

## ASEPTIC CENTRIFUGAL SANITARY PUMPS CSD SERIES

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,

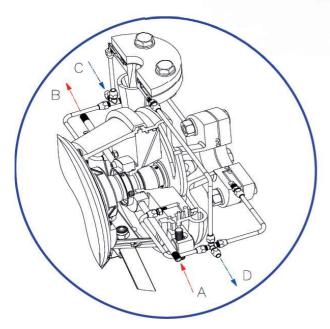
investment cast and electro-chemically polished. Special internal finishes to 0,5 micron Ra are available on request.

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

Mechanical seal flushing inlet

Mechanical seal flushing outlet

Flushing inlet of the casing / cover barrier and inlet - outlet port flanges

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.

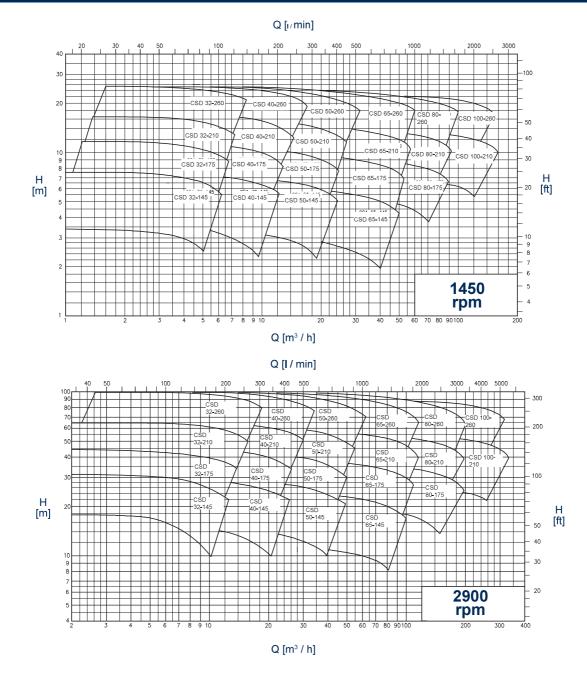
The piping conveying the overheated water for cooling of radial seal must be connected at the inlet to the "A" pipe and at the outlet to the "B" pipe

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.





# (Performance applies to $H_2O$ at 20 °C, 1013 mbar, Data not binding)



### **TECHNICAL DATA**

Flow rates up to 300 m<sup>3</sup>/h Heads up to 90 mH<sub>2</sub>O Maximum operating pressure 10 bar up to 100°C Temperature range  $-20^{\circ} \div +100^{\circ}$ 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  $\div$  1 l/min and pressure  $\leq$  1 Bar.

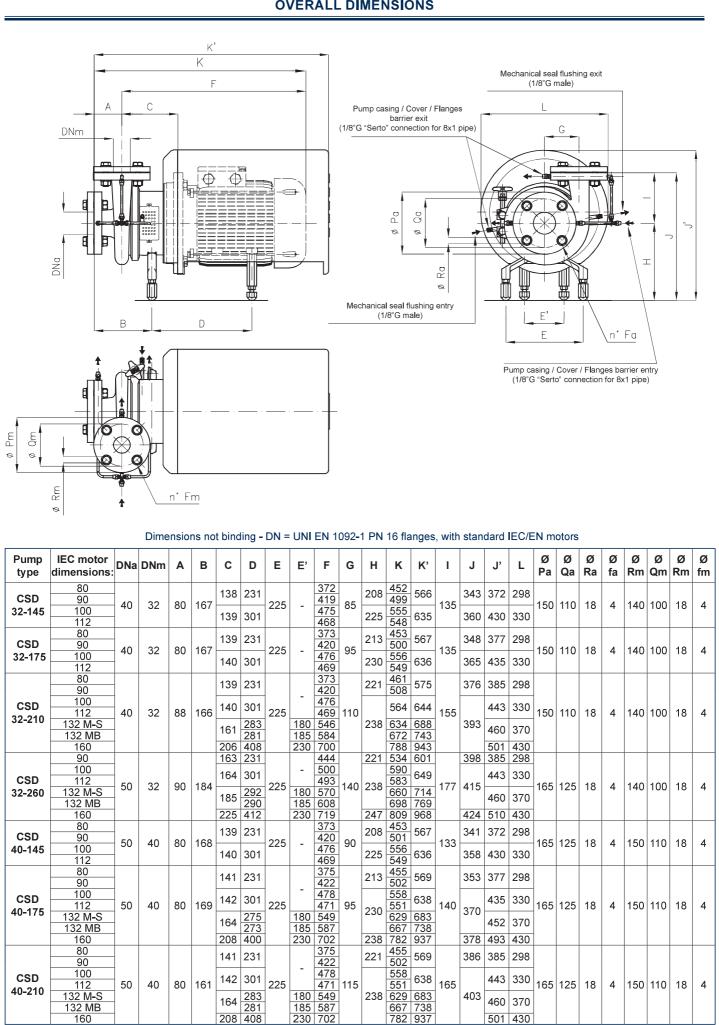
## **Technical Data for Sterlisation:**

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**



Pump type	IEC motor dimensions:	DNa	DNm	A	в	с	D	Е	E'	F	G	н	к	к'	I	J	J'	L	Ø Pa	Ø Qa	Ø Ra	Ø fa	Ø Rm	Ø Qm	Ø Rm	Ø fm
CSD 40-260	<u>90</u> 100	50		100	194	163				444 500	145	221			167	388	385				18	4	150	110	18	4
	112		40			164	301			493		238	600 593	681		405	443	330								
	132 M-S 132 MB					185	292 290	225		570 608		200		724 779		400	460	370	165 1	125						
	160					225	412		230	719		247	819	978		414	510									
	180 80					141	<u>532</u> 231		279	374		208	462	1094 577	•	353		420 298								
CSD	90	0 65 2 2	50	86	170			225	-	422 478	8 95 1 9 4	200	510 566			555			185	145	18	4	165	125	18	4
50-145	112					142	301			471		225	559	646		370	430			140						-
	132 80						274 231		180	549 374		213	637 454	691 569		262										
CSD 50-175	90 100	-	50	80	169	141			-	422 478	100	213	502 558		150	363	377	298			5 18	4	165	125	18	4
	112	65				142	301	225		471			551	638		380	435	330		145						
	132 M-S 132 MB					164	275 273		180 185	549 587		230	629 667				452	370								
	160 90						400		230	702		224	782	937		201	493 385			$\left  - \right $				$\parallel$		
CSD 50-210	100	65	50	80	161	141 142	<u>231</u> 301		-	422 478	120	221	502 558	569 638	170	391	443			35 145	18	4	165	125	18	4
	112 132 M-S							225	180	471 549		238	551 629	683		408										
	132 MB					164	281		185	587			667	738			460									
	160 180					208 223			230 279	702 783	-	248		937 1072		418	501 580	430 420								
CSD 50-260	100	65		90	186	165	301		-	501 494		238	591 584	671	175	413	443	330	185	145	18	4	165	125	18	4
	160		50			228	412	225	230	722	145	247	812			422	510									4
	180 80						532		279	788 379		208	458	1087 572			579 272									
CSD 65-145	90 100		65	79	173	145	231		-	426 482		200	505 563		145	353		298	200	160		8	185	145	18	4
	112					146	301	225	-	475	112	005	555	642			430	330			18					
	132 M-S 132 MB					168	274 272		180 185			225	632 670			370	447	370								
	160 90	1				212 144	399 231		230	706		213		940		363	488	430 298					<u> </u>			
	100		65	80	172	144	301		-	425 481		213	561	641	150	303	435		200 16		) 18	8	185	145	18	4
CSD	112 132 M-S	80						225	180	474 552	120	230	554 632			380				160						
65-175	132 MB					167	273		185	590			670	741			452									
	160 180				182	211 224	531		230 279	705 784		241	864	940 1073			493 573	420								
CSD 65-210	90	80	65	90	189		231		- 5	449 505	135	221	539 595		175		385		1	160	18	8		145	18	4
	112					169		225		498		238	588	675		413	443	330	200				185			
	160 180					231	412 532		230			247		974 1090		422	510 579	430					<u> </u>			
CSD 65-260	<u>100</u> 112	80		100	198	168	301		- 180 185 230	504 497	155		604 597	684	205		443	330	200 160					145	18	4
	132 M-S		65			190	292	225		575		238	675	729		443	460	370		160	18	8	185			
	132 MB 160					230	290 412			724		247	824	785 983		452	510	430								
CSD 80-175	180 100		00	100	205		532		279	790 510		247	890 1 610	1	164	452	579		220 180							
	112	2				174		0.05	-	503	400	230	603	690		394	435			180	18	8	200	160	18	
	132 M-S 160	100	80				411	225	180 230		139	2/1		734 989		105	504	430								8
	180 100					236	531		279			241		1105		405	573	420								
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	132 M-S 160	100		100	201	193	292 412	225	180 230	578 727		247		732 986	185	400	460 510		220 18	180			200			8
CSD	180					233	532		279	793		247	893	1102		432	579	420	<u> </u>		<u> </u>					
80-260	100 112	100	80	100	201	171	301		-	507 500	165		607 600	007	209	447		330	220	180	18	8	200	160	18	8
CSD 100-210	132 180	125	100	111	219	200 240	292 532	225	180 279	585 800	161	238 247		750 1120	214		460 579									
CSD	132 MB	105	100	145	240	195	290		185	618	100	238	733	804		454	460	370	250	210	18	8	220	180	18	8
100-260	160 180	125	100	115	218		412 532	225	230		186	247		1003 1118		463	510 579									



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A-PF SOLUTIONS

Quality first

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