



## Product Overview

### Pressure Measurement



## Process Instrumentation

Sensor Solutions  
Motion Control  
Vision Technologies

## Welcome to the World of Sensors and Measuring Instruments



Baumer – a name known worldwide for more than 56 years – is recognised as a leading producer of innovative sensor solutions for the factory and for the process automation industry.

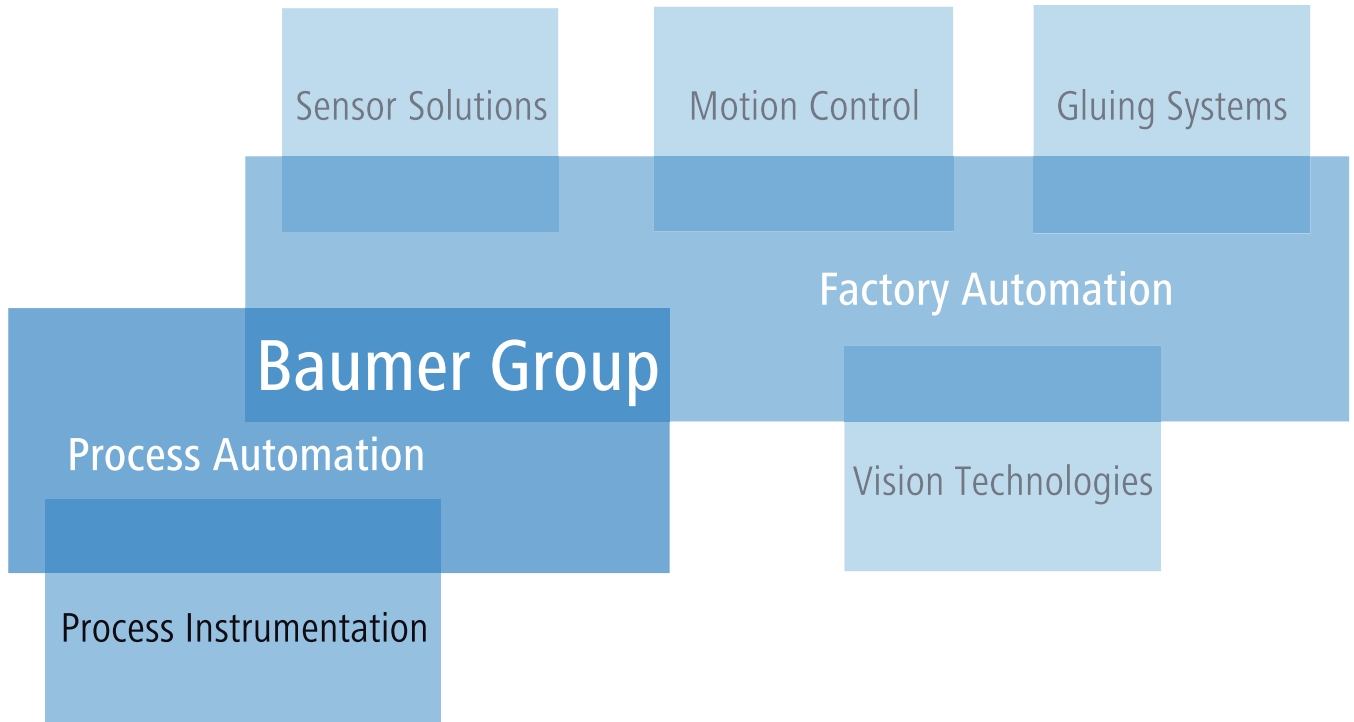
More than 2,000 employees in 16 countries work in the product segments: Sensor Solutions, Motion Control, Vision Technologies, Process Instrumentation and Gluing Systems. Our products keep processes running in innumerable fields.

The demands placed on sensors by industry can only be met by a company which constantly works innovatively. It is for this reason that Baumer maintains an outstandingly staffed development department in an international network of highly qualified specialists.

A global presence, offering the highest level of expertise with regard to consultation, sales and service, assures you of the well known Baumer standard of quality around the world.

In this catalog you will find a broad range of products for pressure measurement.

# Your Partner for Innovative Sensor Design



## Process Instrumentation

In the product segment Process Instrumentation, Baumer manufactures mechanical and electronic measuring instruments and offers customers one-stop solutions for pressure, temperature, level and conductivity measurement.

Our products are designed to provide precise measurement results whatever the environment. Through our expertise and knowledge, we are able to meet your requirements worldwide from standard to customized solutions.



## Electronic Technologies



### Thin film

- Linearity
  - Reliability
  - Excellent resistance against overpressure and pressure pulses
  - Wetted part all stainless steel
  - from 1 bar to 1600 bar gauge pressure
- Ideal for hydraulic and heavy duty applications



### Ceramic thick film

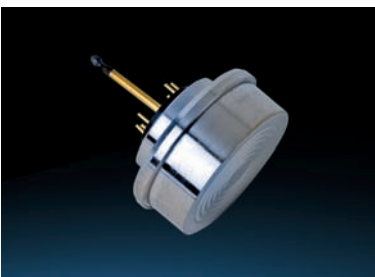
- Very low hysteresis
  - High resistance to most of chemical products
  - From 25 mbar to 600 bar, Gauge, absolute, compound pressure
- Covers a wide range of applications like industrial, gazes, railways, automotive industries



### Capacitive

The last technology developed by Baumer for low pressure ranges it shows:

- Very good long term stability
  - Very high resistance to overpressure
  - 100 mbar to 40 bar absolute, gauge pressure and compound pressure
- All applications with possible over pressure like water distribution, pumps, regulation systems



### Piezo-resistive silicon

- High accuracy
  - Long term stability and reliability
  - Pressure range from 100 mbar to 40 bar, absolute, gauge and compound pressure
- Sensor for accurate measurement in food and beverage, pharmaceutical and biotech industries  
Used as well in submersible transmitters

# Mechanical Technologies



## Bourdon tube Pressure Gauge

In 1849 the Bourdon tube pressure gauge was patented in France by Eugene Bourdon  
It is still the most commonly used device for the mechanical pressure measurement

- Measurement range from 600 mbar to 1600 bar
- Good resistance to corrosion for stainless steel type
- Good overpressure resistance
- Long life



## Capsule Pressure Gauge

Pressure is applied inside of the capsule, which changes shape

- Low gauge or differential pressure measurement from 6 mbar
- Stainless steel or cuprous alloy wetted parts
- Good overpressure resistance

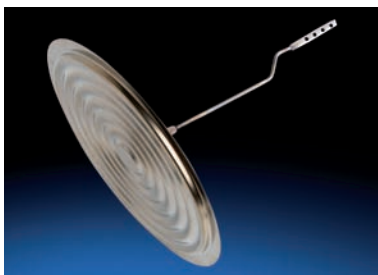


## Bellows Pressure Gauge

The pressure gauge incorporates a highly sensitive diaphragm bellows

The bellows expands with rising pressure there by driving the mechanism and pointer

- Differential pressure measurement from 100 mbar
- Absolute pressure measurement from 100 mbar
- All stainless steel wetted parts



## Diaphragm Pressure Gauge

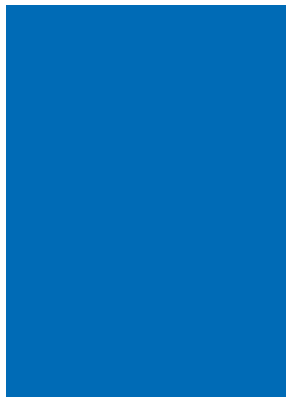
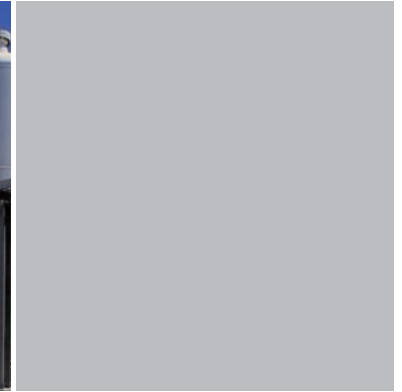
The pressure bend the diaphragm which drives the pointer through a rod and a mechanism

- Medium in contact with the diaphragm
- Pressure measurement from 600 mbar
- Without chemical seal nor liquid of transmission

# Baumer Pressure Products keep processes running in:

- Chemical, Petrochemical
- Food, Beverage
- Injection Molding, Die Casting
- OEM
- Medical Industry
- Pharmaceutical, Bio Technology, Cosmetics
- Transportation
- Water, Energy, Mining

And many others



# Table of Contents

Electronic Pressure Measurement	<ul style="list-style-type: none"><li>■ Industrial pressure transmitters</li><li>■ Hygienic pressure transmitters</li><li>■ Pressure transmitters with flush diaphragm</li><li>■ Pressure transmitters digital communication</li></ul>	8
Mechanical Pressure Measurement	<ul style="list-style-type: none"><li>■ Stainless steel pressure gauges</li><li>■ Safety pattern gauges</li><li>■ Differential pressure gauges</li><li>■ Pressure gauges with electrical contacts</li><li>■ Other pressure gauges</li></ul>	16
Pressure Switches	<ul style="list-style-type: none"><li>■ Digital pressure switches</li><li>■ Mechanical pressure switches</li></ul>	22
Diaphragm Seals	<ul style="list-style-type: none"><li>■ Diaphragm seals</li><li>■ Pressure seal for chemical processes</li><li>■ In Line Pipe</li><li>■ Combi Connect</li></ul>	24
Accessories	<ul style="list-style-type: none"><li>■ Accessories</li></ul>	28
Programmer	<ul style="list-style-type: none"><li>■ FlexProgrammer 9701</li></ul>	30
Additional Sensors	<ul style="list-style-type: none"><li>■ Temperature measurement</li><li>■ Level measurement</li><li>■ Angle and position measurement</li></ul>	31

# Electronic Pressure Measurement



				
Model	CTL (*), CTX	E91x	E61x	
Pressure range	-1...0 to 2.5...200 bar	-1...0 bar to 25 mbar...600 bar	-1...0 bar to 100 mbar...40 bar	
Overpressure	Max. 360 bar	Max. 800 bar	Max. 120 bar	
Accuracy (linearity, repeatability, hysteresis)	±2% F.S.	±1.5% F.S. <60 mbar = 600 bar ±2% F.S.	0.5% F.S.	
Output signal	4...20 mA, 0...10 V 1...5 V, 0.5...4.5 V	0...20 mA, 4...20 mA, 0...10 V, 1...5 V	4...20 mA, 0...10 V, 1...5 V	
Process connection	G¼, G½, ¼NPT, ½NPT	G¼, G½, ¼NPT, ½NPT, M20x1.5	G¼, G½, ¼NPT, ½NPT, M20x1.5	
Electrical connection	DIN 43650, pig tail cable outlet, M12 plug	DIN 43650, pig tail cable outlet, M12 plug, HE302 plug, ...	DIN 43650, pig tail cable outlet, M12 plug, ...	
Technology	Ceramic thick film	Ceramic thick film	Capacitive ceramic	
Protection class / Approval	IP 65	IP 65, IP 67, BV Marine Lloyd's Register	IP 65, IP 67 Lloyd's Register	
Other	(*) brass construction	Intrinsically safe version (Ex ia) conforms to ATEX Directive (Y91x)	FlexProgrammer kit: to configure the zero and the gain via USB	



## Industrial pressure transmitters

- For a wide range of applications in hydraulic or pneumatic
- Wide variety of electrical and hydraulic connections
- All stainless steel
- Welded construction – reinforced product
- Highly resistant to severe process conditions

The different technologies used in these instruments can bring most solutions posed by the pressure measurement in industrial environments

			
ED 701	PDR, PDA (Class A, B and C)	TED6, YTED	
100 mbar...40 bar	0...1600 bar	-1...0 to 0...400 bar	
Max. 120 bar	Max. 4000 bar	Max. 600 bar	
±0.1%, ±0.2%, ±0.4% F.S.	±0.15% to ±1.0% F.S.	±0.5% F.S.	
4...20 mA, 0...10 V, 1...5 V	4...20 mA, 0...5 V, 0...10 V, 1...5 V, 1...10 V	4...20 mA, 2xPNP switching outputs	
G¼, G¼ DIN 3852E, G½, ¼ NPT, ½ NPT	G¼, G¼ DIN 3852E, M12x1.5, M14x1.5 60 °Cone	G¼, ¼ NPT, G½, ½ NPT, M20x1.5, G¼ female	
DIN 43650, pig tail cable outlet, M12 plug, field housing, ...	M12x1-4 or 5 pins connector, MIL C26482, DIN 45322, PVC cable	M12-5 plug	
Piezo-resistive silicon	Metal thin film	Ceramic thick film	
–	IP 67	IP 65, ATEX	
–	–	300° swivelling version (option). Intrinsically safe version (Ex ia) conforms to ATEX Directive (YTED)	

# Electronic Pressure Measurement



				
<b>Model</b>	E93x	ED 701, hygienic	FlexBar HRT, hygienic	
<b>Pressure range</b>	-1...0 to 0.25...40 bar (60...600 bar for homogenizer)	100 mbar...40 bar	-1(0)...400 bar	
<b>Overpressure</b>	Max. 80 bar (max. 800 bar for homogenizer)	Max. 120 bar	400% of M.R., max. 600 bar	
<b>Accuracy</b> (linearity, repeatability, hysteresis)	±1.5% F.S.	±0.1%, ±0.2%, ±0.4% F.S.	±0.2% F.S.	
<b>Output signal</b>	0...20 mA, 4...20 mA, 0...10 V, 1...5 V	4...20 mA, 0...10 V, 1...5 V	4...20 mA, HART® protocol	
<b>Process connection</b>	Clamp, DIN, SMS, G½ or G1 with conical threading, homogenizer	Tri-Clamp, Clamp DIN 11864-3 and ISO 2852	ISO 2852 clamp, 3A approved, SMS 1145, DIN 11851	
<b>Electrical connection</b>	DIN 43650, pig tail cable outlet, M12 plug, HE302 plug	DIN 43650, cable output, M12 plug, field housing	DIN 43650, pig tail cable outlet, M12 plug, ...	
<b>Technology</b>	Ceramic thick film	Piezo-resistive silicon	Piezo-resistive silicon	
<b>Protection class / Approval</b>	IP 65, IP 67, BV Marine, CSA, FM, 3A-Sanitary Standard (option)	IP 65, IP 67, Lloyd's Register, ATEX II 2G and II 1D, Ex ia	IP 65, IP 67, Demko Ex ia, ATEX 3A option	
<b>Other</b>	Intrinsically safe version (Ex ia) conforms to ATEX Directive (Y93x)	Adapter for high temperature (cooling device)	Configurable with FlexProgrammer and HART® configurator. FlexView LC-display optional	

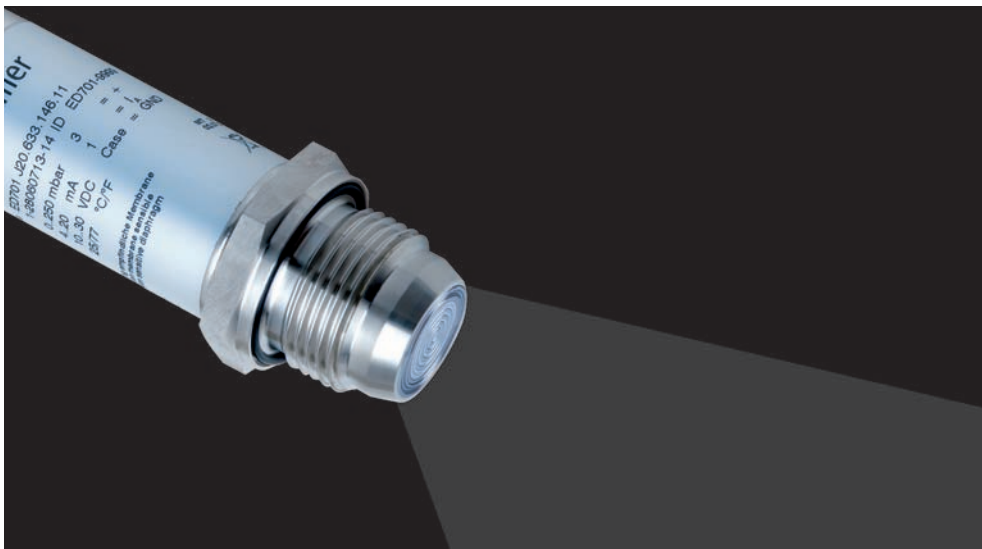
# Electronic Pressure Measurement

## Hygienic pressure transmitters with LC or LED Display

- For food and pharmaceutical industries
- Most hygienic fittings used in these industries are available
- All these products are designed to support the CIP (Cleaning-in-Place) and SIP (Sterilization-in-Place) cycles

			
FlexBar 3431, hygienic	TED6, hygienic		
-1(0)...400 bar	-1(0)...400 bar		
Max. 600 bar	Max. 600 bar		
±0.2% F.S.	±0.5% F.S.		
Profibus® PA communication	4...20 mA + 2 PNP switching output		
G½, ISO 2852 clamp, 3A approved, SMS 1145, DIN 11851	Clamp, DIN, SMS, G½ or G1 with conical threading		
Cable, gland M16, M12 plug	M12 plug		
Piezo-resistive silicon	Ceramic thick film		
IP 66, IP 67, Ex ia, ATEX II 1G 3A option	IP 65, ATEX		
Configurable with FlexProgrammer and Simatic® PDM® software. FlexView LC-display optional	Intrinsically safe version (Ex ia) conforms to ATEX Directive (YTED)		

# Electronic Pressure Measurement



				
Model	E92x	ED 701, ED 711	FlexBar HRT	
Pressure range	1.6...600 bar	100 mbar...40 bar	-0.1...0.4 to -1...400 bar	
Overpressure	Max. 800 bar	Max. 120 bar	400% of M.R., max. 600 bar	
Accuracy (linearity, repeatability, hysteresis)	±1.5% F.S.	±0.1%, ±0.2%, ±0.4% F.S.	±0.2% F.S.	
Output signal	0...20 mA, 4...20 mA, 0...10 V, 1...5 V	4...20 mA, 0...10 V, 1...5 V	4...20 mA, HART® protocol	
Process connection	G½, G¾, G1 and ½NPT flush diaphragm	G1 and G½ flush diaphragm with cone, G½ DIN 3852	G½ flush diaphragm, male nipple ½-14 NPT	
Electrical connection	DIN 43650, pig tail cable outlet, M12 plug, HE302 plug	DIN 43650, cable output, M12 plug, field housing	Cable, gland M16, M12 plug	
Technology	Ceramic thick film	Piezo-resistive silicon	Piezo-resistive silicon	
Protection class / Approval	IP 65, IP 67, BV Marine, CSA, FM, Lloyd's Register	IP 65, IP 67, Lloyd's Register, ATEX II 2G and II 1D, Ex ia	IP 65, IP 67, Demko Ex ia, ATEX 3A option	
Other	Intrinsically safe version (Ex ia) conforms to ATEX Directive (Y92x)	Adapter for high temperature (cooling device)	Configurable with FlexProgrammer and HART® configurator. FlexView LC-display optional	

# Electronic Pressure Measurement

## Pressure transmitters with flush diaphragm

- All stainless steel construction with flush diaphragm connection
- Measurements on viscous and heavy fluids
- FlexBar 3431 is a configurable pressure transmitter with Profibus® PA communication. The integrated display is optional
- The ED 752 is a submersible pressure transmitter completely made of stainless steel. It is suitable for all kinds of hydrostatic depth measurements

It covers a wide range of needs in the most diverse industrial applications

			
FlexBar 3431	ED 752	ED 753	
-1(0)...400 bar	0.1 mH2O...400 mH2O	0.1 mH2O...400 mH2O	
Max. 600 bar	Max. 120 bar	Max. 120 bar	
±0.2% F.S.	±0.2%, ±0.4% F.S.	±1% F.S.	
Profibus® PA communication	4...20 mA, 0...10 V, 1...5 V	4...20 mA, 0...10 V, 1...5 V	
G½, ISO 2852 clamp, 3A approved, SMS 1145, DIN 11851	Male thread M27 x 1.5 with different Stainless steel cap	Male thread M27 x 1.6	
Cable, gland M16, M12 plug	Cable outlet	Cable outlet	
Piezo-resistive silicon	Piezo-resistive silicon	Piezo-resistive silicon	
IP 66, IP 67, Ex ia, ATEX II 1G 3A option	IP 68, Lloyd's Register, ATEX II 2G and II 1D	IP 68	
Configurable with FlexProgrammer and Simatic® PDM® software. FlexView LC-display optional	Intrinsically safe version (Ex ia) conforms to ATEX Directive	–	

# Electronic Pressure Measurement



				
Model	FlexBar HRT, HART® protocol	FlexBar 3501, HART® protocol	FlexBar 3431, Profibus® PA	
Pressure range	-1(0)...400 bar	100 mbar...40 bar	-1(0)...400 bar	
Overpressure	Max. 600 bar	Max. 105 bar	Max. 600 bar	
Accuracy (linearity, repeatability, hysteresis)	±0.2% F.S.	±0.1% F.S.	±0.2% F.S.	
Output signal	4...20 mA, HART® protocol	4...20 mA, HART® protocol	Profibus® PA communication	
Process connection	G½, G¾, G1 and ½NPT flush diaphragm	G½, ½NPT, 3A hygienic connection, flush mount	G½ flush mount, hygienic connections	
Electrical connection	Cable, gland M1+, or M20, M12 plug, Din 43650	Cable, gland M20	Cable, gland M16, M12 plug	
Technology	Piezo-resistive silicon	Capacitive ceramic	Piezo-resistive silicon	
Protection class / Approval	IP 65, IP 67, Demko Ex ia, ATEX	IP 66, IP 67, Ex ia, ATEX II 1G	IP 66, IP 67, Ex ia, ATEX II 1G	
Other	Configurable with FlexProgrammer and HART® configurator FlexView LC-display optional	Configurable with FlexProgrammer and HART® configurator LC-display optional	Configurable with FlexProgrammer and Simatic® PDM® software FlexView LC-display optional	

# Electronic Pressure Measurement

## Pressure transmitters digital communication

Our transmitters integrate various communication protocols such as:

- Modbus™
- Hart®
- Profibus®
- CANopen




Barflex®: the most popular digital pressure gauge.

- Option: data acquisition

			
<b>CANopen</b>	<b>MODBUS</b>	<b>IrDA</b>	
PDRJ, PDAJ, CANopen	TEDM, Modbus™	BarFlex®	
0...1 to 0...1000 bar	-1(0)...400 bar	-1(0)...400 bar	
Max. 2000 bar	Max. 600 bar	Max. 800 bar	
±0.3% F.S.	±0.5% F.S.	±0.1%, ±0.25% F.S.	
CANopen DS404	RS-485, Modbus™ RTU 2 isolated switching out put	IrDA (infrared)	
G¼ female	G½, G¼, ½NPT, ¼NPT, hygienic connections	M12x5 DIN 2353, adaptor G½, ½NPT	
M12 plug, connector MIL C26482 or DIN 45322, PVC cable	M12-8 plug	IrDA port	
Metal thin film	Ceramic thick film	Ceramic thick film	
IP 66	IP 65	IP 55, ATEX	
–	Configurable with Modbus™ software	–	

# Mechanical Pressure Measurement



				
Model	MEX2, MEX3	MEX5, DRC 100	MIX7	
DN	50 and 63 mm	100 mm	150 mm	
Pressure range	-1...0 to 0...1000 bar -30"Hg to 0...15,000 psi	-1...0 to 0...1600 bar -30"Hg to 0...20,000 psi	-1...0 to 0...1600 bar -30"Hg to 0...20,000 psi	
Accuracy class	1.6	1.0	1.0	
Case material	Stainless steel	Stainless steel	Stainless steel	
Protection class	IP 65	IP 65	IP 65	
Sensing element material	Stainless steel, option: Monel	Stainless steel, option: Monel	Stainless steel, option: Monel	
Process connection	G $\frac{1}{4}$ , $\frac{1}{4}$ NPT	G $\frac{1}{2}$ , $\frac{1}{2}$ NPT, M20 x 1.5	G $\frac{1}{2}$ , $\frac{1}{2}$ NPT, M20 x 1.5	
Type of mounting	Bottom or back connection, panel mounting flange, clamp	Bottom or back connection, panel mounting flange, clamp	Bottom or back connection, panel mounting flange, clamp	
Approval and standards	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	



# Mechanical Pressure Measurement

## Stainless steel pressure gauges

- Bourdon tube, capsule or diaphragm element
- Corrosive environment
- Wide range of pressures from a few mbar to 1600 bar
- Many types of mounting and process connection
- Many options: material of windows, filling liquid, overpressure protection device, pointers
- Chemical, Petrochemical, Energy or Gas industries



MEX8

160 mm

-1...0 to 0...1600 bar  
-30"Hg to 0...20,000 psi

1.0

Stainless steel

IP 65

Stainless steel

G½, ½NPT, M20 x 1,5

Bottom or back connection,  
panel mounting flange, clamp

EN 837-1, Lloyd's Register,  
ATEX 94/9/CE (option)



MCX5, MCX7

100 and 150 mm

-25...0 to 0...600 mbar

1.6 and 2.5

Stainless steel

IP 65

Stainless steel

G½, ½NPT

Bottom or back connection,  
panel mounting flange, clamp

EN 837-1, ATEX 94/9/CE (option)



DPC 100 and 150

100 and 150 mm

-60...0 mbar to 0...25 bar

1.6

Stainless steel

IP 54

Duratherm 600, option PTFE coated

G½, flange

Bottom connection

DIN 16005




# Mechanical Pressure Measurement



## Safety pattern gauges

These safety pattern gauges have a blow out back and a baffle wall to prevent injury to the operator in case of accidental break of the Bourdon tube

- MEP5 is all Stainless steel made for corrosive applications Robust construction – fully welded process connection
- MPG6 is a «turret» design very often used in Oil Industries. Watertight and fillable with dampening liquid

			
Model	MEP5	MPG6, MPE6	MAN7
DN	100 mm	130 mm (4"½)	150 mm
Pressure range	-1...0 to 0...1600 bar -30"Hg to 0...20,000 psi	-1...0 to 0...1600 bar -30"Hg to 0...20,000 psi	-1...0 to 0...1600 bar -30"Hg to 0...20,000 psi
Accuracy class	1.0	0.5 (Grade 2A)	1.0
Case material	Stainless steel	Polypropylene (MPG6) Phenol (MPE6)	Stainless steel
Protection class	IP 65	IP 65	IP 52
Sensing element material	Stainless steel, option: Monel	Stainless steel, option: Monel	Stainless steel, option: Monel
Process connection	G½, ½NPT, M20x1,5	G½, ½NPT	G½, ½NPT
Type of mounting	Bottom connection, panel mounting (3 back lugs fixing)	Bottom connection, panel mounting (back flange)	Bottom or back connection, panel mounting flange
Approval and standards	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	ANSI B40.1	EN 837-1, ATEX 94/9/CE (option)
Others	Fillable	Fillable	Fillable

# Mechanical Pressure Measurement






## Differential pressure gauges

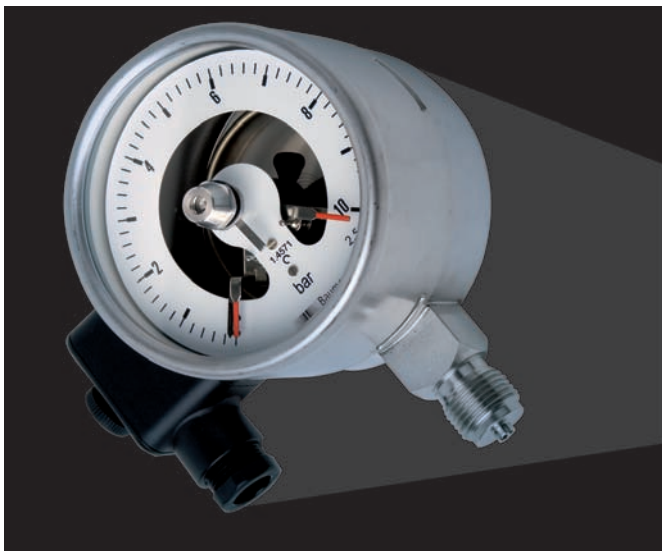
These pressure gauges indicate directly the difference of pressure between two pressure connections, "High Pressure" and "Low Pressure"

Typical uses:

- Level measurement
- Flow measurement
- Filters control

			
Model	MCD7	MX7, MZ7	MJ5, MJ7
DN	150 mm	150 mm	100 and 150 mm
Pressure range	-1...0 to 0...1000 bar -30"Hg to 0...15,000 psi	-1...0 to 0...1600 bar -30"Hg to 0...20,000 psi	0...75 mbar to 0...35 bar
Static pressure	Max. 250 mbar (4 psi)	Max. 100 bar (1450 psi)	Max. 400 bar (5800 psi)
Accuracy class	2.0	1.0	1.0
Case material	Stainless steel	Stainless steel	Stainless steel
Protection class	IP 66	IP 65	IP 65
Sensing element material	Stainless steel capsule	Two Stainless steel bellows	Stainless steel, option: Monel
Process connection	G½, ½NPT	G½, ½NPT	Female ½NPT
Type of mounting	Bottom connections, panel mounting (back flange)	ottom or back connections, panel mounting flange, pipe fitting	Wall mounting, pipe fitting
Approval and standards	—	ATEX 94/9/CE (Option)	ATEX 94/9/CE (Option)




# Mechanical Pressure Measurement



## Pressure gauges with electrical contacts

- All Stainless steel
- Local indication of the pressure
- Regulation or alarm actuation
- Intrinsically safe or explosion-proof version (conforms to ATEX)
- Chemical, Petrochemical, Energy or Gas industries

Many others series of pressure gauges with electrical contacts are available too

			
Model	MS5, MR5, DRCE 100, MEC5	MG5	M17, M27, M37, Mx8
DN	100 mm	100 mm	150 and 160 mm
Pressure range	-1...0 to 0...1600 bar -30"Hg to 0...20.000 psi	-1...0 to 0...1600 bar -30"Hg to 0...20.000 psi	-1...0 to 0...1600 bar -30"Hg to 0...20.000 psi
Accuracy class	2.0	2.5	2.5
Set points	1 or 2	1 or 2	1 or 2
Current rating	Dry contact / 0.4W-0.4VA min. 30W-50 VA max.	Inductive contact	Dry contact / 0.4 W-0.4 VA min. 30W-50VA max. or inductive contact
Case material	Stainless steel	Stainless steel	Stainless steel
Sensing element material	Stainless steel	Stainless steel	Stainless steel
Process connection	G½, ½ NPT	G½, ½ NPT	G½, ½ NPT
Type of mounting	Bottom or back connection, panel mounting flange	Bottom or back connection, panel mounting flange	Bottom or back connection, panel mounting flange
Protection class / Approval	IP 65, CE	IP 65, CE, ATEX Ex ia	IP 65, CE, ATEX Ex ia

## Other Pressure Gauges

### Specific Pressure Gauges and Transducers

In collaboration with our partners, we have developed a high performance range of instruments for measuring pressure

- Commercial and military aeronautics: hydraulic jackpressure measurement, helicopter braking rotor system
- Railway: pressure control of the braking system, Gauge cabdriving
- Naval applications: pressure or level measurement (motor, oil circuits, ...)
- Refrigerating installations: compressors



### Test and Precision Gauges

These products are used to calibrate (with pressure comparators) or to check other pressure gauges or transmitters mounted on industrial equipments

- MVX series, accuracy class 0.6
- MV series, accuracy class 0.25
- MTH series, accuracy class 0.1

### Standard Gauges

In addition to the stainless steel series, BAUMER also offers a wide variety of gauges with wetted parts made of brass for non-corrosive fluids and atmospheres

- MMD series: accuracy class 1.0, 0.4...60 bar, stainless 100 and 150 mm
- MIT series: accuracy class 2.5, -1...600 bar, stainless steel case DN63 and 100 mm
- MAT series: accuracy class 1.6 and 2.5, -1...400 bar, steel case DN40 to 100 mm






# Pressure Switches




## TED digital pressure switch

- Pressure control for industrial process management (level management, jack control, ...)
- Can be configured on site
- Auto-zero function
- Two set points, configured parameters of each threshold
- ATEX Ex ia version
- 300° swivelling version

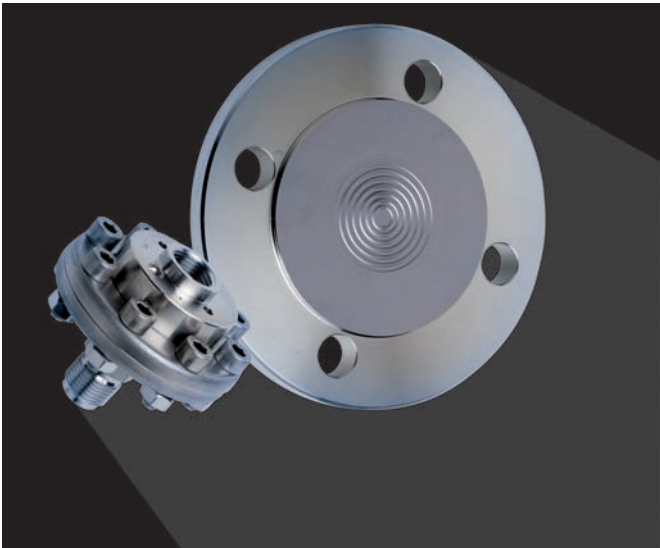
			
Model	TED5	TED6	YTED
Pressure range	-1...0 to 0...400 bar	-1...0 to 0...400 bar	-1...0 to 0...400 bar
Overpressure	Max. 600 bar	Max. 600 bar	Max. 600 bar
Accuracy (linearity, repeatability, hysteresis)	±0.5% F.S.	±0.5% F.S.	±0.5% F.S.
Supply voltage	18...32 VDC, unregulated	10...32 VDC, unregulated	10...28 VDC, unregulated
Output signal	4...20 mA, 3 wire, 2 isolated switching out put	4...20 mA, 2 wire, 2 PNP switching out put	4...20 mA, 2 wire, 2 PNP switching out put
Process connection	G¼, ¼ NPT, G½, ½ NPT, M20x1.5, G¼ female	G¼, ¼ NPT, G½, ½ NPT, M20x1.5, G¼ female	G¼, ¼ NPT, G½, ½ NPT, M20x1.5, G¼ female
Electrical connection	M12-8 plug	M12-5 plug	M12-5 plug
Technology	Ceramic thick film	Ceramic thick film	Ceramic thick film
Protection class / Approval	IP 65, Lloyd's Register	IP 65, Lloyd's Register	IP 65, ATEX Ex ia IIC T6 and T5
Other	300° swivelling version (option)	300° swivelling version (option)	300° swivelling version (option)

## Mechanical instruments

- From vacuum to 600 bar
- All industrial environments
- Power generation safety equipments
- Intrinsically safe or explosion-proof version (conforms to ATEX)
- Nuclear versions

			
Model	RP2 series	RP series	RD series
Pressure range	1...100 bar	-50...0 mbar to 60...600 bar	-2.5...2.5 mbar to 2.5...30 bar
Overpressure / Static pressure	Max. 200 bar	Max. 800 bar	0.15...220 bar
Reproducibility	±2% F.S.	±2% F.S.	±2% F.S.
Current rating	10 mA...10 A, 250 VAC max. / 220 VDC max.	5 mA...10 A, 250 VAC max. / 220 VDC max.	5 mA...10 A, 250 VAC max. / 220 VDC max.
Set points	1	1 or 2	1 or 2
Protection class	IP 65	IP 65	IP 65
Measuring element	1.4404 (316L) Stainless steel	According to range and model: steel, Viton®, st. steel, EPDM	According to range and model: steel, Viton®, st. steel, EPDM
Process connection	¼ NPT, G½, ½ NPT	G¼, ¼ NPT, G½, ½ NPT	G¼, ¼ NPT, G½, ½ NPT
Housing / body material	Polyamide PA6 / Aluminium alloy	Aluminium alloy	Aluminium alloy
Approval and standards	ATEX, Ex ia (RP2Y), Ex d (RP2E)	ATEX, Ex ia (RPPY), Ex d (RPPE)	ATEX, Ex ia (RDY), Ex d (RDE)

# Diaphragm Seals



## Diaphragm Seals

In the world of pressure measurement, the chemical seals has a predominant place. Our range allows a pressure measurement when corrosive, toxic, viscous or turbid fluids are present in the process, or when hygienic requirement are expected

- All Stainless steel is the standard
- Various material
- PTFE, Halar or Gold coating
- Easy maintenance

				
Model	D040, D041	D05x series	D1xx, D2xx, D3xx series	
Type	Single piece threaded connection	Flush diaphragm threaded connection	Standard threaded connection	
Range	D040 : 0...1 to 0...16 bar D041 : 0...16 to 0...250 bar	0...1 to 0...600 bar	D1xx: 0...4 to 0...160 bar D12x: 0...160 to 0...1000 bar D2xx: 0...1 to 0...40 bar D3xx: 0...0.16 to 0...25 bar	
Wetted parts	Stainless steel	Stainless steel	Stainless steel, Hastelloy, Tantalum, Monel, Plastic	
Working temperature	-60 °C...+200 °C	-60 °C...+200 °C	-60 °C...+200 °C	
Process connection	G $\frac{1}{4}$ , $\frac{1}{4}$ NPT, G $\frac{1}{2}$ , $\frac{1}{2}$ NPT, $\frac{3}{4}$ NPT $\frac{1}{4}$ BSP-Tr, $\frac{1}{2}$ BSP-T	G $\frac{1}{4}$ , G $\frac{1}{2}$ , $\frac{1}{2}$ NPT, G $\frac{3}{4}$ , $\frac{3}{4}$ NPT, G1, 1NPT, G1 $\frac{1}{2}$ , 1 $\frac{1}{2}$ NPT, G2, 2NPT	G $\frac{1}{4}$ , $\frac{1}{4}$ NPT, G $\frac{1}{2}$ , $\frac{1}{2}$ NPT, G $\frac{3}{8}$ , $\frac{3}{8}$ NPT,	
Approval	–	–	–	





# Diaphragm Seals

- Hygienic connections for Food and Beverage or Pharmaceutical, 3A-approval
- Cleaning-In-Place (CIP) and Sterilization-In-Place (SIP) without major disassembly and assembly work
- Flange connection for Chemical or Oil industries
- Thread connection for industrial uses

			
DAxx series	D4xx, D6xx series	D8xx series	15xx, 16xx series
Hygienic pressure applications	Flanged connection	Flush diaphragm flanged connection	One-piece tubular seal
0...1 to 0...40 bar	-1...0 to 0...400 bar	-1...0 to 0...400 bar	0...1 to 0...60 bar
Stainless steel	Stainless steel, Hastelloy, Tantalum, Monel, Plastic	Stainless steel, Hastelloy, Tantalum, Monel,	Stainless steel
-20 °C...+150 °C	-60 °C...+200 °C	-60 °C...+400 °C	-20 °C...+150 °C
Clamp ISO/DIN, SMS 1145, DIN 11851, Varivent®	ISO / ANSI / EN 1092-1 - Flanges	ISO / ANSI / EN 1092-1 - Flanges	Clamp ISO/DIN, SMS 1145, DIN 11851, Sterile connection
3A-Sanitary standard. Complies with FDA recommendations	–	–	3A-Sanitary standard (1620 series)



## Pressure Seal for Chemical Processes D900 series

D900 series are flange connection chemical seals mainly designed for level measurement in chemical and oil industries

- Minimum range 100 mmH<sub>2</sub>O / 0.1 bar with static pressure up to 100 bar
- Stainless steel or Hastelloy C diaphragm. Gold coated for H<sub>2</sub>S application in option
- Maximum operating temperature +400 °C.
- ANSI or EN forged Stainless steel flange with drain, vent and built-in vapour tracing

D900 series can be fitted on Baumer process transmitter (Flexbar 3501, EDD575), or on many other Process transmitters



## Chemical Seal Guide

The chemical seal is an important component of a measuring system. Wrong choice, bad mounting or bad use may cause wrong measurement.

There are many kind of chemical seals with many materials, many type of connection, many filling liquids. To help our customers to find the right model according to his pressure device and his application, Baumer has done a Chemical Seal Guide.



# Diaphragm Seals

## InLine Pipe with 3A connection

InLine Pipe is a system of hygienic pipes with one or two integrated unions for 3A/DN38 connections  
The pipes fit the 3A/DN38 versions of the Flexbar HRT flush diaphragm pressure transmitter

- No "dead areas" in the pipe
- All Stainless steel
- Reduces welding and finishing difficulties
- Complies with the directives and standards from 3A, FDA, EHEDG and EN 1672-2

The InLine pipe with 2 unions is the perfect choice.



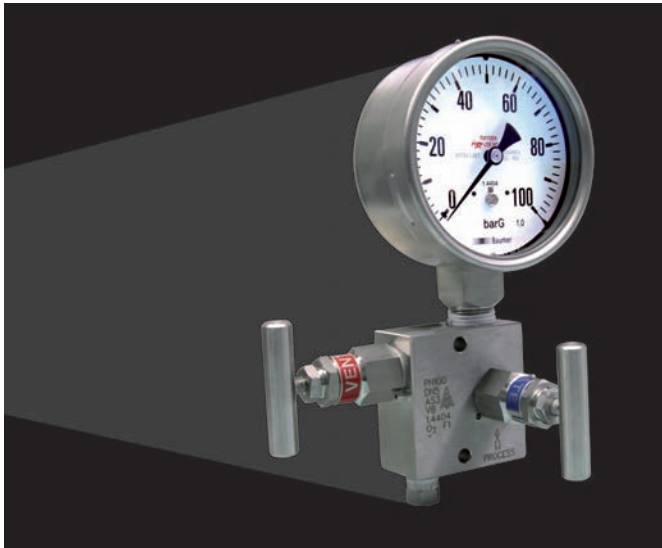
## Combi Connect Hygienic Connections

Combi Connect series a hygienic replaceable connections  
Compatible with Flexbar HRT, Flexbar 3431, ED 701, pressure transmitter and the Combitemp PT 100 sensors

- All Stainless steel
- Quick mounting
- High flexibility
- Wide range of connections
- Complies with the directives and standards from 3A, FDA, EHEDG and EN1672-2



# Accessories



## Accessories

Our range of accessories allows to protect your pressure gauges or transmitters against high temperature, overpressure or variation in pressure:

- All Stainless steel is the standard
- Various material
- Easy maintenance

Valve and Manifold are recommended to allow the removal of the pressure device without stopping your process

Model	AORP, AORPB	ARA	ASIP
Type	Pressure limiter	Pressure dampener	Siphon
Range	AORP: 3...400 bar AORPB: 0.1...16 bar and Vacuum	—	—
Max. pressure	700 bar	600 bar	400 bar
Wetted parts	Stainless steel, Viton®	Stainless steel, Steel or Brass	Stainless steel, Carbon steel
Working temperature	+150 °C maxi	+250 °C maxi	+400 °C maxi
Process connection	½NPT female thread	G½, ½NPT female thread	G½, ½NPT male or female thread

In case of high fluid process temperature, it is necessary to move away the pressure device with:

- A siphon for condensable fluids
- A capillary for non-condensable fluids

In case of vibrations, it is necessary to move away the pressure device with a capillary

			
Model	AKPL	ARPX	AMFD
Type	Capillary	Needle valve	Manifold 2, 3 or 5 ways
Range	–	–	–
Max. pressure	1000 bar	400 bar	420 bar
Wetted parts	Stainless steel	Stainless steel / PTFE	Stainless steel / PTFE
Working temperature	+400 °C	+250 °C maxi	+200 °C maxi
Process connection	G½, ½ NPT male or female thread	G½, ½ NPT male or female thread	½ NPT female thread


# Programmer



## FlexProgrammer 9701

### Flexibility is the key

- Dedicated configuring tool for Baumer products
- Portable flexibility with battery supply
- Operated and recharged from a USB port
- Display for remote monitoring
- DTM-based device drivers
- Easy-to-use dedicated software

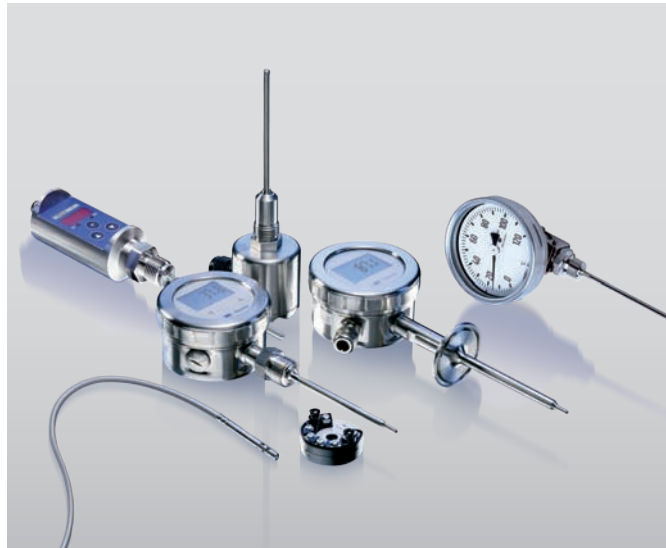
		
Model	FlexProgrammer 9701	
Characteristics	<ul style="list-style-type: none"> <li>- Easy configuring with menu control function</li> <li>- Data transfer from PC to device via USB</li> <li>- Configuration of a device on the spot without a PC</li> <li>- Robust plastic case with digital display and buttons</li> <li>- Rechargeable battery type NiMH 2,4 V, 450mAh</li> <li>- Free FlexProgram updates from our web site</li> </ul>	
Supply voltage	From USB-port or from rechargeable battery	
Software	FDT based, user-friendly menus with help function	
Ambient values	0...+50 °C, rel. humidity <90%	
Protection class	IP 42	

# Additional Sensors from our extensive range

## Temperature Measurement

- Rugged all Stainless steel design options
- Wide range of mechanical design and electrical outputs
- Programmable head mounted transmitters and displays
- Process temperatures up to +600 °C

More information at: [www.baumerprocess.com](http://www.baumerprocess.com)



## Level Measurement

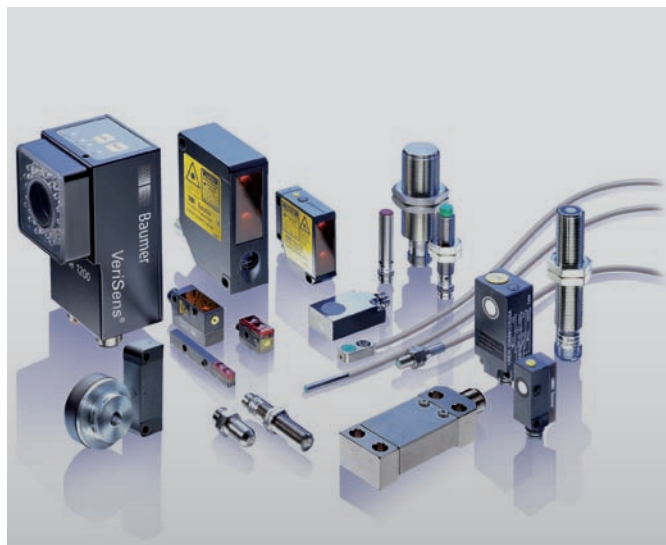
- 6 measurement technologies
- For solid and liquid materials
- 3A-Sanitary Standard
- With or without contact with the media
- Distance measuring up to 2.5 metres

More information at: [www.baumerprocess.com](http://www.baumerprocess.com)

## Angle and Position Measurement

- Rotary encoders and actuators in Stainless steel
- Inductive sensors in complete metal housing
- Vision Sensor *VeriSens*® in Stainless steel, ideal for inspection of profile, presence and position of objects
- Optical sensors on fibre optic light guide basis for difficult conditions

More information at: [www.baumerprocess.com](http://www.baumerprocess.com)



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