

Liberty LL3

Progressive Cavity Pump

Features

- * Modular Design
- * Maintenance Free
- * Easy Assembly/Disassembly
- * Simple Pin-Joint Connection
- * Non-Pulsating Low Shear
- * NPT Discharge Connection
- * Can Be Run In Either Direction

Pump Description

The Liberty LL3 Progressive Cavity Pump is an affordable, maintenance free, dependable drop-in replacement non-pulsating progressive cavity pump which is an ideal solution for your low-flow rate and high viscosity pumping applications. It is ideal for pumping the latex in the carpet manufacturing industry such as adhesives, backing and filler materials as well as other viscous, abrasive liquids and solutions.

The LL3 Series PC Pump is a standard flanged pump design with a body made in either Cast Iron or 316 Stainless Steel. The LL Series Pump unit is a modular design with a simple pinned-joint drive assembly and is designed for either 1, 2, or 3 pumping stages for 75, 150 or 225 psi discharge pressures.

Standard LL3 Series PC Pump Rotors are Chrome Plated Hardened Tool Steel or Chrome Plated 316 Stainless Steel. All other internal pump wetted parts are Steel or 316 Stainless Steel and made for durability and use in the harshest manufacturing and pumping environments.

The LL3 Series Progressive Cavity Pump Stators come in a wide variety of elastomer materials depending on your application such as Buna Nitrile, Natural Rubber, EPDM and Viton for long usage. The standard seal design option for the LL3 series is a set of gland packing with Lantern Ring and flush connections.

Mechanical seal assembly retrofits are readily available and can be selected at the time of your order based upon your pumping applications. The Liberty LL3 Progressive Cavity Pump parts are direct aftermarket replacements that work with the Moyno® L3 Series, Tarby® TL3 Series and Continental® CL3 Series.*

Contact a Liberty Process representative today for more information about the LL3 Series.

Materials

Rotor: Tool Steel & Stainless Steel, Chrome-Plated

Stator: Buna, Rubber, Viton™, EPDM

Motor: 1/2, 3/4, 1, 1.5, and 2 hp

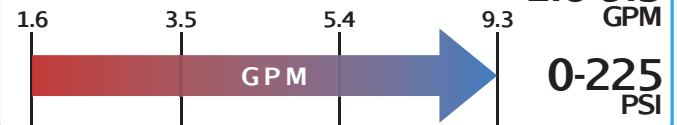
Inlet: 1-1/2"

Outlet: 1-1/4"

Bases: Steel and Stainless Steel



Liberty LL3



Curves



Single Stage



Double Stage



Triple Stage

Please Click the Icon

Drawings



Single Stage



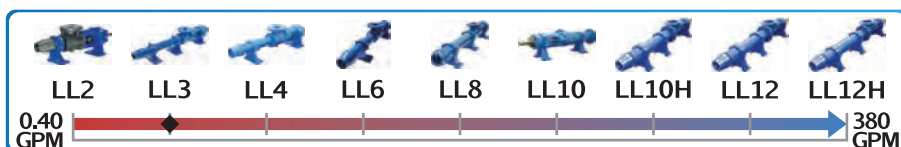
Double Stage



Triple Stage

Please Click the Icon

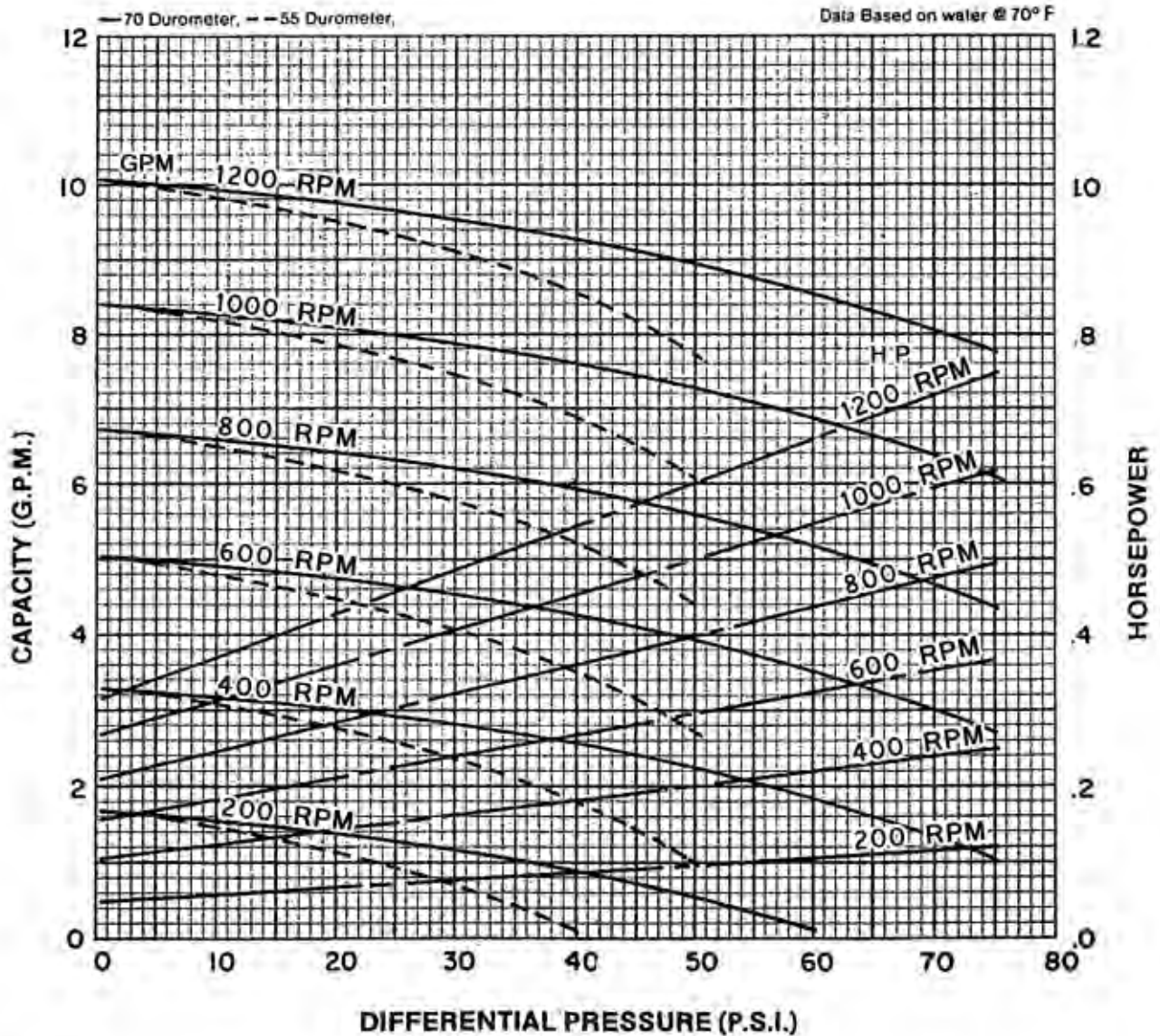
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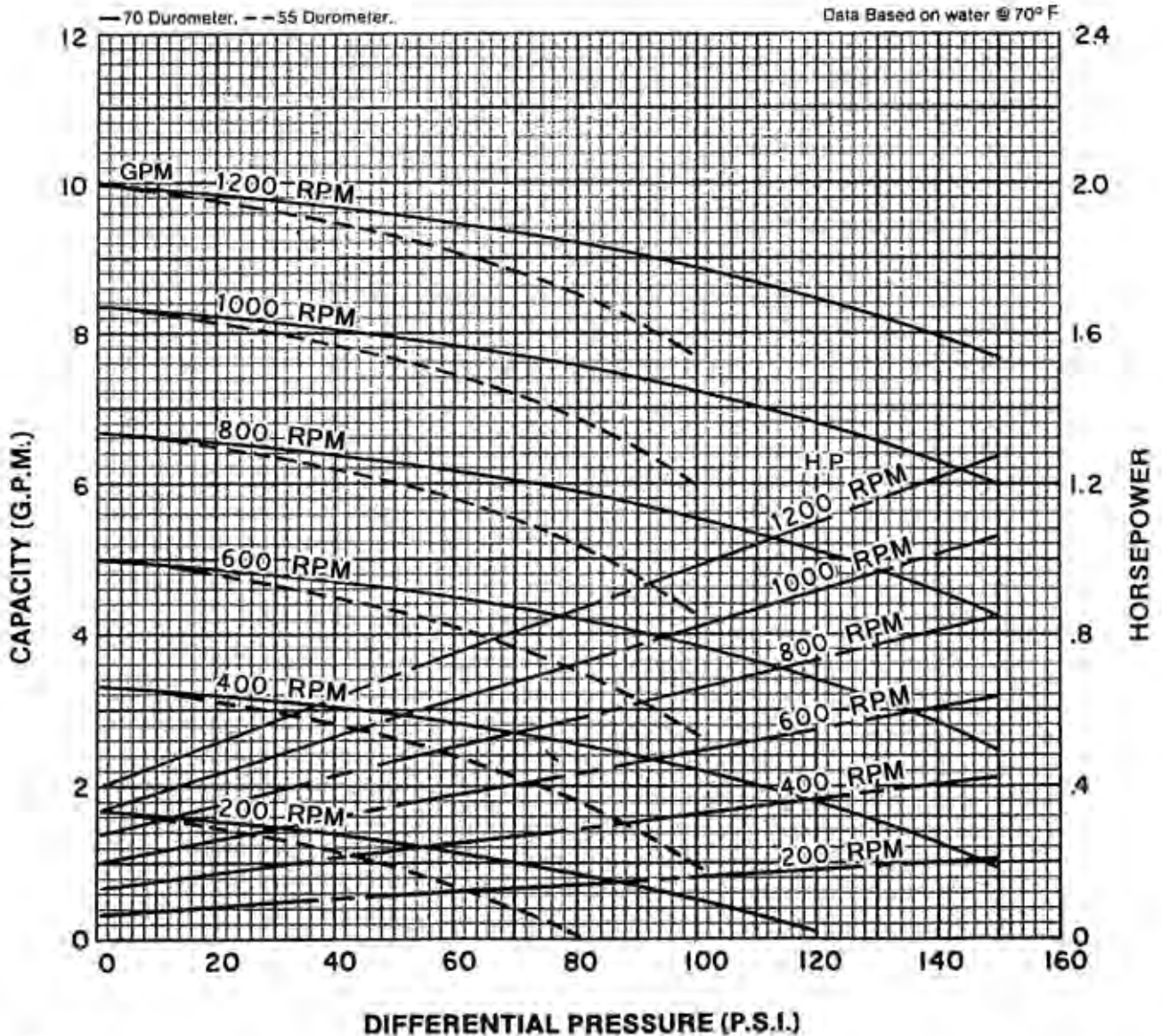
Liberty 1LL3

RPM	200	400	600	800	1000	1200	
NPSH REQ'D	.6	1.3	2	2.6	3.2	3.9	
MIN. HP	1/4	1/3	1/3	1/2	3/4	3/4	



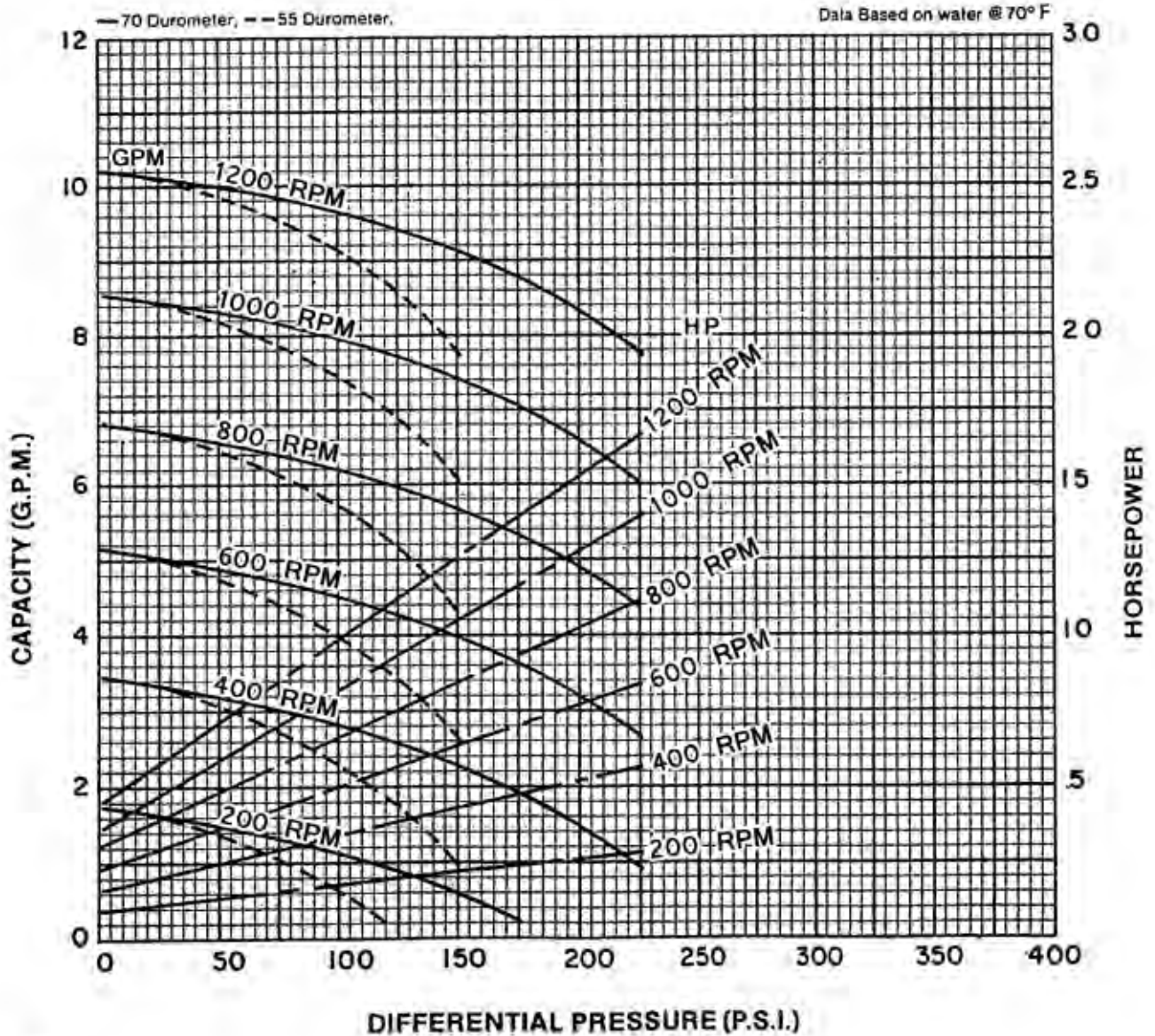
Liberty 2LL3

RPM	200	400	600	800	1000	1200	
NPSH REQ'D	.6	1.3	2	2.6	3.2	3.9	
MIN. HP	1/4	1/3	1/2	3/4	1	1	



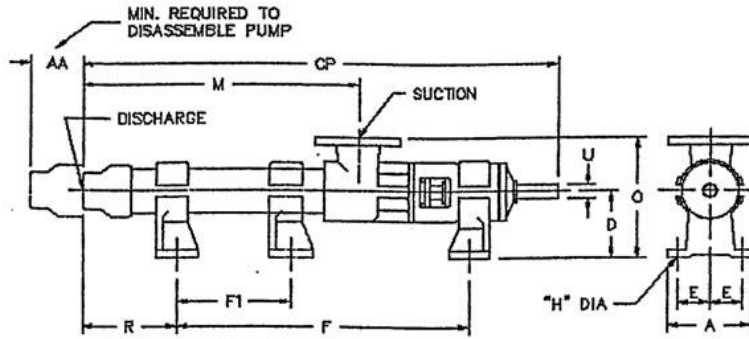
Liberty 3LL3

RPM	200	400	600	800	1000	1200	
NPSH REQ'D	.6	1.3	2	2.6	3.2	3.9	
MIN. HP	1/3	1/2	3/4	3/4	1	1	





Liberty Pump Series – Dimension Sheet



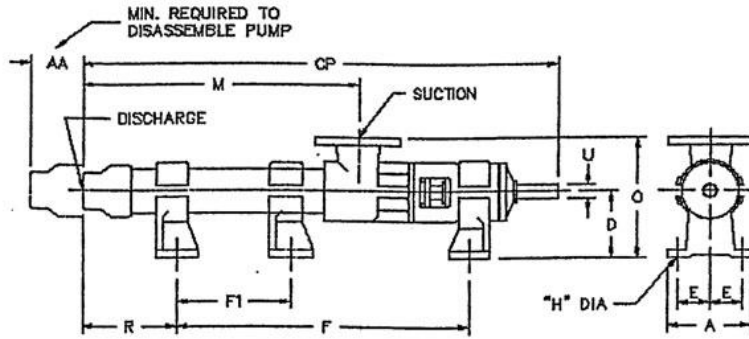
Standard Pump Dimensions

Model	AA	CP	A	D	E	F	F1	H	M	O	R	U	Suct. Size	Disc. Size	Approx. Lbs.
2ML1	6.50	17.31	4.00	3.25	1.56	8.50	-	.37	7.62	5.88	4.56	.62	1.00	.75	22
3ML1	6.50	19.12	4.00	3.25	1.56	9.62	-	.37	9.44	5.88	5.25	.62	1.00	.75	24
6ML1	6.50	24.69	4.00	3.25	1.56	15.75	-	.37	15.00	5.88	4.69	.62	1.00	.75	30
1LL2	6.50	17.25	4.00	3.25	1.56	8.50	-	.37	7.56	5.88	4.50	.62	1.00	.75	22
2LL2	6.50	20.75	4.00	3.25	1.56	10.50	-	.37	11.06	5.88	6.00	.62	1.00	.75	25
3LL2	6.50	24.37	4.00	3.25	1.56	12.00	-	.37	14.69	5.88	8.12	.62	1.00	.75	31
6ML2	8.37	39.12	5.75	4.12	2.12	25.50	14.00	.44	26.50	7.31	7.94	.75	1.50	.75	55
1LL3	8.37	23.00	5.37	4.12	2.12	11.50	-	.44	10.37	7.31	5.81	.75	1.50	1.25	47
2LL3	8.37	28.31	5.37	4.12	2.12	13.00	-	.44	15.69	7.31	9.62	.75	1.50	1.25	51
3LL3	8.37	33.62	5.37	4.12	2.12	16.50	-	.44	21.00	7.31	11.44	.75	1.50	1.25	55
6ML3	11.37	54.62	7.00	5.50	2.75	37.50	22.00	.56	37.75	9.88	10.12	.94	2.50	1.25	105
1LL4	11.37	30.37	7.00	5.50	2.75	15.75	-	.56	13.50	9.88	7.62	.94	2.50	2.00	85
2LL4	11.37	37.44	7.00	5.50	2.75	22.00	-	.56	20.56	9.88	8.44	.94	2.50	2.00	91
3LL4	11.37	44.50	7.00	5.50	2.75	22.75	-	.56	27.62	9.88	14.75	.94	2.50	2.00	97
6ML4	14.25	71.25	8.62	6.25	3.50	45.00	25.00	.69	49.94	11.25	17.69	1.12	3.00	2.50	171
1LL6	14.25	39.37	8.62	6.25	3.50	20.00	-	.69	18.06	11.25	10.81	1.12	3.00	2.50	141
2LL6	14.25	50.00	8.62	6.25	3.50	26.00	-	.69	28.69	11.25	15.44	1.12	3.00	2.50	159
3LL6	14.25	60.62	8.62	6.25	3.50	38.00	18.00	.69	39.31	11.25	14.06	1.12	3.00	2.50	192
1LL8	18.37	46.31	11.50	8.00	4.50	27.00	-	.88	20.50	14.00	10.06	1.37	4.00	4.00	303
2LL8	18.37	58.75	11.50	8.00	4.50	32.00	-	.88	32.94	14.00	17.50	1.37	4.00	4.00	322
3LL8	18.37	71.12	11.50	8.00	4.50	49.00	24.00	.88	45.31	14.00	12.88	1.37	4.00	4.00	372
1LL10	31.88	53.62	11.50	9.75	4.50	30.00	-	.88	22.37	16.69	10.12	1.88	6.00	5.00	412
2LL10	31.88	64.00	11.50	9.75	4.50	35.50	-	.88	32.75	16.69	15.00	1.88	6.00	5.00	460
3LL10	31.88	74.37	11.50	9.75	4.50	48.00	18.00	.88	43.12	16.69	12.88	1.88	6.00	5.00	545
1LL10H	31.88	59.00	11.50	9.75	4.50	30.00	-	.88	27.75	16.69	15.50	1.88	6.00	5.00	424
2LL10H	31.88	74.37	11.50	9.75	4.50	48.00	18.00	.88	43.12	16.69	12.88	1.88	6.00	5.00	545
1LL12	37.75	70.19	14.50	12.50	6.31	37.50	-	1.00	31.44	21.00	14.69	2.25	8.00	6.00	880
2LL12	37.75	85.88	14.50	12.50	6.31	55.50	20.50	1.00	47.50	21.00	12.37	2.25	8.00	6.00	1075
3LL12	37.75	101.44	14.50	12.50	6.31	69.00	27.00	1.00	62.69	21.00	14.44	2.25	8.00	6.00	1200
1LL12H	37.75	78.00	14.50	12.50	6.31	42.00	-	1.00	39.25	21.00	18.00	2.25	8.00	6.00	945
2LL12H	37.75	101.44	14.50	12.50	6.31	69.00	27.00	1.00	62.69	21.00	14.44	2.25	8.00	6.00	1205

*All listed dimensions in inches



Liberty Pump Series – Dimension Sheet



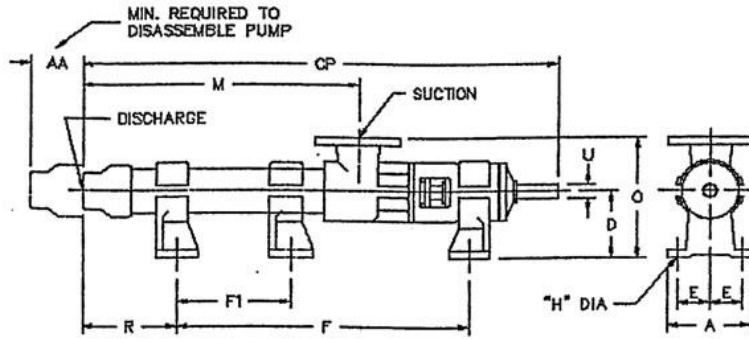
Standard Pump Dimensions

Model	AA	CP	A	D	E	F	F1	H	M	O	R	U	Suct. Size	Disc. Size	Approx. Lbs.
2ML1	6.50	17.31	4.00	3.25	1.56	8.50	-	.37	7.62	5.88	4.56	.62	1.00	.75	22
3ML1	6.50	19.12	4.00	3.25	1.56	9.62	-	.37	9.44	5.88	5.25	.62	1.00	.75	24
6ML1	6.50	24.69	4.00	3.25	1.56	15.75	-	.37	15.00	5.88	4.69	.62	1.00	.75	30
1LL2	6.50	17.25	4.00	3.25	1.56	8.50	-	.37	7.56	5.88	4.50	.62	1.00	.75	22
2LL2	6.50	20.75	4.00	3.25	1.56	10.50	-	.37	11.06	5.88	6.00	.62	1.00	.75	25
3LL2	6.50	24.37	4.00	3.25	1.56	12.00	-	.37	14.69	5.88	8.12	.62	1.00	.75	31
6ML2	8.37	39.12	5.75	4.12	2.12	25.50	14.00	.44	26.50	7.31	7.94	.75	1.50	.75	55
1LL3	8.37	23.00	5.37	4.12	2.12	11.50	-	.44	10.37	7.31	5.81	.75	1.50	1.25	47
2LL3	8.37	28.31	5.37	4.12	2.12	13.00	-	.44	15.69	7.31	9.62	.75	1.50	1.25	51
3LL3	8.37	33.62	5.37	4.12	2.12	16.50	-	.44	21.00	7.31	11.44	.75	1.50	1.25	55
6ML3	11.37	54.62	7.00	5.50	2.75	37.50	22.00	.56	37.75	9.88	10.12	.94	2.50	1.25	105
1LL4	11.37	30.37	7.00	5.50	2.75	15.75	-	.56	13.50	9.88	7.62	.94	2.50	2.00	85
2LL4	11.37	37.44	7.00	5.50	2.75	22.00	-	.56	20.56	9.88	8.44	.94	2.50	2.00	91
3LL4	11.37	44.50	7.00	5.50	2.75	22.75	-	.56	27.62	9.88	14.75	.94	2.50	2.00	97
6ML4	14.25	71.25	8.62	6.25	3.50	45.00	25.00	.69	49.94	11.25	17.69	1.12	3.00	2.50	171
1LL6	14.25	39.37	8.62	6.25	3.50	20.00	-	.69	18.06	11.25	10.81	1.12	3.00	2.50	141
2LL6	14.25	50.00	8.62	6.25	3.50	26.00	-	.69	28.69	11.25	15.44	1.12	3.00	2.50	159
3LL6	14.25	60.62	8.62	6.25	3.50	38.00	18.00	.69	39.31	11.25	14.06	1.12	3.00	2.50	192
1LL8	18.37	46.31	11.50	8.00	4.50	27.00	-	.88	20.50	14.00	10.06	1.37	4.00	4.00	303
2LL8	18.37	58.75	11.50	8.00	4.50	32.00	-	.88	32.94	14.00	17.50	1.37	4.00	4.00	322
3LL8	18.37	71.12	11.50	8.00	4.50	49.00	24.00	.88	45.31	14.00	12.88	1.37	4.00	4.00	372
1LL10	31.88	53.62	11.50	9.75	4.50	30.00	-	.88	22.37	16.69	10.12	1.88	6.00	5.00	412
2LL10	31.88	64.00	11.50	9.75	4.50	35.50	-	.88	32.75	16.69	15.00	1.88	6.00	5.00	460
3LL10	31.88	74.37	11.50	9.75	4.50	48.00	18.00	.88	43.12	16.69	12.88	1.88	6.00	5.00	545
1LL10H	31.88	59.00	11.50	9.75	4.50	30.00	-	.88	27.75	16.69	15.50	1.88	6.00	5.00	424
2LL10H	31.88	74.37	11.50	9.75	4.50	48.00	18.00	.88	43.12	16.69	12.88	1.88	6.00	5.00	545
1LL12	37.75	70.19	14.50	12.50	6.31	37.50	-	1.00	31.44	21.00	14.69	2.25	8.00	6.00	880
2LL12	37.75	85.88	14.50	12.50	6.31	55.50	20.50	1.00	47.50	21.00	12.37	2.25	8.00	6.00	1075
3LL12	37.75	101.44	14.50	12.50	6.31	69.00	27.00	1.00	62.69	21.00	14.44	2.25	8.00	6.00	1200
1LL12H	37.75	78.00	14.50	12.50	6.31	42.00	-	1.00	39.25	21.00	18.00	2.25	8.00	6.00	945
2LL12H	37.75	101.44	14.50	12.50	6.31	69.00	27.00	1.00	62.69	21.00	14.44	2.25	8.00	6.00	1205

*All listed dimensions in inches



Liberty Pump Series – Dimension Sheet



Standard Pump Dimensions

Model	AA	CP	A	D	E	F	F1	H	M	O	R	U	Suct. Size	Disc. Size	Approx. Lbs.
2ML1	6.50	17.31	4.00	3.25	1.56	8.50	-	.37	7.62	5.88	4.56	.62	1.00	.75	22
3ML1	6.50	19.12	4.00	3.25	1.56	9.62	-	.37	9.44	5.88	5.25	.62	1.00	.75	24
6ML1	6.50	24.69	4.00	3.25	1.56	15.75	-	.37	15.00	5.88	4.69	.62	1.00	.75	30
1LL2	6.50	17.25	4.00	3.25	1.56	8.50	-	.37	7.56	5.88	4.50	.62	1.00	.75	22
2LL2	6.50	20.75	4.00	3.25	1.56	10.50	-	.37	11.06	5.88	6.00	.62	1.00	.75	25
3LL2	6.50	24.37	4.00	3.25	1.56	12.00	-	.37	14.69	5.88	8.12	.62	1.00	.75	31
6ML2	8.37	39.12	5.75	4.12	2.12	25.50	14.00	.44	26.50	7.31	7.94	.75	1.50	.75	55
1LL3	8.37	23.00	5.37	4.12	2.12	11.50	-	.44	10.37	7.31	5.81	.75	1.50	1.25	47
2LL3	8.37	28.31	5.37	4.12	2.12	13.00	-	.44	15.69	7.31	9.62	.75	1.50	1.25	51
3LL3	8.37	33.62	5.37	4.12	2.12	16.50	-	.44	21.00	7.31	11.44	.75	1.50	1.25	55
6ML3	11.37	54.62	7.00	5.50	2.75	37.50	22.00	.56	37.75	9.88	10.12	.94	2.50	1.25	105
1LL4	11.37	30.37	7.00	5.50	2.75	15.75	-	.56	13.50	9.88	7.62	.94	2.50	2.00	85
2LL4	11.37	37.44	7.00	5.50	2.75	22.00	-	.56	20.56	9.88	8.44	.94	2.50	2.00	91
3LL4	11.37	44.50	7.00	5.50	2.75	22.75	-	.56	27.62	9.88	14.75	.94	2.50	2.00	97
6ML4	14.25	71.25	8.62	6.25	3.50	45.00	25.00	.69	49.94	11.25	17.69	1.12	3.00	2.50	171
1LL6	14.25	39.37	8.62	6.25	3.50	20.00	-	.69	18.06	11.25	10.81	1.12	3.00	2.50	141
2LL6	14.25	50.00	8.62	6.25	3.50	26.00	-	.69	28.69	11.25	15.44	1.12	3.00	2.50	159
3LL6	14.25	60.62	8.62	6.25	3.50	38.00	18.00	.69	39.31	11.25	14.06	1.12	3.00	2.50	192
1LL8	18.37	46.31	11.50	8.00	4.50	27.00	-	.88	20.50	14.00	10.06	1.37	4.00	4.00	303
2LL8	18.37	58.75	11.50	8.00	4.50	32.00	-	.88	32.94	14.00	17.50	1.37	4.00	4.00	322
3LL8	18.37	71.12	11.50	8.00	4.50	49.00	24.00	.88	45.31	14.00	12.88	1.37	4.00	4.00	372
1LL10	31.88	53.62	11.50	9.75	4.50	30.00	-	.88	22.37	16.69	10.12	1.88	6.00	5.00	412
2LL10	31.88	64.00	11.50	9.75	4.50	35.50	-	.88	32.75	16.69	15.00	1.88	6.00	5.00	460
3LL10	31.88	74.37	11.50	9.75	4.50	48.00	18.00	.88	43.12	16.69	12.88	1.88	6.00	5.00	545
1LL10H	31.88	59.00	11.50	9.75	4.50	30.00	-	.88	27.75	16.69	15.50	1.88	6.00	5.00	424
2LL10H	31.88	74.37	11.50	9.75	4.50	48.00	18.00	.88	43.12	16.69	12.88	1.88	6.00	5.00	545
1LL12	37.75	70.19	14.50	12.50	6.31	37.50	-	1.00	31.44	21.00	14.69	2.25	8.00	6.00	880
2LL12	37.75	85.88	14.50	12.50	6.31	55.50	20.50	1.00	47.50	21.00	12.37	2.25	8.00	6.00	1075
3LL12	37.75	101.44	14.50	12.50	6.31	69.00	27.00	1.00	62.69	21.00	14.44	2.25	8.00	6.00	1200
1LL12H	37.75	78.00	14.50	12.50	6.31	42.00	-	1.00	39.25	21.00	18.00	2.25	8.00	6.00	945
2LL12H	37.75	101.44	14.50	12.50	6.31	69.00	27.00	1.00	62.69	21.00	14.44	2.25	8.00	6.00	1205

*All listed dimensions in inches