



FORLAND SERVICES LLC offers conventional crank-balanced pumping units which provide reliable, cost-effective performance at a competitive price. Manufactured to API standards, these units deliver high reliability and efficiency operations. These units are suitable for all wells that can deploy sucker rod pumping, wells with deviations and high rod friction, conventional oil wells and unconventional shale reservoirs. These conventional-geometry pumping units are available in API sizes 80 to 1280. In addition, FORLAND SERVICES LLC provides a various standard and customized gear boxes of pumping unit.





Conventional Pumping Unit Specifications

Model	Rated Polished Rod Capacity, lbf	Stroke Length, in	Pulley Size	Rated Torque, lbf	Reducer Gear Ratio	Gear Oil Capacity, gallon	Unit Weight, lbs
C1280D-365-240	36,500	240/209/179/151	10C 50"	1,280,000	30.47	243	93200.3
C912D-427-144	42,700	144/124/106	8C 50"	912,000	28.79	180	78799.7
C912D-365-192	36,500	192/168/144/120	8C 50"	912,000	28.79	180	87501.4
C912D-365-168	36,500	168/145/124	8C 50"	912,000	28.79	180	79256.1
C640D-365-168	36,500	168/145/124	6C 50"	640,000	27.21	106	66423.0
C640D-256-144	25,600	144/120/100	6C 50"	640,000	27.21	106	59198.5
C456D-305-168	30,500	168/145/124	6C 44"	456,000	28.25	88	56354.5
C456D-305-144	30,500	144/124/106	6C 44"	456,000	28.25	88	58332.0
C456D-256-120	25,600	120/102/84	6C 44"	456,000	28.25	88	51014.9
C320D-305-100	30,500	100/85/70	5C 44"	320,000	28.8	75	45745.9
C320D-256-120	25,600	120/102/85	5C 44"	320,000	28.8	75	46151.5
C320D-213-120	21,300	120/102/84	5C 44"	320,000	28.8	75	44934.6
C320D-173-120	17,300	120/102/84	5C 44"	320,000	28.8	75	42286.8
C228D-246-86	24,600	86/74/61	4C 36"	228,000	28.87	43	37423.4
C228D-213-100	21,300	100/86/73	4C 36"	228,000	28.87	43	32145.6
C228D-173-120	17,300	120/102/84	4C 36"	228,000	28.87	43	32008.9
C160-200-74	20,000	74/64/54	4C 36"	160,000	28.51	37	29378.8
C160-173-86	17,300	86/76/61	4C 36"	160,000	28.51	37	26991.2
C114D-173-64	17,300	64/54/44	3C 30"	114,000	29.82	25	25818.3
C114D-143-74	14,300	74/62/51	3C 30"	114,000	29.82	25	19008.2
C114D-119-86	11,900	86/72/58	3C 30"	114,000	29.82	25	23831.9
C80D-119-64	11,900	64/54/44	3C 27"	80,000	28.93	21	15002.4

FORLAND SERVICES LLC

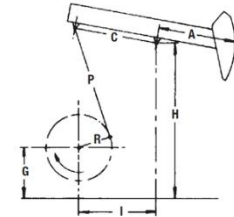
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API Linkage Dimensions, in



Model	A	C	P	H	I	G	R				SU (lb)	Torque factor@90°/Stroke
							R1	R2	R3			
C1280D-365-240	228.0	120.0	226.8	340.0	120.1	111.0	60.0	53.0	46.0	39.0	-1794	111.7/240
C912D-365-192	210.0	120.3	172.4	286.0	120.1	111.0	52.7	46.6	40.3	33.8	-1499	90.5/192
C912D-365-168	210.0	120.3	143.2	262.0	120.3	111.0	48.0	41.5		35.0	-996	79.6/168
C912D-427-144	180.0	120.3	148.5	262.0	120.1	111.0	47.0	40.2		33.2	-1325	68.9/144
C640D-365-168	203.2	120.0	143.2	262.2	119.9	111.0	48.0	41.5		35.0	-1106	79.6/168
C640D-256-144	180.0	120.8	144.5	260.0	120.0	111.0	47.0	40.2		33.3	-687	68.6/144
C456D-305-168	210.0	120.0	148.5	262.0	120.0	111.0	47.0	40.2		33.3	-624	80.0/168
C456D-305-144	180.0	120.0	148.5	262.0	120.0	111.0	43.1	40.9		34.8	-526	68.6/144
C456D-256-120	154.8	111.0	124.4	222.8	111.8	111.0	42.0	35.9		29.8	-368	57.4/120
C320D-256-120	155.0	111.1	124.4	232.0	111.8	96.0	42.0	35.9		29.8	-261	57.4/120
C320D-213-120	154.8	111.0	124.4	223.0	111.8	96.0	42.0	35.9		29.8	-97	57.4/120
C320D-173-120	154.8	111.0	124.4	223.0	111.8	96.0	42.0	35.9		29.8	-227	57.4/120
C320D-305-100	128.9	111.1	132.0	232.0	111.0	96.0	42.0	35.9		29.8	-63	47.7/100
C228D-173-120	153.9	111.0	130.5	231.9	112.0	96.5	42.0	35.9		29.8	-227	57.4/120
C228D-213-100	128.9	96.1	113.0	196.1	96.0	79.1	37.0	32.0		26.9	-701	47.6/100
C228D-246-86	111.0	111.0	132.0	231.5	111.0	96.5	42.0	35.9		29.8	-802	40.9/86
C160-173-86	111.0	96.1	114.0	195.9	96.1	89.6	37.0	31.9		26.8	628	41.0/86
C160-200-74	96.1	96.1	114.0	207.5	96.1	89.6	37.0	31.9		26.8	-577	35.6/74
C114D-119-86	110.9	84.0	93.7	166.0	84.0	69.3	32.0	27.0		22.0	-286	40.9/86
C114D-143-74	96.1	84.0	93.7	166.0	84.0	69.3	32.0	27.0		22.0	-1085	35.6/74
C80D-119-64	84.0	64.0	74.7	139.2	64.0	64.2	24.0	19.0		14.0	-258	30.9/64



Counterbalance Data

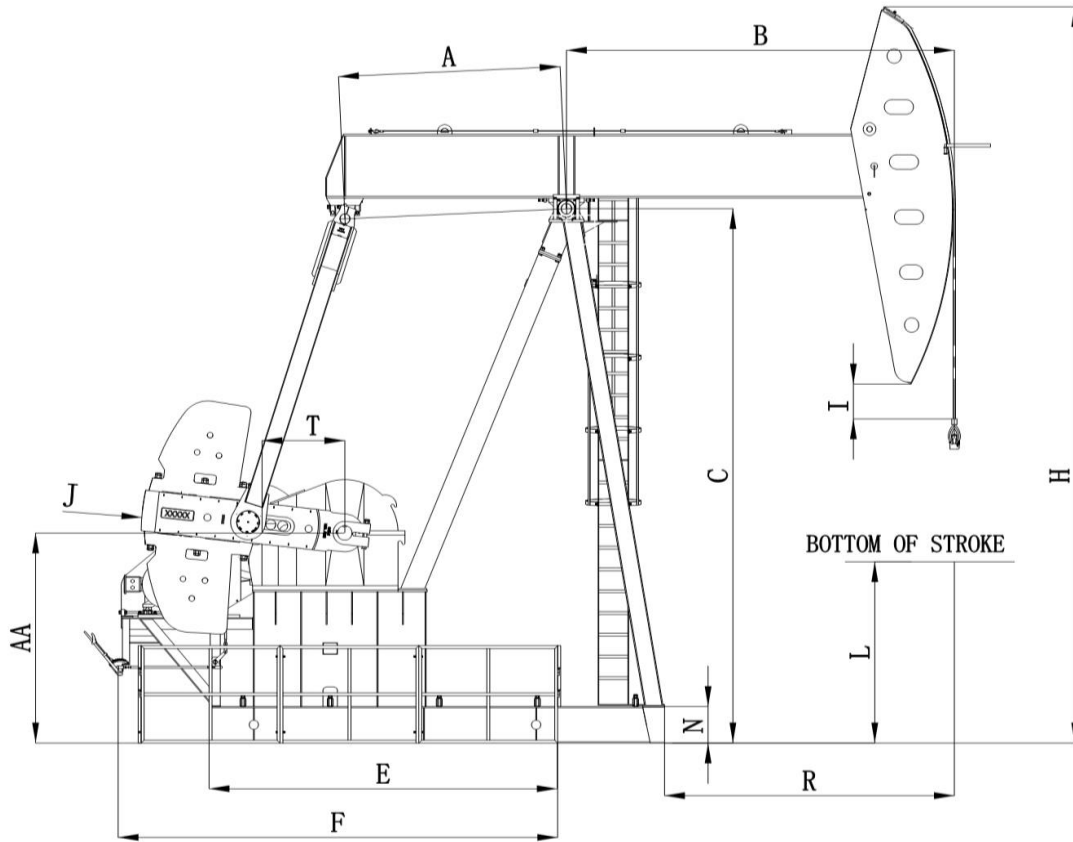
All values shown in lbs of ECB at longest stroke length w/ four weights at maximum position on crank

Model	Cranks Only	1#	2#	3#	4#	5#	6#	7#	8#	9#	10#
C1280D-365-240	7350	8152	9062	10068	11079	12220	13949	16654	23212	26210	28956
C912D-427-144	7100	8260	9125	10263	12520	14256	16565	18006	23215	26011	29052
C912D-365-192	6132	7788	8956	9896	11996	13269	15425	17023	22136	25003	28922
C912D-365-168	6696	7963	9025	10965	12955	15002	18025	20725	24201	27956	-
C640D-365-168	6360	7325	8695	10369	12002	14369	17630	19750	25035	28765	-
C640D-256-144	5865	8120	9963	12025	15236	18425	21032	-	-	-	-
C456D-305-168	4120	7452	9025	11963	13998	17105	20105	23990	-	-	-
C456D-305-144	4560	7620	8926	12036	14256	17500	19876	23630	-	-	-
C456D-256-120	4652	7120	8569	12366	14069	17256	19220	-	-	-	-
C320D-305-100	4896	7612	8925	11965	14006	16352	18333	21758	-	-	-
C320D-256-120	5120	7296	8896	11696	13523	15036	19202	-	-	-	-
C320D-213-120	4758	7950	9025	12106	14569	17596	-	-	-	-	-
C320D-173-120	4360	6952	8159	9663	11096	-	-	-	-	-	-
C228D-246-86	3930	6540	8517	10692	12009	17256	-	-	-	-	-
C228D-213-100	4791	6012	8756	10621	12309	15402	-	-	-	-	-
C228D-173-120	4250	5729	6698	9712	11245	14256	-	-	-	-	-
C160-200-74	2985	8406	9129	10230	14965	-	-	-	-	-	-
C160-173-86	3265	9420	10602	15500	-	-	-	-	-	-	-
C114D-173-64	1890	8234	9431	12803	-	-	-	-	-	-	-
C114D-143-74	2182	5960	8526	11052	-	-	-	-	-	-	-
C114D-119-86	1920	6310	8142	-	-	-	-	-	-	-	-
C80D-119-64	1369	5589	7985	-	-	-	-	-	-	-	-

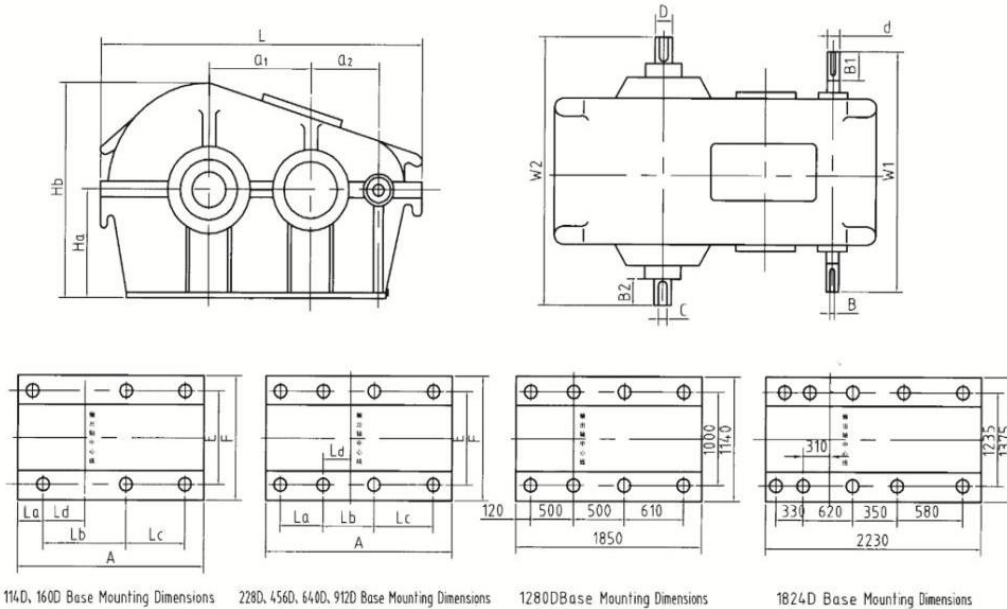


Dimensional Data

Model	A	B	C	E	F	H	I	J	L	N	R	T	AA
C1280D-365-240	120.0	228.0	340.0	268.1	349.6	462.0	35.0	108.3	66.0	24.8	160.6	56.7	111.0
C912D-427-144	120.3	180.0	262.0	246.3	327.6	344.3	30.3	108.3	83.5	23.6	129.2	48.4	111.0
C912D-365-192	120.3	210.0	286.0	246.3	327.6	386.4	22.4	108.3	55.7	23.6	159.6	48.4	111.0
C912D-365-168	120.3	210.0	262.0	246.3	327.6	355.1	38.2	108.3	53.0	23.6	159.6	48.4	111.0
C640D-365-168	120.0	203.2	262.2	239.6	314.2	360.5	19.0	108.3	66.3	23.6	163.2	41.3	111.0
C640D-256-144	120.8	180.0	260.0	238.3	315.5	342.3	35.6	108.3	73.9	23.6	129.9	41.3	111.0
C456D-305-168	120.0	210.0	262.0	237.7	312.3	355.2	21.9	108.3	62.3	17.7	159.3	39.4	111.0
C456D-305-144	120.0	180.0	262.0	237.7	312.3	344.3	30.3	108.3	83.5	17.7	129.2	39.4	111.0
C456D-256-120	111.0	154.8	222.8	215.4	304.5	294.1	33.7	108.3	65.4	17.7	109.0	39.4	111.0
C320D-305-100	111.1	128.9	232.0	213.4	297.0	295.8	21.7	95.0	101.8	16.1	83.0	37.4	96.0
C320D-256-120	111.1	155.0	232.0	213.4	297.0	300.9	36.8	95.0	70.9	16.1	109.1	37.4	96.0
C320D-213-120	111.0	154.8	223.0	213.8	301.3	294.3	33.9	95.0	65.4	16.1	109.1	37.4	96.0
C320D-173-120	111.0	154.8	223.0	213.8	301.3	294.3	33.9	95.0	65.4	16.1	109.0	37.4	96.0
C228D-246-86	111.0	111.0	231.5	209.3	287.5	294.9	45.2	95.0	75.7	15.7	68.3	33.5	96.5
C228D-173-120	111.0	153.9	231.9	209.8	288.1	296.9	20.5	76.2	69.0	15.7	111.6	33.5	96.5
C228D-213-100	96.1	128.9	196.1	188.1	266.4	259.8	21.7	76.2	63.0	15.7	92.3	33.5	79.1
C160-200-74	96.1	96.1	207.5	171.7	256.7	261.4	32.7	76.2	53.3	12.6	54.2	29.5	89.6
C160-173-86	96.1	111.0	195.9	183.1	249.3	249.2	32.7	76.2	69.6	12.6	70.5	29.5	89.6
C114D-173-64	84.0	84.0	166.0	159.9	218.9	209.9	31.1	67.7	62.8	12.6	49.6	25.6	69.3
C114D-143-74	84.0	96.1	166.0	159.9	222.9	219.9	28.5	67.7	51.1	12.6	61.5	25.6	69.3
C114D-119-86	84.0	110.9	166.0	159.9	218.9	214.3	28.5	67.7	46.4	12.6	76.5	25.6	69.3
C80D-119-64	64.0	84.0	139.2	128.5	177.2	181.1	19.7	62.0	43.3	11.4	57.6	21.7	64.2



Gear Reducer Data



1	Specification	114D	160D	228D	320D	456D	640D	912D	1280D	1824D	
2	Torque(kn.m)	13	18	26	37	53	73	105	146	211	
3	Transmission Ratio	29.818	28.506	28.87	28.8	28.25	27.21	28.79	30.47	28.81	
4	Modulus	High Speed Grade	3	4	4.5	5	6	6	7	8	
		Low Speed Grade	5	6	7	8	9	10	10	12	
5	Center Height (Ha)	430	450	500	590	650	660	785	800	850	
6	Center to Center Distance(a1 a2)	400/250	450/300	500/350	580/370	600/375	650/400	790/440	800/500	900/550	
7	Outside Dimensions	L A	1330/1050	1480	1610/1335	1830/1510	1920/1580	2010/1688	2317/2002	2460/1850	2720/2230
		Hb F	830/700	875/750	1000/780	1140/880	1160/1020	1180/960	1514/1020	1550/1140	1696/1375
8	Input Shaft	W1 d	925/φ60	945/φ66.6	990/φ76.2	1162/φ92	1439/φ101.68	1398/φ101.6	1478/φ111.13	1530/φ105	1990/φ120
		B1 B	92.5/18	92/16	92/19.05	115/22.23	169/25.4	169/25.4	169/25.4	155/28	240/32
9	Out put Shaft	W2 D	1500/φ130	1640/φ150	1744/φ175	1920/φ175	2230/φ200	2189/φ200	2280/φ200	2300/φ220	2900/φ225
		B2 C	200/32	192/36	205/45	210/45	240/45	240/45	235/45	220/50	230/56
10	Base Mounting Dimensions	E	630	670	680	770	900	860	890		
		La Lb Lc Ld	65 510 350 335	72 530 430 355	155 540 460 270	185 620 460 310	250 650 450 255	285 605 545 255	700 620 380 370		
11	External-Contracting	φ300	φ300	φ300	φ400	φ400	φ400	φ500	φ500 (内蔵式)	φ500	
12	C Type Belt Pulley (Groove)		φ772 x 3	φ772 x 4	φ925 x 4	φ925 x 5	φ1280 x 6	φ1280 x 6	φ1280 x 7	φ1450 x 8	φ1610 x 8
							φ1117 x 6				