Close-Coupled Lobe Rotor Pump

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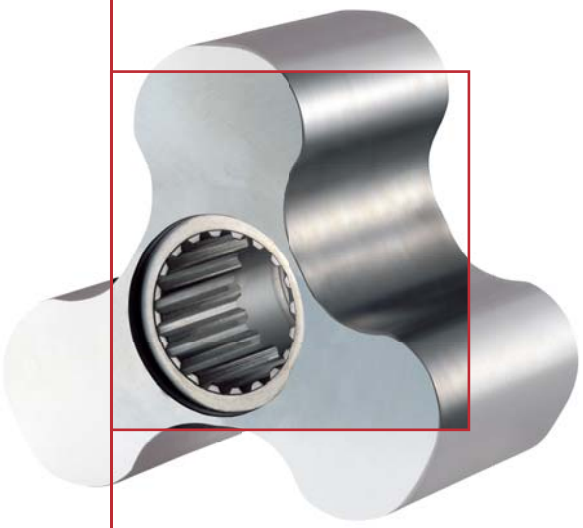


I Application

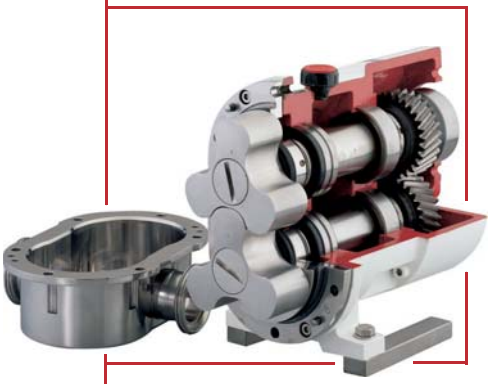
The TLS pump is a positive displacement lobular rotating pump of a sanitary design providing high performance and maximum reliability with a reduced size.
This pump is perfect for managing all kinds of fluid, of either low or high viscosity, in the food-processing, dairies, and cosmetic industries as well as for filtering and bottling applications. Fluids containing fragile solids such as junket, can be pumped without damage thanks to the specially designed lobes.

I Operating principle

The TLS pumps basically consist of two lobe rotors which rotate synchronously inside a casing without touching each other.
As the rotors rotate, the spaces between the lobes and the casing are successively filled with fluid, which is transported to the discharge nozzle with a fixed amount of displacement. The pumped fluid forms a continuous stream thanks to the tolerances between the lobes and the pump casing, thus ensuring an efficient pumping.

I Design and features

Close-coupled construction.
Casing and cover in stainless steel (investment casting).
Tri-lobe rotors.
Sanitary design of the attachment of the rotors.
DIN connections.
Sanitary mechanical seals.
Easy cleaning and maintenance.



I Materials

Parts in contact with the product	*AISI 316L*
Other parts	*AISI 304*
Support	*GG-15*
Gaskets	*EPDM in compliance with FDA*
Mechanical seals	*C/SiC/EPDM*
Internal surface finish	*Ra < 0.8 µm*
External surface finish	*bright polish*

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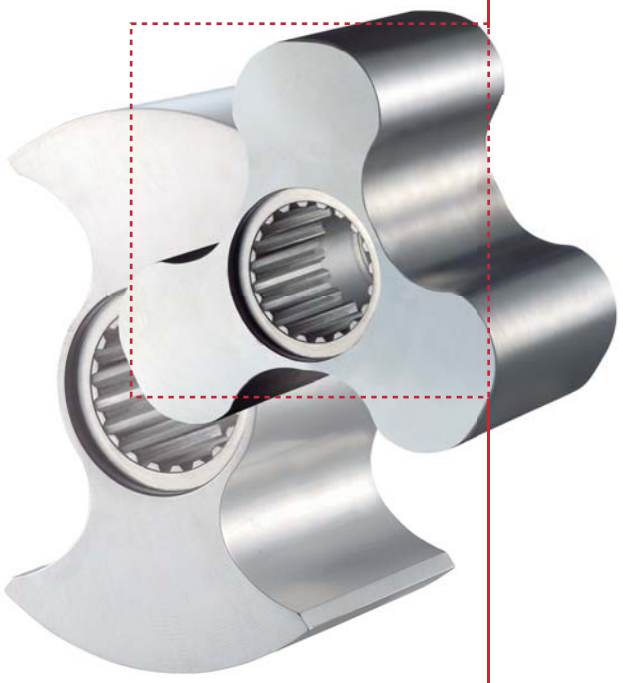
I Options

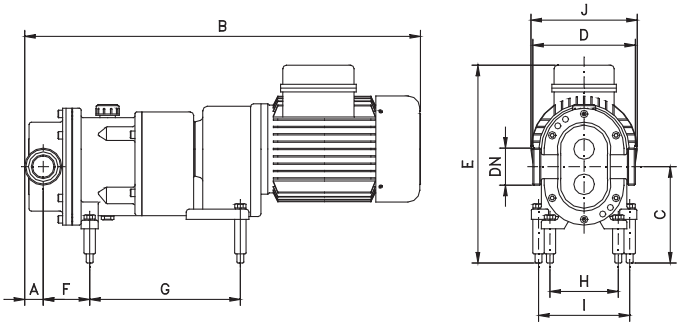
Mech.seals in SiC/SiC, TgC/SiC, C/StSt.
Packing with lip seal.
Gaskets: FPM.
External by-pass.
Bi-wing lobes.
AISI 304 drive shroud.
Several kinds of drives and protections (gearbox drive with optional frequency converter pulley drive speed selector).
Trolley and/or switchboard.
Connections: Clamp, SMS, RJT, etc.



I Technical specifications

Max. flow	*41 m³ /h*	*180 GPM*
Max. pressure	*12 bar*	*174 PSI*
Max. working temperature	*120 ºC*	*248ºF*
Max. speed	*950 rpm*	
Max. differential pressure:		
TLS 1-25, 2-40, 3-50	*12 bar*	*174 PSI*
TLS 1-40, 2-50, 3-80	*7 bar*	*102 PSI*

I General dimensions



TYPE	Motor gear		DN	A	B	C	D (*)	E	F	G	H	I	J
	kW	Size											
TLS 1-25	0,55 - 0,75	SK 01/80	25 1"	26	600	150	158	295	71	275	105	105	181
	1,1 – 1,5	SK 01/90			650			300					
TLS 1-40	0,75	SK 01/80	40 1½"	33	615		166	295	77				
	1,1 – 1,5	SK 01/90			665			300					
TLS 2-40	1,1 - 1,5	SK 20/90			695	170	190	325	82	265	120	160	203
	2,2	SK 20/100			725			355					
TLS 2-50	1,5	SK 20/90	50 2"	39	705		194	325	87				
	2,2	SK20/100			735			355					
TLS 3-50	2,2 - 3	SK25/100			840	227	239	435	97	427	160	155	228
	4	SK25/112			863			445					
TLS 3-51	5,5	SK33/132			920			470		413		175	266
TLS 3-80	3	SK30/100	80 3"	55	865		256	435	108	348		185	228
	4	SK30/112			890			445					
TLS 3-81	5,5 - 7,5	SK33/132			945			470		413		175	266

(*) Dimensions with DIN 11851 connections

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