



## Design

### O.R.P. transmitter type 8206 compact

The O.R.P. transmitter compactly combines an O.R.P. sensor and an electronic with display in splash-proof plastic IP 65 enclosure.

The sensor component consists of a replaceable combination O.R.P. electrode, screwed into the sensor housing with screw-in threads PG 13.5. The measured signal is conveyed to the controller via a coax plug.

The transmitter component converts the measured signal and displays the actual value.

Compact version for fitting types S020 and 1500 / 1501.

### Separated O.R.P. transmitter type 8206

The O.R.P. transmission system combines a O.R.P. sensor type 8200 and a separate O.R.P. transmitter type 8206 with display.

The 8206 separate transmitter is available in panel mounted version and in a wall mounted plastic IP65

enclosure for connection to the O.R.P. sensor type 8200 for short distance (max. 5 m).

### O.R.P. sensor type 8200

A wide range of O.R.P. sensors with different characterized electrodes and process connection types offers large capabilities of mounting and O.R.P. measurement.

Remote indication with separated transmitter device for wall or panel mounting connected over coaxial cable with O.R.P. sensor 8200 for distances up to 5 metres.

Sensor type 8200 for mounting on different fitting types as S020, 1500 / 1501, TriClamp or sanitary versions.

## Advantages / Benefits

- ▶ Easy System integration by Easy LINK provides low cost of ownership
- ▶ Programmable O.R.P. transmitter for easy O.R.P. measuring system solutions
- ▶ Compact version with integrated O.R.P. electrodes
- ▶ Remote version with separated controller away from the sensor for short and long distances
- ▶ Large range of process connections with different fittings as threads, Triclamp or sanitary versions
- ▶ Easy commissioning due to multi language, menu-guided operation
- ▶ Easy processing by 4... 20mA output signal, two relay outputs
- ▶ Individual adjustment of all measuring ranges
- ▶ For use in both pipes and tanks installed in custom fittings and submersion kits

## Application

### O.R.P. measurements

Waste engineering

Water treatment and process technology

Cooling water monitoring

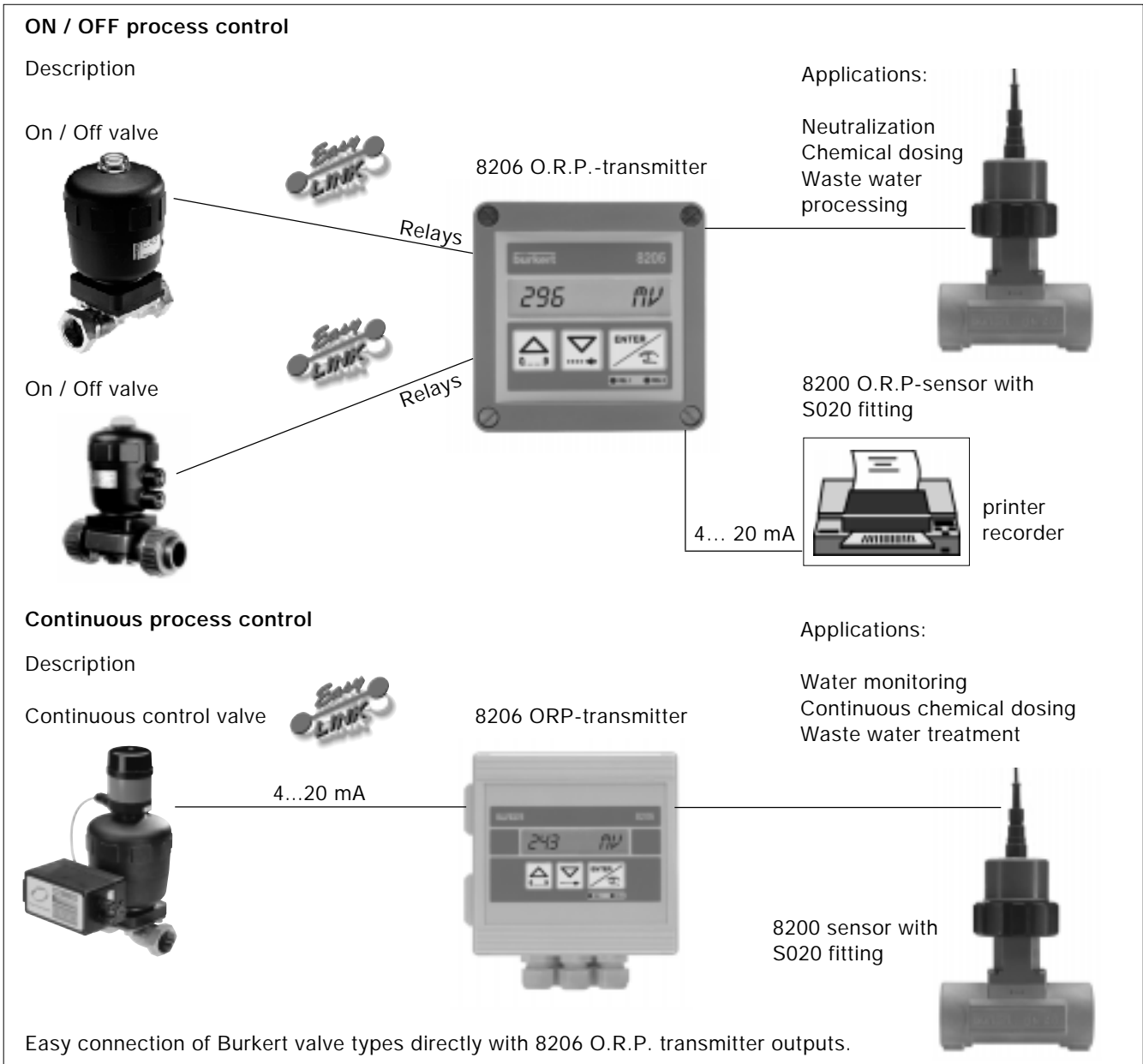
Swimming pool engineering

Chemical dosing

Electroplating

**bürkert**  
Easy Fluid Control Systems

The Easy O.R.P. - Control



Principle of Operation

The most important part of the O.R.P. or redox transmitter is the redox electrode with its potential selective glass membrane. When the redox electrode is immersed into the solution, an electron exchange occurs between the oxidised and the reduced state of the electrolyte. The generated cell voltage is the redox potential, that is directly proportional to the redox value.

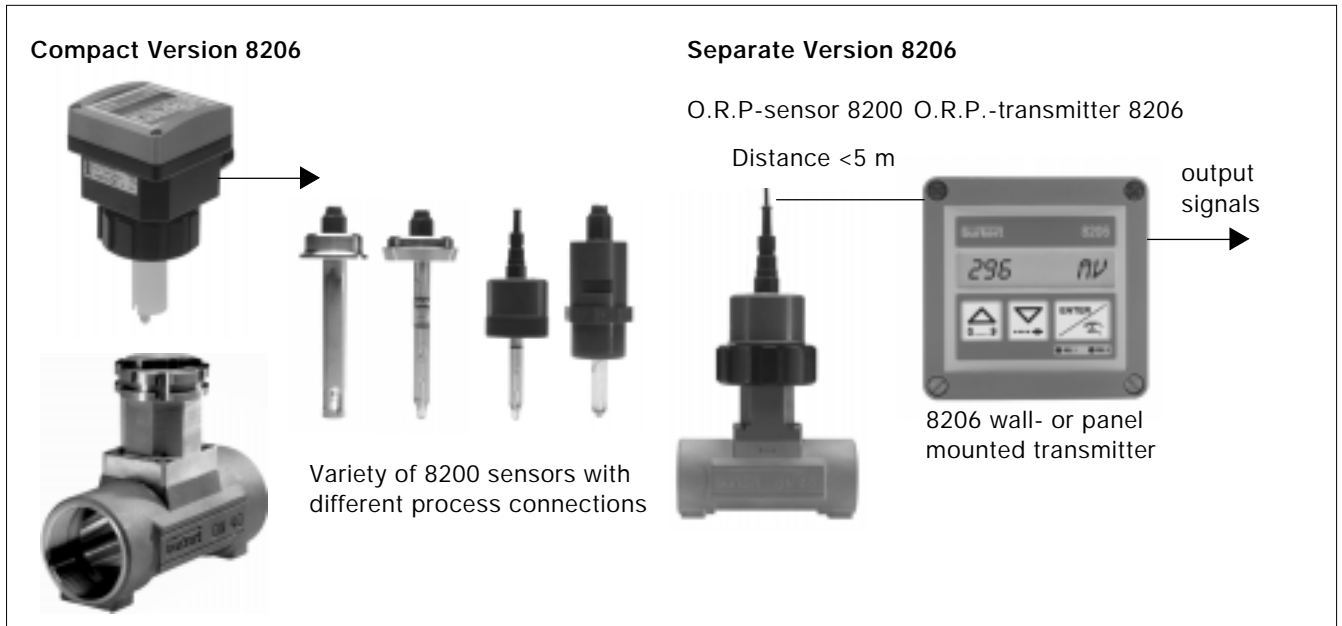
The transducer without relay functions in a 2-wire circuit and requires a power supply of 12... 30 VDC.

A 4... 20 mA standard signal is available as an output signal, proportional to the redox value.

The transducer with two additional relays functions in a 3-wire circuit. Limit values are freely adjustable. The compact version as well as the panel- and wall mounted version requires a power supply of 12... 30 VDC. The wall mounted version is also available with 115... 230 VAC power supply.

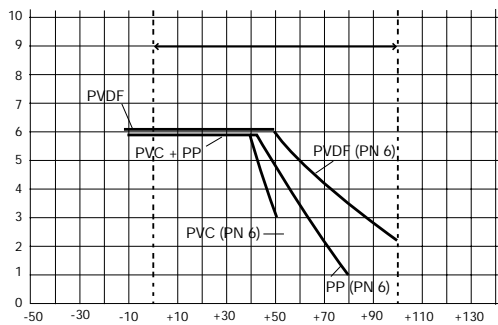
## Installation

The compact O.R.P. transmitter can easily be installed into any Burkert insertion fitting system (S020 or 1500 / 1501) by just fixing the main nut. For the separated transmitter version, a wide range of holders offers large capabilities of mounting and redox measurement. The redox transmission system combines a 8200 O.R.P. sensor with a Bürkert fitting type and a separate O.R.P. transmitter type 8206 with display. The transmitter type 8206 is available in panel mounted version or in a wall mounted plastic IP65 enclosure for short distance (up to 5 m) connection to the O.R.P. sensor type 8200.



### Pressure-Temperature-Diagramm

Mind pressure-temperature dependence according to the respective fitting material.



### Industrial immersion fitting

Allows installation into tanks and containers. The following standard lengths are available: 500, 1000, 1500, 2000 mm. Special lengths on request. (dimensions see fittings)



## Operation / Commissioning

Customized adjustments, such as measuring ranges and alarm setpoints can be carried out menu-supported on site via a multi-lingual display. Please consider the respective operating instructions prior to commissioning the devices.



## O.R.P. electrode

The O.R.P-transmitter is available with five different types of standard electrodes. The adjacent chart indicates the appropriate electrode for the respective application. The service life of the O.R.P.-electrode depends on the application. Electrodes in the type 8206 / 8200 can easily be replaced.

### How to select the most suitable redox electrode<sup>1)</sup>

| Applications                           | Sensor 8200              |             |          |
|--|--------------------------|-------------|----------|
|  | Compact Type 8206<br>PLA | Easycontrol | Oxitrode |
| Waste water samples                    | ●                        | ●           | ●        |
| General aqueous solution               | ●                        | ●           | ●        |
| Aquariums                              | ●                        | ●           | ●        |
| Beer, juices, wine                     | ○                        | ○           | ○        |
| Butter, compact yoghurt, cheese        | ○                        | ○           | ○        |
| Protein-containing solutions           |                          |             |          |
| Aqueous emulsions                      |                          |             |          |
| Partly aqueous emulsions               |                          |             |          |
| Soil, earth suspensions                | ○                        | ○           | ○        |
| Extreme pH-values (pH<1, pH>13)        | ○                        | ○           | ○        |
| Hydrofluoric acid containing solutions |                          |             | ○        |
| Galvanic waste water                   | ●                        | ○           | ●        |
| Hot lyes                               | ○                        | ○           | ○        |
| Highly viscous solutions               |                          |             |          |
| Infusion solutions                     | ●                        | ●           | ●        |
| Solutions with low ion content         |                          |             | ●        |
| Jam                                    |                          |             |          |
| Cosmetic products                      |                          |             |          |
| Varnish, colours                       |                          |             |          |
| Milk                                   | ○                        | ○           | ○        |
| Non-aqueous solutions                  |                          |             |          |
| Oil                                    |                          |             |          |
| Ultra pure and rain water              |                          |             |          |
| Cream, yoghurt                         |                          | ○           | ○        |
| Brines                                 |                          |             |          |
| Swimming pools                         | ●                        | ●           | ●        |
| Soaps, detergents                      | ○                        |             | ●        |
| Aqueous suspensions                    | ●                        | ○           | ●        |
| Partly aqueous suspensions             |                          |             | ○        |
| Partly aqueous solutions >10% H2O      | ○                        | ○           | ○        |
| Partly aqueous solutions <10% H2O      |                          |             |          |
| TRIS buffer solutions                  | ○                        | ○           | ○        |

- most suitable electrode
- depending on the application

<sup>1)</sup> Technical data see: Ordering data Accessories



## Operation and display

The operation of the O.R.P. transmitter is classified in the following 3 different menus:

### Main Menu

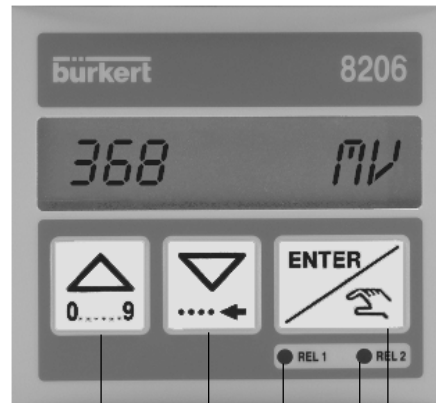
- Redox potential
- Output current
- HOLD function
- O.R.P. electrode calibration

### Calibration Menu

- Language
- Measuring range 4 ... 20 mA
- Relay parameter definition
- Filter selection

### Test Menu

- Offset
- Span
- Simulation of redox potential



Direction upwards  
in menu

Choice of digit  
value.  
Steps from 0 to 9

Direction downwards in  
menu or sideways for digit  
selection

Relay 1: contact closed

Relay 2: contact closed

Accept of choosen parameter or  
adjusted value



## Technical Data

### General Data

|  |   |
|--|---|
| Measuring range                              | -2000... +2000 mV                           |
| Smallest measuring range on output 4...20 mA | 50 mV                                       |
| Measuring error                              | +/-3 mV, depending on electrode calibration |
| Ambient temperature                          | 0 to 60 °C (32 °F to 140 °F)                |
| Storage temperature                          | 0 to 60 °C (32 °F to 140 °F)                |

### Compact version

|                                   |  |  |
|-----------------------------------|--|--|
| Pipe diameter:                    | Stainless steel:   | DN 15 to DN 50 (1/2" to 2") fitting type S020<br>DN 65 to DN 100 (2 1/2" to 4") weld-o-let fitting type 1500 |
|                                   | Brass:   | DN 15 to DN 50 (1/2" to 2") fitting type S020  |
|                                   | PVC, PP, PVDF:   | DN 15 to DN 50 (1/2" to 2") fitting type S020  |
|                                   | PE, PP, PVDF:  | DN 65 to DN 100 (2 1/2" to 4") weld-o-let fitting type 1501  |
| Enclosure                         | IP 65 (NEMA 4). Relative humidity max. 80%                   |  |
| Electronic housing                | PC   |  |
| Front plate                       | Polyester  |  |
| Sensor housing                    | PVDF; O-rings FPM / EPDM                                     |  |
| Voltage supply                    | 12-30 VDC  |  |
| Consumption                       | 80 mA (with relays), 20 mA (without relays)                  |  |
| Display                           | 15 x 60 mm LCD 8 digits, alphanumeric 15 segments, 9 mm high |  |
| Analog output signal              | 4... 20 mA programable, proportional to the O.R.P.           |  |
| Load                              | <700 Ω at 30 V; <400 Ω at 24 V; <100 Ω at 15 V               |  |
| Relay output                      | 2 relays 3 A / 230 V; freely adjustable                      |  |
| Electrode                         | PLA; glass shaft   |  |
| Diaphragm                         | Zirkondioxide  |  |
| Reference electrolyte             | gel  |  |
| Media pressure                    | 0-6 bar (0-87 psi)   |  |
| Media temperature                 | 0-90 °C (32-194 °F)  |  |
| Max. pressure at max. temperature | 4 bar (58 psi)   |  |

### Remote version short distance (<5 m)

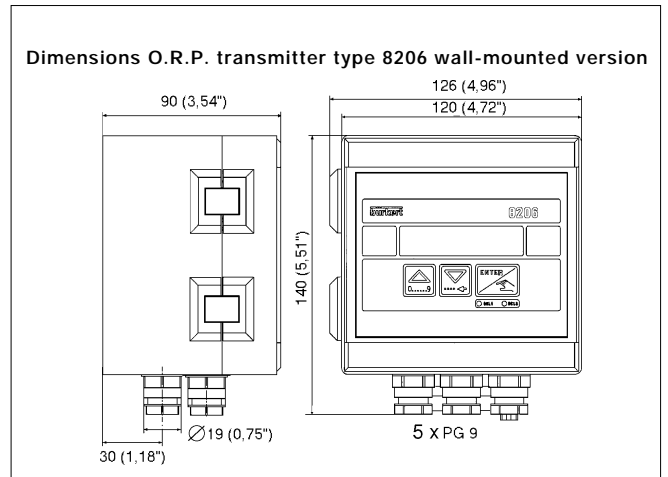
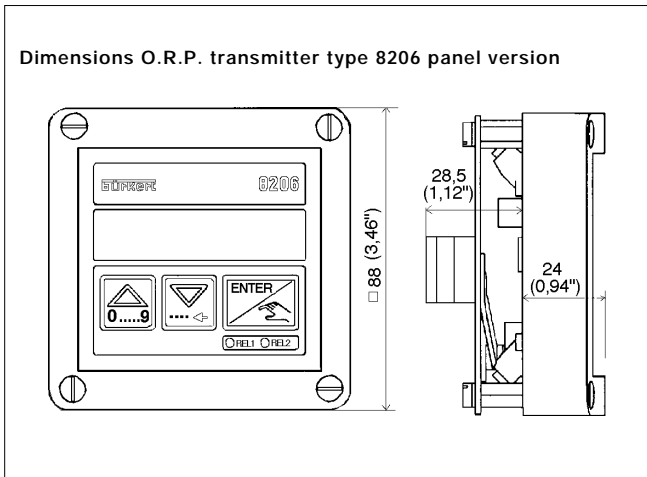
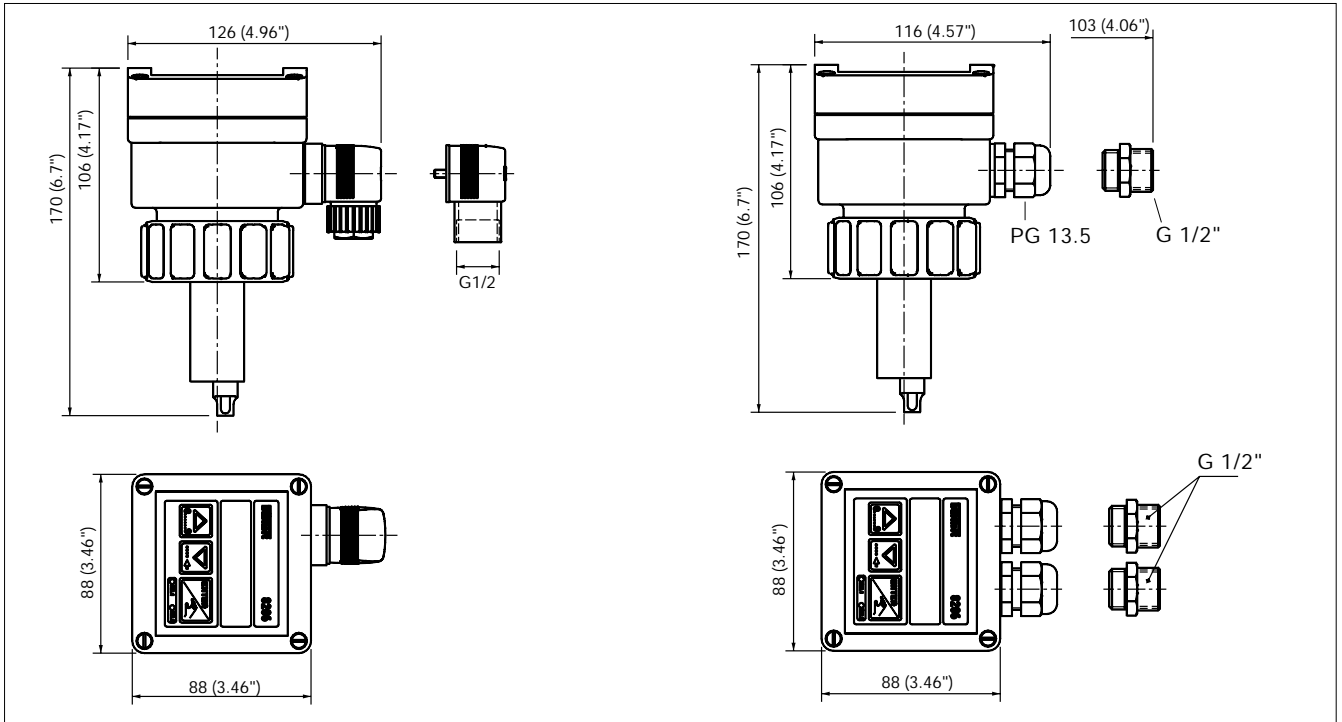
|  |   |   |
|--|---|---|
| Pipe diameter                          | Stainless Steel:  | DN 32 to DN 50 (1 1/4" to 2"); fitting type S020<br>DN 65 to 100 weld-in; weld-o-let fitting type 1500  |
|  | Brass:  | DN 32 to DN 50; fitting type S020   |
|  | PVC, PP, PVDF:  | DN 15 to DN 50; fitting type S020 (true union ISO)<br>DN 32 to DN 50; fitting type S020 (all other versions)<br>DN 65 to DN 100 PE/PP/PVDF-weld-o-let fitting type 1501 |
| Enclosure                              | Wall mounted version IP65 (NEMA4). Rel. humidity max. 80%; ABS<br>Panel version IP 20 (rear plate); IP 65 (front plate); PC |   |
| Voltage supply                         | 12 – 30 VDC; (115/230 VAC option wall mounted version)  |   |
| Consumption                            | 80 mA (with relays), 20 mA (without relays)   |   |
| Display                                | 15 x 60 mm LCD 8 digits, alphanumeric 15 segments; 9 mm high  |   |
| Analog output signal                   | 4... 20 mA programable, proportional to the O.R.P.  |   |
| Load                                   | <700 Ω at 30 V; <400 Ω at 24 V; <100 Ω at 15 V  |   |
| Relay output                           | 2 relays 3 A / 230 V; freely adjustable   |   |
| Signal input/connection to sensor 8200 | short distance version (<5 m):  | analog signal input for coaxial cables from O.R.P.-electrode  |

### Separate pH-sensor type 8200 with O.R.P. electrode

|                                   | Easycontrol                            | Oxytrode                  |
|-----------------------------------|--|---------------------------|
| Measuring range                   | -2000... +2000 mV                      | -2000... +2000 mV         |
| Housing                           | glass shaft                            | glass shaft               |
| Fluid pressure                    | 0 – 2 bar (0 – 29 psi)                 | 0 – 16 bar (0 – 232 psi)  |
| Fluid temperature                 | 0 – +60 °C (32 – 140 °F)               | 0 – +130 °C (32 – 266 °F) |
| Max. pressure at max. temperature | 2 bar (29 psi)                         | 3 bar (44 psi)            |
| Diaphragm                         | ceramic                                | ceramic                   |
| Reference electrolyte             | gel                                    | special                   |
| <b>O.R.P. -sensor connection</b>  |  |                           |
| Connection                        | Material-connection size               |                           |
| G 2" with union nut               | PVC                                    |                           |
| G 1"                              | PVC; PP; PVDF; SS                      |                           |
| Sanitary                          | SS DN40; DN 50; DN 65                  |                           |
| Triclamp                          | SS 50.5 / 64                           |                           |
| Wiring                            | coaxial cables for O.R.P. : 2 m or 5 m |                           |

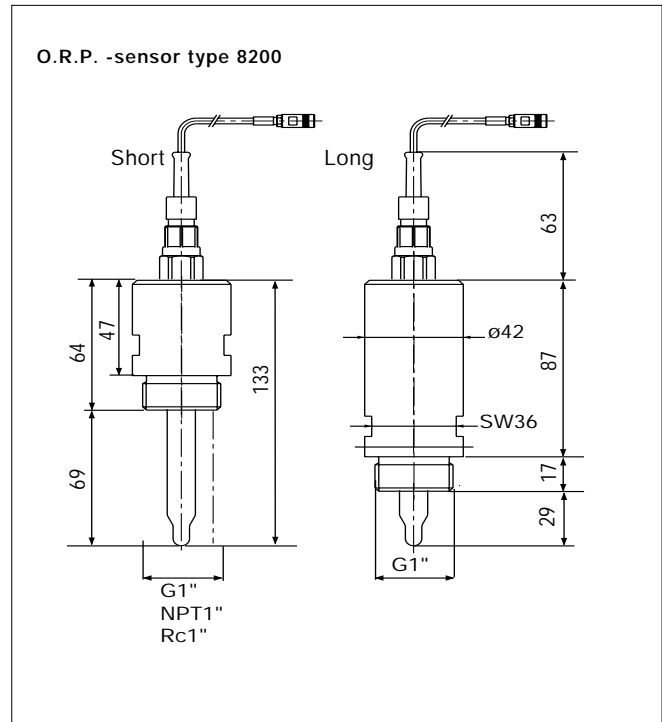
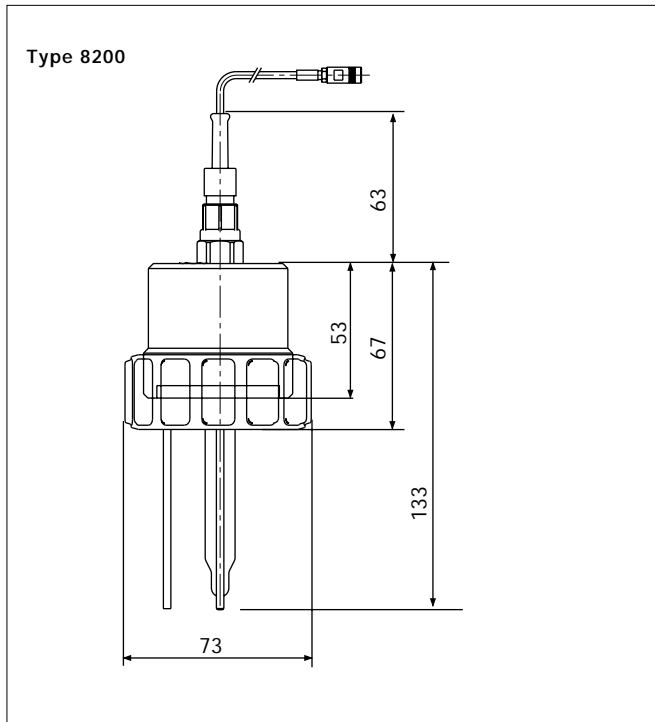
**Dimensions [mm (inch)]**

Dimensions of the O.R.P. transmitter type 8206 compact  
G2" connection

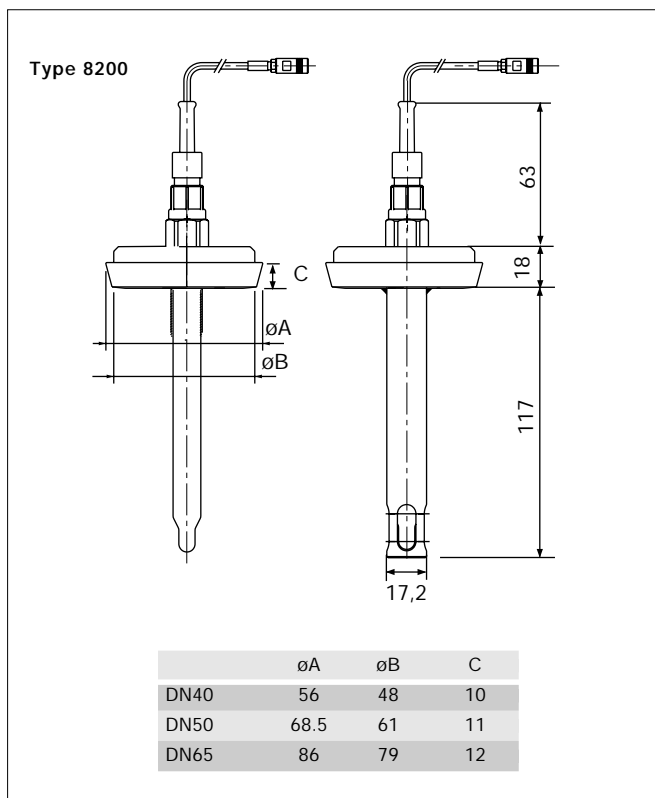


## Dimensions [mm]

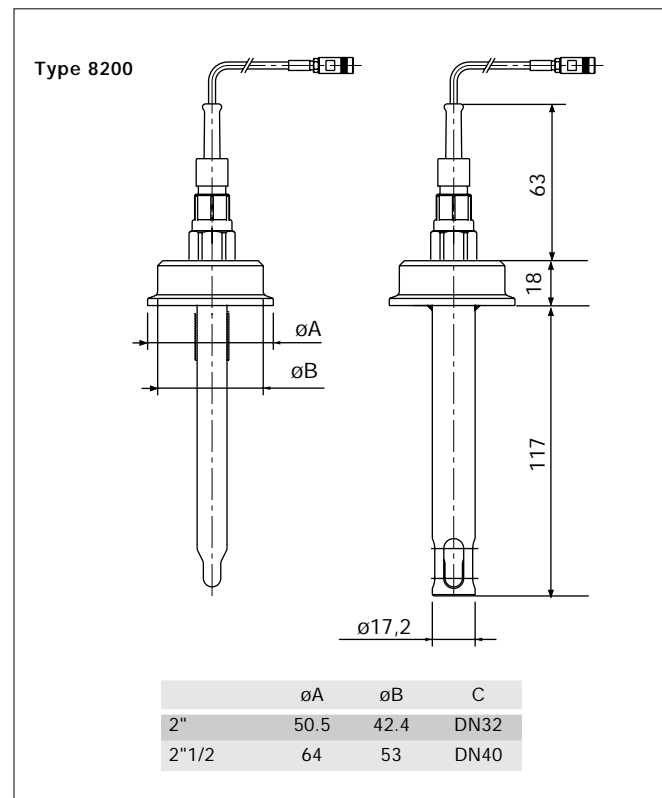
O.R.P.-sensor type 8200 for Burkert fitting type S020; 1500; 1501  
 G2" connection; Material: PVC, PP, PVDF, SS



O.R.P.-sensor type 8200 sanitary connection according to DIN 11851  
 Material: SS (304/1.4301 or 316Ti/1.4571)

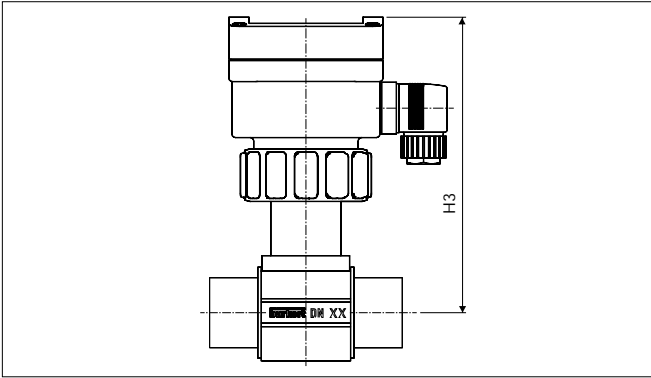


O.R.P.-sensor type 8200 Triclamp connection  
 Material: SS (316L/DIN 1.4404)





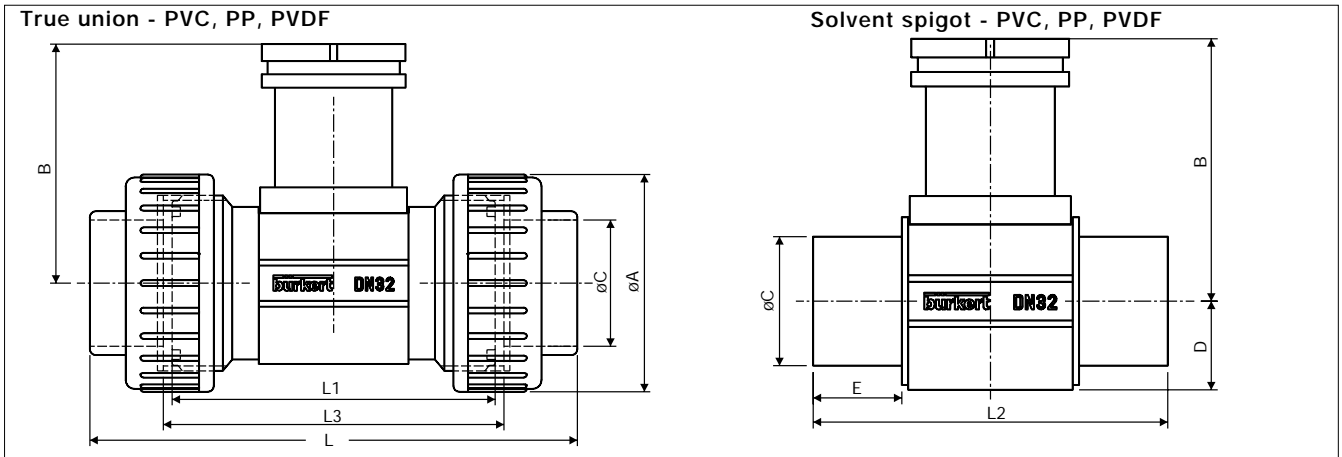
**Fittings Type S020 DN15 - 50 for transmitter 8206 or sensor 8200 with G2"-connection**



Variable Dimensions [mm]

| DN | H 1 | H2  | H3  |
|----|-----|-----|-----|
| 15 | 163 | 177 | 177 |
| 20 | 163 | 177 | 177 |
| 25 | 163 | 177 | 177 |
| 32 | 163 | 177 | 177 |
| 40 | 164 | 178 | 178 |
| 50 | 170 | 184 | 184 |

Applicable for all fitting materials  
DN 15 ...50 sizes and process  
connections.

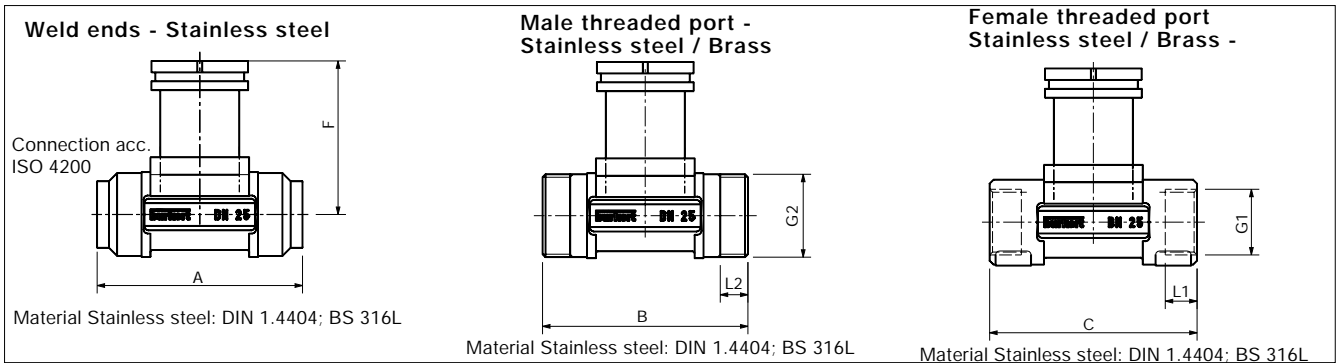


| Remote version short distance |     |     |       |     |       |         |        |     |     |                |      |     |         |      |         |
|-------------------------------|-----|-----|-------|-----|-------|---------|--------|-----|-----|----------------|------|-----|---------|------|---------|
| True union                    |     |     |       |     |       |         |        |     |     | Solvent spigot |      |     |         |      |         |
| B                             | øA  | L   |       |     | øC    |         |        | L1  | L3  | DN             | D    | L2  |         | E    |         |
|                               |     | DIN | ANSI  | JIS | (DIN) | (ANSI)* | (JIS)* |     |     |                |      | PVC | PP/PVDF | PVC  | PP/PVDF |
| 81.4                          | 74  | 148 | ---   | --- | 20    | ---     | ---    | 110 | 116 | 15             | ---  | --- | ---     | ---  | ---     |
| 81.4                          | 74  | 154 | ---   | --- | 25    | ---     | ---    | 110 | 116 | 20             | ---  | --- | ---     | ---  | ---     |
| 81.4                          | 74  | 160 | ---   | --- | 32    | ---     | ---    | 110 | 116 | 25             | ---  | --- | ---     | ---  | ---     |
| 81.4                          | 74  | 168 | 170.0 | 169 | 40    | 42.2    | 38.60  | 110 | 116 | 32             | 27.5 | 110 | 100     | 27.5 | 20      |
| 85.2                          | 83  | 188 | 190.2 | 190 | 50    | 48.3    | 48.70  | 120 | 127 | 40             | 31.5 | 120 | 106     | 30.0 | 23      |
| 91.5                          | 103 | 212 | 213.6 | 213 | 63    | 60.3    | 60.80  | 130 | 136 | 50             | 39.5 | 130 | 110     | 37.0 | 27      |

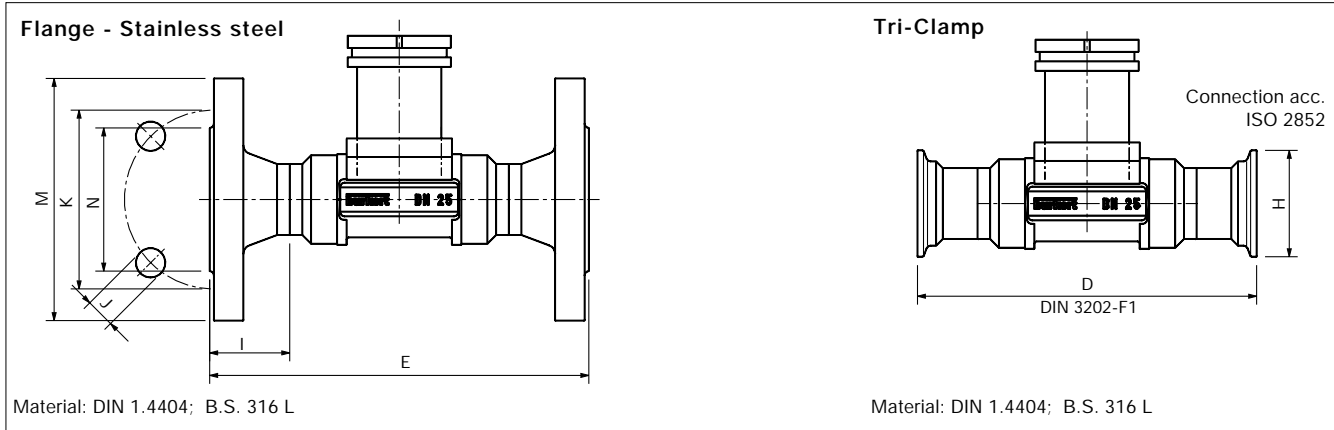
\* only for PVC with true union

| Compact version |     |     |       |     |       |         |        |     |     |                |      |     |         |      |         |
|-----------------|-----|-----|-------|-----|-------|---------|--------|-----|-----|----------------|------|-----|---------|------|---------|
| True union      |     |     |       |     |       |         |        |     |     | Solvent spigot |      |     |         |      |         |
| B               | øA  | L   |       |     | øC    |         |        | L1  | L3  | DN             | D    | L2  |         | E    |         |
|                 |     | DIN | ANSI  | JIS | (DIN) | (ANSI)* | (JIS)* |     |     |                |      | PVC | PP/PVDF | PVC  | PP/PVDF |
| 80.4            | 43  | 128 | 130.0 | 129 | 20    | 21.3    | 18.40  | 90  | 96  | 15             | 17.5 | 90  | 85      | 16.5 | 14      |
| 77.8            | 53  | 144 | 145.6 | 145 | 25    | 26.7    | 26.45  | 100 | 106 | 20             | 17.5 | 100 | 92      | 20.0 | 16      |
| 78.0            | 60  | 160 | 161.4 | 161 | 32    | 33.4    | 32.55  | 110 | 116 | 25             | 21.5 | 110 | 95      | 23.0 | 18      |
| 81.4            | 74  | 168 | 170.0 | 169 | 40    | 42.2    | 38.60  | 110 | 116 | 32             | 27.5 | 110 | 100     | 27.5 | 20      |
| 85.2            | 83  | 188 | 190.2 | 190 | 50    | 48.3    | 48.70  | 120 | 127 | 40             | 31.5 | 120 | 106     | 30.0 | 23      |
| 91.5            | 103 | 212 | 213.6 | 213 | 63    | 60.3    | 60.80  | 130 | 136 | 50             | 39.5 | 130 | 110     | 37.0 | 27      |

\* only for PVC with true union



Dimensions [mm] - Fittings S020, DN 15 - 50



Variable dimensions [mm] for Weld ends, Male threaded port, Female threaded port, Flange, Tri-Clamp

| Remote version short distance |           |                |                   |     |     |     |                |         |      |          |      |       |      |           |                   |       |        |       |     |       |
|-------------------------------|-----------|----------------|-------------------|-----|-----|-----|----------------|---------|------|----------|------|-------|------|-----------|-------------------|-------|--------|-------|-----|-------|
| DN                            | Weld ends |                | Length dimensions |     |     |     |                |         |      | Thread   |      |       |      | Tri-Clamp | Flange dimensions |       |        |       |     |       |
|                               | ø outside | Wall-thickness | A                 | B   | C   | D   | E (DIN) (ANSI) | E (JIS) | F    | G1       | L1   | G2    | L2   |           | H                 | Norm* | I      | J     | K   | M     |
| 32                            | 42.4      | 2.0            | 119               | 119 | 120 | 180 | 180            | 178     | 81.6 | G 1 1/4  | 23.5 | G 1/2 | 18.0 | 50.5      | DIN               | 31.0  | 4x18.0 | 100.0 | 140 | 78.0  |
|                               |           |                |                   |     |     |     |                |         |      | NPT 11/4 | 21.0 |       |      |           | ANSI              | 31.0  | 4x15.8 | 88.9  | 117 | 63.5  |
|                               |           |                |                   |     |     |     |                |         |      | Rc       | 21.0 |       |      |           | JIS               | 31.0  | 4x19.0 | 100.0 | 135 | 76.0  |
| 40                            | 48.3      | 2.0            | 129               | 129 | 130 | 200 | 200            | 190     | 85.4 | G 1 1/2  | 23.5 | M55x2 | 19.0 | 64.0      | DIN               | 36.0  | 4x18.0 | 110.0 | 150 | 88.0  |
|                               |           |                |                   |     |     |     |                |         |      | NPT 11/2 | 20.0 |       |      |           | ANSI              | 36.0  | 4x15.8 | 98.4  | 127 | 73.0  |
|                               |           |                |                   |     |     |     |                |         |      | Rc 11/2  | 19.0 |       |      |           | JIS               | 36.0  | 4x19.0 | 105.0 | 140 | 81.0  |
| 50                            | 60.3      | 2.6            | 149               | 149 | 150 | 230 | 230            | 216     | 91.5 | G 2      | 27.5 | M64x2 | 20.0 | 77.5      | DIN               | 41.0  | 4x18.0 | 125.0 | 165 | 102.0 |
|                               |           |                |                   |     |     |     |                |         |      | NPT 2    | 24.0 |       |      |           | ANSI              | 41.0  | 4x19.0 | 120.6 | 152 | 92.1  |
|                               |           |                |                   |     |     |     |                |         |      | Rc 2     | 24.0 |       |      |           | JIS               | 41.0  | 4x19.0 | 120.0 | 155 | 96.0  |

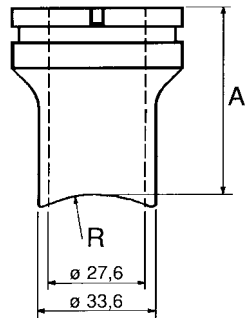
| Compact version |           |                |                   |     |     |     |                |         |      |          |      |        |      |           |                   |       |        |       |     |       |
|-----------------|-----------|----------------|-------------------|-----|-----|-----|----------------|---------|------|----------|------|--------|------|-----------|-------------------|-------|--------|-------|-----|-------|
| DN              | Weld ends |                | Length dimensions |     |     |     |                |         |      | Thread   |      |        |      | Tri-Clamp | Flange dimensions |       |        |       |     |       |
|                 | ø outside | Wall-thickness | A                 | B   | C   | D   | E (DIN) (ANSI) | E (JIS) | F    | G1       | L1   | G2     | L2   |           | H                 | Norm* | I      | J     | K   | M     |
| 15              | 21.3      | 1.6            | 84                | 84  | 85  | 130 | 130            | 140     | 80.3 | G 1/2    | 16.0 | G3/4   | 11.5 | 34.0      | DIN               | 23.5  | 4x14.0 | 65.0  | 95  | 45.0  |
|                 |           |                |                   |     |     |     |                |         |      | NPT 1/2  | 17.0 |        |      |           | ANSI              | 23.5  | 4x15.8 | 60.3  | 89  | 34.9  |
|                 |           |                |                   |     |     |     |                |         |      | Rc 1/2   | 15.0 |        |      |           | JIS               | 23.5  | 4x15.0 | 70.0  | 95  | 51.0  |
| 20              | 26.9      | 1.6            | 94                | 94  | 95  | 150 | 150            | 152     | 77.8 | G 3/4    | 17.0 | G 1    | 13.5 | 50.5      | DIN               | 28.5  | 4x14.0 | 75.0  | 105 | 58.0  |
|                 |           |                |                   |     |     |     |                |         |      | NPT 3/4  | 18.3 |        |      |           | ANSI              | 28.5  | 4x15.8 | 69.8  | 99  | 42.9  |
|                 |           |                |                   |     |     |     |                |         |      | Rc 3/4   | 16.3 |        |      |           | JIS               | 28.5  | 4x15.0 | 75.0  | 100 | 56.0  |
| 25              | 33.7      | 2.0            | 104               | 104 | 105 | 160 | 160            | 165     | 78.0 | G 1      | 23.5 | G 1/14 | 14.0 | 50.5      | DIN               | 28.5  | 4x14.0 | 85.0  | 115 | 68.0  |
|                 |           |                |                   |     |     |     |                |         |      | NPT 1    | 18.0 |        |      |           | ANSI              | 28.5  | 4x15.8 | 79.4  | 108 | 50.8  |
|                 |           |                |                   |     |     |     |                |         |      | Rc 1     | 18.0 |        |      |           | JIS               | 28.5  | 4x19.0 | 90.0  | 125 | 67.0  |
| 32              | 42.4      | 2.0            | 119               | 119 | 120 | 180 | 180            | 178     | 81.6 | G 1 1/4  | 23.5 | G 1/2  | 18.0 | 50.5      | DIN               | 31.0  | 4x18.0 | 100.0 | 140 | 78.0  |
|                 |           |                |                   |     |     |     |                |         |      | NPT 11/4 | 21.0 |        |      |           | ANSI              | 31.0  | 4x15.8 | 88.9  | 117 | 63.5  |
|                 |           |                |                   |     |     |     |                |         |      | Rc       | 21.0 |        |      |           | JIS               | 31.0  | 4x19.0 | 100.0 | 135 | 76.0  |
| 40              | 48.3      | 2.0            | 129               | 129 | 130 | 200 | 200            | 190     | 85.4 | G 1 1/2  | 23.5 | M55x2  | 19.0 | 64.0      | DIN               | 36.0  | 4x18.0 | 110.0 | 150 | 88.0  |
|                 |           |                |                   |     |     |     |                |         |      | NPT 11/2 | 20.0 |        |      |           | ANSI              | 36.0  | 4x15.8 | 98.4  | 127 | 73.0  |
|                 |           |                |                   |     |     |     |                |         |      | Rc 11/2  | 19.0 |        |      |           | JIS               | 36.0  | 4x19.0 | 105.0 | 140 | 81.0  |
| 50              | 60.3      | 2.6            | 149               | 149 | 150 | 230 | 230            | 216     | 91.5 | G 2      | 27.5 | M64x2  | 20.0 | 77.5      | DIN               | 41.0  | 4x18.0 | 125.0 | 165 | 102.0 |
|                 |           |                |                   |     |     |     |                |         |      | NPT 2    | 24.0 |        |      |           | ANSI              | 41.0  | 4x19.0 | 120.6 | 152 | 92.1  |
|                 |           |                |                   |     |     |     |                |         |      | Rc 2     | 24.0 |        |      |           | JIS               | 41.0  | 4x19.0 | 120.0 | 155 | 96.0  |

\* Flange: DIN 2501/2633, length according to DIN 3201-F1;  
 ANSI B16-5-1988, length according to DIN 3201-F1  
 JIS 10K, length according to ANSI B16-10

**Dimensions [mm] - Fittings DN 65 - 100**

**Weld-o-let fittings with radius - Stainless steel**

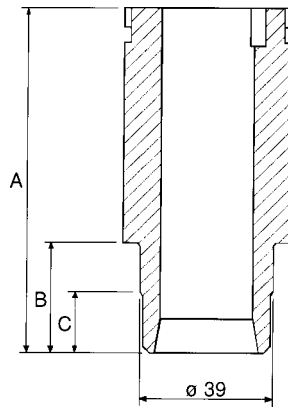
Material: 1.4404 (DIN),  
316L (B.S.)



Variable Dimensions [mm]

| DN  | A     | R     |
|-----|-------|-------|
| 65  | 54.52 | 36.65 |
| 80  | 53.07 | 44.45 |
| 100 | 50.71 | 57.15 |

**Weld-o-let fittings - PE, PP, PVDF**

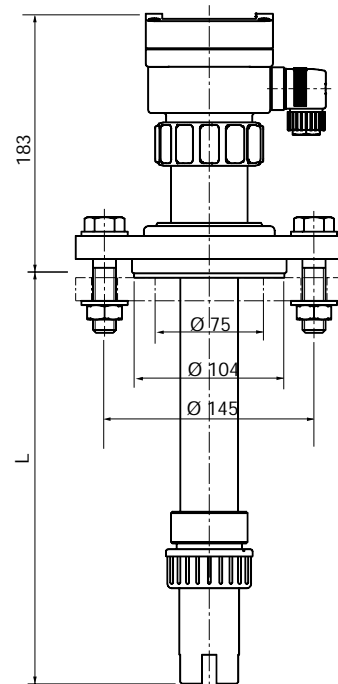
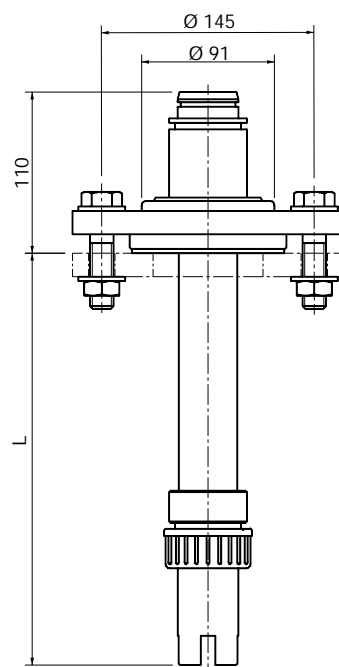


Variable Dimensions [mm]

| DN     | A    | PE |     | PP |     | PVDF |     |
|--------|------|----|-----|----|-----|------|-----|
|        |      | B  | C   | B  | C   | B    | C   |
| 65-100 | 72.5 | 13 | --- | 13 | --- | 10.4 | --- |

**Immersion fitting - PP**

Lengths L: 500, 1000,  
1500, 2000



**Ordering Data for O.R.P. transmitter 8206**

A compact version of O.R.P. transmitter Type 8206 consists of two basic units as follows:

- Fitting type S020 (DN15 to DN50) or 1500/1501 (DN65 to DN200)
- Compact O.R.P. transmitter

| TYPE DESCRIPTION   | Electrode | Gasket | ITEM-No<br>Worldwide Standard<br>Plug, PG 9 | ITEM-No<br>Worldwide Standard<br>1 x PG 13.5 | ITEM-No<br>North America<br>Standard<br>Plug G 1/2" |
|--|-----------|--------|---|--|---|
| <b>O.R.P.-transmitter compact 4-20 mA output, no relay, 12 – 30 VDC; with Pt1000</b> |           |        |   |  |   |
| Compact O.R.P. transmitter 8206  | PLA       | FPM    | 418 836 K                                   | 418 850 D                                    | 418 860 F   |
| Compact O.R.P. transmitter 8206  | PLA       | EPDM   | 418 849 G                                   | 418 851 S                                    | 418 867 S   |

| TYPE DESCRIPTION  | Electrode | Gasket | ITEM-No<br>Worldwide Standard<br>2 x PG 13.5 | ITEM-No<br>North America<br>Standard<br>2 x G 1/2" |
|---|-----------|--------|--|--|
| <b>O.R.P.-transmitter compact 4-20 mA output; 2 relay outputs; 12 – 30 VDC; with Pt1000</b> |           |        |  |  |
| Compact O.R.P. transmitter 8206   | PLA       | FPM    | 418 837 L                                    | 418 861 U  |
| Compact O.R.P. transmitter 8206   | PLA       | EPDM   | 418 857 Y                                    | 418 873 Y  |

A separate version of O.R.P-transmitter consists of five basic units as follows:

- Fitting type S020 (DN15 to DN50) or 1500/1501 (DN65 to DN200)
- O.R.P. holder
- O.R.P. electrode
- cable for O.R.P. electrode
- O.R.P. transmitter 8206 wall- or panel mounted version

| TYPE DESCRIPTION  | Pulse output | Cable connection | Power supply  | ITEM-No   |
|---|--------------|------------------|---------------|-----------|
| <b>O.R.P. transmitter panel mounted version for separate sensor type 8200; 4-20 mA output</b> |              |                  |               |           |
| Panel mounted transmitter 8206 max. 5 m to sensor   | no           | clamps           | 12 – 30 VDC   | 429 088 U |
| Panel mounted transmitter 8206 max. 5 m to sensor   | 2 x relay    | clamps           | 12 – 30 VDC   | 430 754 G |
| <b>O.R.P. transmitter wall mounted version for separate sensor type 8200; 4-20 mA output</b>  |              |                  |               |           |
| Wall mounted transmitter 8206 max. 5 m to sensor  | no           | 5 x PG 9         | 12 – 30 VDC   | 430 755 H |
| Wall mounted transmitter 8206 max. 5 m to sensor  | 2 x relay    | 5 x PG 9         | 12 – 30 VDC   | 430 756 A |
| Wall mounted transmitter 8206 max. 5 m to sensor  | no           | 5 x PG 9         | 115 – 230 VAC | 430 757 B |
| Wall mounted transmitter 8206 max. 5 m to sensor  | 2 x relay    | 5 x PG 9         | 115 – 230 VAC | 430 758 L |

## Ordering Data

| TYPE DESCRIPTION  | Material  | Boring for connection Sensor | Protection Tube | ITEM-No   |
|---|-----------|------------------------------|-----------------|-----------|
| <b>O.R.P.-holder type 8200 without O.R.P.-electrode</b>     |           |                              |                 |           |
| 8200 short version G1" connection thread                    | PVC       | no                           | no              | 429 220 G |
| 8200 long version G1" connection thread                     | PVC       | no                           | no              | 429 222 W |
| 8200 short version 1"NPT connection thread                  | PVC       | no                           | no              | 430 165 S |
| 8200 long version 1"NPT connection thread                   | PVC       | no                           | no              | 430 167 U |
| 8200 short version RC 1" connection thread                  | PVC       | no                           | no              | 430 169 E |
| 8200 long version RC 1" connection thread                   | PVC       | no                           | no              | 430 171 Y |
| 8200 with G 2" connection for fitting type S020; 1500; 1501 | PVC       | no                           | no              | 429 224 Y |
| 8200 with G 2" connection for fitting type S020; 1500; 1501 | PP        | no                           | no              | 429 225 Z |
| 8200 with G 2" connection for fitting type S020; 1500; 1501 | PVDF      | no                           | no              | 429 226 S |
| 8200 with G 2" connection for fitting type S020; 1500; 1501 | SS        | no                           | no              | 429 227 T |
| 8200 with Triclamp connection DN 32 (dia 50.5 mm)           | SS 316 L  | no                           | no              | 429 232 Y |
| 8200 with Triclamp connection DN 32 (dia 50.5 mm)           | SS 316 L  | no                           | yes             | 429 233 Z |
| 8200 with Triclamp connection DN 40 (dia 64 mm)             | SS 316 L  | no                           | no              | 429 236 U |
| 8200 with Triclamp connection DN 40 (dia 64 mm)             | SS 316 L  | no                           | yes             | 429 237 V |
| 8200 with sanitary connection DN 40 DIN 11851               | SS 304    | no                           | no              | 429 240 L |
| 8200 with sanitary connection DN 40 DIN 11851               | SS 304    | no                           | yes             | 429 242 A |
| 8200 with sanitary connection DN 40 DIN 11851               | SS 316 Ti | no                           | no              | 429 241 H |
| 8200 with sanitary connection DN 40 DIN 11851               | SS 316 Ti | no                           | yes             | 429 243 B |
| 8200 with sanitary connection DN 50 DIN 11851               | SS 304    | no                           | no              | 429 248 Q |
| 8200 with sanitary connection DN 50 DIN 11851               | SS 304    | no                           | yes             | 429 250 N |
| 8200 with sanitary connection DN 50 DIN 11851               | SS 316 Ti | no                           | no              | 429 249 R |
| 8200 with sanitary connection DN 50 DIN 11851               | SS 316 Ti | no                           | yes             | 429 253 D |
| 8200 with sanitary connection DN 65 DIN 11851               | SS 304    | no                           | no              | 429 256 G |
| 8200 with sanitary connection DN 65 DIN 11851               | SS 304    | no                           | yes             | 429 260 Q |
| 8200 with sanitary connection DN 65 DIN 11851               | SS 316 Ti | no                           | no              | 429 257 H |
| 8200 with sanitary connection DN 65 DIN 11851               | SS 316 Ti | no                           | yes             | 429 261 D |

| TYPE DESCRIPTION   | Material | Temperatur Range | Pressure | ITEM-No   |
|--|----------|------------------|----------|-----------|
| <b>ACCESSORIES</b>   |          |                  |          |           |
| <b>O.R.P. electrodes 120 mm for sensor type 8200</b>                             |          |                  |          |           |
| EASYCONTROL +/-2000 mV   | glass    | 0... 60 °C       | 2 bar    | 427 250 C |
| OXYTRODE +/-2000 mV  | glass    | 0... 130 °C      | 16 bar   | 427 251 Z |
| <b>Connection Cables between 8206 controller and 8200 sensor; short distance</b> |          |                  |          |           |
| O.R.P. coaxial cable with standard electrode plug                                |          | 2 m              |          | 427 024 H |
| O.R.P. coaxial cable with standard electrode plug                                |          | 5 m              |          | 427 025 A |
| <b>Gaskets</b>   |          |                  |          |           |
| Gasket for all fitting type 8200   | FPM      |                  |          | 429 264 G |
| Gasket for all fitting type 8200   | EPDM     |                  |          | 429 265 H |
| <b>Accessories for tank installation (compact version)</b>                       |          |                  |          |           |
| Immersion fitting  | PP       | 0.5 m            |          | 419 567 W |
| Immersion fitting  | PP       | 1.0 m            |          | 419 568 F |
| Immersion fitting  | PP       | 1.5 m            |          | 419 569 G |
| Immersion fitting  | PP       | 2.0 m            |          | 419 570 D |
| Extension cable for immersion fitting  |          | 0.5 m            |          | 413 499 M |
| Extension cable for immersion fitting  |          | 1.0 m            |          | 413 500 S |
| Extension cable for immersion fitting  |          | 1.5 m            |          | 413 501 P |
| Extension cable for immersion fitting  |          | 2.0 m            |          | 413 502 Q |
| Fixing Kit – Flange DN65 with SS-screws  | PP       |                  |          | 413 615 Q |

**Ordering Data of Stainless Steel Fittings Type S020**

| Diameters                                    | Materials | I T E M - No. |                    |
|--|-----------|---------------|--------------------|
|  |           | Compact vers. | Remote short dist. |
| <b>SS - Female G-Threaded Ports</b>          |           |               |                    |
| DN 15  | SS, FPM   | 428 736 Y     | --- ---            |
| DN 20  | SS, FPM   | 428 737 Z     | --- ---            |
| DN 25  | SS, FPM   | 428 738 A     | --- ---            |
| DN 32  | SS, FPM   | 428 739 B     | 428 739 B          |
| DN 40  | SS, FPM   | 428 740 Q     | 428 740 Q          |
| DN 50  | SS, FPM   | 428 741 D     | 428 741 D          |
| <b>SS - Female NPT-Threaded Ports</b>        |           |               |                    |
| DN 15  | SS, FPM   | 428 742 E     | --- ---            |
| DN 20  | SS, FPM   | 428 743 F     | --- ---            |
| DN 25  | SS, FPM   | 428 744 G     | --- ---            |
| DN 32  | SS, FPM   | 428 745 H     | 428 745 H          |
| DN 40  | SS, FPM   | 428 746 A     | 428 746 A          |
| DN 50  | SS, FPM   | 428 747 B     | 428 747 B          |
| <b>SS - Female ISO7 (JIS) Threaded Ports</b> |           |               |                    |
| DN 15  | SS, FPM   | 428 748 L     | --- ---            |
| DN 20  | SS, FPM   | 428 749 M     | --- ---            |
| DN 25  | SS, FPM   | 428 750 J     | --- ---            |
| DN 32  | SS, FPM   | 428 751 F     | 428 751 F          |
| DN 40  | SS, FPM   | 428 752 G     | 428 752 G          |
| DN 50  | SS, FPM   | 428 753 H     | 428 753 H          |
| <b>SS- Male G Threaded Ports</b>             |           |               |                    |
| DN 15  | SS, FPM   | 428 754 A     | --- ---            |
| DN 20  | SS, FPM   | 428 755 B     | --- ---            |
| DN 25  | SS, FPM   | 428 756 C     | --- ---            |
| DN 32  | SS, FPM   | 428 757 D     | 428 757 D          |
| DN 40  | SS, FPM   | 428 758 N     | 428 758 N          |
| DN 50  | SS, FPM   | 428 759 P     | 428 759 P          |
| <b>SS - Weld Ends</b>                        |           |               |                    |
| DN 15  | SS, FPM   | 428 760 L     | --- ---            |
| DN 20  | SS, FPM   | 428 761 H     | --- ---            |
| DN 25  | SS, FPM   | 428 762 A     | --- ---            |
| DN 32  | SS, FPM   | 428 763 B     | 428 763 B          |
| DN 40  | SS, FPM   | 428 764 C     | 428 764 C          |
| DN 50  | SS, FPM   | 428 765 D     | 428 765 D          |
| <b>SS - Tri-Clamp (ISO 2852)</b>             |           |               |                    |
| DN 15  | SS, FPM   | 428 766 E     | --- ---            |
| DN 20  | SS, FPM   | 428 767 F     | --- ---            |
| DN 25  | SS, FPM   | 428 768 Q     | --- ---            |
| DN 32  | SS, FPM   | 428 769 R     | 428 769 R          |
| DN 40  | SS, FPM   | 428 770 N     | 428 770 N          |
| DN 50  | SS, FPM   | 428 771 B     | 428 771 B          |
| <b>SS - DIN Flanges (DIN 2501)</b>           |           |               |                    |
| DN 15  | SS, FPM   | 428 772 C     | --- ---            |
| DN 20  | SS, FPM   | 428 773 D     | --- ---            |
| DN 25  | SS, FPM   | 428 774 E     | --- ---            |
| DN 32  | SS, FPM   | 428 775 F     | 428 775 F          |
| DN 40  | SS, FPM   | 428 776 G     | 428 776 G          |
| DN 50  | SS, FPM   | 428 777 H     | 428 777 H          |
| <b>SS - Flanges (JIS 10K)</b>                |           |               |                    |
| DN 15  | SS, FPM   | 431 053 J     | --- ---            |
| DN 20  | SS, FPM   | 431 054 K     | --- ---            |
| DN 25  | SS, FPM   | 431 055 L     | --- ---            |
| DN 32  | SS, FPM   | 431 056 M     | 431 056 M          |
| DN 40  | SS, FPM   | 431 057 N     | 431 057 N          |
| DN 50  | SS, FPM   | 431 058 X     | 431 058 X          |

| Diameters                                  | Materials | I T E M - No. |                    |
|--|-----------|---------------|--------------------|
|  |           | Compact vers. | Remote short dist. |
| <b>SS - ANSI Flanges (ANSI B16-5-1988)</b> |           |               |                    |
| DN 15                                      | SS, FPM   | 428 778 J     | --- ---            |
| DN 20                                      | SS, FPM   | 428 779 K     | --- ---            |
| DN 25                                      | SS, FPM   | 428 780 H     | --- ---            |
| DN 32                                      | SS, FPM   | 428 781 W     | 428 781 W          |
| DN 40                                      | SS, FPM   | 428 782 X     | 428 782 X          |
| DN 50                                      | SS, FPM   | 428 783 Y     | 428 783 Y          |
| <b>SS - Weld-o-let</b>                     |           |               |                    |
| DN 65                                      | SS        | 418 112 M     | 418 112 M          |
| DN 80                                      | SS        | 418 113 N     | 418 113 N          |
| DN 100                                     | SS        | 418 114 P     | 418 114 P          |

**Ordering Data of Brass Fittings Type S020**

| Diameters                                       | Materials  | I T E M - No. |                    |
|---|------------|---------------|--------------------|
|   |            | Compact vers. | Remote short dist. |
| <b>Brass - Female G-Threaded Ports</b>          |            |               |                    |
| DN 15   | Brass, FPM | 428 712 Y     | --- ---            |
| DN 20   | Brass, FPM | 428 713 Z     | --- ---            |
| DN 25   | Brass, FPM | 428 714 S     | --- ---            |
| DN 32   | Brass, FPM | 428 715 T     | 428 715 T          |
| DN 40   | Brass, FPM | 428 716 U     | 428 716 U          |
| DN 50   | Brass, FPM | 428 717 V     | 428 717 V          |
| <b>Brass - Female NPT-Threaded Ports</b>        |            |               |                    |
| DN 15   | Brass, FPM | 428 718 E     | --- ---            |
| DN 20   | Brass, FPM | 428 719 F     | --- ---            |
| DN 25   | Brass, FPM | 428 720 C     | --- ---            |
| DN 32   | Brass, FPM | 428 721 Z     | 428 721 Z          |
| DN 40   | Brass, FPM | 428 722 S     | 428 722 S          |
| DN 50   | Brass, FPM | 428 723 T     | 428 723 T          |
| <b>Brass - Female ISO7 (JIS) Threaded Ports</b> |            |               |                    |
| DN 15   | Brass, FPM | 428 724 U     | --- ---            |
| DN 20   | Brass, FPM | 428 725 V     | --- ---            |
| DN 25   | Brass, FPM | 428 726 W     | --- ---            |
| DN 32   | Brass, FPM | 428 727 X     | 428 727 X          |
| DN 40   | Brass, FPM | 428 728 G     | 428 728 G          |
| DN 50   | Brass, FPM | 428 729 H     | 428 729 H          |
| <b>Brass - Male G/metric Threaded Ports</b>     |            |               |                    |
| DN 15   | Brass, FPM | 428 730 E     | --- ---            |
| DN 20   | Brass, FPM | 428 731 T     | --- ---            |
| DN 25   | Brass, FPM | 428 732 U     | --- ---            |
| DN 32   | Brass, FPM | 428 733 V     | 428 733 V          |
| DN 40   | Brass, FPM | 428 734 W     | 428 733 V          |
| DN 50   | Brass, FPM | 428 735 X     | 428 735 X          |

Ordering Data of Plastic Fittings Type S020

| Diameters                    | Materials | I T E M - No. |                    |
|------------------------------|-----------|---------------|--------------------|
|                              |           | Compact vers. | Remote short dist. |
| <b>PVC - True union DIN</b>  |           |               |                    |
| DN 15                        | PVC, FPM  | 428 670 J     | 430 837 L          |
| DN 20                        | PVC, FPM  | 428 671 F     | 430 838 V          |
| DN 25                        | PVC, FPM  | 428 672 G     | 430 839 W          |
| DN 32                        | PVC, FPM  | 428 673 H     | 428 673 H          |
| DN 40                        | PVC, FPM  | 428 674 A     | 428 674 A          |
| DN 50                        | PVC, FPM  | 428 675 B     | 428 675 B          |
| <b>PVC - True union ASTM</b> |           |               |                    |
| 1/2"                         | PVC, FPM  | 428 682 T     | --- ---            |
| 3/4"                         | PVC, FPM  | 428 683 U     | --- ---            |
| 1"                           | PVC, FPM  | 428 684 V     | --- ---            |
| 1" 1/4"                      | PVC, FPM  | 428 685 W     | 428 685 W          |
| 1" 3/4"                      | PVC, FPM  | 428 686 X     | 428 686 X          |
| 2"                           | PVC, FPM  | 428 687 Y     | 428 687 Y          |
| <b>PVC - True union JIS</b>  |           |               |                    |
| DN 15                        | PVC, FPM  | 429 078 H     | --- ---            |
| DN 20                        | PVC, FPM  | 429 079 A     | --- ---            |
| DN 25                        | PVC, FPM  | 429 080 Y     | --- ---            |
| DN 32                        | PVC, FPM  | 429 081 M     | 429 081 M          |
| DN 40                        | PVC, FPM  | 429 082 N     | 429 082 N          |
| DN 50                        | PVC, FPM  | 429 083 P     | 429 083 P          |
| <b>PVC - Solvent Spigot</b>  |           |               |                    |
| DN 15                        | PVC, FPM  | 428 676 C     | --- ---            |
| DN 20                        | PVC, FPM  | 428 677 D     | --- ---            |
| DN 25                        | PVC, FPM  | 428 678 N     | --- ---            |
| DN 32                        | PVC, FPM  | 428 679 P     | 428 679 P          |
| DN 40                        | PVC, FPM  | 428 680 D     | 428 680 D          |
| DN 50                        | PVC, FPM  | 428 681 S     | 428 681 S          |
| <b>PE - Weld-o-let</b>       |           |               |                    |
| DN 65-100                    | PE        | 418 642 G     | 418 642 G          |

| Diameters                                   | Materials | I T E M - No. |                    |
|---|-----------|---------------|--------------------|
|   |           | Compact vers. | Remote short dist. |
| <b>PP - True Union with Threaded Port</b>   |           |               |                    |
| DN 15                                       | PP, FPM   | 428 688 H     | 430 840 B          |
| DN 20                                       | PP, FPM   | 428 689 A     | 430 841 Y          |
| DN 25                                       | PP, FPM   | 428 690 F     | 430 842 Z          |
| DN 32                                       | PP, FPM   | 428 691 U     | 428 691 U          |
| DN 40                                       | PP, FPM   | 428 692 V     | 428 692 V          |
| DN 50                                       | PP, FPM   | 428 693 W     | 428 693 W          |
| <b>PP - Weld Ends</b>                       |           |               |                    |
| DN 15                                       | PP, FPM   | 428 694 X     | --- ---            |
| DN 20                                       | PP, FPM   | 428 695 Y     | --- ---            |
| DN 25                                       | PP, FPM   | 428 696 Z     | --- ---            |
| DN 32                                       | PP, FPM   | 428 697 S     | 428 697 S          |
| DN 40                                       | PP, FPM   | 428 698 B     | 428 698 B          |
| DN 50                                       | PP, FPM   | 428 699 C     | 428 699 C          |
| <b>PP - Weld-o-let</b>                      |           |               |                    |
| DN 65-100                                   | PP        | 418 650 L     | 418 650 L          |
| <b>PVDF - True Union with Threaded Port</b> |           |               |                    |
| DN 15                                       | PVDF, FPM | 428 700 R     | 430 843 S          |
| DN 20                                       | PVDF, FPM | 428 701 E     | 430 844 T          |
| DN 25                                       | PVDF, FPM | 428 702 F     | 430 845 U          |
| DN 32                                       | PVDF, FPM | 428 703 G     | 428 703 G          |
| DN 40                                       | PVDF, FPM | 428 704 H     | 428 704 H          |
| DN 50                                       | PVDF, FPM | 428 705 A     | 428 705 A          |
| <b>PVDF - Weld Ends</b>                     |           |               |                    |
| DN 15                                       | PVDF, FPM | 428 706 B     | --- ---            |
| DN 20                                       | PVDF, FPM | 428 707 C     | --- ---            |
| DN 25                                       | PVDF, FPM | 428 708 M     | --- ---            |
| DN 32                                       | PVDF, FPM | 428 709 N     | 428 709 N          |
| DN 40                                       | PVDF, FPM | 428 710 A     | 428 710 A          |
| DN 50                                       | PVDF, FPM | 428 711 X     | 428 711 X          |
| <b>PVDF - Weld-o-let</b>                    |           |               |                    |
| DN 65-100                                   | PVDF      | 418 658 Q     |                    |

Ordering Data for O.R.P. transmitter 8206

