Datasheet

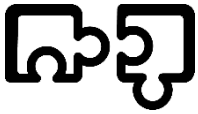
Leopold Clean Seal Connectors

CSC designation	Height XXX	Clamp standards ZZZ
CSC0250XXX-ZZZ CSC0250XXX-ZZZ CSC0254XXX-ZZZ	15 to 400mm	SMS (DS/SMS3008) DIN (DIN32676) ASM (ASME)
CSC0380XXX-ZZZ CSC0400XXX-ZZZ CSC0381XXX-ZZZ	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008) DIN (DIN32676) ASM (ASME)
CSC0510XXX-ZZZ CSC0500XXX-ZZZ CSC0508XXX-ZZZ	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008) DIN (DIN32676) ASM (ASME)
CSC0635XXX-ZZZ CSC0635XXX-ZZZ	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008) ASM (ASME)
CSC0761XXX-ZZZ CSC0650XXX-ZZZ CSC0762XXX-ZZZ	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008) DIN (DIN32676) ASM (ASME)
CSC0800XXX-ZZZ	15 to 400mm	DIN (DIN32676)
CSC1016XXX-ZZZ CSC1000XXX-ZZZ CSC1016XXX-ZZZ	15 to 400mm	SMS (ISO2852/SMS3017 and DS/SMS3008) DIN (DIN32676) ASM (ASME)
CSC1250XXX-ZZZ	20 to 400mm	DIN (DIN32676)
CSC1500XXX-ZZZ	20 to 400mm	DIN (DIN32676)
Design code		EN13445:2024
Design pressure (min/max)		-1/16Barg
Design temperature (min/max)		-100 / 200 C°
Materials (wetted)		1.4404 or 316L
Materials (non-wetted)		1.4301 or 304
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

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 29 Barg
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) 1935/204 and (EC) 2023/2006 (product affected parts)

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 s pace 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.