

CERTIFICATE OF COMPLIANCE



EL Class I

Date of issue: 30 June 2026

Valid until: 31 December 2027

EHEDG hereby declares that the product

***Clean Seal Connector types: EC-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 009)
according to DIN 11864-3 and EF-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 016)
according to DIN 11864-2, XXX is the external height and ZZZ is either DIN, ISO or
ASM***

from

Leopold Parts ApS, 7 Industrivej, 6580 VAMDRUP, Denmark

***has/have been evaluated for compliance and meets/meet the current criteria for
Hygienic Equipment Design of closed process applications of the EHEDG***

Certificate No. EHEDG-C2600045

Signed  President EHEDG
Hein Timmerman

Signed  EHEDG Certification Officer
Karlijn Faber

***EHEDG
Karspeldreef 8
1101 CJ Amsterdam
Netherlands***

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CONTRACT TO USE THE EHEDG CERTIFICATION LOGO FOR EQUIPMENT OR COMPONENTS

A Contract entered into this 30.06.2026 between STICHTING EHEDG, an organization (foundation) existing under Dutch law, with its Head Office at Karspeldreef 8, 1101 CJ Amsterdam, Netherlands, herein after called "EHEDG" and Leopold Parts ApS, 7 Industrivej, 6580 VAMDRUP, Denmark, herein after called "Company".

1. Certified Equipment and Certified Components are any equipment, component, system, material or service for which EHEDG has specifically authorized the use of the EHEDG Certification Logo. The EHEDG Certification Logo is a registered mark. All existing rights in connection with or future rights through the use of the logo are exclusively reserved to the EHEDG.
2. EHEDG has determined that the Equipment or Components identified in Article 11 of this Contract comply with the requirements of the applicable criteria and certification classification under Appendix 1 (EHEDG Certification Type: EL Class I) of this Contract.
3. Upon execution of this Contract and payment of any outstanding fees, EHEDG authorizes the Company to use the EHEDG Certification Logo on the Equipment or Components identified in Article 11 subject to the conditions described in Appendix 2 (Conditions for Use of the EHEDG Certification Logo) of this Contract for a period of one year. The period may be extended annually by providing documentation which shows that the Equipment or Components Certified still fully meet/s the provisions of this Contract and payment of an annual prolongation fee as published on www.ehedg.org. On each fifth year anniversary of the initial Certification, the Equipment or Component Certified will be subject to a full hygienic design evaluation and testing, as appropriate, to renew the Certification.
4. The Company undertakes the responsibility to place the Logo only on the Equipment or Components which has/have been certified as in compliance with this Contract.
5. It is understood and agreed that a Logo on any Equipment or Components and its/their Certification are invalid if the Equipment or Components has/have been significantly altered or been represented as being Certified for any purpose or end use other than that Certified by EHEDG. EHEDG assumes no liability for any claims arising from such alteration, misuse, or misrepresentation by the Company.
6. The Company assumes responsibility to inform EHEDG of any changes or modification in the design and manufacture of Certified Equipment or Components which may affect compliance with the EHEDG Criteria. EHEDG will judge whether the changes or modifications render the current Certification void. The need for review of the modified Equipment or Components depends on the modification being carried out.
7. EHEDG assumes no liability for any claims for damages of any kind occurring to any person or entity as a result of sale, resale, use or misuse of the Company's Equipment or Components, whether or not these are certified. The Company assumes full and complete responsibility for its use of the Logo or other representation that its Equipment or Components are Certified. EHEDG assumes no liability for any claims arising from the Company's misuse of the Logo or misrepresentation of the Certification status of its Equipment or Components.
8. The Company undertakes to declare in writing before the annual expiry date on the Certificate at the latest that no modifications were made on the Certified Equipment or Components, or parts thereof. If modifications have been made on the certified Equipment or Components, the Company is to notify EHEDG thereof who determines whether the Certified Equipment or Components needs review or not.
9. Certification of the Equipment or Components is subject to a full evaluation every five years from the issuance date. If the company fails to comply with the five year evaluation or fails the evaluation, the certificate will no longer be valid. At the end of this period the Certification is no longer valid and the use of the Certification Logo in relation to the Equipment or Components for which the Certification was issued is, from that moment on, strictly forbidden. However, Certification of the Equipment or Components can be reviewed to determine if the Certification could be reaffirmed as

written or modified to meet the current applicable EHEDG criteria and reissued, or discontinued. The Company is responsible to initiate the review process sufficiently in advance of the renewal date to prevent a delay in certification.

10. The Contract may be terminated with thirty days' notice by either party. The right to terminate the Contract for cause remains unaffected. Good cause is especially given, if the license fees were not paid or modifications have been carried out on the Certified Equipment or Components without prior notification. This Contract will be terminated when replaced by a mutually agreed new contract or contract revision provided by EHEDG or in case of abuse of the Logo as mentioned under article 14, below.
11. The EHEDG Certification Logo may be used on or in connection with the following Equipment or Components:
 - Clean Seal Connector types: EC-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 009) according to DIN 11864-3 and EF-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 016) according to DIN 11864-2, XXX is the external height and ZZZ is either DIN, ISO or ASM as shown on the drawings or copies of drawings with original (NOT copied) EHEDG stamp, dated and signed by AEO, provided that the Equipment or Components - as applicable - has/have means for use and/or mounting such that compliance with the EHEDG Criteria is not adversely affected as stated in the Hygienic Design Evaluation Report.
12. EHEDG will keep all documents and other evidence of the Company's Equipment or Components on file. The Secretariat of EHEDG will keep records of Equipment and Components that has/have been certified. EHEDG undertakes to treat all documents received from the Company as confidential.
13. A Certificate will be provided bearing the EHEDG Logo and applicable Certification type identification as shown on Appendix 1 of this Contract. The Certificate will be signed and dated.
14. Abuse of the EHEDG Certification Logo (i.e. its use under conditions conflicting with this Contract) may result in any or all of the following sanctions:
 - a. a request to immediately take corrective actions;
 - b. termination of the Contract;
 - c. indemnities and damages to the minimum amount of EUR 10,000 per case.

Examples of Abuse:

- the Company uses the EHEDG Certification Logo on Equipment, Components, drawings, brochures or other documents which have not been Certified;
 - the Company uses the EHEDG Certification Logo as general information on documents;
 - the Company uses the EHEDG Certification Logo on modified Equipment, Components drawings, brochures or other documents without prior notification to EHEDG;
 - the Company uses the EHEDG Certification Logo on Certified Equipment or Components, drawings, brochures or other documents using another name and/or designation without prior notification to EHEDG;
 - the Company uses the EHEDG Certification Logo on Equipment, Components, drawings, brochures or other documents of Equipment or Components which passed the EHEDG in-place cleaning test but do not comply with the Hygienic Design Criteria of EHEDG.
15. Disputes between Parties in connection with or arising out of the Contract, which cannot be resolved by arrangement between parties, shall be finally settled by arbitration in accordance with the rules of Conciliation and Arbitration of the International Chamber of Commerce by one or more arbiters appointed in accordance with those rules. The place of arbitration shall be Den Haag (The Hague).
 16. This Contract and referenced documents constitute the entire agreement between Parties and supersede all previous communications, representations or agreements between Parties with respect to the Certified Equipment or Components. No modification will be binding upon either party unless it is made in writing and is signed by duly authorized representatives of both Parties.
 17. This Contract will be subject to Dutch law.

For Company

For EHEDG

Leopold Parts ApS

Gitte Kildbane

Name

CEO

Title

 Signed with Organo Sign
ab64820743...

Signature

30 June 2026

Date

Hein Timmerman

Name

President EHEDG

Title

Signature

30 June 2026

Date

This Contract includes the following documents:

Appendix 1 – EHEDG Certification Logo type and class

Appendix 2 – Conditions for Use of the EHEDG Certification Logo

Appendix 3 – EHEDG Equipment Evaluation Form

Appendix 1

EHEDG CERTIFICATION TYPE EL CLASS I

EQUIPMENT INTENDED FOR CLEANING-IN-PLACE WITH LIQUIDS WITHOUT DISMANTLING

Equipment intended for cleaning-in-place (CIP) with liquids without dismantling may be EHEDG Certified if it complies with the current Hygienic Design Criteria (HDC) of the EHEDG.

TYPE EL CLASS I Certification applies to equipment of which inspection, including documentation provided, by an EHEDG Authorized Evaluation Officer (AEO) that the equipment either fully complies with the HDC, or that for functional reasons, which are unavoidable, does not fully comply with the HDC, and additional documentation of specified measures to compensate for the lack of compliance has been provided. These specific measures shall be clearly mentioned in any technical description of the equipment as well as in any operating instructions to be provided by the equipment supplier.

Examples of certifiable equipment are:
Pipe line equipment like pumps, valves and sensors.

All documentation is recorded within the official certification file and may include reports of cleanability tests, but also include results of the measurement of surface roughness, radii of corners, etc.

Appendix 2

CONDITIONS FOR USE OF THE EHEDG CERTIFICATION LOGO

Upon obtaining evidence of compliance (see Appendix 1: EHEDG Certification Type), a contract shall be executed by the Company and EHEDG. The contract shall detail the Product for which Certification is provided. The Certification Logo will be dated (month and year) and will last for a period not to exceed 5 years unless the equipment, or any part thereof, is modified, in accordance with clauses 3 and 6 of the Contract.

1. Use of the Logo and responsibility of Applicant

1.1 The Applicant shall represent as Certified, by use of the Logo or otherwise, only Products described in the Contract.

1.2 The language allowed is either "Certified by EHEDG" or "EHEDG Certified". Correct literal translations are also allowed.

1.3 The Logo may be printed in black or in two colours. If printed in two colours, "EHEDG" must be in red and all other text in blue (see 10, below).

1.4 The Logo must be used in combination with the type of Certification, such as "TYPE EL CLASS I", and the date (month in text and year in four digits) of Certification. Both must be produced below the logo in the way shown under 10. The text, such as "TYPE EL CLASS I", must be at least 1/10 times the size of the logo and the date must be at least 1/20 times the size of the logo, but both must never be less 2 mm in height. The font must be ARIAL Bold.

1.5 If the logo is applied directly (etching) on to the Product, this may be done without using colours. If colours are used, the colours mentioned under 1.3 must be used, as indicated. It must be ascertained that the use of the Logo on Products does not adversely affect either hygiene or food safety. Dimensional requirements are as specified under 1.4.

1.6 The Logo may not be cropped in any way.

1.7 The Logo may be used in combination with other logos or marks.

If used in combination with other logos, it does not automatically mean that the EHEDG is linked to those organisations in one way or the other.

2. Written Authorization for Certification and Use of the Logo

The EHEDG Logo is a registered Mark. No Company or person shall apply or use the Logo in connection with a Product, or represent in any way that the Product is EHEDG Certified, until receipt of written authorization from EHEDG. EHEDG may pursue legal recourse if the Logo is misused.

3. Transfer of Authorization for Certification and Use of the Logo

No company may independently transfer or authorize the use of their certification. Upon request and with documentation of continued compliance, EHEDG may transfer authorization for continued Certification of specific Products to another Company for the purpose of a name change, change of ownership, or change of a production location. An administration fee will be charged.

4. EHEDG Acknowledgement of Certified Products

Certified Products may bear the Logo or be otherwise represented as Certified.

5. Trade Designations

A Company shall not use the letter combination "EHEDG" in its trade designation (e.g. name, model number, or other identification assigned by the Company) for a Certified or non-Certified Product.

A Company shall not have a trade designation for a Certified Product that directly or indirectly states or implies an end use application for which the product is not certified.

6. Product modification

Any modification of the product, which has been Certified renders the Certification void for the modified products. If Certification of the modified product is desired, a new application must be submitted. If the modification proves to be relatively insignificant, the fee may be reduced or waived at the discretion of EHEDG.

7. Implementation of Revisions to Referenced EHEDG Guideline(s)

Upon adoption of a revision to any referenced EHEDG Guideline(s), mentioned in the Contract, the Company shall be encouraged to implement all changes in requirements in its Certified Products.

8. Certification of Distributors

A Company distributing a Certified Product with a trade designation other than that of the original manufacturer may apply for an extra EHEDG Certification and contract.

9. Private Labelling of Certified Products

If a Company has the intention to label Certified Products with another name and/or designation the Company shall prior to any changes notify the EHEDG thereof in writing. On written consent of the EHEDG, the Company may apply for an extra EHEDG Certification and contract.

10. Examples of the EHEDG Certification Logo

The applicable logo (with Month and Year) will be provided by EHEDG.

EHEDG BLUE

CMYK
100.79.4.0

RGB
22.65.148

HEX
164194

EHEDG RED

CMYK
0.87.84.0

RGB
231.59.45

HEX
E73B2D





APPENDIX 3

EHEDG Certification – Equipment Evaluation Form

Design Evaluation Date: 03.11.2025

EHEDG File Number: EHEDG-R2600027

Certification Type: EL CLASS I

Applicant: Leopold Parts, Industrivej 7D, 6580 Vamdrup, Denmark

Equipment: Clean Seal Connector types: EC-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 009) according to DIN 11864-3 and EF-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 016) according to DIN 11864-2, XXX is the external height and ZZZ is either DIN, ISO or ASM

Other essential identification: Restrictions for blind end installations are determined from dimensions (diameter D and dead leg L). Certified versions where $L/D \leq 1$ see table on page 3.

Evaluated by:

Name: Alan Friis

Date, Signature: 24.06.2026

Approved by:

Name: Andy Timperley on behalf of SubCom Certification

Date, Signature: 29.06.2026,

The use of the EHEDG Certification logo is justified based on the results of the design evaluation, inspection, and testing (as applicable) of the equipment for compliance with the current EHEDG Hygienic Design Criteria (HDC):

Criteria	Certification for use in Closed Processes
☒	The equipment complies with all applicable HDC in the Guidelines.
☐	Evidence for compliance required and provided by in-place cleanability test method according to EHEDG Doc. 2.
☐	Evidence for compliance required and provided by in-place cleanability test method according to EHEDG Doc. 2, in-place sterilisability test method according to EHEDG Doc. 5, and bacteria tightness test according to EHEDG Doc. 7 for EL ASEPTIC Certification.
Criteria	Certification for use in Open Processes
☐	The equipment complies with all applicable HDC in the Guidelines.
☐	Evidence for compliance required and provided by OPC cleanability test method according to EHEDG Doc. 57.

APPENDIX 3

No.	Description
1.	EHEDG Certificate of Compliance
2.	Contract to use the EHEDG certification logo
3.	Appendix 1: Equipment intended for cleaning in place with liquids without dismantling
4.	Appendix 2: Conditions for use of the EHEDG certification logo
5.	Appendix 3: Equipment evaluation form
6.	EHEDG Hygienic Design Criteria Evaluation Report FORCE CHD DR 2026 125-31780
7.	Original drawings: EC-CSCWWWXXX-ZZZ-001 to 009 (9 pages) & EF-CSCWWWXXX-ZZZ-001 to 013, 015 and 016 (15 pages)
8.	Installation and welding specifications CS-Connector LP-CSC-001 revision 5
9.	Example of the EHEDG Certification Logo Type EL Class I

List of certified versions for blind end installation. XXX relates to the depth of an internal dead leg.

Clean Seal Connector EC-CSC according to DIN 11864-3					Clean Seal Connector EF-CSC according to DIN 11864-2				
Approval drawing reference	ZZZ [clamp standard]	D (mm)	L (mm)	XXX for blind end installations [external height]	Approval drawing reference	ZZZ [clamp standard]	D (mm)	L (mm)	XXX for blind end installations [external height]
EC-CS000000000-DIN-001	11864-3 Reihe A (23,0x1,5)	20	19,8	015-028	EF-CS000000000-DIN-001	11864-2 Reihe A (29,0x1,5)	26	25,8	025-034
EC-CS000000000-DIN-001	11864-3 Reihe A (29,0x1,5)	26	25,8	015-034	EF-CS000000000-DIN-001	11864-2 Reihe B (26,9x1,6)	23,7	22,8	025-031
EC-CS000000000-DIN-001	11864-3 Reihe B (26,9x1,6)	23,7	22,8	015-031	EF-CS000000000-DIN-001	11864-2 Reihe C (25,4x1,65)	22,1	21,8	025-030
EC-CS000000000-DIN-001	11864-3 Reihe C (25,4x1,65)	22,1	21,8	015-030	EF-CS000000000-DIN-002	11864-2 Reihe A (41,0x1,5)	38	37,8	025-046
EC-CS000000000-DIN-002	11864-3 Reihe A (41,0x1,5)	38	37,8	015-046	EF-CS000000000-DIN-002	11864-2 Reihe B (42,4x2)	38,4	37,8	025-046
EC-CS000000000-DIN-002	11864-3 Reihe B (42,4x2)	38,4	37,8	015-046	EF-CS000000000-DIN-002	11864-2 Reihe C (38,1x1,65)	34,8	34,8	025-043
EC-CS000000000-DIN-002	11864-3 Reihe B (48,3x2)	44,3	43,8	015-052	EF-CS000000000-DIN-003	11864-2 Reihe A (53x1,5)	50	49,8	025-058
EC-CS000000000-DIN-002	11864-3 Reihe C (38,1x1,65)	34,8	34,8	015-043	EF-CS000000000-DIN-003	11864-2 Reihe B (48,3x2)	44,3	43,8	025-052
EC-CS000000000-DIN-003	11864-3 Reihe A (53x1,5)	50	49,8	015-058	EF-CS000000000-DIN-003	11864-2 Reihe C (50,8x1,65)	47,5	46,8	025-055
EC-CS000000000-DIN-003	11864-3 Reihe C (50,8x1,65)	47,5	46,8	015-055	EF-CS000000000-DIN-004	11864-2 Reihe B (60,3x2)	56,3	55,8	025-064
EC-CS000000000-DIN-004	11864-3 Reihe A (70,0x2,0)	66	65,8	015-074	EF-CS000000000-DIN-004	11864-2 Reihe C (63,5x1,65)	60,2	59,8	025-068
EC-CS000000000-DIN-004	11864-3 Reihe B (60,3x2,0)	56,3	55,8	015-064	EF-CS000000000-DIN-005	11864-2 Reihe B (76,1x2)	72,1	71,8	040-080
EC-CS000000000-DIN-004	11864-3 Reihe C (63,5x1,65)	60,2	59,8	015-068	EF-CS000000000-DIN-005	11864-2 Reihe C (76,2x1,65)	72,9	72,8	040-081
EC-CS000000000-DIN-005	11864-3 Reihe A (85,0x2,0)	81	80,8	015-089	EF-CS000000000-DIN-006	11864-2 Reihe A (104,0x2)	100	99,8	040-108
EC-CS000000000-DIN-005	11864-3 Reihe B (76,1x2,0)	72,1	71,8	015-080	EF-CS000000000-DIN-006	11864-2 Reihe C (101,6x2,11)	97,38	96,8	040-105
EC-CS000000000-DIN-005	11864-3 Reihe C (76,2x1,65)	72,9	72,8	015-081	EF-CS000000000-DIN-007	11864-2 Reihe A (85,0x2)	81	80,8	040-089
EC-CS000000000-DIN-006	11864-3 Reihe A (104x2,0)	100	99,8	015-108	EF-CS000000000-DIN-007	11864-2 Reihe B (88,9x2,3)	84,3	83,8	040-092
EC-CS000000000-DIN-006	11864-3 Reihe C (101,6x2,11)	97,38	96,8	015-105	EF-CS000000000-DIN-008	11864-2 Reihe A (129,0x2)	125	124,8	040-133
EC-CS000000000-DIN-007	11864-3 Reihe B (88,9x2,3)	84,3	83,8	015-092	EF-CS000000000-DIN-009	11864-2 Reihe A (154,0x2)	150	149,8	060-158
EC-CS000000000-DIN-008	11864-3 Reihe A (13,0x1,5)	10	9,8	015-018	EF-CS000000000-DIN-010	11864-2 Reihe B (114,3x2,3)	109,7	108,8	040-117
EC-CS000000000-DIN-008	11864-3 Reihe A (19,0x1,5)	16	15,8	015-024	EF-CS000000000-DIN-011	11864-2 Reihe A (13,0x1,5)			N/A
EC-CS000000000-DIN-008	11864-3 Reihe B (13,5x1,6)	10,3	9,8	015-018	EF-CS000000000-DIN-011	11864-2 Reihe B (13,5x1,6)			N/A
EC-CS000000000-DIN-008	11864-3 Reihe B (17,2x1,6)	14	13,8	015-022	EF-CS000000000-DIN-011	11864-2 Reihe C (12,7x1,65)			N/A
EC-CS000000000-DIN-008	11864-3 Reihe B (21,3x1,6)	18,1	17,8	015-026	EF-CS000000000-DIN-012	11864-2 Reihe A (19,0x1,5)			N/A
EC-CS000000000-DIN-008	11864-3 Reihe B (12,7x1,65)	9,4	8,8	015-017	EF-CS000000000-DIN-012	11864-2 Reihe B (17,2x1,6)			N/A
EC-CS000000000-DIN-008	11864-3 Reihe C (19,05x1,65)	15,75	8,8	015-017	EF-CS000000000-DIN-012	11864-2 Reihe C (19,05x1,65)			N/A
EC-CS000000000-DIN-009	11864-3 Reihe A (35x1,5)	32	31,8	015-040	EF-CS000000000-DIN-013	11864-2 Reihe A (23,0x1,5)	20	19,8	025-028
EC-CS000000000-DIN-009	11864-3 Reihe B (33,7x2,0)	29,7	28,8	015-037	EF-CS000000000-DIN-013	11864-2 Reihe B (21,3x1,6)	18,1	17,8	025-026
					EF-CS000000000-DIN-015	11864-2 Reihe A (35,0x1,5)	32	31,8	025-040
					EF-CS000000000-DIN-015	11864-2 Reihe B (33,7x2)	29,7	28,8	025-037
					EF-CS000000000-DIN-016	11864-2 Reihe A (70,0x2)	66	65,8	025-074



EHEDG - European Hygienic Engineering and Design Group
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Certificate of Completion

EHEDG Certification Contract for Leopold Parts.pdf

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Participants

Signatory	Email	Email Verification
Gitte Kildbane	gitte@leopold-parts.dk	☒
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Email Verification: The signatory has confirmed control of their email inbox by clicking on a unique link

Signing Events

Action	By	Date (UTC)
Creation	EHEDG - European Hygienic Engineering and Design Group, Karlijn Faber karlijn.faber@ehedg.com	30/06/2026 11:41:53
Signature:		466337014065aeacc6a14f3b7a91c23e40f7feef05417fd3e432f7d0962da7b8
Signature <i>Gitte Kildbane</i>	Leopold Parts ApS, Gitte Kildbanegitte@leopold-parts.dk	30/06/2026 12:00:29
Signature:		74c3085a3ea58756d822484ddb75c5300ca62ac102449fa8c84e2eb5ff84a650

✔ The document's integrity is valid.

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Leopold Parts ApS, Gitte Kildbanegitte@leopold-parts.dk	30/06/2026 11:59:25	Before Signature

PAYMENT

Payment within 30 days.

When paying please use the invoice number as a payment reference.

VAT TRANSFERRED

VAT transferred according to article 138, clause 1, Directive 2006/112.

* for World Congress 2026/Austrian purpose only

EHEDG Hygienic Design Criteria Evaluation Report

No. FORCE CHD DR 2026 125-31780

Items evaluated: Clean Seal Connector types: EC-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 009) according to DIN 11864-3 and EF-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 016) according to DIN 11864-2, XXX is the external height and ZZZ is either DIN, ISO or ASM

Restrictions for blind end installations are determined from dimensions (diameter D and dead leg L) shown in the drawings. The external heights XXX listed are those where $L/D \leq 1$.

Clean Seal Connector EC-CSC according to DIN 11864-3				
Approval drawing reference	ZZZ [clamp standard]	D (mm)	L (mm)	XXX for blind end installations [external height]
EC-CSCWWWWXXX-DIN-001	11864-3 Reihe A (23,0x1,5)	20	19,8	015-028
EC-CSCWWWWXXX-DIN-001	11864-3 Reihe A (29,0x1,5)	26	25,8	015-034
EC-CSCWWWWXXX-ISO-001	11864-3 Reihe B (26,9x1,6)	23,7	22,8	015-031
EC-CSCWWWWXXX-ASM-001	11864-3 Reihe C (25,4x1,65)	22,1	21,8	015-030
EC-CSCWWWWXXX-DIN-002	11864-3 Reihe A (41,0x1,5)	38	37,8	015-046
EC-CSCWWWWXXX-ISO-002	11864-3 Reihe B (42,4x2)	38,4	37,8	015-046
EC-CSCWWWWXXX-ISO-002	11864-3 Reihe B (48,3x2)	44,3	43,8	015-052
EC-CSCWWWWXXX-ASM-002	11864-3 Reihe C (38,1x1,65)	34,8	34,8	015-043
EC-CSCWWWWXXX-DIN-003	11864-3 Reihe A (53x1,5)	50	49,8	015-058
EC-CSCWWWWXXX-ASM-003	11864-3 Reihe C (50,8x1,65)	47,5	46,8	015-055
EC-CSCWWWWXXX-DIN-004	11864-3 Reihe A (70,0x2,0)	66	65,8	015-074
EC-CSCWWWWXXX-ISO-004	11864-3 Reihe B (60,3x2,0)	56,3	55,8	015-064
EC-CSCWWWWXXX-ASM-004	11864-3 Reihe C (63,5x1,65)	60,2	59,8	015-068
EC-CSCWWWWXXX-DIN-005	11864-3 Reihe A (85,0x2,0)	81	80,8	015-089
EC-CSCWWWWXXX-ISO-005	11864-3 Reihe B (76,1x2,0)	72,1	71,8	015-080
EC-CSCWWWWXXX-ASM-005	11864-3 Reihe C (76,2x1,65)	72,9	72,8	015-081
EC-CSCWWWWXXX-DIN-006	11864-3 Reihe A (104x2,0)	100	99,8	015-108
EC-CSCWWWWXXX-ASM-006	11864-3 Reihe C (101,6x2,11)	97,38	96,8	015-105
EC-CSCWWWWXXX-ISO-007	11864-3 Reihe B (88,9x2,3)	84,3	83,8	015-092
EC-CSCWWWWXXX-DIN-008	11864-3 Reihe A (13,0x1,5)	10	9,8	015-018
EC-CSCWWWWXXX-DIN-008	11864-3 Reihe A (19,0x1,5)	16	15,8	015-024
EC-CSCWWWWXXX-ISO-008	11864-3 Reihe B (13,5x1,6)	10,3	9,8	015-018
EC-CSCWWWWXXX-ISO-008	11864-3 Reihe B (17,2x1,6)	14	13,8	015-022
EC-CSCWWWWXXX-ISO-008	11864-3 Reihe B (21,3x1,6)	18,1	17,8	015-026
EC-CSCWWWWXXX-ASM-008	11864-3 Reihe B (12,7x1,65)	9,4	8,8	015-017
EC-CSCWWWWXXX-ASM-008	11864-3 Reihe C (19,05x1,65)	15,75	8,8	015-017
EC-CSCWWWWXXX-DIN-009	11864-3 Reihe A (35x1,5)	32	31,8	015-040
EC-CSCWWWWXXX-ISO-009	11864-3 Reihe B (33,7x2,0)	29,7	28,8	015-037

Clean Seal Connector EF-CSC according to DIN 11864-2				
Approval drawing reference	ZZZ [clamp standard]	D (mm)	L (mm)	XXX for blind end installations [external height]
EF-CSCWWWWXXX-DIN-001	11864-2 Reihe A (29,0x1,5)	26	25,8	025-034
EF-CSCWWWWXXX-ISO-001	11864-2 Reihe B (26,9x1,6)	23,7	22,8	025-031
EF-CSCWWWWXXX-ASM-001	11864-2 Reihe C (25,4x1,65)	22,1	21,8	025-030
EF-CSCWWWWXXX-DIN-002	11864-2 Reihe A (41,0x1,5)	38	37,8	025-046
EF-CSCWWWWXXX-ISO-002	11864-2 Reihe B (42,4x2)	38,4	37,8	025-046
EF-CSCWWWWXXX-ASM-002	11864-2 Reihe C (38,1x1,65)	34,8	34,8	025-043
EF-CSCWWWWXXX-DIN-003	11864-2 Reihe A (53x1,5)	50	49,8	025-058
EF-CSCWWWWXXX-ISO-003	11864-2 Reihe B (48,3x2)	44,3	43,8	025-052
EF-CSCWWWWXXX-ASM-003	11864-2 Reihe C (50,8x1,65)	47,5	46,8	025-055
EF-CSCWWWWXXX-ISO-004	11864-2 Reihe B (60,3x2)	56,3	55,8	025-064
EF-CSCWWWWXXX-ASM-004	11864-2 Reihe C (63,5x1,65)	60,2	59,8	025-068
EF-CSCWWWWXXX-ISO-005	11864-2 Reihe B (76,1x2)	72,1	71,8	040-080
EF-CSCWWWWXXX-ASM-005	11864-2 Reihe C (76,2x1,65)	72,9	72,8	040-081
EF-CSCWWWWXXX-DIN-006	11864-2 Reihe A (104,0x2)	100	99,8	040-108
EF-CSCWWWWXXX-ASM-006	11864-2 Reihe C (101,6x2,11)	97,38	96,8	040-105
EF-CSCWWWWXXX-DIN-007	11864-2 Reihe A (85,0x2)	81	80,8	040-089
EF-CSCWWWWXXX-ISO-007	11864-2 Reihe B (88,9x2,3)	84,3	83,8	040-092
EF-CSCWWWWXXX-DIN-008	11864-2 Reihe A (129,0x2)	125	124,8	040-133
EF-CSCWWWWXXX-DIN-009	11864-2 Reihe A (154,0x2)	150	149,8	060-158
EF-CSCWWWWXXX-ISO-010	11864-2 Reihe B (114,3x2,3)	109,7	108,8	040-117
EF-CSCWWWWXXX-DIN-011	11864-2 Reihe A (13,0x1,5)			N/A
EF-CSCWWWWXXX-ISO-011	11864-2 Reihe B (13,5x1,6)			N/A
EF-CSCWWWWXXX-ASM-011	11864-2 Reihe C (12,7x1,65)			N/A
EF-CSCWWWWXXX-DIN-012	11864-2 Reihe A (19,0x1,5)			N/A
EF-CSCWWWWXXX-ISO-012	11864-2 Reihe B (17,2x1,6)			N/A
EF-CSCWWWWXXX-ASM-012	11864-2 Reihe C (19,05x1,65)			N/A
EF-CSCWWWWXXX-DIN-013	11864-2 Reihe A (23,0x1,5)	20	19,8	025-028
EF-CSCWWWWXXX-ISO-013	11864-2 Reihe B (21,3x1,6)	18,1	17,8	025-026
EF-CSCWWWWXXX-DIN-015	11864-2 Reihe A (35,0x1,5)	32	31,8	025-040
EF-CSCWWWWXXX-ISO-015	11864-2 Reihe B (33,7x2)	29,7	28,8	025-037
EF-CSCWWWWXXX-DIN-016	11864-2 Reihe A (70,0x2)	66	65,8	025-074

Manufactured by: Leopold Parts, Industrivej 7D, 6580 Vamdrup, Denmark

The evaluation is based on the applicable hygienic design criteria (HDC) in EHEDG Document Nos: 8 (2025), 9 (1993), 10 (2007), 32 (2005), EHEDG Position Paper P1 V6_2024 and the SCR Version 02_241028.

Materials, Surface Roughness Fabrication and Geometry

- Metallic product contact surfaces of the process adapter are constructed from stainless steel EN 1.4301 (lock rings) and EN 1.4404 (welding flange) which are considered non-toxic, non-absorbent and suitable for the intended conditions of use
- The surface finish of the stainless steel adapter is prepared to $R_a < 0,8 \mu\text{m}$. Control measurements were all below $0,8 \mu\text{m}$ with an average of $0,63 \mu\text{m}$.
- The process connectors are designed according to DIN 11864. Where type EF is according to DIN 11864-2 and type EC is according to DIN 11864-3. These connectors are on the EHEDG Position Paper P1 and have a controlled gasket compression by a metal stop.
- The geometry of the process connectors complies with the EHEDG HDC with no internal angle less than 135° and all radii are 3 mm or larger.

Drainability and Installation

- The installation instructions specify that the drain hole (leakage hole) in the flange must be facing downwards
- The installation instructions are provided that specify correct and drainable installation with reference to EHEDG HDC.
- When applied as a pipe connection there is no dead-leg.
- When applied for a flat sensor blind end installation there is a dead leg which must comply with the $L/D \leq 1$ criterion (allowed versions are listed in the tables under evaluated items).

Cleaning

- The installation instructions are provided specify that all surfaces must be cleanable by direct spray.

Adhesives, Lubricants and Signal Transfer Liquids

- No adhesives, lubricants or signal transfer liquids are used in the construction

Conclusion

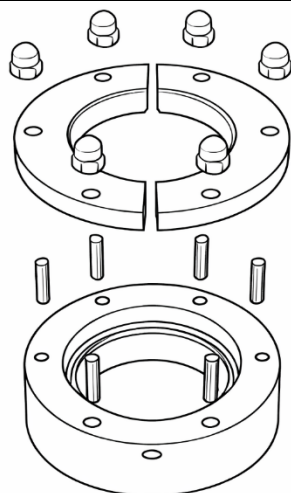
The Hygienic Design Criteria Evaluation Report concludes that the **Clean Seal Connector types: EC-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 009) according to DIN 11864-3 and EF-CSCWWWWXXX-ZZZ-YYY (YYY: 001 to 016) according to DIN 11864-2, XXX is the external height and ZZZ is either DIN, ISO or ASM** fully comply¹ with the applicable EHEDG Hygienic Design Criteria for Hygienic Equipment Class I and that the use of the EHEDG Certified logo Type EL CLASS I is justified.



Name: Dr. A. Friis

Date: June 24th, 2026

¹ Equipment which fully complies with the applicable EHEDG HDC and contains no internal joints other than welds can be certified as TYPE EL-CLASS I without testing according to Document 2.



Preparation and Installation

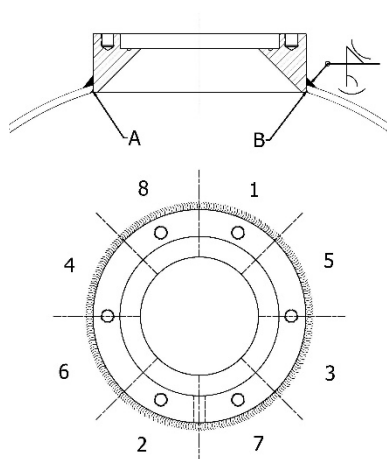
Before installation, remove locking ring, stud bolts and nuts completely.

Sealing surfaces and welding areas must be metallic clean, degreased and free from contamination.

Clean Seal Connector adaption to shell/head curvature shall be performed without damaging material properties and component straightness.

After adaption to shell/head curvature the minimum height of the Clean Seal Connector shall not be below minimum height as referenced on the component certificate. For EHEDG approval the center length shall not be larger than EHEDG XXX as referenced on component certificate.

For EHEDG compliance installation shall comply to current version of EHEDG position paper P1, all surfaces shall be cleanable (direct spray) after installation from inside and/or outside.



Welding Procedure

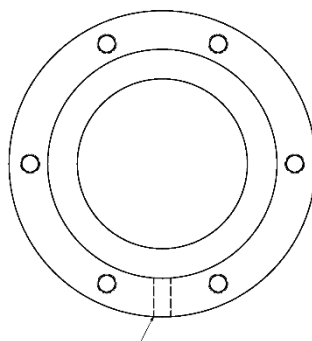
Align flange at reference points A and B flush with the internal vessel wall.

Grinding or machining of the flange after positioning is not permitted.

Welding shall be performed using a controlled segment sequence to minimize distortion.

After each segment, allow natural cooling under ambient air conditions.

After welding, straightness shall be verified



IMPORTANT - drainhole facing downwards

Flange Orientation and Inspection

The drain hole must be positioned at the 6 o'clock orientation.

Execute weld according to the defined segment sequence and verify alignment, distortion and seating after completion.

Welding must be performed according to valid WPS by qualified personnel.

Welding work from customer: quality of weld joint according to EN 5817 level B

Important: At pressure vessel note the prescriptions of the AD-instructions sheets or EN 13445-4

Document Information

Document No.	LP-CSC-001
Revision	05
Date	2026-03-26
Product	CS-Connector
Scope	Installation and welding into pressure vessels or tanks



TYPE EL
CLASS I

JUNE 2026