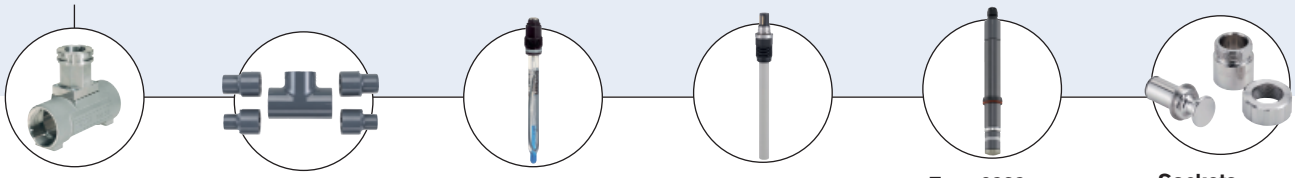
bürkert
FLUID CONTROL SYSTEMS

Armatures for analytical probes

- For many different types of installations and applications
- Large range of probe holders
- General purpose, water treatment, food & beverage, pharmaceutical applications

Type 8200 can be combined with...



Type S020
INSERTION fitting

Pipe and fitting

Type 8203
pH/ORP probe

Type 8221
Conductivity probe

Type 8232
Chlorine Sensor

Sockets
Accessories

The holders range for analytical 120 mm probes (pH/ORP/conductivity) covers many types of applications:

- General purpose
- Water treatment
- Food & Beverage
- Pharmaceutical/Biotechnology.

A wide range of process connection is available for:

- General purpose holders
  - Mounting on pipes
  - Mounting on tanks
- Hygienic holders

  These holders are designed for hygienic applications.
  - The 3-rod holders which ensure a good sensor protection allow an easy cleaning. Due to a sanitary design steam sterilisation, autoclavation, CIP and SIP cleanings are possible.
  - The direct welding holders save space and are designed for installation in fermenters and many other applications with tanks and pipes. Steam sterilisation, autoclavation, CIP are possible.
  - The 15° version with 2" (DN50/40) connection adapted for GEA Tuchenhagen VARINLINE process connections enables positioning of the probe in relation to the flow or in vertical pipes.

A special holder, the analytical measurement chamber Type 8200, is designed to be used with the chlorine sensor Type 8232.

General data	
Process connection	
General purpose	G2" for use with INSERTION fitting Type S020 G1'' for use with T-Fitting Sticking for use with T-Fitting d32xd32 up to d32xd110 Immersion fitting with fixing kit for use on tanks
Hygienic holder	G1¼" (28 or 46 mm O-ring position) Clamp diameter 50.5 mm (1½") 2" (DN50/40) connection adapted for GEA Tuchenhagen VARINLINE process connections Direct welding on pipe
Measurement chamber	Screwings (straight for inlet, elbow for outlet) ¼" external thread to 6/8 hose; mounting nut (to fasten the sensor); hose sleeve (to sample)
Medium temperature	Temperature limits may depend on the inserted probe. Refer to the relevant instruction manual or technical data on next page. If the temperature ranges given for the holder and the inserted probe are different, use the most restrictive range.
Medium pressure	Pressure limits may depend on the inserted probe. Refer to the relevant instruction manual or technical data on next page. If the pressure ranges given for the holder and the inserted probe are different, use the most restrictive range.

Environment	
Ambient temperature	Temperature limits may depend on the inserted probe. Refer to the relevant instruction manual or data sheet for more details

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General purpose holder G2" connection

Materials	
Body	Stainless steel 316L 1.4404, PVC
Seal	FKM (EPDM option)
Medium temperature	with S020 fitting in PVC: 0 to 50°C *(32 to 122°F)*, Stainless steel: -20 to 130°C *(5 to 266°F)*
Medium pressure	with S020 fitting in PVC: PN10 *(145 PSI)*, Stainless steel: PN16 *(232 PSI)*

General purpose holder Immersion fitting with fixing kit

Materials	
Sensor holder	PVDF
Extension tube	PP
Seal	FKM (EPDM option)
Screws	Stainless steel
Medium temperature	0 to 80°C *(32 to 176°F)*

Hygienic holder - short immersion depth Clamp diameter 50.5 mm (1½") connection

Materials	
Body	Stainless steel (316L/1.4435)
Seal	EPDM (FDA)
Medium temperature	-10 to 135°C *(14 to 275°F)*
Medium pressure	Max. 6 bar *(max. 87 PSI)*

Hygienic holder 2" (DN50/40) connection adapted for GEA Tuchenhagen VARIN-LINE process connections

Materials	
Body	Stainless steel (316L/1.4435)
Seal	EPDM (FDA)
Medium temperature	-10 to 135°C *(14 to 275°F)*
Medium pressure	Max. 6 bar *(max. 87 PSI)*

Analytical measurement chamber

Materials	
Body	PMMA polished, beveled edges
Mounting nut	PVC-U grey
O-ring holder	PVDF nature
Slide ring (30x25.5x4)	PETP black
O-ring (30x2.6)	FPM
O-ring (25x2.5)	Silicone
Hose connection	PA
Inlet ball valve	PVC-U
Float	PEEK nature, steel 1.0037
O-ring flat (12x6x2)	Silicone transparent
Sample valve	
Ball valve (with hose sleeve)	PVC-U
Elbow screwing	Stainless steel
Medium temperature	Max. 45°C *(max. 113°F)*
Medium pressure	Max. 4 bar *(max. 58 PSI)* - Permitted operating pressure of the sensor has to be respected

General purpose holder G1" or stick connection

Materials	
Body	PVC
Seal	FKM
Medium temperature	0 to 50°C *(32 to 122°F)*
Medium pressure	PN10 *(145 PSI)*

Hygienic holder G1¼" connection (28 or 46 mm O-ring position)

Materials	
Body	Stainless steel (316L/1.4435)
Seal	EPDM (FDA)
Medium temperature	-10 to 135°C *(14 to 275°F)*
Medium pressure	Max. 6 bar *(max. 87 PSI)*

Hygienic holder - long immersion depth Clamp diameter 50.5 mm (1½") connection

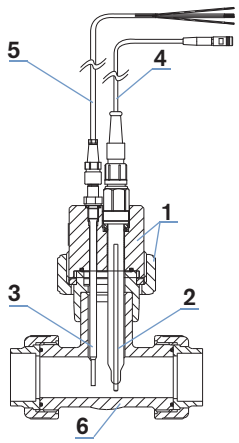
Materials	
Body	Stainless steel (316L/1.4404)
Seal	FKM
Medium temperature	-10 to 135°C *(14 to 275°F)*
Medium pressure	Max. 6 bar *(max. 87 PSI)*

Hygienic holder Direct welding connection

Materials	
Body	Stainless steel (316L/1.4435)
Seal	EPDM (FDA)
Medium temperature	-10 to 140°C *(14 to 284°F)*
Medium pressure	Max. 16 bar *(max. 232 PSI)*

Installation example of Type 8200

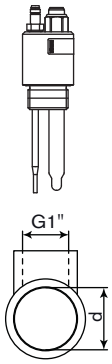
Probe holder Type 8200 for installation on Bürkert fitting S020

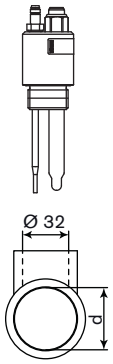


A complete pH/ORP/conductivity sensor consists of

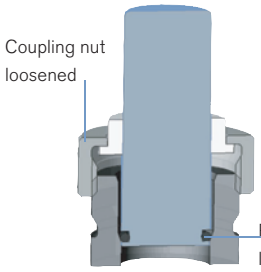
1. Complete probe holder Type 8200 with nut and seals
2. pH/O.R.P probe or conductivity probe with PG13.5 connection
3. Pt1000/liquid earth rod (option, if needed)
4. Shielded cable for pH/ORP or conductivity cable varioPin (6.0)
5. Shielded cable for Pt1000/liquid earth rod (option, if needed)
6. Bürkert fitting S020 (G2" connection)

G1" or sticking probes holders Type 8200 for installation on T-Fitting





G1¼" probes holder with O-ring position of 28 or 46 mm Type 8200 for installation on sockets



The G1¼" probes holder with O-ring position of 28 mm or 46 mm has to be mounted into sockets which are welded on pipes or tanks.

Sockets 15°
Robust weld-in socket with 15° angle to be mounted on tanks.
The sockets have a safety construction. The socket seals only if the o-ring of the holder is exactly at the right place.
Otherwise the medium leaks through the G1¼" coupling nut.

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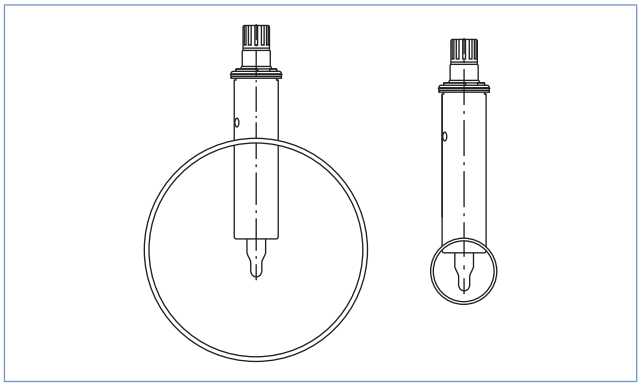
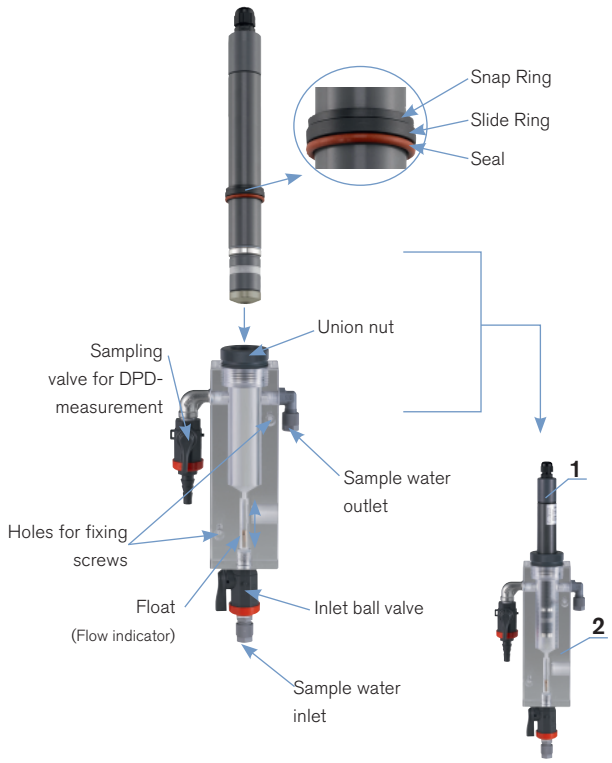
Installation example of Type 8200 (continuation)

Direct welding probes holder Type 8200 for installation on pipe



The steel mantle can be welded into a hole in the tank wall at virtually any depth.
As a result the probe is always immersed to exactly the desired position in the tank.
The O-ring can be easily replaced thanks to the « seal pusher » part.
By screwing in an adapter instead of a pH sensor, conductivity sensors can be mounted practically flush with the holder and is then designed in accordance with EHEDG guidelines.

Analytical measurement chamber Type 8200



A complete chlorine sensor consists of
1. an analytical measurement chamber Type 8200 with nut and seals
2. a chlorine sensor Type 8232

Do not install the sensor in the main pipe.
Measure only in bypass with use of the analytical measuring chamber Type 8200.
- Respect the sensor pressure and temperature ranges.
- Close the water inlet ball valve of the analytical measurement chamber Type 8200.
- Avoid installations that allow air bubbles to enter the measuring water.
- Stop the circulation of fluid, cut off the pressure and drain the pipe before loosening the process connections.

Installing the analytical measurement chamber Type 8200 on the support.

- For the choose of the installation place for the analytical measurement chamber Type 8200, please consider the max. height of the chlorine sensor (approx. 220 mm without cable connected), so it can be set up in this analytical measurement chamber.

A. Drill holes in the support according to the dimensions indicated on the dimension drawing on page 7.
B. Mount the analytical measurement chamber Type 8200 with two screws (recommendation: M4x60 mm pan head screw or hexagon socket head screw. The screws are not provided) onto the support.
C. Connect the water inlet of the analytical measurement chamber with a 6/8 hose to the sample water source.
D. Connect the water outlet of the analytical measurement chamber with a 6/8 hose to the drain for example.
E. Install the chlorine sensor (see operating instruction manual)
F. Establish the circulation of the fluid.
G. Open the water inlet ball valve.

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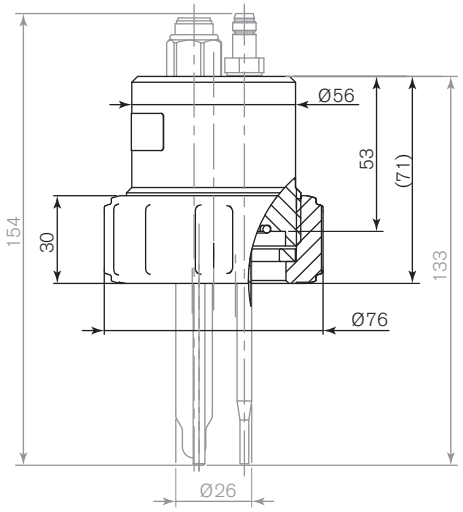
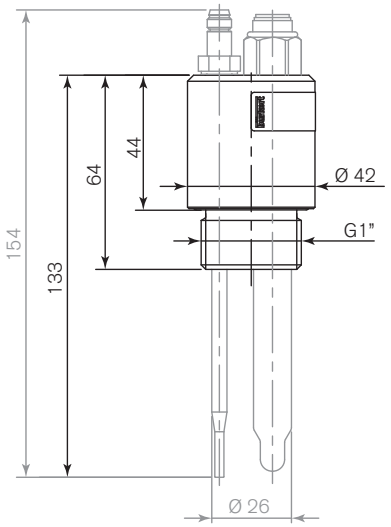
Dimensions [mm]

General purpose holder

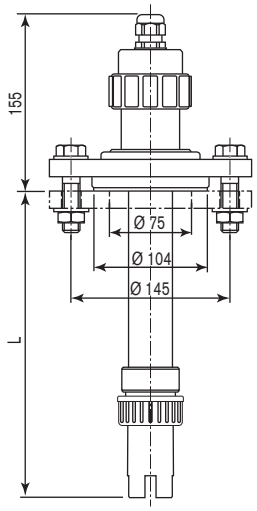
G 2“ connection* for installation on Bürkert fitting S020 - PVC, Stainless steel



G 1“ connection* for installation on T-Fitting - PVC

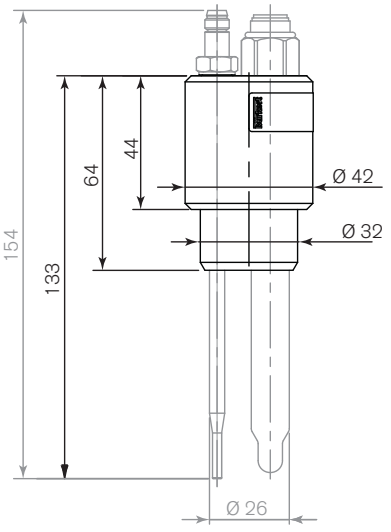


Immersion fitting with fixing kit for installation on Tanks



L
500
1000
1500
2000

Stick connection* for installation on T-Fitting - PVC



*** with analytical probe and Pt1000/liquid earth rod - have to be ordered separately**

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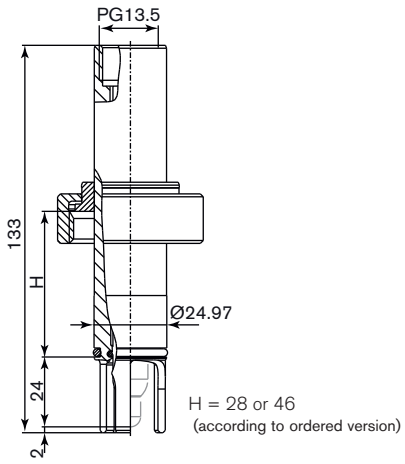
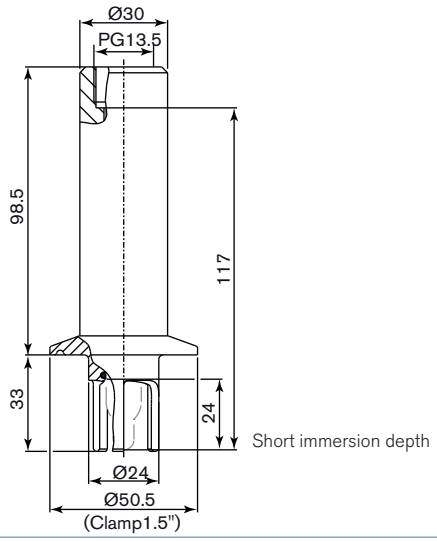
Dimensions [mm] (continuation)

Hygienic holder

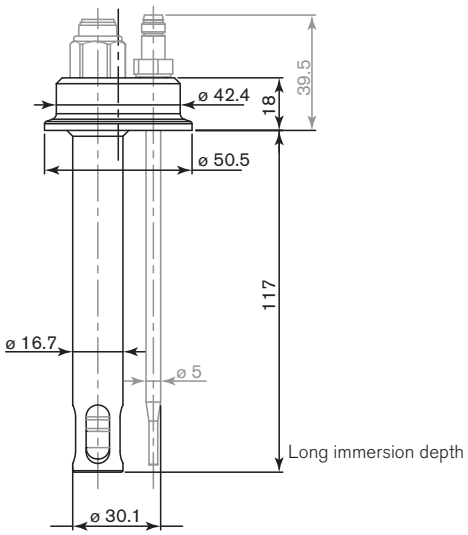
G1¼" connection - Stainless steel 316L/ DIN1.4435



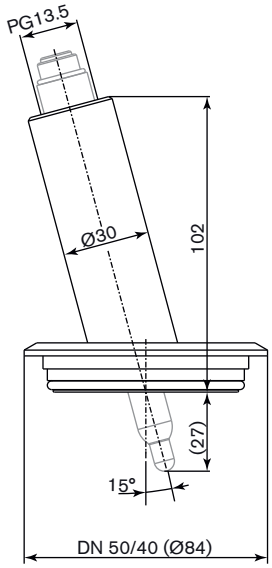
Clamp connection - Stainless steel 316L / DIN1.4435



Clamp connection* - Stainless steel 316L

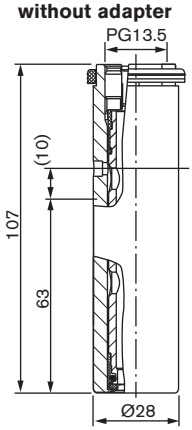


2" (DN50/40) connection* adapted for GEA Tuchenhagen VARINLINE process connections - Stainless steel 316L/ DIN1.4435

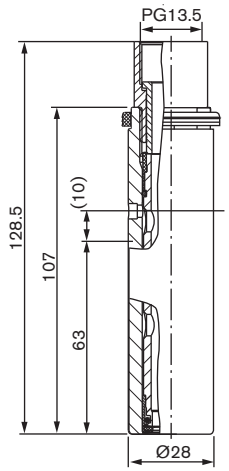


Direct welding connection - Stainless steel 316L/ DIN1.4435

without adapter



with adapter



Standard EHEDG approved design: with adapter and conductivity probe Type 8221

*** with analytical probe and Pt1000/liquid earth rod - have to be ordered separately**

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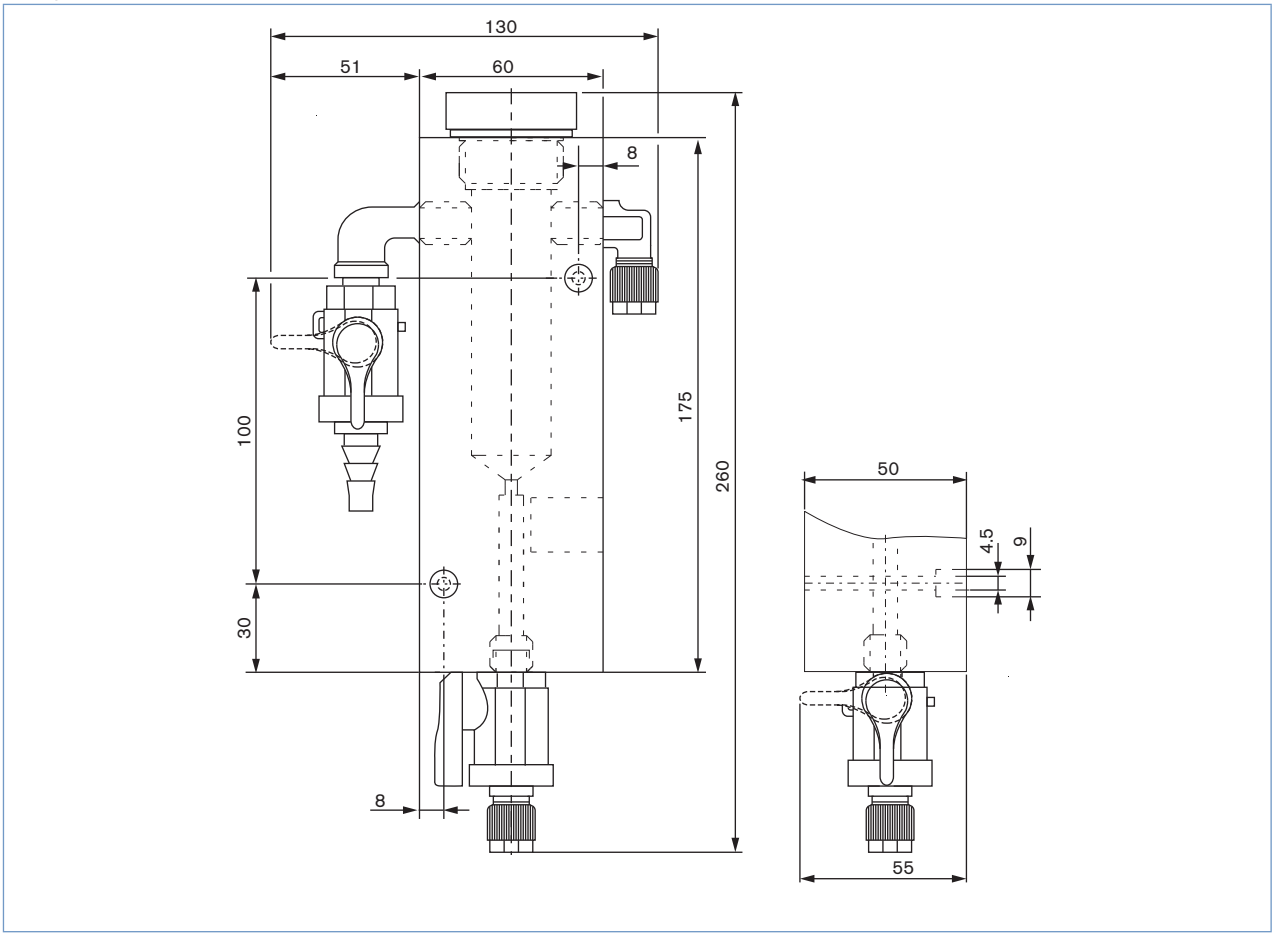
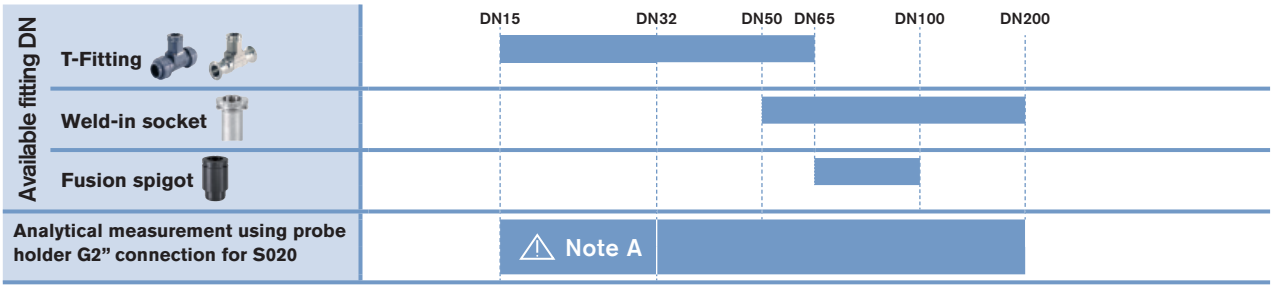
Dimensions [mm] (continuation)

Analytical measurement chamber



Ordering information for complete pH/ORP sensor using Type 8200

Combining the probe holder Type 8200 with fittings Type S020



Note A: Only use plastic fitting ***in analytical version*** with true union acc. to DIN8063 (PVC), to DIN16962 (PP) or to ISO10931 (PVDF), see data sheet Type S020

pH/O.R.P sensor for tank or pipe installation

A complete pH/ORP sensor consists of a probe holder Type 8200 with seals, a pH or O.R.P probe Type 8203, a Pt1000/liquid earth rod (option) and a fitting according to the selected holder.

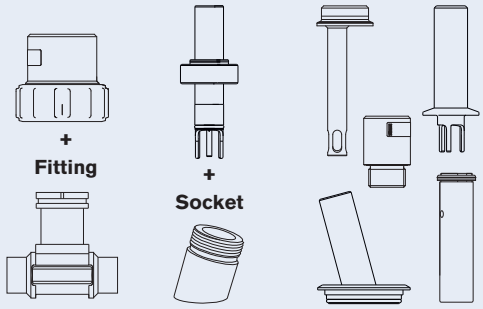
When you click on the orange box "More info.", you will come to our website for the resp. product where you can download the data sheet.

The following information is necessary for the selection of a complete device:

- **Item no.** of the desired probe holder **Type 8200** (see ordering chart, p. 9)
- **Item no.** of the selected pH or O.R.P probe **Type 8203** (see separate data sheet) More info.
- **Item no.** of the Pt1000/liquid earth rod if needed (see separate data sheet Type 8203)
- **Item no.** of the selected fitting **Type S020** (DN15 - DN200) **only** if probe holder with G 2" connection (see separate data sheet) More info.
  or of the select socket **only** if probes holder with G1¼" connection with o-ring position of 28 or 46 mm (see ordering chart, p. 9)

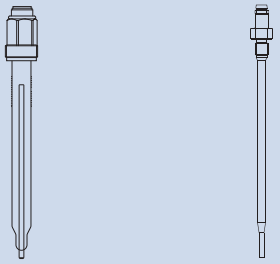
→ You have to order the components separately.

Probe holder Type 8200



Probe Type 8203

pH or ORP probes **Pt1000/liquid earth rod**



pH/O.R.P sensor for tank installation with the immersion fitting

A complete pH/ORP sensor for tank installation consists of an immersion fitting, an extension kit for immersion fitting, a fixing kit (flange DN65 with stainless steel screws), a probe holder with Pt1000/liquid earth rod, a pH or ORP probe Type 8203 and a seal.

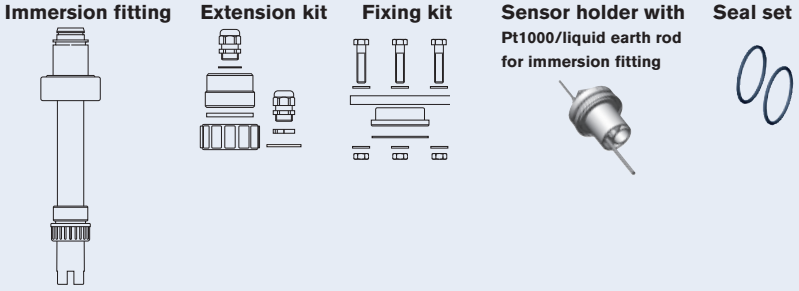
The following information is necessary for the selection of a complete device:

- **Item no.** of the immersion fitting (see ordering chart of probe holders, p. 9)
- **Item no.** of the extension kit for the immersion fitting (see ordering chart of accessories, p. 10)
- **Item no.** of the fixing kit (flange DN65 with stainless steel screws - see ordering chart of accessories, p. 10)
- **Item no.** of the probe holder for immersion fitting with Pt1000/liquid earth rod (see ordering chart of probe holder, p. 9)
- **Item no.** of the 120 mm pH or ORP probe **Type 8203** (see separate data sheet) More info.
- **Item no.** of the seal set if EPDM desired (see ordering chart of accessories, p. 10)

→ You have to order the components separately.

Probe holder Type 8200

Immersion fitting **Extension kit** **Fixing kit** **Sensor holder with Pt1000/liquid earth rod for immersion fitting** **Seal set**



pH or ORP probes Type 8203

Probe of 120 mm

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Ordering information for complete conductivity sensor using Type 8200

Conductivity sensor for tank or pipe installation

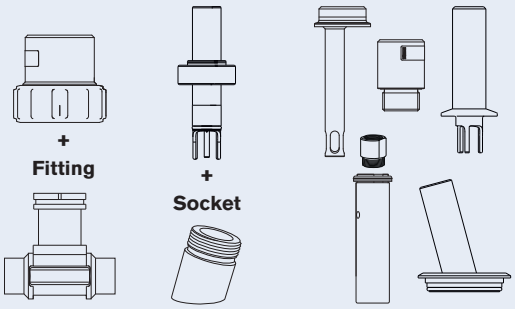
A complete conductivity sensor consists of a probes holder Type 8200 and a conductivity probe.

The following information is necessary for the selection of a complete device:

- **Item no.** of the probes holder **Type 8200** (see ordering chart of probes holder, p. 10)
- **Item no.** of the selected conductivity probe (see separate data sheet Type 8221) More info.

When you click on the orange box "More info.", you will come to our website for the resp. product where you can download the data sheet.

→ You have to order the components separately.

Probe holder Type 8200	Probe Type 8221
	**Conductivity probe** 

Ordering information for complete chlorine sensor using Type 8200

A complete chlorine sensor consists of a analytical measurement chamber Type 8200 and a chlorine sensor.

The following information is necessary for the selection of a complete device:

- **Item no.** of the analytical measurement chamber **Type 8200** (see ordering chart of analytical measurement chamber, p. 10)
- **Item no.** of the selected chlorine sensor (see separate data sheet Type 8232) More info.

→ You have to order the components separately.

Analytical measurement chamber Type 8200	Chlorine sensor Type 8232
	

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Ordering chart - probe holders Type 8200

Specifications	Version	Material	Boring for temperature probe Pt1000	Protection tube	Item no.
G2" connection for installation on Bürkert fitting S020	standard	PVC	No	Yes	429 224
			Yes	Yes	429 228
		Stainless steel	No	Yes	429 227
			Yes	Yes	429 231
G1" connection	short	PVC	No	No	429 220
			Yes	No	429 221
Stick connection	short	PVC	No	No	564 236
			Yes	No	563 475
For immersion fitting	Pt1000/liquid earth rod in stainless steel	PVDF	Yes	Yes	418 889
	Pt1000/liquid earth rod in titanium	PVDF	Yes	Yes	418 890
Immersion fitting	L=0.5 m	PP	No	Yes	419 567
	L=1.0 m	PP	No	Yes	419 568
	L=1.5 m	PP	No	Yes	419 569
	L=2.0 m	PP	No	Yes	419 570
G1¼" connection	High=28	Stainless steel 316L	No	Yes	562 431
	High=46	Stainless steel 316L	No	Yes	562 432
Clamp 1½" connection - (dia. 50.5 mm)	Short immersion depth	Stainless steel 316L	No	Yes	558 885
	Long immersion depth	Stainless steel 316L	Yes	Yes	429 235
2" (DN50/40) connection adapted for GEA Tuchenhagen VARINLINE process connections	15°	Stainless steel 316L	No	Yes	562 433
Hygienic direct welding connection	Standard	Stainless steel 316L/ DIN1.4435	No	No	561728

Ordering chart - Analytical measurement chamber Type 8200

Description	Item no.
Analytical measurement chamber	566 054

Ordering chart for accessories

Description	Item no.
Set with FKM seal	429 264
Set with 1 green FKM + 1 black EPDM seal	552 111
Extension kit for the immersion fitting L= X m	562 573
Fixing kit - flange DN65 with stainless steel screws	413 615
Weld-in socket 15° L=28 for holder G1¼"	737 241
Weld-in socket 15° L=46 for holder G1¼"	737 260
Adapter for hygienic direct welding connection and conductivity probe	563 477

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Interconnection possibilities with other Bürkert devices