



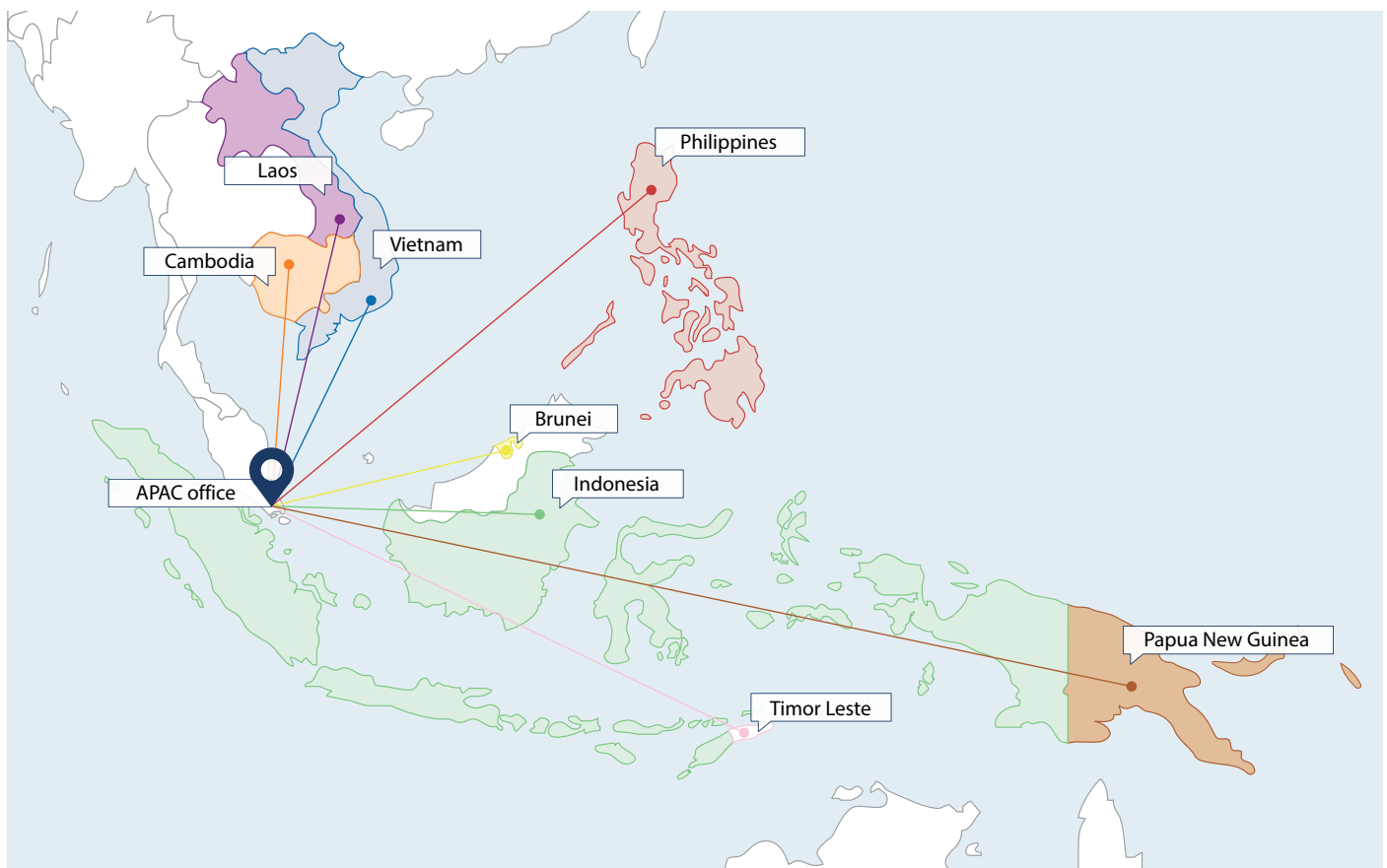
Bringing Bronkhorst closer to you in the Asia Pacific region



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⚙ service@bronkhorst-apac.com



➤ Leader in low-flow measurement and control

Bronkhorst APAC, located in Singapore, is a wholly owned daughter company of Bronkhorst High-Tech B.V. of the Netherlands and offers application engineering, local sales and after-sales support. Product expertise includes gas and liquid mass flow measurement and control, pressure measurement and control, vapour generation systems, OEM Solutions and calibration equipment.

Bronkhorst APAC supports Bronkhorst branch offices and distributors in the Asia Pacific area and directly handles orders and requests from customers in the Asia Pacific (APAC) region which are not covered by domestic distributors, i.e. Brunei, Cambodia, Indonesia, Laos, Papua New Guinea, Philippines, Timor-Leste, Vietnam.

We develop and manufacture smart, sustainable and customer-specific low flow fluidics handling solutions from our vibrant base in Ruurlo in the Achterhoek region of the Netherlands. Our precise and reliable mass flow meters and controllers for liquids and gases find their way in laboratories, test-benches, machinery and a wide variety of industries.

Bronkhorst is a truly worldwide organisation with subsidiary offices for sales and support in Great Britain, France, Northern Germany, The Netherlands, Switzerland, Japan, China, Taiwan, South Korea, India, Singapore (for APAC countries) and the USA. In addition we have build up an extensive complementary network of distributors and service stations across Europe and the rest of the world, whereby local expertise and service is offered.

➤ Bronkhorst subsidiaries

Europe	: Netherlands, France, Germany, Switzerland and United Kingdom
North America	: United States
Asia Pacific area	: China, Japan, Korea, Taiwan, India, Singapore

➤ Facts and Figures

- ◆ Over 40 years experience in Mass Flow & Pressure
- ◆ More than 1.000.000 instruments in the field
- ◆ 600 employees worldwide, 450 at our headquarters;
- ◆ Representation in more than 30 countries; 10 branch offices
- ◆ Cleanroom facilities ISO 14644-1 Class 6 with Class 5 flow benches
- ◆ 20% of employees active in R&D and development
- ◆ ISO 9001 and ISO 14001 certified
- ◆ Bronkhorst Calibration Center, ISO/IEC 17025:2017
- ◆ Round-the-Clock technical support

➤ World Wide Support

No matter the time zone, our experts within the Support Group are available to answer your request immediately or ensure appropriate further action. Our experts are 24/7 reachable at: +31 859 02 1866 and support@bronkhorst.com

➤ Bronkhorst After-Sales Support

Bronkhorst has more than 20 fully equipped Global Service Offices. These offices are able to perform factory level repair, calibration services and replacement sales, in line with the corporate standards.



European
Market
Leader



Gas



> Features

- ◆ Fast and accurate measuring signal
- ◆ Analog and digital (fieldbus) communication
- ◆ Insensitive to mounting position
- ◆ Customer specific designs available on request
- ◆ IP65 housing with optional ATEX Zone 2 approval
- ◆ Pressure ranges up to 700 bar
- ◆ Optional ATEX approved for Zone 1

> Flow ranges (based on air)

Smallest 0...0,7 ml_r/min, highest 0...11.000 m³_r/h

Mass Flow Meters and Controllers for gas applications with an electronic housing suitable for laboratory conditions, industrial environments or hazardous areas. Bronkhorst® instruments for gases are truly unique in their capability to control flow ranges between 0...0,7 ml_r/min and 0...11.000 m³_r/h with pressure rating ranging between vacuum and 700 bar. The operation of mass flow instruments is based on the proven mass flow measurement principle (by-pass or thru flow). For small gas flow rates we can also apply the Coriolis principle. For OEM customers Bronkhorst provides customized solutions on compact, multifunctional manifolds. At our internet shop for flow measurement and control devices we offer instruments not requiring a customer specific advice or quotation. Cost-efficient and delivery within two working days. www.massflow-online.com

Liquid



> Features

- ◆ Fast and accurate measuring signal
- ◆ Analog and digital (fieldbus) communication
- ◆ Insensitive to mounting position
- ◆ Optional IP65 housing and ATEX Zone 2 approval
- ◆ World's smallest low flow Coriolis instruments
- ◆ Magnetic, vortex and ultrasonic liquid flow meters available at our webshop www.massflow-online.com

> Flow ranges (based on water)

Smallest 0...100 mg/h, highest 0...600 kg/h

Mass Flow Meters and Controllers for liquids in ranges between 0...100 mg/h and 0...600 kg/h (water equivalent). Our thermal mass flow meters only require a small differential pressure. Despite utilizing direct measurement (i.e. without a by-pass) the temperature rise of the fluid is minimal; only approx. 1...5 °C. This greatly limits the danger of evaporation or degradation of the fluid. For flow ranges from 0...5 g/h up to 0...600 kg/h Bronkhorst® designed a series of mass flow metering instruments based on the advanced Coriolis principle. These instruments feature unsurpassed performance, even with changing operation conditions in pressure, temperature, density, conductivity and viscosity. Bronkhorst's most recent development is a series of ultrasonic liquid flow meters for flow rates from 2...100 ml/min up to approx. 1500 ml/min. All liquid flow meters can be close-coupled to a Bronkhorst® control valve or pump for pulsation free control of low flow rates of liquids, e.g. additives.

Pressure



> Features

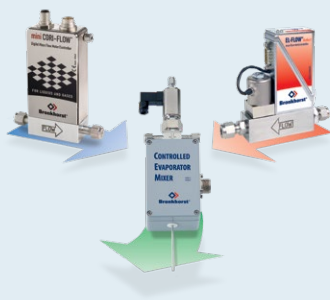
- ◆ Analog and digital (fieldbus) communication
- ◆ Metal sealed versions available
- ◆ Optional IP65 housing and ATEX Zone 2 approval

> Pressure ranges

Smallest 0...100 mbar, highest 0...400 bar

Bronkhorst's electronic pressure meters and controllers for liquids and gases have a well-proven compact thru-flow design. A differential pressure transmitter can also be supplied in the range of 0...15 bar. The pressure controller performs with high accuracy and repeatability and should be specified for forward pressure control or backward pressure control.

Vapour



> Features

- ◆ Accurately controlled gas/liquid mixture (mass flow)
- ◆ Fast response
- ◆ Very stable vapour flow
- ◆ Handles water, solvents, liquid mixtures

> Vapour ranges

The system is suitable for mixing liquid flows of 0,25...1200 g/h resulting in saturated vapour flows of 50 ml/min to 100 l/min.

The CEM-System (Controlled Evaporation and Mixing) is an innovative Liquid Delivery System that can replace traditional Bubbler Systems. It consists of a liquid flow controller, an MFC for carrier gas and a temperature controlled mixing and evaporation device.



Analytical market



Trace Elemental Analytics



Bioprocessing and Bioreactors



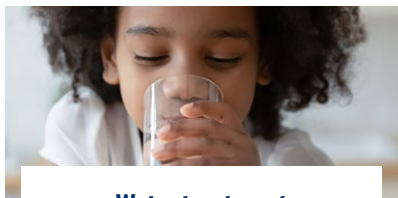
Surface treatment



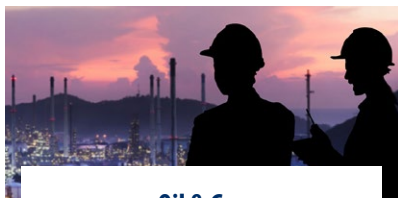
Renewable energy



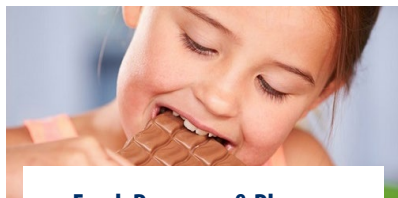
Miscellaneous applications



Water treatment



Oil & Gas



Food, Beverage & Pharma



**Medical, Health
& Personal Care**



**Semiconductor and LED
lighting industry**



**Chemical, Plastics and
Glass Industry**

Bronkhorst High-Tech designs and manufactures innovative instruments and subsystems for low-flow measurement and control for use in laboratories, machinery and industry. Driven by a strong sense of sustainability and with many years of experience, we offer an extensive range of (mass) flow meters and controllers for gases and liquids, based on thermal, Coriolis and ultrasonic measuring principles. Our global sales and service network provides local support in more than 40 countries. Discover Bronkhorst*!

 **Factory**


Bronkhorst®

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