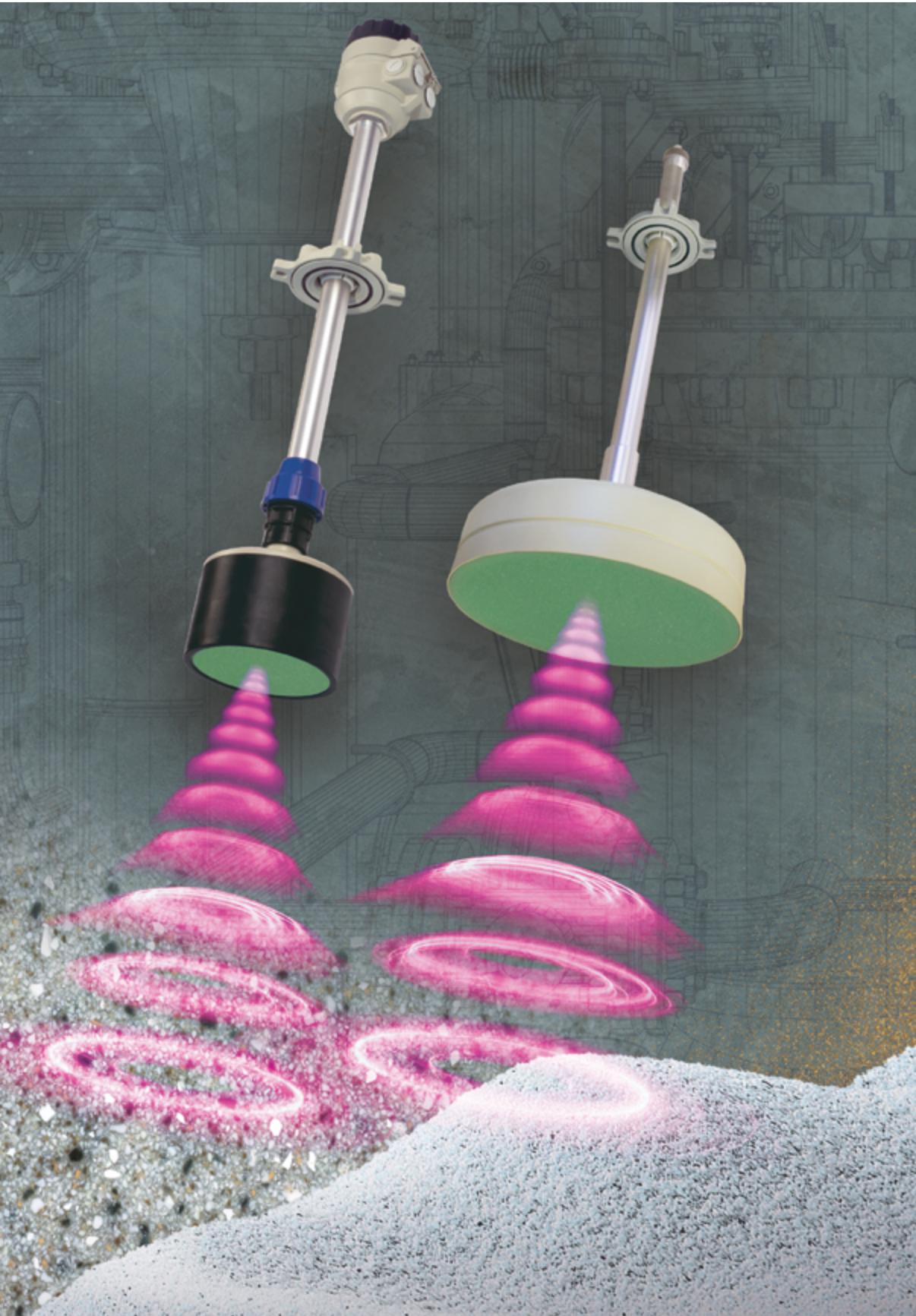


EasyTREK / EchoTREK

ULTRASONIC LEVEL TRANSMITTERS FOR SOLIDS



5 YEARS WARRANTY

PIVELECO

LEVEL TRANSMITTERS

4-wire EasyTREK ultrasonic level transmitters are designed for solids level monitoring, where previously only more complex, two-part systems have performed adequately. SenSonic narrow beam angle transducers offer superb signal transmission, providing the means for EasyTREK units to overcome filling noise, dust, and irregular surface formations. Combined with QUEST+, an advanced adaptive signal processing software, the system offers a solution with world-class performance.

FEATURES

- Non-contact level measurement
- 4-wire integrated (blind) level transmitter
- Maximum 60 m measuring range
- Narrow (5°) beam angle
- Full temperature compensation
- IP65
- HART® communication
- Dust Ex variant
- 5 years warranty

APPLICATIONS

- Level, volume and weight calculation
- Wide application range: light powders to coarse bulk solid materials
- Reliable operation in challenging environments (e. g. dust)

CERTIFICATES

- ATEX (Ex ma ta D)
- EAC Ex (Ex ma ta D)

TECHNICAL DATA

		SCD-300
System	4-wire	
Accuracy ⁽¹⁾	± (0.2% of measured distance + 0.1% of range)	
Resolution	10 mm	
Output	Analog	4...20 mA
	Relay	SPST, 48 V AC / 5 A
	Digital communication	HART®
Ambient temperature	-30... +60 °C	
Process temperature		
Process pressure	0.7...1.1 bar (0.07...0.11 MPa) P _{absolute} and ±0.1 bar (0.01 MPa) difference between ambient and tank pressure	
Supply voltage	11.4...40 V DC / 4.7 W and 11.4...28 V AC / 5.2 VA	
Electrical protection	Class III	
Housing	Same as the transducer housing material	
Electrical connection	LiYCY type 7× 0.5 mm ² shielded Ø7.5 mm cable; standard cable length: 5 m (available up to 30 m)	
Ingress protection	IP65	
Explosion protection	see "Ex Information"	
Weight	~3...3.5 kg, or 6.5 kg	

⁽¹⁾ Under optimal conditions and constant transducer temperature



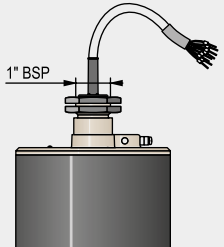
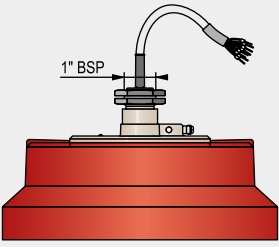
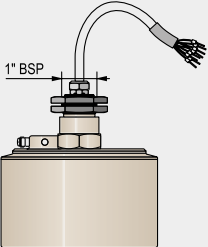
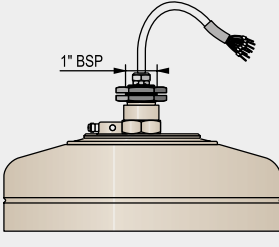
PROPERTIES

Functions	EasyTREK
	SCD-300
Relay or SSR	SPST
HART®	■
Dust Ex version	■

Ex INFORMATION

SCD-300	
Protection	Dust Ex
Ex marking	Ⓜ II 1 D Ex ma ta IIIC T85°C...T130°C Da
Ambient temperature	-30...+60 °C
Process temperature	
Output	Electronic switch: SPST 48 V AC 50 V DC / 1 A

TRANSDUCER PROPERTIES

	SCD-34□	SCD-33□	SCD-31□
Recommended applications	Small tanks, hoppers, conveyor belts. Both for powders and granules.	Medium-sized silos with solids.	Large silos with solids. Recommended in dusty environments due to its power and low frequency.
EasyTREK (standard version)			
EasyTREK (Ex variant)			
Transducer Material	Standard version: PP + Painted aluminum, Ex variant: Painted aluminum		
Transducer Surface	Closed-cell PVC foam		
Beam Angle	5°		
Max. measuring range ⁽¹⁾	15 m	30 m	60 m
Min. measuring range ⁽¹⁾	0.6 m		1 m

⁽¹⁾ Under optimal conditions and constant transducer temperature



SCD-31J-8 Ex



SCD-33J-4



SCD-31J-4

EasyTREK SC-300 **5 years**

4-wire integrated ultrasonic level transmitters for solids with PP or cast aluminum sensor housing with PVC foam face

Range / Frequency

S C D - 3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
4	0.6...15 m (40 kHz)
3	0.6...30 m (30 kHz)
1	1...60 m (15 kHz)

Process connection

S C D - 3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
0	1" BSP thread
J	Joystick aiming device

Output / Ex Certificate

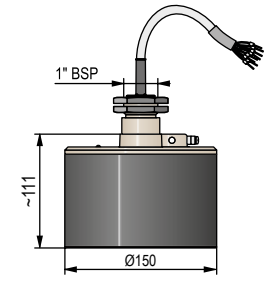
S C D - 3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
4	4...20 mA + HART® + Relay
8	4...20 mA + HART® + SSR / Ex ma ta IIIC

Cable

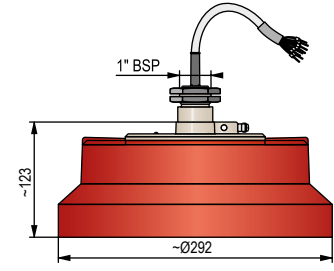
Maximum length 30 m; sold by the meter over the standard 5 m

Accessories sold separately; see relevant page for details

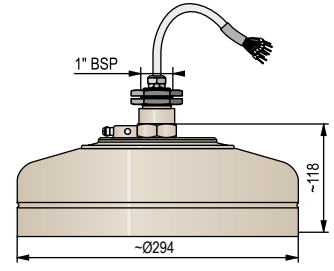
S F A - 3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - 0	Flanges
S A T - 5 0 4 - <input type="checkbox"/>	HART®-USB/Bluetooth® modem
S A K - 3 0 5 - <input type="checkbox"/>	HART®-USB/RS485 modem
S A A - 1 0 1 - 0	Quick-connect gland for pipe-mounting devices with 1" process connection, PP
S A A - 1 0 2 - 0	Aiming device, 500 mm, aluminum, Pg9, drilled as DN50 PN16
P F - 1 <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	Smart Field Display and Data Logger
P F - 0 1 - <input type="checkbox"/>	Loop Display



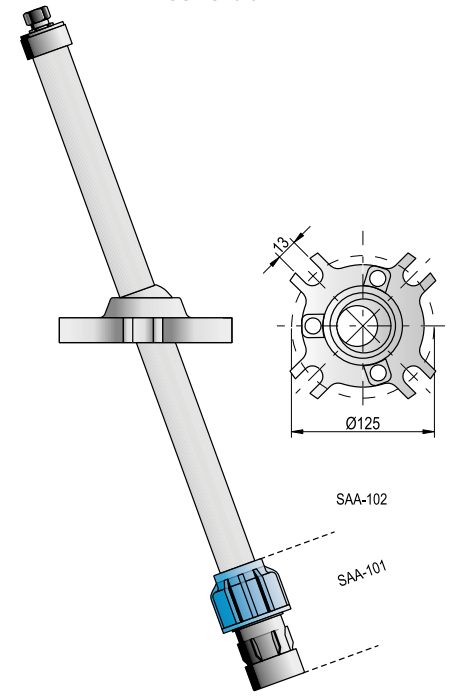
SCD-330 / 340



SCD-310



SCD-310-8 Ex



SAA-102

4-wire EchoTREK compact ultrasonic level transmitters are designed for monitoring the level of solids, where previously only more complex, two-part systems have performed adequately. Sensonic narrow beam angle transducers offer superb signal transmission, providing the means for EchoTREK units to overcome filling noise, dust, and irregular surface formations. Combined with QUEST+, an advanced adaptive signal processing software, the system offers a solution with world-class performance.

FEATURES

- Non-contact level measurement
- 4-wire compact transmitter
- Maximum 60 m measuring range
- Narrow (5°) beam angle
- Full temperature compensation
- IP65
- Plug-in display unit
- HART® communication
- PACTware™ compatible
- Dust Ex variant
- 5 years warranty

APPLICATIONS

- Level, volume and weight calculation
- Wide application range: light powders to coarse bulk solid materials
- Reliable measurement in challenging applications such as dusting during filling

CERTIFICATES

- ATEX (Ex ma ta/tb D)

TECHNICAL DATA

S□D-300		
System	4-wire	
Accuracy ⁽¹⁾	± (0.2% of measured distance + 0.1% of range)	
Resolution	10 mm	
Output	Analog	4...20 mA
	Relay	SPDT, 250 V AC / 3 A, AC1
	Display	SAP-100 plug-in display unit
	Digital comm.	HART®
Ambient temperature	-30...+60 °C with display: -25...+60 °C	
Process temperature	-30...+75 °C	
Process pressure	0.7...1.1 bar (0.07...0.11 MPa) P _{absolute} and ±0.1 bar (0.01 MPa) difference between ambient and tank pressure	
Supply voltage	Version 1: 85...255 V AC / 6.8 VA	
	Version 2: 11.4...40 V DC / 4.1 W and 11.4...28 V AC / 4.6 VA	
Electrical protection	Class I	
Housing	Painted aluminum	
Electrical connection	2x M20x1.5 cable glands + 2x internally threaded ½" NPT connection, cable outer diameter: Ø6...12 mm, wire cross section: 0.5...2.5 mm ² Ex variant: see "Ex Information"	
Ingress protection	IP65	
Explosion protection	See "Ex Information"	
Weight	~7 kg, or 10 kg	

⁽¹⁾ Under optimal conditions and constant transducer temperature

Ex INFORMATION

S□D-300	
Protection	Dust Ex
Ex marking	Ⓔ II 1/2 D Ex ma ta/tb IIIC T85°C...T130°C Da/Db
Ambient temperature	-30...+60 °C, with display: -25...+60 °C
Process temperature	-30...+75 °C
Electrical connection	2x M20x1.5 cable glands with Ex ta IIIC protection for Ø7...Ø12 mm cable, 3x terminal blocks for max. 2.5 mm ² wire cross section, 2x internally threaded ½" NPT connection for protective pipes.

PROPERTIES

Functions	EchoTREK
	STD / SBD-300
Relay	■
HART®	■
Dust Ex variant	■
Display	SAP-100



SAP-100 display



SBD-300

TRANSDUCER PROPERTIES

	S□D-34J-□	S□D-33J-□	S□D-31J-□
Recommended applications	Small tanks, hoppers, conveyor belts. Both for powders and granules.	Medium-sized silos containing all kinds of bulk solids.	Larger silos containing all kinds of bulk solids. Recommended in dusty environments due to its power and low frequency.
EchoTREK (standard version)			
EchoTREK (Ex variant)			
Transducer Material	Standard version: PP + painted aluminum, Ex variant: painted aluminum		
Transducer Surface	Closed-cell PVC foam		
Beam Angle	5°		
Max. Measuring range ⁽¹⁾	15 m	30 m	60 m
Min. Measuring range ⁽¹⁾	0.6 m		1 m

⁽¹⁾ Under ideal conditions and constant transducer temperature

MOUNTING

The SAA-102 ball joint adjustment unit (part of EchoTREK units) helps optimize coning or arching caused by the filling/emptying process in solids material storage. The transducer's position is adjustable during operation. It is recommended to check the position and the filled material's surface multiple times during filling/emptying. The best result is obtained by aiming the transducer at the center of the tank's bottom.

SBD-34J-1



EchoTREK ST-300

5 years

4-wire compact ultrasonic level transmitters with aiming device for solids with PP or cast aluminum sensor housing with PVC foam face

Range / Frequency

S ■ D - 3 ■ J - ■

4	0.6...15 m (40 kHz)
3	0.6...30 m (30 kHz)
1	1...60 m (15 kHz)

Version

S ■ D - 3 ■ J - ■

T	Transmitter
B	Transmitter with plug-in display

Process connection

S ■ D - 3 ■ ■ - ■

J	Joystick aiming device
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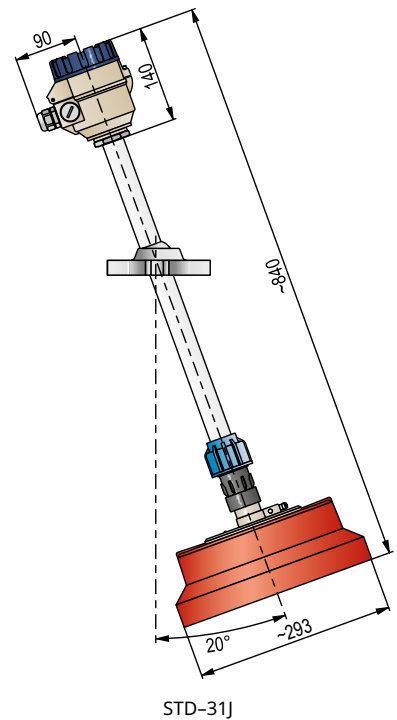
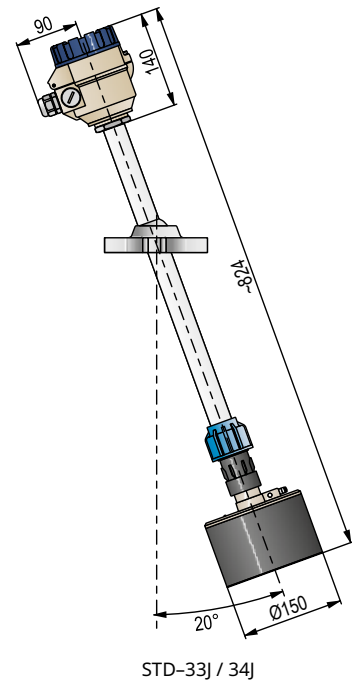
Supply voltage / Output / Certificates

S ■ D - 3 ■ J - ■

1	85...255 V AC / 4...20 mA + Relay
3	85...255 V AC / 4...20 mA + HART® + Relay
5	85...255 V AC / 4...20 mA + Relay / Ex ma ta/tb D
7	85...255 V AC / 4...20 mA + HART® + Relay / Ex ma ta/tb D
2	11.4...40 V DC and 11.4...28 V AC / 4...20 mA + Relay
4	11.4...40 V DC and 11.4...28 V AC / 4...20 mA + HART® + Relay
6	11.4...40 V DC and 11.4...28 V AC / 4...20 mA + Relay / Ex ma ta/tb D
8	11.4...40 V DC and 11.4...28 V AC / 4...20 mA + HART® + Relay / Ex ma ta/tb D

Accessories sold separately; see relevant page for details

S A P - 1 0 0 - 0	Plug-in programmer/display module
S F A - 3 ■ ■ - 0	Flanges
S A T - 5 0 4 - ■	HART®-USB/Bluetooth® modem
S A K - 3 0 5 - ■	HART®-USB/RS485 modem



LEVEL TRANSMITTERS

NIVOSONAR SFA **5 years**

Plastic flanges for ultrasonic level transmitters
Material: Polypropylene (PP)

Type

SFA-3	Flanges
--------------	---------

Flange size

SFA-3 DIN flanges, PN16

2	DN80 PN16
3	DN100 PN16
4	DN125 PN16
5	DN150 PN16
6	DN200 PN16
7	DN250 PN16
8	DN300 PN16
9	DN350 PN16

FF ANSI flanges, 150 psi

A	3" FF 150 psi
B	4" FF 150 psi
C	5" FF 150 psi
D	6" FF 150 psi
E	8" FF 150 psi
Y	12" FF 150 psi
K	14" FF 150psi

JIS flanges, 10K

G	80A (as per 10K)
H	100A (as per 10K)
P	125A (as per 10K)
R	150A (as per 10K)
S	200A (as per 10K)
Z	300A (as per 10K)
W	350A (as per 10K)

Flange type

SFA-3	
1	Ø35 mm hole (for units with 1" BSP process connection)
3	For units with 2" BSP process connection
4	For units with 2" NPT process connection
5	For mounting to SAA-102 aiming device
6	For units with 1½" BSP process connection
7	For units with 1½" NPT process connection

NIVOSONAR SAA **5 years**

Mounting brackets for ultrasonic level transmitters
Material: Plastic / Metal

Type

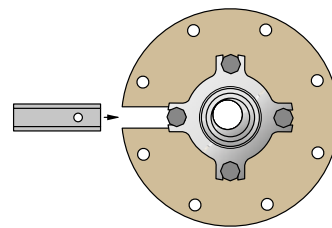
SAA-10	Mounting brackets
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Length

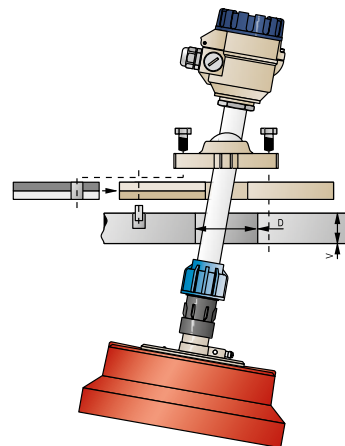
SAA-10	
7	200 mm
8	500 mm
9	700 mm

Process connection

SAA-10	
0	For 1" BSP threaded process connection
3	For 2" BSP threaded process connection
4	For 1½" BSP threaded process connection
5	For 2" NPT threaded process connection
6	For 1½" NPT threaded process connection

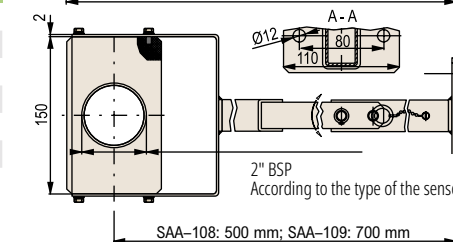
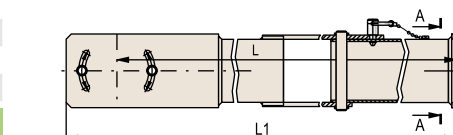
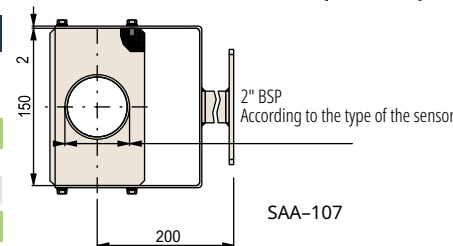
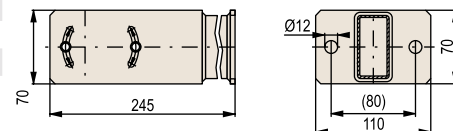


SFA-3□5



STD-31J + SFA-3□5

Diameter of the opening (D)	Max. thickness of the roof (V)
160 mm	110 mm
190 mm	150 mm
230 mm	200 mm
300 mm	280 mm
340 mm	300 mm



SAA-108, SAA-109

ООО "РусАвтоматизация"

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