Baumer
Passion for Sensors

BOURDON
The Original by Baumer

Process Instrumentation

Product Overview

Partnership.
Precise.
Pioneering.

Visibly better: Baumer sensors.

The Baumer Group is leading at international level in the development and production of sensors, shaft encoders, measuring instruments as well as components for automatic image processing. As an owner-managed family business, we employ about 2300 workers worldwide in 38 subsidiaries and 19 countries. With marked customer orientation, consistently high quality and vast innovation capability, Baumer develops specific solutions for many industries and applications worldwide.

Our standards – your benefits.

- Passion coupled with expertise – both have made us a sensor pioneer and technology leader
- Our range of services is hard to beat – we have the right product, developed by our own team, for every task
- Inspiring through innovation – a challenge Baumer employees take on every day
- Reliability, precision and quality – our customers' requirements are what drives us
- Partnership from the start – together with our customers we develop suitable solutions
- Always a step ahead – thanks to our production depth, our flexibility and our delivery reliability
- Available worldwide – Baumer is Baumer everywhere

Today's innovation at Baumer and its original Bourdon®.

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. Baumer, like Bourdon, is a pioneer. And as a pioneer, Baumer sees in each new situation an opportunity to discover and develop a unique method or process, to innovate.
Baumer still continues manufacturing the famous Bourdon® products adding on modern production and quality methods which provide significant benefits especially for the oil & gas industry. The production of a Bourdon® tube starts at the bending machine, where metal tubes get their characteristic C-shape and are cut to length. In the next step, the tubes are welded to the process connection and partly undergo a heat treatment and over pressure cycle. Then the manometers are carefully assembled by hand and finally adjusted and calibrated in a semi-automated process. All steps are monitored and documented by the Baumer Traceability System. *BTrace*® is a unique method in order fulfillment within the Baumer Production System. Closely intertwining the methodologies of Lean Management, MUDA and KAIZEN, *BTrace*® creates added value for the customer in terms of cost efficiency, reliability, traceability, consistency and excellence.

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Pressure gauges

Principle of a Bourdon® tube

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

	 MMX1	 MEX2	 MEX3, MEM3	 MEX5, MEM5
General Data	■ For corrosive gases and liquids ■ Fully welded process connection	■ For corrosive gases and liquids ■ Fully welded process connection	■ For corrosive gases and liquids ■ Fully welded process connection	■ For corrosive gases and liquids ■ Fully welded process connection
Industries	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery
Nominal size (mm)	40	50	63	100
Measuring ranges	0 ... 1.6 bar to 0 ... 25 bar	-1 ... 0 bar to 0 ... 1000 bar	-1 ... 0 bar to 0 ... 1000 bar	-1 ...0 bar to 0 ... 1600 bar
Accuracy (according to EN 837-1)	Class 2.5	Class 1.6	Class 1.6	Class 1
Wetted parts material	Stainless steel 1.4404 (316L)	Stainless steel 1.4404 (316L)	Stainless steel or Monel 400	Stainless steel or Monel 400
Measuring element	Bourdon tube	Bourdon tube	Bourdon tube	Bourdon tube
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Process connection	G 1/8 G 1/4 1/8 NPT 1/4 NPT	G 1/8 G 1/4 1/8 NPT 1/4 NPT	G 1/8 G 1/4 1/8 NPT 1/4 NPT	G 1/2 G 1/4 1/2 NPT 1/4 NPT
Protection rating	IP 65	IP 65	IP 65	IP 65
Approval	ATEX II2GDc-IM2c	ATEX II2GDc-IM2c Lloyd's Register	ATEX II2GDc-IM2c Lloyd's Register	ATEX II2GDc-IM2c Lloyd's Register
Additional information		Option: ■ With damping fluid	Option: ■ With damping fluid	Option: ■ With damping fluid

Baumer's portfolio provides various pressure measuring technologies on mechanic instruments. With Bourdon® tube, diaphragm, capsule and bellow types we cover pressure ranges from 0 … 4 mbar to 0 … 1600 bar.

	MIX7, MIM7	MEX8
General Data	■ For corrosive gases and liquids ■ Long term reliability	■ For corrosive gases and liquids ■ Long term reliability
Industries	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery
Nominal size (mm)	150	160
Measuring ranges	-1 ... 0 bar to 0 ... 1600 bar	-1 ... 0 bar to 0 ... 1600 bar
Accuracy (according to EN 837-1)	Class 1	Class 1
Wetted parts material	Stainless steel or Monel 400	Stainless steel 1.4404 (316L)
Measuring element	Bourdon tube	Bourdon tube
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Process connection	G 1/2 G 1/4 1/2 NPT 1/4 NPT	G 1/2 G 1/4 1/2 NPT 1/2 NPT
Protection rating	IP 65	IP 65
Approval	ATEX II2GDc-IM2c Lloyd's Register	ATEX II2GDc-IM2c Lloyd's Register
Additional information	Option: ■ With damping fluid	Option: ■ With damping fluid

BOURDON
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Today, original Bourdon® products, firmly founded on the brand's history and over 160 years of technological development, can be purchased only from Baumer.

	 MEP5	 MMN5	 MPE6, MPG6	 MPF6, MPJ6
General Data	■ For corrosive atmospheres and fluids ■ Long term reliability ■ Safety version S3 according to EN837-1	■ For corrosive atmospheres and fluids ■ Long term reliability ■ Safety version S3 according to EN837-1	■ For corrosive gases and liquids ■ With or without damping fluid ■ With or without dashpot ■ Solid front	■ For corrosive gases and liquids ■ With or without damping fluid ■ With or without dashpot ■ Solid front
Industries	Oil & Gas / Chemical Water / Waste Water Energy	Oil & Gas / Chemical Water / Waste Water Energy	Oil & Gas / Chemical Water / Waste Water Energy	Oil & Gas / Chemical Water / Waste Water Energy
Nominal size (mm)	100	100	130	130
Measuring ranges	-1 ... 0 bar to 0 ... 1600 bar	-1 ... 0 bar to 0 ... 600 bar	-1 ... 0 bar to 0 ... 1600 bar	-1 ... 0 bar to 0 ... 600 bar
Accuracy	Class 1 (according to EN 837-1)	Class 1 (according to EN 837-1)	Grade 2A (according to ASME B40.100)	Grade 2A (according to ASME B40.100)
Wetted parts material	Stainless steel 1.4404 (316L)	Monel 400	Stainless steel 1.4404 (316L)	Monel 400
Measuring element	Bourdon tube	Bourdon tube	Bourdon tube	Bourdon tube
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Polypropylene / Phenolic	Polypropylene / Phenolic
Process connection	G 1/2 G 1/4 1/2 NPT 1/4 NPT OD 12	G 1/2 G 1/4 1/2 NPT 1/4 NPT OD 12	G 1/2 1/2 NPT	G 1/2 1/2 NPT
Protection rating	IP 67	IP 67	IP 67	IP 67
Approval	ATEX II2GDc-IM2c Lloyd's Register	ATEX II2GDc-IM2c Lloyd's Register		
Additional information	Option: ■ For oxygen applications	Option: ■ For oxygen applications	Option: ■ For oxygen applications ■ With damping fluid ■ With dashpot	Option: ■ With damping fluid ■ With dashpot

Baumer datasheets offer tables with full ordering details for each product line including typical options.

	 MS5, MR5	 MG5	 DPCE 100	 MA35
General Data	■ Local indication of pressure ■ 1 or 2 setpoints for regulation or alarm setting	■ Local indication of pressure ■ 1 or 2 setpoints for regulation or alarm setting	■ Local indication of pressure ■ 1 or 2 setpoints for regulation or alarm setting	■ Local indication of pressure ■ Output signal: 4 ... 20 mA
Industries	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics, Machinery	Food & Beverage, Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics, Machinery	Food & Beverage, Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics, Machinery	Food & Beverage, Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics, Machinery
Nominal size (mm)	100	100	100	100
Measuring ranges	-1 ... 0 bar to 0 ... 1600 bar	-1 ... 0 bar to 0 ... 1600 bar	0 ... 100 mbar to 0 ... 25 bar	0 ... 0.6 bar to 0 ... 600 bar
Accuracy	Class 1 (according to EN 837-1)	Class 1 (according to EN 837-1)	Class 1.6 (according to EN 837-3)	For gauge : Class 1 For output signal : ± 0.5%
Wetted parts material	Stainless steel 1.4404 (316L)	Stainless steel 1.4404 (316L)	Stainless steel 1.4571 (316Ti) Duratherm®	Stainless steel 1.4571 (316Ti)
Measuring element	Bourdon tube	Bourdon tube	Diaphragm	Bourdon tube and piezoresistive Sensor
Contact type	Mechanical sliding contact or magnetic spring contact	Inductive contact	Mechanical sliding contact, magnetic spring contact or inductive contact	
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Process connection	G 1/2 G 1/4 1/2 NPT 1/4 NPT	G 1/2 G 1/4 1/2 NPT 1/4 NPT	G 1/2 1/2 NPT flanges DIN or ANSI	G 1/2 G 1/4 1/2 NPT 1/4 NPT
Protection rating	IP 65	IP 65	IP 65	IP 54
Approval		ATEX II2G Ex ia T4	ATEX II2G Ex ia T4	
Additional information	Option: ■ With damping fluid	Option: ■ With damping fluid	Option: ■ PTFE coating ■ With damping fluid	Option: ■ With damping fluid

Available for all pressure gauges: Calibration certificates according to EN 837-1 (11 points) and simplified reports (5 points)

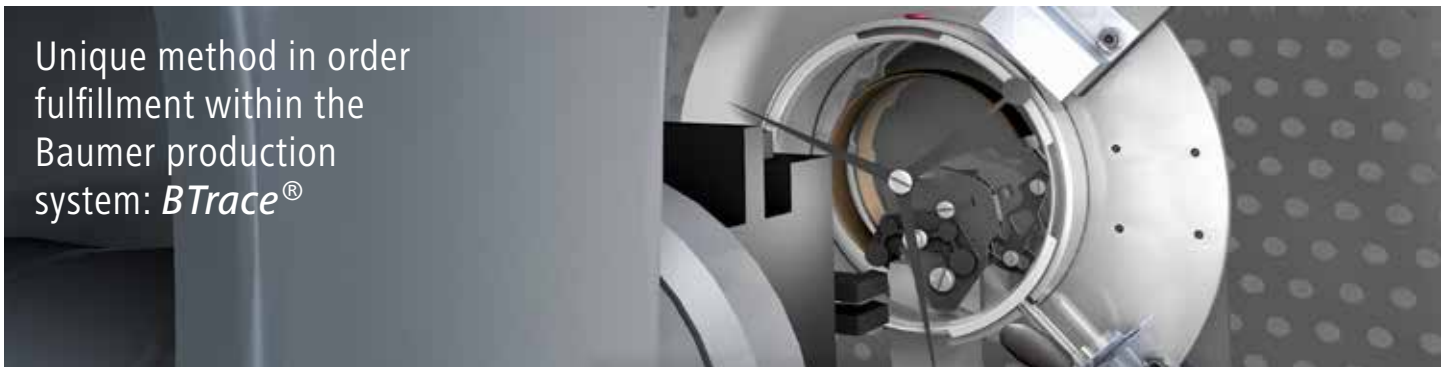
	 MCD7	 MX7, MZ7, MT7, MQ7	 M21, M31	 MFT5, MFT7
General Data	■ Very low differential pressure range ■ Static pressure up to 250 mbar ■ Safety valve on high pressure side	■ For corrosive process fluids and atmospheres ■ Static pressure up to 100 bar	■ For corrosive process fluids and atmospheres ■ Static pressure up to 100 bar ■ 1 or 2 setpoints for regulation or alarm setting	■ For corrosive process fluids and atmospheres ■ Low differential pressure ■ Static pressure up to 400 bar
Industries	Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy	Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy	Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy	Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy
Nominal size (mm)	150	150	150	100 (MFT5), 150 (MFT7)
Measuring ranges	0 ... 10 mbar to 0 ... 250 mbar	0 ... 0.1 bar to 0 ... 25 bar	0 ... 0.25 bar to 0 ... 25 bar	0 ... 25 mbar to 0 ... 25 bar
Static pressure	Max. 250 mbar	Max. 100 bar	Max. 100 bar	Max. 400 bar
Accuracy	± 2 %	± 2 %	± 3 %	± 1 % (dry version) ± 1.6 % (with damping fluid)
Wetted parts material	Stainless steel 1.4404 (316L)	Stainless steel 1.4404 (316L)	Stainless steel 1.4404 (316L)	Stainless steel 316L Monel Hastelloy C276
Measuring element	Capsule	Bellow	Bellow	Differential cell
Contact type			Mechanical sliding contact	
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Process connection	2 x G 1/2 2 x 1/2 NPT	2 x G 1/2 2 x 1/2 NPT	2 x G 1/2 2 x 1/2 NPT	2 x G 1/2 2 x 1/2 NPT
Protection rating	IP 66	IP 65	IP 65	IP 65
Approval		ATEX II2GDc-IM2c		
Additional information		Option: ■ With damping fluid ■ With baffle wall		Option: ■ With damping fluid ■ With baffle wall

Minimizing vibrations or pulsations: Filling with damping fluid or dashpot in the movement.

	DPC 100	DP 100 Hygienic
General Data	■ Welded with blow-out disc, back ■ For gaseous and liquid, aggressive, high and low viscosity media ■ High overpressure safety	■ Hygienic process connections without transmission fluid ■ No risc of media contamination
Industries	Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy	Food & Beverage Laboratory & Medical
Nominal size (mm)	100	100
Measuring ranges	0 ... 60 mbar to 0 ... 25 bar	0 ... 6 bar 0 ... 10 bar -1 ... 5 bar -1 ... 9 bar
Accuracy (according to EN 837-3)	Class 1.6	Class 1.6
Wetted parts material	Stainless steel 1.4571 (316Ti) Duratherm®	Stainless steel 1.4435 (316L)
Measuring element	Diaphragm	Diaphragm
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Process connection	G 1/2 1/2 NPT flanges DIN or ANSI	Clamp Varivent®
Protection rating	IP 65	IP 65
Approval	ATEX II2GDc-IM2c	
Additional information	Option: ■ With damping fluid ■ PTFE coating	Option: ■ Movement with silicone damping

Various series of standard gauges according to EN 837-1 and ASME B40.100.

	MA7	M61	MTA2	MTA3
				
General Data	■ Absolute pressure measurement ■ For corrosive process fluids and atmospheres	■ Absolute pressure measurement ■ For corrosive process fluids and atmospheres ■ 1 or 2 setpoints for regulation or alarm setting	■ Low pressure measurements ■ for clean and non-corrosive gases	■ Low pressure measurements ■ for clean and non-corrosive gases
Industries	Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy	Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy	Laboratory & Medical Machinery	Laboratory & Medical Machinery
Nominal size (mm)	150	150	50	63
Measuring ranges	0 ... 0.1 bar to 0 ... 16 bar abs	0 ... 0.25 bar to 0 ... 16 bar abs	0 ... 60 mbar to 0 ... 600 mbar	0 ... 60 mbar to 0 ... 600 mbar
Accuracy	± 2%	± 3%	Class 1.6	Class 1.6
Overpressure	Max. 25 bar	Max. 25 bar		
Wetted parts material	Stainless steel 1.4404 (316L)	Stainless steel 1.4404 (316L)	Bronze / Brass	Bronze / Brass
Measuring element	Bellow	Bellow	Capsule	Capsule
Contact type		Mechanical sliding contact		
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Process connection	G 1/2 1/2 NPT	G 1/2 1/2 NPT	G 1/4 1/4 NPT	G 1/4 1/4 NPT
Protection rating	IP 65	IP 65	IP 33 / IP 44	IP 33 / IP 44
Approval	ATEX II2GDc-IM2c			
Additional information	Option: ■ With damping fluid		■ Zero adjustment	■ Zero adjustment



	 MTA5	 MTX5	 MCX5, MCF5	 MCX7, MCF7
General Data	■ Low pressure measurements ■ for clean and non-corrosive gases	■ Low pressure measurements ■ for clean and non-corrosive gases	■ Low pressure measurements ■ High overpressure protection ■ Suitable for corrosive gases	■ Low pressure measurements ■ High overpressure protection ■ Suitable for corrosive gases
Industries	Laboratory & Medical Machinery	Laboratory & Medical Machinery	Laboratory & Medical Oil & Gas / Chemical Machinery	Laboratory & Medical Oil & Gas / Chemical Machinery
Nominal size (mm)	100	100	100	150
Measuring ranges	0 ...16 mbar to 0 ... 600 mbar	0 ...16 mbar to 0 ... 600 mbar	0 ...10 mbar to 0 ... 600 mbar	0 ... 6 mbar to 0 ... 600 mbar
Accuracy (according to EN 837-3)	Class 1.6	Class 1.6	Class 1.6	Class 2.5
Wetted parts material	Bronze / Brass	Stainless steel	Stainless steel / FKM	Stainless steel / FKM
Measuring element	Capsule	Capsule	Capsule	Capsule
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Process connection	G 1/2 1/2 NPT	G 1/2 1/2 NPT	G 1/2 1/2 NPT	G 1/2 1/2 NPT
Protection rating	IP 33 / IP 44	IP 33 / IP 44	IP 65	IP 65
Approval			ATEX II2GDc-IM2c	ATEX II2GDc-IM2c
Additional information	■ Zero adjustment	■ Zero adjustment	■ Zero adjustment, integrated overpressure protection valve for short time overload of 20 x span ■ Option: With baffle wall	■ Zero adjustment, integrated overpressure protection valve for short time overload of 20 x span ■ Option: With baffle wall

For cooling systems – pressure gauges with 2nd scale in °C for all standard refrigerants.

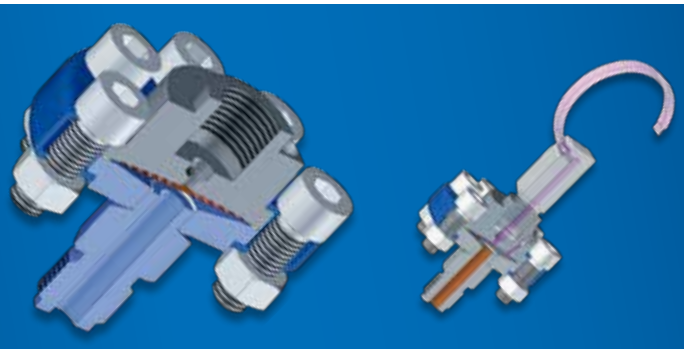
	DRO80	DRO100
General Data	■ For refrigeration applications ■ Multiscaling for pressure and related temperature ■ For R407C, R134 A, ...	■ For refrigeration applications ■ Multiscaling for pressure and related temperature ■ For NH3
Industries	Food & Beverage Transport & Logistics Machinery	Food & Beverage Transport & Logistics Machinery
Nominal size (mm)	80	100
Measuring ranges	-1 ... 9 bar -1 ...12.5 bar -1 ... 24 bar	-1 ... 9 bar -1 ...12.5 bar -1 ... 24 bar
Accuracy (according to EN 837-1)	Class 1	Class 1
Wetted parts material	Brass	Stainless steel
Measuring element	Bourdon tube	Bourdon tube
Case material	Black painted steel	Stainless steel 1.4301 (304)
Process connection	7/16 UNF	G 1/2
Protection rating	IP 65	IP 65
Approval		
Additional information	Option: ■ With damping fluid	Option: ■ With damping fluid

Mechanical pressure switches – a proven technology for power plants.

	 RP2N, RP2Y, RP2E	 RPPN, RPPY, RPPE	 RDPN, RDY, RDE
General Data	■ Standard pressure switch ■ Good resistance to vibrations and overpressure	■ Pressure switch for low and high pressure ■ Adjustable setpoint(s) and deadband	■ Differential pressure switch ■ Adjustable setpoint(s) and deadband
Industries	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery
Measuring ranges	0 ...1 bar to 0 ...100 bar	-50 ... 0 mbar to 60 ... 600 bar	-2.5 ... 2.5 mbar to 2.5 ... 30 bar
Wetted part material	Stainless steel	Steel FKM Stainless steel EPDM (depending on the pressure range)	Steel FKM Stainless steel EPDM (depending on the pressure range)
Set points	1	1	1
Overpressure / Static pressure	Max. 200 bar	Max. 800 bar	0.15 to 220 bar
Repeatability	± 1% F.S.	± 1% F.S.	± 1% F.S.
Process Connection	G 1/2 1/2 NPT 1/4 NPT	G 1/2 1/2 NPT 1/4 NPT	G 1/2 1/2 NPT 1/4 NPT
Protection rating	IP 66	IP 66	IP 66
Current rating	10 mA to 10 A max. 250 VAC / 220 VDC	5 mA to 10 A max. 250 VAC / 220 VDC	10 mA to 10 A max. 250 VAC / 220 VDC
Housing / body material	Polyamid PA6 Aluminum for EEx d	ZnAl - alloy Aluminum for EEx d	ZnAl - alloy Aluminum for EEx d
Protection rating	IP 66	IP 66	IP 66
Approval	Options: ■ ATEX, EEx ia (RP2Y) ■ ATEX, EEx d (RP2E)	Options: ■ ATEX, EEx ia (RPPY) ■ ATEX, EEx d (RPPE)	Options: ■ ATEX, EEx ia (RDY) ■ ATEX, EEx d (RDE)

Diaphragm seals

Chemical seals – separating the measuring instrument from corrosive, highly viscous or dangerious media and high temperature.



	 D030	 D04x	 D05x	 DT1
General Data	■ Suitable for very agressive media ■ No metallic part in contact with media	■ Robust and compact ■ Applicable for corrosive media	■ Flush mounted ■ Suitable for corrosive & viscous media ■ Limited space needed	■ For medium high pressure ■ Cleaning ring optional ■ Suitable for corrosive media ■ High temperature range
Industries	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery
Process connection	G 1/2	G 1/4 G 1/2 1/4 NPT 1/2 NPT	G 1/2 1/2 NPT G 3/4 3/4 NPT G 1 1 NPT G 1 1/2 1 1/2 NPT G 2 2 NPT	G 1/4 G 1/2 1/4 NPT 1/2 NPT
Body material	PPT	Stainless steel	Stainless steel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel PVC PVDF PPH PTFE
Diaphragm material	EPDM / PTFE lining	Stainless steel	Stainless steel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel
Measuring ranges	0 ... 2.5 bar to 0 ...10 bar	0 ...1 bar to 0 ... 250 bar	0 ...1 bar to 0 ... 600 bar	0 ...10 bar to 0 ...160 bar
Approval				

Highly resistant membrane materials and coatings for extremely aggressive media.

	 DT2	 DT3	 DT5	 DT8
General Data	■ For normal pressure ■ Cleaning ring optional ■ Suitable for corrosive media ■ High temperature range	■ for low pressure ■ Cleaning ring optional ■ Suitable for corrosive media ■ High temperature range	■ For very high pressure ■ Cleaning ring optional ■ Suitable for corrosive media ■ High temperature range	■ For high pressure ■ Cleaning ring optional ■ Suitable for corrosive media ■ High temperature range
Industries	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery
Process connection	G 1/4 G 1/2 1/4 NPT 1/2 NPT	G 1/4 G 1/2 1/4 NPT 1/2 NPT	G 1/4 G 1/2 1/4 NPT 1/2 NPT	G 1/4 G 1/2 1/4 NPT 1/2 NPT
Body material	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel PVC PVDF PPH PTFE	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel PVC PVDF PPH PTFE	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel
Diaphragm material	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel
Measuring ranges	0 ...1 bar to 0 ... 40 bar	0 ...160 mbar to 0 ... 25 bar	0 ...160 bar to 0 ...1000 bar	0 ... 40 bar to 0 ... 400 bar
Approval				

	D82x	D4xx	D6xx	1650
General Data	■ Flush diaphragm ■ Cleaning ring optional ■ Coating optional	■ Small diameter flange ■ Cleaning ring optional ■ Coating optional	■ Many process connection standards available ■ Cleaning ring optional ■ Coating optional	■ In line seals for process industry ■ No dead volume
Industries	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics	Laboratory & Medical Oil & Gas / Chemical Energy Machinery
Process connection	EN 1759-1 ASME B16.5 EN 1092-1	EN 1759-1 ASME B16.5 EN 1092-1	EN 1759-1 ASME B16.5 EN 1092-1	Cell mounting
Body material	Stainless steel	Steel Stainless steel Uranus B6 Hastelloy B Hastelloy C Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Monel PVC PVDF PPH PTFE	Stainless steel
Diaphragm material	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel
Measuring ranges	0 ...160 mbar to 0 ...420 bar	0 ...160 mbar to 0 ...420 bar	0 ...160 mbar to 0 ...160 bar	0 ...1.6 bar to 0 ... 250 bar
Nominal size	DN 15 ...100 1/2"... 4"	DN 10 ... 65 3/8" ... 2 1/2"	DN 10 ... 65 3/8"... 2 1/2"	DN 25 ...100
Pressure rating	PN 10 ... 420 class 150 ... 2500	PN 10 ...420 class 150 ... 2500	PN 10 ...150 class 150 ... 900	PN 10 ... 250
Approval				

Oil and Gas – Highest safety and reliability standards for harsh environments and customized applications.

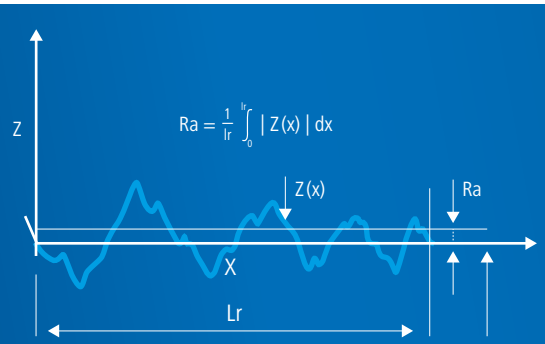
	D92x	D912	D944	D918
General Data	■ Flush diaphragm ■ Cleaning ring optional ■ Coating optional	■ Pressure, level and flow measurement ■ max 400°C ■ Low static pressure	■ Pressure, level and flow measurement ■ max 400°C ■ medium static pressure	■ Pressure, level and flow measurement ■ max 400°C ■ High static pressure
Industries	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics	Oil & Gas / Chemical Energy	Oil & Gas / Chemical Energy	Oil & Gas / Chemical Energy
Process connection	EN 1759-1 ASME B16.5 EN 1092-1	EN 1759-1 ASME B16.5	EN 1759-1 ASME B16.5	EN 1759-1 ASME B16.5
Flange material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Diaphragm material	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tatalum	Stainless steel Hastelloy C	Stainless steel Hastelloy C	Stainless steel Hastelloy C
Measuring ranges	0 ... 25 mbar to 0 ... 400 bar	0 ...10 mbar to 0 ...100 bar	0 ...500 mbar to 0 ... 250 bar	0 ...10 mbar to 0 ... 420 bar
Nominal size	DN 50 ...100 2"... 4"	DN 15 ... 50 1/2" ... 2"	DN 20 ... 50 3/4" ... 2"	DN 15 ... 50 1/2" ... 2"
Pressure rating	PN 10 ...100 Class 150 ... 2500	Class 150 ... 600	Class 1500	Class 1500 ... 2500
Approval	NACE MR0103, MR0175	NACE MR0103, MR0175	NACE MR0103, MR0175	NACE MR0103, MR0175

	1500	1510
General Data	■ Longitudinal starshaped seal ■ Applicable for corrosive media ■ Compact diaphragm seal	■ Longitudinal starshaped seal ■ Applicable for corrosive media ■ Compact diaphragm seal
Industries	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery
Process connection	G 3/4 DIN 3852 G 1/2 DIN 3852	Union nut G 3/4 or G1
Body material	Stainless steel	Stainless steel
Diaphragm material	Stainless steel	Stainless steel
Measuring ranges	0 ... 2.5 bar to 0 ...1000 bar	0 ... 2.5 bar to 0 ...1000 bar

Material certifcates – full traceability of all wetted materials guaranteed by a dedicated material handling system.

	D803	D853
General Data	■ Cell type ■ Flush diaphragm	■ Flange type with extended diaphragm
Industries	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics	Oil & Gas / Chemical Water / Waste Water Energy Machinery
Process connection	Cell mounting	Flange with extension
Body material	Stainless steel	Stainless steel
Diaphragm material	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel	Stainless steel Uranus B6 Hastelloy B Hastelloy C Tantalum Monel
Measuring ranges	0 ...160 mbar to 0 ... 400 bar	0 ...160 mbar to 0 ... 40 bar
Nominal size	DN 50 ...100 2"... 4"	DN 50 ...100 2"... 4"
Pressure rating	PN 10 ... 400 class 150 ... 2500	PN 10 ... 40 class 150 ... 600

For hygienic processes – surface quality Ra = 0.4 … 0.8 µm



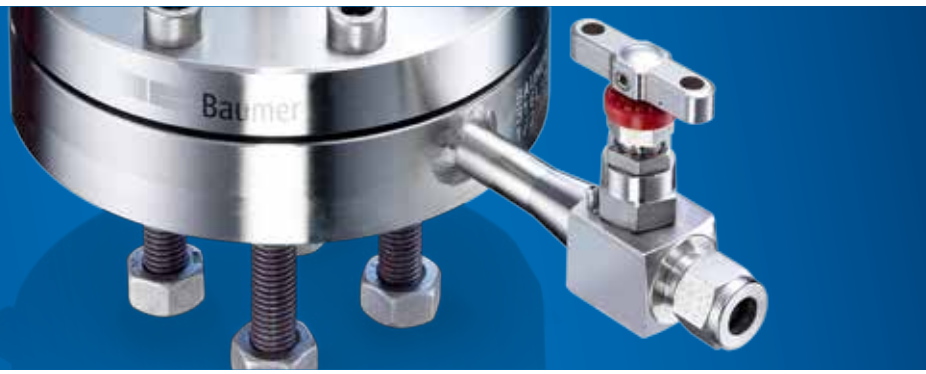
	DANC	DAEL	DAEF	DAVA
General Data	■ Clamp connection ■ According NFE 29521, ISO 2852 ■ DIN 32676	■ SMS 1145 ■ With union nut	■ SMS 1145 ■ Threaded socket	■ Varivent®
Industries	Food & Beverage, Laboratory & Medical Water / Waste Water Machinery	Food & Beverage, Laboratory & Medical Water / Waste Water Machinery	Food & Beverage, Laboratory & Medical Water / Waste Water Machinery	Food & Beverage, Laboratory & Medical Water / Waste Water Machinery
Normal size	DN 25, 38, 40, 50, 51	DN 25, 38, 51, 1",11/2", 2"	DN 38, 51,11/2", 2"	DN 25, 40 / 125
Body material	Stainless steel 1.4435 (316L)	Stainless steel 1.4435 (316L)	Stainless steel 1.4435 (316L)	Stainless steel 1.4435 (316L)
Diaphragm material	Stainless steel 1.4435 (316L) Hastelloy C	Stainless steel 1.4435 (316L) Hastelloy C	Stainless steel 1.4435 (316L) Hastelloy C	Stainless steel 1.4435 (316L) Hastelloy C
Measuring ranges	0 ...1 bar to 0 ... 40 bar	0 ...1 bar to 0 ... 40 bar	0 ...1 bar to 0 ... 40 bar	0 ...1 bar to 0 ... 40 bar
Approval	3-A	3-A	3-A	
Additional information	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm

Wetted materials and transmission fluids conform to hygienic requirements.

	 DAPH	 DADF	 DADL	 1620, 1530, 1520, 1540
General Data	■ Clamp with extended membrane for flush mounting in tanks or pipes	■ DIN 11851 ■ Threaded socket	■ DIN 11851 ■ With union nut	■ In line seals for hygienic applications ■ No dead volume ■ DIN 32676 ISO 2852 SMS1146 DIN 11851 DIN 11864, ...
Industries	Food & Beverage, Laboratory & Medical Water / Waste Water	Food & Beverage, Laboratory & Medical Water / Waste Water	Food & Beverage, Laboratory & Medical Water / Waste Water	Food & Beverage Laboratory & Medical Machinery
Normal size	DN 38	DN 32, 40, 50	DN 25, 32, 40, 50	DN 15...80 1/2"... 3"
Body material	Stainless steel 1.4404 (316L)	Stainless steel 1.4435 (316L)	Stainless steel 1.4435 (316L)	Stainless steel
Diaphragm material	Stainless steel 1.4435 (316L)	Stainless steel 1.4435 (316L) Hastelloy C	Stainless steel 1.4435 (316L) Hastelloy C	Stainless steel
Measuring ranges	0 ... 4 bar to 0 ... 25 bar	0 ...1 bar to 0 ... 40 bar	0 ...1 bar to 0 ... 40 bar	0 ...1.6 bar to 0 ... 40 bar
Approval	3-A	3-A	3-A	
Additional information	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm	■ Ra < 0.8 µm ■ Option electropolished Ra < 0.4 µm

Pressure accessories

On remote seals Baumer provides complete assembly with flushing ring and drain/vent valves.

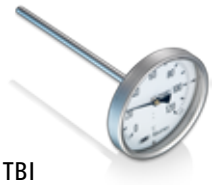
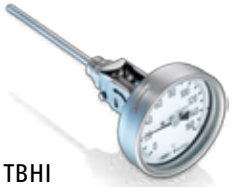


	ARPX	AMFD	AORP	ARA
General Data	■ Shut off valves ■ Separation of gauge or transmitter from the process	■ Manifold ■ 2, 3 or 5 ways	■ Pressure limiter ■ Protection of pressure gauges and transmitters from overpressure	■ Pulsation dampener ■ Protection of pressure gauges and transmitters from pulsations
Industries	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Oil & Gas / Chemical Water / Waste Water Energy	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery
Process temperature	-20 ... +250 °C	Max. +200 °C	Max. +150 °C	Max. +250 °C
Max. pressure	400 bar	420 bar	700 bar	Max. 600 bar
Materials	Brass Steel Stainless steel PTFE	Stainless steel PTFE	Stainless steel Viton®	Brass Steel Stainless steel
Set points			-1 ... 400 bar	
Approval				

	ASIP	AKPL
General Data	■ Siphon ■ Protects gauge from high fluid temperatures ■ Recommended for steam	■ Capillary ■ Reduces medium temperature ■ Separates the instrument from heat sources ■ Reduces pulsations
Industries	Oil & Gas / Chemical Water / Waste Water Energy	Oil & Gas / Chemical Water / Waste Water Energy
Process temperature	Max. +400 °C	Max. +400 °C (depending on process pressure)
Max. pressure	Max. +400 bar	Max. +400 bar (depending on process temperature)
Materials	Steel Stainless steel	Stainless steel
Approval		

	 TB40, TB63	 TB80, TB100, TB160	 TBH	 TBL
General Data	■ Industrial applications ■ Small size ■ All stainless steel design	■ Multi purpose standard thermometer ■ Zero adjustment	■ HVAC applications ■ Short immersion tube for pipes up to Ø 2" ■ Zero adjustment	■ For airducts in ventilation systems ■ Rear flange for wall mounting ■ Zero adjustment
Industries	Laboratory & Medical Energy Machinery	Water / Waste Water Energy Machinery HVAC	HVAC	HVAC
Nominal size (mm)	40, 63	80, 100, 160	80, 100	100
Measuring range	-30 ... +500 °C	-30 ... +500 °C	-20 ... +250 °C	-30 ... +80 °C
Accuracy (according to EN 13190)	Class 1 (≤ 250 °C) Class 2 (> 250 °C)	Class 1 (≤ 250 °C) Class 2 (> 250 °C)	Class 1	Class 1
Immersion tube material	Stainless steel 1.4571 (316Ti)	Cu-alloy (≤ 250°C) Stainless steel 1.4571 (316Ti)	Cu-alloy (≤ 120°C) Stainless steel 1.4571 (316Ti)	Cu-alloy
Immersion tube outlet	Center back	Center back or bottom	Center back	Center back
Immersion tube diameter	4 mm	8 mm	8 mm	8 mm
Immersion tube length	60 ... 400 mm	100 ...1000 mm	48 ... 88 mm	165 mm
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Sensing element	Bi-metal	Bi-metal	Bi-metal	Bi-metal
Protection rating	IP 52	IP 50	IP 50	IP 50
Approval				

Chemical and Petrochemical industry – thermometers for harsh environments.

	TBX	TBI	TBHI	TBHA
				
General Data	■ HVAC applications ■ Conical immersion tube for good heat transfer ■ Zero adjustment	■ All stainless steel thermometer ■ For corrosive applications	■ Heavy industry version ■ Oil filling available as option	■ Clamp-on thermometer ■ For insulated pipes up to Ø 2" ■ Insulating material thickness 30...110 mm
Industries	HVAC	Oil & Gas / Chemical Water / Waste Water Energy	Oil & Gas / Chemical Water / Waste Water Energy	HVAC
Nominal size (mm)	80, 100, 160	80, 100, 130, 160	100, 130	80, 100
Measuring range	-20 ... +250 °C	-70 ... +600 °C	-70... +600 °C	-20 ... +160 °C
Accuracy (according to EN 13190)	Class 1	Class 1	Class 1	Class 1
Immersion tube material	Cu-alloy	Stainless steel 1.4571 (316Ti)	Stainless steel 1.4571 (316Ti)	Stainless steel 1.4571 (316Ti)
Immersion tube outlet	Center back or bottom	Bottom, center back, center back every angle	Center back every angle	Center back
Immersion tube diameter	Conical	6 mm, 8 mm	6 mm, 8 mm	n/a
Immersion tube length	60 mm	60 ...1000 mm	60 ...1000 mm	n/a
Case material	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)	Stainless steel 1.4301 (304)
Sensing element	Bi-metal	Bi-metal	Bi-metal	Bi-metal
Protection rating	IP 50	IP 67	IP 68	IP 50
Approval		ATEX Ex II 2 GDc	ATEX Ex II 2 GDc	

Gas filled thermometers – remote temperature measurement and applications with setpoints.

	TSS	TSF	TSSE	TSFE
General Data	■ Direct measurement industrial thermometer ■ Liquid filling as option ■ Zero adjustment	■ Remote measurement industrial thermometer ■ Liquid filling as option ■ Zero adjustment	■ Direct reading industrial thermometer ■ With contacts ■ Liquid filling as option	■ Remote measurement industrial thermometer ■ With contacts ■ Liquid filling as option
Industries	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery
Nominal size (mm)	63, 80, 100, 160, 250	63, 80, 100, 160, 250	100, 160	100, 160
Measuring range	-200 ... +800 °C	-200 ... +800 °C	-200 ... +800 °C	-200 ... +800 °C
Accuracy (according to EN 13190)	Class 1	Class 1	Class 1	Class 1
Immersion tube material	Stainless steel 1.4541 (321)	Stainless steel 1.4541 (321)	Stainless steel 1.4541 (321)	Stainless steel 1.4541 (321)
Immersion tube diameter	6 mm, 8 mm, 11 mm,14 mm	6 mm, 8 mm, 11 mm,14 mm	6 mm, 8 mm, 11 mm,14 mm	6 mm, 8 mm, 11 mm,14 mm
Immersion tube length	100 ...1000 mm	100 ...1000 mm	100 ...1000 mm	100 ...1000 mm
Capillary	n/a	0.5 to 30 m	n/a	0.5 to 30 m
Contacts	n/a	n/a	1 or 2 set points sliding, magnetic spring or inductive contacts	1 or 2 set points sliding, magnetic spring or inductive contacts
Case and sleeve material	Stainless steel 1.4301 (AISI 304)	Stainless steel 1.4301 (AISI 304)	Stainless steel 1.4301 (AISI 304)	Stainless steel 1.4301 (AISI 304)
Sensing element	Gas filled plunger	Gas filled plunger and capillary	Gas filled plunger	Gas filled plunger and capillary
Protection rating	IP 65	IP 65	IP 65	IP 65
Approval	ATEX Ex II 2 GDc	ATEX Ex II 2 GDc	ATEX Ex ia IIC T4 Gb Ex ia IIIC T135°C ... T85°C Db	ATEX Ex ia IIC T4 Gb Ex ia IIIC T135°C...T85°C Db

Thermowells

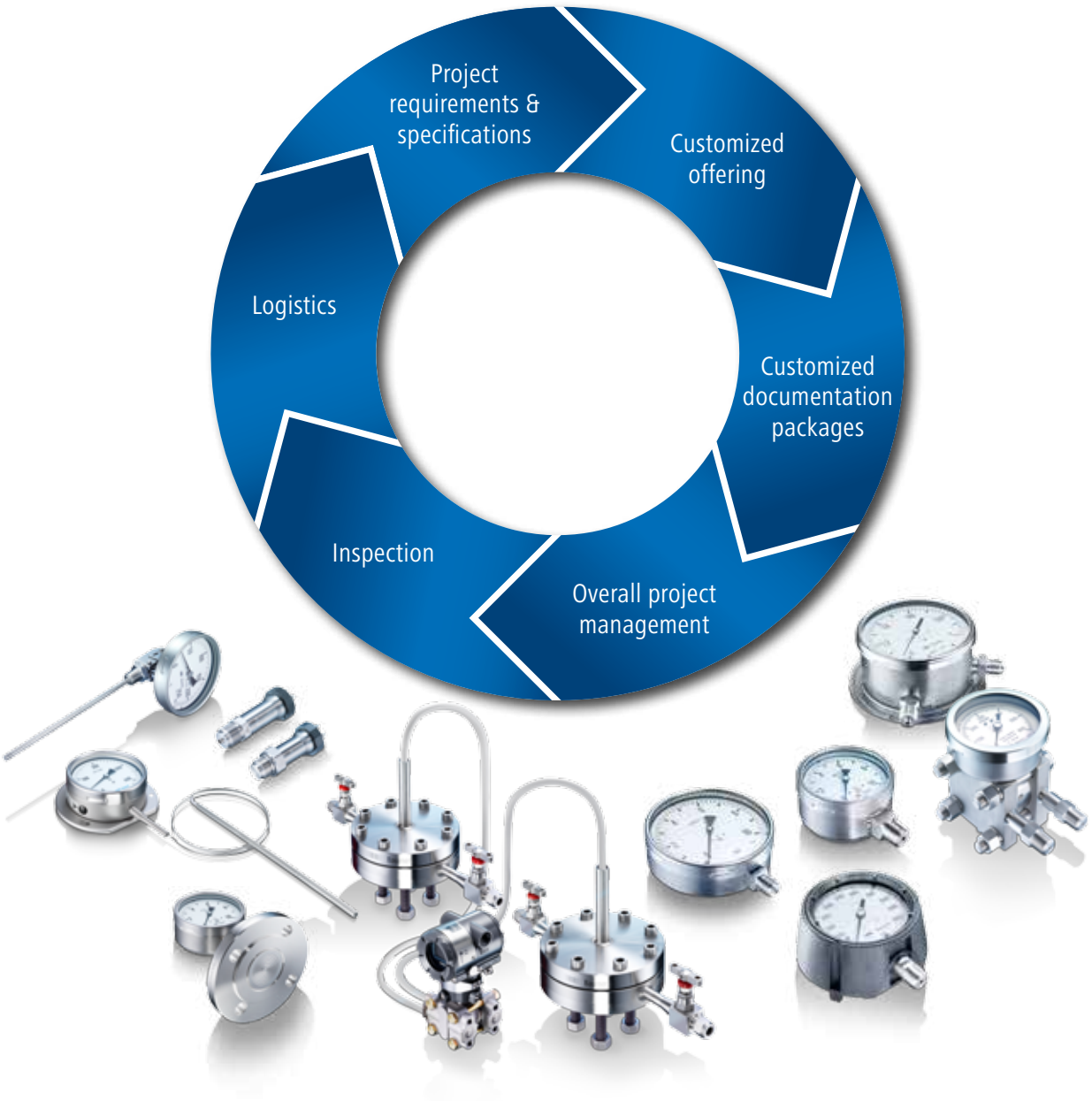
	 T8410, T9093, T9143, T9346	 T8416, T9144, T9367	 AGW, AGF
General Data	■ HVAC and industrial applications ■ Fitting all TBx and TSx ■ Threaded process connection	■ HVAC and industrial applications ■ Fitting all TBx and TSx ■ Welded process connection	■ Process applications ■ DIN / ISO / ANSI / Flanges ■ Threaded connections (NPT or G)
Industries	Water / Waste Water Machinery HVAC	Water / Waste Water Machinery HVAC	Oil & Gas / Chemical Water / Waste Water Energy
Process temperature	Max. 650 °C	Max. 650 °C	Max. 600 °C (depending on process pressure)
Max. pressure	Max. 250 bar	Max. 250 bar	Max. 400 bar (depending on process temperature)
Materials	Brass / steel / stainless steel	Steel / stainless steel	Stainless steel
Length	50 ...1000 mm	50 ...1000 mm	100 ...1000 mm
For immersion tube Ø	4, 6, 8 mm	6, 8 mm	7 to 18 mm
Approval			

From mechanic to electronic.
From digital to analogue.
Baumer's portfolio provides various product families with ATEX approvals.

	RT2N, RT2Y, RT2E	RTN, RTNY, RTNE
		
General Data	■ Compact temperature switch ■ Good vibration resistance	■ Standard temperature switch ■ Adjustable setpoint(s) and deadband
Industries	Oil & Gas / Chemical Water / Waste Water Energy Machinery	Oil & Gas / Chemical Water / Waste Water Energy Machinery
Measuring ranges	-40 ... + 350 °C	-40 ... + 350 °C
Wetted parts material	Stainless steel	Stainless steel
Set points	1	1
Repeatability	± 1 % F.S.	± 1 % F.S.
Current rating	10 mA to 10 A max. 250 VAC / 220 VDC	5 mA to 10 A max. 250 VAC / 220 VDC
Sensor type	Stem 9.5 mm (rigid or with capillary)	Stem 14 mm (rigid or with capillary)
Connection	G 1/2 1/2 NPT	G 1/2 1/2 NPT
Body / Housing material	Polyamid PA6 Aluminum for EEx d	ZnAl - alloy Aluminum for EEx d
Protection rating	IP 66	IP 66
Approval	Options: ■ ATEX, EEx ia (RT2Y) ■ ATEX, EEx d (RT2E)	Options: ■ ATEX, EEx ia (RTNY) ■ ATEX, EEx d (RTNE)

EPC Contractor Business.

Actively present in the EPC business for many years, Baumer is a competent partner through the overall execution of the project: from the offer of products in accordance with the project requirements to the after-sales services.



Global project management close to your business

Safety and reliability are key qualities which can never be compromised in process instrumentation. Our proven business model for EPC projects is based on our core competencies of offering customized and innovative solutions, strong knowledge in project management and trusted partnership in focused industry segments.

Baumer is your experienced partner through all phases of your project.

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