

presenterer



Norwegian Valve Group er leverandør av ventilløsninger til Olje- og Gass-industrien, samt landbasert prosessindustri. Vårt produktspekter omfatter: kuleventiler, spjeldventiler, reguleringsventiler, tilbakeslagsventiler, sikkerhetsventiler, pluggventiler, GG&C-ventiler og aktuatorer med tilhørende kontrollsystemer





Stainless steel bourdon tube pressure gauges model T5500 and T6500

- According to EN 837-1, dial size 100 or 160 mm
- Accuracy 1,0% or 0,5%
- Ranges from -1 up to 2500 bar
- Case dry, field fillable or liquid filled
- Model T6500 solid front
- Wetted parts stainless steel 316L or Monel

Stainless steel bourdon tube pressure gauges with 4-20 mA output model T55E

- Dial Size 100 mm
- accuracy 1,0% or 0,5%
- Ranges from -1 up to 100 bar
- Wetted parts stainless steel 316L
- Integrated thinfilm pressure transducer



Stainless steel capsule gauges model N5500

- According to EN 837-3, dial size 100 or 160 mm
- Accuracy 1,6%
- Ranges from -6 ... 0 mbar up to 0 ... 400 mbar
- Dry case

Stainless steel diaphragm gauges model P5500 and P6500

- According to EN 837-3, dial size 100 or 160 mm
- Accuracy 1,6%
- Ranges from -25 ... 0 mbar up to 0 ... 25 bar
- Case dry, field fillable or liquid filled
- Model P6500 solid front
- Wetted parts stainless steel, optional coated with Halar or PTFE



Differential pressure gauges

Differential pressure gauge model F5503



- Dial size 100 or 160 mm
- Accuracy 1,6 %, optional 1 % or 0,5 %
- Ranges from 0 ... 40 mbar up to 0 ... 25 bar
- Static pressure PN100, optional PN160 up to PN400
- Case dry, field fillable or liquid filled
- Wetted parts stainless steel, optional Hastelloy C or Monel



Differential pressure gauge model F5502



- Dial size 100 or 160 mm
- Accuracy 2,5 %, optional 1,6 %
- Ranges from 0 ... 0,6 bar up to 0 ... 25 bar
- Static pressure PN25
- Case dry, field fillable or liquid filled
- Wetted parts stainless steel and Nickel-Beryllium



Differential pressure gauge / switch Model F5511 / F5512 / F5513

- Accuracy 2,5 %
- Ranges from 0 ... 400 mbar up to 0 ... 25 bar
- Static pressure up to PN25
- Case dry
- Wetted parts stainless steel or aluminum and NBR or Viton
- Pressure gauge, pressure gauge with switch function or blind switch
- 1 or 2 microswitch SPDT



Differential pressure gauge / switch Model 1134

- Dial size 114 mm
- Accuracy 2 %
- Ranges from 0 ... 250 Pa up to 0 ... 12500 Pa
- Static pressure 2,4 bar
- Dry case
- Wetted parts ABS and aluminum
- Optional 1 or 2 reed contacts



Duragauge pressure gauge models 1279, 1377, 1379, 2462

- Dial size 4½", 6" or 8 ½"
- Accuracy 0,5% (ASME Grade 2A)
- Ranges from -1 up to 7000 bar
- Solid front, dry or liquid filled cases
- Phenolic, cast aluminum or polypropylene case materials
- Wetted parts brass, stainless steel 316L or Monel



Stainless steel pressure gauges models 1009 and 1320

- Dial sizes from 2 ½" up to 6"
- Accuracy 1% (ASME Grade A), optional 0,5%
- Ranges from -1 up to 1600 bar
- Case dry, field fillable or liquid filled
- Wetted parts brass, stainless steel or Monel



Low pressure bellows gauge models 1187, 1188 and 1189

- Dial size 4 ½", 6" or 8 ½"
- Accuracy 2-1-2% (ASME Grade A)
- Ranges from -25 ... 0 up to 0 ... 600 mbar
- Case solid front, dry
- Phenolic, cast aluminum or polypropylene case materials
- Wetted parts brass, stainless steel or Monel



Stainless steel pressure gauge 1008

- Dial size 40 mm, 50 mm, 63 mm and 100 mm
- accuracy 3-2-3% (ASME Grade B), optional Class 1,6
For dial size 63mm and 100 mm
- Ranges from -1 up to 1000 bar
- Case dry, field fillable or liquid filled
- Wetted parts brass or stainless steel



Thermometers

Bimetal thermometers models A and E

- Model "A" according to DIN - dial size 100 or 160 mm
- Model "E" according to ASME - dial size 3" or 5"
- Ranges from -50°C up to 500°C
- Protection degree IP65
- Connection location lower, rear or every angle
- Model "E" hermetically sealed with external zero adjustment



Gas-filled stainless steel thermometer model S5500

- Dial size 100 or 160 mm
- Ranges from -200°C up to 800°C
- Rigid stem or capillary line up to 100 meter
- Optional with electrical contacts



Duratemp molecular sieve thermometers model 600A and 600B

- Movementless construction, vibration resistant
- Dial size 4 ½", 6" or 8 ½"
- Ranges from -200°C up to 650°C
- Rigid stem or capillary line up to 24 meter
- Case material stainless steel, phenolic or aluminium alloy

Thermowells

Thermowells are used for installation of thermometers, temperature switches and transmitters into pressurized vessels and pipes. Construction (form, length, diameter, material) depends on process conditions.

Thermowells according ASME

- Threaded, flanged, weld-in or sanitary connections
- Material steel, stainless steel, Monel, Hastelloy, Inconel or other materials
- Material certificate according EN 10204 3.1B
- Hydrostatic test, dye penetration test, X-ray, hardness test, NACE certificate and weak frequency calculation to Design Memo No. T/115 or ASME PTC 19.3



Thermowells according DIN

- Threaded, flanged or weld-in connections
- Material steel, stainless steel, Monel, Hastelloy, Inconel or other materials



Diaphragm seals

A diaphragm seal is a device which is mounted between pressure gauges, switches or transducers and the process to prevent that toxins, corrosives, slurries or viscous fluids damaging or block the measurement. The ASHCROFT diaphragm seals are available for various process conditions and applications

Modular ASHCROFT diaphragm seals
are available in the following models:

- Capsule screwed in the top housing (series 100)
- Diaphragm welded or bonded to the top housing (series 200)
- Diaphragm clamped between top and bottom housing (series 300)
- All welded seal for pressure up to 1000 bar (series 400 and 500)

Various process connections:

- Screwed, optional with flushing connection
- Flanged, optional with flushing connection
- In-line execution, screwed, flanged or welded



Material wetted parts:

Stainless steel, Monel, Hastelloy B and C, Carpenter 20, Inconel, Nickel, Tantalum, Titanium, Halar-coating, Teflon, Viton, PVC and others



Flanged diaphragm seals with flush diaphragm

- Model DF flush diaphragm, DIN, ISO or ANSI flange
- Model DS sandwich construction
- Model DT truncated

Diaphragm seals with quick connection for the food industry

- Connection to DIN 11851
- TRICLAMP or Cherry-Burrell clamp connection
- Connections SMS, IDF or APV/RJT



We offer special diaphragms seals according customers requirements too.

Shut-off valves according to ANSI or DIN

- Optional with vent or test connection
- Materials brass, steel, stainless steel or Monel
- 3- and 5-Way valves for differential pressure
- NACE-Applications



Pressure snubber



- 5 different stages of dampening adjustable
- Brass, steel or stainless steel

Pressure snubber with filter

- Filter, 4 different porosity's
- Brass, stainless steel or Monel

Gauge savers

- Internal elastomeric bladder made of Viton or Neoprene
- Case material steel
- Ranges from 7 up to 345 bar

Siphons according to ANSI or DIN

- Brass, steel or stainless steel
- Pig tail or coil pipe type



Pressure limiter



- Adjustable ranges from 10 mbar up to 690 bar
- Maximum pressure up to 1000 bar
- Brass or stainless steel
- NACE-Applications

Tools for pressure gauge maintenance



Tools for pressure gauge maintenance

- Ring removals for bayonet locking rings
- Gauge pointer remover
- Special tools for calibration

Modular sensing elements for pressure, differential pressure and temperature

B4, B7, L, G, P and V switches all feature a modular sensing element. The element is in pressure, differential pressure or temperature and can be matched to actuators and housings that suit various environmental protection classes or the switch function (1 or 2 microswitches, deadband).

Pressure switches

- Diaphragm operated piston/cylinder
- Gauge pressure from 25 mbar up to 210 bar
- Diaphragm material Buna N, Viton, Teflon, stainless steel or Monel



Differential pressure switches



- Diaphragm operated piston/cylinder
- Differential pressure from 75 mbar up to 42 bar
- Static pressures up to max. 140 bar
- Wetted parts Buna N, Viton, Teflon or stainless steel

For use with aggressive, viscose or toxic media pressure and differential pressure switches may be completed with diaphragm seals.

Temperature switches

- Vapor pressure thermal system
- Temperature ranges from -40°C up to 400°C
- Rigid stem or capillary line



Switches with 1 setpoint (standard / explosion proof)

Pressure, differential pressure and temperature switches models B4, D4 and T4

- Protection class NEMA 4, 4X and 13, IP54 or IP66
- UL, FM and CSA approvals



Pressure, differential pressure and temperature switches models B7, D7 and T7

- Protection IP66
- UL, CSA and ATEX approvals
- Explosion proof NEMA 7 & 9 or EEx d IIC T6 (ATEX)
- Intrinsically safe EEx ia IIC T4 (ATEX)

Switches with 2 setpoints (standard)

1 setpoint with fixed or adjustable deadband or 2 independent setpoints, microswitch type SPDT

Pressure, differential pressure and temperature switches model L

- Protection NEMA 4 and 4X, IP54 or IP66
- UL and CSA approvals
- Case aluminum, epoxy coated



Pressure, differential pressure and temperature switches model G

- Protection NEMA 4 and 4X, IP54 or IP66
- UL and CSA approvals
- Case stainless steel

Switches with 2 setpoints (explosion proof)

1 setpoint with fixed or adjustable deadband or 2 independent setpoints

Pressure, differential pressure and temperature switches model P

- Protection NEMA 4 and 4X, IP54 or IP66 or explosion proof NEMA 7 & 9 and EEx d IIC T6 (ATEX)
- UL, CSA and ATEX approvals
- Case aluminum, epoxy coated
- Dual chamber design with separate chambers for electrical connection and setpoint adjustment



Miniature pressure switches (standard)

Pressure switch model A

- Diaphragm operated switch, stainless steel or brass housing
- Pressure ranges from -1 up to 140 bar
- Internal or flush diaphragm
- 1 or 2 switch elements (SPDT or DPDT)
- Factory or field adjusted setpoint



Compact switches (explosion proof)

Pressure switches model F

- Diaphragm operated switch with aluminum or stainless steel housing
- Pressure ranges from -1 up to 280 bar
- Diaphragm material Buna N, Viton, Teflon or stainless steel
- 1 switch element SPDT or DPDT
- UL and CSA approvals



Electronic pressure switches

Electronic pressure switch model N



- Measurement by thin film element pressure transducer
- Aluminum housing
- Pressure ranges from 4 up to 1400 bar
- Wetted parts stainless steel
- Relay output SPDT
- Setpoint and deadband adjustable
- Protection class NEMA 4 or explosion proof NEMA 7 & 9

Switches with pneumatic signal

- 5/2 way valve size DN2 (one setpoint)
- Case aluminum, epoxy coated
- Pneumatic supply pressure 2 ... 10 bar, optional 1 ... 3 bar
- Protection IP65
- Suitable for use in hazardous areas



Pressure transducer

Polysilicon thin film element with internal diaphragm

Pressure transducers with polysilicon thin film element

- Internal diaphragm, all process wetted parts stainless steel
- Ranges from -1 ... 0 up to 0 ... 1400 bar
- Accuracy 0,5% for ranges 4 ... 600 bar (all other ranges 1%)

Model KX1

- Compact size
- Output 4-20 mA
- Process connection G ¼ B or ¼ NPT

Model KXD

- Standard execution
- Output 0/4-20 mA, 0-5/10 VDC
- Optional intrinsically safe according to ATEX EEx ib IIC T6
- Model KXD-VA with stainless steel field housing

Model KXX

- Compact size
- Accuracy 1%
- Output 0/4-20 mA, 0-5/10 VDC



Polysilicon thin film element and flush diaphragm

Flush mounted pressure transducer with polysilicon thin film sensor element model KXF / KXF-HT



- Wetted parts stainless steel or optionally Hastelloy-C
- Ranges from -1 ... 1,5 up to 0 ... 600 bar
- Accuracy 0,5% for ranges between 4 ... 400 bar (for all other ranges 1%)
- Output 0/4-20 mA, 0-5/10 VDC
- Optional intrinsically safe according to ATEX EEx ib IIC T6
- Process connection G ½ B or ½ NPT

High temperature design for process temperatures up to 200°C with integrated cooling device

Compact pressure transducer

Polysilicon thin film pressure transducer for OEM application (model G2) and industrial application (model T2)

- Compact size, competitive price
- Material wetted parts stainless steel
- Ranges from -1 ... 2 up to 0 ... 1400 bar
- Accuracy 1 % Total Error Band including temperature influence
- Output 4-20 mA, 0-5/10, 1-5/6 VDC or ratiometric 0,5-4,5 VDC



Industrial pressure transducer

Polysilicon thin film or piezoresistive pressure transducer, model A2

- Material wetted parts stainless steel
- Ranges from -1 ... 0 up to 0 ... 600 bar
- Accuracy 1 %, 0,5 % or 0,25 % F.S.
- Ambient temperature range -40 ... 125 °C
- 1 ½" and 2" Tri-Clamp process connection for sanitary applications
- Explosion proof according to Class I, Div. 1 and 2, Groups A, B, C and D
- Intrinsically safe according to FM and CSA

Polysilicon thin film pressure transducer for OEM application KM11



- Compact size, competitive price
- Material wetted parts and housing stainless steel
- Ranges from -1 ... 0 up to 0 ... 1600 bar
- Accuracy 1 % Total Error Band including temperature influence
- Output 4-20 mA, 0-5/10, 1-5/6 VDC or ratiometric 0,5-4,5 VDC
- Optional intrinsically safe according to ATEX EEx ia IIC T4



Differential pressure transducer

Capacitance differential pressure transducer for dry gasses model

- Micro machined differential capacitance silicon sensor
- Ranges from 0,25 mbar up to 500 mbar differential pressure
- Excellent long-term stability and overpressure capability
- Output 4-20 mA or various voltage signals

Standard types

Model XLdp:

- Ranges up to 125 mbar
- Accuracy 0,5 or 0,25%

Model RXLdp:

- Small OEM version
- Ranges up to 125 mbar
- Accuracy 1%

Model IXLdp:

- Industrial execution with stainless steel enclosure
- Ranges up to 500 mbar
- Static pressure up to 7 bar
- Accuracy 0,5 or 0,25%



ABS-plastic case, protection IP65

Model XLdp1/2/3

- Specification as RXLDP, XLDP or IXLDP
- ABS case material, protection IP65
- Mini-Hirschmann connector or direct cable

Model DXLdp for DIN-rail mounting according EN 50022

- Ranges from 0,25 mbar up to 125 mbar
- Accuracy 0,25%, 0,5% or 1%
- optional with status LED and front accessible test points
- optional integrated SpoolCal calibration port
- optional 2:1 turndown



Model CXLdp for Building Energy Management and Comfort Control

Model CXLdp



- Ranges from 25 Pa up to 60 mbar
- Accuracy 0,8 or 0,4 %
- Fire resistant Noryl case for DIN-rail mounting according to EN50022
- Status LED

Precision pressure transducer

Precision pressure transducer model HEISE HPO



- Non contacting optical sensor with diaphragm or bourdon tube
- Ranges from $\pm 0,2$ up to 0 ... 600 bar gauge, 0 ... 0,4 up to 0 ... 600 bar absolute
- Accuracy 0,05 %
- Output 0-5/10 VDC

Precision pressure transducer model HEISE DXD

- Digital pressure transducer with piezoresistive sensor element
- Ranges 0 ... 0,3 up to 0 ... 700 bar gauge or absolute
- Integrated temperature measurement and compensation
- Accuracy 0,02 %
- Output RS 232 or 485, suitable for connection in a network



Rangeable pressure and dp transmitter

Rangeable pressure transmitter model GC51

Applications:

Municipal water for pumping, tank level and General industrial for compressor control, process automation, hydraulic systems.

Features:

- Up to 8 times smaller than a conventional process transmitter
- Robust NEMA 4X (IP65) aluminum die cast housing
- Bright backlit LCD display
- All stainless steel wetted parts
- Ranges from 0/50 to 0/7500 psig and compound to -15/50 psi
- 2 wire 4-20 mA output
- Internal push-button configurability allows quick range changes
- Scaling function allows display to indicate arbitrary physical units
- "Loop Check" function allows unit to output 4-20 mA without applying pressure
- "Min/Max Hold" function allows display to capture pressure events
- Easily rotatable display, 90° increments



The new Ashcroft® Model GC51 is a uniquely compact pressure transmitter, ideal for monitoring pressures in process automation, hydraulic systems, compressors, pumps and in tank level applications where consistent, reliable pressure measurement is essential. The GC51 is equipped with Ashcroft's field-proven thin film sensor and can monitor a wide variety of wet or dry media.

Rangeable low differential pressure transmitter model GC52

Applications:

Pressurized and non-pressurized tank levels, flow measurement (liquid or gas), pollution monitoring equipment.

Features:

- Up to 8 times smaller than a conventional process transmitter
- Robust NEMA 4X (IP65) aluminum die cast housing
- Bright backlit LCD display
- All stainless steel wetted parts
- Ranges from 0/4 to 0/400 Inches W.C. and bi-directional ± 4 to ± 200 Inches W.C.
- 2 wire 4-20 mA output
- Internal push-button configurability allows quick range changes
- Scaling function allows display to indicate arbitrary physical units
- "Loop Check" function allows unit to output 4-20 mA without applying pressure
- Easily rotatable display, 90° increments



The new Ashcroft® Model GC52 is a uniquely compact wet-wet differential pressure transmitter, ideal for flow and tank level applications where reliable, low DP measurements are required. Equipped with the patented SiGlas™ 316 stainless steel isolated sensor, the GC52 can monitor a wide variety of wet or dry media.

Modular calibration systems

Digital precision pressure gauges and calibration systems for laboratory and field applications

Modular calibration systems PTE-1 and ST-2H:

- Equipped with one or two interchangeable measurement modules for pressure or temperature
- Differential pressure measurement with capacitive sensor from 0,6 ... 400 mbar
- Pressure measurement from -1 ... 700 bar gauge and up to 500 bar absolute with piezoresistive sensor element
- Accuracy 0,1; 0,05 or 0,025% F.S.
- Serial output RS-232
- Temperature measurement with RTD or thermocouples
- Voltage and current measurement for transmitter test



For field application Handheld-calibrator model PTE-1

- Portable handheld calibrator with data logger
- Extensive accessories (cases, test pumps, adapters)
- Optional intrinsically safe execution (FM-approval)

Calibration system for laboratory

- Desktop calibrator with data logger
- Optional NiCad rechargeable batteries
- Optional back lite display
- Optional power supply for transmitter test



Digital pressure gauges

Digital test gauge modell 3089 for field application

- Compact gauge with piezoresistive sensor
- Ranges from -1 ... 0 up to 0 ... 500 bar and 1 ... 3,4 bar absolute
- Accuracy 0,05% F.S. including temperature error (TEB, Total error band)
- CE, CSA and FM approval
- Min/Max storage, damping, back lite
- In field calibration



Digital Industrial Pressure Gauge

Digital pressure gauges model 2074, 2174 and 2274

- Ranges from -1 ... 1400 bar
- Accuracy 0,25% F.S.
- Output signal 4-20 mA and up to 2 SPDT switches
- Min/Max storage, damping, back lite
- Intrinsically safe acc. to FM und ATEX



Digital test gauge for laboratory modell PM

- Desktop precision pressure gauge with permanent pressure or temperature ports
- One or two measurement channels
- Differential pressure measurement with capacitive sensor from 0,6 ... 400 mbar
- Pressure measurement from -1 ... 700 bar gauge and up to 500 bar absolute with piezoresistive sensor
- Temperature measurement with RTD
- Accuracy 0,1; 0,05 or 0,025% F.S.
- Multiple functions for data
- Remote controlled by RS 232 interface



Precision bourdon tube pressure gauges

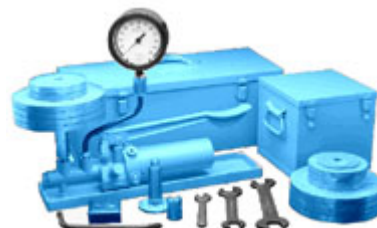
HEISE Precision pressure gauges models CM, CC, CMM



- Dial size 6", 8 ½", 12" or 16"
- Accuracy 0,1% (Grade 4A according to ASME B40.1)
- Ranges up to 7000 bar
- Aluminum, solid front, black epoxy coated case
- External zero adjustment and mirror dial
- Optional with bi-metallic temperature compensation

ASHCROFT Deadweight tester model 1305D

- 2-stage hydraulic pressure pump
- Accuracy 0,1% of reading
- Ranges 1000, 2000, 3000, 5000 and 10000 psi
- Complete with carrying case and accessories





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Norwegian Valve Group er leverandør av ventilløsninger til Olje- og Gass-industrien, samt landbasert prosessindustri.
Vårt produktspekter omfatter: kuleventiler, spjeldventiler, reguleringsventiler, tilbakeslagsventiler, sikkerhetsventiler, pluggventiler, GG&C-ventiler og aktuatorer med tilhørende kontrollsystemer

