



## ASEPTIC CENTRIFUGAL SANITARY PUMPS CSD SERIES



HYGIENE



BIOTECHNOLOGY

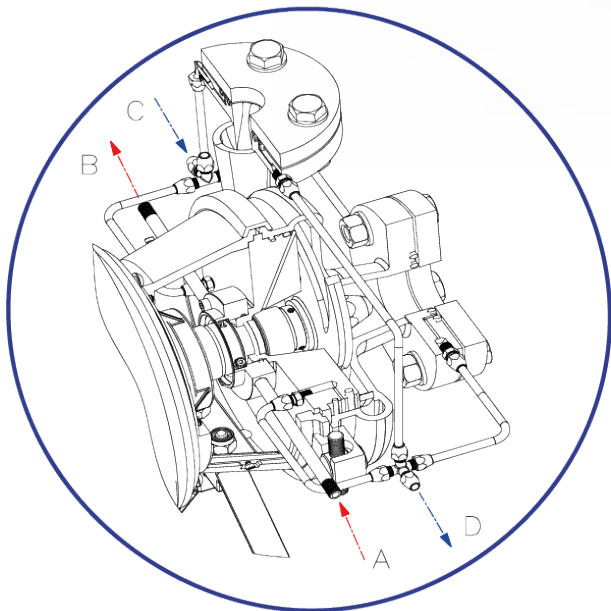
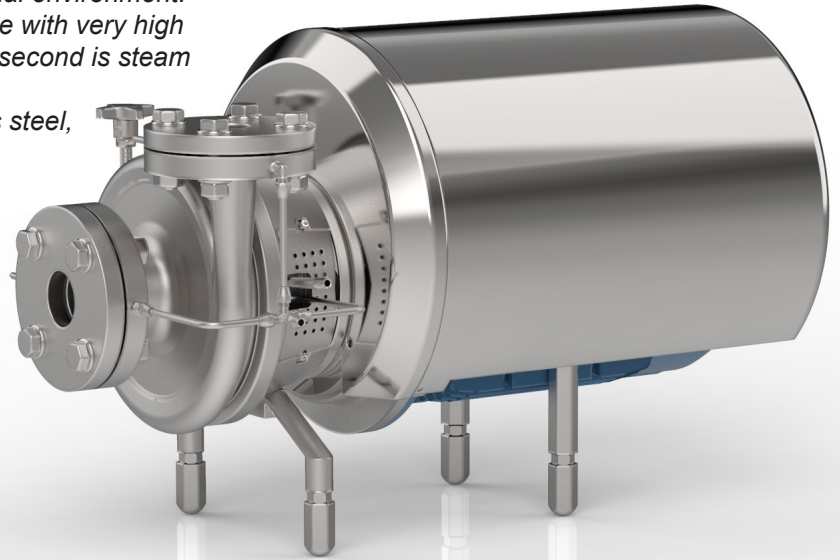


INDUSTRIAL

Closed coupled hygienic and aseptic centrifugal pumps with open impellers.  
For optimal product security, the CSD aseptic series incorporates a steam protection barrier between the pumped product and the external environment.  
It is composed of two different flushing systems: one with very high temperature water for the mechanical seal and the second is steam on the product pump connections.  
Wetted parts in CF-3M 1.4404 / AISI 316L stainless steel, investment cast and electro-chemically polished.  
Special internal finishes to 0,5 micron Ra are available on request.  
The clamp casing and seal design allows quick disassembly for inspection, cleaning and maintenance.  
Separate IEC standard motor.  
For aggressive products and environments, CSD pumps can on special request, be manufactured in the following materials:

- Superduplex
- Nickel steel

Note: upon availability with CSF



### Flushing pipes connections: 1/8" GAS

- A - Mechanical seal flushing inlet
- B - Mechanical seal flushing outlet
- C - Flushing inlet of the casing / cover barrier and inlet - outlet port flanges
- D - Flushing outlet of the casing / cover barrier and inlet - outlet port flanges

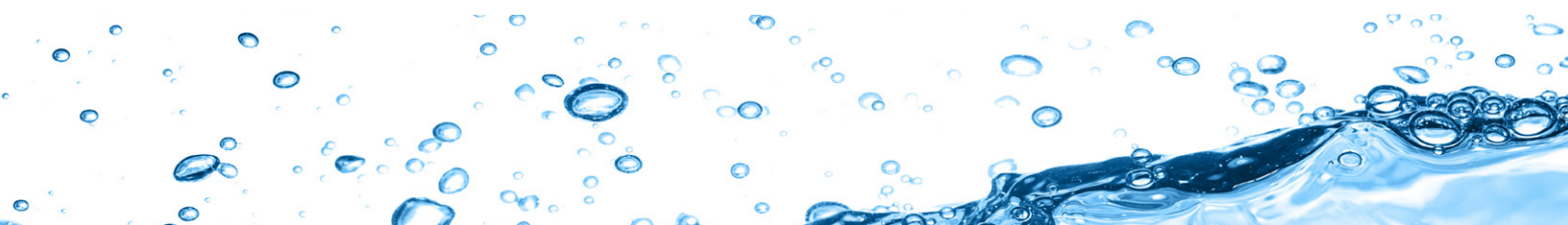
### Steam protective barrier

The steam piping must be connected to the "C" inlet fitting. The steam creates a sterile protection barrier for the pumped product by circulating inside the circuit positioned between the casing / cover and the inlet and outlet flanges.

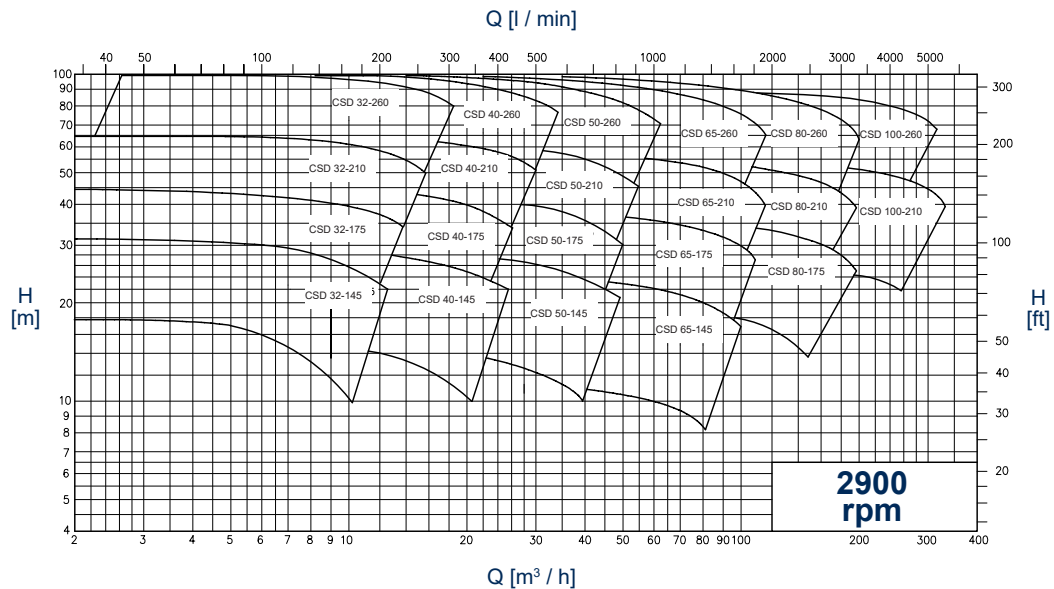
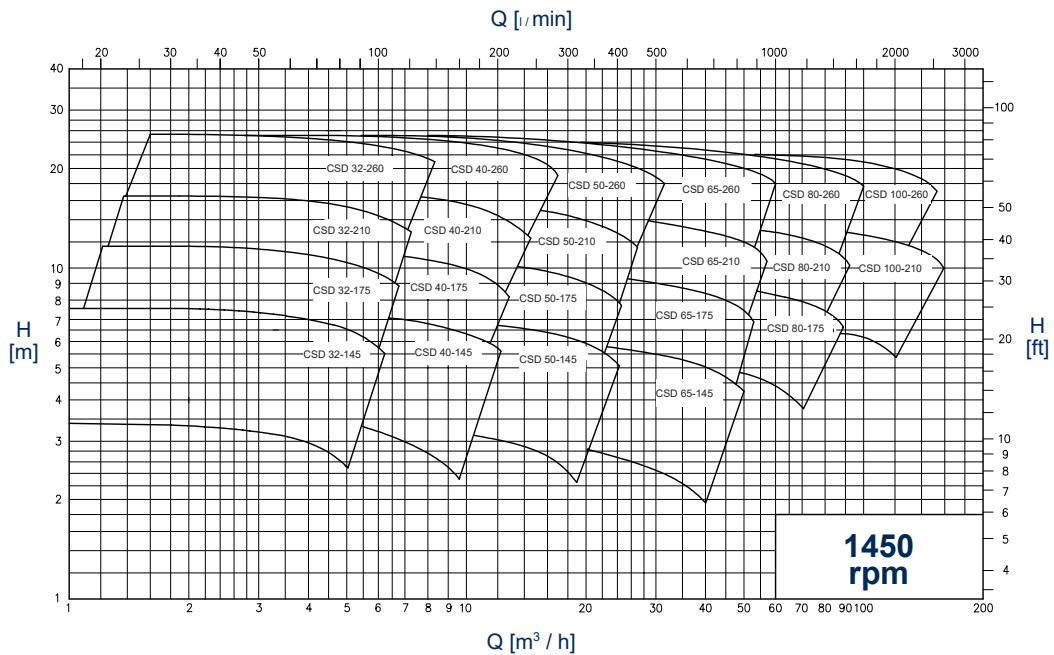
The steam collecting piping will be connected to the "D" steam outlet fitting.

The piping conveying the overheated water for cooling of radial seal must be connected at the inlet to the "A" pipe and at the outlet to the "B" pipe

**Note: For the good running of the pump it is important that the flushing liquid circulate inside the mechanical seal box before the pump start-up and it must be suspended after the pump stop only. Make closed-loop connection of the D steam outlet fitting to avoid contact with the atmosphere.**



**GENERAL DIAGRAMS**  
(Performance applies to H<sub>2</sub>O at 20 °C, 1013 mbar, Data not binding)



**TECHNICAL DATA**

Flow rates up to 300 m<sup>3</sup>/h  
Heads up to 90 m  
Maximum operating pressure 10 bar up to 100°C  
Temperature range -20°÷ +100°  
High performance, with low NPSH values.

**Connections:**

UNI EN1092-1 PN16 flanges.

**Mechanical seals:**

Protected, balanced and bi-directional mechanical seals with seats to EN12756, ISO3069 standards.  
Single internal mechanical seal with external protective barrier "V".

The "V execution" seal system is composed of an internal, protected, balanced and bi-directional mechanical seal with seats according to EN 12756 - ISO 3069 standards in direct contact with the product and of an external radial seal for the high temperature flushing liquid.

Use sterile condensate with flow rate 0.5 ÷ 1 l/min and pressure ≤ 1 Bar.

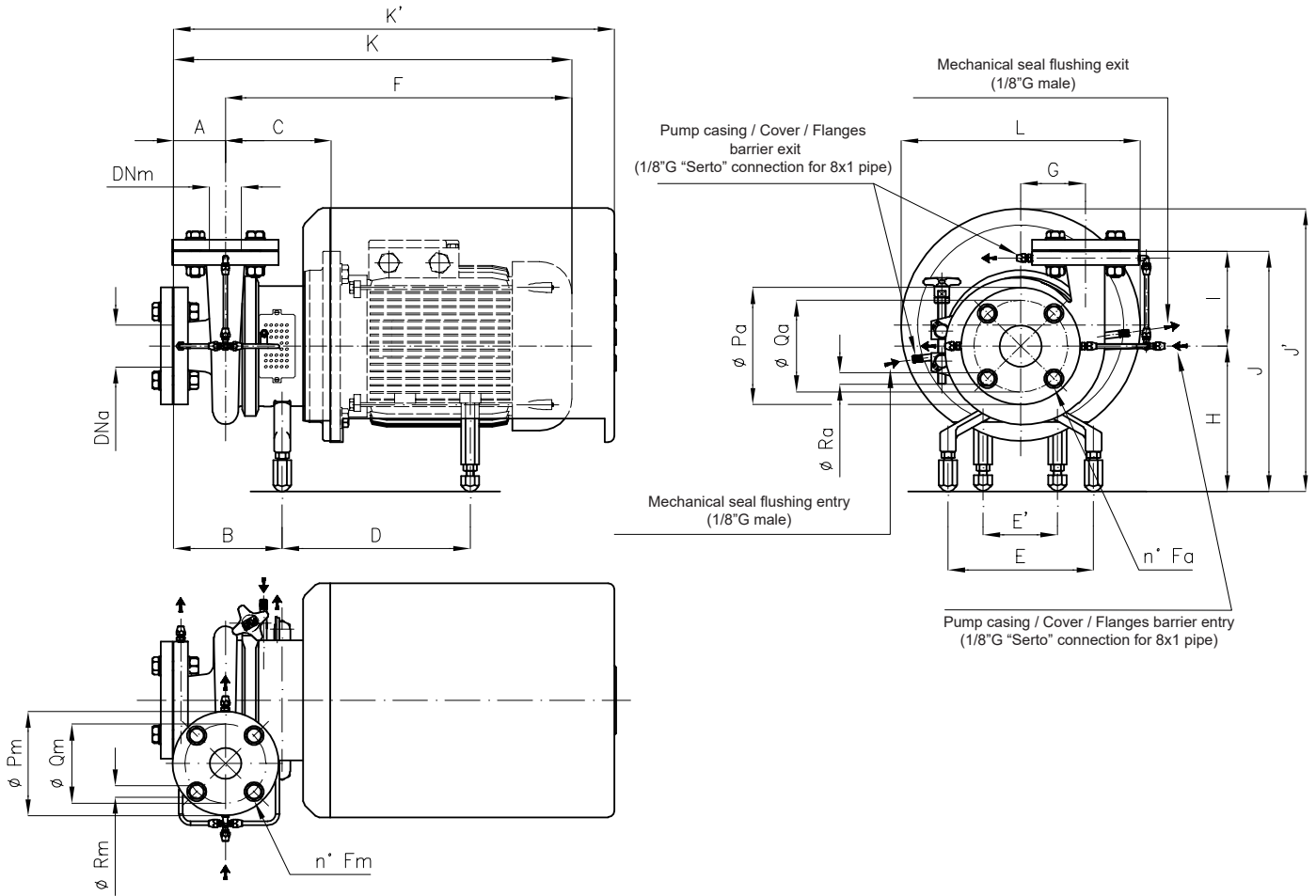
**Technical Data for Sterilisation:**

Maximum steam pressure: 3 Bar  
Maximum steam temperature : 130°C

**Elastomers (FDA Regulation (EC) No. 1935/2004):**

- Nitrile (NBR)
- Ethylene propylene (EPDM)
- Special fluorocarbon seal
- Fluorocarbon seal (FPM - FKM)
- FEP
- FFPM - FFKM
- Silicone

## OVERALL DIMENSIONS



Dimensions not binding - DN = UNI EN 1092-1 PN 16 flanges, with standard IEC/EN motors

Pump type	IEC motor dimensions:	DNa	DNm	A	B	C	D	E	E'	F	G	H	K	K'	I	J	J'	L	Ø Pa	Ø Qa	Ø Ra	Ø fa	Ø Rm	Ø Qm	Ø Rm	Ø fm
CSD 32-145	80	40	32	80	167	138	231	225	-	372	85	208	452	566	135	343	372	298	150	110	18	4	140	100	18	4
	419									499			635													
	475									555			635													
	468									548			635													
CSD 32-175	80	40	32	80	167	139	231	225	-	373	95	213	453	567	135	348	377	298	150	110	18	4	140	100	18	4
	420									500			636													
	476									556			636													
	469									549			636													
CSD 32-210	80	40	32	88	166	139	231	225	-	373	110	221	461	575	155	376	385	298	150	110	18	4	140	100	18	4
	420									508			644													
	476									564			644													
	469									549			644													
	283									634			688													
	281									672			743													
CSD 32-260	160	50	32	90	184	164	301	225	-	444	140	221	534	601	177	398	385	298	165	125	18	4	140	100	18	4
	500									590			649													
	493									583			649													
	570									660			714													
	292									698			769													
	290									698			769													
CSD 40-145	80	50	40	80	168	139	231	225	-	373	90	208	453	567	133	341	372	298	165	125	18	4	150	110	18	4
	420									501			636													
	476									556			636													
	469									549			636													
CSD 40-175	80	50	40	80	169	141	231	225	-	375	95	213	455	638	140	353	377	298	165	125	18	4	150	110	18	4
	422									502			638													
	478									558			638													
	471									551			638													
	275									629			683													
	273									667			738													
CSD 40-210	160	50	40	80	161	141	231	225	-	375	115	221	455	569	165	386	385	298	165	125	18	4	150	110	18	4
	422									502			638													
	478									558			638													
	471									551			638													
	283									629			683													
	281									667			738													

Pump type	IEC motor dimensions:	DNa	DNm	A	B	C	D	E	E'	F	G	H	K	K'	I	J	J'	L	Ø Pa	Ø Qa	Ø Ra	Ø fa	Ø Rm	Ø Qm	Ø Rm	Ø fm								
CSD 40-260	90	50	40	100	194	163	231	225	-	444	145	238	544	611	167	388	385	298	165	125	18	4	150	110	18	4								
	100					164	301			500			600	681		405	443	330																
	112					185	292			290			180	570		708	779	414									510	430						
	132 M-S																												225	412	230	719	819	978
	132 MB					180	225			532			279	785		885	1094	414									510	430						
160	141	231	374	422	208	510	577	353	372	298																								
CSD 50-145	80	65	50	86	170	142	301	225	-	374	95	225	462	577	145	353	372	298	185	145	18	4	165	125	18	4								
	90									478			566	646		370	430	330																
	100									471			559	637		691	447	370																
	112									180			549	637		691	447	370																
	132									141			231	374		422	213	454									569	363	377	298				
CSD 50-175	80	65	50	80	169	142	301	225	-	374	100	230	558	638	150	380	435	330	185	145	18	4	165	125	18	4								
	90									478			558	638													435	330						
	100									471			551	638													435	330						
	112									180			549	629													683	452	370					
	132 M-S									164			275	185													587	667	738					
132 MB	208	400	230	702	782	937	493	430																										
160	141	231	422	478	221	502	569	391	385	298																								
CSD 50-210	90	65	50	80	161	142	301	225	-	478	120	238	551	638	170	408	460	370	185	145	18	4	165	125	18	4								
	100									471			551	638													460	370						
	112									180			549	629													683	460	370					
	132 M-S									164			283	185													587	667	738					
	132 MB									208			408	230													702	782	937	501	430			
160	171	223	279	783	448	863	1072	418	580	420																								
CSD 50-260	80	65	50	90	186	165	301	225	-	501	145	238	591	671	175	413	443	330	185	145	18	4	165	125	18	4								
	90									494			584	671													413	443	330					
	100									230			722	812													971	422	510	430				
	112									228			412	279													788	247	878	1087	422	510	430	
	132 M-S									145			231	379													426	208	458	572	353	372	298	
CSD 65-145	90	80	65	79	173	146	301	225	-	482	112	225	563	642	145	370	430	330	200	160	18	8	185	145	18	4								
	100									475			555	642													430	330						
	112									180			553	632													686	447	370					
	132 M-S									168			274	185													591	670	741					
	132 MB									212			399	230													706	785	940	488	430			
160	144	231	425	481	213	505	572	363	377	298																								
CSD 65-175	90	80	65	80	172	145	301	225	-	481	120	230	554	641	150	380	452	370	200	160	18	8	185	145	18	4								
	100									474			554	641													435	330						
	112									180			552	632													686	452	370					
	132 M-S									167			275	185													590	670	741					
	132 MB									211			400	230													705	785	940	493	430			
160	182	224	279	784	241	864	1073	391	573	420																								
CSD 65-210	80	80	65	90	189	168	231	225	-	449	135	238	595	605	175	413	443	330	200	160	18	8	185	145	18	4								
	90									505			595	605													413	443	330					
	100									498			588	675													413	443	330					
	112									231			412	230													725	247	815	974	422	510	430	
	132 M-S									169			301	230													725	247	881	1090	422	510	430	
132 MB	231	412	279	791	247	881	1090	422	510	430																								
CSD 65-260	90	80	65	100	198	168	301	225	-	504	155	238	604	684	205	443	460	370	200	160	18	8	185	145	18	4								
	100									497			597	684													443	330						
	112									180			575	675													729	460	370					
	132 M-S									190			292	185													613	713	785					
	132 MB									230			412	230													724	824	983	452	510	430		
160	230	412	279	790	247	890	1099	452	510	430																								
CSD 80-175	80	100	80	100	205	174	301	225	-	510	139	230	610	690	164	394	435	330	220	180	18	8	200	160	18	8								
	90									503			610	690													435	330						
	100									180			580	680													734	452	370					
	112									195			290	230													730	241	830	989	405	504	430	
	132 M-S									236			411	279													796	241	896	1105	405	573	420	
CSD 80-210	80	100	80	100	201	171	301	225	-	507	145	238	607	687	185	423	443	330	220	180	18	8	200	160	18	8								
	90									500			607	687													443	330						
	100									180			578	678													732	460	370					
	112									193			292	230													727	247	827	986	432	510	430	
	132 M-S									233			412	279													793	247	893	1102	432	510	430	
CSD 80-260	100	100	80	100	201	171	301	225	-	507	165	238	607	687	209	447	443	330	220	180	18	8	200	160	18	8								
	112									500			607	687													443	330						
	132									180			585	696													750	452	460	370				
100-210	132	125	100	111	219	200	292	225	180	585	161	238	696	750	214	452	460	370	250	210	18	8	220	180	18	8								
	180												240	532													279	800	247	911	1120	461	579	420
CSD 100-260	132 MB	125	100	115	218	195	290	225	185	618	186	238	733	804	216	454	460	370	250	210	18	8	220	180	18	8								
	160												235	412													230	729	247	844	1003	463	510	430
	180												235	532													279	795	247	910	1118	463	510	430



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