

Fabius MRI



**From specialists
for specialists**

**Your team focuses on performance and safety.
So does our breakthrough MRI system.**



Many clinicians rely on Dräger Medical for their anesthesia equipment in the highly specialized arena of MRI imaging, experience can make all the difference. And now our leading-edge anesthesia technology is available in a new solution specifically developed for your MRI environments up to 3 tesla: Introducing the Fabius MRI.

Best-in-class performance and safety

Only Dräger Medical features the E-Vent servo-controlled piston ventilator. It delivers maximum peak flow far more precisely than any bellows ventilator and requires no drive gas. Its rapid response time has clear physiological benefits for the patient. And the Fabius MRI offers it to you in a solution certified for use with 1.5 tesla and 3 tesla MRI systems.

Handles a broader range of patient needs

Digital precision also holds the key to making the most of the latest anesthesia ventilation modes. Using Volume Mode, Pressure Mode, Pressure Support Mode and SIMV/PS, you can more effectively and confidently synchronize anesthesia therapy to patient requirements, regardless of age or acuity level. It's having ICU-quality ventilation performance at your disposal at all times.

Alarm innovations optimize response

To better attune clinicians to patient needs, the Fabius MRI features alarm lights on top of the system and a large display with color coded alarms to efficiently alert the user to changing patient needs.

Designed for a comfortable fit

The Fabius MRI has been thoughtfully designed to work ergonomically within your MRI environment. A choice of mounting options for the breathing system easily accommodates space constraints and user preferences. Plus, convenient features like the slim housing and four wheel central brake facilitate positioning and handling so you can concentrate on the patient and clear imaging results.

Our leading-edge anesthesia technology is available in a new solution specifically developed for your MRI environments: The Fabius MRI.



When your anesthesia technology is as advanced as your MRI, you don't miss a thing

Supporting complete imaging

As MRI suites become more advanced, the quality of therapy depends increasingly on the quality of your anesthesia solution. Through an ability to more precisely meet patient ventilation requirements, the Fabius MRI facilitates induction, sedation and recovery. This makes it easier to achieve complete MRI imaging, while also optimizing throughput.

Designed for use with 3-Tesla systems

The Fabius MRI meets all current electromagnetic restriction requirements, including today's demanding 3-Tesla standard. At an operating limit of 40 mtesla and it is certified for use with most brands of 3-Tesla MRI's.

Modular, easy to customize system

Our modular design allows you to create the ultimate anesthesia workstation based on your operating requirements and user preferences. The slim-line design easily accommodates your choice of patient monitors and additional third-party devices, including hemodynamic monitoring specially developed for MRI use. In addition to being highly flexible, this approach allows you to conveniently upgrade components as new technology is introduced to economically maintain superior performance.



Compact Breathing System "Cosy 2.6"

- Absorber compatible to Apollo / Primus
- Useable with click adapter (disposable absorber)
- Breathing bag extension, fixed (option)
- Mounted with 8" Cosy arm
- Shorter arm enables more ergonomic positioning of the device
- Integrated cable management

High resolution TFT color display (6.5 in diagonal)

- Excellent brightness and contrast for best readability
- One single screen for all settings, ventilation and fresh-gas flow measurements
- Virtual flow tubes displayed on screen
- Settings and pressure curve switching
- Dräger operating philosophy

Additional LED's at top plate (2)

- For CAUTION (yellow) and
- WARNING (red)
- To efficiently alert the user to changing patient needs.



LED Alarm Indicators

Additional Caution and/or Warning displays along the top plate edges make alarms visible to clinicians throughout the MRI-operating room.

High-resolution Color display

A full TFT color display features excellent brightness and contrast for better readability.

Vaporizer

Vapor 2000 system

Label 40 mtesla/400 gauss

Distance to MRT system during operation

Cylinder Pressure gauges

with pin index cylinders only

E-Vent™

Electronically controlled and driven, high-precision ventilator optimizes performance of available ventilation modes: Volume-controlled; Pressure-controlled; Pressure support; and SIMV/PS. Compliance Compensation supports various lengths of breathing tube, plus "get what you set" tidal volume makes system practical for all patients, from neonates to adults.

Compact Breathing System Cosy 2.6

Ergonomic enhancements include:

- Improved compact breathing system design
- Left- or right-side mounting
- COSY cover and 8" arm w/ integrated cable management
- Easily removed for cleaning and sterilization

Three drawers allow you to keep items handy and organized.

Fixed and adjustable handles provide easy positioning and maneuvering.

Common rail profiles at the front and rear on both sides of the workplace allow attachment of MR-validated components and accessories.

Central brake with four wheels effectively enables fast and easy interlock or release for safe handling.

Today, investment protection is essential. We also make it easier to achieve.



Readily upgradeable

You want to be able to cost-effectively take advantage of new anesthesia technology as it becomes available. You also want to be able to readily adapt to changing MRI suite requirements. That's why the Fabius MRI features a modular design that enables you to easily add future ventilation modes without having to replace or extensively modify existing hardware.

Certified application versatility

Due to its certified compatibility with most major brands of MRI systems, this single-solution versatility can simplify your specification process and help contain costs by minimizing your spare parts inventory, maintenance and service training.

Designed to reduce operating costs

One key to significantly reducing operating costs is the Fabius MRI's piston ventilation. Its precision enables you to leverage low-flow anesthesia. Plus, our Fabius MRI moisture reduction solution prevents condensation build-up to assure stable flow measurement accuracy. As a result you can minimize the use of expensive anesthetic agents and conserve fresh gases. At the same time, low-flow anesthesia minimizes patient risk and helps expedite recovery.

Minimize training

The Fabius MRI also demonstrates the power of Dräger Medical's CareArea™ Solutions. Its intuitive, high-efficiency user interface is consistent with our current family of state-of-the-art anesthesia workstations. This minimizes user training requirements and can assist users in transitioning from one Dräger Medical workstation to another.

With the sizeable investment you make in MRI technology, it only makes sense to do everything you can to protect that investment and leverage its value. And that includes choosing the Fabius MRI.



Weight	
Base unit with COSY and without supplementary	165.8 kg (365.5 lb)
Base unit with COSY and two vaporizers; without additional supplementary	182.8 kg (403 lb)
Dimensions W x H x D	
Base unit (caster) with central brake locked (with COSY, left or right side mounted)	approx. 78 x 140 x 92 cm (31 x 55 x 36.3 in) approx. 99 x 140 x 90/92cm (39 x 55 x 35.5/36.3 in)
Hight extendable writing tray	86 cm (33.5 in)
Hight Teslameter sensor location	96 cm (37.8 in)
Power supply (rating non-configurable)	100 to 240 VAC, 50 / 60 Hz, 70 VA, including additional power outlets
Ambient Conditions	
Operation temperature	10 to 35 °C (50 to 95 °F)
Storage temperature	-10 to 60 °C (14 to 140 °F)
Battery (supports ventilator and integrated monitor)	> 45 min
Ventilator E-vent	Electronically controlled, electrically driven
Operating modes	
	Standard: Manual / Spontaneous Volume Control (IPPV) Pressure Control (PCV) Pressure Support (PS) Synchronized Volume Controlled Ventilation w/PS (SIMV/PS)
Breathing frequency (f)	4 to 60 bpm
Max. minute volume (MV)	25 L / min
Positive end-expiratory pressure (PEEP)	0 to 20 cmH ₂ O (hPa)
Inspiration / expiration ratio (Ti:Te)	4 : 1 to 1 : 4
Pressure limiting (Pmax)	15 to 70 cmH ₂ O (hPa)
Tidal Volume (Vt)	20 to 1400 mL in Volume Control 20 to 1100 mL in SIMV/PS
Inspiratory pause (Tip:Ti)	0 to 50 %
SIMV inspiratory time (T _{insp})	0.3 - 4.0 sec
Inspiratory pressure (P _{insp})	PEEP + 5 to 65 cmH ₂ O (hPa)
Inspiratory flow (InspFlow)	10 to 75 L / min in Volume and Pressure Control modes 10 to 85 L / min in Pressure Support and SIMV/PS modes
Pressure Support Level (Δ PPS)	PEEP + 3 to 20 cmH ₂ O (hPa)
Min. frequency for apnea-ventilation (Freq. Min.)	3 to 20 bpm and "OFF"
Trigger	2 to 15 L / min
Integrated safety functions	
Sensitive Oxygen Ratio Controller (S-ORC) guarantees a minimum O ₂ concentration of 23% in an O ₂ /N ₂ O mixture. N ₂ O cut-off if O ₂ fresh gas valve is closed or if O ₂ flow is less than 0.2 L/min. Audible and visual (flashing red LED) indication in case O ₂ pressure drops below 1.38 bar (20 psi) ± 0.27 bar (4 psi). In case of electricity and battery failure, manual ventilation, gas delivery and agent delivery are possible. Positive pressure relief valve opens at 75 ± 5 cmH ₂ O. Negative pressure relief valve opens at -7.5 to -9 cmH ₂ O.	
Total fresh gas flow meter	at 87 psi (6 kPa x 100): max. 75 L/min at 41psi (2.8 kPa x 100): max. 25 L/min
O₂ flush (bypass)	at 55 psi (3.8 kPa x 100): max. 50 L/min at 50 psi (3.8 kPa x 100): max. 35 L/min
Auxiliary Oxygen Flowmeter	
Fresh-gas flow	0 to 10 L/min
Anesthetic Agent Vaporizer	
Vapor 2000 system only	Dräger Halothane Vapor 2000, Dräger Enflurane Vapor 2000 Dräger Isoflurane Vapor 2000, Dräger Sevoflurane Vapor 2000
Monitoring	
Continuous monitoring of inspiratory O ₂ concentration, frequency, tidal volume, minute volume, mean or plateau pressure, peak airway pressure as well as PEEP. In addition, all fresh gas flow information is displayed as virtual flow tubes.	
Serial interface	1 x RS 232 (standard)
Protocols	Medibus
Volume of CO ₂ absorber	1.5 Liter, Option: Dräger Medical's prefilled CLIC absorber
Volume of entire compact breathing system	1.7 Liter + bag
Gas supply from supplementary MR compatible cylinders	· with pin-index connections or · with threaded connectors

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The quality management system at Dräger Medical AG & Co. KG is certified according to ISO 13485, ISO 9001 and Annex II.3 of Directive 93/42/EEC (Medical devices).