

INSERTABLE (iPCP)

PROGRESSING CAVITY PUMP SPECIFICATIONS

**EXPERIENCE
PERFORMANCE.**

iPCP INSERTABLE PROGRESSING CAVITY PUMPS

iPCP INSERT ASSEMBLY

The Lifting Solutions (LS) Insertable Progressing Cavity Pump (iPCP) is a thru-tubing pump that is installed using the rod string inside the production tubing and landed in the production zone. The main advantage of using an iPCP is to eliminate the need to pull tubing on pump-related workovers. This significantly reduces the cost associated with pulling the tubing and downtime during workovers.

KEY FEATURES

HAMMER TAIL

- Upset feature located at the bottom of the rotor used for pump removal.
- Engages with the unseating ring to unseat and remove the pump assembly.
- Allows flushing and reduces the entire length of the iPCP assembly.
- Designed to safely drift the stator and locate the rotor in the stator during landing/seating.

MULTI-SIZE SEATING RINGS

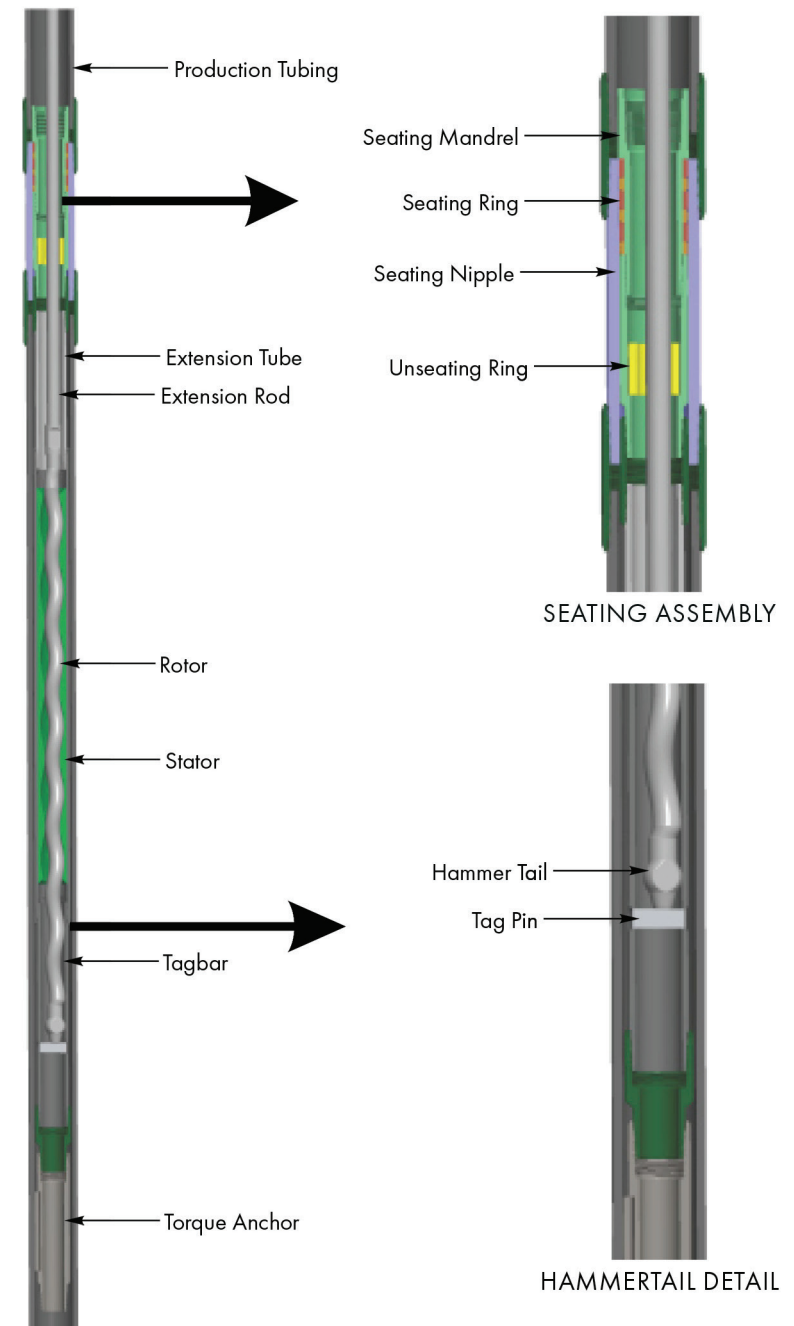
- Industry has multiple PSNs that are utilized with a range of inside diameters (IDs).
- iPCP is uniquely designed with three ring sizes to accommodate all PSN IDs in the market.
- Design gives operators the added advantage of using existing PSN already installed in the tubing.

STATOR DISCHARGE SEAL

- The LS iPCP discharge seal and seating assembly are located at the top of the pump assembly.
- This configuration allows for use in applications with sand/abrasive production.
- The discharge seal isolates the pump discharge from the PSN and seating ring annulus.
- Design prevents sand packing that would otherwise present unseating challenges.
- Sand is kept above the discharge of the pump, where it can effectively be produced.

BENEFITS

- Reduce workover time and associated costs of pulling the tubing during bottom hole pump replacement.
- Reduce downtime associated with lost or deferred production during workovers.
- Ability to be flushed by pulling rotor up above the stator to allow reverse fluid flow without unseating the pump.
- Torque anchor at the bottom of the assembly holds torque and prevents backoff of threaded components.
- Workovers can be limited to smaller flush-by and/or rod rigs thereby reducing service costs.
- Enables volume/lift changes without pulling the tubing to allow well optimization with minimal downtime/costs.
- Tubing remains downhole with all associated downhole monitoring systems and cabling during workovers.
- iPCP component reusability allows for additional cost savings associated with the initial investment.



iPCP INSERTABLE PROGRESSING CAVITY PUMP MODELS

LS 2-7/8" Insert PC Pump (2.25 OD Series)																														
Specifications										Stator, Tagbar & Orbit Tube						Rotor & Rod Details ("L" Length Code)														
Volume (/day/100rpm)		Rated Lift		Torque		Pump Length		Pump Connection		Length (L)		Weight		Max. OD		Rod Connection	Max. Torque		"L" Length		Weight		Max. OD		Rod Stickup		Flush-By Dist		Unseating Dist.	
(m3)	(bbls)	(m)	(ft)	(Nm)	(ft*lbs)	(m)	(in)	Top	Bottom	(m)	(in)	(kg)	(lbs)	(mm)	(in)		(Nm)	(ft*lbs)	(m)	(in)	(kg)	(lbs)	(mm)	(in)	(mm)	(in)	(m)	(in)	(m)	(in)
2	13	900	3000	30	22	4.16	164	1.660-in. EUE BOX	1.660-in. EUE PIN	2.93	115	27	59	57.2	2.25	5/8-in. API PR Pin 225	225	166	3.59	141	9	20	31.8	1.25	500	19.7	2.11	83	2.69	106
		1200	3900	41	30	4.56	180			3.34	131	31	67						3.99	157	10	22					2.51	99	3.10	122
		1500	4900	50	37	4.94	195			3.72	146	35	76						4.38	172	11	24					2.90	114	3.48	137
		1800	6000	60	44	5.35	211			4.12	162	38	85						4.78	188	12	27					3.30	130	3.89	153
		2400	7900	80	59	6.14	242			4.91	193	46	102						5.57	219	14	32					4.09	161	4.67	184
		3600	11800	119	88	7.71	304			6.49	255	62	136						7.14	281	19	41					5.66	223	6.25	246
4	25	600	2000	37	27	4.31	170	1.660-in. EUE BOX	1.660-in. EUE PIN	3.08	121	28	62	57.2	2.25	5/8-in. API PR Pin 225	225	166	3.74	147	9	21	31.8	1.25	500	19.7	2.26	89	2.84	112
		900	3000	56	41	4.97	196			3.74	147	35	76						4.40	173	11	25					2.92	115	3.51	138
		1200	3900	73	54	5.63	222			4.40	173	41	91						5.06	199	13	29					3.58	141	4.17	164
		1500	4900	92	68	6.29	248			5.06	199	48	105						5.72	225	15	32					4.24	167	4.83	190
		1800	6000	110	81	6.95	274			5.72	225	54	120						6.38	251	17	36					4.90	193	5.49	216
		2400	7900	146	108	8.27	326			7.05	277	67	148						7.70	303	20	44					6.22	245	6.81	268
7	44	900	3000	85	63	5.96	235	1.660-in. EUE BOX	1.660-in. EUE PIN	4.73	186	44	98	57.2	2.25	5/8-in. API PR Pin 225	225	166	5.39	212	14	31	31.8	1.25	500	19.7	3.91	154	4.50	177
		1200	3900	114	84	6.95	274			5.72	225	54	119						6.38	251	17	36					4.90	193	5.49	216
		1500	4900	142	105	7.94	313			6.72	264	64	141						7.37	290	19	42					5.89	232	6.48	255
		1800	6000	171	126	8.93	352			7.71	303	74	162						8.36	329	22	48					6.88	271	7.47	294
		2400	7900	228*	168*	10.91	430			9.69	381	93	205						10.34	407	27	60					8.86	349	9.45	372
11	69	900	3000	134	99	6.95	274	1.660-in. EUE BOX	1.660-in. EUE PIN	5.72	225	54	119	57.2	2.25	5/8-in. API PR Pin 225	259	191	6.38	251	18	40	31.8	1.25	500	19.7	4.90	193	5.49	216
		1200	3900	179	132	8.27	326			7.05	277	67	148						7.70	303	22	49					6.22	245	6.81	268
		1500	4900	224	165	9.59	378			8.37	329	80	176						9.02	355	26	58					7.54	297	8.13	320
		1800	6000	268*	198*	10.91	430			9.69	381	93	205						10.34	407	30	67					8.86	349	9.45	372
18	113	600	2000	146	108	6.95	274	1.660-in. EUE BOX	1.660-in. EUE PIN	5.72	225	54	119	57.2	2.25	5/8-in. API PR Pin	259	191	225	251	18	40	31.8	1.25	500	19.7	4.90	193	5.49	216
		900	3000	220	162	8.93	352			7.71	303	74	162						8.36	329	24	53					6.88	271	7.47	294
		1200	3900	293*	216*	10.91	430			9.69	381	93	205						10.34	407	30	67					8.86	349	9.45	372
23	145	500	1600	156	115	6.95	274	1.660-in. EUE BOX	1.660-in. EUE PIN	5.72	225	54	119	57.2	2.25	5/8-in. API PR Pin	259	191	225	251	18	40	31.8	1.25	500	19.7	4.9	193	5.5	216
		750	2500	235	173	8.93	352			7.71	303	74	162						8.36	329	24	53					6.9	271	7.5	294
		1000	3300	312*	230*	10.91	430			9.69	381	93	205						10.34	407	30	67					8.9	349	9.5	372

*Estimated pump torque at 100% pump pressure loading exceeds the rotor/rod torque rating.

**Length exceeds the maximum shipping length for a 40ft container

LS 3-1/2" Insert PC Pump (2.75 OD Series)																														
Specifications								Stator, Tagbar & Orbit Tube							Rotor & Rod Details ("L" Length Code)															
Volume (/day/100rpm)		Rated Lift		Torque		Pump Length		Pump Connection		Length (L)		Weight		Max. OD		Rod Connection	Max. Torque		"L" Length		Weight		Max. OD		Rod Stickup		Flush-By Dist		Unseating Dist.	
(m3)	(bbls)	(m)	(ft)	(Nm)	(ft*lbs)	(m)	(in)	Top	Bottom	(m)	(in)	(kg)	(lbs)	(mm)	(in)		(Nm)	(ft*lbs)	(m)	(in)	(kg)	(lbs)	(mm)	(in)	(mm)	(in)	(m)	(in)	(m)	(in)
7	44	1000	3300	95	70	5.21	205	1.900-in. EUE BOX	1.900-in. EUE PIN	3.92	154	44	97	69.9	2.75	7/8-in. API PR Pin	614	453	4.80	189	25	54	41.3	1.63	536	21.1	3.3	129	3.9	152
		1500	4900	142	105	6.43	253			5.14	202	58	128						6.02	237	32	70					4.5	177	5.1	200
		2000	6600	190	140	7.65	301			6.36	250	72	160						7.24	285	39	85					5.7	225	6.3	248
		2250	7400	214	158	8.26	325			6.97	274	80	175						7.85	309	42	93					6.3	249	6.9	272
		2500	8200	237	175	8.87	349			7.58	298	87	191						8.46	333	46	101					6.9	273	7.5	296
		3000	9800	285	210	10.09	397			8.80	346	101	222						9.68	381	53	117					8.2	321	8.7	344
9	57	900	3000	122	90	5.52	217	1.900-in. EUE BOX	1.900-in. EUE PIN	4.23	166	48	105	69.9	2.75	7/8-in. API PR Pin	614	453	5.11	201	26	58	41.3	1.63	536	21.1	3.6	141	4.2	164
		1200	3900	163	120	6.43	253			5.14	202	58	128						6.02	237	32	70					4.5	177	5.1	200
		1500	4900	203	150	7.35	289			6.05	238	69	152						6.94	273	37	82					5.4	213	6.0	236
		1800	6000	244	180	8.26	325			6.97	274	80	175						7.85	309	42	93					6.3	249	6.9	272
		2400	7900	325	240	10.09	397			8.80	346	101	222						9.68	381	53	117					8.2	321	8.7	344
17	107	900	3000	207	153	6.74	265	1.900-in. EUE BOX	1.900-in. EUE PIN	5.45	214	62	136	69.9	2.75	7/8-in. API PR Pin	614	453	6.33	249	33	74	41.3	1.63	536	21.1	4.8	189	5.4	212
		1200	3900	277	204	8.06	317			6.77	266	77	170						7.65	301	41	91					6.1	241	6.7	264
		1500	4900	346	255	9.38	369			8.09	318	92	203						8.97	353	49	108					7.4	293	8.0	316
		1800	6000	415	306	10.70	421			9.41	370	108	237						10.29	405	57	125					8.8	345	9.4	368
24	151	900	3000	207	153	8.11	319	1.900-in. EUE BOX	1.900-in. EUE PIN	6.82	268	78	171	69.9	2.75	7/8-in. API PR Pin	614	453	7.70	303	41	91	41.3	1.63	536	21.1	6.2	243	6.8	266
		1200	3900	277	204	9.89	389			8.59	338	98	216						9.48	373	52	114					8.0	313	8.5	336
		1500	4900	346	255	11.66	459			10.37	408	119	262						11.26	443	62	137					9.7	383	10.3	406
		1800	6000	415	306	13.44**	529**			12.15**	478**	140	308						13.03**	513**	72	160					11.5	453	12.1	476
29	182	600	2000	244	180	7.04	277	1.900-in. EUE BOX	1.900-in. EUE PIN	5.75	226	65	144	69.9	2.75	7/8-in. API PR Pin	614	453	6.63	261	35	78	41.3	1.63	536	21.1	5.1	201	5.7	224
		900	3000	366	270	9.18	361			7.88	310	90	198						8.77	345	48	105					7.2	285	7.8	308
		1200	3900	488	360	11.31	445			10.02	394	115	253						10.90	429	60	132					9.4	369	10.0	392
		1500	4900	610	450	13.44**	529**			12.15**	478**	140	308						13.03**	513**	72	160					11.5	453	12.1	476
39	245	500	1600	255	188	7.04	277	1.900-in. EUE BOX	1.900-in. EUE PIN	5.75	226	65	144	69.9	2.75	7/8-in. API PR Pin	614	453	6.63	261	35	78	41.3	1.63	536	21.1	5.1	201	5.7	224
		600	2000	305	225	7.91	311			6.61	260	75	165						7.50	295	40	89					6.0	235	6.6	258
		750	2500	381	281	9.18	361			7.88	310	90	198						8.77	345	48	105					7.2	285	7.8	308
		1000	3300	508	375	11.31	445			10.02	394	115	253						10.90	429	60	132					9.4	369	10.0	392
		1200	3900	610	450	13.04**	513**			11.74	462	135	297						12.63**	497**	70	154					11.1	437	11.7	460
50	315	600	2000	390	288	8.87	349	1.900-in. EUE BOX	1.900-in. EUE PIN	7.58	298	86	190	69.9	2.75	7/8-in. API PR Pin	614	453	8.46	333	46	101	41.3	1.63	536	21.1	6.9	273	7.5	296
		800	2600	521	384	10.90	429			9.61	378	110	242						10.49	413	58	127					9.0	353	9.6	376
		1000	3300	651*	480*	12.93**	509**			11.64	458	134	295						12.53**	493**	70	153					11.0	433	11.6	456
		1200	3900	781*	576*	14.97**	589**			13.67**	538**	157	347						14.56**	573**	81	179					13.0	513	13.6	536
62	390	500	1600	404	298	8.87	349	1.900-in. EUE BOX	1.900-in. EUE PIN	7.58	298	86	190	69.9	2.75	7/8-in. API PR Pin	614	453	8.46	333	46	101	41.3	1.63	536	21.1	6.9	273	7.5	296
		750	2500	606	447	11.92**	469**			10.63	418	122	269						11.51	453	64	140					10.0	393	10.6	416
		1000	3300	808*	596*	14.97**	589**			13.67**	538**	157	347						14.56**	573**	81	179					13.0	513	13.6	536

*Estimated pump torque at 100% pump pressure loading exceeds the rotor/rod torque rating.

**Length exceeds the maximum shipping length for a 40ft container

LSI 4-1/2" Insert PC Pump (3.50 OD Series)																														
Specifications										Stator, Tagbar & Orbit Tube						Rotor & Rod Details ("L" Length Code)														
Volume (/day/100rpm)		Rated Lift		Torque		Pump Length		Pump Connection		Length (L)		Weight		Max. OD		Rod Connection	Max. Torque		"L" Length		Weight		Max. OD		Rod Stickup		Flush-By Dist		Unseating Dist.	
(m3)	(bbls)	(m)	(ft)	(Nm)	(ft*lbs)	(m)	(in)	Top	Bottom	(m)	(in)	(kg)	(lbs)	(mm)	(in)		(Nm)	(ft*lbs)	(m)	(in)	(kg)	(lbs)	(mm)	(in)	(mm)	(in)	(m)	(in)	(m)	(in)
10	63	600	2000	89	66	4.33	171	2.875-in. EUE BOX	2.875-in. EUE PIN	2.70	106	42	93	88.9	3.50	7/8-in. API PR Pin	1085	800	3.71	146	28	63	47.7	1.88	594	23.4	2.1	81	2.6	104
		900	3000	133	98	4.94	195			3.31	130	54	118						4.31	170	34	75					2.7	105	3.3	128
		1200	3900	178	131	5.55	219			3.91	154	65	144						4.92	194	39	87					3.3	129	3.9	152
		1500	4900	222	164	6.16	243			4.52	178	77	169						5.53	218	45	99					3.9	153	4.5	176
		1800	6000	266	196	6.77	267			5.13	202	88	194						6.14	242	51	111					4.5	177	5.1	200
		2400	7900	355	262	7.99	315			6.35	250	111	244						7.36	290	62	136					5.7	225	6.3	248
		2700	8900	399	294	8.60	339			6.96	274	122	269						7.97	314	67	148					6.3	249	6.9	272
		3000	9800	443	327	9.21	363			7.57	298	134	295						8.58	338	73	160					6.9	273	7.5	296
		3600	11800	531	392	10.43	411			8.79	346	156	345						9.80	386	84	184					8.2	321	8.7	344
15	94	600	2000	134	99	4.64	183	2.875-in. EUE BOX	2.875-in. EUE PIN	3.00	118	48	106	88.9	3.50	7/8-in. API PR Pin	1085	800	4.01	158	29	64	48.1	1.89	594	23.4	2.4	93	3.0	116
		900	3000	202	149	5.40	213			3.76	148	62	137						4.77	188	35	78					3.1	123	3.7	146
		1200	3900	268	198	6.16	243			4.52	178	77	169						5.53	218	41	91					3.9	153	4.5	176
		1400	4600	313	231	6.67	263			5.03	198	86	190						6.04	238	46	100					4.4	173	5.0	196
		1800	6000	403	297	7.69	303			6.05	238	105	232						7.06	278	54	119					5.4	213	6.0	236
		2400	7900	536	395	9.21	363			7.57	298	134	294						8.58	338	66	146					6.9	273	7.5	296
		2700	8900	603	445	9.97	393			8.33	328	148	326						9.34	368	72	159					7.7	303	8.3	326
		3000	9800	670	494	10.73	423			9.10	358	162	357						10.11	398	79	173					8.5	333	9.0	356
		3600	11800	804	593	12.26**	483**			10.62	418	191	420						11.63	458	91	200					10.0	393	10.6	416
20	126	900	3000	262	193	6.16	243	2.875-in. EUE BOX	2.875-in. EUE PIN	4.52	178	77	169	88.9	3.50	7/8-in. API PR Pin	1085	800	5.53	218	41	91	47.9	1.89	594	23.4	3.9	153	4.5	176
		1200	3900	348	257	7.18	283			5.54	218	96	211						6.55	258	49	109					4.9	193	5.5	216
		1500	4900	437	322	8.19	323			6.56	258	115	253						7.57	298	57	126					5.9	233	6.5	256
		1800	6000	523	386	9.21	363			7.57	298	134	294						8.58	338	66	144					6.9	273	7.5	296
		2100	6900	610	450	10.23	403			8.59	338	153	336						9.60	378	74	162					8.0	313	8.5	336
		2400	7900	697	514	11.24	443			9.60	378	172	378						10.61	418	82	180					9.0	353	9.6	376
		2700	8900	784	578	12.26**	483**			10.62	418	191	420						11.63	458	90	198					10.0	393	10.6	416
		3000	9800	872	643	13.27**	523**			11.64	458	210	462						12.65**	498**	98	216					11.0	433	11.6	456
		30	189	600	2000	239	176			5.76	227	2.875-in. EUE BOX	2.875-in. EUE PIN						4.12	162	69	152					88.9	3.50	7/8-in. API PR Pin	1085
900	3000			358	264	7.08	279	5.44	214	94	206			6.45	254	48	107	4.8	189	5.4	212									
1200	3900			477	352	8.40	331	6.76	266	118	261			7.77	306	59	130	6.1	241	6.7	264									
1500	4900			595	439	9.72	383	8.08	318	143	315			9.09	358	70	153	7.4	293	8.0	316									
1800	6000			715	527	11.04	435	9.40	370	168	370			10.41	410	80	177	8.8	345	9.4	368									
2400	7900			953	703	13.68**	539**	12.04**	474**	217	479			13.05**	514**	101	223	11.4	449	12.0	472									
2700	8900			1071	790	15.00**	591**	13.36**	526**	242	533			14.37**	566**	112	247	12.7	501	13.3	524									
3000	9800			1190*	878*	16.32**	643**	14.68**	578**	267	588			15.69**	618**	123	270	14.1	553	14.6	576									

*Estimated pump torque at 100% pump pressure loading exceeds the rotor/rod torque rating.
**Length exceeds the maximum shipping length for a 40ft container

LSI 4-1/2" Insert PC Pump (3.50 OD Series)																														
Specifications										Stator, Tagbar & Orbit Tube						Rotor & Rod Details ("L" Length Code)														
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(m3)	(bbls)	(m)	(ft)	(Nm)	(ft*lbs)	(m)	(in)	Top	Bottom	(m)	(in)	(kg)	(lbs)	(mm)	(in)		(Nm)	(ft*lbs)	(m)	(in)	(kg)	(lbs)	(mm)	(in)	(mm)	(in)	(m)	(in)	(m)	(in)
41	258	800	2600	464	342	7.51	296	2.875-in. EUE BOX	2.875-in. EUE PIN	5.87	231	104	224	88.9	3.50	7/8-in. API PR Pin	1085	800	6.88	271	53	114	47.9	1.89	594	23.4	5.2	206	5.8	229
		1200	3900	694	512	9.72	383			8.08	318	146	315						9.09	358	71	153					7.4	293	8.0	316
		1500	4900	868	640	11.37	448			9.73	383	178	383						10.74	423	85	183					9.1	358	9.7	381
		1800	6000	1041	768	13.02**	513**			11.38	448	209	451						12.39**	488**	98	212					10.7	423	11.3	446
		2400	7900	1388*	1024*	16.32**	643**			14.68**	578**	272	587						15.69**	618**	125	270					14.1	553	14.6	576
55	346	600	2000	464	342	7.46	294	2.875-in. EUE BOX	2.875-in. EUE PIN	5.82	229	103	222	88.9	3.50	7/8-in. API PR Pin	1085	800	6.83	269	53	113	47.9	1.89	594	23.4	5.2	204	5.8	227
		800	2600	618	456	8.91	351			7.27	286	131	282						8.28	326	65	139					6.6	261	7.2	284
		1000	3300	773	570	10.35	408			8.72	343	159	342						9.73	383	76	165					8.1	318	8.7	341
		1200	3900	927	684	11.80	465			10.16	400	186	401						11.17	440	88	190					9.5	375	10.1	398
		1600	5200	1237*	912*	14.70**	579**			13.06**	514**	242	521						14.07**	554**	112	241					12.4	489	13.0	512
70	440	600	2000	548	404	8.40	331	2.875-in. EUE BOX	2.875-in. EUE PIN	6.76	266	121	261	88.9	3.50	7/8-in. API PR Pin	1085	800	7.77	306	60	130	47.9	1.89	594	23.4	6.1	241	6.7	264
		900	3000	820	605	11.04	435			9.40	370	172	370						10.41	410	82	177					8.8	345	9.4	368
		1200	3900	1094*	807*	13.68**	539**			12.04**	474**	222	479						13.05**	514**	104	223					11.4	449	12.0	472

LS 4-1/2" I-PCP (3.75 OD Series)																														
Specifications										Stator, Tagbar & Orbit Tube						Rotor & Rod Details ("L" Length Code)														
Volume (/day/100rpm)		Rated Lift		Torque		Pump Length		Pump Connection		Length (L)		Weight		Max. OD		Rod Connection	Max. Torque		"L" Length		Weight		Max. OD		Rod Stickup		Flush-By Dist		Unseating Dist.	
(m3)	(bbls)	(m)	(ft)	(Nm)	(ft*lbs)	(m)	(in)	Top	Bottom	(m)	(in)	(kg)	(lbs)	(mm)	(in)		(Nm)	(ft*lbs)	(m)	(in)	(kg)	(lbs)	(mm)	(in)	(mm)	(in)	(m)	(in)	(m)	(in)
13	82	1200	3900	225	166	6.12	241	2.875-in. EUE BOX	2.875-in. EUE PIN	4.43	174	80	177	95.3	3.75	1-in. API Pin	1627	1200	5.23	206	45	99	53.6	2.11	653	25.7	3.5	136	4.1	162
		1500	4900	281	207	6.73	265			5.04	198	93	205						5.84	230	51	113					4.1	160	4.7	186
		1800	6000	338	249	7.34	289			5.65	222	105	232						6.45	254	58	127					4.7	184	5.3	210
		2400	7900	449	331	8.56	337			6.87	270	130	287						7.67	302	70	155					5.9	232	6.6	258
		3000	9800	561	414	9.78	385			8.09	318	155	342						8.89	350	83	182					7.1	280	7.8	306
18	113	600	2000	161	119	5.31	209	2.875-in. EUE BOX	2.875-in. EUE PIN	3.62	142	64	141	95.3	3.75	1-in. API Pin	1627	1200	4.42	174	35	77	53.2	2.09	653	25.7	2.6	104	3.3	130
		1200	3900	323	238	6.94	273			5.24	206	97	214						6.04	238	50	111					4.3	168	4.9	194
		1500	4900	403	297	7.75	305			6.05	238	114	251						6.85	270	58	128					5.1	200	5.7	226
		1800	6000	483	356	8.56	337			6.87	270	130	288						7.67	302	66	145					5.9	232	6.6	258
		2400	7900	644	475	10.19	401			8.49	334	164	361						9.29	366	81	179					7.5	296	8.2	322
28	176	1200	3900	475	350	8.03	316	2.875-in. EUE BOX	2.875-in. EUE PIN	6.33	249	119	263	95.3	3.75	1-in. API Pin	1627	1200	7.13	281	61	134	53.3	2.10	653	25.7	5.4	211	6.0	237
		1500	4900	592	437	9.12	359			7.43	292	141	311						8.23	324	71	156					6.5	254	7.1	280
		1800	6000	710	524	10.19	401			8.49	334	163	360						9.29	366	81	179					7.5	296	8.2	322
		2400	7900	948	699	12.37**	487**			10.68	420	208	458						11.48	452	102	224					9.7	382	10.4	408
		2700	8900	1066	786	13.47**	530**			11.77	463	230	507						12.57**	495**	112	247					10.8	425	11.5	451
		3000	9800	1184	873	14.56**	573**			12.86**	506**	252	555						13.66**	538**	122	270					11.9	468	12.6	494
32	201	800	2600	376	277	6.58	259	2.875-in. EUE BOX	2.875-in. EUE PIN	4.89	192	90	197	95.3	3.75	1-in. API Pin	1627	1200	5.69	224	47	103	53.3	2.10	653	25.7	3.9	154	4.6	180
		1200	3900	563	415	8.03	316			6.33	249	119	262						7.13	281	61	134					5.4	211	6.0	237
		1600	5200	750	553	9.48	373			7.78	306	149	327						8.58	338	74	164					6.8	268	7.5	294
		2000	6600	938	692	10.93	430			9.23	363	178	392						10.03	395	88	194					8.3	325	8.9	351
		2400	7900	1125	830	12.37**	487**			10.68	420	208	457						11.48	452	102	224					9.7	382	10.4	408

LS 4-1/2" I-PCP (3.75 OD Series)																														
Specifications								Stator, Tagbar & Orbit Tube							Rotor & Rod Details ("L" Length Code)															
Volume (/day/100rpm)		Rated Lift		Torque		Pump Length		Pump Connection		Length (L)		Weight		Max. OD		Rod Connection	Max. Torque		"L" Length		Weight		Max. OD		Rod Stickup		Flush-By Dist		Unseating Dist.	
(m3)	(bbls)	(m)	(ft)	(Nm)	(ft*lbs)	(m)	(in)	Top	Bottom	(m)	(in)	(kg)	(lbs)	(mm)	(in)		(Nm)	(ft*lbs)	(m)	(in)	(kg)	(lbs)	(mm)	(in)	(mm)	(in)	(m)	(in)	(m)	(in)
36	226	900	3000	475	350	7.75	305	2.875-in. EUE BOX	2.875-in. EUE PIN	6.05	238	113	250	95.3	3.75	1-in. API Pin	1627	1200	6.85	270	65	143	53.5	2.11	653	25.7	5.1	200	5.7	226
		1200	3900	633	467	9.12	359			7.43	292	141	311						8.23	324	80	176					6.5	254	7.1	280
		1500	4900	792	584	10.47	412			8.77	345	169	372						9.57	377	95	209					7.8	307	8.5	333
		1800	6000	949	700	11.84	466			10.14	399	196	432						10.94	431	110	242					9.2	361	9.8	387
		2400	7900	1266	934	14.56**	573**			12.86**	506**	251	554						13.66**	538**	140	308					11.9	468	12.6	494
43	270	900	3000	540	398	8.03	316	2.875-in. EUE BOX	2.875-in. EUE PIN	6.33	249	119	262	95.3	3.75	1-in. API Pin	1627	1200	7.13	281	64	140	53.3	2.10	653	25.7	5.4	211	6.0	237
		1200	3900	719	530	9.48	373			7.78	306	148	327						8.58	338	78	173					6.8	268	7.5	294
		1500	4900	899	663	10.93	430			9.23	363	178	392						10.03	395	93	205					8.3	325	8.9	351
		1800	6000	1078	795	12.37**	487**			10.68	420	207	457						11.48	452	108	237					9.7	382	10.4	408
		2400	7900	1437	1060	15.27**	601**			13.57**	534**	266	587						14.37**	566**	137	301					12.6	496	13.3	522
54	340	600	2000	441	325	6.94	273	2.875-in. EUE BOX	2.875-in. EUE PIN	5.24	206	97	213	95.3	3.75	1-in. API Pin	1627	1200	6.04	238	50	111	53.3	2.10	653	25.7	4.3	168	4.9	194
		900	3000	660	487	8.56	337			6.87	270	130	286						7.67	302	66	145					5.9	232	6.6	258
		1200	3900	880	649	10.19	401			8.49	334	163	359						9.29	366	81	179					7.5	296	8.2	322
		1500	4900	1101	812	11.81	465			10.12	398	196	432						10.92	430	97	213					9.1	360	9.8	386
		1800	6000	1321	974	13.44**	529**			11.74	462	229	505						12.54**	494**	112	247					10.8	424	11.4	450
68	428	900	3000	828	611	10.19	401	2.875-in. EUE BOX	2.875-in. EUE PIN	8.49	334	163	359	95.3	3.75	1-in. API Pin	1627	1200	9.29	366	82	182	53.3	2.10	653	25.7	7.5	296	8.2	322
		1200	3900	1105	815	12.35**	486**			10.65	419	207	457						11.45	451	103	228					9.7	381	10.3	407
		1500	4900	1380	1018	14.51**	571**			12.81**	504**	251	554						13.61**	536**	124	274					11.8	466	12.5	492
		1800	6000	1657*	1222*	16.69**	657**			15.00**	590**	295	651						15.80**	622**	145	320					14.0	552	14.7	578
		600	2000	687	507	8.87	349			7.17	282	137	301						7.97	314	67	147					6.2	244	6.9	270
85	535	750	2500	860	634	10.19	401	2.875-in. EUE BOX	2.875-in. EUE PIN	8.49	334	163	360	95.3	3.75	1-in. API Pin	1627	1200	9.29	366	79	174	53.1	2.09	653	25.7	7.5	296	8.2	322
		875	2900	1003	740	11.23	442			9.53	375	185	408						10.33	407	89	195					8.6	337	9.2	363
		1000	3300	1146	845	12.35**	486**			10.65	419	207	457						11.45	451	99	218					9.7	381	10.3	407
		1250	4100	1432	1056	14.51**	571**			12.81**	504**	252	555						13.61**	536**	119	261					11.8	466	12.5	492
		1500	4900	1718*	1267*	16.69**	657**			15.00**	590**	296	652						15.80**	622**	139	306					14.0	552	14.7	578
102	642	600	2000	797	588	9.27	365	2.875-in. EUE BOX	2.875-in. EUE PIN	7.58	298	144	318	95.3	3.75	1-in. API Pin	1627	1200	8.38	330	72	160	53.3	2.10	653	25.7	6.6	260	7.3	286
		900	3000	1196	882	12.07**	475**			10.37	408	201	444						11.17	440	99	218					9.4	370	10.1	396
		1200	3900	1594	1176	14.86**	585**			13.17**	518**	258	569						13.97**	550**	125	276					12.2	480	12.9	506
120	755	600	2000	922	680	10.19	401	2.875-in. EUE BOX	2.875-in. EUE PIN	8.49	334	163	359	95.3	3.75	1-in. API Pin	1627	1200	9.29	366	81	179	53.3	2.10	653	25.7	7.5	296	8.2	322
		900	3000	1383	1020	13.44**	529**			11.74	462	229	505						12.54**	494**	112	247					10.8	424	11.4	450
		1200	3900	1844*	1360*	16.69**	657**			15.00**	590**	295	651						15.80**	622**	143	314					14.0	552	14.7	578
155	975	500	1600	1009	744	10.19	401	2.875-in. EUE BOX	2.875-in. EUE PIN	8.49	334	163	359	95.3	3.75	1-in. API Pin	1627	1200	9.29	366	81	179	53.3	2.10	653	25.7	7.5	296	8.2	322
		750	2500	1513	1116	13.44**	529**			11.74	462	229	505						12.54**	494**	112	247					10.8	424	11.4	450
		1000	3300	2017*	1488*	16.69**	657**			15.00**	590**	295	651						15.80**	622**	143	314					14.0	552	14.7	578