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ADVANCED APPLIED TECHNOLOGIES

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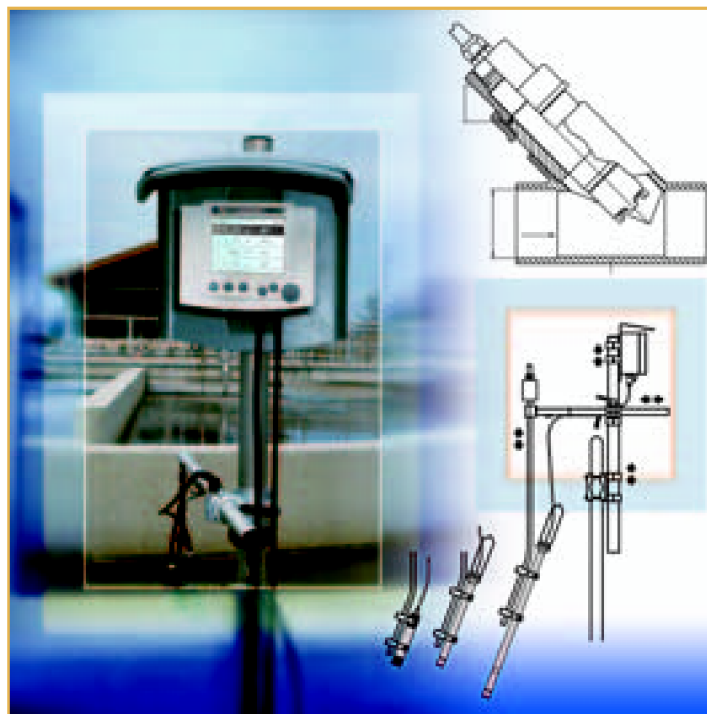
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# Accessories

## Practical and Functional Components



- 🔹 Junction boxes
- 🔹 Sensor extension assemblies
- 🔹 Mounting hardware
- 🔹 Flow-thru adapters
- 🔹 Valve Assemblies
- 🔹 Cleaning System

For optimal configuration of the monitoring station, the instruments are supplemented by an extensive range of mechanical installation and assembly aids and useful accessories. These functional and practical tools provide the user with tailor-made and well thought-out solutions for almost every application.

All mechanical system components are manufactured from corrosion resistant materials. They are easy to assemble and completely maintenance free. The modular concept and the large design variety facilitate trouble-free adaption to the specific application requirements and installation circumstances.

# Analog Junction Boxes

## ● KI/S

Order No.: 108 606

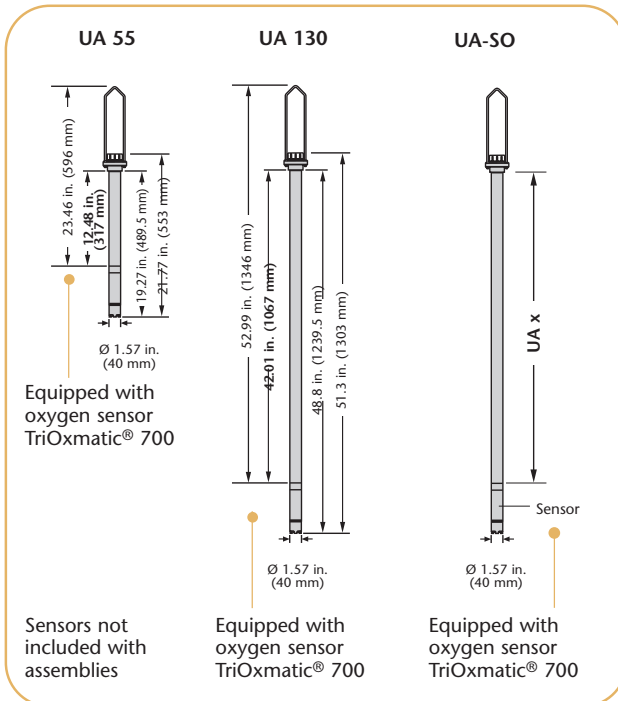
This passive junction box is used for extension cabling between WTW sensors and the EcoLine and QuadroLine® series monitors.

## ● KI/pH 170

Order No.: 108 596

Junction box with integrated impedance converter is designed to connect high impedance pH electrodes to WTW pH monitors over relatively long distances of up to 330 ft (100 m).

# Analog & Digital Sensor extensions



The universal extension assemblies made of PVC are used for mounting and mechanically protecting all 650, 690, 70X and 70X IQ series WTW sensors. The extension assemblies are available with two different standard lengths of armor; special armor lengths can be defined in your order. The assemblies are supplied with a stainless steel handle and a set of seals.

## ● UA 55

Order No.: 109 260

Armored length without sensor 12.48 in. (317 mm).

## ● UA 130

Order No.: 109 261

Armored length without sensor 42.01 in. (1067 mm).

## ● UA-SO

Order No.: 109 263V

Armored length without sensor: stepless selectable between 9.45 and 102.36 in. (240 - 2600 mm).

# Analog & Digital Sensor holders

## ● EH/U 170

Order No.: 109 320

Single sensor holder

## ● EH2/U 170

Order No.: 109 323

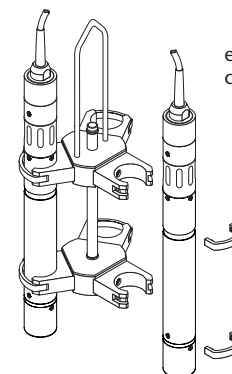
Twin sensor holder

## ● EH3/U 170

Order No.: 109 325

Triple sensor holder

EH3/U 170



e.g. with mounted conductivity cell

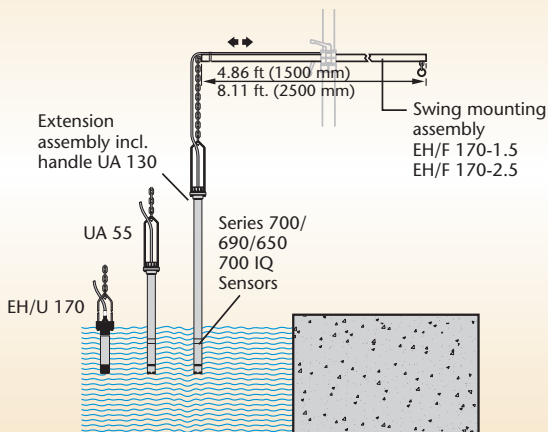
# Mounting Hardware

## Installation Flexibility

The WTW mounting hardware constitutes a flexible mechanical system in which the individual components are optimally matched. With the selection and combination of various sensor holders, mounting stands and fastening elements, tailor made solutions can be established for the appropriate configuration of the measuring stations; as the diagrams show.

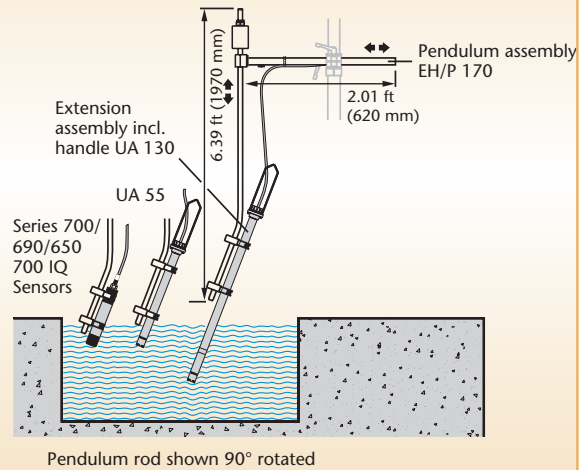
### Measurements in Basins

Recommended sensor holding device:  
**Swing mounting assembly**



### Measurements in Open Channels

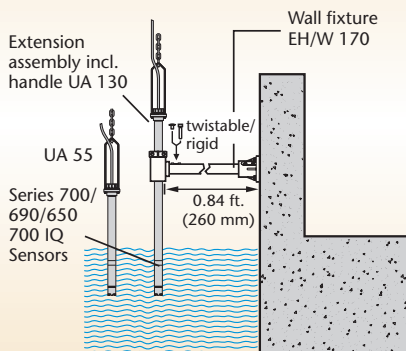
Recommended sensor holding device:  
**Pendulum assembly**



### Measurements in Basins or in Open Channels

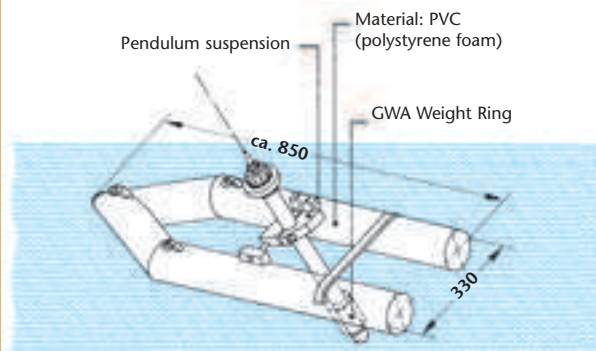
#### Wall mounting

for universal extension assemblies UA 55/ UA 130



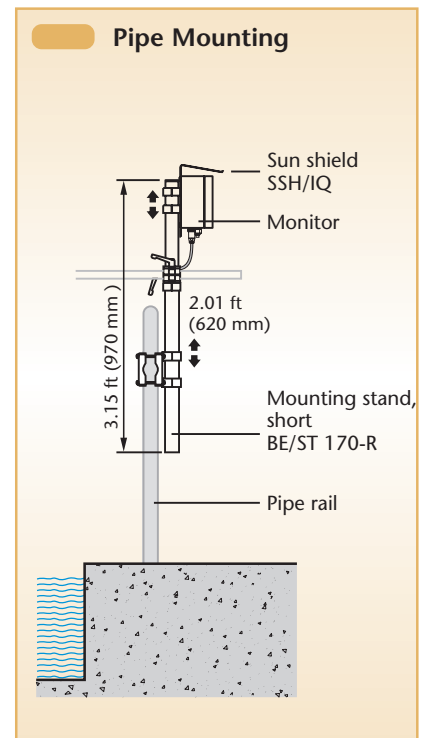
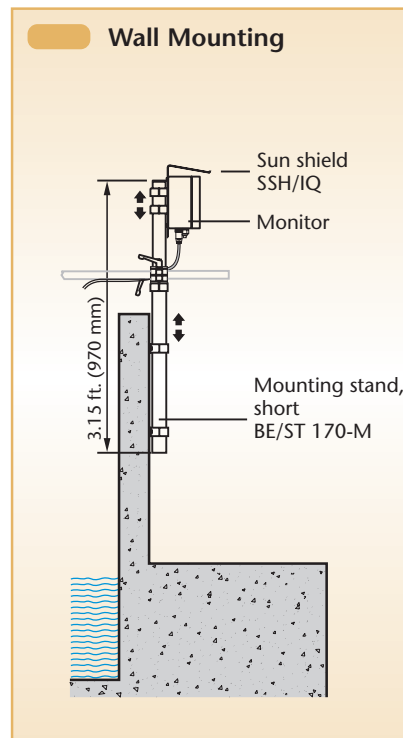
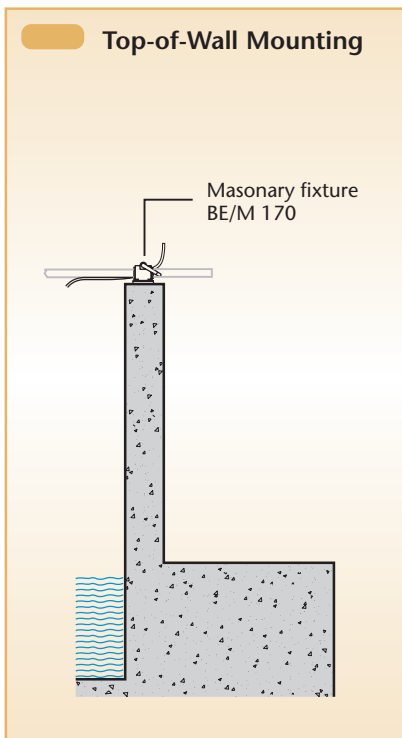
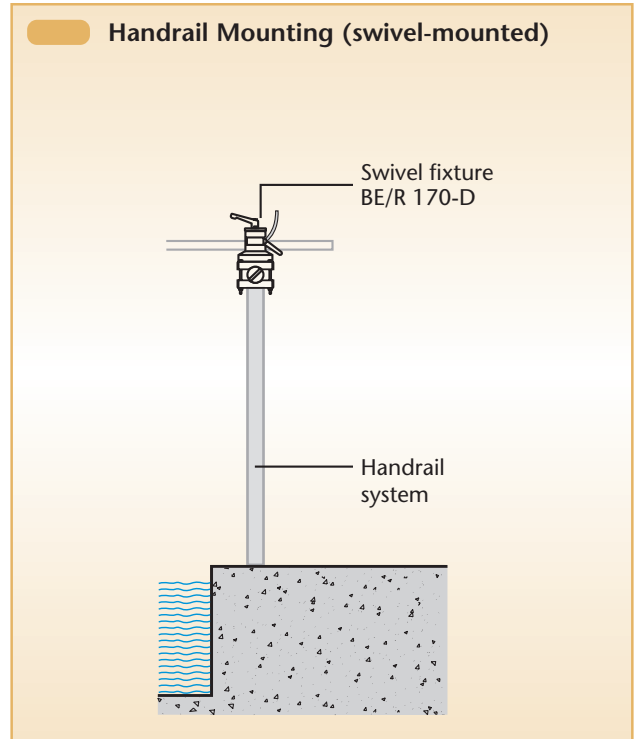
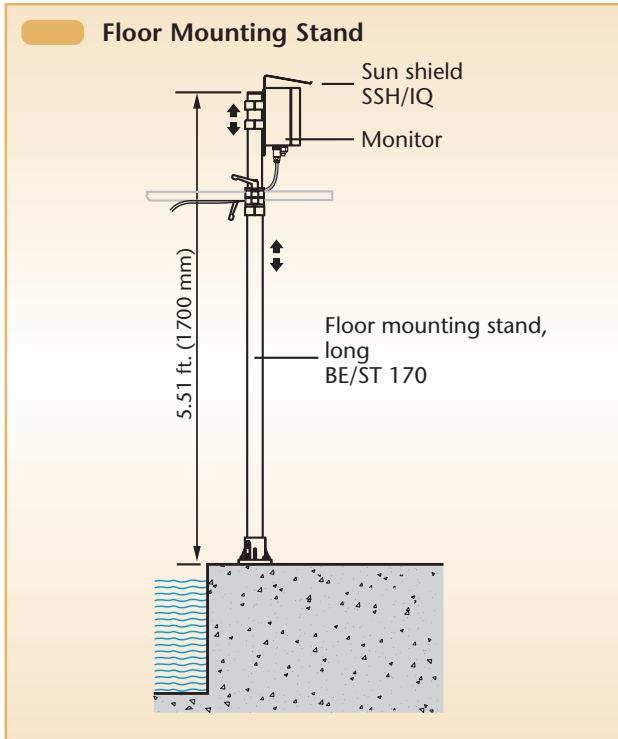
### Measurements in very variable water levels or in rivers, lakes, etc.

#### Sensor Float S 200



## Mounting Stands and Fixtures

Details see page 98/99



## Sensor Holding Devices

### EH/F 170

Order No.: 109 272, 109 273

The **SensoClean** swing mounting assembly consists of a 4.86 ft. or 8.11 ft. (1.5 or 2.5 m) long boom and a 13 ft. (4 m) long plastic chain for height adjustment of the sensor. It may also hold sensor extension assemblies. Particularly in turbulent flows, the freely swinging suspension produces a self-cleaning effect of the sensor, making the swing mounting especially suitable for operation in basins; e.g. in the aeration tank of a wastewater treatment plant.

Boom length:	4.86 ft. or 8.11 ft. (1.5 or 2.5 m)
Material:	Stainless steel 1.4301
Chain material:	Polyethylene

### VIS Set-EH/F

Order No.: 480 056

Supplemental kit for horizontal mounting of a UV/VIS sensor (NitraVis®, CarboVis®, NiCaVis®). Suitable for basin or channel mounting in combination with swing mounting assembly EH/F 170.

Chain material:	Polyethylene
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### EH/P 170

Order No.: 109 270

The **SensoClean** pendulum mounting assembly consists of a boom with a pendulum head and an angled pendulum rod. It is fitted at the top end with a movable counter-weight for fine adjustment. The sensor or the extension assembly is fastened to the pendulum rod by two pipe clamps.

Boom:	Length 2.01 ft. (620 mm), stainless steel 1.4301
Pendulum rod:	Length 6.39 ft. (1970 mm), stainless steel 1.4301
Pendulum head, clamp:	POM/Polyethylene

### EH/W 170

Order No.: 109 274

The EH/W 170 mounting assembly is designed for direct fastening to a wall of a basin. It can be set for pendulous or rigid operation, and it is suitable for extension assemblies. The immersion depth is adjusted by means of a fixing ring. Includes mounting plate with appropriate wall anchors and screws.

Boom:	Length 0.84 ft. (260 mm), stainless steel 1.4301
Pendulum head:	POM
Mounting plate:	Diecast aluminum

### S 200

Order No.: 108 540

The float with pendulum mounting assembly is available for use in flowing water or where the water level fluctuates considerably. The fixture is designed for extension assembly UA 55. A GWA weight ring is also required.

Dimensions:	2.76 x 1.07 ft. (850 x 330 mm) (L x W)
Material:	PVC

### VIS Set-S 200

Order No.: 480 054

Supplemental kit for horizontal mounting of a UV/VIS sensor (NitraVis®, CarboVis®, NiCaVis®). Particularly suitable for heavily fluctuating water levels in combination with the S 200 electrode float.

Material:	PVC/POM
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### VIS Set-Inlet

Order No.: 480 058

Mounting set for horizontal mounting of a UV/VIS sensor in the inlet of a wastewater treatment plant. Especially developed for such muddy applications.

Dimensions:	Total height approx. 8.9 ft (2.75 m), boom approx. 4.8 ft (1.50 m)
Material:	PVC-U, stainless steel 1.4571

## Vario Mounting Stand

### BE/ST 170

Order No.: 109 280

Robust floor mounted stand made of stainless steel, with joint-locking fixture to accommodate a swing or pendulum mounting assembly and 2 pipe brackets for attaching a sun shield. With diecast aluminum baseplate, wall plugs and screws.

Stand:	Length 5.51 ft. (1700 mm), diameter 1.97 in. (50 mm)
Material:	Stainless steel 1.4301
Brackets:	Polypropylene

### BE/ST 170-M

Order No.: 109 283

Mounting stand similar to model BE/ST 170, but shorter version for wall mounting. Wall mounting material is included instead of the baseplate.

Stand:	Length 3.15 ft. (970 mm), diameter 1.97 in. (50 mm)
Material:	Stainless steel 1.4301

### BE/ST 170-R

Order No.: 109 281

This stand is similar to model BE/ST 170, but with hardware for fastening of the stand to a vertical or horizontal pipe rail.

Stand:	Length 3.15 ft. (970 mm), diameter 1.97 in. (50 mm)
Material:	Stainless steel 1.4301

## Mounting Hardware

### Fixtures

#### BE/R 170 Order No.: 109 278

With the BE/R 170 clamp set, a swing or pendulum mounting assembly can be fixed directly to a pipe; e.g. a handrail.

Material: Stainless steel 1.4301/  
diecast Al/POM

#### BE/R 170-D Order No.: 109 279

The swivel/pivot clamp fixture provides secure connection of a swing or pendulum mounting assembly to a horizontal pipe rail.

Material: Stainless steel 1.4301/  
diecast aluminum

#### MR/SD 170 Order No.: 109 286

Mounting kit for sun shields, suitable for horizontal or vertical pipe rails with diameters of 0.98 to 2.36 in. (25 -60 mm). Sun shield not included.

Material: Stainless steel 1.4301

#### BE/M 170 Order No.: 109 276

With the BE/M 170, a swing or pendulum mounting assembly can be inexpensively installed directly at the basin edge or on top of a wall. It consists of a flange clamp with a clamping lever and a bolt-on base plate.

Material: Stainless steel 1.4301/  
diecast Al/POM

#### BE/M 170 D Order No.: 109 275

Wall mounting similar model BE/M 170, but pivoting version.

Material: Stainless steel 1.4301/  
diecast Al



*VIS Set-EH/F in use*



*VIS Set-Inlet in use*

### Sun Shields

#### SD/M 170-D Order No.: 109 287

Stainless steel double sun shield for parallel mounting of 2 series 171, 170 measuring transducers and IQ SENSOR NET.

Dimensions: 10.55 x 21.42 x 5.91 in.  
(268 x 544 x 150 mm)  
(H x W x D)

Material: Stainless steel, 1.4301

#### SD/K 170 Order No.: 109 284

Sun shield for mounting a junction box or an IQ SENSOR NET module in the open air. Mounting kit MR/SD 170 is additionally required for attachment to vertical or horizontal pipes.

Dimensions: 5.59 x 9.06 x 3.43 in.  
(142 x 230 x 87 mm)  
(H x W x D)

Material: Stainless steel, 1.4301

#### SSH/IQ Order No.: 109 295

Sunshield for mounting series 171, 170 and IQ SENSOR NET monitors on a Vario Mounting Stand.

Dimensions: 13.03 x 13.54 x 9.45 in.  
(331 x 344 x 240 mm)  
(H x W x D)

Material: ASA (Dust gray color)



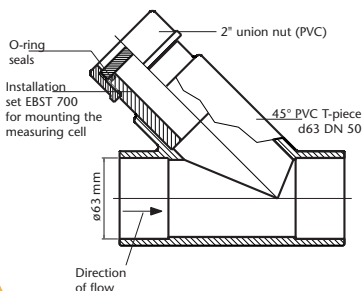
*IQ SENSOR NET under sun shield SSH/IQ*

## Flow-thru adapters and flow-thru vessels

WTW accessories can also be used for the recently introduced IQ SENSOR NET series. By the selection of a suitable adapter all the previous and new WTW sensors of the 690 and 70X (IQ) series can be mounted in the existing flow-thru adapters and vessels.

### Flow-thru adapters

**EBST 700-DU/N**



**EBST 700-DU/N** Order No.: 203 753

Flow-thru adapter for measurements in pipelines, consisting of a 45° PVC T-piece (d 63 DN 50) with bonded sleeve, O-ring seals and union nut. The adapter must be completed by the selection of a suitable sensor flange from the table on page 101 and can then be used for measurement of pH, oxygen, temperature and conductivity with all current WTW sensors.

Max. pressure:	3 bar
Max. temperature:	122 °F (50 °C)
Material:	PVC/POM

**EBS 700-DU/N** Order No.: 203 751

Mounting set for flow-thru measurements, consisting of a bonded sleeve for standard 45° PVC T-pieces (d 63 DN 50) or other suitable pipeline systems, one R 2" union nut and the necessary O-ring seals. Please select an adapter from the table on page 101.

Max. pressure:	3 bar
Max. temperature:	122 °F (50 °C)
Material:	PVC/POM

**ESS 700 VA/N** Order No.: 203 755

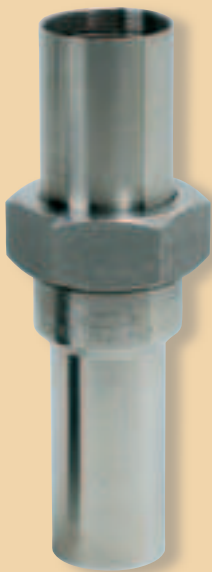
Stainless steel weld-in socket, for measurements in pipelines. Please select an adapter from the table on page 101.

Max. pressure:	3 bar
Max. temperature:	122 °F (50 °C)
Material:	
Weld-in socket:	V4A stainless steel 1.4571
Union nut:	PVC-U
Total length:	5.59 in. (142 mm)
Outside diameter:	2.36 in. (60 mm)

**ESS 700 VA/10** Order No.: 203 757

Stainless steel weld-in socket, for measurements in pipelines. Please select an adapter from the table on page 101.

Max. pressure:	10 bar
Max. temperature:	140 °F (60 °C)
Material:	
Weld-in socket:	V4A stainless steel 1.4571
Union nut:	V4A stainless steel 1.4571
Total length:	5.59 in. (142 mm)
Outside diameter:	2.36 in. (60 mm)



ESS 700 VA/10

## Flow-thru adapters and flow-thru vessels

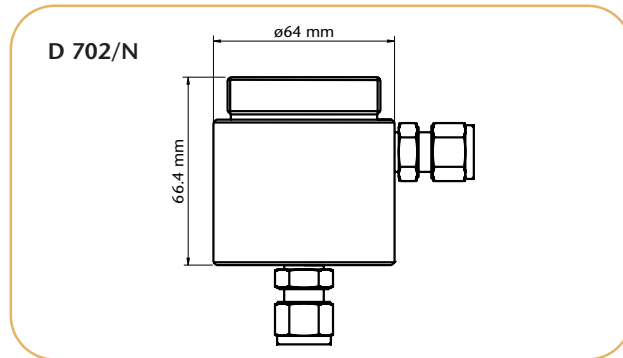
### Flow-thru Vessels

#### Oxygen Flow-Thru Measurement

##### D 702/N

Order No.: 203 747

In principle the flow-thru vessel D 702/N for continuous oxygen measurement can be fitted with all TriOxmatic® sensors of the 690/700/701 (IQ) series. However, it is primarily intended for oxygen measurements in the ppb range (TriOxmatic® 702 IQ), e.g. boiler feed water. In this application the flow-thru vessel is usually installed in the bypass of a water circulation system. Please select an adapter from the table (see below).



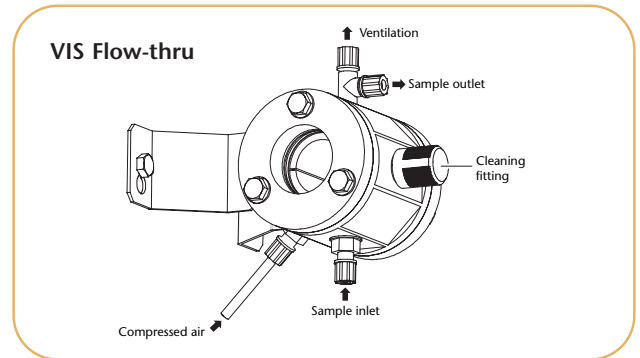
#### UV/VIS sensors in flow-thru measurement

##### VIS Flow-thru

Order No.: 480 059

Flow-thru cell for UV/VIS sensors NitraVis®/CarboVis® and NiCaVis® 700 IQ (TS).

The sensor can be cleaned automatically in mounted state by means of compressed air.



Technical details and further flow-thru vessels see brochure "Product Details".

### Available flow-thru adapters with order numbers

Flow-thru vessel	EBS 700-DU/N 203 751 Flow-thru adapter	EBST 700-DU/N 203 753 Flow-thru adapter	ESS 700 VA/N 203 755 Weld-in socket	ESS 700 VA/10 203 757 Weld-in socket	D 702/N 203 747 Flow-thru vessel
Sensor to be built in					
TriOxmatic® 690/700/700 IN/701 CellOx® 700 TetraCon® 700	ADA-DF 8 203 775	ADA-DF 8 203 775	ADA-DF 8 203 775	ADA-DF 12 203 783	–
SensoLyt® 690/700	ADA-DF 10 203 779	ADA-DF 10 203 779	ADA-DF 10 203 779	ADA-DF 13 203 785	–
VisoTurb 700 IQ ViSolid 700 IQ	ADA-DF 9 203 777	ADA-DF 9 203 777	–	–	–
TetraCon® 700 IQ SensoLyt® 700 IQ	ADA-DF 9 203 777	ADA-DF 9 203 777	ADA-DF 9 203 777	ADA-DF 11 203 781	–
TriOxmatic® 700 IQ/ TriOxmatic® 701 IQ	ADA-DF 9 203 777	ADA-DF 9 203 777	ADA-DF 9 203 777	ADA-DF 11 203 781	–
TriOxmatic® 702	–	–	–	–	ADA-DF 4 203 767 and ADA-DF 5 203 769
TriOxmatic® 702 IQ	–	–	–	–	ADA-DF 4 203 767 and ADA-DF 6 203 771
	– = Configuration not intended				



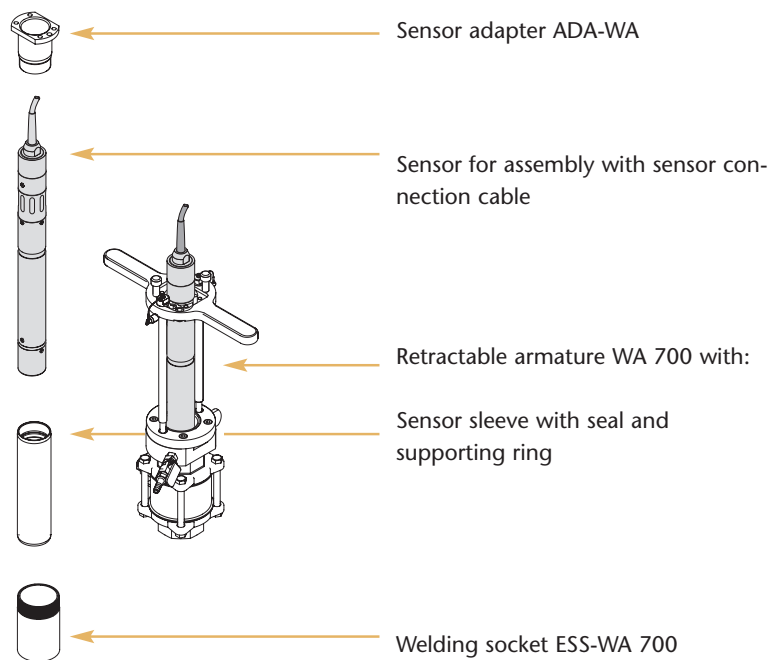
## Retractable Armatures

Online measurements, of suspended solids in particular, are increasingly performed directly in pipework or pressurized containers. Retractable armatures are used in order to enable assembly and removal of sensors during ongoing operation without interrupting the process. Depending on working pressure, these require suitable assembly aids in order to re-insert the sensor against the working pressure.

The universally applicable structure is as follows:



- Universally applicable
- For pressurized applications up to 10 bar (overpressure)
- Insertion and removal of sensor during ongoing operation



Apart from the two retractable armatures (for various pressure ranges) there are two different welding sockets (steel or stainless steel) and different matching adapters for mounting of the various online sensors with a shaft diameter of 1.57 in. (40 mm) available.

## Ordering Information Retractable Armatures

Sensor adapter		Order No.
ADA-WA 1	Adapter for mounting of IQ sensors	480 108
ADA-WA 2	Adapter for mounting of TriOxmatic® 690/70X, CellOx® 700 and TetraCon® 700	480 110
ADA-WA 3	Adapter for mounting of pH/ORP sensor assembly SensoLyt® 690/700	480 112
Retractable Armatures		
WA 700/10	Retractable armature for measurements in pipework, up to 10 bar (overpressure)	480 100
WA 700/2	Retractable armature for measurements in pipework, up to 2 bar (overpressure)	480 102
Welding socket		
ESS-WA 700/ST	Steel welding socket (St 33)	480 104
ESS-WA 700/VA	Stainless steel welding socket (1.4571)	480 106

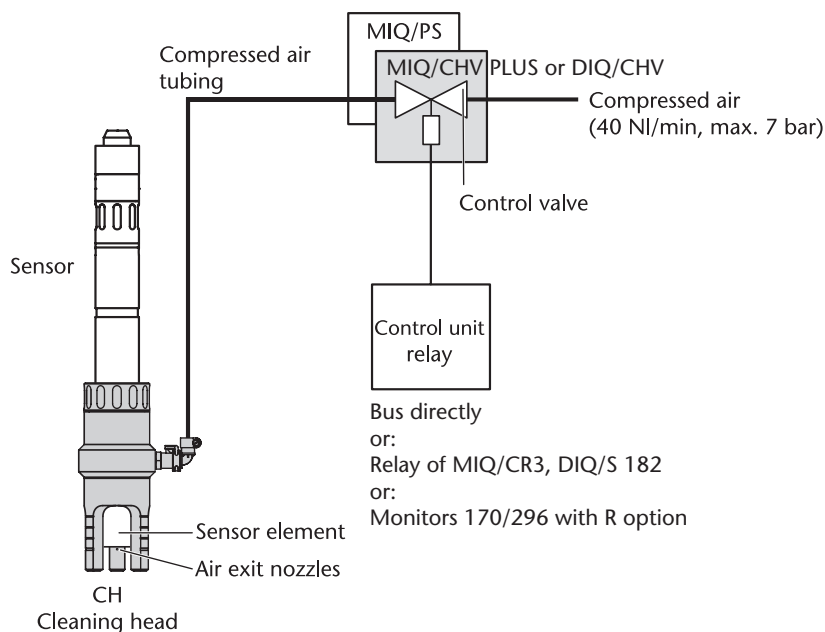
For information visit [www.WTW.com](http://www.WTW.com) for a customer care center near you or inside US: call **WTW 800 645 5999**.

## Cleaning System

Some applications, in particular in the wastewater treatment, require special precautions for permanent and interference-free operation. The following components are required for a continuous compressed air cleaning system (components are highlighted in gray in the diagram):

- Cleaning head CH
- Valve module (MIQ/CHV PLUS or DIQ/CHV)

These components are required for the IQ SENSOR NET system. An additional power supply (e.g. MIQ/PS) is required for other measuring transducers.



- Universally applicable
- Accessible directly via IQ SENSOR NET bus or via a relay at your choice
- Compressed air cleaning—winterized and interference-free

Efficient compressed air cleaning put into practice:



For cleaning, compressed air is blown at the sensor element (from external source) freeing it from pollutants. The compressed air is turned on and off by means of an electrically actuated control valve. For cleaning, the valve is opened for a certain length of time (duration of cleaning). The valve is activated time-triggered via the IQ SENSOR NET bus or via a relay of the measuring system.

## Ordering Information Cleaning System

		Order No.
CH	Cleaning head with tube (16.4 yds/ 15 m)	900 107
MIQ/CHV PLUS	Valve module for cleaning system (IQ SENSOR NET, system 184 XT or 2020 XT)	480 018
DIQ/CHV	Valve module for cleaning system (IQ SENSOR NET, system 182)	472 007
MIQ/PS	Wide-range power supply	480 004

For information visit [www.WTW.com](http://www.WTW.com) for a customer care center near you or inside US: call WTW 800 645 5999.