

## On-line Analyzers

CONTINUOUSLY AND FULL AUTOMATIC

# NORDITEC

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# SPXFLOW

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets.

To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit [www.spxflow.com](http://www.spxflow.com).

**FOR MORE THAN 80 YEARS, SPX FLOW'S BRAN+LUEBBE BRAND HAS BEEN PROVIDING CUSTOMERS WITH HIGH QUALITY METERING, PROCESSING AND ANALYSING EQUIPMENT.**

As part of the global SPX FLOW, Inc. , we are one of the world's most reputable manufacturers of metering and process pumps, process systems as well as analyzing technologies. Our engineers have comprehensive process and applications knowledge across a wide range of markets. This has resulted in product innovations and developments which harness the latest technology whilst meeting the highest quality standards.

**> Bran+Luebbe®**

## Over 85 Years of Process Experience

SPX Flow Technology Norderstedt offers a worldwide programme of high-quality measuring instruments for water analysis. The reliability, operational safety and flexibility of Bran+Luebbe on-line measuring instruments have established these as an industrial standard worldwide.

Based on the success of the previous PowerMon analyser series, the new PowerMon NG product family offers new functions for low-maintenance and reduced downtimes as well as support for overall efficiency. The key technologies in the PowerMon NG series include extended unmonitored runtimes as well as an intuitive user interface.

90-day, unmonitored operation of the silica analyser, for example, requires just 5 liters of reagent. The PowerMon NG measuring instrument does away with the need for frequent maintenance. Predictive diagnostic software, warnings and messages contribute to preventing unplanned downtimes. The "Laboratory Sample" function enables fast analysis of a sample.

The PowerMon NG can, for example, carry out the actuation and control of metering pumps, valves etc. with no problem at all. The PowerMon NG can be used for the archiving of measured data, right through to visualisation.

Fast data exchange is possible via the integrated USB interface either with the use of a USB stick or directly to external systems.

The PowerMon NG is suitable for both conventional measurement technology with analog outputs as well as for fieldbus technology.

The PowerMon NG – the economical solution – is ideally suited for central measuring points, i.e. locations where multiple parameters have to be measured at the same place.



# Advantages of our analyzers

- low investment costs
- low operating costs
- innovative technology
- space-saving design
- integrated multi-stream measurement with up to 6 samples with one analyzer



## CONNECTION OF EXTERNAL PHYSICAL MEASURING PROBES

Several external sensors can be connected to the PowerMon NG, in which case it functions as a data logger and control device.



## MORE ECONOMICAL, MORE ACCURATE, FASTER

The PowerMon NG enables specific adaptation to different measuring requirements and is equipped with multi-measuring point technology. In other words, the PowerMon NG can process and save several process parameters in parallel and can therefore simply replace several external display units. Low reagent consumption and long maintenance intervals result in minimum running costs. The speed controlled peristaltic pumps shorten the measuring cycles and accelerate the availability of the measured values. Where accuracy is concerned, the high-resolution double-beam photometer delivers the most exact results



## COMPACT DESIGN

The PowerMon NG is modular in design. Its outstanding features include a robust, space-saving and compact design.



## SUPPORT OF ALL STANDARD INTERFACES SUCH AS :

RS485, LAN, ProfiBus, DP, Modbus RTU or TCP/IP, Modem (analog, ISDN, UMTS) and USB



## FULL NETWORK CAPABILITIES POSSIBLE WITH DIRECT LAN CONNECTION

The direct LAN connection makes the PowerMon NG the first fully network-enabled on-line monitor on the market.



## REMOTE MAINTENANCE AND NETWORK CONNECTIVITY

Thanks to its numerous interfaces the PowerMon NG can be connected to your PC network or your telephone system, so that it can be controlled and maintained centrally by customers – at all times and from every networked location.



## UPDATE OF THE SOFTWARE OR UPLOAD AND DOWNLOAD OF DATA VIA A USB STICK

The automatic software update or storage of measured values for user-friendly transfer to external PC systems is carried out simply via the USB interface using the USB stick supplied.



## FAULT REPORTING VIA TEXT MESSAGE (SMS)

The alarm function per text message to the user is especially helpful in the case of on-call duty or for particularly extensive process systems.



## COLOURED GRAPHICAL USER INTERFACE WITH TOUCH SCREEN OPERATION

Control is effected via a user-friendly, coloured graphical user interface with interactive touch screen operation. The display and control keys adapt to the respective functions. Operation of the menu control is self-explanatory.



## LINUX-BASED SOFTWARE

The Linux-based operating system of the PowerMon NG ensures especially stable and safe operation.



## UP TO 6 MEASURING POINTS!

The PowerMon NG can measure up to 6 sample streams and up to 6 parameters per sample stream.

## Process and waste water

We deliver custom-made installations for public and industrial treatment plants.

Our On-line Analyzers can also cope with difficult waste water such as the effluent from chemical, food and paper factories.

The compact process analyzers and the new in-line sensors combine to create an integrated measuring and control system with graphical display and easy operation. The instruments are delivered in a waterproof housing with space for reagents and accessories.

### ONLY POSSIBLE WITH THE POWERMON NG

The possibility of multi-parameter analysis means one PowerMon NG can replace several conventional devices.

6 measuring points with up to 6 chemical parameters in the process can be analysed simultaneously and fully automatically! Even complex measuring methods such as total nitrogen or total phosphate are possible.

The PowerMon NG is suitable for both process optimisation as well as the monitoring of effluent concentrations, requires little maintenance, has a low reagent consumption and only very few wear parts.

### LOWER OPERATING COSTS WITH THE POWERMON NG TITROMETER



This PowerMon NG Titrometer provides high accuracy analysis for water hardness, chlorine and acid capacity in water treatment plants and is an ideal component for inclusion in a fully automated control loop.



### IN-LINE FILTRATION

“Lift it up, wipe it over, hang it back into place and that's it, done!”

This simple cleaning process is only required every 2-6 weeks and takes no longer than 1 minute. No tubing needs to be replaced and the filter has no wear parts. The light-weight 4 kg filter is simple to install, needs no screws as it is simply hung into place.

### CERACLEAN



CeraClean is used with the Bran+Luebbe PowerMon NG, delivering a continuous supply of purified sample for analysis. CeraClean removes solids, colloids and high molecular weight interfering substances from dirty samples.

# Water treatment

## ACCURATE AND RELIABLE - THE POWERMON NG FAMILY



Easy to use and maintain, the PowerMon NG is a versatile on-line analyzer with over 100 documented applications which are easily adapted to specific analysis tasks. Up to 6 different sample streams can be measured by one instrument.

The PowerMon NG is widely used to measure hardness, chlorine, ammonia, nitrate, iron, aluminium and manganese.

Self-diagnostics, automatic calibration and low reagent consumption result in long intervals between routine maintenance to give low operating costs and minimum down time.

## MORE THAN 85 YEARS OF EXPERIENCE AND SUCCESS THE POWERMON NG SILIKOMETER

The PowerMon NG Silikometer guarantees a permanent optimal water quality by the continuous supervision of the silica concentration in boiler feed water or during water treatment.

The compact and modular design can obtain up to 6 on-line measuring points in one device and enables a space-saving and economic operation.



## OPTIMUM PERFORMANCE IN ULTRA-PURE WATER - THE POWERMON NG NG NATRIOMETER

This PowerMon NG Natriometer is specially designed to measure the extremely low levels of sodium in ultra-pure water. It has a detection limit of ng/l (ppt) but can also be adapted to a range extending to g/l concentrations.

The PowerMon NG Natriometer combines high precision with proven reliability and economical operation.



## Some Applications

PARAMETER*		MINIMUM RANGE	MAXIMUM RANGE	APPLICATION
Acid	as HCl	0 – 20 g/l	0 – 100 g/l	Etching
Acid capacity	HCO <sub>3</sub> <sup>-</sup> / CO <sub>3</sub> <sup>2-</sup>	0 – 0,25 mmol/l	0 – 100 mmol/l	Sewage treatment
Ammonium	NH <sub>4</sub> <sup>+</sup>	0 - 0,5 mg N/l	0 - 1000 mg N/l	Drinking water, Leachate Sewage treatment
Boric acid	H <sub>3</sub> BO <sub>3</sub>	0 - 10 g/l	0 - 20 g/l	Cooling water monitoring in power plants
Boron	B <sup>3+</sup>	0 – 1 mg/l	0 – 30 mg/l	Drinking water Sewage treatment
Chloride	Cl <sup>-</sup>	0 – 0,1 mg/l	0 – 10000 mg/l	Drinking water Process water River water
Chromium	Cr <sup>6+</sup>	0 - 0,1 mg/l	0 – 5 mg/l	Electroplating Tanneries
Chlorine free or total	Cl <sub>2</sub>	0 – 0,2 mg/l	0 – 3000 mg/l	Bathrooms Drinking water; Sewage treatment
Cyanide free or total	CN <sup>-</sup>	0 – 0,050 mg/l	0 – 20000 mg/l	Drinking water Electroplating Noble metal winning River water
Copper	Cu <sup>2+</sup>	0 – 0,03 mg/l	0 – 1 mg/l	Boiler water Drinking water Surface water
DOC/TOC		0 – 20 mg/l	0 – 1000 mg/l	Process water Waste water
Fluoride	F <sup>-</sup>	0 – 1 mg/l	0 – 1000 mg/l	Process water Process waste water River water
Iron	Fe <sup>2+/3+</sup>	0 – 20 ppb	0 – 2 g/l	Etching Drinking water Sewage Treatment
Lead	Pb <sup>2+</sup>	0 - 0,1 mg/l	0 - 6 mg/l	Drinking water Process water Waste water
Manganese	Mn <sup>2+</sup>	0 – 20 ppb	0 – 2 mg/l	Drinking water River water
Molybdenum	Mo	0 - 10 mg/l	0 - 250 mg/l	Sewage treatment
Nickel	Ni <sup>2+</sup>	0 – 0,1 µg/l	0 – 10 mg/l	Steel industry
Nitrate	NO <sub>3</sub> <sup>-</sup>	0 – 0,1 mg N/l	0 – 200 mg N/l	Sewage treatment Surface water
Nitric acid	HNO <sub>3</sub>	0 - 1 g/l	0 - 20 g/l	Electroplating Process water
Nitrite	NO <sub>2</sub> <sup>-</sup>	0 – 0,003 mg N/l	0 – 20 mg N/l	Drinking water Sewage treatment
ortho Phosphate	PO <sub>4</sub> <sup>3+</sup>	0 – 0,025 mg P/l	0 – 40 mg P/l	Sewage treatment Surface water
Oxygen	O <sub>2</sub>	0 – 20 mg/l	0 – 20 mg/l	Aquaculture General water quality Sewage treatment
Peracetic acid	CH <sub>3</sub> COOOH	0 – 50 mg/l	0 – 5.000 mg/l	Food
Peroxygen	H <sub>2</sub> O <sub>2</sub>	0 – 100 mg/l	0 – 50 g/l	Electroplating Textile industry



PARAMETER*		MINIMUM RANGE	MAXIMUM RANGE	APPLICATION
Phenol	$C_6H_5OH$	0 – 0,1 mg/l	0 – 100 mg/l	Gas works Petroleum
pH value		2 – 12	2 – 12	General water quality
Potassium	$K^+$	0 – 10 mg/l	0 – 10 g/l	Process water
Silica	$SiO_2$	0 – 5 ppb	0 – 40 mg/l	Chip Industry Power plants Sewage treatment
Sodium	$Na^+$	0 – 0,2 $\mu$ g/l	0 – 3000 mg/l	Sewage treatment
Sulfide	$S^{2-}$	0 – 1 mg/l	0 – 200 mg/l	Gas works
Sulfur dioxide	$SO_2$	0 – 10 ppm	0 – 50 ppm	Beverages
Sulfuric acid	$H_2SO_4$	0 – 1 g/l	0 – 200 g/l	Electroplating Process water
Temperature		-4 – 30 °C	-4 – 115 °C	Sewage treatment
Total hardness	$Ca^{2+} + Mg^{2+}$	0 – 0,025 mmol/l	0 – 50 mmol/l	Drinking water Sewage treatment
Total N	N	0 – 2,5 mg/l	0 – 350 mg/l	Sewage treatment Surface water
Total P	P	0 – 0,5 mg P/l	0 – 40 mg P/l	Sewage treatment Surface water
Zinc	$Zn^{2+}$	0 – 1 mg/l	0 – 70 mg/l	Electroplating Heavy metal industry

\* Auf Anfrage sind eine Vielzahl weiterer Parameter und Messbereiche erhältlich.



Spare parts  
in  
**24 hrs.**  
worldwide



## Service Experts - Worldwide and Individual

For decades now the SPXFLOW Bran+Luebbe brand has stood for maximum quality, flexibility and application expertise. In line with the high level of our product portfolio and our customised complete solutions we place the highest demands on our service team. This consists of selected and highly qualified specialists who apply their extensive expertise profitably for you and your company – worldwide!

## Customer Service - Products

### Maintenance Contracts - your benefits

- Retention of trouble-free operation
- Highest possible availability of our products at an outlay that can be calculated in advance
- Maintenance work carried out by our qualified service staff
- Exclusive use of OEM parts

### Training and Seminars

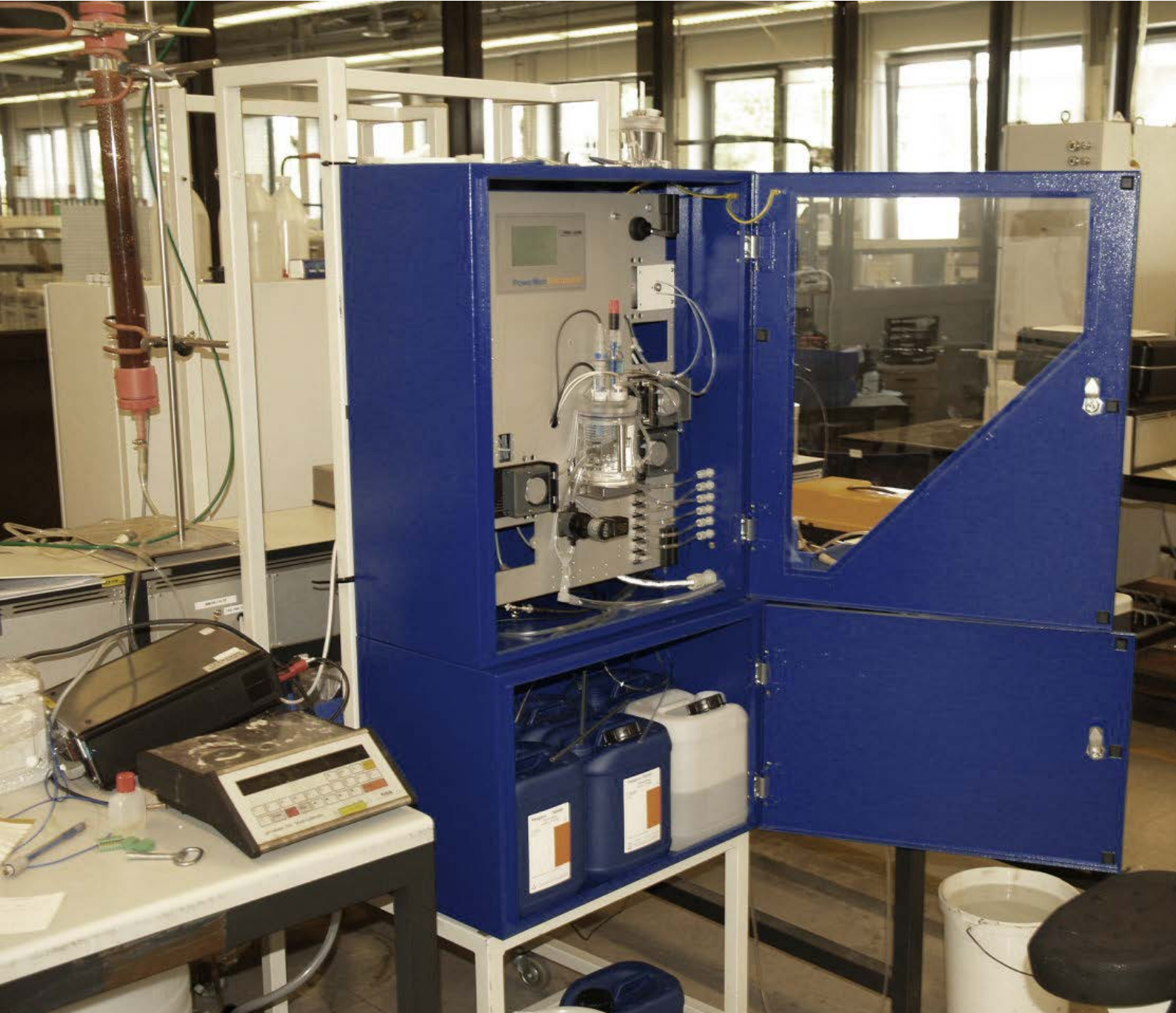
Our training courses and seminars are carried out by especially trained specialists, either in our training center or directly on your premises. Our program includes among others:

- User training for beginners and advanced learners
- Training on the job
- On-site training

### Consulting

We provide immediate user consultation for your measuring processes as well as a troubleshooting service via our Service Hotline, via fax, email or the Internet.

You can also order original spare parts or the support of our service team in this way. A team of trained chemists and engineers is available to assist you at all times with any questions you may have concerning measuring methods or calibration.



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CONTINUOUSLY AND  
FULL AUTOMATIC

OUR PRODUCT RANGE - MORE EXAMPLES OF BRAN+LUEBBE PRODUCTS WITH HIGH QUALITY STANDARD, INNOVATION AND KNOW-HOW.

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