

# Liberty LL10H

## Progressive Cavity Pump

### Features

- \* Modular Design
- \* Maintenance Free
- \* Easy Assembly/Disassembly
- \* Simple Pin-Joint Connection
- \* Non-Pulsating Low Shear
- \* NPT Discharge Connection

### Pump Description

The Liberty LL10H Progressive Cavity Pump is an ideal unit for abrasive pumping applications like industrial wastewater and effluent flows. Flow rate (27 gallons/100 revolutions) 22 up to 140 GPM and represents one of our most popular heavy duty models of Progressive Cavity Pumps for Industry currently carried by Liberty Process. The LL10H Liberty pump unit is a low-cost, maintenance free, dependable drop-in replacement pump

The Liberty LL10H Series PC Pump is a standard flanged pump design manufactured with high strength cast iron or 316 stainless steel pump casings and designed in 1, 2, and 3 stages for 75, 150 or 225 psi discharge pressures.

The pump unit is a modular design with simple hardened pinned joint drive assembly. The LL10H Rotors are typically hardened tool steel or 316 stainless steel with a hard chrome plating for long life in abrasive pumping applications.

All other wetted parts are either carbon steel or 316 stainless steel. Stators are available in many elastomer materials such as buna, natural rubber, epdm and viton. The standard seal design is a set of packing with a Lantern Ring and flush connectors. Mechanical seal options are readily available.

The Liberty LL10H Progressive Cavity Pump parts are direct aftermarket replacements that work with the Moyno™ L10H Series, Tarby™ TL10H Series and Continental™ CL10H Series.\*

Contact a Liberty Process representative today for more information about the LL10H Series.

### Materials

**Rotor:** Tool Steel & Stainless Steel, Chrome-Plated

**Stator:** Buna, Rubber, Viton™, EPDM

**Motor:** 5, 7.5, 10, and 15 hp

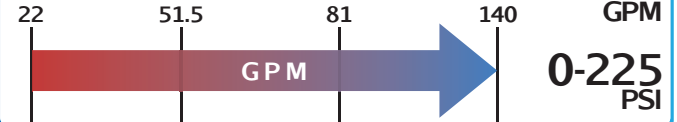
**Inlet:** 6"

**Outlet:** 5"

**Bases:** Carbon and Stainless Steel



Liberty LL10H



### Curves



Single Stage



Double Stage

Please Click the Icon

### Drawings



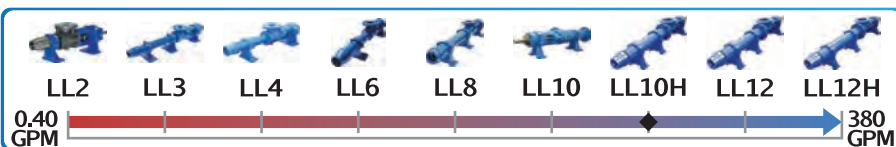
Single Stage



Double Stage

Please Click the Icon

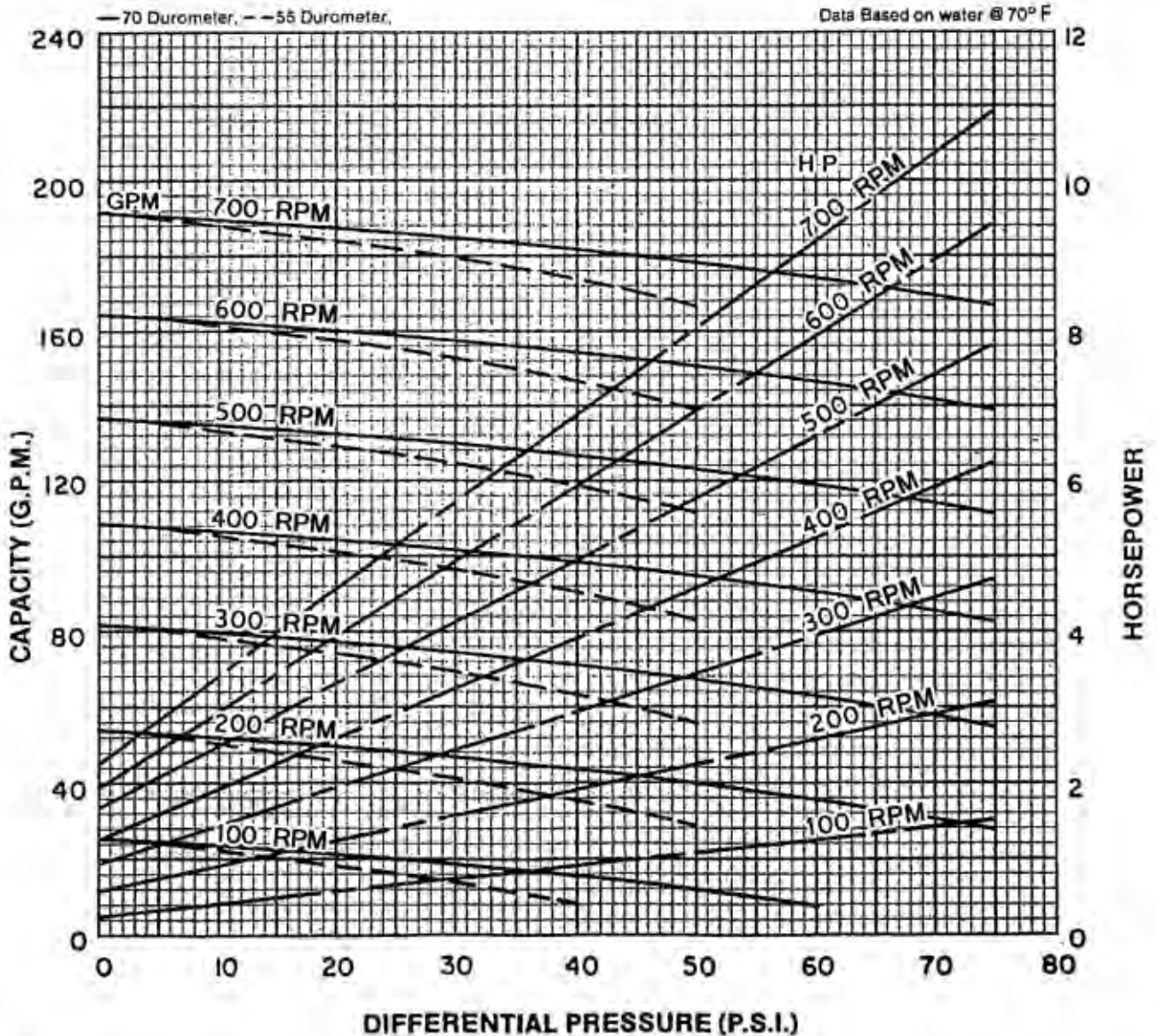
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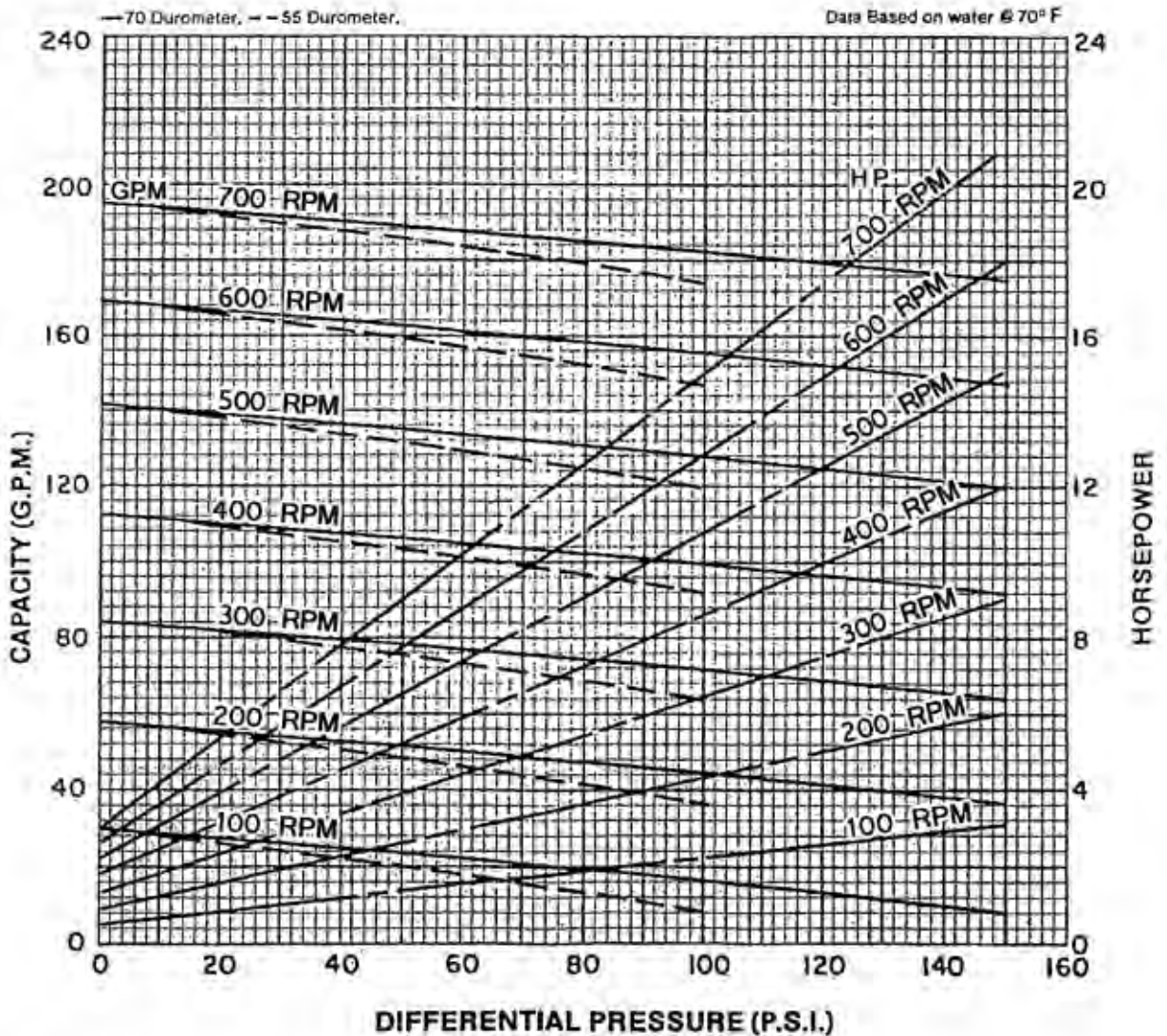
# Liberty 1LL10H

RPM	100	200	300	400	500	600	700
NPSH REQ'D	1.1	2.1	3.2	4.7	7.4	9.9	12.6
MIN. HP	1	2	3	5	5	7 1/2	7 1/2



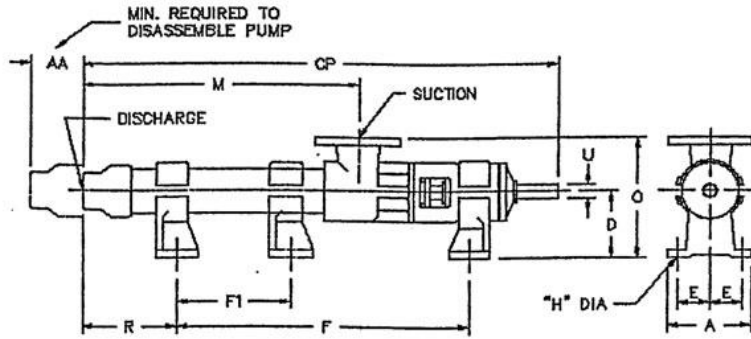
# Liberty 2LL10H

RPM	100	200	300	400	500	600	700
NPSH REQ'D	1.1	2.1	3.2	4.7	7.4	9.9	12.6
MIN. HP	2	5	5	7½	10	10	15





# Liberty Pump Series – Dimension Sheet



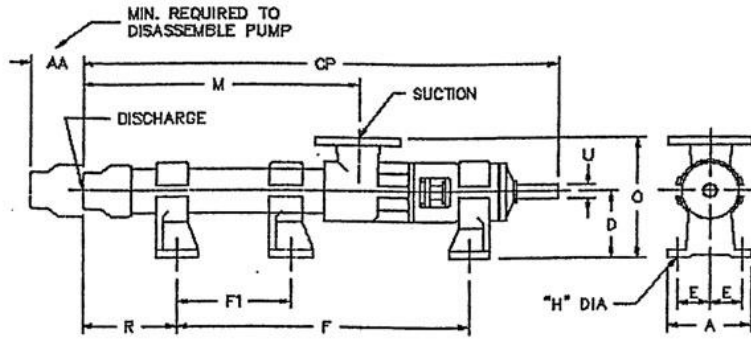
## Standard Pump Dimensions

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
<b>1LL10H</b>	<b>31.88</b>	<b>59.00</b>	<b>11.50</b>	<b>9.75</b>	<b>4.50</b>	<b>30.00</b>	-	<b>.88</b>	<b>27.75</b>	<b>16.69</b>	<b>15.50</b>	<b>1.88</b>	<b>6.00</b>	<b>5.00</b>	<b>424</b>
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
<b>2LL10H</b>	<b>31.88</b>	<b>74.37</b>	<b>11.50</b>	<b>9.75</b>	<b>4.50</b>	<b>48.00</b>	<b>18.00</b>	<b>.88</b>	<b>43.12</b>	<b>16.69</b>	<b>12.88</b>	<b>1.88</b>	<b>6.00</b>	<b>5.00</b>	<b>545</b>
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