

EMISSION MONITORING SYSTEMS



We care about the environment

VARIOUS APPLICATION POSSIBILITIES



NOVA 2000 –
A DEVICE OF TOP CLASS

NOVA 2000

A CLASS OF ITSELF

O₂

CO

CO_{high}

NO

NO₂

SO₂

Light, robust and portable,
it suites the most varied requirements.

- Extensive, measuring-ready basic equipment
- Upgradable to high-end configuration by adaptable hard and software concept.
- High security by means of selected materials and electronic supervision of most important functions.
- Up to 4 electrochemical cells
- Suitable also for solid-fuel combustion measurements

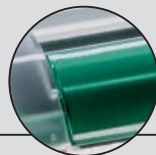
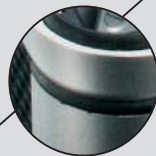
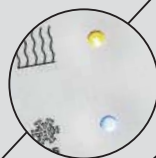
Control LED for battery charge,
main power supply, probe heating,
electric gas cooler and sample flow

Light-weight, elegant round
profile designed suitcase

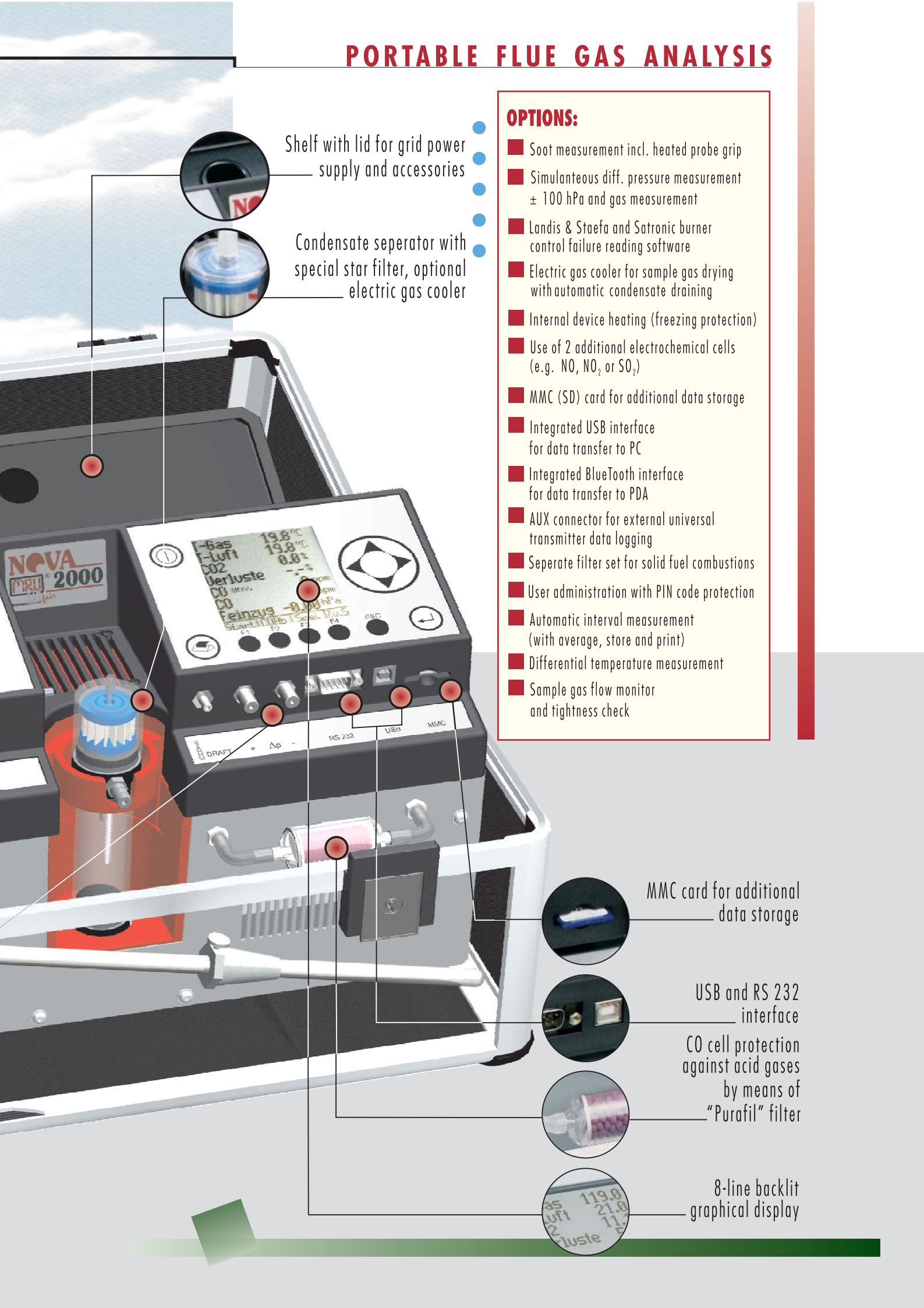
High speed thermo printer with easy
paper loading

Robust quick connector for
electrical connections

Robust metal fittings for sample gas and
pressure measurements



PORTABLE FLUE GAS ANALYSIS



OPTIONS:

- Soot measurement incl. heated probe grip
- Simultaneous diff. pressure measurement ± 100 hPa and gas measurement
- Landis & Staefa and Satronic burner control failure reading software
- Electric gas cooler for sample gas drying with automatic condensate draining
- Internal device heating (freezing protection)
- Use of 2 additional electrochemical cells (e.g. NO, NO₂ or SO₂)
- MMC (SD) card for additional data storage
- Integrated USB interface for data transfer to PC
- Integrated BlueTooth interface for data transfer to PDA
- AUX connector for external universal transmitter data logging
- Separate filter set for solid fuel combustions
- User administration with PIN code protection
- Automatic interval measurement (with average, store and print)
- Differential temperature measurement
- Sample gas flow monitor and tightness check

Shelf with lid for grid power supply and accessories

Condensate separator with special star filter, optional electric gas cooler

MMC card for additional data storage

USB and RS 232 interface

CO cell protection against acid gases by means of "Purafil" filter

8-line backlit graphical display



EMISSION MONITORING SYSTEMS

We care about the environment

TECHNICAL DATA:

Fuel types	Oil light no2/no6, natural gas, coke oven gas, blast furn gas, propane, butane, coal, pellets (others on request).		
Components	Measuring range	Accuracy (whichever is higher)	Resolution
O₂	0 - 21 Vol-%	± 0,2 Vol-% abs.	0,1 %
CO (H₂ compensated)	0 - 4.000 ppm, overload up to 10.000 ppm	± 20 ppm or 5 % reading / ≤ 4.000 ppm 10 % reading / > 4.000 ppm	1 ppm 1 ppm
CO high (option)	0 - 4.000 ppm, overload up to 20.000 ppm	± 100 ppm or 5 % reading / ≤ 4.000 ppm 10 % reading / > 4.000 ppm	1 ppm 1 ppm
CO very high (option)	0 - 40.000 ppm, overload up to 100.000 ppm	± 200 ppm or 5 % reading / ≤ 40.000 ppm 10 % reading / > 40.000 ppm	1 ppm 1 ppm
NO (option)	0 - 1.000 ppm, overload up to 5.000 ppm	± 5 ppm or 5 % reading / ≤ 1.000 ppm 10 % reading / > 1.000 ppm	1 ppm 1 ppm
NO₂ (option)	0 - 200 ppm, overload up to 1.000 ppm	± 5 ppm or 5 % reading / ≤ 200 ppm 10 % reading / > 200 ppm	1 ppm 1 ppm
SO₂ (option)	0 - 2.000 ppm, overload up to 5.000 ppm	± 10 ppm or 5 % reading / ≤ 2000 ppm 10 % reading / > 2000 ppm	1 ppm 1 ppm
Stack gas temp. T_e	0 - 650 °C by means of stainless steel sampling tube 0 - 1.100 °C by means of Inconel steel sampling tube	± 2 °C / < 200 °C 1 % reading > 200 °C	1 °C 0,1 °C
Combustion air temp. T_a	0 - 100 °C	± 1 °C	0,1 °C
Draft measurement	± 100 hPa	± 0,03 hPa or 1% reading	0,5 Pa
Differential pressure	± 100 hPa	± 0,03 hPa or 1% reading	0,5 Pa
Soot measurement	automatic, heated filter paper method		
Calculated values	depend on fuel		
CO₂	0 - CO ₂ max	± 0,3 Vol-% abs.	0,1 %
Dewpoint	°C		
Losses	0 - 99,9 %		
Efficiency	0 - 120 %		
Measured values as	mg/Nm ³ referenced to O ₂ , mg/KWh, NO _x as mg/Nm ³ NO ₂		
Operation temperature	+ 5 - + 45 °C, max. 95 % humidity, not condensing		
Storage temperature	- 20 - + 50 °C		
Power supply	internal: 12 V / 1,8 Ah battery, 8 h operation (without gas cooler) external: universal grid power, 110 - 230 Vac / 12 Vdc		
Protection class	IP 20		
Weight	approx. 8,0 kg		
Dimensions	(W x H x D) 420 x 300 x 266 mm		



We are certified!



MRU
Measuring instruments for flue gases
and environmental protection GmbH
Fuchshalde 8
D-74172 Neckarsulm-Obereisesheim
Tel. +49 71 32 99 62 - 0 * Fax 99 62 20
info@mru.de * www.mru.de