

Technical Data

Basic data	Sinus	Sinus TR
Weight, incl. circuit system	12 kg	12 kg
Dimensions without circuit system (H x W x D)	43.5 x 41 x 27 cm	40.5 x 30.5 x 27 cm
Cart (without device)	Cart with four (4) anti-static castors All castors are lockable 36.5 kg (without drawer unit) Dimensions (H x W x D): 140 x 63 x 56 cm Dimensions Drawers (H x W x D): 8.5 x 32.5 x 30.5 cm	
Classification	II b as per 93/42/EEC Annex IX Section 3.1., Rule 9 and Section 3.2., Rule 11	
Gas connections	Connections for O ₂ , N ₂ O and AIR	
Central gas supply	Connections for O ₂ , N ₂ O and AIR	
10-liter gas cylinder	Manometer on Sinus housing	O ₂ , N ₂ O or AIR Monitoring of the supply pressures with manometer on pressure reducer
Supply pressure	2.8 – 6.0 kPa x 100 (bar)	
Connection type (standard) Reserve gas connector O ₂	NIST standard DISS (1.9 kPa x 100 (bar))	Central gas supply DISS (1.9 kPa x 100 (bar))
Gas management	Gauge block for two (AIR and O ₂) or three gases (AIR, O ₂ and NO ₂)	
Fresh gas generator	Gauge block for two (AIR and O ₂) or three gases (AIR, O ₂ and NO ₂)	
Settings O ₂ N ₂ O AIR	Fine flow meter tube: 100 to 1000 ml / min Rough flow meter tube: 1 to 10 l / min 0.2 - 10.0 l / min 0.2 - 10.0 l / min	
Adjustable O ₂ concentration in fresh gas	21 to 100 Vol. - % ± 4 Vol. - % O ₂ , when O ₂ / AIR is selected. 25 to 100 Vol. - % ± 4 Vol. - % O ₂ , when O ₂ / N ₂ O is selected.	
O ₂ flush	> 35 l / min (at O ₂ supply pressure 2.8 to 6 kPa x 100)	
Other connections	Fresh gas output over adapter Central Gas Supply to 22 mm outer / 15 mm inner ISO cone	
Circuit system	22 mm outer / 15 mm inner ISO cone	
Patient connections (H x W x D)	29 x 21 x 8 cm	
Weight incl. APL and CO ₂ absorber	3,65 kg	
Volumes (without breathing tubes and bag with absorber)	Ventilation mode MAN / SPONT about 2.6 l	
Compliance (without breathing tubes and bag with absorber)	Ventilation mode MAN / SPONT about 2.6 ml / „Pa x 100“	
Leakage	Corresponds to DIN EN ISO 80601 2 13 < 150 ml / min at 30 „Pa x 100“ (mbar)	
Exp. / insp. resistance at 30 l / min	Corresponds to DIN EN ISO 80601 2 13 5.4 „Pa x 100“	

APL Valve	Sinus	Sinus TR
Setting range	Spontaneous breathing and adjustable ventilation pressures to minimum 50 „Pa x 100“ with tactile click into place	
Accuracy	± 5 „Pa x 100“	
CO₂ absorber	Ø 140 mm Height 265 mm	
Dimensions	Ø 140 mm Height 265 mm	
Weight	550 g	
Material	Polisulfone / PBT	
Volume	850 ml	
Manual Ventilation MAN / SPONT	Manual ventilation is produced with the breathing bag used as reservoir	
Breathing bag	Manual ventilation is produced with the breathing bag used as reservoir	
Safety facilities	Activation pressure: 2.0 kPa x 100 Alarm sounds for more than seven (7) seconds	
O ₂ insufficiency	Activation pressure: 1.6 kPa x 100 Reactivation O ₂ pressure: 2.7 kPa x 100 for 20 seconds	
N ₂ O shut-off valve	Maintains minimum O ₂ concentration of 25 ± 4 %	
O ₂ Ratio Controller	Mechanical lock prevents the O ₂ concentration from falling below 25 % in an O ₂ / N ₂ O gas mixture. N ₂ O block in event of an O ₂ deficiency	
O ₂ minimum concentration	Valve with adjustable pressure relief Automatic safety valve that prevents hazards from excessively high pressure Automatic safety valve that prevents hazards from excessively low pressure	
Safety valve	Valve with adjustable pressure relief Automatic safety valve that prevents hazards from excessively high pressure Automatic safety valve that prevents hazards from excessively low pressure	
Relevant Standards	COUNCIL DIRECTIVE of 14 June 1993 concerning medical devices	
93 / 42 / EEC	COUNCIL DIRECTIVE of 14 June 1993 concerning medical devices	
DIN EN 60601-1	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance (IEC 60601-1:2005 + Cor. :2006 + Cor. :2007 + A1:2012); German version EN 60601-1:2006 + Cor. :2010 + A1:2013	
DIN EN ISO 80601-2-13	Medical electrical equipment - Part 2-13: Particular requirements for basic safety and essential performance of an anaesthetic workstation (ISO/DIS 80601-2-13:2011) German version EN ISO 80601-2-13:2012	
DIN EN ISO 80601-2-55	Medical electrical equipment - Part 2-55: Particular requirements for the basic safety and essential performance of respiratory gas monitors (ISO 80601-2-13:2011); German version EN ISO 80601-2-13:2012	

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LÖWENSTEIN medical



NEW!

Sinus / Sinus TR

The flexible alternative for „small“ anesthesia.



CE 0197

Learn more about Sinus / Sinus TR



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With people in mind

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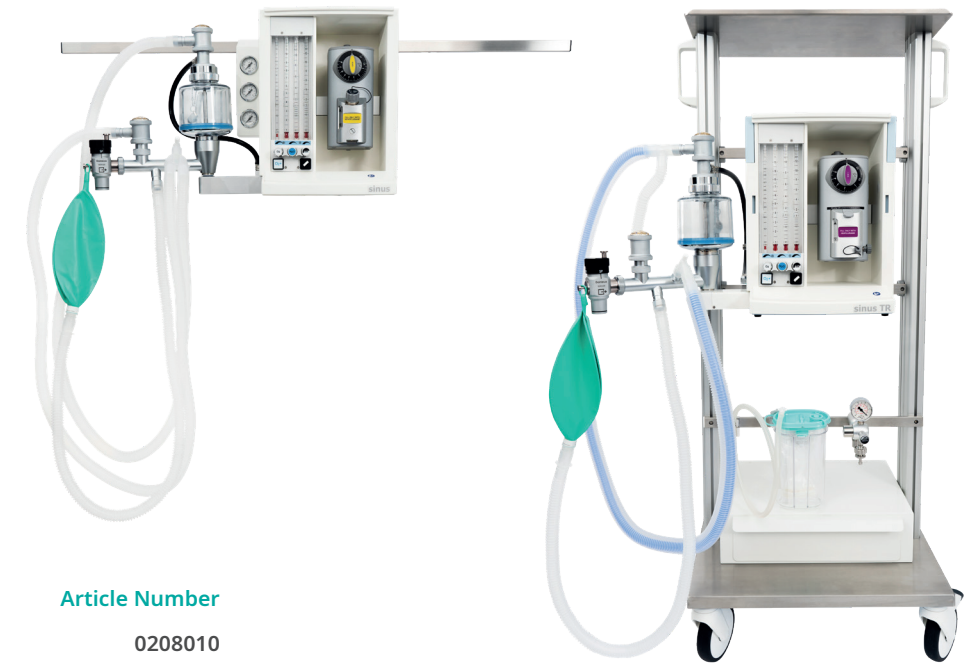
Functional Design for Hospital and Practices. Sinus.

The anesthesia system for adults and children allows manual ventilation and spontaneous breathing. Sinus can be used with the ISO circuit system or the semi-open anesthesia machine. The gas supply with O₂, N₂O and/or AIR can be drawn from a wall outlet, a central gas system installation or a 10-liter cylinder placed on the optional cart.

Special features include the integrated wall mount, retractable handle, extendable circuit system holder, the cover to close the device and three gauges whose special arrangement permits fine dosages in low-flow operation. A minimum dosage of oxygen (with SORC or Sensitive Oxygen Ratio Controller) ensures the highest level of patient safety.

The well-designed cart offers options for the use of Sinus with space for patient monitoring and a cylinder holder. Equipped with an integrated mount on the back, the Sinus anesthesia system can be easily attached to a standard hospital rail and the Sinus TR to a cart.

Sinus / Sinus TR



Device

Sinus
Sinus TR

Article Number

0208010
0200005

Accessories

Sinus circuit system, complete
with ventilation pressure gauge CO₂ absorber,
inhalation / exhalation valve, Berner excess valve

Sinus fresh air circuit / circuit system
(750 mm)

Cover for Sinus TR

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0201564
0207001

Accessories

Cart for Sinus / Sinus TR
Sinus with upper shelf, two mounting rails-
and handles

Cylinder holder Sinus /
Sinus TR cart
for two 10-liter cylinders, including rails,
two holders with belt and mat

Drawer for Sinus / Sinus TR cart
(available with one or two drawers)

Article Number

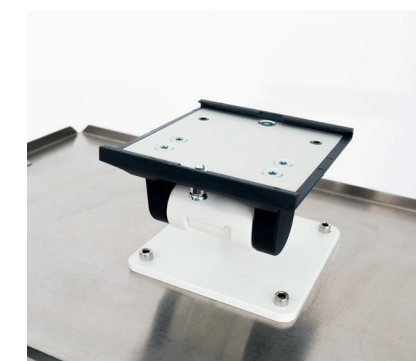
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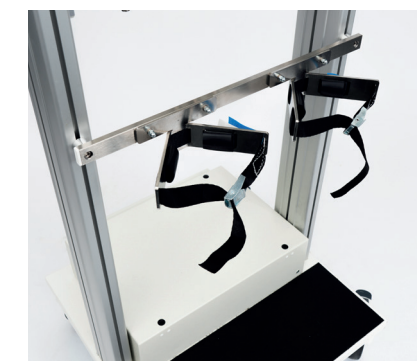
Cover for Sinus TR cart



Extendable handle and circuit system holder for Sinus TR cart



Optional holder for monitoring Sinus / Sinus TR



Cylinder holder for Sinus / Sinus TR cart



Drawer for Sinus / Sinus TR cart