

# Spare Parts List Ws+ Pump









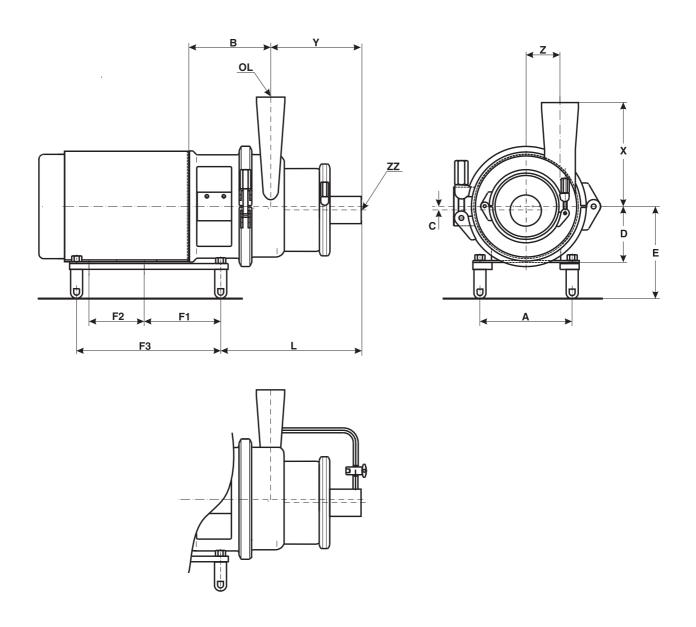
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## 7.1 Pump Dimensions



Inlet/Outlet Size	Bevel Seat	Threaded PV	TRI Clamp	APC Clamp	ISS	Male Pipe Thread	150#Flange
2.0" (51 mm)	0.750" (19 mm)	0.750" (19 mm)	1.125" (29 mm)	0.750" (19 mm)	1.125" (29 mm)	1.687" (43 mm)	1.187" (30 mm)
2.5" (63 mm)	0.844" (21 mm)	0.844" (21 mm)	1.125" (29 mm)	0.844" (21 mm)	1.125" (29 mm)	2.187" (55 mm)	1.187" (30 mm)
3.0" (76 mm)	0.906" (23 mm)	0.906" (23 mm)	1.125" (29 mm)	0.906" (23 mm)	1.125" (29 mm)	2.250" (57 mm)	1.500" (38 mm)



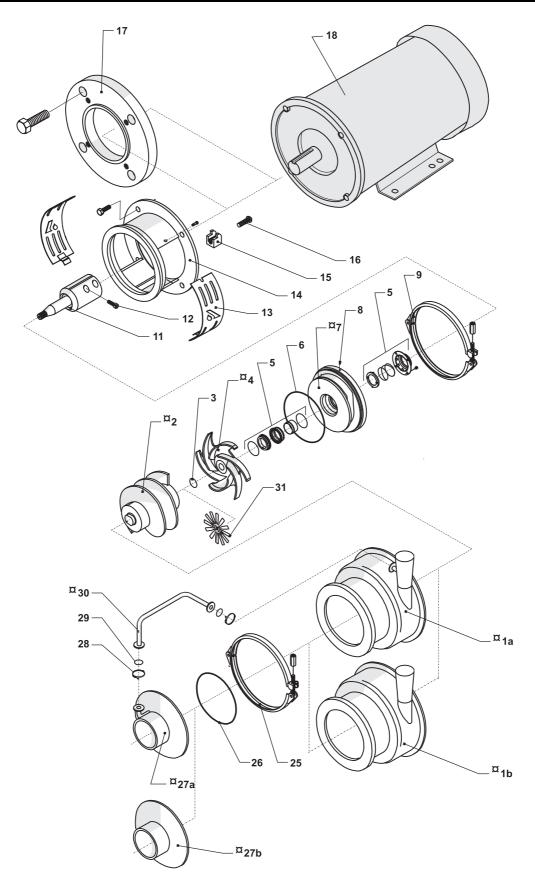
## 7.1 Pump Dimensions

Pump Type	Motor Size	F1	F2	F3	D	A	E	L	С	В	ZZ	OL	Z	X (Butt weld)	Y (Butt weld)
	143TC 145TC	3.75 (93.5)	4.00 (101.6) 5.00 (127)	10.25 (260.4)	3.50 (88.9)	5.50 (139.7)	7.00 (177.8)	9.46 (240)		5.98 (152)					
Ws+20/15	182TC 184TC	4.37 (111)	4.50 (114.3) 5.50 (139.7)	11.37 (288.8)	4.50 (114.3)	7.50 (190.5)	8.00 (203.2)	13.5 (342.9)	0.315 (8)	2.5 (63.5)	2.0 (51.6)	2.60 (66)	8.47 (215)	7.48 (190)	
213TC 215TC		5.38 (136.7)	5.50 (139.7) 7.0 (177.8)	13.88 (352.6)	5.25 (133.4)	8.50 (215.9)	8.75 (222.3)	13.36 (339.3)		(178)					
Ws+30/30	184TC 213TC 215TC	4.37 (111) 5.38 (136.7)	5.50 (139.7) 5.50 (139.7) 7.0 (177.8)	11.37 (288.8) 13.88 (352.6)	4.50 (114.3) 5.25 (133.4)	7.50 (190.5) 8.50 (215.9)	8.00 (203.2) 8.75 (222.3)	12.12 (308) 11.86 (301)	0.39	6.14 (156)	2.5 (63.5)	2.0 (51.6)	3.27	9.06	7.60
	254TC 256TC	6.50 (165.1)	8.25 (209.6) 10.00 (254)	18.00 (457.2)	6.25 (158.8)	10.00 (254)	9.75 (267.7)	12.12 (308)	(10)	6.77 (172)		(51.6)	(83)	(230)	(193)
	254TC 256TC	6.50	8.25 (209.6) 10.00 (254)	18.00 (457.2)	6.25 (158.8)	10.00 (254)	9.75 (267.7)	14.81 (376)		7.28 (185)					
Ws+44/50	284TSC 286TSC	(165.1)	9.50 (241.3) 11.00 (279.4)	19.00 (482.6)	7.00 (177.8)	11.00 (279.4)	10.50 (266.7)	14.64 (372)	0.51 (13)	6.61 (168)	3.0 (76.1)	2.0 (51.6)	3.94 (100)	8.66 (220)	9.78 (248)
	324TSC 326TSC	7.00 (177.8)	10.50 (266.7) 12.00 (304.8)	20.50 (520.7)	8.00 (203.2)	12.50 (317.5)	11.50 (292.1)	15.71 (399)		7.68 (195)					

Tolerances:	Y:	+0"	X:	+0.197"	OL;ZZ:	nominal	B:	±0.197"	L:	±0.197"	Others:	±0.079"
		-0.197"		-()"	- ,							



#### 7.2 Spare Parts Compl.





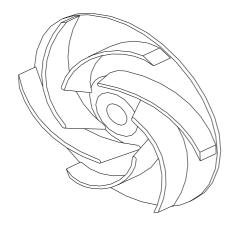
## 7.2 Spare Parts Comp.

				Pump Type				
			Ws+20/15	Ws+30/30	Ws+44/50			
Pos	Qty	Description		Part No.				
1a	1	Pump casing	L804669	L804670	L804671			
1b	1	Pump casing	L182857	L182858	L182859			
2	1	Air screw	L804675	L804676	L804677			
3	1	O-ring		s/p 9				
4	1	Impeller		s/p 6				
5	1	Shaft seal		s/p 7/8				
6	1	O-ring		s/p 9				
7	1	Back Flange	N/A	L260950	L260954			
8	1	Pin		L772493	L772493			
9	1	Clamp ring	L188430	L188432				
11	1	Shaft	s/p 10					
12	2	Screw	s/p 10					
13	2	Shaft guard		s/p 11				
14	1	Motor adaptor		s/p 11				
15	2	Bracket		L268499	L268499			
16	2	Screw		L701942	L701942			
17	1	Flange Adapter		s/p 11				
18	1	Motor		See order				
25	1	Clamp ring	L169050	L188430	L804665			
26	1	O-ring		s/p 9				
27a	1	Front cover	L804672	L804673	L804674			
27b	1	Front cover	L808296	L808297	L808298			
28	2	Clamp ring	L771837	L771837	L771837			
29	2	Gasket		s/p 9				
30	1	Re-circulation connection	L808288	L808289	L808290			
31	1	Spacer/Plastic star	L259776	L259776	L260406			
		Frame		s/p 12				

S/p XX = see page XX



7.3 Impeller Ws+

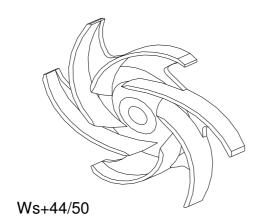


Ws+20/15 Ws+30/30

Impeller Ø	Ws+20/15 Ws+30/30 Ws+44/50				
		Part No.			
8.7" / Ø220			L253777		
8.5" / Ø215			L253778		
8.3" / Ø210			L253779		
8.1" / Ø205			L253780		
7.9" / Ø200			L253781		
7.7" / Ø195			L253782		
7.5" / Ø190			L253783		
7.3" / Ø185			L253784		
7.1" / Ø180			L253785		
6.9" / Ø175		L267000	L253786		
6.7" / Ø170		L267001	L253787		
6.5" / Ø165		L267002	L253788		
6.3" / Ø160		L267003	L253789		
6.1" / Ø155		L267004			
5.9" / Ø150		L267005			
5.7" / Ø145		L267006			
5.5" / Ø140	L253767*	L267007			
5.3" / Ø135	L253768	L267008			
5.1" / Ø130	L253769	L267009			
4.9" / Ø125	L253770	L267010			
4.7" / Ø120	L253771	L267011			
4.5" / Ø115	L253772				
4.3" / Ø110	L253773				
4.1" / Ø105	L253774				
3.9" / Ø100	L253775				
3.7" / Ø95	L253776				
*5 5" / Ø142		•			

Pump type

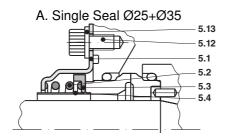
\*5.5" / Ø142

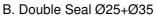


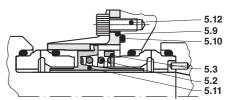


7.4 Shaft Seal Ws+

#### 7.4.1 Fixing Kit

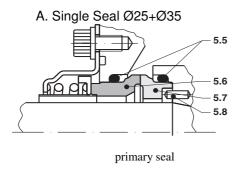


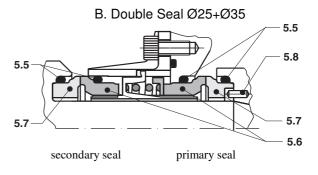




		Fixing Kit		Shaf	t size
		FIXING KIL		Ø25	Ø35
Pos	Description	Items	Part	t No.	
Α	Single seal	Complete		L772460	L772465
	_	Pos 5.1 Seal housing	AISI 316		
		Pos 5.2 Spring	AISI 316		
		Pos 5.3 Pressure ring	AISI 316		
		Pos 5.4 Drain pipe	PTFE	(L773100)	(L773101)
В	Double seal	Complete		L194448	L194449
		Pos 5.2 Spring	AISI 316		
		Pos 5.3 Pressure ring	AISI 316		
		Pos 5.9 Seal housing	AISI 316		
		Pos 5.11 Pressure ring	AISI 316		
5.10		O-ring	EPDM	L772470	L771362
5.12		4 Screws M6x10	AISI 316	L770496	L770496

#### 7.4.2 Face Kit

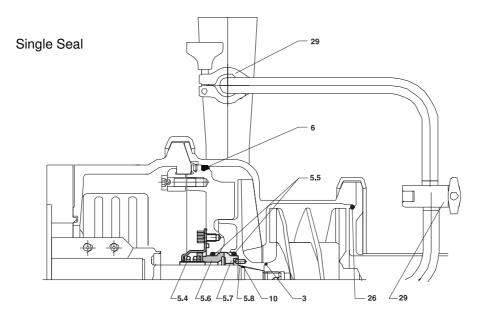


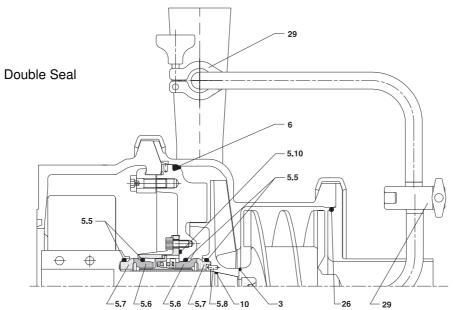


		Chaft and		Shaf	t size
		Shaft seal		Ø25	Ø35
Pos	Description	Items	Material	Par	No.
Α	Schaftdichtung Set SiC/Car EPDM	Complete Pos 5.5 2 off o-rings	EPDM	L772461	L772466
^	SIO/Oai El DIVI	Pos 5.6 Stationary seal	Car		
В	Face Kit	Pos 5.7 Rotary seal	SiC		
	SiC/Car EPDM	Pos 5.8 pin	AISI316L		
	Schaftdichtung Set	Complete		L772462	L772467
Α	SiC/Car FPM (Viton)	Pos 5.5 2 off o-rings	FPM (Viton)		
_		Pos 5.6 Stationary seal	Car		
В	Face Kit	Pos 5.7 Rotary seal	SiC AISI316L		
	SiC/Car FPM (Viton) Schaftdichtung Set	Pos 5.8 pin	AISISTOL	L772463	L772468
Α	SiC/SiC EPDM	Complete Pos 5.5 2 off o-rings	EPDM	L//2463	L//2400
^	SIO/SIO EI DIVI	Pos 5.6 Stationary seal	SiC		
В	Face Kit	Pos 5.7 Rotary seal	SiC		
	SiC/SiC EPDM	Pos 5.8 pin	AISI316L		
	Schaftdichtung Set	Complete		L772464	L772469
Α	SiC/SiC FPM (Viton)	Pos 5.5 2 off o-rings	FPM (Viton)		
		Pos 5.6 Stationary seal	SiC		
В	Face Kit	Pos 5.7 Rotary seal	SiC		
	SiC/SiC FPM (Viton)	Pos 5.8 pin available. – SPX FT recomme	AISI316L		



#### 7.5 Seal Kit Comp.



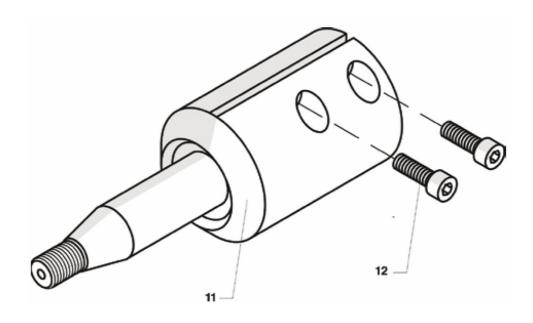


			Pump Type	
		W+10/8	W+22/20	W+30/80
Pos.	Material		Part No.	
Seal Kit, Single	SiC/SiC - EPDM	L808325	L808326	L808327
3, 6, 10, 26,29x2,	SiC/Car - EPDM	L808328	L808329	L808330
5.4, 5.5x2, 5.6,	SiC/SiC - FPM	L808331	L808332	L808333
5.7, 5.8	SiC/Car - FPM	L808334	L808335	L808336
Seal Kit , Double	SiC/SiC - EPDM	L808551	L808555	L808559
3, 6, 10, 26,29x2,	SiC/Car - EPDM	L808552	L808556	L808534
5.5x2, 5.6x2,	SiC/SiC – FPM	L808553	L808557	L808535
5.7x2, 5.8, 5.10	SiC/Car - FPM	L808554	L808558	L808536
O-Ring Kit	EPDM	L808619	L808620	L808621
3, 6, 10, 26,29x2	FPM (Viton)	L808622	L808623	L808624



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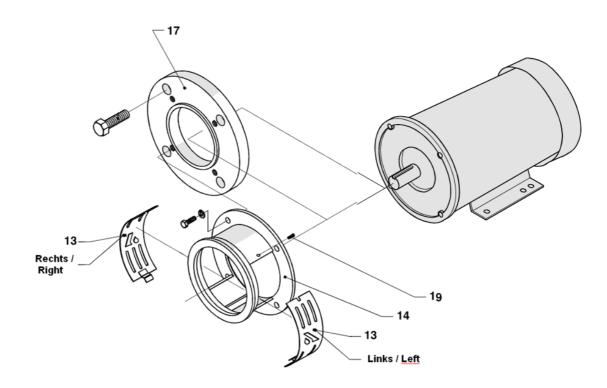
7.6 Shaft Ws+



	Motor									
Pump Type	143-145TC	182-184TC	213-215TC	254-256TC	254-256TC	284-286TSC	324-326TSC			
		Pos. 11 S	Shaft Ø25		Pos. 11 Shaft Ø35					
Ws+20/15	L267333	L267334	L267335							
Ws+30/30	L267333	L267334	L267335	L267336						
Ws+40/15					L267341	L267342	L267343			
				Pos. 12						
Qty.	2	2	2	2	2	2	2			
Screw	L771199	L771199	L771199	L771199	L771199	L771199	L701700			



## 7.7 Motor Adaptor and Shaft Guard

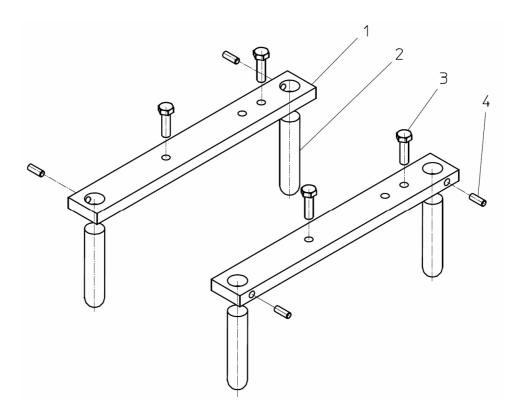


				Mc	otor					
Pump Type	Qty	143- 145TC	182- 184TC	213- 215TC	254- 256TC	284- 286TSC	324- 326TSC			
		Pos. 13 Shaft Guard								
Ws+20/15	2 R/L	L188334	L188334	L188334						
Ws+30/30	2 R/L		L188653	L188653	L188653					
Ws+44/50	2 R/L				L188653	L188811	L188811			
	Pos. 14 Motor Adaptor									
Ws+20/15	1	L260973#*	L260973#*	L260973#*						
Ws+30/30	1		L260975	L260975	L260975**					
Ws+44/50	1				L260977**	L260978	L260978***			
			Pos. 17	Flange Adapt	er St 37 / (AIS	I 304SS)				
*	1		*L267095	*L267095						
**	1				**L267096					
***	1						***L267097			
		Pos. 19 Screws								
All types	2			L700	)420					

<sup>#</sup> integrated in back plate pos. 7b



Frame Ws+ 7.8



			Motor					
			143-	182-	213-	254-	284-	324-
Pos	Qty	Description	145TC   184TC   215TC   256TC   286TSC   326TSC   Part No.					
103	Gty	Description	rait NO.					
		Frame cpl.	L110256	L110255	L110254	L110253	L110252	L110251
1	2	Side bar	L110262	L110261	L110260	L110259	L110258	L110257
2	4	Leg ¾"	L110264					
2	4	Leg 1"				L110263		
3	4	Screw	5/16-18 x 3/4 3/8-16 x 1		1/2-13 x 1 1/8		5/5-11 x 1 1/4	
4	2	Screw	1/4-20 x 1/2 SQ.HD			1/4-20 x 5/8 SQ.HD		



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