

#### NOT JUST ANOTHER PRESSURE GAUGE THE ORIGINAL.



## The Original Bourdon

History and Innovation

#### "The Best Way Towards A Bright Future Is A Bright Past. "

When he discovered the manometer, Eugène Bourdon was searching for improvement but found a solution that would endure for centuries. Our engineers, much like Bourdon himself, continually find themselves facing challenges: Know the unknown and continuously optimize to find a solution.

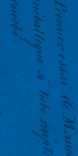






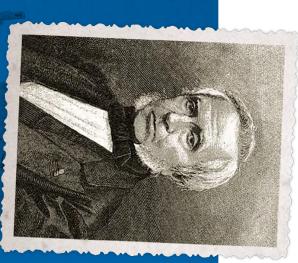












It's All About The Internals.

**S**Bourdon

#### Monel, with or without blowout plug on the back. Safety level \$1,\$2 or \$3 Case: Stainless steel or

polycarbonate or safety glass Window: Instrument glass,

Process connections (several types: 6 1/2,1/2 NPT, M20x1.5...)



Vent plug filling with damping fluid (e.g. glycerine, silicone, etc. depending on Optional: Dry, without filling

Movement: Stainless steel, optionally available with silicone damping (Dashpot) vibrations or pulsations

Standard: EN837-1 or ASME B40.1.

Dial: Optional customer







# SBourdon Our Process



# Our gauges are assembled here in the USA

Science and history have taught us that improvement and optimization call for extraordinary experience as well as bright, curious minds that are able to confidently explore new territory. Bourdon, is a pioneer. As a pioneer, Bourdon sees in each new situation an opportunity to discover and develop a unique method or process of innovation.

Bourdon continues manufacturing the famous Bourdon products, adding on modern production and quality methods which provide significant benefits especially for the Oil & Gas industry, Production starts with the bending of the Bourdon tube and finishes with final testing and compliance of our BTrace standards.



## BTrace comprises of six elements

Bourdon Business System for process optimization in production and management

Traceability throughout the whole order process

Reliability compliant to the "Zero Defect Philosophy" (ZDP)

Automation representing the advanced and computer-based calibration and certification system

Consistency in continuous optimization based on Lean Management, MUDA and KAIZEN

Excellence for highest quality to the customer





# PROUDLY SERVING MULTIPLE INDUSTRIES FOR OVER 150 YEARS.



## **Industries We Serve**



OIL & GAS





**MACHINE BUILDING** 





**TRANSPORTATION** 



**CUSTOMER SPECIFIC** 



Options to be added	Pressure Ranges psi	Silicone	Glycerine	Low Temp Glycerine	Dry	Fill Options	1/2" NPT	1/4" NPT	1/8" NPT	Connection Type	Back connection with clamp	Back connection, 3 back lugs fixing	Bottom connection	Bottom / front flange	Back connection, front flange, 3 mounting holes	Bottom connection, 3 back lugs fixing	Mounting / Style STAINLESS STEEL CASE AND BEZEL RING 1/430 (AISI 304)		6"	4.5"	4 "	2.5*	2"	1.5"	Dial Size	Stainless case with stainless internals (6")	Process gauge, stainless internals (4.5")	Stainless Case with stainless internals (1.5, 2, 2.5, 4, 4)	Stainless Case with brass internals (2.5", 4")	Forged Brass (2.5", 4")	Modal	S PART NUMBER NOMENCLATURE	
																										MIX	MPG	MEX	MAX	MAG			
																			7	6	v,	3	2	↦									
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5 H13 0-19 AVA V 19 A	-30" Hg -15	Code	psi psi	Code	<b>psi</b>	Code	<b>psi</b>	
5 H13 0-10 H3 0 H15 0-15 H25 0 H1C 0-20 H26 0 H17 0-30 H27 50 H21 0-60 H30 0 H21 0-100 H31	5. H13 0-10 0 H15 0-15 0 H1C 0-20 0 H17 0-30 0 H19 0-60 20 H21 0-100	Н59	-30" Hg - 0	H82	-30" Hg - 300	H22	П	0 - 160
00 H15 0-15 H25 00 H1C 0-20 H26 00 H17 0-30 H27 50 H19 0-60 H30 20 H21 0-100 H31	00 H15 0-15 00 H1C 0-20 00 H17 0-30 00 H19 0-60 00 H21 0-100	H73	-30" Hg - 15	H13	0-10	Н23		0 - 200
00 H1C 0-20 H26 00 H17 0-30 H27 50 H19 0-60 H90 20 H21 0-100 H31	00 H1C 0-20 00 H17 0-30 50 H19 0-60 20 H21 0-100	H75	-30" Hg - 30	H15	0-15	H25		0 - 300
00 H17 0-30 H27 50 H19 0-60 H30 20 H21 0-100 H31	00 H17 0-30 50 H19 0-60 20 H21 0-100	H2C	-30° Hg - 60	H1C	0 - 20	H26		0 - 400
50 H19 0-60 H30 20 H21 0-100 H31	50 H19 0-60	H78	-30" Hg - 100	H17	0 - 30	H27		0 - 600
20 H21 0-100 H31	20 H21 0-100   mg holes, case material 1.4301 -	H79	-30" Hg - 150	H19	0 - 60	H30		0 - 1000
	Example  Ill dainless streel pressure gauge   dominal size 4°   lack connection, front flange, 3 mounting holes, case material 1.4301	H81	-30" Hg - 220	H21	0-100	H31	_	0 - 1500
ll sainless seel pressure gauge ◀	Il dainless steel pressure gauge   ominal size 4"   ack connection, front flange, 3 mounting holes, case material 1.4301   rocess connection 1/2 NPT	:xample						
	oursea 3xez	ll stainless steel pres	sure gauge 🔺				_	5

# S BRASS INTERNAL OPTIONS









SPEED AVAILABILITY SERVICE

	MAX3	MAX5	MAG3	MAG5
Protection	IP65	IP65	IIP66	IP66
Size	2.5*	4.	2.5*	4,
Range	Vac15,000 psi	Vac15,000 psi	Vac15,000 psi	Vac15,000 psi
Accuracy	1.6	14	1.6	12
Wetted Parts	CopperAlloy	Copper Alloy	Copper Alloy	Copper Alloy
Element	Bourdon Tube	Bourdon Tube	Bourdon Tube	Bourdon Tube
Case	Stainless	Stainless	Brass	Brass
Process Connection	1/4 NPT	1/4 NPT 1/2 NPT	1/4 NPT	1/4 NPT 1/2 NPT

# 15,000 psi 71/2 NPT

# Prepared for any requirement.

## Reliable results even under extreme conditions

Bourdon stands for more than 150 years of expertise in measuring technology. The patented original Bourdon Tube by French engineer Eugene Bourdon, firmly branded the company history and is still the essential component of precise mechanical pressure measuring instruments.



rass Internal Options | 11

### PRESSURE GAUGES

















AVAILABILITY SERVICE

SPEED

1/4 NPT 1/2 NPT	Stainless	Bourdon Tube	Stainless	12	Vac20,000 psi	4.	IP65
1/4 NPT 1/2 NPT	Polypropylene	Bourdon Tube	Stainless	0.5	Vac20,000 psi	4.5*	IP67
1/4 NPT 1/2 NPT	Stainless	Bourdon Tube	Stainless	Н	Vac20,000 psi	4.	IP67
1/4 NPT 1/2 NPT	Stainless	Bourdon Tube	Stainless	Ľ	Vac20,000 psi	6,	IP65

Element

Bourdon Tube

Wetted Parts

Stainless

Stainless 1.6

Stainless 1.6

2.5

**Process Connection** 

1/8 NPT 1/4 NPT

1/4 NPT

1/4 NPT

Stainless Bourdon Tube

Stainless Bourdon Tube

ATEX

Lloyds Register / ATEX

Lloyds Register / ATEX

Lloyds Register / ATEX

S3 Safety Level

Lloyds Register / ATEX

Lloyds Register / ATEX

Size

1.5\* IP33/43

2"

2.5"

IP65 MEX2

IP65

MEX3, MEM3

MEX5, MEM5

MPG6

MEP5

MIX7

20...300 psi

Vac....15,000 psi

Vac....15,000 psi

MMX1

### Principle of a Bourdon Tube

material of the tube is magnified by forming the circular form in cross-section when pressurized. Although this change in cross-section may be elastically, as it is pressurized. the entire tube tends to straighten out or uncoil, tube into a C shape or even a helix, such that of easily workable materials, the strain of the nearly imperceptible, and thus involving only A flattened tube tends to straighten or regain its moderate stresses within the elastic range





Minimizing vibrations or pulsations:



Our excellence in product quality has won us recognition with prestigous certifications from many different regulatory bodies. Bourdon complies with many norms and approvals







Pressure Gauges | 13

## S DIAPHRAGM SEALS











D400

DA

	(

Stainless, Hast C, Tantalum, Monel	Stainless	Flanged
Stainless	Stainless	Sanitary Clamp

Measuring Ranges

N/A

N/A

N/A

N/A

3...6,000 psi

15...600 psi

• 24 hour shipping guarantee

Rapid part development

Same day order processing

Same day response time

**Body Standard** Diaphragm

> Stainless Threaded-Flush

Stainless 15...10,000 psi

Stainless

15...6,000 psi

Vac...15,000 psi

Stainless, Hast C, Tantalum, Monel

Stainless

Stainless

Threaded 믁

**Process Connection** 

D055

DG

# **Chemical Seals**





coatings for extremely aggresive media. Highly risistant memberane materials and



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Diaphragm Seals | 15







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Y913

X913







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14	2/			



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	SA XX		

Approvals	Electric Connections	Connections	Accuracy	Technology	Output	Wetted Materials	Measuring Ranges	Protection Ratings
	M12-4 / DIN 43650 /cable	1/4 NPT 1/2 NPT	0.5% (BFSL)	Ceramic Thick Film	420 mA	Stainless / Ceramic / NBR /EPDM /FKM	Vac3000 psi	IP65,67
ATEX	M12-4 / DIN 43650 / Cable	1/4 NPT 1/2 NPT	0.3% (BFSL)	Ceramic Thick Film	420 mA	KM Stainless / Ceramic / NBR /EPDM /FKM	Vac10,000 psi	IP67
ATEX / Hazardous Area: 11,12,21,22	1/2 NPT Conduit w/cable & Internal terminal strip gland	1/4 NPT 1/2 NPT	0.3% (BFSL)	Ceramic Thick Film	4.20 mA		Vac10,000 psi	IP65
Approvals	Current Ratings	Connections	Repeatability	Over Pressure	Set Points	Wetted Materials	Measuring Ranges	Protection Rating
	gs					ials	nges	ting
ATEX	10mA to 10 A max 250 VAC / 220 VDC	1/4 NPT 1/2 NPT	1%	3000 psi	1-7	Stainless	151500 psi	IP66

#### RP2

	IP65	Protection Rating	IP66
Vac10,000 psi Measuring Ranges 151500 psi		Measuring Ranges	151500 psi

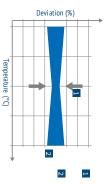
# **The Bourdon In-House Cell Competence**Bourdon provides the optimum technology

for your specific application



#### **Total Error Band**

over a temperature range. (linearity, hysteresis, repeatability) and the thermal drift The total error band specifies the characteristic deviation



### **Mechanical Pressure Switches**

power plants A proven technology for



- Your supply chain partner
- Your custom part solution
- Parts you need, when you need them
- Largest stock selection in our industry

## PRESSURE ACCESSORIES



Consistent info the first time

Technical expertise

 Dedicated regional Commitment to quality

SERVICE CO

support





chemical seal needs. assembly of your gauge and Bourdon provides complete







Pressure Accessories | 19

### THERMOMETERS





**GAS FILLED** 

TSS

TSF

BI-METAL	TBI
Protection Rating	IP67
DialSize	3,4,5,6
Ranges	-100_1100 F
Accuracy	1

Accuracy Gase Materials Stem Lengths Stem Lengths Sensing Element	Staintess 25°-36° Staintess Bimetal NA
Materials Lengths	Stainless 25°-36° Stainless Bimetal
rsing Element	Stainless Bimetal
Capillary	NA



Protection Rating	IP65	IP65
Dial Size	2.5",3",4",6"	2.5",3",4",6"
Ranges	-1001100 F	-1001100 F
Accuracy	1	1

se Materials	Stainless	Stainless
em Lengths	4"-36"	4"-36"
nsing Element	Stainless Gas Filled	Stainless Gas Filled & Capillary

Connection Size 1/2 NPT 1,	Capillary NA 1
1/2 NPT	12"-80"
	1/2 NPT

Approvals Connection Size

1/2 NPT ATEX



Measuring Ranges	Protection Rating	SWITCHES
-40650 F	IP66	RT2

Wetted Parts

Current Ratings	Repeatability	Set Points
10mA to 10 A max 250 VAC / 220	1% FS	-

Connection	Sensor Type	Current Ratings
1/2 NPT	Stem or with Capillary	10mA to 10 A max 250 VAC / 220 VDC

Approval	
ATEX	

sensor placement. accurately is a question of proper To measure temperature

rely on competent advice With Bourdon you can always









AVAILABILITY SERVICE SPEED

Bourdon complies with many norms and approvals Our excellence in product quality has won us recognition with prestigous certifications from many different regulatory bodies.

#### THERMOWELLS









	T8410, T9093, T9143, T9346	T8416,T9144,T9367	AGW, AGF
Process Connections	Threaded	Welded	Flanged & Threaded
Process Temp	1100 F	1100 F	1100 F
Pressure Max	3600 psi	3600 psi	6000 psi
Materials	Brass / Steel / Stainless Steel	Steel / Stainless Steel	Stainless Steel
Length	2"-36"	2*- 36*	4"-36"
Immersion Tube	4,6, & 8 mm	6,8 mm	7-18 mm





#### **Worldwide Presence**

Worldwide certified quality.



Assembly in the U.S.A., ensures the speed, availability, and service you need.

Atlanta, GA U.S.A France

India Venezuela

Switzerland Germany

Denmark Saudi Arabia

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BourdonUSA.com

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