



Component Certificate

Issued to declare conformity to

EN13445:2024, AD2000 and Pressure Equipment Directive 2014/68/EU



This Component Certificate is issued under the sole responsibility of LEOPOLD PARTS ApS. We, LEOPOLD PARTS ApS declare that the design and manufacturing of the Clean Seal Connectors described below is in conformity with EN13445:2024, AD2000 and essential safety requirements 2.2, 3.1.1, 3.1.5, 4.1, 4.2, 4.3 ref. Annex I of the Pressure Equipment Directive 2014/68/EU.

CSC designation	Height XXX	Clamp standards ZZZ	Drawing references
CSC0100XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0100XXX-DIN-101, CSCWWWWW-110
CSC01270XXX-ASM	15 to 400mm	ASM (ASME)	CSC01270XXX-ASM-101, CSCWWWWW-114
CSC0150XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0150XXX-DIN-101, CSCWWWWW-111
CSC01905XXX-ASM	15 to 400mm	ASM (ASME)	CSC01905XXX-ASM-101, CSCWWWWW-113
CSC0200XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0200XXX-DIN-101, CSCWWWWW-112
CSC0250XXX-SMS	15 to 400mm	SMS (DS/SMS3008)	CSC0250XXX-SMS-101, CSCWWWWW-101
CSC0250XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0250XXX-DIN-101, CSCWWWWW-101
CSC0254XXX-ASM	15 to 400mm	ASM (ASME)	CSC0254XXX-ASM-101, CSCWWWWW-101
CSC0380XXX-SMS	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008)	CSC0380XXX-SMS-101, CSCWWWWW-102
CSC0400XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0400XXX-DIN-101, CSCWWWWW-102
CSC0381XXX-ASM	15 to 400mm	ASM (ASME)	CSC0381XXX-ASM-101, CSCWWWWW-102
CSC0510XXX-SMS	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008)	CSC0510XXX-SMS-101, CSCWWWWW-103
CSC0500XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0500XXX-DIN-101, CSCWWWWW-103
CSC0508XXX-ASM	15 to 400mm	ASM (ASME)	CSC0508XXX-ASM-101, CSCWWWWW-104
CSC0635XXX-SMS	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008)	CSC0635XXX-SMS-101, CSCWWWWW-104
CSC0635XXX-ASM	15 to 400mm	ASM (ASME)	CSC0635XXX-ASM-101, CSCWWWWW-104
CSC0761XXX-SMS	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008)	CSC0761XXX-SMS-101, CSCWWWWW-105
CSC0650XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0650XXX-DIN-101, CSCWWWWW-105
CSC0762XXX-ASM	15 to 400mm	ASM (ASME)	CSC0762XXX-ASM-101, CSCWWWWW-105
CSC0800XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC0800XXX-DIN-101, CSCWWWWW-107
CSC1016XXX-SMS	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008)	CSC1016XXX-SMS-101, CSCWWWWW-106
CSC1000XXX-DIN	15 to 400mm	DIN (DIN32676)	CSC1000XXX-DIN-101, CSCWWWWW-106
CSC1016XXX-ASM	15 to 400mm	ASM (ASME)	CSC1016XXX-DIN-101, CSCWWWWW-106
CSC1250XXX-DIN	20 to 400mm	DIN (DIN32676)	CSC1250XXX-DIN-101, CSCWWWWW-108
CSC1500XXX-DIN	20 to 400mm	DIN (DIN32676)	CSC1500XXX-DIN-101, CSCWWWWW-109
Design code		EN13445:2024 & AD2000	
Design pressure (min/max)		-1/16Barg	
Design temperature (min/max)		-100 (-46)* / 200 C° *min. temp for 1.4462 and 1.4410 material	
Materials (wetted)		1.4404, 1.4539, 1.4462, 1.4410, 2.4819	
Materials (non-wetted)		1.4301, 1.4404, 1.4539, 1.4462, 1.4410, 2.4819	
Surface roughness, wetted		R _a ≤0,8µm	
Surface roughness, non-wetted		R _a ≤0,8µm	
Approval Body		TÜV NORD Scandinavia AB Gåsebäcksvägen 20 252 27 Helsingborg Sweden	
Design Examination Confirmation		Report No. 81030601 rev. 02	
Validity		June 2029	
Conditions for use			
1. It is installers/end users responsibility that the Clean Seal Connectors are not used outside above listed design parameters			
2. Clean Seal Connector shall not be exposed to external forces and moments			
3. Sanitary design is only ensured, when using corresponding clamp standards and when installed so drain ability is possible.			
4. Clean Seal Connector adaption to shell/head curvature shall be performed without damaging material properties and component straightness			
5. After adaption to shell/head curvature the minimum height of the Clean Seal Connector shall not be below 15 mm or 20 mm as applicable			
6. The Clean Seal Connector shall be rotated in position to ensure drain hole facing downwards			
7. Remove locking rings, bolts and nuts before welding			
8. Welding shall be performed according to qualified welding procedures and by certified welders			
9. After welding, straightness shall be verified			
10. Pressure test shall be performed after weld-in in accordance with equipment design criteria i.e. max. test pressure 29Barg			
11. The Clean Seal Connector design is Patent-Pending			
12. CSC and locking ring are covered by EN10204 3.1 material certificates. LEOPOLD PARTS ApS declares that all materials comply with regulation (EC) 1935/2004 and (EC) 2023/2006 (product affected parts)			
Date of signature		2026-06-25	
Name and position		Gitte Kildbane, CEO <i>Gitte Kildbane</i>	

ADVANTAGES

	100% HYGIENIC DESIGN Many commonly available tank connections exhibit internal geometric deviations when connection elements from different Systems are combined. This can result in edges or gaps where residues may accumulate – a potential hygiene risk, especially in process-critical areas. Our CS-Connector is specifically designed to ensure a continuous internal diameter between the connection and the pipeline. This minimizes dead space and supports a cleaning-friendly, hygienic design.
	HIGHER PRESSURE RATING The conventional tank connector is only approved up to PN7, while many tanks are designed for operating pressures above 7 bar(g). In contrast, our CS-Connector is approved up to PN16 – that is, 16 bar(g).
	DRAIN HOLE WITH QUICK LEAK DETECTION The conventional tank connector has four grooves that allow drainage from the top side of the clamp. In contrast, our CS-Connector features a dedicated drain hole that covers both the top of the clamp and the connection itself. This ensures complete drain ability and enables direct leakage detection – improving reliability and allowing for faster troubleshooting during operation.
	STABILITY DURING WELDING The conventional tank connector has four “grooves” that create weak points in the construction. During welding, heat is introduced, and the presence of these grooves causes the connector to deform and become misaligned. As a result, additional time is required during production to straighten the connector after welding – yet full straightness, as before welding, is rarely achieved. In contrast, our CS-Connector is designed to remain stable throughout the welding process, increasing its strength and reliability. At the same time, it saves production time, as the CS-Connector retains its shape and requires no post-weld straightening.
	SIMPLE, INTUITIVE INSTALLATION When welding the conventional tank connector, the welder must measure the distance between the bolts to ensure that all connectors are properly aligned in a vertical position for the locking rings. In contrast, the CS-Connector only needs to be aligned with the drain hole facing downward. This makes it quick and consistent to position correctly during welding.
	TRANSPARENT QUALITY DOCUMENTATION With the CS-Connector, in addition to EN 10204 3.1 material certificates, a component certificate in accordance with EN 13445 and PED 2014/68/EU is also provided. The TÜV design approval can be download from our website. Tank manufacturers can include this TÜV approval directly in their design documentation, eliminating the need for separate calculations for the CS-Connector.
	HIGH-QUALITY MATERIALS The CS-Connector is manufactured as standard using EN-compliant materials. As a result, tank manufacturers do not need to carry out a PMA (Particular Material Appraisal) when CE-marking the tank in accordance with PED 2014/68/EU.