Baumer
Passion for Sensors

Process Sensors

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

Baumer – rely on our technological advantage

Sophisticated and proven products, top precision and expert consultancy – Baumer meets all these demands in every respect. Our broad product portfolio provides optimally suited, dependable solutions, which provide a one-stop solution to meet your individual requirements. Our longstanding expertise, practical insights and technological supremacy give you the control you need to maximize production and equipment performance as well to reduce downtime and maintenance to a minimum.

Customization – our understanding of individual needs
Operating worldwide and present across the globe, we are always close to provide you with competent on-site support. The customer is at the very heart of our services, and our level of commitment is characterized by taking swift and effective action to respond to our customers' needs. Furthermore, beside our standard portfolio, we are specialized to produce your individual product in terms of your application demands.

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Electronic pressure

The Baumer in-house cell competence: Baumer provides the optimum technology for your specific application.

	CTX/CTL	Y91	PBSN industrial
General Data	■ OEM applications ■ Compact design ■ Stainless steel or brass construction	■ Robust stainless housing ■ High overpressure resistance ■ Abrasive and chemical resistant	■ Robust stainless housing ■ Abrasive and chemical resistant
Industries	Energy, Machinery HVAC	Laboratory & Medical, Oil & Gas / Chemical, Machinery	Laboratory & Medical, Energy, Machinery
Measuring ranges	-1 … 0 bar to 0 … 200 bar	-1 … 0 bar to 0 … 600 bar	-1 … 0 bar to 0 … 600 bar
Media temperature	-25 … +100 °C	-25 … +100 °C	-40 … +125 °C
Technology	Ceramic thick film	Ceramic thick film	Ceramic thick film
Wetted parts material	CTL: Brass CTX: AISI 316L (1.4404) Ceramic (96 % AI_2O_3) NBR, EPDM, FKM	AISI 316L (1.4404) Ceramic (96 % AI2O3) NBR, CR, EPDM, FKKM, FKM	AISI 316L (1.4404) Ceramic (96 % AI_2O_3) NBR, EPDM, FKM
Accuracy (linearity, hysteresis, repeatability)	≤ ± 0.5% FS (BFSL)	≤ 0.3% FS (BFSL)	≤ 0.5 % FS ≤ 0.7 % FS
Output signal	4 … 20 mA 0 … 10 V 1 … 5 V 0.5 … 4.5 V ratiometric	4 … 20 mA 0 … 10 V	4 … 20 mA 0 … 10 V
Overpressure	> 2x nominal pressure, max. 360 bar	> 2x nominal pressure, max. 800 bar	> 2x nominal pressure, max. 600 bar
Versatile options for process connection	G 1/4 DIN 3852 (CTX) G 1/4 EN 837 G 1/2 EN 837 (CTX)	G 1/4 EN 837 G 1/2 EN 837 1/4 NPT 1/2 NPT M20x1.5	G 1/4 DIN 3852 G 1/4 EN 837 G 1/2 EN 837
Electrical connection	M12, 4 pins DIN 43650 Shielded cable	DIN 43650, 4 pins Shielded cable (1.5 m) M12, 4 pins Terminal strip outlet + screwed cap Terminal strip outlet + cap with M20x150 thread and gland	M12, 4 pins DIN 43650 Shielded cable
Protection rating	IP 65, IP 67	IP 67	IP 65, IP 67
Approvals		ATEX I M1 Ex ia I Ma ATEX II 1G D Ex ia IIC T6 or T5 Ga Ex ia IIIC T80°C or T95°C Da IP6x	

Pressure control with EF6 for:

- Braking
- Slide regulation
- Retarder cooling
- Sanding system
- Pantograph pressure

	PDRx	PBM4	PBMN industrial	EF6
General Data	■ Fully welded design ■ Excellent overpressure resistance ■ Compact design	■ Fully welded design ■ High temperature resistance	■ Fully welded design ■ Excellent overpressure resistance ■ Low measurement ranges (0 … 100 mbar)	■ Designed and manufactured according to EN50155 ■ Abrasive and chemical resistant
Industries	Energy, Transport & Logistics, Machinery	Transports & Logistics, Machinery	Laboratory & Medical, Oil & Gas / Chemical, Transport & Logistics, Machinery	Energy, Transport & Logistics
Measuring ranges	0 … 60 bar to 0… 1600 bar	0 … 25 bar to 0 … 1000 bar	-1 … 0 bar to 0 … 40 bar / Piezoresistive silicon 0 … 60 bar to 0 … 1600 bar / Metal thin film	0...6 bar to 0...250 bar
Media temperature	-25 … +85 °C	-40 … +150 °C	-40 … +120 °C	-40...+125 °C
Technology	Metal thin film	Metal thin film	Piezoresistive silicon / Metal thin film	Ceramic thick film
Wetted parts material	AISI 304 (1.4301) AISI 630 (1.4542)	AISI 630 (1.4548)	AISI 316L (1.4404) AISI 316L (1.4435) AISI 304 (1.4301) AISI 630 (1.4542)	AISI 316L (1.4404) Ceramic (96% Al_2O_3) FVMQ, NBR, EPDM, FKM
Accuracy (linearity, hysteresis, repeatability)	≤ 0.3 % FS	≤ 0.5 % FS	≤ 0.1 % FS (Pnom ≥ 400 mbar) ≤ 0.25 % FS, ≤ 0.5 % FS	≤ 0.5% FS
Output signal	4 … 20 mA 0 … 10 V CANopen	4 … 20 mA 1 … 6 V 0 … 5 V 0 … 10 V 0.5 … 4.5 V ratiometric	4 … 20 mA 0 … 10 V	4...20 mA 0...10 V
Overpressure	> 2x nominal pressure	> 2x nominal pressure, max. 1200 bar	> 3x nominal pressure Low pressure < = 40 bar > 2x nominal pressure High pressure > = 60 bar	> 2x nominal pressure
Versatile options for process connection	G 1/4 DIN 3852 G 1/4 EN 837 M14x1.5 60° cone	G 1/4 DIN 3852 G 1/4 DIN 3852 with Ø 0.6 mm nozzle G 1/4 EN 837 1/4 NPT	G 1/4 DIN 3852 G 1/4 EN 837 G 1/2 EN 837	G 1/4 DIN 3852 G 1/4 EN 837 G 1/2 EN 837
Electrical connection	M12, 4 pins	M12, 5 pins	M12, 4 pins DIN 43650 Shielded cable	M12, 4 pins DIN 43650 Shielded cable
Protection rating	IP 67	IP 67	IP 65, IP 67	IP 65, IP 67
Approvals			ATEX II 1G Ex ia IIC T4/T6 Ga ATEX II 1/2G Ex ia IIC T4/T6 Ga/Gb ATEX II 1D Ex ia IIIC T107°C IP6X Da	Railway (EN 50155)

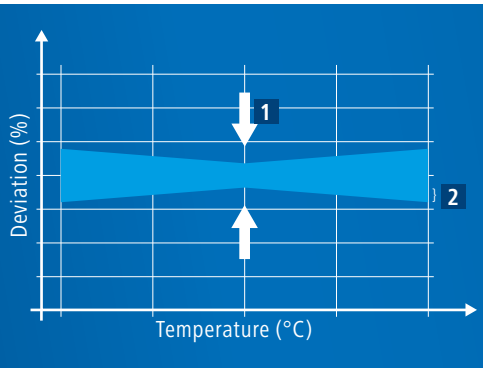
Customization is our passion!
One of our strengths is customizing products to your individual needs.

	PBMN flush	*CombiPress*® PFMN flush	PBMH hygienic	*CombiPress*® PFMH hygienic
General Data	■ Compact design and flush diaphragm ■ Excellent temperature charateristics ■ SIP / CIP compatible	■ Flush diaphragm ■ Optional display: *CombiView*® DFON ■ Programmable by touch screen ■ SIP / CIP compatible	■ Compact and hygienic design ■ SIP / CIP compatible ■ Excellent temperature charateristics	■ Hygienic design ■ Optional display: *CombiView*® DFON ■ Programmable by touch screen ■ SIP / CIP compatible
Industries	Food & Beverage Oil & Gas / Chemical Water / Waste Water	Food & Beverage Oil & Gas / Chemical Water / Waste Water	Food & Beverage Oil & Gas / Chemical Water / Waste Water	Food & Beverage Oil & Gas / Chemical Water / Waste Water
Measuring ranges	-1 … 0 bar to 0 … 400 bar	-1 … 0 bar to 0 … 400 bar	-1 … 0 bar to 0 … 40 bar	-1 … 0 bar to 0 … 60 bar
Media temperature	-40 … +125 °C -40 … +200 °C (with cooling neck)	-40 … +125 °C -40 … +200 °C (with cooling neck)	-40 … +125 °C -40 … +200 °C (with cooling neck)	-40 … +125 °C -40 … +200 °C (with cooling neck)
Technology	Piezoresistive silicon	Piezoresistive silicon	Piezoresistive silicon	Piezoresistive silicon
Wetted parts material	AISI 316L (1.4404) AISI 316L (1.4435) Hastelloy-C (optional)	AISI 316L (1.4404) AISI 316L (1.4435) Hastelloy-C (optional)	AISI 316L (1.4404) AISI 316L (1.4435) Hastelloy-C (optional)	AISI 316L (1.4404) AISI 316L (1.4435) Hastelloy-C (optional)
Accuracy (linearity, hysteresis, repeatability)	≤ 0.1 % FS (Pnom ≥ 400 mbar) ≤ 0.25 % FS ≤ 0.5 % FS	≤ 0.1 % FS (Pnom ≥ 400 mbar) ≤ 0.25 % FS	≤ 0.1 % FS (Pnom ≥ 400 mbar) ≤ 0.25 % FS	≤ 0.1 % FS (Pnom ≥ 400 mbar) ≤ 0.25 % FS
Output signal	4 … 20 mA 0 … 10 V	4 … 20 mA HART®	4 … 20 mA 0 … 10 V	4 … 20 mA HART®
Overpressure	3x nominal pressure, max. 690 bar	3x nominal pressure, max. 690 bar	> 3x nominal pressure	> 3x nominal pressure
Versatile options for process connection	G 1/2 A flush G 1" flush	G 1/2 A flush G 1" flush	TriClamp11/2", 3-A TriClamp 2", 3-A	3-A DN38 and DN76 TriClamp 11/2" and 2" Varivent® type N
Electrical connection	M12, 4 pins DIN 43650 Shielded cable	M12, 5 pins M12, 8 pins Cable gland, M16	M12, 4 pins DIN 43650 Shielded cable	M12, 5 pins M12, 8 pins Cable gland, M16
Protection rating	IP 65 , IP 67	IP 67, IP 69K	IP 65, IP 67	IP 67, IP 69K
Approvals	ATEX II 1G Ex ia IIC T4/T6 Ga ATEX II 1/2G Ex ia IIC T4/T6 Ga/Gb ATEX II 1G Ex ia IIC T3/T4/T6 Ga ATEX II 1/2G Ex ia IIC T3/T4/T6 Ga/Gb ATEX II 1D Ex ia IIIC T107°C IP6X DA	ATEX II 1GD Ex ia IIC T5 Ga Ex ta IIIC IP67 T100 Da ATEX II 3G Ex nA II T5	ATEX II 1G Ex ia IIC T4/T6 Ga ATEX II 1/2G Ex ia IIC T4/T6 Ga/Gb ATEX II 1G Ex ia IIC T3/T4/T6 Ga ATEX II 1/2G Ex ia IIC T3/T4/T6 Ga/Gb ATEX II 1D Ex ia IIIC T107°C IP6X DA 3-A, EHEDG, EL class 1	ATEX II 1GD Ex ia IIC T5 Ga Ex ta IIIC IP67 T100 Da ATEX II 3G Ex nA II T5 3-A EHEDG, EL class 1
Additional information	■ External programming of zero point and span with FlexProgrammer 9701	■ Internal setting of 0-point ■ External programming with FlexProgrammer 9701	■ External programming of zero point and span with FlexProgrammer 9701	■ Internal setting of 0-point ■ External programming with FlexProgrammer 9701

Total error band

(accuracy and thermal drift)

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



1 Characteristic deviation at ambient temperature

2 Thermal drift

	PBMH autoclavable	CPX	(Y)TED
General Data	■ Fully autoclavable pressure transmitter for common sterilisation processes ■ SIP/CIP compatible ■ Surface roughness of process connection ≤ 0.8 Ra	■ Vacuum measurement ■ Compact and light-weight design	■ Two threshold outputs ■ Totally stainless steel ■ 300° swivelling version
Industries	Health care Biotechnology Pharmaceutical	Machinery	Oil & Gas / Chemical Water / Waste Water / Food & Beverage / Machinery
Pressure ranges	-1 … 0 bar to 0 … 40 bar	-1 … 0 bar to 0 … 600 bar	-1 … 0 bar to 0 … 400 bar
Medium temperature	-10 … +125 °C -10 … +200 °C (with cooling neck)	-20 … +100 °C	-20 … +100 °C
Technology	Piezoresistive silicon	Ceramic thick film	Ceramic thick film
Wetted parts material	AISI 316L (1.4404) AISI 316L (1.4435)	AISI 316L (1.4404) Ceramic (96 % Al_2O_3) NBR, EPDM, FKM	AISI 316L (1.4404) Ceramic (96 % Al_2O_3) NBR, EPDM, FKM
Accuracy (linearity, hysteresis, repeatability)	≤ ± 0.1 % FS, 0.25 % FS	≤ 0.5 % FS (BFSL)	≤ 0.5 % FS
Output signal	4 … 20 mA 0 … 10 V	2 PNP switching outputs	4 … 20 mA and 2 PNP or 2 isolated switching outputs RS-485 Modbus™ and 2 isolated switching outputs
Overpressure	max. 135 bar	2x nominal pressure, max. 500 bar	2x nominal pressure, max. 500 bar
Versatile options for process connection	TriClamp 11/2", 3-A TriClamp 3/4"	G 1/4 DIN 3852 G 1/4 EN 837 G 1/2 EN 837	G 1/4 DIN 3852 G 1/4 EN 837 G 1/2 EN 837 Clamp DIN ISO 2852
Electrical connection	M12, 4 pins Fischer plug, 4 pins	M12, 5 pins DIN 43650	M12, 5 pins M12, 8 pins
Protection rating	IP 67	IP 65, IP 67	IP 67
Approvals	3-A, EHEDG EL class 1		3-A, ATEX M1 Ex ia I Ma ATEX II 1G Ex ia IIC T5/T6
Additional information	■ External programming with FlexProgrammer 9701 ■ Available with optional electropolished process connection	■ External programming with FlexProgrammer 9701	■ Explosion-proof version available ■ Local programming on display ■ Available with hygienic connection

Electronic temperature

	CombiTemp® TFRN	*CombiTemp*® TFRH	*CombiTemp*® TFR5
General Data	■ Industrial RTD temperature sensor ■ Optional display: *CombiView*® DFON ■ Threaded process connections ■ 4 … 20 mA, HART® or Pt100-output	■ Hygienic RTD temperature sensor ■ Optional display: *CombiView*® DFON ■ Hygienic process connections ■ 4 … 20 mA, HART® or Pt100-output	■ Room temperature or out-door temperature sensor ■ Can be used for remote temperature reading ■ Optional display: *CombiView*® DFON ■ Wall or pipe mounted ■ Housing and sensor in stainless steel
Industries	Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Food & Beverage Laboratory & Medical Water / Waste Water	Oil & Gas / Chemical, Water / Waste Water Energy Transport & Logistics Machinery Food & Beverage
Measuring ranges	Sensor -50 … +400 °C Ambient -40 … +160 °C	Sensor -50 … +250 °C Ambient -40 … +160 °C	Media -40 … 85 °C Ambient -30 … 70 °C with DFON display Ambient -30 … 80 °C with BattTemp display
Sensor element	Pt100	Pt100	Pt100
Accuracy	DIN A 1/1 DIN B 1/1, 1/3, 1/6	DIN A 1/1 DIN B 1/1, 1/3, 1/6	DIN A 1/1 DIN B 1/1, 1/3, 1/6
Wetted parts material	AISI 316L (1.4404)	AISI 316L (1.4404)	
Versatile options for process connection	Tube without connection G1/2 male DIN 3852 G1/2 male ISO 228-1 R1/2 male ISO 7/1 1/2"-14 NPT male	G1/2 B Hygienic 3 A DN38 Hygienic DN25/DN38 Clamp, 3-A DN51 Clamp, 2" 3-A Varivent® type N	N/A
Display	*CombiView*® DFON and BattTemp (optional)	*CombiView*® DFON and BattTemp (optional)	*CombiView*® DFON and BattTemp (optional)
Protection rating	IP 67 IP 69K	IP 67 IP 69K	IP 67
Approvals	ATEX II 1G, Ex ia IIC T5 ATEX II 3G, Ex nA II T5	3-A ATEX II 1G, Ex ia IIC T5 ATEX II 3G, Ex nA II T5	ATEX II 1G, Ex ia IIC T5/T6 ATEX II 3G, Ex nA II T5

	TE2	*CombiTemp* TCR6	ETTN, YTTN
General Data	■ Compact and light weight ■ -50 … +250 °C transmitter ■ 4 … 20 mA or Pt100 output	■ Industrial RTD temperature sensor ■ High level of modularity ■ Available with 4 … 20 mA, HART or Pt100 / Pt1000 output	■ Switching outputs ■ On site configuration ■ Suitable for hazardous ■ areas ■ Ideal for safety circuits ■ Robust design for rugged industrial environment
Industries	Food & Beverage Laboratory & Medical 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	Sensor -50 … +250 °C Ambient -40 … +85 °C	Sensor -50 … 400 °C with terminal block: -40 … 160 °C with transmitter: -40 … 85 °C	Display range -200 ... +400 °C Ambient -25 ... +85 °C
Sensor element	Pt100	Pt100 / Pt1000	Pt1000
Accuracy	DIN A 1/1 DIN B 1/1, 1/3, 1/6	DIN A 1/1 DIN B 1/1, 1/3, 1/6	DIN B 1/1
Wetted parts material	AISI 316L (1.4404) (PEEK)	AISI 316L (1.4404)	AISI 316L (1.4404)
Versatile options for process connection	Process connections G1/2" male nipple G1/2 B Hygienic M12 x 1.5 Hygienic M12 x 1.5 Hygienic cone Conical sensor G1/4" DIN 3852-E DN25/DN38 clamp Triclamp® 1/2", 3/4" 3-A DN38	Tube without connection G1/2 Male DIN 3852 A/E R1/2 Male ISO 7/1 1/2"-14 NPT Male M18, M20 G1/2, G3/4, G1 male rotating G1/2, G3/4 female union	Without union G 1/4 G 1/2 1/4 NPT 1/2 NPT
Display	No	No	4 digit 7-segment LED (red)
Protection rating	M12: IP 67 DIN 43650: IP 65	IP 65	IP 67
Approvals	3-A	ATEX II 1G, Ex ia IIC T5/T6 ATEX II 3G, Ex nA II T5	ATEX I M1 Ex ia I ATEX II 1G Ex ia IIC T6 to T5

User configurable transmitters for head mounting.

	FlexTop 2202	FlexTop 2203	FlexTop 2204
General Data	■ In-head transmitter for *CombiTemp*® or OEM applications ■ User configurable	■ In-head transmitter for OEM applications ■ User configurable	■ In-head transmitter for OEM applications ■ User configurable
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
Supply	8 … 35 VDC	8 … 35 VDC	8 … 35 VDC
Accuracy	< 0.25 °C (Pt100)	< 4 … 5 °C	< 0.25 °C (Pt500)
Measuring range	-200 … +850°C	-100 … +1820 °C -10 … 100 mV	-100 … +160 °C 0 … 1000 Ohm
Input	Pt100, 2-, 3-, 4 wire	T/C and mV	Pt500 and Ohm
Output	4 … 20 mA	4 … 20 mA	4 … 20 mA
Protection rating	IP 40	IP 40	IP 40
Approvals	Ex ia IIC T5/T6, ATEX II 1G Ex nA II T5, ATEX II 3G	Ex ia IIC T5/T6, ATEX II 1G Ex nA II T5, ATEX II 3G	Ex ia IIC T5/T6, ATEX II 1G Ex nA II T5, ATEX II 3G

Transmitters with your individual logo and in your individual housing color.

FlexTop 2211

FlexTop 2221

	FlexTop 2211	FlexTop 2221
General Data	■ In-head transmitter for *CombiTemp*® or OEM applications ■ User configurable	■ In-head transmitter for *CombiTemp*® or OEM applications ■ User configurable
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
Supply	6.5 … 35 VDC / 8 … 35 VDC	6.5 … 35 VDC / 8 … 35 VDC
Accuracy	< 0.1 °C (Pt100)	< 0.1 °C (Pt100)
Measuring range	RTD: -200 ... +850 °C T/C: -270 ... +2300 °C Ohm: 0 ... 2200 Ω	RTD: -200 ... +850 °C T/C: -270 ... +2300 °C Ohm: 0 ... 2200 Ω
Input	RTD T/C mV and Ohm	RTD T/C mV and Ohm
Output	4 … 20 mA	4 … 20 mA and HART®
Protection rating	IP 40	IP 40
Approvals	Ex ia IIC T5/T6, ATEX II 1G Ex nA II T5, ATEX II 3G	Ex ia IIC T5/T6, ATEX II 1G Ex nA II T5, ATEX II 3G

	Conical sensor	Cable sensor
General Data	■ Compact and light weight ■ Hygienic cable sensor ■ Pt100 output	■ Cable sensor with standard or air sensor ■ Cable length according to customer specification ■ Various Pt100 and Pt1000 elements available
Industries	Food & Beverage Laboratory & Medical Water / Waste Water	Oil & Gas / Chemical Energy Transport & Logistics Machinery
Measuring ranges	-50 … +205 °C	-50 … +205 °C
Sensor element	Pt100	Pt100 Pt1000
Accuracy	DIN A 1/1 DIN B 1/1, 1/3, 1/6	DIN A 1/1 DIN B 1/1, 1/3, 1/6
Wetted parts Material	AISI 316L (1.4404)	AISI 316Ti (1.4571)
Versatile options for process connection	G1/8 union, conical	
Protection rating	IP 65	IP 65

	FlexTemp 2301	FlexTemp 2311	FlexTemp 2321
General Data	■ Rail mounted transmitter ■ Damping and status indication configurable	■ Rail mounted transmitter ■ Damping and status indication configurable	■ Rail mounted transmitter ■ Damping and status indication configurable
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
Input	Pt100	RTD, T/C, mV and R	RTD, T/C, mV and R
Output	4 … 20 mA	4 … 20 mA	4 … 20 mA and HART®
Measuring range	-200 … +850 °C	RTD: -200 ... +850 °C T/C: -270 ... 2300 °C Ohm: 0 ... 2200 Ω	RTD: -200 ... +850°C T/C: -270 ... 2300°C Ohm: 0...2200 Ω
Accuracy	> 0,25°C (Pt100)	< 0.1°C (Pt100)	< 0.1°C (Pt100)
Supply	8 … 35 VDC	6.5 … 35 VDC	8 …35 VDC
Protection rating	Housing: IP 30 Terminals: IP 10	Housing: IP 30 Terminals: IP 10	Housing: IP 30 Terminals: IP 10

Level measurement

	CleverLevel LBFS	*CleverLevel* LFFS
General Data	■ Minimal insertion length ■ Detects all kinds of media (solid, liquid, viscous, pasty) ■ Compact and light weight	■ Detects all kinds of media (solid, liquid, viscous, pasty) ■ Bright, blue light on top when triggered ■ Visible from long distance
Industries	Food & Beverage Laboratory & Medical Oil & Gas / Chemical Water / Waste Water Energy Transport & Logistics Machinery	Food & Beverage Laboratory & Medical Water / Waste Water
Process conditions	-40 … +115 °C	-40 … +115 °C -40 … +200 °C
Versatile options for process connection	G1/2" G3/4" 3/4" NPT G1" G1/2" B hygienic M18x1 G1/2" for reverse assembly	G1/2" B hygienic 3A DN38 G1/2" sliding connection
Switching points	1	1
Wetted parts material	PEEK AISI 316L (1.4404) or AISI 304 (1.4301)	PEEK
Protection rating	IP67 / IP69K	IP 67
Approvals	ATEX II 1G, Ex ia IIC T5 ATEX II 1D, Ex ta IIIC T100 Da T100°C ATEX II 3G, Ex nA II T5 3-A EHEDG WHG EN50155 (railway) DNV GL Lloyd's register CCS	ATEX II 1G, Ex ia IIC T5 ATEX II 1D, Ex A20 IP67 ATEX II 3G, Ex nA II T5 3-A EHEDG WHG EN50155 (railway) DNV
Additional information	■ M18x1 replaces a capacitive sensor directly ■ G1/2" reverse for inside mounting in a tank ■ Hanging version ■ Adaptors for other hygienic connections available (see accessories)	■ Available with sliding connection 100 mm and 250 mm for reaching media which is difficult to access or for high temperatures up to 200 °C

	LSP051.X	LSP056.X	PSMN submersible	PSSN submersible
General Data	■ Fast response time < 10 ms ■ Insensitive to foam, bubbles and sticky media ■ Top-, bottom- or side mounting	■ Fast response time < 10 ms ■ Insensitive to foam, bubbles and sticky ■ Separate electronics	■ Excellent long term stability ■ Piezoresistive silicon sensor	■ High long term stability ■ Abrasive and chemical resistant
Industries	Food & Beverage Laboratory & Medical Water / Waste Water	Food & Beverage, Laboratory & Medical Water / Waste Water	Water / Waste Water	Water / Waste Water
Operating temperature	Sensor -20 … +140 °C Ambient -20 … +60 °C	Sensor -20 … +140 °C Ambient -20 … +100 °C	-5 … +80 °C	-5 … +40 °C
Measuring ranges			0 … 250 mH_2O	0 … 20 mH_2O
Versatile options for process connection	G1" B hygienic	G1"B hygienic		
Media conductivity	min. 50 µS	min. 50 µS		
Technology	Potentiometric	Potentiometric	Piezoresistive silicon	Ceramic thick film
Wetted parts material	PEEK AISI 316L (1.4404)	PEEK AISI 316L (1.4404)	AISI 316L (1.4404) AISI 904L (1.4539) for seawater applications AISI 316L (1.4435) Hastelloy-C PUR or PTFE (Cable) NBR, FKM (sealing)	AISI 316L (1.4404) Ceramic (96 % AL) PUR (Cable) NBR (sealing)
Accuracy (linearity, hysteresis, repeatability)	± 0.5 % FS	± 0.5 % FS	≤ 0.1 % FS (Pnom ≥ 4 mH_2O) ≤ 0.25 % FS	≤ 1 % FS
Output signal	4 … 20 mA	4 … 20 mA	4 … 20 mA 0 … 10 V	4 … 20 mA
Cable		Silicone Length up to 5 m	PUR or ETFE with integrated humidity filter up to 250 m length	PUR black with integrated humidity filter up to 25 m length
Protection rating	IP 67	IP 67	IP 68	IP 68
Approvals	3-A	3-A	ATEX II 1G Ex ia IIC T4 / T6 Ga	
Additional information	■ Adaptors for other hygienic connections available (see accessories)	■ Adaptors for other hygienic connections available (see accessories)	■ External programming of zero point and span with FlexProgrammer 9701	

	LSKx2x	LSKx5x
General Data	■ Top- or side mounted ■ Adjustable rod length ■ Robust stainless steel housing	■ Multipoint level detection ■ Adjustable rod length ■ Robust stainless steel housing
Industries	Food & Beverage, Laboratory & Medical Water / Waste Water	Food & Beverage Laboratory & Medical Water / Waste Water
Process conditions	-20 … +140 °C	-20 … +140 °C
Versatile options for process connection	G1/2" B hygienic	G1" B hygienic
Switching points	1	2 … 4
Wetted parts material	PEEK PTFE AISI 316L (1.4404)	PEEK PTFE AISI 316L (1.4404)
Protection rating	IP 67	IP 67
Approvals	3-A	3-A
Additional information	■ Adaptors for other hygienic connections available (see accessories)	■ Adaptors for other hygienic connections available (see accessories)

	CombiLyz® AFI4	*CombiLyz*® AFI5
General Data	■ Conductivity or concentration output ■ Fast internal temperature compensation ■ Fast response time ■ High accuracy < 1.0 % ■ Programmable via touch screen or FlexProgrammer 9701	■ Remote sensor with 2.5 / 5 / 10 meter cable ■ Conductivity or concentration output ■ Fast internal temperature compensation ■ Fast response time ■ High accuracy < 1.0 % ■ Programmable via touch screen or FlexProgrammer 9701
Industries	Food & Beverage Laboratory & Medical Water / Waste water	Food & Beverage Laboratory & Medical Water / Waste water
Operating temperature	-20 … 140 °C (150 °C < hour)	-20 … 140 °C (150 °C < hour)
Measuring range	500 µS/cm … 1 S/cm	500 µS/cm … 1 S/cm
Versatile options for process connection	G1" B hygienic	G1" B hygienic
Wetted parts material	PEEK	PEEK
Output	4 … 20 mA 4 … 20 mA – HART	4 … 20 mA 4 … 20 mA – HART
Accuracy	1.0 % of selected range	1.0 % of selected range
Protection rating	IP67 / IP69K	IP67 / IP69K
Approvals	3-A EHEDG	3-A EHEDG
Additional information	■ Adaptors for other hygienic connections available (see accessories) ■ *CombiView*® DFON (optional)	■ Adaptors for other hygienic connections available (see accessories) ■ *CombiView*® DFON (optional)

User interface

Your individual alarm system.

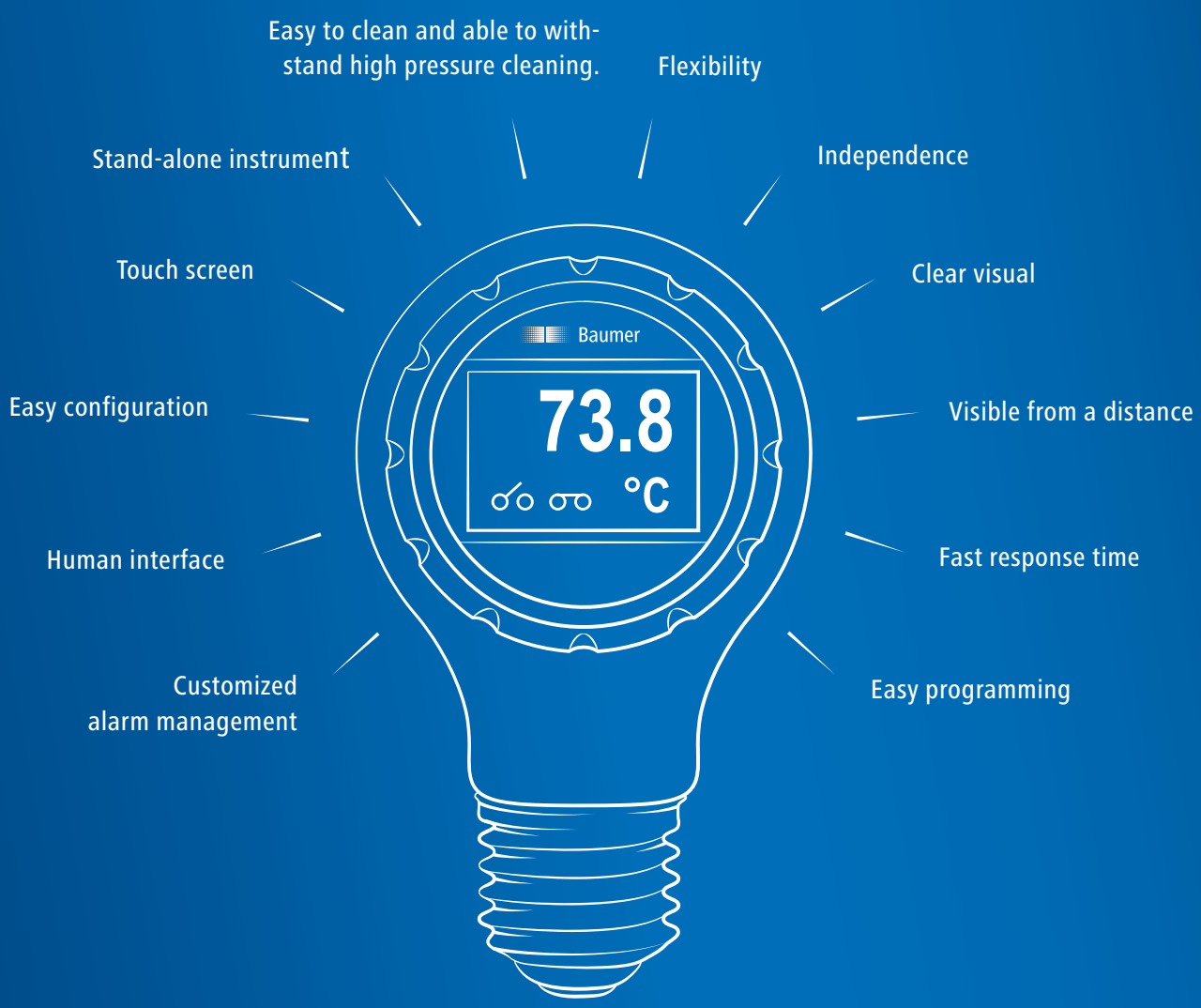
Red = take action

Green = ok

	CombiView® DFON	FlexProgrammer 9701
General Data	■ Large digits and illustration visible from long distance ■ Configurable via touch screen or FlexProgrammer ■ Backlight color change according to alarm settings	■ Easy configuring with menu control function ■ Data transfer from PC to device via USB ■ Configuration of a device on the spot without a PC ■ Robust plastic case with digital display and buttons ■ Rechargeable battery ■ Free FlexProgram updates from Baumer web site
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
Backlight	3 configurable backlight colors	
Display modes	Digits, analog, bargraph	
Supply voltage	Loop-powered	From USB-port or from rechargeable battery
Accuracy	0.1 % ± 1 digit	
Relays	2 configurable relays	
Ambient values	-30 … +80 °C	0 … +50 °C, rel. humidity < 90 %
Protection rating	IP 10 on terminals IP 67 in housing	IP 42
Software		FDT / DTM based
Approvals	ATEX II GD – Ex ia IIC T5 Ga. ATEX ta IIIC IP 67 T100 Da. ATEX II 3G – Ex nA II T5	

A brilliant solution.

The *CombiView*® display by Baumer – designed for a safe and convenient control of your processes.



Please find further information about the entire *CombiSeries*® at www.baumer.com/CombiSeries

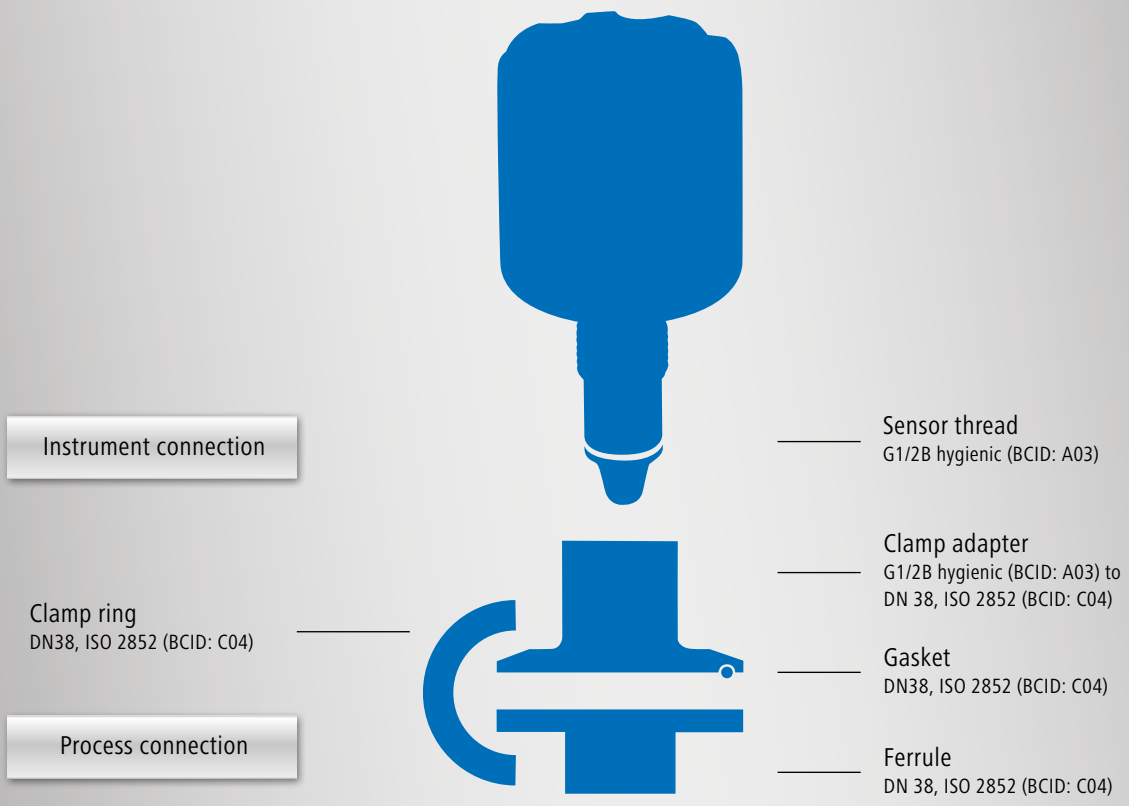
Another Baumer INNOVATION

Ready to fit your process: Baumer sensors support off-the-shelf standard and brand compatible process connections.

Baumer instruments fit almost every process connection you have in place. With more than 40 connenction types readily available, you needn't modify your system design in any way. The Baumer Connection Identifier (BCID) provides you a convenient and safe system to identify the right process adapter to get your Baumer sensor mounted to your application.

How to select the fitting adaptor to your instrument
In the first place, you should decide which process connection – threaded, clamped or welded. Please refer to the table on next page for more information. Afterwards, the sensor data sheet provides you with the BCID code for the selected connection type. Each adaptor or sleeve comes also with a BCID code. Same BCID codes always mean matching accessories – whether adaptors, ferrules, clamp rings or gaskets.

Example for the Baumer Connection Identifier (BCID) System



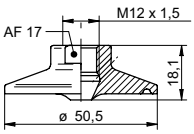
Threaded connections		Hygienic	BCID
ISO 228-1	G1/2 B		G07
	G1 1/4 B		G13
	G1 1/2 B		G14
	G2 B		G16
	G1/2 A cone		G08
	G1/2 A O-ring at the front		G09
	G1 A O-ring at the front		G12
EH FTL EE2	Rd52	x	T02
EH FTL GW2 (ø 29.0)	G1 B	x	T03
EH FTL GQ2 (ø 23.7)	G3/4 B	x	T04
VS (ø 21.3)	G3/4	x	T06
VS (ø 21.3)	G1	x	T07
Hygienic (cone)	G1/8	x	A01
	M12 × 1.5	x	A02
	G1/2 B	x	A03
	G1 B	x	A04

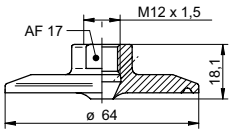
Clamp and nut connections		Hygienic	BCID
Baumer Hygienic Connection	BHC 3A DN 38	x	B01
	BHC 3A DN 76	x	B02
ISO 2852	1″	x	C03
	1 1/2″	x	C04
	2″	x	C05
DIN 11851	DN 25		D01
	DN 32		D02
	DN 40		D03
	DN 50		D04
	DN 65		D05
SMS 1145	DN 38	x	S01
	DN 51	x	S02
Varivent®	Type N	x	V02

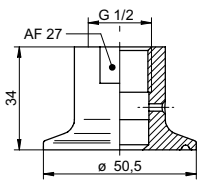
Welded connections		BCID
Thin wall tank (collar)	Ø16 × 12.2	W01
	Ø25 × 17	W05
	Ø45 × 34	W20
Thick wall tank (cylinder)	Ø30 × 26	W10
	Ø30 × 34 with inspection hole	W21
	Ø35 × 20.0	W35
	Ø50 × 23	W45
	Ø55 × 32	W65
	Ø60 × 20.5	W50
	Ø120 × 32	W70
Angular mounting (ball)	Ø35	W30
Pipe without extrusion	Ø16, DN 25	W02
Pipe extrusion	Ø29, DN 25 … DN 50	W25
	Ø30, DN 65 … DN 150	W26
	Ø40, DN 40… DN 50	W40
	Ø41, DN 65 … DN 150	W41
	Ø38, DN 38	W60

Process connections & accessories

	ZPH1-2213	ZPH1-2216	ZPH1-3213
Process connection	DN 38 (BCID: C04)	DN 51 (BCID: C05)	DN 38 (BCID: C04)
Instrument connection	M12 hygienic (BCID: A02)	M12 hygienic (BCID: A02)	G1/2B hygienic (BCID: A03)
Instrument series	TE2	TE2	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40 (PN 64 w. ZPX4-610)	PN 40 (Safe at PN 64)
Approvals			3-A, EHEDG for LBFS / LFFS
Union nut			
Ferrule	ZPX4-320		ZPX4-320
Clamp-ring	ZPX4-310	ZPX4-610	ZPX4-310
O-ring			
Gasket EPDM (3-A, FDA) EPDM (EHEDG)	ZPX3-7233 ZPX3-7234	ZPX3-7263 ZPX3-7264	ZPX3-7233 ZPX3-7234
Drawing			

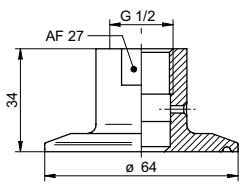


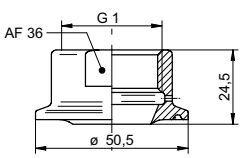


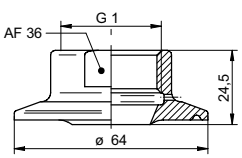


Hygienic clamp adapters acc. ISO 2852, DIN 32676

	ZPH1-3216	ZPH1-5213	ZPH1-5216
Process connection	DN 51 (BCID: C05)	DN 38 (BCID: C04)	DN 51 (BCID: C05)
Instrument connection	G1/2B hygienic (BCID: A03)	G1B hygienic / G1B cone (BCID: A04)	G1B hygienic / G1B cone (BCID: A04)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	PBMN flush PFMN LSP, LSKx5 AFIx	PBMN flush PFMN LSP, LSKx5 AFIx
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40 (Safe at PN 64)	PN 40 (Safe at PN 64)	PN 40 (Safe at PN 64)
Approvals	3-A, EHEDG for LBFS / LFFS	3-A, EHEDG for AFI4 / AFI5	3-A, EHEDG for AFI4 / AFI5
Union nut			
Ferrule		ZPX4-320	
Clamp-ring DN 38, DN 51	ZPX4-610	ZPX4-310	ZPX4-610
O-ring			
Gasket EPDM (3-A, FDA) EPDM (EHEDG)	ZPX3-7263 ZPX3-7264	ZPX3-7233 ZPX3-7234	ZPX3-7263 ZPX3-7264
Drawing			

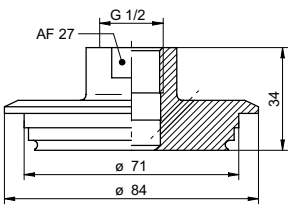


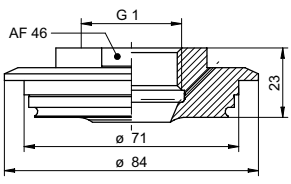




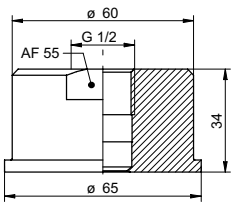
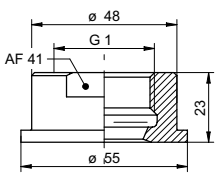
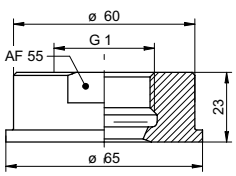
Hygienic Varivent® adapters

	ZPH1-324E	ZPH1-524E
Process connection	Varivent® type N (BCID: V02)	Varivent® type N (BCID: V02)
Instrument connection	G1/2B hygienic (BCID: A03)	G1B hygienic / G1B cone (BCID: A04)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	PBMN flush PFMN LSP, LSKx5 AFIx
Material	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	10 bar	10 bar
Approvals	3-A, EHEDG for LBFS / LFFS	3-A, EHEDG for AFI4 / AFI5
Union nut		
Ferrule		
Clamp-ring		
O-ring	ZPX2-323	ZPX2-323
Gasket		
Drawing		

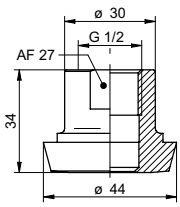
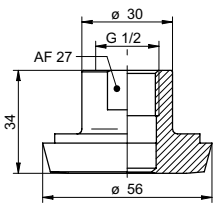
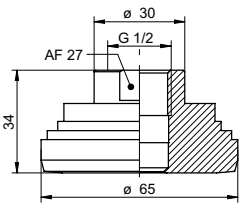




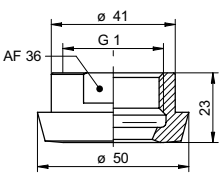
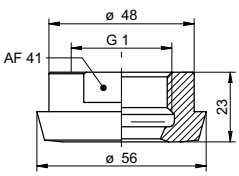
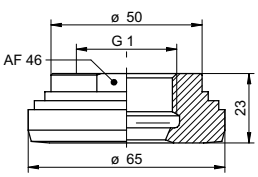
Hygienic adapters acc. SMS 1145

	ZPH1-3236	ZPH1-5233	ZPH1-5236
Process connection	DN 51 (BCID: S02)	DN 38 (BCID: S01)	DN 51 (BCID: S02)
Instrument connection	G1/2B hygienic (BCID: A03)	G1B hygienic / G1B cone (BCID: A04)	G1B hygienic / G1B cone (BCID: A04)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2	PBMN flush PFMN LSP, LSKx5 AFIx	PBMN flush PFMN LSP, LSKx5 AFIx
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	25 bar	40 bar	25 bar
Approvals			
Union nut SMS 1145	ZPX4-630	ZPX4-330	ZPX4-630
Ferrule			
Clamp-ring			
O-ring			
Gasket NBR	ZPX3-8160	ZPX3-8130	ZPX3-8160
Drawing			

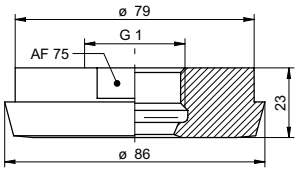
Hygienic adapters acc. DIN 11851

	ZPH1-3221	ZPH1-3224	ZPH1-3225
Process connection	DN 25 (BCID: D01)	DN 40 (BCID: D03)	DN 50 (BCID: D04)
Instrument connection	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)
Instrument series	PBMN flush PFMN LBFS, LFFS LSKx2 TFRH, TE2	PBMN flush PFMN LBFS, LFFS LSKx2 TFRH, TE2	PBMN flush PFMN LBFS, LFFS LSKx2 TFRH, TE2
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	40 bar	40 bar	10 bar
Approvals			
Union nut	ZPX4-140	ZPX4-440	ZPX4-540
Ferrule			
Clamp-ring			
O-ring			
Gasket	ZPX3-9110	ZPX3-9140	ZPX3-9150
Drawing			

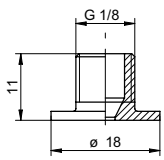
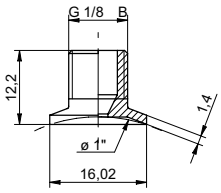
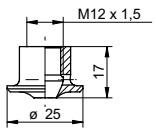
Hygienic adapters acc. DIN 11851

	ZPH1-5222	ZPH1-5224	ZPH1-5225
Process connection	DN 32 (BCID: D02)	DN 40 (BCID: D03)	DN 50 (BCID: D04)
Instrument connection	G1B hygienic / G1B cone (BCID: A04)	G1B hygienic / G1B cone (BCID: A04)	G1B hygienic / G1B cone (BCID: A04)
Instrument series	PBMN flush PFMN LBFS, LFFS LSKx5 TFRH, TE2	PBMN flush PFMN LBFS, LFFS LSKx5 TFRH, TE2	PBMN flush PFMN LBFS, LFFS LSKx5 TFRH, TE2
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	40 bar	40 bar	25 bar
Approvals			
Union nut		ZPX4-440	ZPX4-540
Ferrule			
Clamp-ring			
O-ring			
Gasket NBR		ZPX3-9140	ZPX3-9150
Drawing			

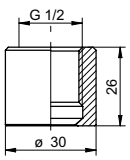
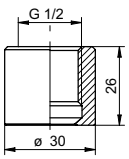
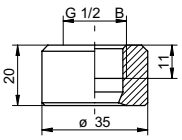
Hygienic adapters acc. DIN 11851

	ZPH1-5227
Process connection	DN 65 (BCID: D05)
Instrument connection	G1B hygienic / G1B cone (BCID: A03)
Instrument series	PBMN flush PFMN LSP, LSKx5 AFIx
Material	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8
Max. pressure	25 bar
Approvals	
Union nut	ZPX4-540
Ferrule	
Clamp-ring	
O-ring	
Gasket NBR	
Drawing	

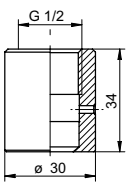
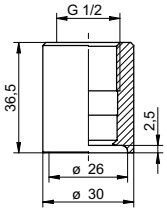
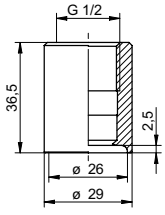
Hygienic weld-in sleeves

	ZPW2-122	ZPW2-125	ZPW2-222
Process connection	Thin-walled tanks (BCID: W01)	Tube DN 25 (BCID: W02)	Thin-walled tanks Small pipes (BCID: W05)
Instrument connection	G 1/8 conical (BCID: A01)	G1/8 conical (BCID: A01)	M12 hygienic (BCID: A02)
Instrument series	TE2 Conical cable sensor	TE2 Conical cable sensor	TE2
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40	PN 40
Approvals			
Union nut			
Ferrule			
Clamp-ring			
O-ring			
Gasket			
Drawing			

Industrial and hygienic weld-in sleeves

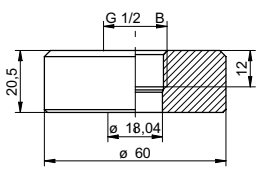
	ZPW1-711	ZPW1-721	ZPW1-121
Process connection	Tank Pipes (BCID: W10)	Tank Pipes (BCID: W10)	Tank Pipes (BCID: W35)
Instrument connection	LBFS G1/2B (BCID: G07)	LBFS G1/2B (BCID: G07)	G1/2A cone (BCID: G08)
Instrument series	LBFS	LBFS	PBMN flush
Material	AISI 304 (1.4301)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 100	PN 100	PN 100
Approvals			
Union nut			
Ferrule			
Clamp-ring			
O-ring			
Gasket			
Drawing			

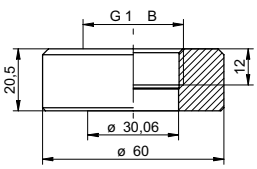
Hygienic weld-in sleeves

	ZPW2-321	ZPW2-327	ZPW2-326
Process connection	Tank with inspection hole (BCID: W21)	Pipe end DN 65 … DN 150 (BCID: W26)	Pipe end DN 25 … DN 50 (BCID: W25)
Instrument connection	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 100	PN 40	PN 40
Approvals	3-A, EHEDG		
Union nut			
Ferrule			
Clamp ring			
O-ring			
Gasket			
Drawing			

Industrial flush and hygienic weld-in sleeves

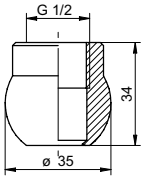
	ZPW1-221	ZPW1-621
Process connection	Tank Pipes (BCID: W50)	Tank Pipes (BCID: W50)
Instrument connection	G1/2A o-ring at the front (BCID: G09)	G1A, o-ring at the front (BCID: G12)
Instrument series	PBMN flush	PBMN flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)		Ra ≤ 0.8
Max. pressure		
Approvals		
Union nut		
Ferrule		
Clamp-ring		
O-ring NBR	ZPX2-610	ZPX2-710
EPDM	ZPX2-620	ZPX2-720
FKM	ZPX2-630	ZPX2-730
Gasket NBR	ZPX3-410	ZPX3-510
EPDM	ZPX3-420	ZPX3-520
FKM	ZPX3-430	ZPX3-530
Drawing		

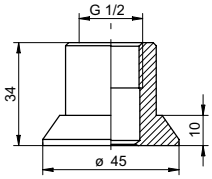




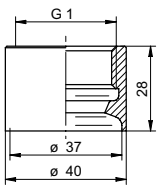
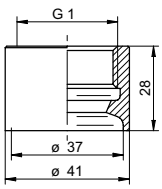
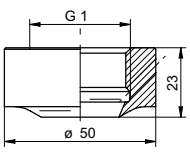
Industrial flush and hygienic weld-in sleeves

	ZPW2-324	ZPW2-322
Process connection	Tanks Pipes (BCID: W30)	Thin walled tanks Pipes (BCID: W20)
Instrument connection	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)		Ra ≤ 0.8
Max. pressure		PN 40
Approvals		
Union nut		
Ferrule		
Clamp-ring		
O-ring NBR EPDM FKM		
Gasket NBR EPDM FKM		
Drawing		



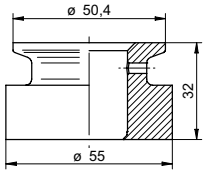


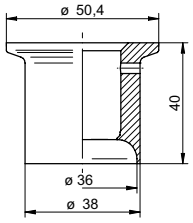
Hygienic weld-in sleeves acc. Baumer Hygienic Connection (BHC 3A)

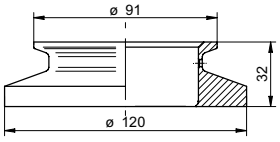
	ZPW2-526	ZPW2-527	ZPW2-521
Process connection	Pipe end DN 40…DN 50 (BCID: W40)	Pipe end DN 65…DN 150 (BCID: W041)	Tanks (BCID: W45)
Instrument connection	G1B hygienic (BCID: A04)	G1B hygienic (BCID: A04)	G1B hygienic (BCID: A04)
Instrument series	PBMN flush PFMN LSP, LSKx5 AFIx	PBMN flush PFMN LSP, LSKx5 AFIx	PBMN flush PFMN LSP, LSKx5 ISL, AFIx
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40	PN 100
Approvals			3-A, EHEDG
Union nut			
Ferrule			
Clamp-ring			
O-ring NBR EPDM FKM			
Gasket			
Drawing			

Hygienic weld-in sleeves

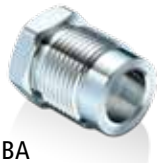
	ZPW2-621	ZPW2-626	ZPW2-721
Process connection	DN 38 Tanks (BCID: W65)	DN 38 Pipe end DN 38 (BCID: W60)	DN 76 Tanks level measurement (BCID: W70)
Instrument connection	BHC 3A DN 38 (BCID: B01)	BHC 3A DN 38 (BCID: B01)	BHC 3A DN 76 (BCID: B02)
Instrument series	PBMH PFMH, TE2 TFRH LFFS	PBMH PFMH, TE2 TFRH LFFS	
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40	PN 10
Approvals	3-A, EHEDG	3-A, EHEDG	3-A, EHEDG
Union nut			
Ferrule			
Clamp-ring	ZPX4-310	ZPX4-310	ZPX4-810
O-ring NBR EPDM FKM	ZPX2-112 ZPX2-123 ZPX2-132	ZPX2-112 ZPX2-123 ZPX2-132	ZPX2-212 ZPX2-222 ZPX2-232
Gasket			
Drawing			

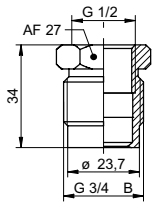
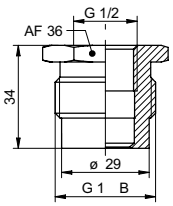
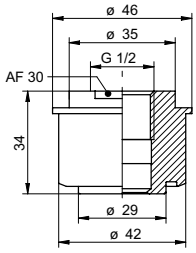




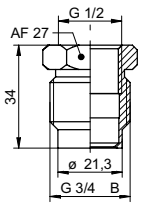
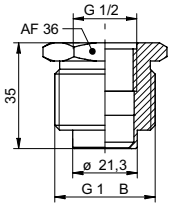
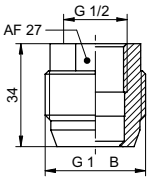


Vibronic level switch replacement

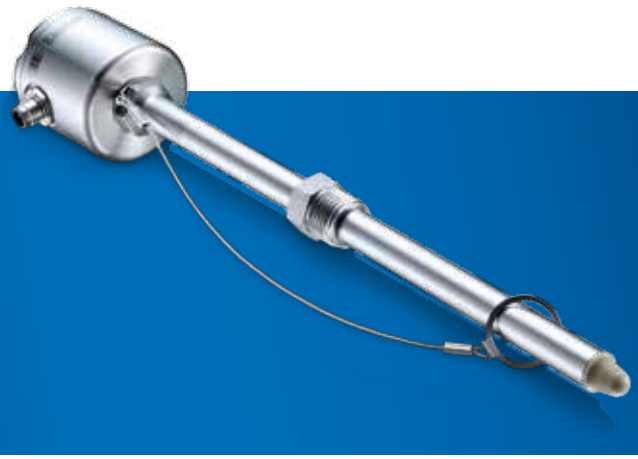


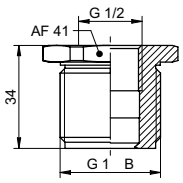
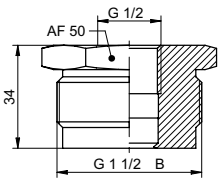
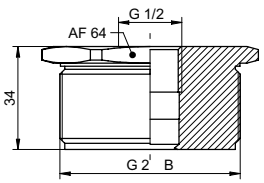
	ZPH1-32BA	ZPH1-32CB	ZPH1-32A1
Process connection	EH FTL G3/4B Ø23.7 G3/4" Hygienic adapter (BCID: T04)	EH FTL G1B Ø29 G1" Hygienic adapter (BCID: T03)	EH Rd52 (BCID: T01)
Instrument connection	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40	40 bar
Approvals			
Union nut			ZPX4-140
Ferrule			
Clamp-ring			
O-ring			
Gasket			ZPX3-9110
Drawing			

Vibronic level switch replacement

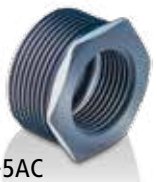
	ZPH1-32BC	ZPH1-32CD	ZPH1-32C0
Process connection	VS G3/4B, Ø21.3 G3/4" Hygienic adapter (BCID: T06)	VS G1B, Ø21.3 G1" Hygienic adapter (BCID: T07)	G1B (For mounting G1/2B hygienic in G1 conical adapter) (BCID: A04)
Instrument connection	G1/2"B hygienic (BCID: A03)	G1/2"B hygienic (BCID: A03)	G1/2"B hygienic (BCID: A03)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40	PN 40
Approvals			
Union nut			
Ferrule			
Clamp-ring			
O-ring			
Gasket			
Drawing			

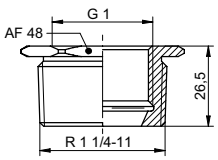
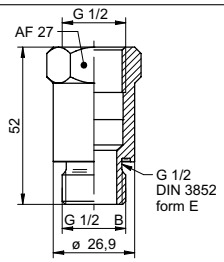
Standard threaded adapters



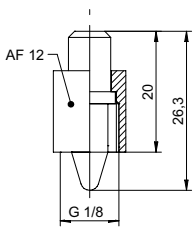
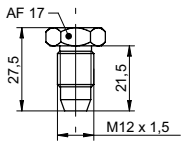
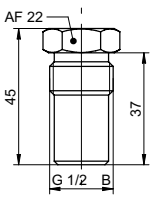
	ZPI1-32B	ZPI1-32D	ZPI1-32E
Process connection	Industrial thread G1B (BCID: G11)	Industrial thread G11/2B (BCID: G14)	Industrial thread G2B (G16)
Instrument connection	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)	G1/2B hygienic (BCID: A03)
Instrument series	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40	PN 40
Approvals			
Union nut			
Ferrule			
Clamp-ring			
O-ring			
Gasket			
Drawing			

Standard threaded adapters
Threaded cable hanger



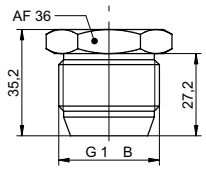
	ZPI1-5AC	ZPI1-32A	ZPI1-A2D
Process connection	G11/4B industrial (BCID: G13)	G1/2 industrial DIN 3852 form E Tanks and pipes (BCID: G51)	G11/2B industrial (BCID: G14)
Instrument connection	G1B hygienic / G1B cone (BCID: A04)	G1/2B hygienic (BCID: A03)	Cable holder
Instrument series	PBMN flush PFMN LSP, LSKx5 AFIx	LFFS sliding connection	LBFS-Hanging
Material	PVC	AISI 316L (1.4404)	
Surface roughness (µm)		Ra ≤ 0.8	
Max. pressure	PN 10, 20°C	PN 16	PN 10
Approvals			
Union nut			
Ferrule			
Clamp-ring			
O-ring			
Gasket NBR		ZPX2-410	
EPDM		ZPX2-420	
FKM		ZPX2-430	
Drawing			

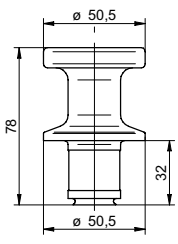
Blind plugs
G1/8, M12, G1/2

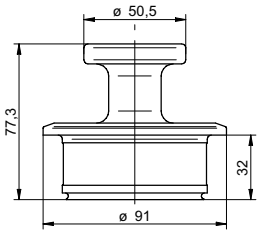
	ZPX5-12	ZPX5-22	ZPX5-32
Process connection			
Instrument connection	G1/8 (BCID: A01)	M12 hygienic (BCID: A02)	G1/2B hygienic (BCID: A03)
Instrument series	TE2 Conical cable sensor	TE2	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 40	PN 40	PN 100
Approvals			
Union nut			
Ferrule			
Clamp-ring			
O-ring			
Gasket			
Drawing			

Blind plugs G1, BHC 3A DN 38, BHC 3A DN 76

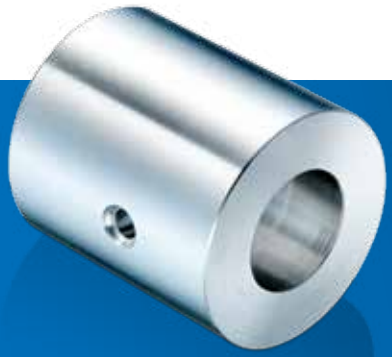
	ZPX5-62	ZPX5-82	ZPX5-92
Process connection		BHC 3A DN 38	BHC 3A DN 76
Instrument connection	G1B hygienic / G1B cone (BCID: A04)	BHC 3A DN 38 (BCID: B01)	BHC 3A DN 76 (BCID: B02)
Instrument series	PBMN flush PFMN LSP, LSKx5 AFIx	PBMH PFMH, TE2 TFRH LFFS	PBMH PFMH
Material	AISI 316L (1.4404)	AISI 316L (1.4404)	AISI 316L (1.4404)
Surface roughness (µm)	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	PN 70	PN 40	PN 10
Approvals		3-A	3-A
Union nut			
Ferrule			
Clamp-ring			
O-ring NBR EPDM FKM		ZPX2-112 ZPX2-123 ZPX2-132	ZPX2-212 ZPX2-222 ZPX2-232
Gasket			
Drawing			

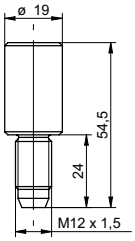
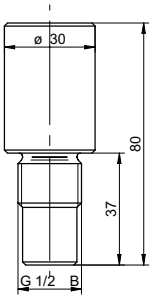
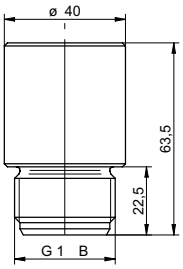




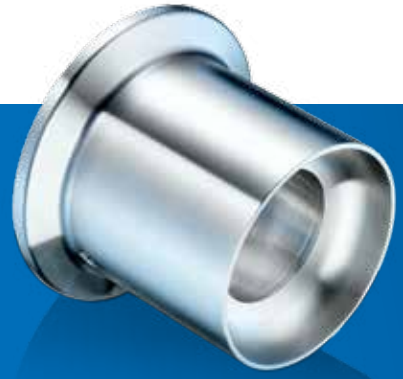


Welding mandrels for threaded hygienic welded connections



	ZPX6-26	ZPX6-36	ZPX6-66
Process connection			
Instrument connection	M12 hygienic (BCID: A02)	G1/2" hygienic (BCID: A03)	G1B hygienic / G1B cone (BCID: A04)
Instrument series	TE2	LBFS, LFFS LSKx2 TFRH, TE2 PBMN-flush PFMN	PBMN flush PFMN LSP, LSKx5 AFIx
Material	Brass	Brass	Brass
Surface roughness (µm)			
Max. pressure			
Approvals			
Union nut			
Ferrule			
Clamp-ring			
O-ring			
Gasket			
Drawing			

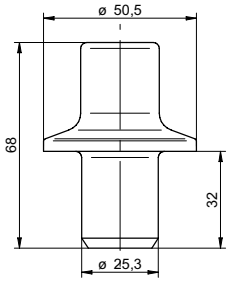
Welding mandrels for BHC hygienic welded connections

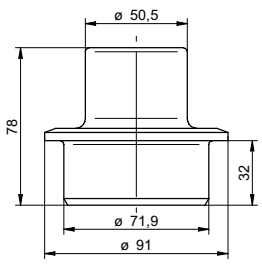


ZPX6-86

ZPX6-96

Process connection		
Instrument connection	BHC 3A DN 38 (BCID: B01)	BHC 3A DN 76 (BCID: B02)
Instrument series	PBMH PFMH, TE2 TFRH	PBMH PFMH
Material	Brass	Brass
Surface roughness (µm)		
Max. pressure		
Approvals		
Union nut		
Ferrule		
Clamp-ring		
O-ring		
Gasket		
Drawing		





Additional parts for hygienic clamp connections acc. ISO 2852, DIN 32676

	ZPX4-320	ZPX4-x10	ZPX3-7xxx
Process connection	Ferrule ISO 2852 (BCID: C04)	Closure clamp ISO 2852 (BCID: B0x, C0x)	Gasket ISO 2852 (BCID: C04, C05)
Instrument connection			
Instrument series			
Material	AISI 304 (1.4301)	Stainless steel AISI 304 (1.4301)	EPDM
Surface roughness (µm)	Ra ≤ 0.8		
Max. pressure	DN 38 - 16 bar	DN 38 - 100 bar DN 51 - 100 bar DN 76 - 90 bar	
Approvals	3-A		3-A, FDA EHEDG
Dimension / material / type code:	DN 38 / ZPX4-320	DN 38 / ZPX4-310 (BCID: B01, C04) DN 51 / ZPX4-610 (BCID: C05) DN 76 / ZPX4-810 (BCID: B02)	3-A, FDA DN 38 / EPDM / ZPX3-7233 (BCID: C04) DN 51 / EPDM / ZPX3-7263 (BCID: C05) EHEDG DN 38 / EPDM / ZPX3-7234 (BCID: C04)

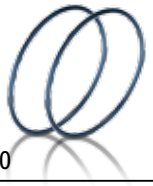
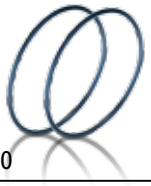
Additional parts for hygienic threaded connections acc. SMS 1145, DIN 11851

	ZPX4-xx0	ZPX3-xxx0
Process connection	Ring nut SMS 1145 DIN 11851 (BCID: D0x / S0x)	Union gasket SMS 1145 DIN 11851 (BCID: D0x / S0x)
Instrument connection		
Instrument series		
Material	Stainless steel AISI 304 (1.4301)	NBR
Surface roughness (µm)		
Max. pressure		
Approvals		
Dimension / material / type code:	SMS, DN 38 / ZPX4-330 (BCID: S01) SMS, DN 51 / ZPX4-630 (BCID: S02) DIN, DN 25 / ZPX4-140 (BCID: D01) DIN, DN 40 / ZPX4-440 (BCID: D03) DIN, DN 50 / ZPX4-540 (BCID: D04) DIN, DN 65 / ZPX4-740 (BCID: D05)	SMS, DN 38 / NBR / ZPX3-8130 (BCID: S01) SMS, DN 51 / NBR / ZPX3-8160 (BCID: S02) DIN, DN 25 / NBR / ZPX3-9110 (BCID: D01) DIN, DN 40 / NBR / ZPX3-9140 (BCID: D03) DIN, DN 50 / NBR / ZPX3-9150 (BCID: D04) DIN, DN 65 / NBR / ZPX3-9170 (BCID: D05)

O-ring acc.
3A DN 38 and DN 76
Varivent type N

	ZPX2-1xx	ZPX2-2xx	ZPX2-323
Process connection	O-ring BHC 3A DN 38 (BCID: B01)	O-ring BHC 3A DN 76 (BCID: B02)	O-ring Varivent type N (BCID: V02)
Instrument connection			
Instrument series			
Material	NBR, EPDM, FKM	NBR, EPDM, FKM	EPDM
Surface roughness (µm)			
Max. pressure	DN 38 - 16 bar	DN 38 - 100 bar DN 51 - 100 bar DN 76 - 90 bar	
Approvals	3-A, FDA	FDA	3-A, FDA
Dimension / material / type code:	NBR (FDA) / ZPX2-112 EPDM (3-A, FDA) / ZPX2-123 FKM (FDA) / ZPX2-132	NBR (FDA) / ZPX2-212 EPDM (FDA) / ZPX2-222 FKM (FDA) / ZPX2-232	

Gasket acc. DIN 3852 form E, O-ring at the front for G1/2 and G1

	ZPX2-xx0	 ZPX2-6x0	 ZPX2-7x0
Process connection	Sealing ring (DIN 3869) G1/2, DIN 3852 Form E (BCID: G51)	O-rings G1/2A, O-ring at the front (BCID: G09)	O-rings G1A, O-ring at the front (BCID: G12)
Instrument connection			
Instrument series			
Material	NBR, EPDM, FKM	NBR, EPDM, FKM	NBR, EPDM, FKM
Surface roughness (µm)			
Max. pressure			
Approvals			
Dimension / material / type code:	NBR / ZPX3-410 EPDM / ZPX3-420 FKMM / ZPX3-430	NBR / ZPX2-610 EPDM / ZPX2-620 FKMM / ZPX2-630	NBR / ZPX2-710 EPDM / ZPX2-720 FKMM / ZPX2-730

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