Imo™ Pump

120-800 GPM *Up to 175 PSI*

Model UCF

IMO Model UCF pumps are positive displacement, rotary, screw-type pumps designed and engineered for excellent suction capability over a wide range of fluid viscosities. Flow rates (120 to 800 GPM) are proportional to rotating speed when the pump is operated within the recommended pressure range (up to 175 PSI). The self-priming design permits both evacuation of air filled inlet lines and repriming if suction is lost.

The unique IMO design – only three moving parts – is the key to the Model UCF pump performance. A precision bored housing encases the driven screw (power rotor) and intermeshing sealing screws (idler rotors). The accurately machined idler rotors conform perfectly to the threads of the power rotor and to the housing bores, confining the fluid in a succession of closures or cavities. As the screws rotate, the fluid is moved axially from the inlet port to the outlet port in a continuous, uniform flow. This uniform axial flow results in a minimum of fluid pulsation and extremely quiet operation.

The rotating idler rotors generate a hydrodynamic film of fluid which supports the idlers in the housing bores and prohibits wearing contact. The strength of this film is based on fluid viscosity, pump pressure and speed. As pressure requirements increase, the hydrodynamic film can be strengthened by increasing viscosity or speed. Both the flow rate and pressure capability of the IMO pump increase with speed; thus higher speeds generally result in better performance and longer life.

The Model UCF is designed so that the rotor set is lubricated by the pumped fluid and all axial and radial loads on the rotor set are supported by a system of thrust and journal bearings. This IMO design feature extends pump life and assures the quiet and trouble free operation for which IMO pumps are known.

The simple, compact design of the Model UCF pump permits fast, easy installation, low maintenance, and ease of repair. Periodic inspections can be made without removing the pump, and routine maintenance can be performed without disturbing system piping.

The Model UCF is available as either a face or foot mounted unit in seven basic flow steps with an integral relief valve. It is available as either a bare pump or complete pump/driver assembly.

Applications

Model UCF pumps are designed to meet the requirements for low pressure, high flow rate hydraulic, lubricating, and fuel oil applications. These units have been widely utilized in power plants, mechanical transmissions, and lubricating oil systems – wherever high performance and reliability in a compact design are required.

Typical applications are:

Lubrication of diesel engines, gas turbines, steam turbine/generator sets, reciprocating and centrifugal compressors, transmission gears, large centrifugal pumps, and other rotating machinery.

Circulation of fuel oils, hydraulic oils, transformer insulating oil and most petroleum based fluids in general.

Transfer, Loading and Unloading of clean lube, fuel, waste and similar type oils in refineries, factories, storage or settling tanks and lube oil reservoirs.

Specifications and Features

CASING ..... Pearlitic cast iron.

ROTORS ..... Carbon (mild) steel power and idler rotors, treated for reduced friction and increased surface hardness.

PUMP INTERNALS ..... Mechanical seal with cast iron seal ring and seat, viton elastomers, and steel spring. Regreasable, deep groove type ball bearing, external from fluid flow path. Entire rotor set is hydrostatically balanced by power rotor balancing piston and idler rotor set hydrodynamic bearing arrangement on the inlet end.

OPERATING PRESSURE ..... 175 PSIG normal maximum operating pressure for lube and hydraulic oils.
75 PSIG normal maximum operating pressure for No. 2 fuel oil.
Up to 235 PSIG under approved conditions. Consult IMO.

INLET PRESSURE ..... 55 PSIG Maximum.

VISCOSITY ..... 2 cst (33 SSU) normal minimum; 7000 SSU normal maximum.
Consult IMO for applications with viscosities outside this normal range.

TEMPERATURE ..... 0 - 200°F as standard, assuming fluid viscosity is within allowed limits.

DRIVE ..... Direct gear or pulley drive. Consult IMO for maximum speed and radial force guidelines.

ROTATION ..... Clockwise facing pump shaft. Optional counterclockwise rotation available.

CONNECTIONS ..... Inlet and outlet are ANSI 125 pound FF flanges.

FILTRATION ..... Inlet strainers are required to keep contaminants and abrasives out of pump, but should be selected with the strainer vendor to prevent pump starvation. Normally, 25 micron or finer is for light lube oils, and 1/8" - 3/16" openings for heavy oils is recommended.

RELIEF VALVE ..... Integral relief valve with internal return to suction side of pump available.

TUNER ..... Patented tuner device provided as standard. This is an internal pump valve that reduces cavitation noise by bleeding a portion of pumpage at discharge pressure through a variable orifice back to the suction chamber. While not eliminating cavitation problems due to inadequate Net Inlet Pressure, by pressurizing entrained air and vapor in the suction chamber, it significantly reduces noise due to these conditions.

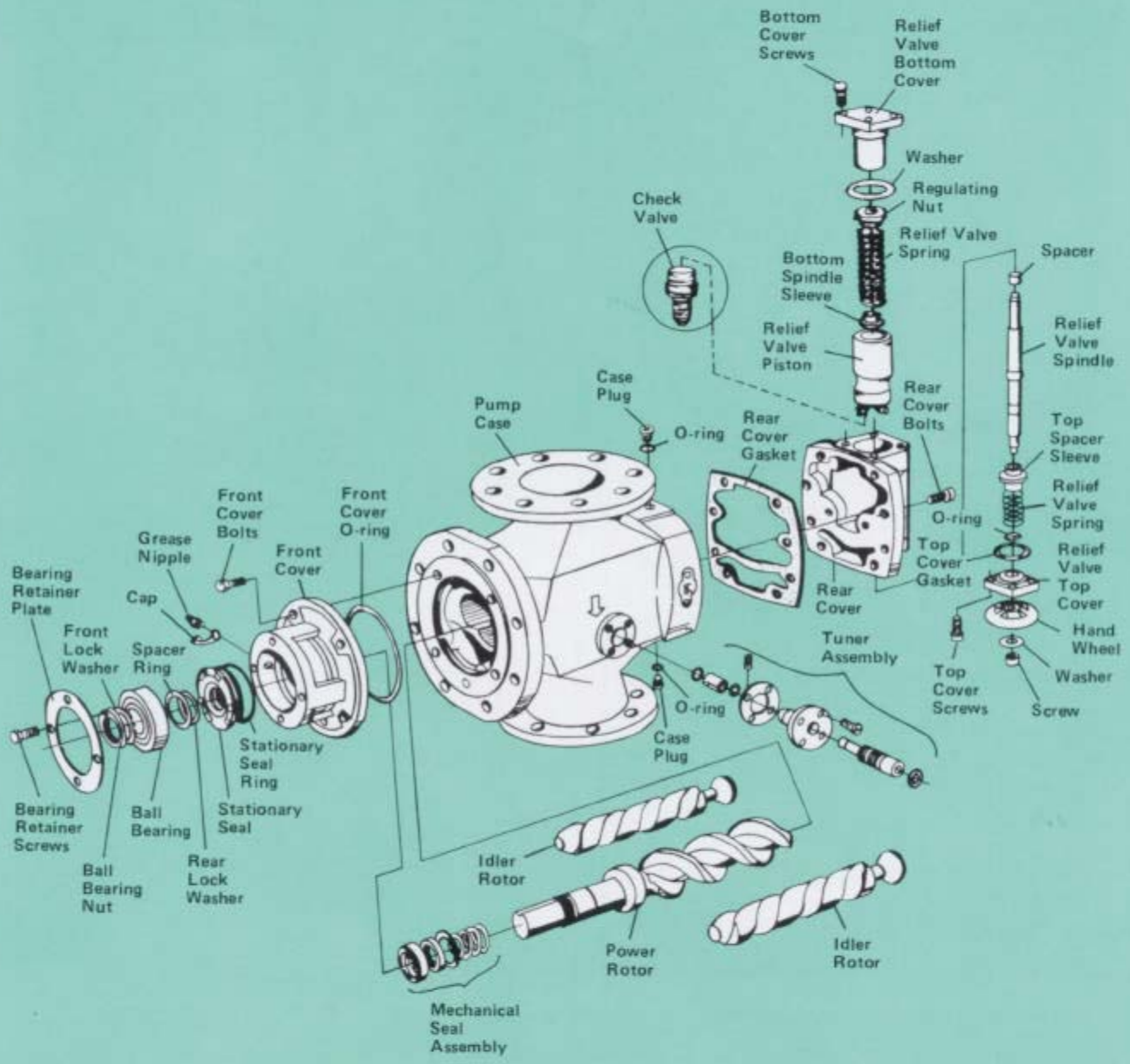
WEIGHTS .....

Rotor Size	080	090	100	110	125
Lbs.*	280	325	425	490	650

*Bare pump in foot mounted execution with relief valve

ACCESSORIES ..... Complete mounted pump/driver assemblies on steel bedplate, with or without driprim, and pump/motor adapters for NEMA "C" face or metric IEC motors.

Typical UCF Assembly



(For Models with Relief Valve)

Performance Data

Rotor Size 080N

Speed 1750 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	192	185	–	–	–	–	
	150	203	198	197	194	190	–	
	200	204	201	199	197	193	–	
	650	208	206	205	204	202	201	
	1000	208	207	206	205	204	203	
	5000	210	210	209	209	208	208	
BHP	150	5.5	8.7	11.5	14.9	20.7	–	6.1
	200	5.9	9.1	12.2	15.3	21.6	–	6.2
	650	8.1	11.2	14.3	17.5	23.7	26.9	6.2
	1000	9.3	12.3	15.4	18.4	24.9	28.1	6.3
	5000	14.3	17.5	20.4	23.4	29.5	33.1	15.0

Speed 1150 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	120	112	–	–	–	–	
	150	130	127	124	122	118	–	
	200	132	129	126	124	121	–	
	650	135	133	132	131	129	128	
	1000	136	134	133	132	131	130	
	5000	138	137	136	136	135	135	
BHP	150	3.3	5.3	7.3	9.3	13.3	–	6.0
	200	3.5	5.5	7.6	9.6	13.8	–	6.0
	650	4.7	6.7	8.8	10.8	15.0	17.0	6.0
	1000	5.3	7.3	9.3	11.3	15.3	17.7	6.0
	5000	8.0	10.0	12.0	14.0	18.0	20.3	10.4

Speed 1450 RPM (50 Hz)

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	157	148	–	–	–	–	
	150	167	163	160	158	154	–	
	200	168	165	162	160	157	–	
	650	171	170	168	167	165	164	
	1000	172	171	170	169	167	167	
	5000	174	173	173	172	172	171	
BHP	150	4.3	6.9	9.5	12.1	17.3	–	6.0
	200	4.6	7.2	9.8	12.4	17.6	–	6.0
	650	6.3	8.9	11.5	14.1	19.3	21.9	6.0
	1000	7.2	9.8	12.4	15.0	20.2	22.8	6.0
	5000	11.0	13.6	16.2	18.8	24.0	26.6	11.9

Rotor Size 090N

Speed 1750 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	278	268	–	–	–	–	
	150	291	286	283	280	–	–	
	200	293	288	285	283	278	–	
	650	297	294	293	291	289	288	
	1000	298	296	294	293	291	291	
	5000	300	299	298	298	297	297	
BHP	150	7.8	12.1	16.4	20.8	–	–	6.0
	200	8.3	12.7	17.2	21.7	30.6	–	6.0
	650	11.5	15.9	20.4	24.9	33.8	38.2	6.3
	1000	13.3	17.6	21.9	26.3	35.0	40.0	8.7
	5000	20.4	24.7	29.3	33.7	42.7	47.1	17.5

Speed 1150 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	174	164	–	–	–	–	
	150	187	183	179	176	171	–	
	200	189	185	182	179	175	–	
	650	193	191	189	188	185	184	
	1000	194	192	191	190	188	187	
	5000	196	196	195	194	194	193	
BHP	150	4.7	7.5	10.4	13.2	18.9	–	6.0
	200	4.9	7.9	10.8	13.7	19.6	–	6.0
	650	6.6	9.6	12.5	15.5	21.3	24.3	6.0
	1000	7.6	10.5	13.3	16.2	21.9	25.2	6.0
	5000	11.4	14.2	17.1	20.0	25.7	29.0	11.9

Speed 1450 RPM (50 Hz)

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	226	216	–	–	–	–	
	150	239	235	231	228	223	–	
	200	241	237	234	231	227	–	
	650	245	243	241	240	237	236	
	1000	246	244	243	242	240	239	
	5000	249	248	247	246	245	245	
BHP	150	6.1	9.8	13.5	17.2	24.6	–	6.0
	200	6.6	10.3	14.0	17.7	25.1	–	6.0
	650	9.0	12.7	16.4	20.1	27.5	31.2	6.0
	1000	10.3	14.0	17.7	21.4	28.8	32.5	6.0
	5000	15.7	19.4	23.1	26.8	34.2	37.9	14.7

Rotor Size 100N

Speed 1750 RPM

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	383	371	–	–	–	–	
	150	400	394	390	386	380	–	
	200	402	397	393	390	385	–	
	650	407	404	402	401	398	396	
	1000	408	406	404	403	401	400	
	5000	411	410	409	409	408	407	
BHP	150	10.6	16.6	22.5	28.5	40.4	–	7.6
	200	11.6	17.7	23.8	29.9	42.2	–	7.6
	650	16.0	22.1	28.2	34.3	46.6	52.7	9.0
	1000	18.2	24.1	30.1	36.0	47.9	55.1	9.7
	5000	27.9	33.9	39.8	45.8	57.7	64.9	19.7

Speed 1150 RPM

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	241	229	–	–	–	–	
	150	258	252	248	244	238	–	
	200	260	255	251	248	243	–	
	650	265	263	260	259	256	254	
	1000	267	264	263	261	259	258	
	5000	269	268	268	267	266	265	
BHP	150	6.4	10.3	14.2	18.1	26.0	–	6.0
	200	6.9	11.0	15.0	19.0	27.0	–	6.0
	650	9.3	13.3	17.3	21.3	29.4	33.4	6.0
	1000	10.4	14.3	18.2	22.1	30.0	34.7	6.0
	5000	15.6	19.5	23.4	27.3	35.2	39.9	12.0

Speed 1450 RPM (50 Hz)

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	312	300	–	–	–	–	
	150	329	323	319	315	–	–	
	200	331	326	322	319	314	–	
	650	336	334	331	330	327	325	
	1000	338	335	334	332	330	329	
	5000	341	339	338	338	337	336	
BHP	150	8.6	13.7	18.8	23.9	–	–	6.0
	200	9.2	14.3	19.3	24.4	34.6	–	6.0
	650	12.5	17.6	22.7	27.7	37.9	42.9	6.0
	1000	14.3	19.4	24.4	29.5	40.0	44.7	7.3
	5000	21.7	26.7	31.8	36.9	47.0	52.1	16.1

Rotor Size 110L

Speed 1750 RPM

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	450	434	–	–	–	–	
	150	470	463	458	453	445	–	
	200	472	466	461	457	451	–	
	650	479	475	473	471	467	465	
	1000	480	477	475	474	471	470	
	5000	484	482	482	481	479	479	
BHP	150	12.5	19.5	26.5	33.5	47.5	–	6.0
	200	13.6	20.8	28.0	35.2	49.6	–	6.0
	650	18.8	26.0	32.2	40.4	54.8	62.0	6.3
	1000	21.4	28.4	35.4	42.4	56.4	64.8	8.7
	5000	32.9	39.9	46.9	53.9	67.9	76.3	17.5

Speed 1150 RPM

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	283	267	–	–	–	–	
	150	303	296	291	286	279	–	
	200	305	299	294	291	284	–	
	650	312	308	306	304	300	298	
	1000	313	311	309	307	304	303	
	5000	317	316	315	314	313	312	
BHP	150	7.5	12.1	16.7	21.3	30.5	–	6.0
	200	8.1	12.9	17.6	22.4	31.8	–	6.0
	650	10.9	15.6	20.4	25.1	34.6	39.3	6.0
	1000	12.3	16.9	21.5	26.1	35.3	40.8	6.0
	5000	18.4	23.0	27.6	32.2	41.4	46.9	11.9

Speed 1450 RPM (50 Hz)

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	366	351	–	–	–	–	
	150	386	379	374	369	–	–	
	200	389	383	378	374	367	–	
	650	395	392	389	387	384	382	
	1000	397	394	392	390	387	386	
	5000	400	399	398	397	396	395	
BHP	150	10.1	16.1	22.1	28.0	–	–	6.0
	200	10.8	16.8	22.7	28.7	40.1	–	6.0
	650	14.7	20.7	26.7	32.6	44.6	50.5	6.0
	1000	16.8	22.8	28.8	34.7	46.7	52.6	6.0
	5000	25.5	31.5	37.4	43.4	55.3	61.3	14.7

1. For conditions between listed values, interpolate between those values. For conditions not listed or off tables, do not interpolate. Contact IMO.
2. Net Inlet Pressure Required is minimum pressure above vapor pressure at pump inlet to prevent cavitation. This assumes that the fluid is air and gas free.
3. For BHP values at viscosities below 150 SSU, use values listed for 150 SSU.

Performance Data

Rotor Size 110N

Speed 1750 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	511	495	–	–	–	–	
	150	533	525	520	515	507	–	
	200	535	529	524	520	513	–	
	650	542	539	536	534	530	528	
	1000	544	541	539	537	534	532	
	5000	547	546	545	544	543	543	
BHP	150	14.2	22.1	30.0	37.9	53.8	–	9.1
	200	15.4	23.5	31.7	39.8	56.1	–	9.2
	650	21.3	29.4	37.6	45.7	62.0	70.1	11.4
	1000	24.2	32.1	40.0	47.9	63.8	73.3	11.0
	5000	37.2	45.1	53.0	60.9	76.8	86.3	21.1

Speed 1150 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	322	306	–	–	–	–	
	150	344	337	331	326	318	–	
	200	346	340	335	331	324	–	
	650	353	350	347	345	341	339	
	1000	355	352	350	348	345	343	
	5000	359	357	356	356	354	354	
BHP	150	8.5	13.7	18.9	24.1	34.6	–	6.0
	200	9.2	14.6	19.9	25.3	36.0	–	6.0
	650	12.3	17.7	23.0	28.4	39.1	44.5	6.0
	1000	13.9	19.1	24.3	29.5	39.9	46.2	6.0
	5000	20.8	26.0	31.2	36.4	46.8	53.1	14.3

Speed 1450 RPM (50 Hz)

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	417	427	–	–	–	–	
	150	438	431	425	420	–	–	
	200	441	434	429	425	418	–	
	650	448	444	441	439	435	434	
	1000	449	447	444	442	439	438	
	5000	453	451	451	450	449	448	
BHP	150	11.4	18.2	24.9	31.7	–	–	6.0
	200	12.2	19.0	25.7	32.5	46.0	–	6.0
	650	16.6	23.4	30.1	36.9	50.4	57.1	7.5
	1000	19.0	25.8	32.5	39.3	52.8	59.5	9.0
	5000	28.8	35.6	42.3	49.1	62.6	69.3	17.4

Rotor Size 125L

Speed 1750 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	603	585	–	–	–	–	
	150	627	619	612	607	598	–	
	200	630	622	617	612	605	–	
	650	637	633	630	628	624	622	
	1000	639	636	633	631	628	627	
	5000	643	642	641	640	638	638	
BHP	150	16.6	25.9	35.2	44.6	63.2	–	7.6
	200	18.1	27.7	37.2	46.8	65.9	–	7.6
	650	25.0	34.5	44.1	53.7	72.8	82.4	9.0
	1000	28.4	37.7	47.0	56.3	74.9	86.1	9.7
	5000	43.7	53.0	62.3	71.6	90.2	102	19.7

Speed 1150 RPM

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	381	363	–	–	–	–	
	150	405	397	391	385	377	–	
	200	408	401	395	391	383	–	
	650	416	412	409	406	402	400	
	1000	417	414	412	410	406	405	
	5000	421	420	419	418	416	416	
BHP	150	10.0	16.1	22.2	28.4	40.6	–	6.0
	200	10.8	17.1	23.4	29.7	42.3	–	6.0
	650	14.5	20.8	27.1	33.4	45.9	52.2	6.0
	1000	16.3	22.4	28.5	34.6	46.8	54.2	6.0
	5000	24.4	30.5	36.6	42.8	55.0	62.4	12.0

Speed 1450 RPM (50 Hz)

Viscosity SSU		Differential Pressure – PSI						Net Inlet Pressure Required PSIA
		25	50	75	100	150	175	
GPM	33	492	474	–	–	–	–	
	150	516	508	501	496	–	–	
	200	519	512	506	501	494	–	
	650	526	522	519	517	513	511	
	1000	528	525	523	521	517	516	
	5000	533	531	530	529	528	527	
BHP	150	13.4	21.4	29.3	37.2	–	–	6.0
	200	14.3	22.3	30.2	38.1	54.0	–	6.0
	650	19.5	27.5	35.4	43.3	59.2	67.1	6.0
	1000	22.3	30.3	38.2	46.1	62.0	70.0	7.3
	5000	33.9	41.8	49.7	57.7	73.5	81.5	16.1

Rotor Size 125N

Speed 1750 RPM

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	755	734	–	–	–	–	
	150	784	774	767	760	750	–	
	200	788	779	772	767	758	–	
	650	797	792	788	785	780	778	
	1000	799	795	792	789	785	783	
	5000	804	802	801	799	798	797	
BHP	150	20.8	32.4	44.0	55.7	78.9	–	11.9
	200	22.6	34.5	46.5	58.5	82.4	–	11.9
	650	31.2	43.2	55.1	67.1	91.0	103	12.8
	1000	35.5	47.1	58.7	70.3	93.6	108	14.7
	5000	54.6	66.2	77.8	89.4	113	127	23.2

Speed 1150 RPM

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	478	457	–	–	–	–	
	150	507	497	490	484	473	–	
	200	510	502	495	490	480	–	
	650	520	515	511	508	503	501	
	1000	522	518	515	513	508	507	
	5000	527	525	524	523	521	520	
BHP	150	12.5	20.2	27.8	35.4	50.7	–	6.0
	200	13.5	21.4	29.2	37.1	52.8	–	6.0
	650	18.1	26.0	33.8	41.7	57.4	65.3	6.0
	1000	20.3	28.0	35.6	43.3	58.5	67.7	7.0
	5000	30.5	38.2	45.8	53.4	68.7	97.9	16.0

Speed 1450 RPM (50 Hz)

Viscosity SSU		Differential Pressure – PSI						
		25	50	75	100	150	175	Net Inlet Pressure Required PSIA
GPM	33	617	595	–	–	–	–	
	150	646	636	628	622	–	–	
	200	649	640	634	628	619	–	
	650	658	654	650	647	642	639	
	1000	660	657	654	651	647	645	
	5000	666	664	663	661	660	659	
BHP	150	16.8	26.7	36.6	46.5	–	–	9.0
	200	17.9	27.8	37.7	47.7	67.5	–	9.0
	650	24.4	34.3	44.2	54.1	74.0	83.9	9.3
	1000	27.9	37.8	47.7	57.6	77.5	87.4	11.7
	5000	42.3	52.2	62.1	72.0	91.9	102	19.7

Viscosity Conversion Data

Seconds Saybolt Universal SSU	Kinematic Viscosity Centistokes	Seconds Saybolt Furol SSF	Seconds Redwood 1 (Standard)	Seconds Redwood 2 (Admiralty)	Degrees Engler
32	1.82	–	30.8	–	1.14
35	2.71	–	32.1	–	1.16
40	4.25	–	36.2	5.10	1.31
50	7.68	–	44.3	5.83	1.58
60	10.3	–	52.3	6.77	1.88
70	13.1	12.95	60.9	7.60	2.17
80	15.7	13.70	69.2	8.44	2.45
90	18.1	14.44	77.6	9.30	2.73
100	20.5	15.24	85.6	10.12	3.02
150	31.9	19.30	128	14.48	4.48
200	43.0	23.5	170	18.90	5.92
250	53.8	28.0	212	23.45	7.35
300	64.6	32.5	254	28.0	8.79
400	86.2	41.9	338	37.1	11.70
500	108	51.6	423	46.2	14.60
600	130	61.4	508	55.4	17.50
700	151	71.1	592	64.6	20.45
800	173	81.0	677	73.8	23.35
900	194	91.0	762	83.0	26.30
1000	216	100.7	896	92.1	29.20
1500	324	150	1270	138.2	43.80
2000	432	200	1690	184.2	58.40
2500	539	250	2120	230	73.0
3000	648	300	2540	276	87.60
4000	862	400	3380	368	117.0
5000	1079	500	4230	461	146
6000	1295	600	5080	553	175
7000	1510	700	5920	645	204.5
8000	1726	800	6770	737	233.5
9000	1942	900	7620	829	263
10000	2160	1000	8460	921	292
15000	3240	1500	13700	–	438
20000	4320	2000	18400	–	584

$$\text{Kinematic Viscosity (in centistokes)} = \frac{\text{Absolute viscosity (in centipoises)}}{\text{Specific Gravity}}$$

Above 300 SSU, use the following conversion:

$$\text{Specific Gravity} = \frac{141.5}{131.5 + {}^{\circ}\text{API}}$$

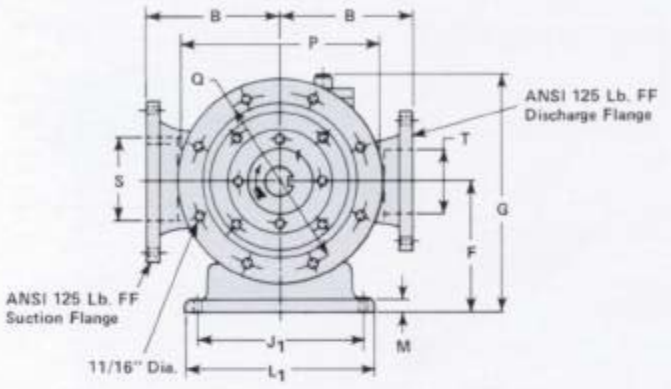
SSU = Centistokes x 4.635

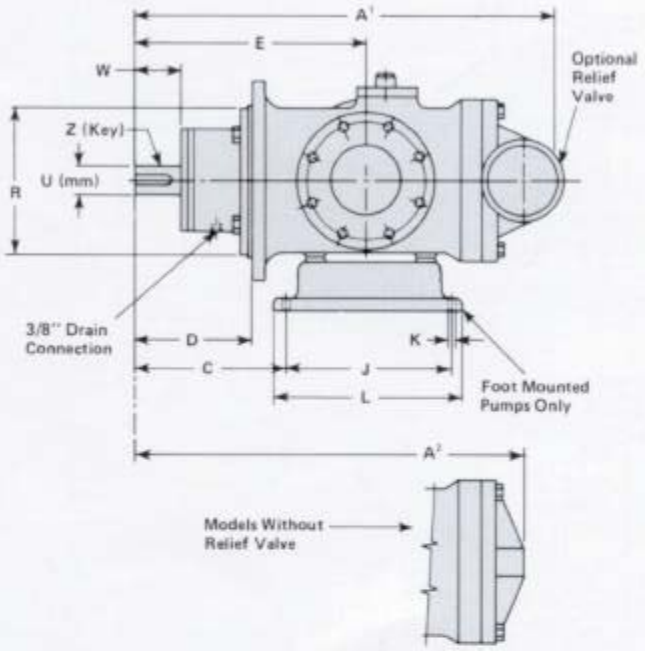
For viscosities beyond the range shown above, the following approximations can be used:

Viscosity Units		Multiplier		
Saybolt Furol	x	10.	=	Viscosity (SSU)
Redwood Standard	x	1.095	=	Viscosity (SSU)
Redwood Admiralty	x	10.87	=	Viscosity (SSU)
Engler Degrees	x	34.5	=	Viscosity (SSU)

1. For conditions between listed values, interpolate between those values. For conditions not listed or off tables, do not interpolate. Contact IMO.
2. Net Inlet Pressure Required is minimum pressure above vapor pressure at pump inlet to prevent cavitation. This assumes that the fluid is air and gas free.
3. For BHP values at viscosities below 150 SSU, use values listed for 150 SSU.

Model UCF Dimensions





CERTIFIED BY		DATE
CUSTOMER		
TYPE		CUSTOMER ORDER
ROTATION	CASING	IMO ORDER

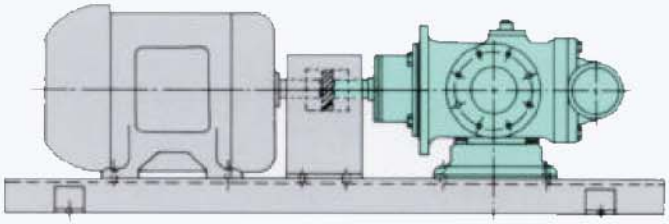
Pump Size	A^1	A^2	B	C	D	E	F	G	J	J_1	K
UCF 080	24-7/8	22-7/8	7-7/8	9-1/2	7-1/8	13-7/8	7-3/4	14	10-1/4	7-7/8	1/2
UCF 090	26-1/8	24-1/8	8-7/8	10-3/8	7-1/8	14-1/2	8	14-1/8	10-1/4	7-7/8	1/2
UCF 100	30	28	9-7/8	12	8-5/8	16-7/8	8-5/8	16-3/8	11	8-5/8	3/4
UCF 110	31-7/8	29-7/8	10-1/4	12-5/8	8-5/8	18-1/8	9	16-3/4	11	8-5/8	3/4
UCF 125	36-1/8	34-1/8	10-3/8	14-1/8	8-5/8	19-1/4	10	17-3/4	13	10-5/8	3/4

Pump Size	L	L_1	M	P	Q	R (mm)	S	T	U (mm)	W	Z (mm)
UCF 080	11-3/4	9-1/2	5/8	11-13/16	10-7/16	230	5	4	40	2-3/4	12 x 12
UCF 090	11-3/4	9-1/2	5/8	13-3/4	11-13/16	250	6	5	45	2-3/4	14 x 14
UCF 100	12-5/8	10-1/4	3/4	15-3/4	13-3/4	300	6	5	50	3-1/8	14 x 14
UCF 110	12-5/8	10-1/4	3/4	15-3/4	13-3/4	300	8	6	55	3-3/8	16 x 16
UCF 125	15	12-5/8	7/8	15-3/4	13-3/4	300	8	6	60	3-1/2	18 x 18

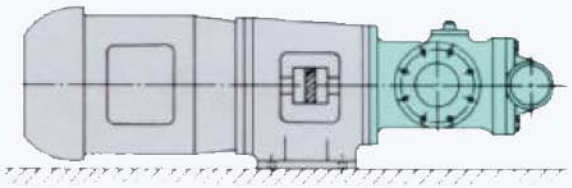
NOTES:

1. All dimensions in inches, ± 1/16 inch, unless otherwise noted.
2. Dimensions R, U and Z in millimeters.
   Tolerance for dimension R is ISO h7.
   Tolerance for dimension U is ISO j6.

Typical Pump/Motor Arrangements



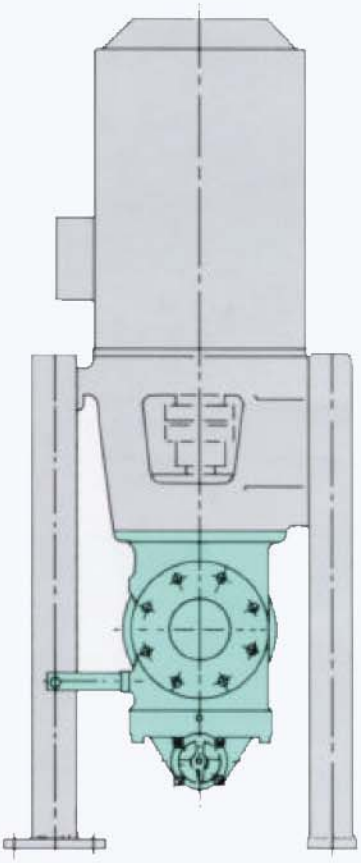
HORIZONTAL FOOT MOUNTED
UCF PUMP/MOTOR ASSEMBLY



HORIZONTAL FACE MOUNTED
UCF PUMP/MOTOR ASSEMBLY

NOTES:

1. Pump may be mounted in a vertical or horizontal position. Suction piping to be arranged so that pump does not drain dry when not in service.
2. For variations or arrangements not shown, contact IMO.



VERTICAL TRIPOD MOUNTED UCF PUMP/MOTOR ASSEMBLY

Typical UCF Nomenclature

UCF XXXX 4 1 V X X

- UCF — Series
- XXXX — Rotor Size
  080N, 090N, 100N,
  110L, 110N, 125L or 125N
- 4 — Design Modification
  4= Fourth Generation
- 1 — Casing Materials
  1 = Pearlitic Cast Iron
- V — Mechanical Seal Options
  V = Pearlitic Cast Iron Sealing Rings with Viton O-rings
- X — Mounting
  B = Bellhousing (face) Mounted
  F = Foot Mounted
- X — Relief Valve
  E = Excluded from pump
  O = Provided (25 - 140 psi)
  P = Provided (120 - 200 psi)

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Quality Management System

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