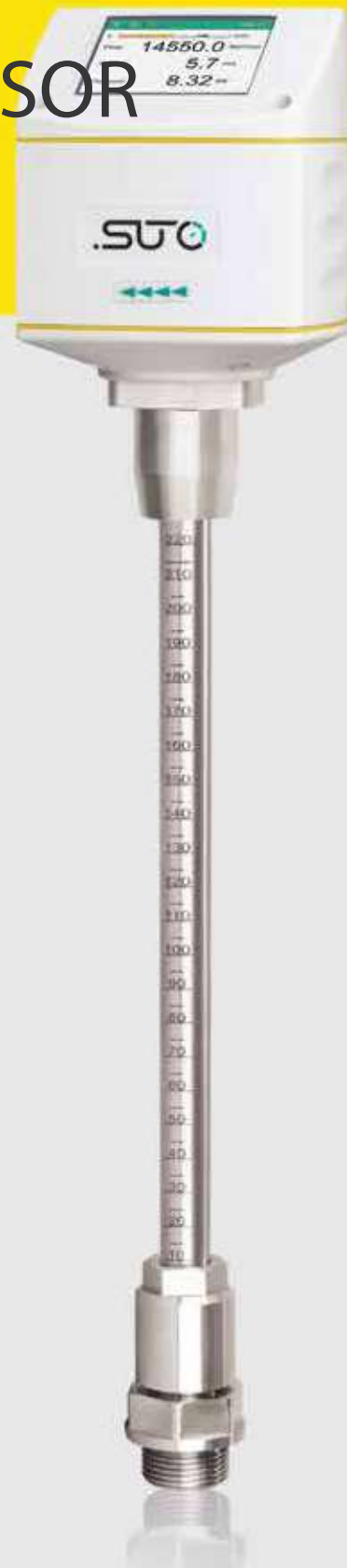
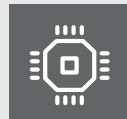


# PITOT TUBE FLOW / CONSUMPTION SENSOR S430



SMARTPHONE ANDROID APP  
For remote configuration



# Measures air delivery at compressor discharge — **ideal flow meter for compressor performance tests**



## S430 FEATURES



**SMARTPHONE  
ANDROID APP**  
For remote  
configuration



**ACCURATE  
RESULTS**  
Very fast  
response time



**EASY PROCESS  
MONITORING**  
Effective and  
inexpensive  
measurements



**TOTAL FLOW**  
High accuracy  
and reliable  
measurements

## S430 FEATURES AT A GLANCE

- Flow and consumption measurement in wet air or high mass flow / velocity applications
- Measurement at compressor outlet
- Tube diameters of 1.25" to 10" through center installation, bigger diameters through non-center installation
- Insertion type, easy installation under pressure through ball valve possible
- High temperature applications up to 230 °C
- No mechanical wear parts
- All parts which are in contact with flow medium are made of stainless steel
- Compressor-FAD-Measurement
- Measures Flow, Consumption, Temperature and Pressure

## S430 BENEFITS

The S430 is based on the pitot tube principle to measure flow. Properly installed (refer to instruction manual for details) the sensor can measure in wet and dirty gases as occurring, for example, at the discharge of a compressor.

The sensor features long term stability, wide turndown ratio and good temperature stability. It can be used in compressed air and non-corrosive gases.

The sensor can be installed through a ball valve while the system is pressurized.

Various output signals allow the sensor to be connected to SUTO displays and/or third-party displays and PLCs.

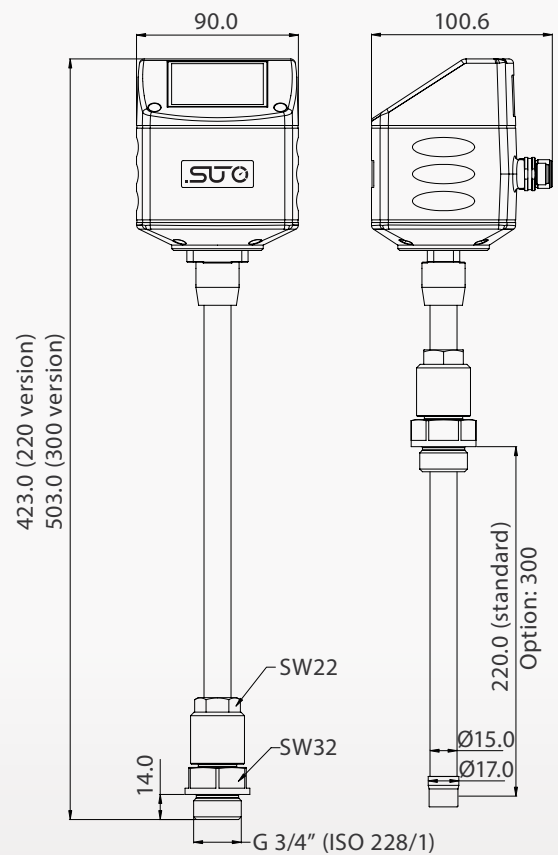
## S430 TECHNICAL DATA

| General Specifications                                                                                                                                                             |       |                                                                                                        |       |        |       |      |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------|-------|--------|-------|------|-------|
| Flow range                                                                                                                                                                         |       | Refer to table below                                                                                   |       |        |       |      |       |
| Pressure range                                                                                                                                                                     |       | 0 ... 1.6 MPa                                                                                          |       |        |       |      |       |
| Temperature range                                                                                                                                                                  |       | -40 ... +230 °C                                                                                        |       |        |       |      |       |
| Accuracy                                                                                                                                                                           |       | Flow: ±(1.5 %+0.3 % full scale)<br>Pressure: 0.5 % F.S.<br>Temperature: 0.5 °C                         |       |        |       |      |       |
| Reference conditions                                                                                                                                                               |       | Programmable,<br>default P = 1000 hPa(a), T = 20 °C                                                    |       |        |       |      |       |
| Medium                                                                                                                                                                             |       | Wet and dry air, non-corrosive gases                                                                   |       |        |       |      |       |
| Output signals                                                                                                                                                                     |       | 4 ... 20 mA and Pulse (optional)<br>Modbus/RTU (optional)<br>M-Bus (optional)<br>Modbus/TCP (optional) |       |        |       |      |       |
| Medium temp.                                                                                                                                                                       |       | -40 ... +230 °C                                                                                        |       |        |       |      |       |
| Ambient temp.                                                                                                                                                                      |       | -20 ... +60 °C                                                                                         |       |        |       |      |       |
| Power supply                                                                                                                                                                       |       | 24 VDC, 150 mA                                                                                         |       |        |       |      |       |
| Display option                                                                                                                                                                     |       | 2.4" color graphic display with keypad                                                                 |       |        |       |      |       |
| Process connection                                                                                                                                                                 |       | 3/4" G type (ISO 228-1)                                                                                |       |        |       |      |       |
| Sensor material                                                                                                                                                                    |       | Stainless steel 1.4404 (SUS 316L)                                                                      |       |        |       |      |       |
| Flow Ranges                                                                                                                                                                        |       |                                                                                                        |       |        |       |      |       |
| Tube                                                                                                                                                                               |       | Volumetric Flow                                                                                        |       |        |       |      |       |
| Inch                                                                                                                                                                               | mm    | m³/h                                                                                                   |       | m³/min |       | cfm  |       |
|                                                                                                                                                                                    |       | Min                                                                                                    | Max   | Min    | Max   | Min  | Max   |
| 1                                                                                                                                                                                  | 27.3  | 23                                                                                                     | 229   | 0.38   | 3.8   | 13   | 135   |
| 1¼"                                                                                                                                                                                | 36.0  | 51                                                                                                     | 507   | 0.85   | 8.5   | 30   | 298   |
| 1½"                                                                                                                                                                                | 41.9  | 76                                                                                                     | 756   | 1.26   | 12.6  | 45   | 445   |
| 2"                                                                                                                                                                                 | 53.1  | 130                                                                                                    | 1298  | 2.16   | 21.6  | 76   | 764   |
| 2½"                                                                                                                                                                                | 68.9  | 227                                                                                                    | 2274  | 3.79   | 37.9  | 134  | 1338  |
| 3"                                                                                                                                                                                 | 80.9  | 318                                                                                                    | 3175  | 5.29   | 52.9  | 187  | 1869  |
| 4"                                                                                                                                                                                 | 100.0 | 488                                                                                                    | 4880  | 8.13   | 81.3  | 287  | 2872  |
| 5"                                                                                                                                                                                 | 125.0 | 763                                                                                                    | 7625  | 12.71  | 127.1 | 449  | 4488  |
| 6"                                                                                                                                                                                 | 150.0 | 1099                                                                                                   | 10993 | 18.32  | 183.2 | 647  | 6470  |
| 8"                                                                                                                                                                                 | 200.0 | 1961                                                                                                   | 19611 | 32.69  | 326.9 | 1154 | 11543 |
| 10"                                                                                                                                                                                | 250.0 | 3064                                                                                                   | 30642 | 51.07  | 510.7 | 1804 | 18035 |
| 12"                                                                                                                                                                                | 300.0 | 4412                                                                                                   | 44125 | 73.54  | 735.4 | 2597 | 25971 |
| Flow range for Air at 6 barg, 50 °C and 90 % humidity. For other gas a condition please download Flow Range software from <a href="http://www.suto-itec.com">www.suto-itec.com</a> |       |                                                                                                        |       |        |       |      |       |

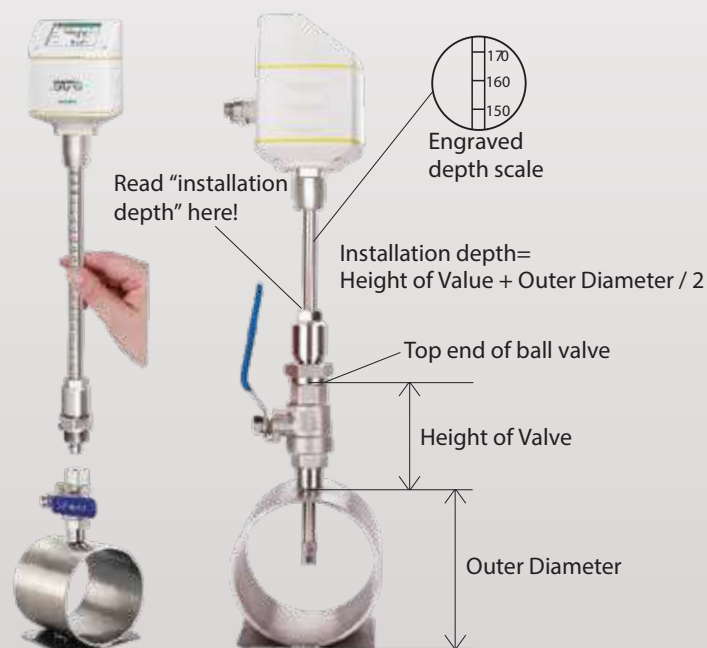
Stated measuring ranges under following conditions:

- Standard flow in air
- Reference pressure: 1000 hPa
- Reference Temperature: +20 °C

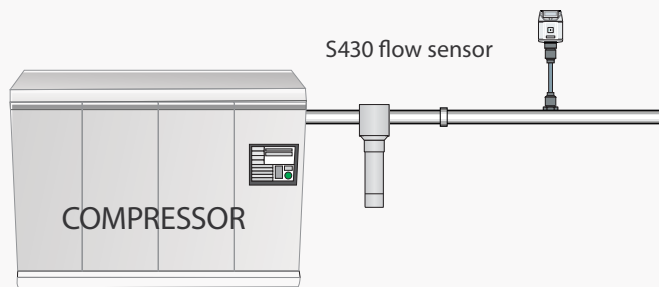
## Dimensions



## Installation



S430 Installation through a ball valve



Compressor air delivery measurement and FAD calculation



Colour graphic display for online values and sensor settings

## S430 ORDERING

Please use the following tables to assist in placing your order with our sales staff.

| S430 Pitot Tube Flow Sensor, Insertion Type, 220 mm Shaft |       |                                                            |
|-----------------------------------------------------------|-------|------------------------------------------------------------|
| Order No.                                                 | Code  | Description                                                |
| S6954300                                                  | S4300 | S430, pitot tube flow sensor, insertion type, 220 mm shaft |
| Connection thread                                         |       |                                                            |
|                                                           | A     | G 3/4" Standard                                            |
| A1068                                                     | B     | PT 3/4" adaptor                                            |
| A1069                                                     | C     | NPT 3/4" adaptor                                           |
| Gas type                                                  |       |                                                            |
| A1007                                                     | A     | Medium Air                                                 |
| A1008                                                     | B     | Medium CO <sub>2</sub>                                     |
| A1009                                                     | C     | Medium O <sub>2</sub> (Oil- & grease-free cleaned)         |
| A1010                                                     | D     | Medium N <sub>2</sub>                                      |
| A1011                                                     | E     | Medium N <sub>2</sub> O                                    |
| A1012                                                     | F     | Medium Ar                                                  |
| A1013                                                     | G     | Medium Natural gas (Exact gas mix required)                |
| A1014                                                     | H     | Medium H <sub>2</sub>                                      |
| A1015                                                     | I     | Others (Please specify the gas or gas mix)                 |
| A1016                                                     | J     | Medium He                                                  |
| Fieldbus                                                  |       |                                                            |
| A1061                                                     | A     | Modbus/RTU                                                 |
| A1062                                                     | B     | Analog, Pulse                                              |
| A1063                                                     | C     | M-Bus                                                      |
| A1064                                                     | D     | Modbus/TCP (including 5 m M12 cable with RJ45 plug)        |
| Range                                                     |       |                                                            |
|                                                           | A     | Standard                                                   |
| A1066                                                     | B     | Bi-directional standard                                    |
| A1067                                                     | C     | High speed: Max flow increased by 30 %                     |
| Display                                                   |       |                                                            |
|                                                           | A     | Without Display Standard                                   |
| A1060                                                     | B     | With Display                                               |

| S430 Pitot Tube Flow Sensor, Insertion Type, 300 mm Shaft |       |                                                            |
|-----------------------------------------------------------|-------|------------------------------------------------------------|
| Order No.                                                 | Code  | Description                                                |
| S695 4302                                                 | S4302 | S430, pitot tube flow sensor, insertion type, 300 mm shaft |
| Connection thread                                         |       |                                                            |
|                                                           | A     | G 3/4" Standard                                            |
| A1068                                                     | B     | PT 3/4" adaptor                                            |
| A1069                                                     | C     | NPT 3/4" adaptor                                           |
| Gas type                                                  |       |                                                            |
| A1007                                                     | A     | Medium Air                                                 |
| A1008                                                     | B     | Medium CO <sub>2</sub>                                     |
| A1009                                                     | C     | Medium O <sub>2</sub> (Oil- & grease-free cleaned)         |
| A1010                                                     | D     | Medium N <sub>2</sub>                                      |
| A1011                                                     | E     | Medium N <sub>2</sub> O                                    |
| A1012                                                     | F     | Medium Ar                                                  |
| A1013                                                     | G     | Medium Natural gas (Exact gas mix required)                |
| A1014                                                     | H     | Medium H <sub>2</sub>                                      |
| A1015                                                     | I     | Others (Please specify the gas or gas mix)                 |
| A1016                                                     | J     | Medium He                                                  |
| Fieldbus                                                  |       |                                                            |
| A1061                                                     | A     | Modbus/RTU                                                 |
| A1062                                                     | B     | Analog, Pulse                                              |
| A1063                                                     | C     | M-Bus                                                      |
| A1064                                                     | D     | Modbus/TCP (including 5 m M12 cable with RJ45 plug)        |
| Range                                                     |       |                                                            |
|                                                           | A     | Standard                                                   |
| A1066                                                     | B     | Bi-directional standard                                    |
| A1067                                                     | C     | High speed: Max flow increased by 30 %                     |
| Display                                                   |       |                                                            |
|                                                           | A     | Without Display Standard                                   |
| A1060                                                     | B     | With Display                                               |



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