



## Accessories

### Practical and Functional Components

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.

#### Accessory scheme

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

## Junction Boxes **Analog**

**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).

## Sensor extensions **Analog & Digital**

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**

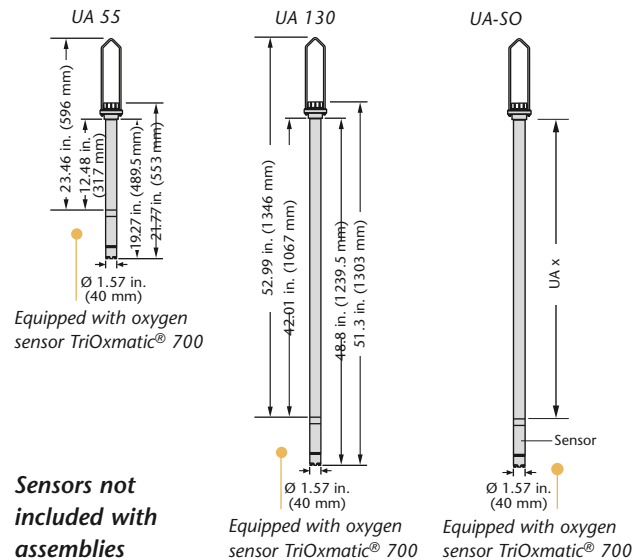
Order No.: 109 261

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).



## Sensor holders **Analog & Digital**

**EH/U 170**

Order No.: 109 320

Single sensor holder

**EH2/U 170**

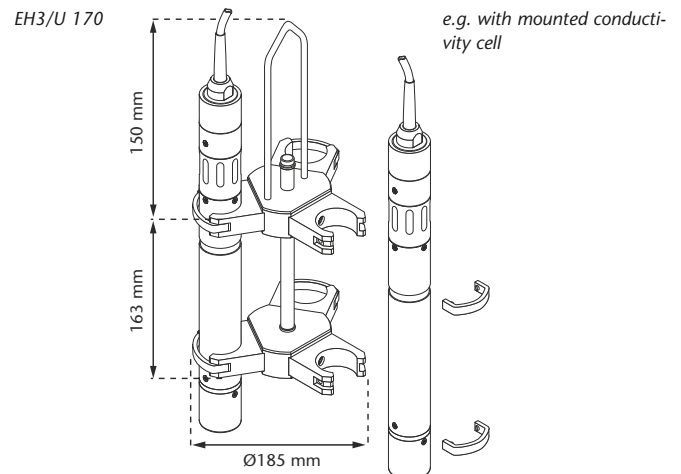
Order No.: 109 323

Twin sensor holder

**EH3/U 170**

Order No.: 109 325

Triple sensor holder



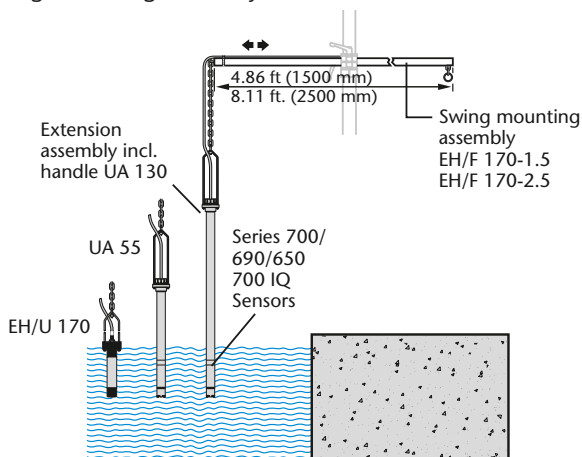
# Mounting Hardware

## 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.

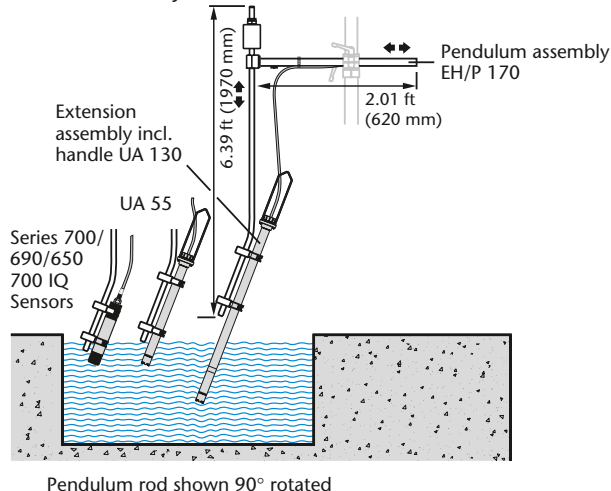
### Measurements in Basins

Recommended sensor holding device:  
Swing mounting assembly



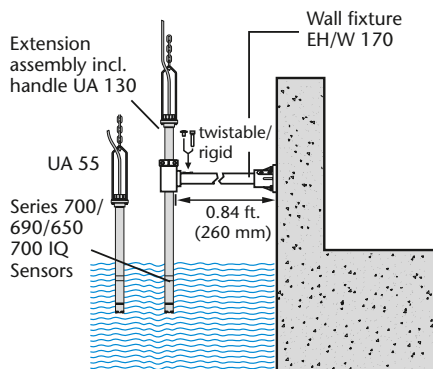
### Measurements in Open Channels

Recommended sensor holding device:  
Pendulum assembly



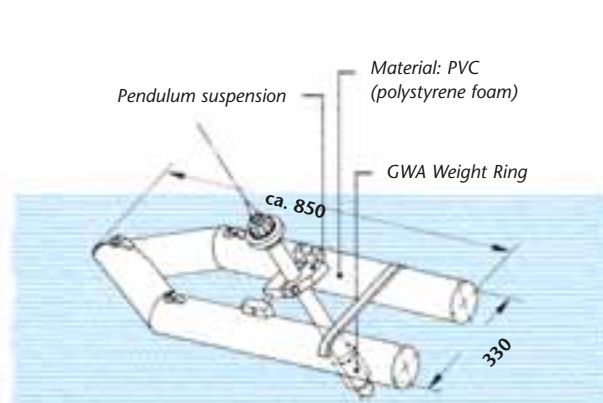
### Measurements in Basins or in Open Channels

Wall mounting  
for universal extension assemblies UA 55/ UA 130



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

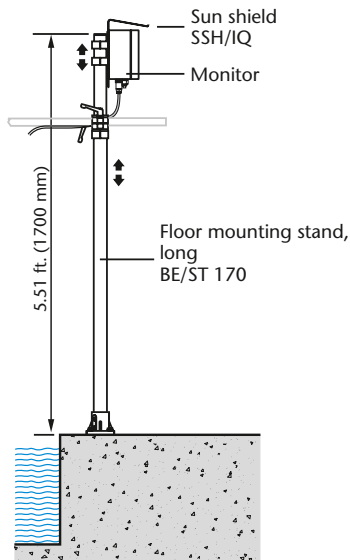
Sensor Float S 200



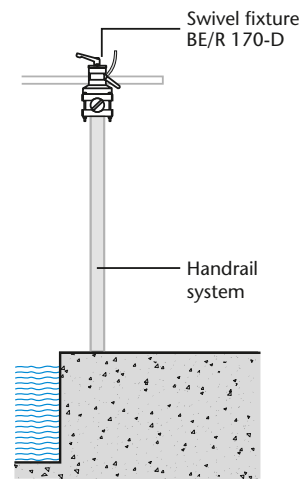
# Mounting Stands and Fixtures

Details see page 128/129

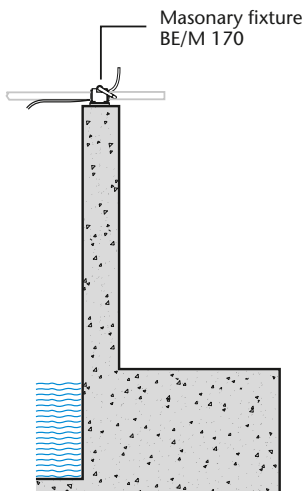
Floor Mounting Stand



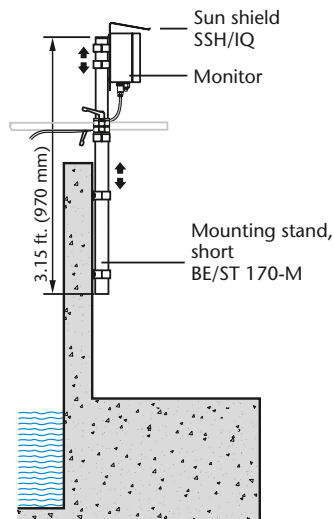
Handrail Mounting (swivel-mounted)



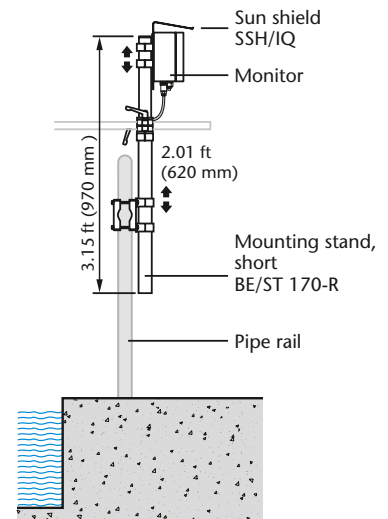
Top-of-Wall Mounting



Wall Mounting



Pipe Mounting



## 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

Order No.: 481 073

Supplemental kit for horizontal mounting of a UV(-VIS)-sensor (NitroVis®, 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 counterweight 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

## 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

### 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-F

Order No.: 481 080

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

Material	PVC/POM
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### 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

## 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.

<b>Material</b>	Stainless steel 1.4301/diecast Al/POM
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**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.

<b>Material</b>	Stainless steel 1.4301/diecast aluminum
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**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.

<b>Material</b>	Stainless steel 1.4301
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**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.

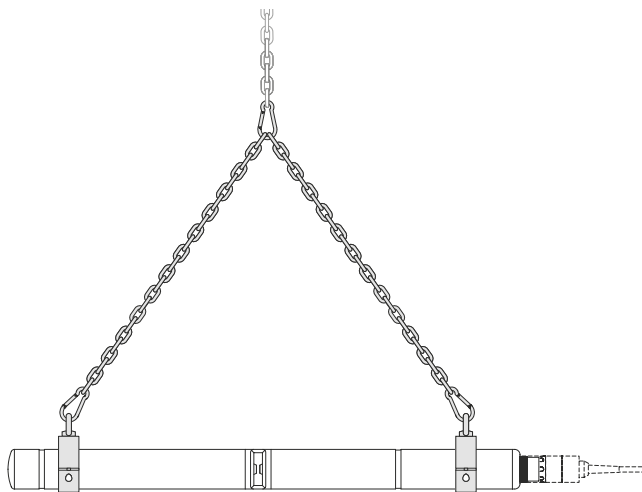
<b>Material</b>	Stainless steel 1.4301/diecast Al/POM
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**BE/M 170 D**

Order No.: 109 275

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

<b>Material</b>	Stainless steel 1.4301/diecast Al
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VIS Set/EH

## 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.

<b>Dimensions</b>	10.55 x 21.42 x 5.91 in. (268 x 544 x 150 mm) (H x W x D)
<b>Material</b>	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.

<b>Dimensions</b>	5.59 x 9.06 x 3.43 in. (142 x 230 x 87 mm) (H x W x D)
<b>Material</b>	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.

<b>Dimensions</b>	13.03 x 13.54 x 9.45 in. (331 x 344 x 240 mm) (H x W x D)
<b>Material</b>	ASA (Dust gray color)



IQ SENSOR NET under sun shield SSH/IQ

# Flow-thru Adapters

	Flow-thru Vessels									
	D 700/N Flow-thru vessel Order No. 203 745	D 702/N Flow-thru vessel Order No. 203 747	DMS/N Flow-thru vessel Order No. 203 749	EBS 700-DU/N Flow-thru adapter Order No. 203 751	EBST 700-DU/N Flow-thru adapter Order No. 203 753	EBST 700-DU/ND Flow-thru adapter Order No. 203 754	ESS 700 VA/N Welding socket Order No. 203 755	ESS 700 VA/10 * Welding socket Order No. 203 757	WA 700/2 Retractable armature Order No. 480 102	WA 700/10 * Retractable armature Order No. 480 100
TriOxmatic® 690/700/ 700 IN/701/ 702 **	ADA-DF3 203 765	ADA-DF4 203 767 and ADA-DF5 203 769	ADA-DF3 203 765	ADA-DF8 203 775	ADA-DF8 203 775		ADA-DF8 203 775	ADA-DF12 203 783	ESS-WA 700/X 480 10X ADA-WA2 480 110	ESS-WA 700/X 480 10X ADA-WA2 480 110
TetraCon® 700	ADA-DF3 203 765		ADA-DF3 203 765	ADA-DF8 203 775	ADA-DF8 203 775		ADA-DF8 203 775	ADA-DF12 203 783	ESS-WA 700/X 480 10X ADA-WA2 480 110	ESS-WA 700/X 480 10X ADA-WA2 480 110
SensoLyt® 650/690/700	ADA-DF2 203 763		ADA-DF10 203 779	ADA-DF10 203 779	ADA-DF10 203 779		ADA-DF10 203 779	ADA-DF13* 203 785	ESS-WA 700/X 480 10X ADA-WA3 480 112	ESS-WA 700/X 480 10X ADA-WA3* 480 112
VisoTurb® 700 IQ			ADA-DF7 203 773	ADA-DF9 203 777	ADA-DF9 203 777	ADA-DF9 203 777	ADA-DF9 203 777	ADA-DF11 203 781	ESS-WA 700/X 480 10X ADA-WA1 480 108	ESS-WA 700/X 480 10X ADA-WA1 480 108
ViSolid® 700 IQ			ADA-DF7 203 773	ADA-DF9 203 777	ADA-DF9 203 777	ADA-DF9 203 777	ADA-DF9 203 777	ADA-DF11 203 781	ESS-WA 700/X 480 10X ADA-WA1 480 108	ESS-WA 700/X 480 10X ADA-WA1 480 108
TetraCon® 700 IQ	ADA-DF1 203 761		ADA-DF1 203 761	ADA-DF9 203 777	ADA-DF9 203 777		ADA-DF9 203 777	ADA-DF11 203 781	ESS-WA 700/X 480 10X ADA-WA1 480 108	ESS-WA 700/X 480 10X ADA-WA1 480 108
SensoLyt® 700 IQ	ADA-DF1 203 761		ADA-DF1 203 761	ADA-DF9 203 777	ADA-DF9 203 777		ADA-DF9 203 777	ADA-DF11* 203 781	ESS-WA 700/X 480 10X ADA-WA1 480 108	ESS-WA 700/X 480 10X ADA-WA1* 480 108
TriOxmatic® 700 IQ/ 701 IQ	ADA-DF1 203 761	ADA-DF4 203 767 and ADA-DF6 203 771	ADA-DF1 203 761	ADA-DF9 203 777	ADA-DF9 203 777		ADA-DF9 203 777	ADA-DF11 203 781	ESS-WA 700/X 480 10X ADA-WA1 480 108	ESS-WA 700/X 480 10X ADA-WA1 480 108
TriOxmatic® 702 IQ		ADA-DF4 203 767 and ADA-DF6 203 771		ADA-DF9 203 777	ADA-DF9 203 777		ADA-DF9 203 777	ADA-DF11 203 781	ESS-WA 700/X 480 10X ADA-WA1 480 108	ESS-WA 700/X 480 10X ADA-WA1 480 108
FDO® 700 IQ	ADA-DF14 203 787		ADA-DF1 203 761	ADA-DF15 203 789	ADA-DF15 203 789		ADA-DF15 203 789	ADA-DF11 203 781	ESS-WA 700/X 480 10X ADA-WA4 480 114	ESS-WA 700/X 480 10X ADA-WA4 480 114
AmmoLyt® Plus 700 IQ NitroLyt® Plus 700 IQ VARiON® Plus 700 IQ	ADA-DF1 203 761		ADA-DF1 203 761	ADA-DF9 203 777	ADA-DF9 203 777	ADA-DF9 203 777				

ADA-DFX	Configuration recommended
	Configuration possible (check sensor specs and application)
	Configuration not intended

\* with electrode SensoLyt® SEA-HP  
\*\* only for flow-thru vessel D 702/N



	Flow-thru Vessels	
	EBST/SW Flow-thru adapter Order No. 203 758	EBST-D/SW Flow-thru adapter Order No. 203 759
VisoTurb® 700 IQ SW	ADA-DF9/SW 203 790	ADA-DF9/SW 203 790
ViSolid® 700 IQ SW	ADA-DF9/SW 203 790	ADA-DF9/SW 203 790
TetraCon® 700 IQ SW	ADA-DF9/SW 203 790	
Sensor to be built in SensoLyt® 700 IQ SW	ADA-DF9/SW 203 790	
TriOxmatic® 700 IQ SW	ADA-DF9/SW 203 790	
FDO® 700 IQ SW	ADA-DF9/SW 203 790	

ADA-DFX	Configuration recommended
	Configuration possible (check sensor specs and application)
	Configuration not intended

# Flow-thru adapters and flow-thru vessels

WTW accessories can also be used for the 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.

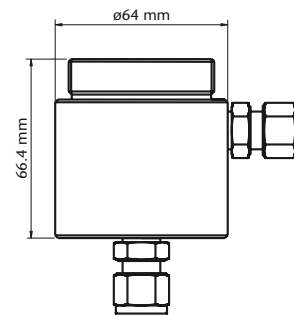
## Flow-thru Vessels

### 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 690/70X (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 page 130/131).



D 702/N

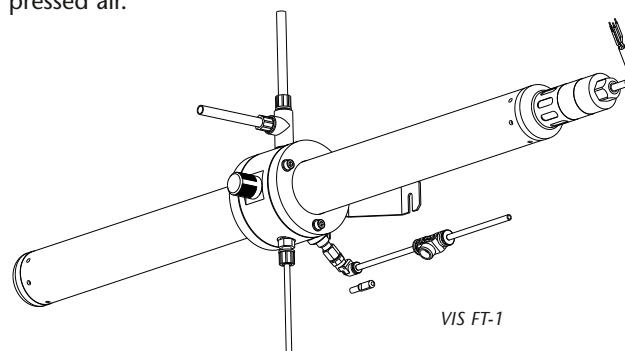
### UV-VIS sensors in flow-thru measurement

#### VIS FT-1

Order No.: 480 080

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.



VIS FT-1

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



## Flow-thru adapters

### EBST 700-DU/N and EBST 700-DU/ND

Order No.: 203 753

Order No.: 203 754

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 114 and can then be used for measurement of pH, oxygen, temperature and conductivity with all current WTW sensors.

EBST 700-DU/ND additionally features a compressed-air connection for cleaning installed sensors. Selection of sensors acc. table on page 130/131.

Max. pressure	3 bar (EBST 700-DU/N) or resp. 0.2 bar (EBST 700-DU/ND)
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 130/131.

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



ESS 700 VA/10

### 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 130/131.

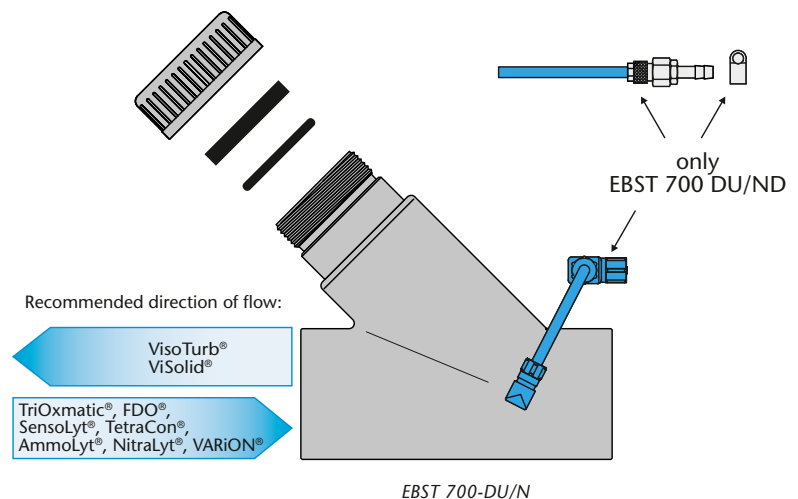
Max. pressure	3 bar
Max. temperature	122 °F (50 °C)
Material	Weld-in socket V4A stainless steel 1.4571 Union nut PVC/-U
Total length	5.59 in. (142 mm)
Outside diameter	2.36 in. (60 mm)

### 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 130/131.

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)



EBST 700-DU/N

Flow-thru adapters for all sensors in the seawater version of Series 700 IQ SW / 701 SW IQ, see brochure "Product Details".

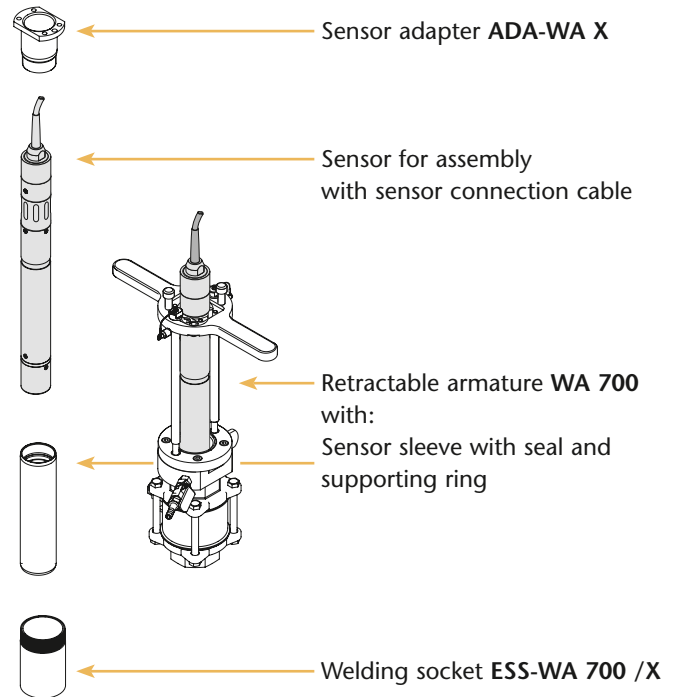
## Retractable Armatures

- For pressurized applications up to 10 bar (overpressure)
- Insertion and removal of sensor during ongoing operation
- With compressed-air cleaning (optional)

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:



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

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		Order No.
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		Order No.
ESS-WA 700/ST	Steel welding socket (St 33)	480 104
ESS-WA 700/VA	Stainless steel welding socket (1.4571)	480 106

Please refer to table on page 130/131

# Cleaning System

Some applications, in particular in the wastewater treatment, require special precautions for permanent and interference-free operation.

## Cleaning System

- Solutions for all plants
- Controllable via any WTW monitor
- Compressed air cleaning – winterized and interference-free



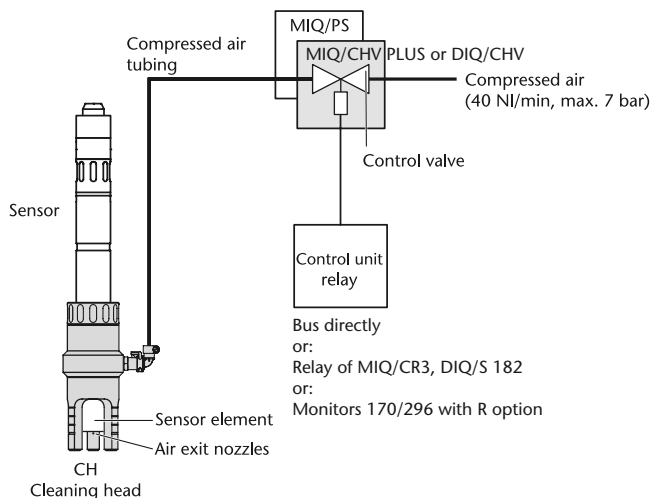
Efficient compressed air cleaning put into practice:

For a continuous compressed-air cleaning system there are two options:

### Option 1:

Compressed-air supply is provided at the plant. You require the following components

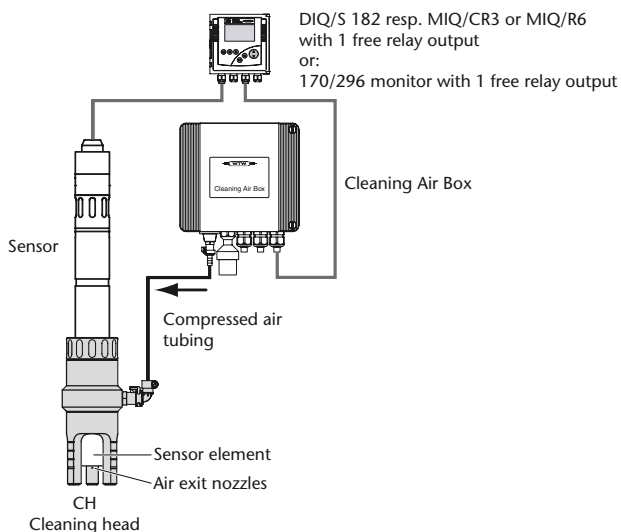
- Cleaning head CH
- Valve module (MIQ/CHV PLUS or DIQ/CHV with MIQ/PS)



### Option 2:

Compressed-air supply is not provided at the plant. You require the following components

- Cleaning head CH
- Cleaning Air Box
- Monitor with relay output



For cleaning, compressed air is blown at the sensor element (from external source) freeing it from pollutants. The compressed air from the cleaning air box or installation to the sensor is switched on or off electronically by an activated control valve or relay. The control is regulated by a timer via the IQ SENSOR NET or via a relay of the measuring system.

## Cleaning Air Box

- Oil-free compressed-air
- Most easy installation
- Decentralized weatherproof compressed-air supply on site

The cleaning air box is a air-pressure compressor supplying the cleaning air to the various sensors.

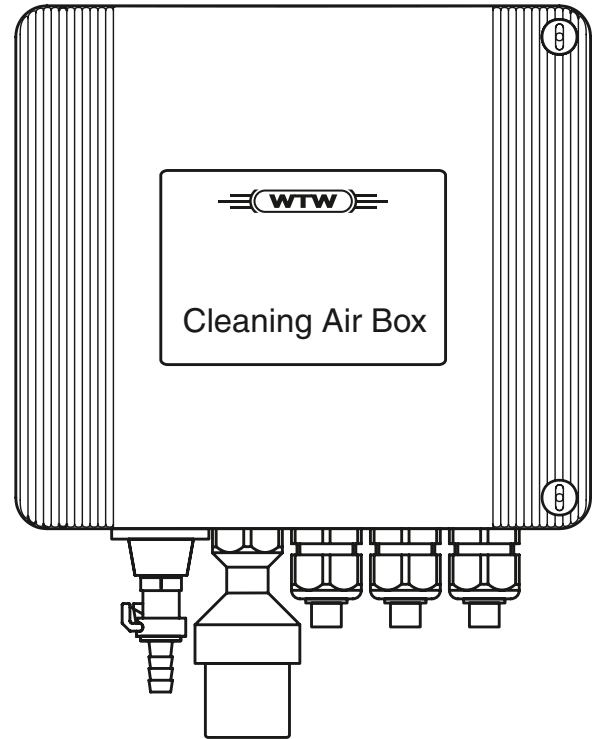
Compared with the former systems with the cleaning head valve (CHV) the cleaning air box does not require any special valve installation as well as no compressed-air supply on site.

The cleaning air box can be controlled by any WTW supplied converter via a relay (exception: MIQ/VIS).

The great advantage of this cleaning air box compared to any former systems with CHV (cleaning had valve):

No compressed-air system is required on site. The cleaning air box is delivered in two models 115 VAC (480 017) and 230 VAC (480 019).

Thanks to the installation of the membrane compressor and the pre-switched filters, the cleaning air box provided oil and dust-free compressed-air, which guarantees keeping the sensor clean.



Ordering Information		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
		<b>Order No.</b>
Cleaning Air Box	Cleaning air box with compressor, 230 VAC with air-filter	480 019
Cleaning Air Box	Cleaning air box with compressor, 115 VAC with air-filter	480 017
AF/Cleaning Air Box	Air-filter for the suction side of the pump, annual exchange	408 026
RM/Cleaning Air Box	Spare membrane for the membrane pump of the cleaning box, exchange after 5000 operating hours or after 5 years	480 027
BPV	Check-valve, which is installed in the box between pump and compressed-air hose. It stops the measuring solution from rising and entering the cleaning nozzles in the hose system and contaminating it. It can also be used for the EBST 700 DU/ND.	480 029