# VACUUM TECHNOLOGY Ositrad



# **VACUUM METROLOGY**

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#### **Our Company**

Hositrad Holland and Hositrad Deutschland combine more than 50 years of experience in vacuum and cryogenic technology. Customers profit from a broad range of capabilities, starting from a standard flange up to the design of a complete vacuum system as well as manufacturing, repair and after sales service of vacuum equipment.

#### **Our Activities:**

- •Welding Service TIG & Laser
- ·Helium Leak Detection
- ·Ultrasonic Cleaning
- & (Class 7) Cleaning Room
- ·Maintenance of Vacuum Equipment
- ·Regeneration of lonpumps
- ·Mass Spectrometer Service

#### We are major supplier to:

- ·European Research Institutes
- ·Important High Tech Industries
- •Universities all over Europe
- •Synchrotron Accelerator Facilities
- Space Laboratories
- ·Vacuum Companies



#### We supply

- •Vacuum Components in KF, ISO and CF
- •Edge Welded Bellows & Formed Bellows
- ·Valves, All-Metal, Leak and Gate Valves
- ·Viewports, Glass to Metal Seals
- •Thin Film Monitors & Sensor Heads
- Electrical Feedthroughs & Isolators
- ·Ion Pumps & Power Supplies
- Rotary Vane Pumps
- ·Manipulators, XYZ XY and Tilt
- ·Mechanical Feedthroughs, Linear & Rotary
- •E-Guns, 3kW 20kW & Power Supply
- •Custom Stainless Steel Vacuum Chambers
- ·Quadrupole Mass Spectrometers
- Mass Flow Controllers
- ·Special Custom Made Products

# THYRACONT ABOUTUS

#### We measure "nothing", but accurately

Precision is a matter of course in terms of our measuring instruments as well as our production and order processing. Nevertheless, we are continuously working on increasing flexibility and efficiency of our business processes.

#### Made in Germany since 1970

For more than 40 years, we have manufactured vacuum metrology in Germany. In doing so, we give quality and reliability utmost priority.

# For Decades we have set Standards

To bring forward innovative ideas and develop own products - The number of patented innovations proves that this is one of our strengths.

#### **Expertise and Responsiveness**

We produce our entire range of measuring and controll instruments ourselves. You will therefore get straight forward responses not only for technical queries but also for quotations and delivery times in a quick and accurate manner.

## **VD8** COMPACTVACUUM METERS



## Handy Tool

Thanks to high functionality and compact dimensions the VD8 compact vacuum meters are ideally suited for the maintainance of vacuum pumps and plants.

#### Flexibly applicable

VD8 compact vacuum meters can be operated either with a battery or power supply and may thus be used in a fixed installation or mobile.

### **Precise Measurements**

Temperature compensated sensors and processor controlled analysis electronics ensure precise and reproducible measurements.

#### **Data Logger Feature**

Save up to 2000 measurements in the integrated data logger and simply transfer them to a PC via USB. This enables an easy documentation of your measurements.

# MODELS



## **VD81** 1600 to 1 mbar

- Chemical resistant ceramic sensor with FKM sealing
- Up to 5000 h battery life
- Measurement independent of gas type
- Almost insensitive against contamination



#### VD83 100 to 5e-4 mbar

- •Metal sealed Pirani sensor with durable helix filament
- Sensor largely protected by a metal shield against contamination
- High accuracy and reproducability
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#### VD84 100 to 1e-3 mbar

- External, detachable Pirani sensor with durable helix filament
- Excellent reproducability
- Sensor largely protected by a metal shield against contamination



#### **VD85** 1200 to 5e-4 mbar

- •Wide measuring range due to piezo/Pirani combination sensor
- High precision and resolution
- Excellent long term stability
- Measurement above 15 mbar independent of gas type

# **SMARTLINE** VACUUM TRANSDUCERS

## Analog and digital

Choose between a digital Rs485 interface and a scalable o-10 V output signal or an EtherCAT interface. Two potential-free relay switch points ease the controlling of vacuum processes.

#### **Optional Display**

Perfectly suited as a simple to install plug and play solution for high vacuum applications: connect transducer, plug power supply, read pressure from the integrated display.

### **Combination Sensors**

Temperature compensated combination sensors and a processor controlled electronics guarantee a wide measuring range as well as precise and reproducable readings.

#### **Display and Control Units**

For panel mounting, we provide the display and control units VD12 (2 channels) and VD10 (4 channels), which can be combined with all Smartline transducers.

# MODELS



## VSR 1200 to 1e-4 mbar

- •Wide measuring range of piezo/Pirani sensor
- Excellent reproducability and long term stability
- •High accuracy and resolution over the whole range
- Small sensor volume e.g. 2 cm<sup>3</sup> for VSR53D



#### VSP 1000 to 1e-4 mbar

- Durable Pirani helix filament
- High resolution and accuracy
- Metal sealed stainless steel measuring cell
- Small sensor volume e.g. 1.8 cm<sup>3</sup> for VSP63D



#### **VSM** 1000 to 5e-9 mbar

- Wide measuring range Insensitive against inrush of due to combined Pirani/cold cathode
  - air Small sensor volume
- Excellent ignition behaviour
- e.g. 9 cm<sup>3</sup> for VSM77D



#### VSH 1000 to 5e-10 mbar

- •Wide measuring range due to combined Pirani/hot cathode
- Excellent accuracy and reproducibility
- High operational safety with two iridium filaments
- Small sensor volume e.g. 20 cm<sup>3</sup> for VSH88D

# ANALOGLINE VACUUM TRANSDUCERS

VSP63MV

1000 - 1.0x10 " mbst 9 - 10 V

18 - 30 VDC (6

### **Current or Voltage**

Choose between an analogue o-10 V or a 4-20 mA output signal.

#### **Compact and Robust**

Thanks to their compact dimensions the transducers can be easily integrated into applications. A metal housing perfectly protects the gauges in rough industrial operations.

#### **Extensive Cable Lengths**

With its 4-20 mA output signal extensive cable lengths are possible. The M12 connector protects the transducers from dust and splash water.

#### **Display- and Control Units**

For panel mounting, we provide the display and control units VD6 (1 channel, 4-20 mA) and VD12 (2 channels, 0-10 V).

# MODELS



#### VSC 1400 to 1 mbar

- Chemical resistant ce Insensitive against ramic measuring cells
- High reliability and long term stability
- Fast reaction time
- contamination
- Measurement independent of gas type



#### VCC 200 to 0.1 mbar

- Corrosion resistant aluminium oxide ceramic sensor
- High resolution
- Measurement independent of gas type
- Excellent accuracy

#### VSP/VCP 1000 to 1e-4 mbar

- filament
- Optionally with tungsten or platinum / rhodium filament
- Durable Pirani helix Wide measurement range, excellent resolution also in rough vacuum range



#### **VSP841/2** 1000...100 to 1e-3 mbar

- Cost effective, passive
  Very small sensor volume Pirani sensor
- Extremely compact
- Long term stability
- Integrated temperature sensor

## FURTHER PRODUCTS AND ACCESSORIES





#### Vacuum Switches

The robust vacuum switches VRC with piezo sensor and VRP with Pirani sensor allow for pumps or valves to be directly operated. The IP54 housing is also suitable for operations under demanding environmental conditions.

#### **ISO-KFAccessories**

In order that you can use our products immediately, we provide a range of standard ISO-KF parts.

Special centering rings with integrated wire grating or chevron protect your sensors from contamination.

#### VacuGraph Software

With VacuGraph you can record, plot and save measurements for your quality control. Furthermore, it is possible to adjust gauge parameters in a comfortable way. VacuGraph is applicable for all Thyracont gauges with serial interface.

#### Calibration

On request, we provide works calibration of our vacuum gauges with a certificate (4 reference points per pressure decade) or a DAkkS calibration. Hositrad Holland B.V. De Wel 44 3871 MV Hoevelaken Holland Phone: (+31) 33 25 37 210 Fax : (+31) 33 25 35 274 E-mail: info@hositrad.com Hositrad - Deutschland Lindnergasse 2 93047 Regensburg Germany Phone: (+49) 941 55 82 7 Fax : (+49) 941 56 22 96 E-mail: info@hositrad.com

