dual sensor inbuilt
11	Ventilator Parameter	Battery backup time (Hrs)	2 Hrs
12		Display and operation	10" TFT colour touch screen
13		Driven mode	Pneumatically driven and electronically controlled
14		Ventilation mode	VCV, PCV, SIMV & MANUAL
15		Tidal volume (mL)	50 ~ 1500 ml
16		I:E Ratio	4:1 to 1:10
17		Frequency/RR	0-100 BPM
18		Inspiratory Pause	0-60%
19		PEEP	0-30 cmH2O
20		Pressure Limit	5 - 70 cmH2o
21		Drive gas type	O2/Air Auto Switch
22		Waveform	Waveform & Loops
23	Monitoring	FiO2 (Galvanic fuel cell)	Yes
24	Communication port for service		Yes
25	Brake system		Front Wheels Lock
26	Body Type		Metal body with anti – bacterial powder coating



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