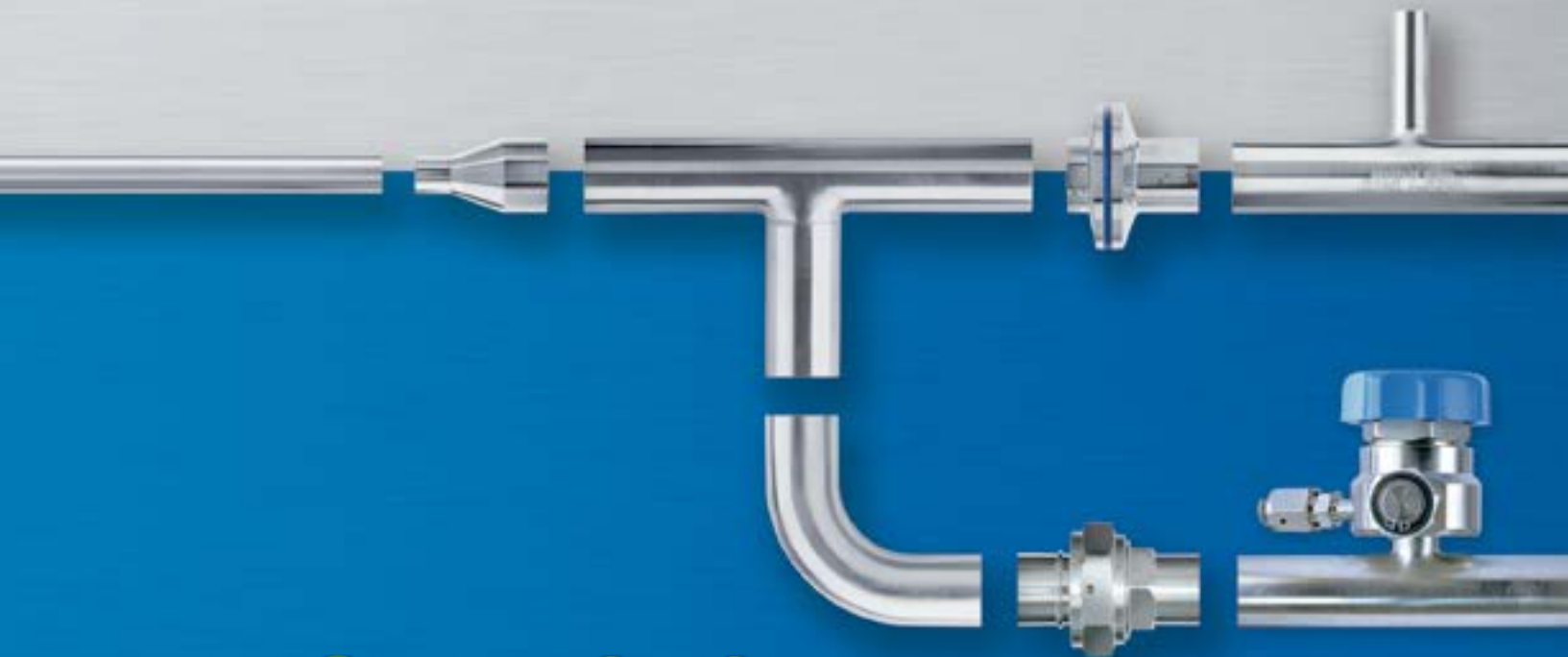


D-ECKWEILER

TUBE SYSTEMS IN STAINLESS STEEL



PRODUCTS AT A GLANCE

Stainless steel tube systems,
tube connections, ball valves, manifolds, vessels,
gaskets and customized solutions.

DOCKWEILER PRODUCTS

AT A GLANCE

TUBES & FITTINGS

Standard, Coax and Connections
Corrugated stainless steel hoses

Page 4



CUSTOMIZED SOLUTIONS

Manifolds, Vessels,
and Custom fittings

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BUBBLER SYSTEMS

Bubblers and accessories

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COMPONENTS & VALVES

Ball Valves, Purge Tools,
Gas Sticks, Presslok

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SERVICE

Cleanroom, Engineering Support,
Eco-Purge, Swap Body

Page 11



DOCUMENTATION & CERTIFICATES

Certified manufacturing, WebCert,
Customized documentation

Page 12



QUALITIES AND SURFACES

HIGHEST STANDARDS WHEN IT COMES TO SURFACE QUALITY AND PURITY

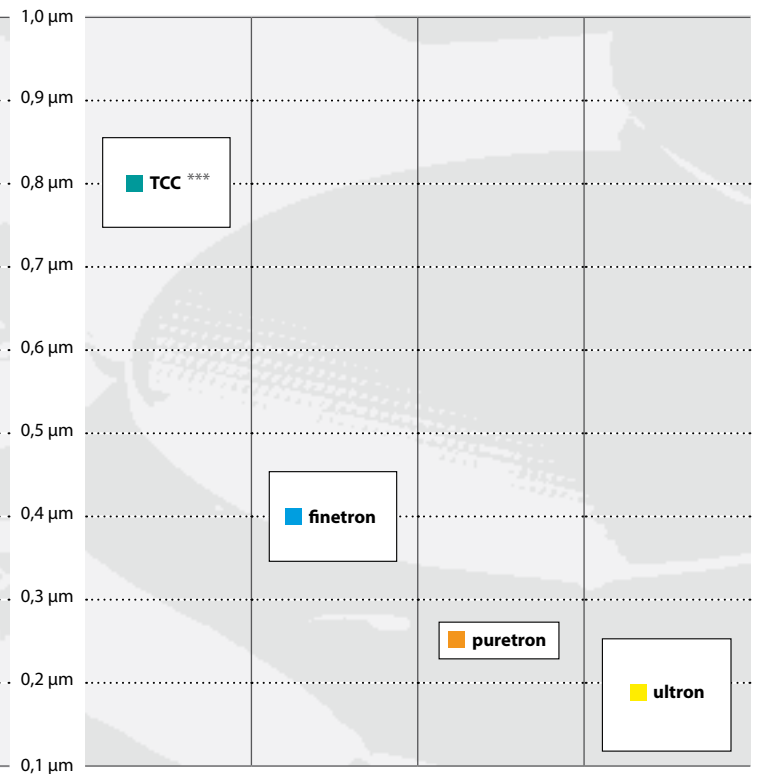
Specific surfaces for secure constructions: Dockweiler has many years of experience and competence in the field of surface optimization and finishing.

Qualities pharmaceutical industry



bright-finish (SF1**)	bright-finish (H3*)	bright-finish (H4*)
-	anodically cleaned	anodically cleaned
electropolished (SF4**)	electropolished (HE3*)	electropolished (HE4*)

Qualities semiconductor industry



bright-finish	bright-finish	-	-
anodically cleaned	anodically cleaned	-	-
-	-	electropolished	electropolished

* Hygiene grade in accordance with DIN 11864 / DIN 11865 / DIN 11866. ** in accordance with ASME BPE. *** not defined, Ra 0,80 µm on request



All pictures show the respective surfaces in a 380-fold magnification.

TUBES & FITTINGS

DOCKWEILER STANDARD



Tubes



Elbows



T-pieces



Reducers



Caps

Our tubes and fittings offer the highest standards of surface quality and purity, whether for the semiconductor, pharmaceutical, biotechnology, photovoltaics, or other high-tech industries.

TUBES

For liquids
For gases

Dimensions

Imperial	ISO	Metric
1/8" to 6"	DN 8 to DN 200	DN 4 to DN 150
(3,18 x 0,56 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 219,10 x 2,60 mm)	(3,00 x 0,50 mm to 154,00 x 2,00 mm)

Pipe

DN 6 to DN 20
(168,28 x 3,40 mm to 508,00 x 5,54 mm)

Instrumentation tubing

0,30 x 0,06 mm to 12,00 x 2,00 mm

ELBOWS

Standard elbows: 45° / 90° / 180°
Special elbows: 30° / 60° / 88° / 92° / Point-of-Use

Dimensions

Imperial	ISO	Metric
1/4" to 6"	DN 8 to DN 100	DN 4 to DN 150
(6,35 x 0,89 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 114,30 x 2,30 mm)	(6,00 x 1,00 mm to 154,00 x 2,00 mm)

Surfaces

Bright-finish, anodically cleaned, electropolished

Materials

1.4404, 1.4435 (BN2), UNS S31603 (316L), UNS S30403 (304L), 1.4539

Qualities

■ **ultron**
■ **puretron**
■ **finetron**
■ **TCC**
■ **VSR 80**
■ **weldtron**
■ **safetron**
■ **bpe-direct**

T-PIECES

Standard: long or short branch/reduced branch
Special T-pieces: 45° branch/excentric branch/Y-piece/
T-piece with valve/thermowell

Dimensions

Imperial	ISO	Metric
1/4" to 6"	DN 8 to DN 100	DN 4 to DN 150
(6,35 x 0,89 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 114,30 x 2,30 mm)	(6,00 x 1,00 mm to 154,00 x 2,00 mm)

REDUCERS

Standard: concentric/excentric
Special reducers: conc. with joint/exc. with joint

Dimensions

Imperial	ISO	Metric
1/4" to 6"	DN 8 to DN 100	DN 4 to DN 150
(6,35 x 0,89 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 114,30 x 2,30 mm)	(6,00 x 1,00 mm to 154,00 x 2,00 mm)

CAPS

With weld-on end
Dockweiler cap

Dimensions

Imperial	ISO	Metric
1/4" to 6"	DN 8 to DN 100	DN 4 to DN 150
(6,35 x 0,89 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 114,30 x 2,30 mm)	(6,00 x 1,00 mm to 154,00 x 2,00 mm)

TUBES & FITTINGS

COAX



Coax tubes

Coax elbows

Coax T-pieces

Sleeves & terminators

Purge tees

The double-wall tube system from Dockweiler, consisting of an inner process tube and an outer safety tube, guarantees safe transport of explosive, toxic, and corrosive media.

TUBES

For liquids
For gases

Dimensions

Imperial

1/4" to 1"

Inner tube: 6,35 x 0,89 mm to 25,40 x 1,65 mm

Outer tube: 12,70 x 1,24 mm to 38,10 x 1,65 mm

ELBOWS

Standard elbows: 45° / 90°

Dimensions

Imperial

1/4" to 1"

Inner tube: 6,35 x 0,89 mm to 25,40 x 1,65 mm

Outer tube: 12,70 x 1,24 mm to 38,10 x 1,65 mm

T-PIECES

Standard: long or reduced branch

Dimensions

Imperial

1/4" to 1"

Inner tube: 6,35 x 0,89 mm to 25,40 x 1,65 mm

Outer tube: 12,70 x 1,24 mm to 38,10 x 1,65 mm

Surfaces

Bright-finish, anodically cleaned, electropolished

Materials

1.4404, 1.4435, UNS S31603 (316L)

Qualities

■ **COAX** in accordance with process tube quality: ■ **ultron** ■ **finetron** ■ **TCC** ■ **TCC.1**

SLEEVES

For connecting the coaxial components

Dimensions

Imperial

1/4" to 1"

Inner tube: 6,35 mm to 25,40 mm

Outer tube: 12,70 to 38,10 mm

TERMINATORS

For the transition from a coaxial system to a standard stainless steel tube system

Dimensions

Imperial

1/4" to 1"

Inner tube: 6,35 x 0,89 mm to 25,40 x 1,65 mm

Outer tube: 12,70 x 1,24 mm to 38,10 x 1,65 mm

PURGE TEES

T-piece with VCR connector
bulkhead purge tee

Dimensions

Imperial

1/4" to 1"

Inner tube: 6,35 x 0,89 mm to 25,40 x 1,65 mm

Outer tube: 12,70 x 1,24 mm to 38,10 x 1,65 mm

TUBES & FITTINGS

CONNECTIONS



ZeroCon® connection



DIN 11864



Clamp connection



Gaskets

Different applications and media require their own particular connections. Dockweiler offers the ideal connection for every type of application.

ZeroCon®

The unique threaded connection is as completely leakproof as a weld seam.

Dimensions

Imperial	ISO	Metric
1/4" to 4"	DN 8 to DN 80	DN 4 to DN 100
(6,35 mm to 101,60 mm)	(13,50 mm to 88,90 mm)	(6,00 x 1,00 mm to 104,00 x 2,00 mm)

CLAMP CONNECTION

Standard: ferrules/caps/clamps/special ferrules with thread or hose connection/tank ferrules
Clamps with wing or hexagon screw/3-segment clamp/high pressure clamp

Dimensions

Imperial	ISO	Metric
1/4" to 6"	DN 8 to DN 100	DN 4 to DN 150
(6,35 x 0,89 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 114,30 x 2,30 mm)	(6,00 x 1,00 mm to 154,00 x 2,00 mm)

CONNECTIONS IN ACCORDANCE WITH DIN 11864

Threaded tube connection /flange connection/clamp connection

Dimensions

Imperial	ISO	Metric
1/4" to 6"	DN 8 to DN 100	DN 4 to DN 150
(6,35 x 0,89 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 114,30 x 2,30 mm)	(6,00 x 1,00 mm to 154,00 x 2,00 mm)

GASKETS

Cleaned and laser-marked in accordance with FDA requirements

Dimensions

Imperial	ISO	Metric
1/4" to 6"	DN 8 to DN 100	DN 4 to DN 150
(6,35 x 0,89 mm to 152,40 x 2,77 mm)	(13,50 x 1,60 mm to 114,30 x 2,30 mm)	(6,00 x 1,00 mm to 154,00 x 2,00 mm)

Surfaces

Bright-finish, anodically cleaned, electropolished / ZeroCon®: bright-finish, electropolished

Materials

1.4404, 1.4435 (BN2), 1.4539, UNS S31603 (316L), UNS S30403 (304L) / Gaskets materials: EPDM, PTFE, Silikon

Qualities

■ **ultron**
■ **finetron**
■ **safetron**
■ **weldtron**

TUBES & FITTINGS

CORRUGATED STAINLESS STEEL HOSES



Flextron corrugated stainless steel hose

The use of flexible tube systems in the semiconductor as well as in parts of the fine chemical industry is becoming increasingly important. Dockweiler, as a leading manufacturer for stainless steel tube systems, has developed a procedure for electropolished corrugated stainless steel hoses. They guarantee a surface quality which meet highest requirements.

FLEXTRON

Electropolished corrugated stainless steel hoses for the semiconductor industry and fine chemistry.

Dimensions

Corrugated hoses

DN 6 to DN 20

Connection: 1/4" to 1"

(6,35 x 0,89 mm to 25,40 x 1,65 mm)

OPTIONS

As connection options we offer the corrugated hose with welding ends, VCR or ZeroCon® connection.

ADVANTAGES

Rapid connection of components to existing media supply systems. Furthermore, the optional Dockweiler ZeroCon® connection guarantees a connection to a system with a highest level of safety and absolute leakproofness.

Optimized inner surface quality is achieved by electropolishing in accordance with the high Dockweiler standards.

Clear marking: Needle marking ensures the well-established traceability of the corrugated high-quality hoses.



Flextron corrugated stainless steel hose with ZeroCon® connection

Surfaces Chemically cleaned, electropolished

Materials Corrugated hose: 1.4404 / UNS S31603 (316L), Braiding: 1.4301 / UNS S30403 (304L)

CUSTOMIZED SOLUTIONS

MANIFOLDS / VESSELS / CUSTOM FITTINGS



R4i manifolds

It all began with the advancement of orbital welding technology to meet the high standards required by the semiconductor industry. Today, the products manufactured by Dockweiler include manifolds with minimal dead space and in various designs – surfaces/purity – and with a range of different outlets.

MANIFOLDS

Dockweiler manufactures and supplies manifolds for UHP, PCW, and CFOS applications for the semiconductor industry.

When manufacturing CIP lances and CIP rings for liquids, Dockweiler places emphasis on elimination of dead space and closely fitted outlets.

The tailored solutions we offer our customers lead to a shorter acceptance process when installing or cleaning.

VESSELS

Due to custom production with the elimination of dead space and optimized surfaces, Dockweiler offers its customers vessels that can be emptied completely.

Features

- Can be produced for a volume of up to 200 liters and a diameter of up to 508 mm (20")
- CE certification for Categories I and II
- Pressure equipment in accordance with PED Category II (Pressure Equipment Directive)

Dimensions

Imperial, ISO, Metric, in accordance with customer requirements

Surfaces

Bright-finish, anodically cleaned, electropolished

Materials

1.4404, 1.4435 (BN2), 1.4306, 1.4307, UNS S31603 (316L), UNS S30403 (304L) / In addition to our standard materials, special materials such as Hastelloy can be used upon request.

Qualities

 **ultron**  **puretron**  **finetron**  **TCC**  **VSR 80**  **weldtron**  **safetron**  **bpe-direct**

BUBBLER SYSTEMS

BUBBLERS / ACCESSORIES



HPL



HPS



Eco



Accessories

Safety in stainless steel – Dockweiler bubblers are vessels for the transport and manufacture of organometallic compounds. Due to the sophisticated production method, electropolishing can be done after the last weld seam. This means that our bubbler can be used in critical areas of application.

SERIE HPL

Bubblers for liquids

Volume

ca. 200 ml to 56 liters

Options

Crossover and various other valves
Level sensor

Approvals

DOT and ADR

SERIE HPS

Bubblers for solids

Volume

ca. 600 ml to 6 liters

Options

Crossover and various other valves
Level sensor

Approvals

DOT and ADR

SERIE ECO

Bubblers for liquids with specially optimized components

Volume

ca. 1,5 liters to 8 liters

Options

–

Approvals

DOT and ADR for ECO8000

ACCESSORIES

Heat exchanger system for bubbler temperature control

HE8002 Temperature control unit

Larger bubblers cannot be used in conventional temperature baths. Dockweiler offers the flexible HE8002 temperature control unit for this.

This is connected and supplied via a pump to the supply, temperature, and control unit.

Supply, temperature, and control unit

In the sensitive production process, keeping the temperature of the medium constant is a must. To ensure a constant process temperature, Dockweiler offers a supply, temperature, and control unit. This ensures a constant and stable flow of gas.

Surfaces

p = free of oil and grease / hp = electropolished
uhp = electropolished (incl. the last weld seam)

Materials

1.4404, 1.4435 (BN2), UNS S31603 (316L)
Other special materials such as UNS S30403 (304L), 904L, Hastelloy, or Monel available on request

COMPONENTS AND VALVES

BALL VALVES / PURGE TOOLS / GAS STICKS / PRESSLOK



Ball valves

Purge tools

Gas sticks

Presslok

Evans Components is one of the leading international manufacturers of innovative ball valves, purge gas distributors, and combination fittings for the semiconductor, microelectronics, and pharmaceutical industries. They are the ideal complement to the Dockweiler stainless steel tube systems.

BALL VALVES

Ball valves and mini ball valves
for CFOS applications

Dimensions

Imperial

1/4" to 12" (6,35 mm to 304,80 mm)

ISO and Metric on request

PURGE TOOLS

Purge gas distributors

Dimensions

Imperial

Inlet 1/2"

Outlet 1/4"

GAS STICKS

Combination fitting of mini ball valve, regulator and
pressure gauge
GS / GM / GL series

Dimensions

Imperial

1/4" to 1" (6,35 mm to 25,40 mm)

PRESSLOK

Weld-free crimp connection for gas installations or
cooling water systems
Tubes and fittings from the PLT / PLHT series

Dimensions

Imperial

1/2" to 4" (12,70 mm to 101,60 mm)

Surfaces

Bright-finish, electropolished

Materials

UNS S31603 (316L), UNS S30403 (304L)

SERVICES

CLEANROOM / ENGINEERING SUPPORT / ECO-PURGE / SWAP BODY



CLEANROOM

For semiconductor applications

Having installed a cleanroom, Dockweiler is able to weld, assemble, clean, and pack custom-manufactured products according to the strictest purity requirements

Features

Cleanroom class ISO 4
Cleanroom size ca. 100 m²

ENGINEERING SUPPORT

In close collaboration with the customer, Dockweiler draws on its many years of experience and motivated team of staff to create optimized products.

Technical testing

In addition to standard testing, Dockweiler offers a range of special tests for prefabrication. These include:

- Helium leak testing
- Dye penetrant testing
- Corrosion testing in accordance with ASTM G 61 (CPP)
- X-ray testing of weld seams
- Material hardness testing (Vickers)
- Pressure testing
- Cold stress bath (with liquid nitrogen) before dimensions check
- Water jacket test (DOT approval of bubblers)
- Microscope images (microsections and surface finish)
- PMI = positive material identification (X-ray fluorescence)
- Accuracy of dimensions of 3D geometries

ECO-PURGE

Using the innovative Eco-Purge reduces purge gas consumption during welding due to the greatly minimized purge volume and the resulting reduction in purge time.

Dimensions

Available in 3", 4" und 6"
ISO and Metric on request



SWAP BODY

Dockweiler offers containers and swap bodies for flexible storage on the construction site.

The containers are equipped with metal racks and cantilever racks, each with five shelves, for safe storage of tubes and fittings. The swap bodies can, for example, be used in the execution of installation and production projects (skid production or system installation).

Options

The containers offer the following advantages:

- safe and manageable outside storage of materials
- storage capacity easily increased
- project materials stored separately from actual storage area
- no risk of confusing different materials in projects

Measurements:

Length of swap body: 7,45 m
External height (standard): 2,70 m
Internal height: 2,48 m
Height of roll-up door: 2,25 m

DOCUMENTATION & CERTIFICATES

CERTIFIED MANUFACTURING



AD 2000 HPO



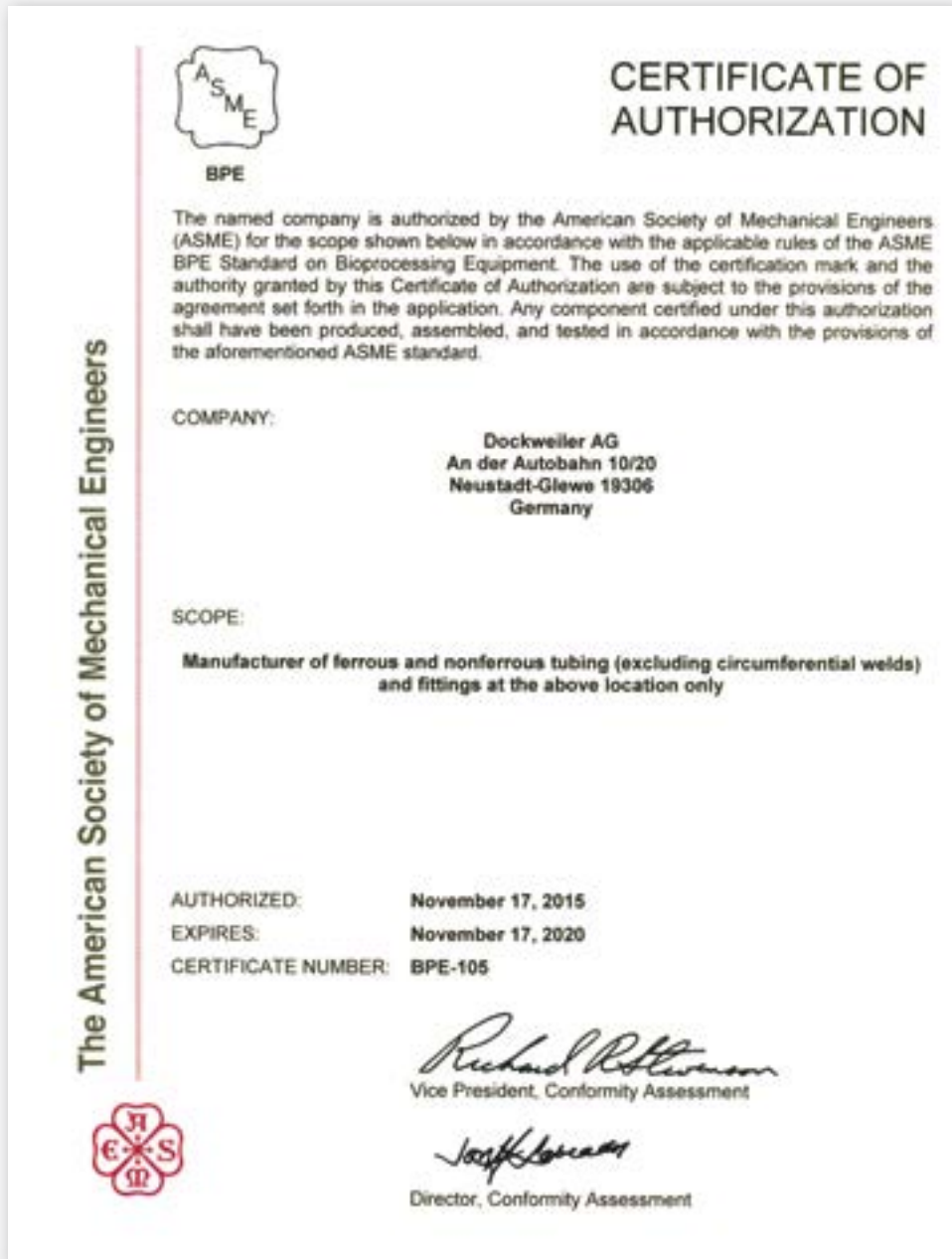
DIN EN ISO 9001



DIN EN ISO 14001



DGR 97 23 EG and AD 2000 WO



ASME BPE

Further certificates are available on our website:

www.dockweiler.com

DOCUMENTATION & CERTIFICATES

WEBCERT



Nowadays, for plant operators, documentation such as material inspection certificates is becoming increasingly more important and comprehensive. To support our customers in this development while also improving our service, we have set up a new certifications portal. The Dockweiler's WebCert portal offers the simple solution for everyone who manages their certifications digitally.

All required information can therefore be accessed extremely rapidly, leading to significant time savings. For further Informations please visit our website at: www.dockweiler.com/downloads/

WEBCERT – ADVANTAGES

- Irrespective of browser, documents can be accessed online from anywhere in the world.
- All documents for past deliveries are held in our archive for an unlimited period.
- The flexible search function allows you to enter several search parameters simultaneously.
- If you do not know the full details of a search parameter, you can search with asterisks.
- WebCert can display an initial preview of the document you are searching for.

SPECIFIC BENEFITS

- You can retrieve documents before the receipt of goods, that is, directly after dispatch of the consignment. As a result, you can assign the documents quickly and directly to the goods upon receipt.
- All required information can therefore be accessed extremely rapidly, leading to significant time savings.
- With no need to file these documents manually, your company's paper and printing costs are reduced.
- WebCert is continually updated with the newest solutions, ensuring it is always optimized and progressive.

Functions	WebCert Basic	WebCert Advanced
Access to documents	12 month	24 month
Concurrent user licenses	1	2
Easy search functions	■	■
Certificates and reports	■	■
Weld log/Welding certificates	■	■
Welding procedure specification (WPS)	■	■
Procedure qualification record (PQR)	■	■
Welder performance qualification (WPQ)	■	■
Advanced search		■
Delivery notes		■
Order confirmations		■
Invoices		■
ZIP download of selected documents		■

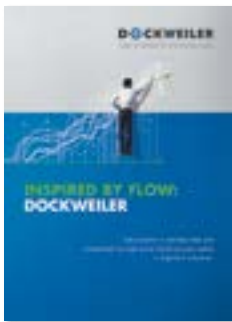
CATALOGS

DOCKWEILER PUBLICATIONS



Our catalogs are also available for download on our website at:
www.dockweiler.com/downloads/

Company Profile



Products at a Glance



Technical Catalog



ASME BPE Catalog



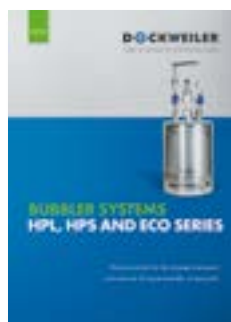
Tube Connections



ZeroCon



Bubbler Systems



R4i Lateral Concept



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