

# **DC • Hydraulic Power Unit**

// Modular Design, Compact Size // High Quality Parts // 100% End of Line Test // Flexible Capability for DIY









Type 06, Single Acting	Page A1-6
Type 13, Double Acting, Single-output, Cetop5(D03) Valve	Page A1-13
Type 14, Double Acting, Expandable Circuit with Cetop5(D03) Valve	Page A1-18
Type 15, Double Acting, Expandable Circuit with Sectional Valve	Page A1-21
Type 21, Double Acting, with Screw-in Cartridge valves	Page A1-20
Type 07, Single Acting, Dual-output	Page A1-32
Type 97, Circuit for Truck Tailgate	Page A1-35

### Chart of Flow Rated vs. Pressure

DP13
Series

DC Hydraulic Power Unit

### Group 01D, 03D, 05D and 08D

\*Grouped by Motor Rated Power

#### Group 01D - Rated Power 150W (DC12V and 24V)

Pump Displacement	0.19cc	0.26cc	0.38cc	0.50cc
Rated Pressure	22MPa(3200PSI)	20MPa(2900PSI)	14MPa (2000PSI)	10MPa(1450PSI)
Flow Rate @ Rated Pressure	0.3LPM(0.08GPM)	0.47LPM(0.12GPM)	0.68LPM(0.18GPM)	0.9LPM(0.23GPM)
Max Pressure	25MPa(3600PSI)	25MPa(3600PSI)	18MPa(2600PSI)	13MPa(1900PSI)
Flow Rate @ Max. Pressure	0.15LPM(0.04GPM)	0.23LPM(0.06GPM)	0.4LPM(0.1GPM)	0.54LPM(0.14GPM)

#### Group 03D - Rated Power 350kW (DC12V and 24V)

Pump Displacement	0.38cc	0.5cc	0.65cc	0.75cc
Rated Pressure	22MPa(3200PSI)	16MPa (2300PSI)	13MPa(1900PSI)	11MPa(1600PSI)
Flow Rate @ Rated Pressure	0.68LPM(0.18GPM)	0.9LPM(0.23GPM)	1.1LPM(0.29GPM)	1.2LPM(0.31GPM)
Max Pressure	25MPa(3600PSI)	19MPa(2800PSI)	16MPa(2300PSI)	15MPa(2200PSI)
Flow Rate @ Max. Pressure	0.34LPM(0.09GPM)	0.5LPM(0.13GPM)	0.7LPM(0.18GPM)	0.8LPM(0.21GPM)

#### Group 05D - Rated Power 500W (DC12V and 24V)

Pump Displacement	0.5cc	0.65cc	0.75cc	0.88cc
Rated Pressure	22MPa(3200PSI)	18MPa (2600PSI)	15MPa (2200PSI)	12MPa (1700PSI)
Flow Rate @ Rated Pressure	1LPM(0.26GPM)	1.3LPM (0.34GPM)	1.5LPM (0.4GPM)	2LPM (0.52GPM)
Max Pressure	25MPa(3600PSI)	20MPa (2900PSI)	17MPa (2500PSI)	15MPa (2200PSI)
Flow Rate @ Max. Pressure	0.5LPM(0.13GPM)	0.9LPM (0.23GPM)	1.2LPM (0.31GPM)	1.6LPM (0.42GPM)

#### Group 08D - Rated Power 800W (DC12V and 24V)

Pump Displacement	0.65cc	0.88cc	1.0cc	1.25cc
Rated Pressure	20MPa (2900PSI)	13MPa (1900PSI)	11MPa (1600PSI)	9MPa (1300PSI)
Flow Rate @ Rated Pressure	1.6LPM (0.42GPM)	2.5LPM (0.66GPM)	2.6LPM (0.68GPM)	3.2LPM (0.84LPM)
Max Pressure	22MPa (3200PSI)	16MPa (2300PSI)	14MPa (2000PSI)	11MPa (1600PSI)
Flow Rate @ Max. Pressure	1.1LPM (0.29GPM)	2.2LPM (0.58GPM)	2LPM (0.52GPM)	2.6LPM (0.68GPM)





### Chart of Flow Rated vs. Pressure

DP13
Series

DC Hydraulic Power Unit

# Group16D,22D,25D, 28D

\*Grouped by Motor Rated Power

#### Group 16D - Rated Power 1.6W (12V only)

Pump Displacement	1.1cc	1.3cc	1.6cc	2.1cc
Rated Pressure	22MPa(3200PSI)	20MPa(2900PSI)	16MPa (2300PSI)	13MPa(1900PSI)
Flow Rate @ Rated Pressure	1.4LPM(0.37GPM)	1.7LPM(0.45GPM)	3.7LPM(1GPM)	4.8LPM(1.28GPM)
Max Pressure	27MPa(3900PSI)	27MPa(3900PSI)	23MPa(3300PSI)	21MPa(3000PSI)
Flow Rate @ Max. Pressure	1.1LPM(0.28GPM)	1.2LPM(0.32GPM)	2LPM(0.5GPM)	2.4LPM(0.6GPM)

#### Group 22D - Rated Power 2.2kW (24V only)

Pump Displacement	1.3cc	1.6cc	2.1cc	2.7cc
Rated Pressure	25MPa(3600PSI)	22MPa (3200PSI)	18MPa(2600PSI)	13MPa(1880PSI)
Flow Rate @ Rated Pressure	1.7LPM(0.45GPM)	2.2LPM(0.58GPM)	4.8LPM(1.2GPM)	6.2LPM(1.6GPM)
Max Pressure	27MPa(3900PSI)	25MPa(3600PSI)	23MPa(3300PSI)	18MPa(2600PSI)
Flow Rate @ Max. Pressure	1.3LPM(0.34GPM)	1.8LPM(0.47GPM)	2.6LPM(0.68GPM)	5LPM(1.3GPM)

#### Group 25D - Rated Power 2.5kW (12V and 24V)

Pump Displacement	1.6cc	2.1cc	2.7cc	3.2cc
Rated Pressure	27MPa(3900PSI)	21MPa (3000PSI)	16MPa (2500PSI)	14MPa (2000PSI)
Flow Rate @ Rated Pressure	2.2LPM(0.58GPM)	3.9LPM (1GPM)	5LPM (1.32GPM)	6.2LPM (1.6GPM)
Max Pressure	29MPa(4200PSI)	27MPa (3900PSI)	20MPa (2900PSI)	20MPa (2900PSI)
Flow Rate @ Max. Pressure	1.8LPM(0.47GPM)	2.6LPM (0.68GPM)	3.8LPM (1.0GPM)	4.8LPM (1.2GPM)

#### Group 28D - Rated Power 2.8kW (24V only)

1.6cc	2.1cc	2.7cc	3.2cc
25MPa (3600PSI)	18MPa (2600PSI)	14MPa (2000PSI)	10MPa (1450PSI)
4LPM (1.1GPM)	6LPM (1.5GPM)	7.8LPM (2.0GPM)	10LPM (2.7LPM)
30MPa (4350PSI)	28MPa (4000PSI)	24MPa (3400PSI)	20MPa (2900PSI)
2.5LPM (0.6GPM)	3.2LPM (0.8GPM)	4.5LPM (1.1GPM)	4.8LPM (1.2GPM)
	25MPa (3600PSI) 4LPM (1.1GPM) 30MPa (4350PSI)	25MPa (3600PSI) 18MPa (2600PSI)  4LPM (1.1GPM) 6LPM (1.5GPM)  30MPa (4350PSI) 28MPa (4000PSI)	25MPa (3600PSI)       18MPa (2600PSI)       14MPa (2000PSI)         4LPM (1.1GPM)       6LPM (1.5GPM)       7.8LPM (2.0GPM)         30MPa (4350PSI)       28MPa (4000PSI)       24MPa (3400PSI)





# Chart of Flow Rated vs. Pressure

DP13
Series

DC Hydraulic Power Unit

# Group 30D, 40D, 45D

\*Grouped by Motor Rated Power

#### Group 30D - Rated Power 3.0KW (12V only)

Pump Displacement	2.7cc	3.2cc	3.7cc	4.2cc
Rated Pressure	18MPa(2600PSI)	16MPa(2300PSI)	13MPa (1900PSI)	11MPa(1600PSI)
Flow Rate @ Rated Pressure	4.8LPM(1.2GPM)	6.2LPM(1.6GPM)	6.7LPM(1.76GPM)	8LPM(2.11GPM)
Max Pressure	27MPa(3900PSI)	27MPa(3900PSI)	26MPa(3770PSI)	22MPa(3200PSI)
Flow Rate @ Max. Pressure	2.6LPM(0.68GPM)	2.7LPM(0.71GPM)	2.85LPM(0.75GPM)	3.25LPM(0.85GPM)

#### Group 30D - Rated Power 3kW (24V only)

Pump Displacement	2.7cc	3.2cc	3.7cc	4.2cc
Rated Pressure	18MPa(2600PSI)	16MPa (2300PSI)	13MPa(1900PSI)	11MPa(1600PSI)
Flow Rate @ Rated Pressure	6.2LPM(1.6GPM)	8LPM(2.11GPM)	10LPM(2.7GPM)	10.7LPM(2.8GPM)
Max Pressure	27MPa(3900PSI)	27MPa(3900PSI)	26MPa(3770PSI)	22MPa(3200PSI)
Flow Rate @ Max. Pressure	3.8LPM(1.0GPM)	4.4LPM(1.16GPM)	4.8LPM(1.2GPM)	5.5LPM(1.4GPM)

#### Group 40D - Rated Power 4.0kW (24V only)

Pump Displacement	3.7cc	4.2cc	4.8cc	5.8cc
Rated Pressure	14MPa(2000PSI)	11MPa (1600PSI)	10MPa (1450PSI)	9MPa (1300PSI)
Flow Rate @ Rated Pressure	9LPM(2.38GPM)	10LPM (2.7GPM)	11.7LPM (3.1GPM)	14LPM (3.8GPM)
Max Pressure	24MPa(3500PSI)	22MPa (3200PSI)	20MPa (2900PSI)	16MPa (2320PSI)
Flow Rate @ Max. Pressure	4.6LPM(1.22GPM)	5LPM (1.32GPM)	6.4LPM (1.7GPM)	8LPM (2.11GPM)

#### Group 45D - Rated Power 4.5kW (24V only)

4.2cc	4.8cc	5.8cc	7.0cc
16MPa (2300PSI)	15MPa (2180PSI)	13MPa (1900PSI)	10MPa (1450PSI)
9.1LPM (2.4GPM)	10.4LPM (2.75GPM)	12.5LPM (3.3GPM)	15LPM (4GPM)
27MPa (3900PSI)	27MPa (3900PSI)	22MPa (3200PSI)	18MPa (2600PSI)
4.3LPM (1.13GPM)	4.9LPM (1.3GPM)	5.95LPM (1.57GPM)	7.18LPM (1.9GPM)
	16MPa (2300PSI) 9.1LPM (2.4GPM) 27MPa (3900PSI)	16MPa (2300PSI) 15MPa (2180PSI) 9.1LPM (2.4GPM) 10.4LPM (2.75GPM) 27MPa (3900PSI) 27MPa (3900PSI)	16MPa (2300PSI)       15MPa (2180PSI)       13MPa (1900PSI)         9.1LPM (2.4GPM)       10.4LPM (2.75GPM)       12.5LPM (3.3GPM)         27MPa (3900PSI)       27MPa (3900PSI)       22MPa (3200PSI)



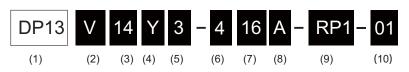


DC Hydraulic Power Unit





— For Function Type 13 only



— For Function Type 14/15 only

- (1) DP13 Series DC Hydraulic Power Unit
- (2) <u>Style of Central Manifold</u>: M Machined Manifold from Aluminum Bar, C Aluminum Die Casting Manifold

Function Type 14/15 only V - Manifold for Vertical Mounting, H - Manifold for Horizontal Mounting

- (3) Function Type (Hydraulic Circuit): 01, 03, 06, 21, 31...
  - 13 Double Acting Circuit, with Cetop3 (D03) 3/4 Directional Valve.
  - 14 Expandable Double Acting Circuit, with Cetop3 (D03) 3/4 Directional Valve.
  - 15 Expandable Double Acting Circuit, with Sectional 3/4 Directional Valve.
- (4) Function Code of 3/4 Directional Valve : E, Y, H etc... compatiable with Rexrothe
- (5) <u>Number of Directional Valves Installed.</u>
- (6) Motor Series (Size): 3- 3" Motor, 4- 4" Motor, 5 -5" Motor
- (7) Rated Power of DC Motor:

3" DC Motor: 01 - 150W, 03 - 350W, 05 - 500W, 08 - 800W

4" DC Motor: 16 - 1.6kW, 22 - 2.2kW, 25 - 2.5kW, 28 - 2.8kW

5" DC Motor: 30 - 3.0Kw, 40 - 4.0kW

(8) Voltage of DC Motor: A - DC12V, B - DC24V, C- DC36V

(9) Code of Oil Tank: MS- MS tank; RP - RP Tank; etc...

(10) Design Number, specified by Mocen.

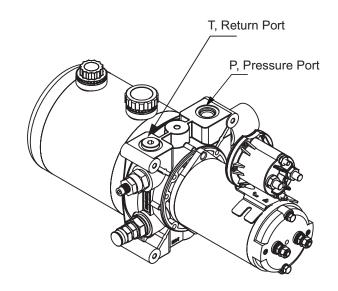
#### **DP13C06-3**

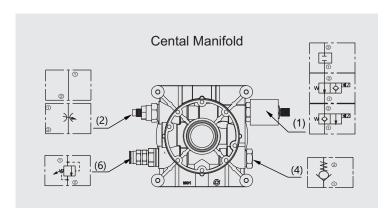
Group 01D/03D/05D/08D (150W to 800W)

- Driving single acting hydraulic cylinder extending or retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- Four options for controlling the Return Flow (down speed) by flow control valve (2):
- 1. Non-Adjustable.
- 2. Non Adjustable, with pressure compensate.
- 3. Adjustable, with pressure compensate.
- 4. No return flow control
- Three options for 2-way valve(1), more details refer to page DD.
  - 1. Manual Valve.
- 2. Solenoid Valve.
- 3. Solenoid Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads, please consult us.
- Port P and T, standard options:
- 1. G3/8 (BSPP 3/8")
- 2. SAE#6(9/16-18UNF),
- 3. M14

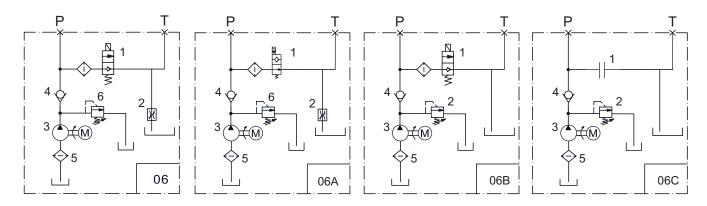
To custom-built other port size, please consult us.

- Optional Tanks:
   Type MS, and Type LS, RP, LT and MT.
- Controller Options:
  - 1) KCB21, the basic remote control handset.
  - 2) WRB21, economy wireless remote
- Popular Applications: Material Handling forklift, stacker, dumper, dump trailer, Mobile lighthouse...etc.





Typical Circuits:



DC Hydraulic Power Unit

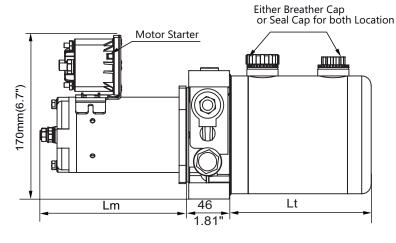
# DP13C06-3 with 3" DC Motor

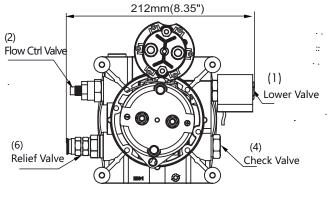
	Motor P/N	Voltage	Rated Power	Dim "Lm"	Shaft Coupling
DP13C06-301	301A(301B)	12V(24V)	150W	4.25"(108mm)	
DP13C06-303	303A(303B)	12V(24V)	350W	5.39" (137mm)	CD10 50
DP13C06-305	305A (305B)	12V (24V)	500W	5.39" (137mm)	CP18-50
DP13C06-308	308A (308B)	12V (24V)	800W	5.39" (137mm)	

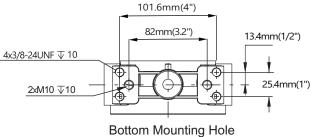


#### Configuration

DC Motor :	3 Series (150w-800w)
Main Manifold:	M01-03 (Die Casting Aluminum Manifold)
Gear Pump:	S Series (Details refer to page S02)
Tank:	Type MS (Details refer to page N1)







#### Tank Size

P/N	MS1	Ms2	MS3	MS4	MS5	MS6	MS7	MS8
Lt	5.9"	7.9"	9.84"	11.¾"	13¾"	15 ¾"	21¾"	21.65"
	150mm	200mm	250mm	300mm	350mm	400mm	450mm	550mm
Volume	1.0Qt	1.5Qt	2.0Qt.	2.5Qt.	3.0Qt.	3.5Qt	4.0Qt.	5.0Qt.
	1L	1.4L	1.8L	2.4L	2.8L	3.3L	3.8L	4.75L





<sup>\*</sup> Optional Tanks: Type LS, RP, LT and MT

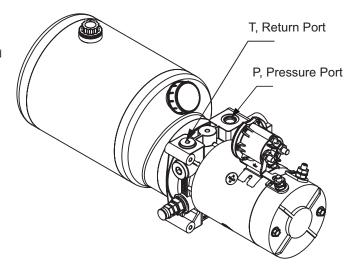
#### **DP13C06**

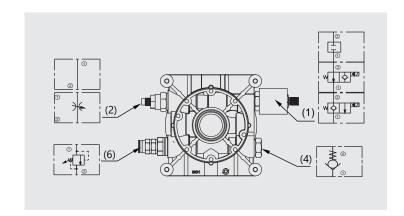
#### Group16D/22D/25D/28D/30D/40D

- Driving single acting hydraulic cylinder extending or retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- Four options for controlling the Return Flow (down speed) by flow control valve (2):
- 1. Non-Adjustable.
- 2. Non Adjustable, with pressure compensate.
- 3. Adjustable, with pressure compensate.
- 4. No return flow control
- Three options for 2-way valve(1), more details refer to page DD.
- 1. Manual Valve.
- 2. Solenoid Valve.
- 3. Solenoid Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads, please consult us.
- Port P and T, standard options:
- 1. G3/8 (BSPP 3/8")
- 2. SAE#6(9/16-18UNF),
- 3.M14

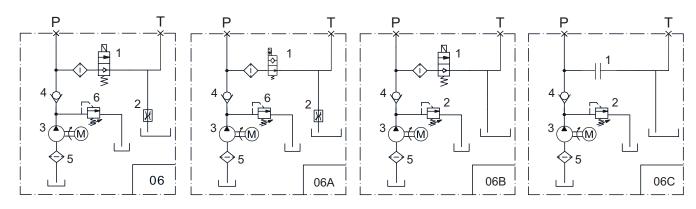
To custom-built other port size, please consult us.

- Optional Tanks: Series RP, LS, LT, MS, MT, details refer to page BB.
- Controller Options:
  - 1) KCB21, the basic remote control handset.
  - 2) WRB21, economy wireless remote
- Popular Applications:
   Material Handling forklift, stacker, dumper, dump trailer, Mobile lighthouse...etc.





Typical Circuits:





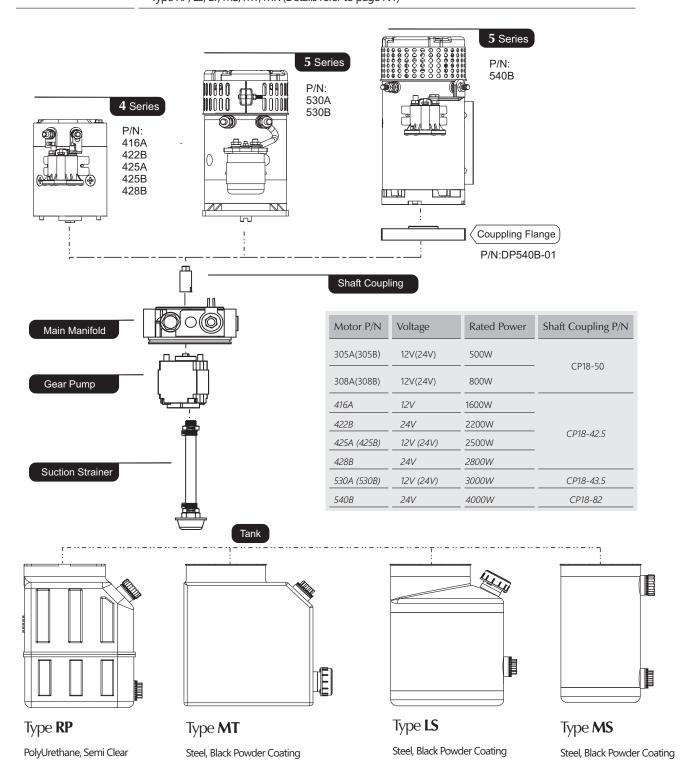
### **DP13C06**

DC Motor: 4" Series, 5" Series

Main Manifold M01-03 (Die Casting Aluminum Manifold)

Gear Pump G Series (Details refer to page G1-1)

Tank Type RP, LS, LT, MS, MT, MR (Details refer to page N1)



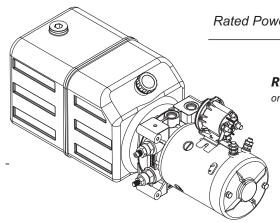
DC Hydraulic Power Unit

DP13C06-4 with 4" DC Motor

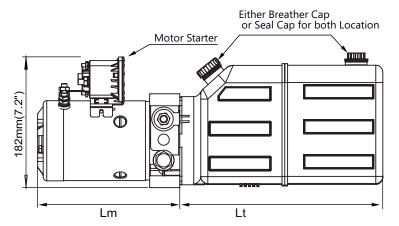
#### **Outline Diemnsions**

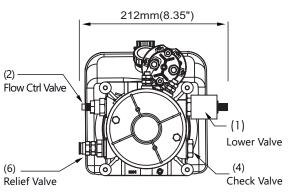
Group 16D/22D/25D/28D

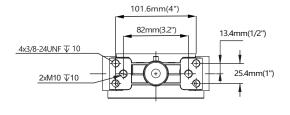
	DP13M06- <b>416</b>	DP13M06 <b>-422</b>	DP13M06- <b>425</b>	DP13M06- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	203mm	203mm	223mm	250mm
Rated Power	1.6kW	2.2kW	2.5kW	2.8kw
	(12V)	(24V)	(12&24V)	(24V)



**RP** tank showed in following drawings. The dimension "Lt" of RP tank or other optional tanks, please refer to page N1-1.







**Bottom Mounting Hole** 

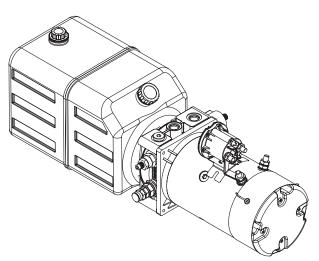




DC Hydraulic Power Unit

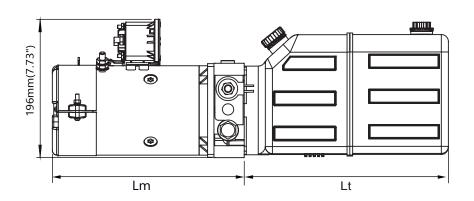
DP13C06-5 with 5" DC Motor

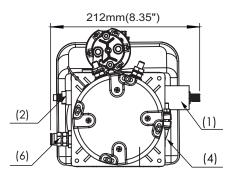
#### **Outline Diemnsions**

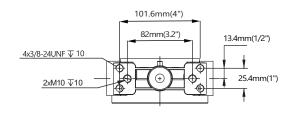


	DP13M06-530A	DP13M06-530B
Dim "Lm"	11.04" (280mm)	11.04 (280mm)
Rated Power	3.0kW, 12V	3.0kW, 24V

**RP** tank showed in following drawings. The dimension "Lt" of RP tank or other optional tanks, please refer to Page N1-1.







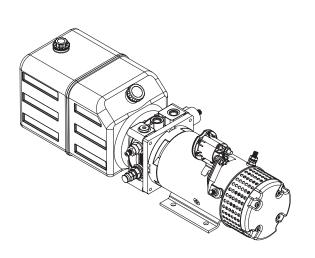
**Bottom Mounting Hole** 





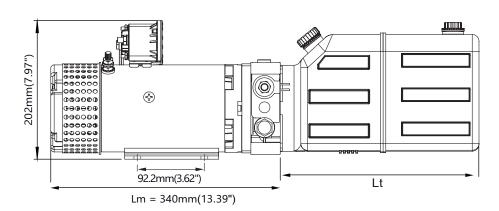
DP13C06-5 with 5" DC Motor

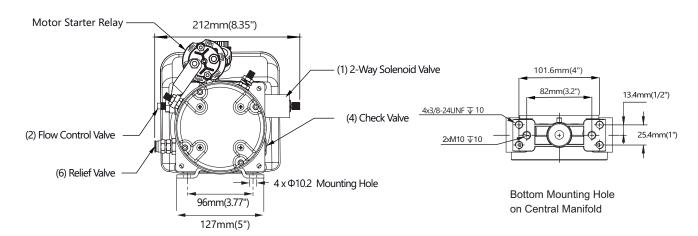
#### **Outline Diemnsions**



	DP13M06-540B
Dim "Lm"	13.39" (340mm)
Rated Power	4.0kW, 24V

**RP** tank showed in following drawings. The dimension "Lt" of RP tank or other optional tanks, please refer to Page N1-1.









With Stackable Cetop (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

#### **DP13M13**

Group 16D/22D/25D/28D/30D/40D (1.6kW to 4KW)

- Driving double acting hydraulic cylinder extending and retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- Options for 3W4P directional valve(3), more details refer to page DD.
  - 1. Solenoid Valve.
  - 2. Solenoid Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads, please consult us.
- Port A and B, standard options:
  - 1. G3/8 (BSPP 3/8")
  - 2. SAE#6(9/16-18UNF),
  - 3. M14

To custom-built other port size, please consult us.

- Optional Tanks:

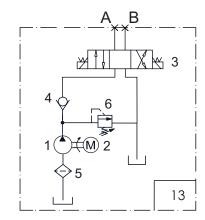
Series RP, LS, LT, MS, MT, details refer to page BB.

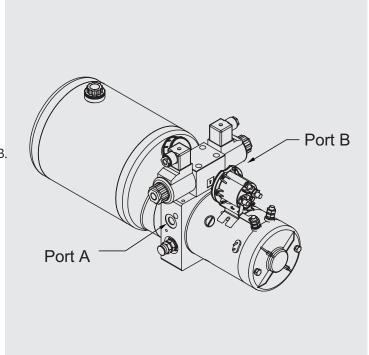
- Controller Options:
  - 1) KCB22, the basic remote control handset.
  - 2) WRB22, economy wireless remote.

More details please refer to N2-1

- Popular Applications:

Material Handling forklift, dumper, dump trailer. Mobile Home (RV), etc..







With Stackable Cetop (D03) Directional Valve

**DP13**Series

DC Hydraulic Power Unit

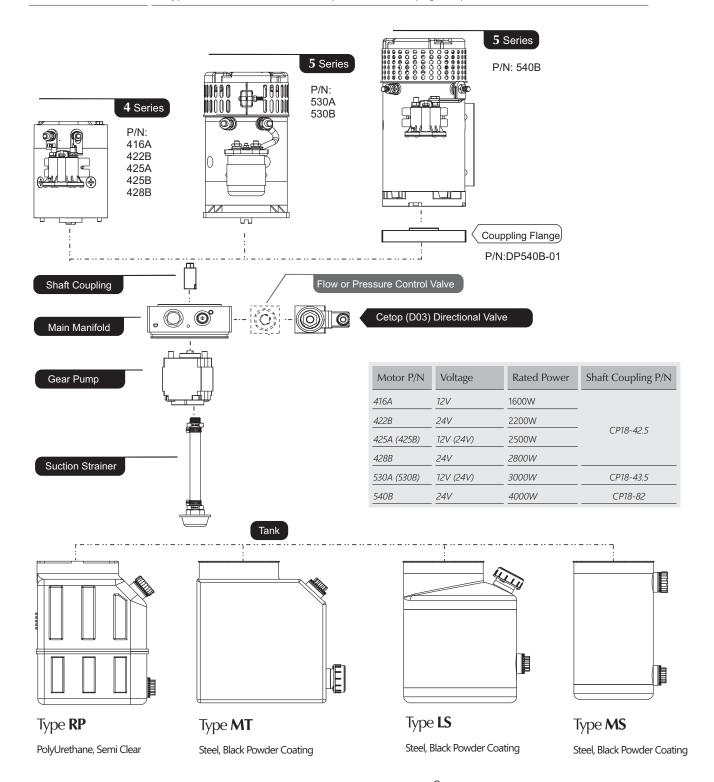
### **DP13M13**

DC Motor: 4" Series, 5" Series

Main Manifold UD021 (Machined Aluminum Manifold)

Gear Pump G Series (Details refer to page G1-1)

Tank Type RP, LS, LT, MS, MT, MR (Details refer to page N1)







With Stackable Cetop (D03) Directional Valve

DP13
Series

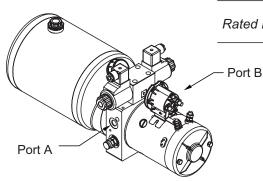
DC Hydraulic Power Unit

DP13M13-4 with 4" DC Motor

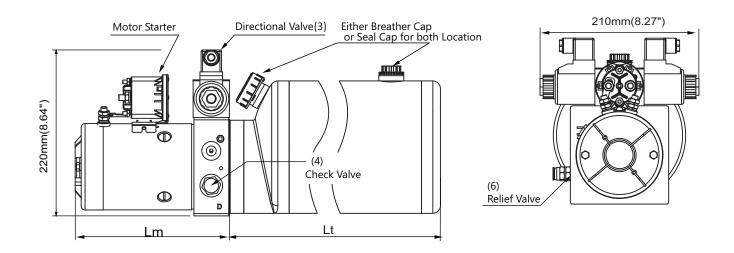
### **Outline Diemnsions**

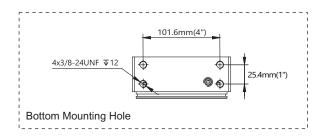
Group 16D/22D/25D/28D

	DP13M06-4 <b>16</b>	DP13M06-4 <b>22</b>	DP13M06-4 <b>25</b>	DP13M06-4 <b>28</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	203mm	203mm	223mm	250mm
Rated Power	1.6kW	2.2kW	2.5kW	2.8kw
	(12V)	(24V)	(12&24V)	(24V)



**LS** type tank showed in following drawings. The dimension "Lt" of RP tank or other optional tanks, please refer to Page N1-1.









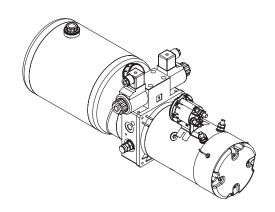
With Stackable Cetop (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

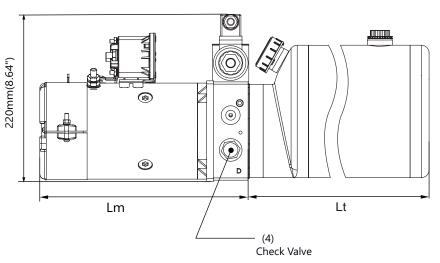
**DP13M13-530** with 5" DC Motor

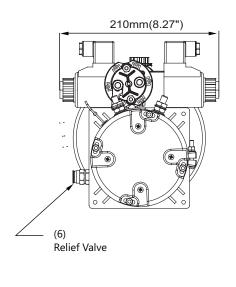
#### **Outline Diemnsions**

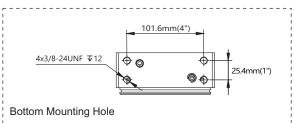


	DP13C13-530A	DP13C13-530B
Dim "Lm"	11.04" (280mm)	11.04 (280mm)
Rated Power	3.0kW, 12V	3.0kW, 24V

**LS** type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.











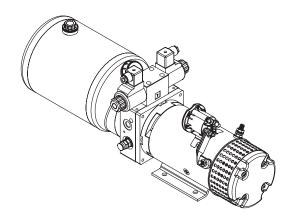
With Stackable Cetop (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

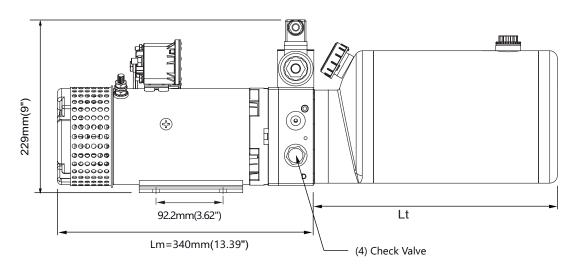
# $DP13M13\text{--}540 \hspace{0.2cm} \text{with 5" DC Motor}$

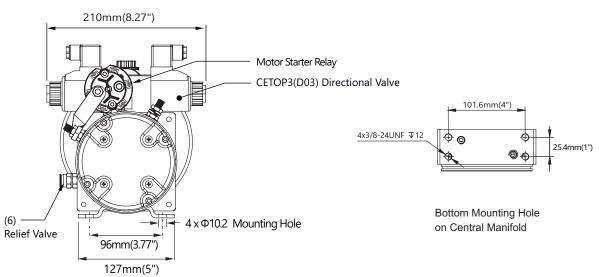
#### **Outline Diemnsions**



	DP13C13-540B
Dim "Lm"	13.39" (340mm)
Rated Power	4.0kW, 24V

**LS** type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.









Expandable Circuit with Cetop3 (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

#### DP13V14 & DP13H14

Group16D/22D/25D/28D/30D/40D (1.6kW to 4KW)

- Driving double acting hydraulic cylinder extending and retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- Options for 3W4P directional valve(3), more details refer to page DD.
  - 1. Solenoid Valve.
  - 2. Solenoid Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads, please consult us.
- Port A and B, standard options:
  - 1. G3/8 (BSPP 3/8")
- 2. SAE#6(9/16-18UNF),
- 3. M14

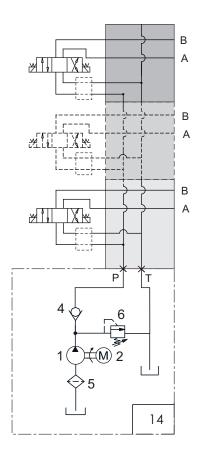
To custom-built other port size, please consult us.

- Optional Tanks: Series RP, LS, LT, MS, MT, details refer to page BB.

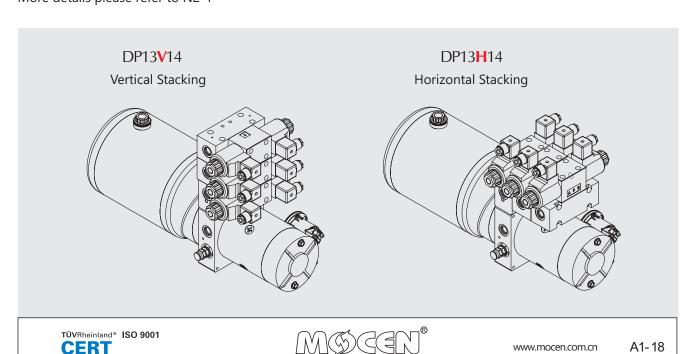
- Controller Options:
  - 1) KCB Series, the basic remote control handset, able to control 3 paths.
  - 2) WRV Series, industrial grade wireless remote, able to control 3 paths max.

More details please refer to N2-1

#### Expandable Circuit Design



\*2 Valves (paths) min, expandable up to 5 Valves (paths).



Expandable Circuit with Cetop3 (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

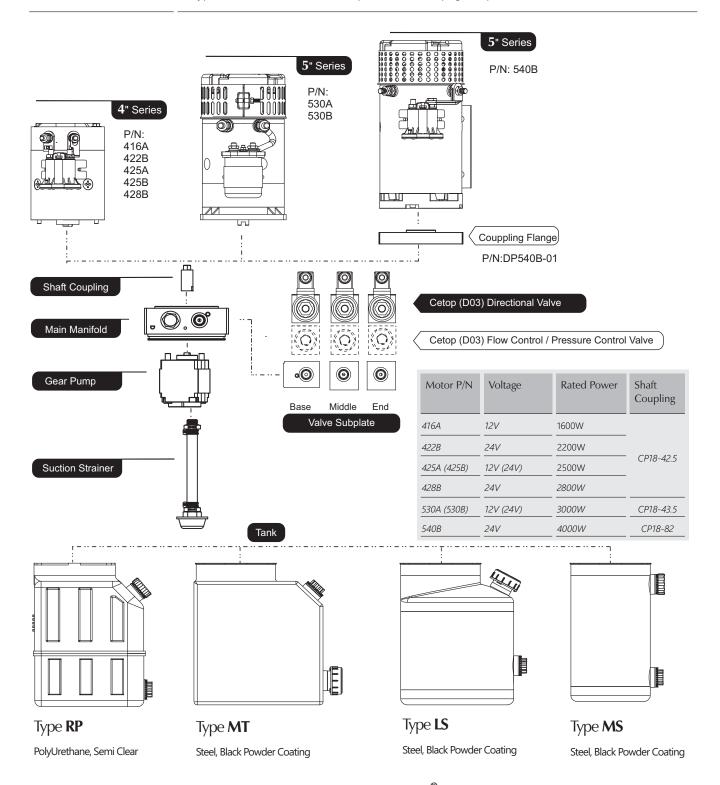
# DP13V14 & DP13H14

DC Motor ...... 4 Series, 5 Series, (1.6kw-4kw)

Main Manifold ...... UD013A (Machined Aluminum Manifold)

Gear Pump ...... G Series ( Details refer to page G1-1)

Tank ...... Type RP, LS, LT, MS, MT, MR (Details refer to page N1)



Expandable Circuit with Cetop3 (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

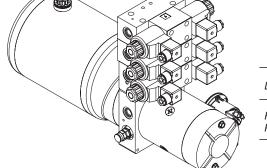
#### **Vertical Stacking**

### **DP13V14-4**

With 4" DC Motor

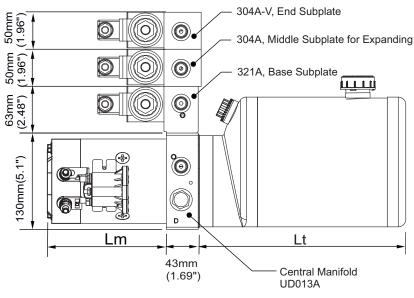
#### **Outline Diemnsions**

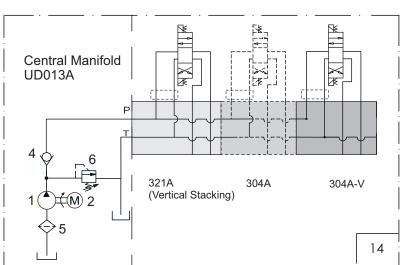
Group 16D/22D/25D/28D

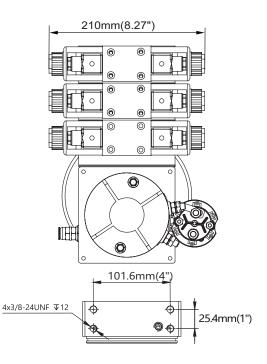


	DP13V14- <b>416</b>	DP13V14 <b>-422</b>	DP13V14- <b>425</b>	DP13V14- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

**LS** type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.







**Bottom Mounting Hole** 





Expandable Circuit with Cetop3 (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

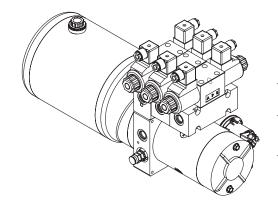
#### Horizontal Stacking

#### DP13H14-4

With 4" DC Motor

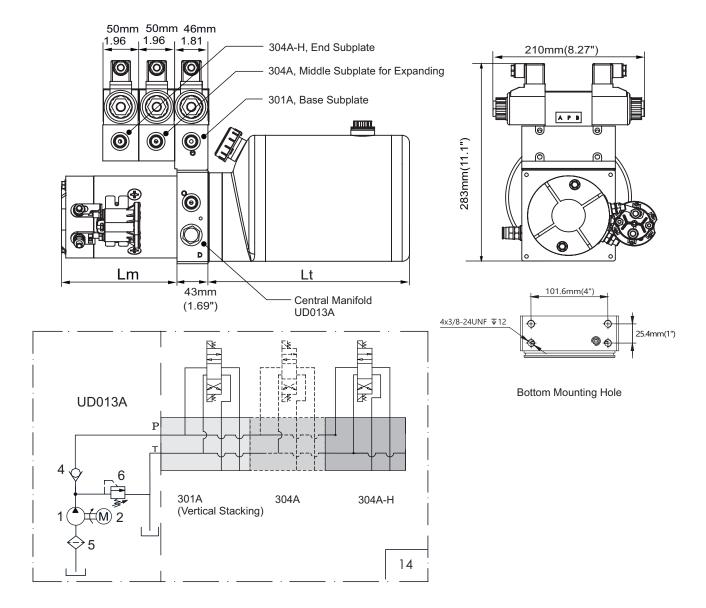
#### **Outline Diemnsions**

Group 16D/22D/25D/28D



	DP13H14- <b>416</b>	DP13H14 <b>-422</b>	DP13H14- <b>425</b>	DP13H14- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

**LS** type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.







Expandable Circuit with Cetop3 (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

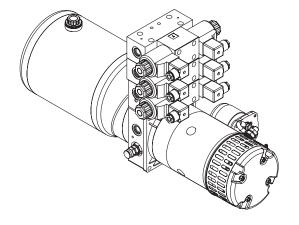
#### Vertical Stacking

### **DP13V14-5**

With 5" DC Motor

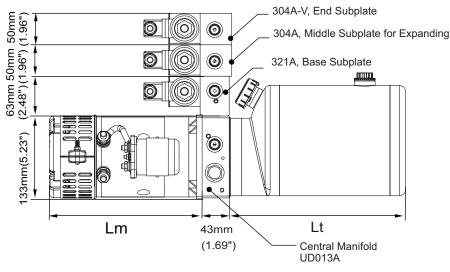
#### **Outline Diemnsions**

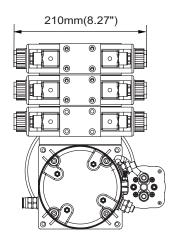
Group 30D/40D

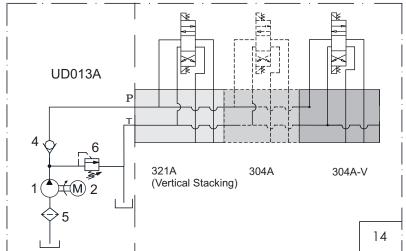


	DP13V14 <b>-530</b>	DP13V14- <b>540</b>
Dim "Lm"	11.04" (280mm)	13.39" (340mm)
Rated Power	3.0kW, 12V	3.0kW, 24V

**LS** type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.











Expandable Circuit with Cetop3 (D03) Directional Valve

DP13
Series

DC Hydraulic Power Unit

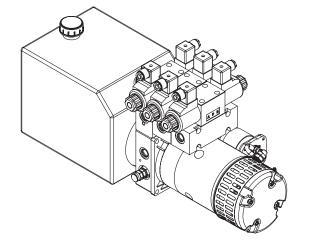
#### Horizontal Stacking

### **DP13H14-5**

With 5" DC Motor

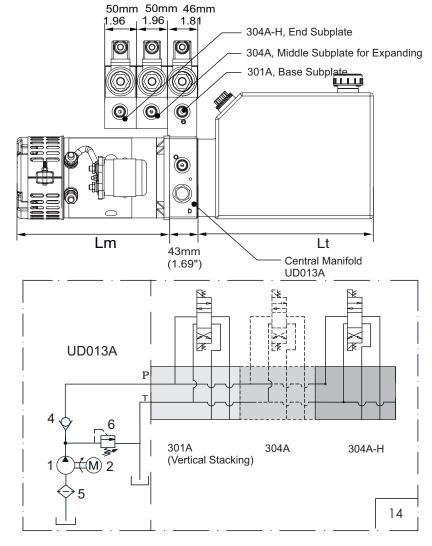
#### **Outline Diemnsions**

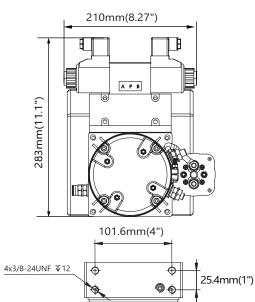
Group 30D/40D



	DP13H14- <b>530</b>	DP13H14- <b>540</b>
Dim "Lm"	11.04" (280mm)	13.39" (340mm)
Rated Power	3.0kW, 12V	3.0kW, 24V

**LS** type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.





Bottom Mounting Hole





Expandable Circuit with Sectional Directional Valve

DP13
Series

DC Hydraulic Power Unit

#### **DP13H15**

Group 16D/22D/25D/28D/30D/40D (1.6kW to 4KW)

- Driving multi double acting hydraulic cylinders extending and retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- Options for 3W4P directional valve(3), more details refer to page DD.
  - 1. Solenoid Directional Valve.
- 2. Solenoid Directional Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads, please consult us.
- Port A and B, standard options:
  - 1. G3/8 (BSPP 3/8")
  - 2. SAE#6(9/16-18UNF),
  - 3 M14

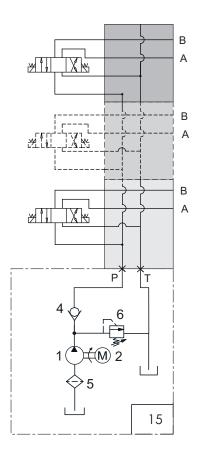
To custom-built other port size, please consult us.

Optional Tanks:
 Series RP, LS, LT, MS, MT, details refer to page BB.

- Controller Options:
  - 1) KCB Series, the basic remote control handset, able to control 5 paths.
  - 2) WRV Series, industrial grade wireless remote, able to control 3 paths max.

More details please refer to N2-1

#### Expandable Circuit Design



\*1 Valves (paths) min, expandable up to 5 Sectional Valves.

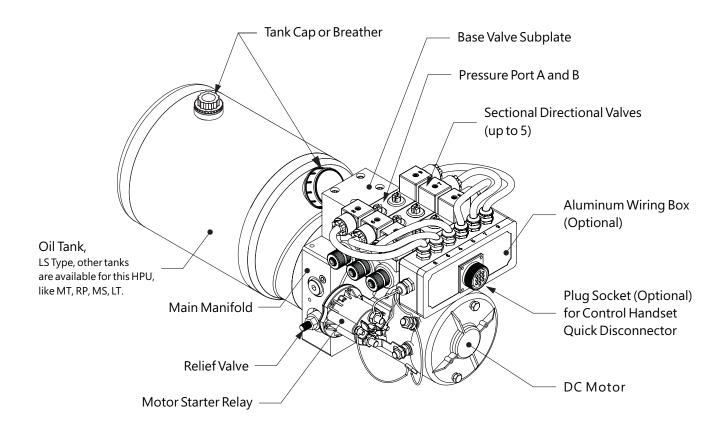




Expandable Circuit with Sectional Directional Valve

DP13
Series

DC Hydraulic Power Unit





- (1) DP13 Series DC Hydraulic Power Unit
- (2) Style of Directional Valve Stacking: V Vertical Mounting, H Horizontal Mounting
- (3) Function Type ( Hydraulic Circuit): 14 Expandable Double Acting Circuit, with Cetop3 (D03) 3/4 Directional Valve.
  - 15 Expandable Double Acting Circuit, with Sectional 3/4 Directional Valve.
- (4) Function Code of 3/4 Directional Valve
- (5) Number of Directional Valves Installed
- (6) Motor Size: 3-3" Motor, 4-4" Motor, 5-5" Motor
- (7) Rated Power of DC Motor.

3" DC Motor: 01 - 150W, 03 - 350W, 05 - 500W, 08 - 800W 4" DC Motor: 16 - 1.6kW, 22 - 2.2kW, 25 - 2.5kW, 28 - 2.8kW

5" DC Motor : 30 - 3.0Kw, 40 - 4.0kW

- (8) Voltage of DC Motor
- (9) Code of Oil Tank
- (10) Design Number, specified by Mocen.



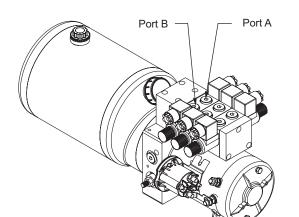


Expandable Circuit with Sectional Directional Valve

Series

DC Hydraulic Power Unit

# DP13H15-4 with 4" DC Motor

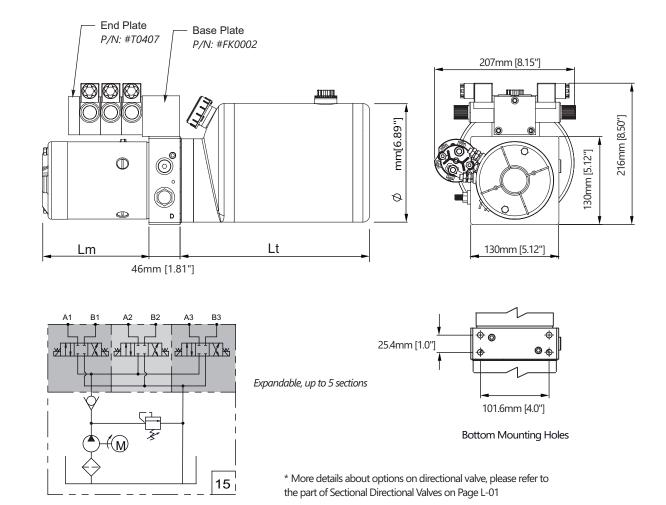


#### **Outline Diemnsions**

Group 16D/22D/25D/28D

	DP13H14	DP13H14	DP13H14	DP13H14
	- <b>416</b>	- <b>422</b>	- <b>425</b>	- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

LS type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.





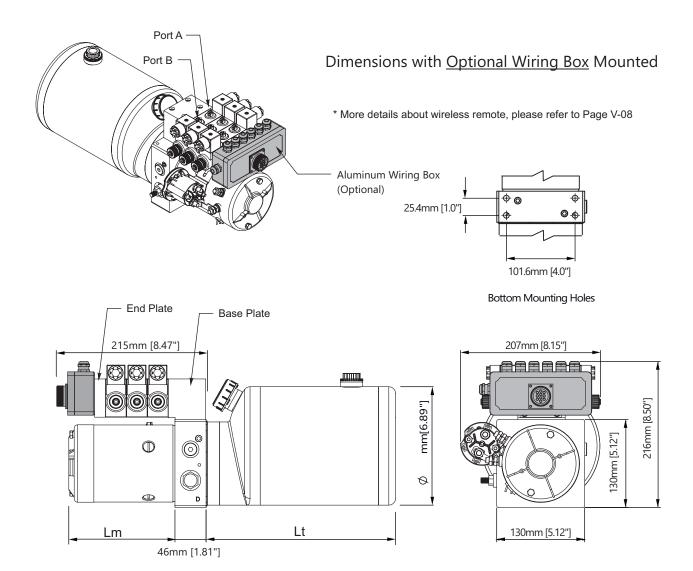


Expandable Circuit with Sectional Directional Valve

DP13
Series

DC Hydraulic Power Unit

# DP13H15-4 With 4" DC Motor







Expandable Circuit with Sectional Directional Valve

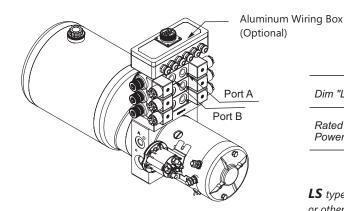
DP13
Series

DC Hydraulic Power Unit

#### DP13V15-4 With 4" DC motor

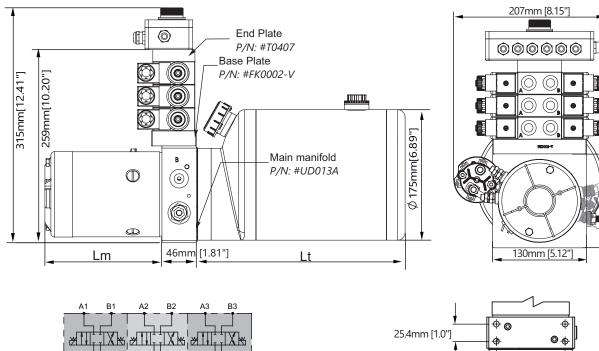
#### **Outline Diemnsions**

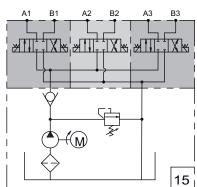
Group 16D/22D/25D/28D

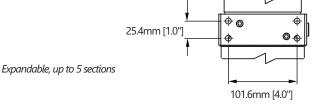


	DP13H14	DP13H14	DP13H14	DP13H14
	- <b>416</b>	<b>-422</b>	- <b>425</b>	- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

**LS** type tank showed in following drawings. The dimension "Lt" of LS tank or other optional tanks, please refer to Page N1-1.







Bottom Mounting Holes





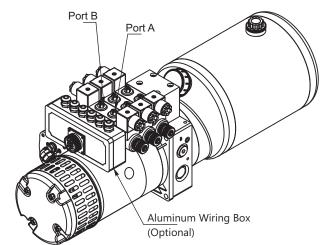
<sup>\*</sup> More details about options on directional valve, please refer to the part of Sectional Directional Valves on Page L-01

Expandable Circuit with Sectional Directional Valve

DP13
Series

DC Hydraulic Power Unit

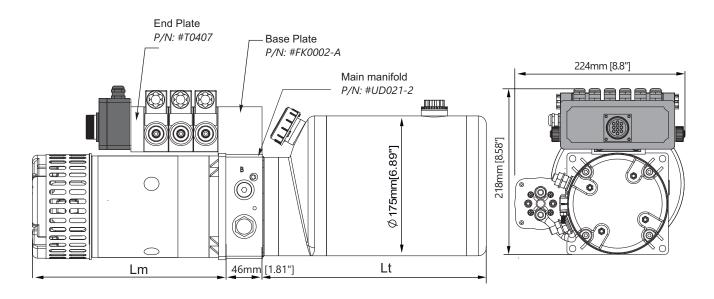
# DP13H15-5 With 5" DC motor

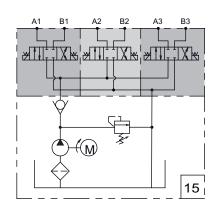


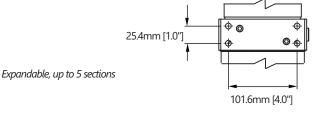
### **Outline Diemnsions**

Group 30D/40D

	DP13H15- <b>530</b>	DP13H15- <b>540</b>
Dim "Lm"	11.04" (280mm)	13.39" (340mm)
Rated Power	3.0kW, 12V	3.0kW, 24V







Bottom Mounting Holes

\* More details about options on directional valve, please refer to the part of Sectional Directional Valves on Page L-01





Expandable Circuit with Sectional Directional Valve

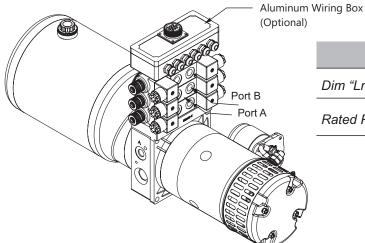
DP13
Series

DC Hydraulic Power Unit

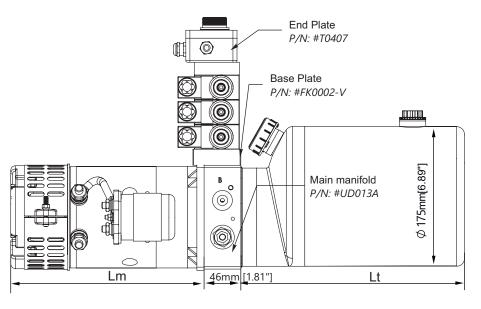
#### **DP13V15-5** With 5" DC motor

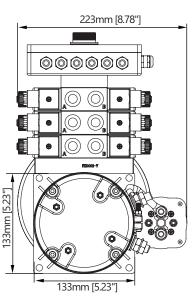
# **Outline Diemnsions**

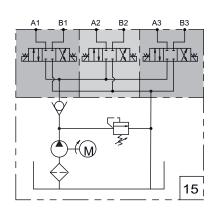
Group 30D/40D



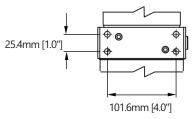
	DP13H15- <b>530</b>	DP13H15- <b>540</b>
Dim "Lm"	11.04" (280mm)	13.39" (340mm)
Rated Power	3.0kW, 12V	3.0kW, 24V







Expandable, up to 5 sections



**Bottom Mounting Holes** 

\* More details about options on directional valve, please refer to the part of Sectional Directional Valves on Page L-01





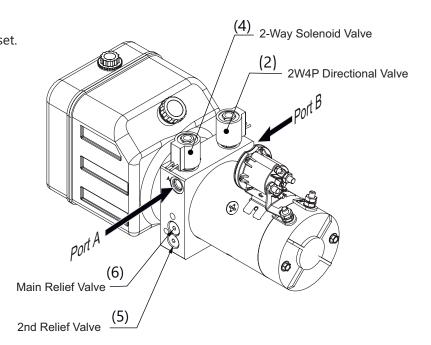
#### **DP13M21**

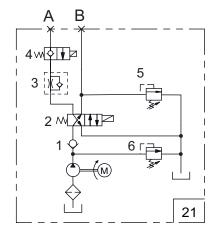
Group 16D/22D/25D/28D/30D/40D (1.6kW to 4KW)

- Drive double acting cylinder extending and retracting.
- Variety motor power generate different pressure and flow.
- Optional Flow Control Valve (3).
   Return flow at cylinder retracting can be restricted by a optional flow control valve (3) with reverse flow check. The orifice in this valve could be specified according to customer's specification.
- 2-way Solenoid Valve (4). You have two option on this 2-way solenoid valve:
- 1. No Manual Override (Default). 2. With Manual Override.
- Port Size: O-ring Boss SAE #6 (9/16-18UNF), on port A and B Other port size upon customer's requirement.
- Standard Duty Cycle is S1=1 minute, S2 15%. Please consult us for Longer duty cycle.
- Optional Tanks:
   Series RP, LS, LT, MS, MT, details refer to page BB.
- Controller Options:

KCB22, the basic remote control handset.
 WRB22, economy wireless remote.
 More details please refer to N2-1

Popular Applications:
 Dump Truck, Dump Trailer,
 Mobile Home (RV), etc..









# Function 21 - Double Acting

# DP13 Series

DC Hydraulic Power Unit

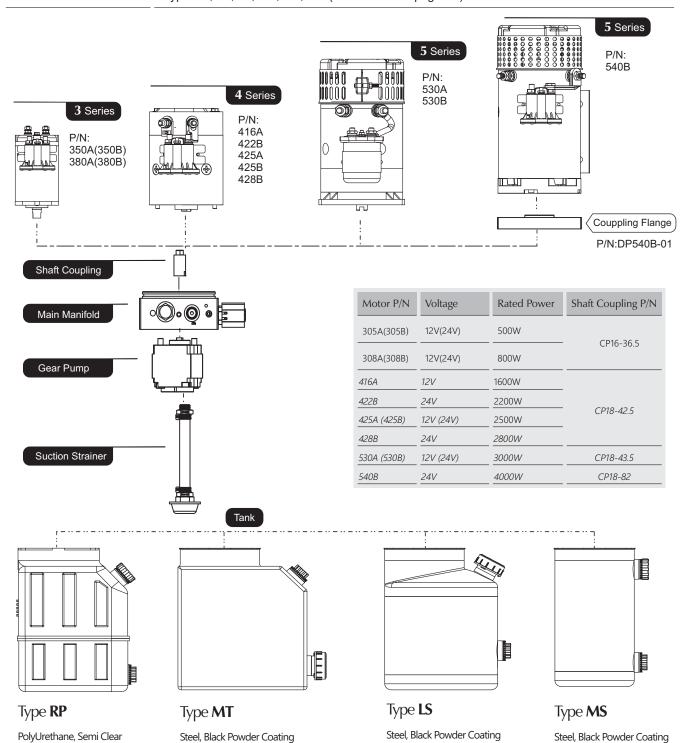
#### **DP13M21**

DC Motor 3 Series,4 Series,5 Series,(500w-4kw)

Main Manifold UD21A-01 (Machined Aluminum Manifold)

Gear Pump G Series (Details refer to page G1-1)

Tank Type RP, LS, LT, MS, MT, MR (Details refer to page N1)





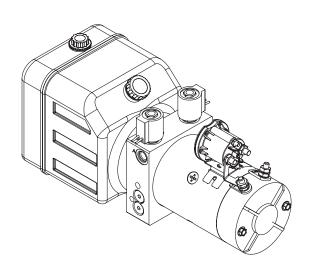


# **DP13M21-4**

with 4" DC Motor

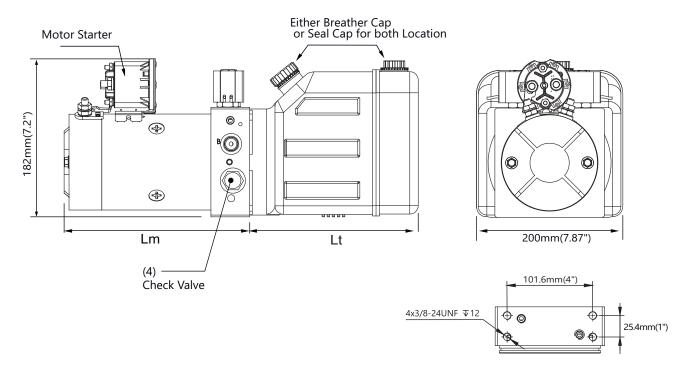
#### **Outline Diemnsions**

Group 16D/22D/25D/28D



	DP13M21	DP13M21	DP13M21	DP13M21
	- <b>416</b>	- <b>422</b>	- <b>425</b>	- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

**RP** tank showed in following drawings. The dimension "Lt" of RP tank or other optional tanks, please refer to Page N1-1.



**Bottom Mounting Hole** 





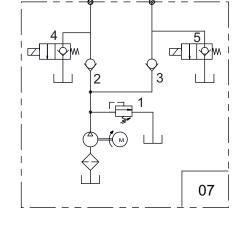
P2

#### **DP13M07**

Group 16D/22D/25D/28D/30D/40D (1.6kW to 4KW)

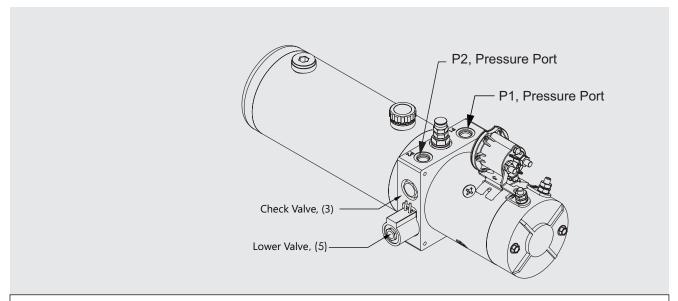
- Driving single acting hydraulic cylinder extending or retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- -Four options for controlling the Return Flow (down speed) by flow control valve (2):
- 1. Non-Adjustable.
- 2. Non Adjustable, with pressure compensate.
- 3. Adjustable, with pressure compensate.
- 4. No return flow control
- Three options for 2-way valve(1), more details refer to page DD.
  - 1. Manual Valve.
  - 2. Solenoid Valve.
  - 3. Solenoid Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads , please consult us.
- Port P and T, standard options:
- 1. G3/8 (BSPP 3/8")
- 2. SAE#6(9/16-18UNF),
- 3. M14

To custom-built other port size, please consult us.



Ρ1

- Optional Tanks:
- Series RP, LS, LT, MS, MT, details refer to page BB.
- Controller Options:
  - 1) KCB22, the basic remote control handset.
  - 2) WRB22, economy wireless remote



DC Hydraulic Power Unit

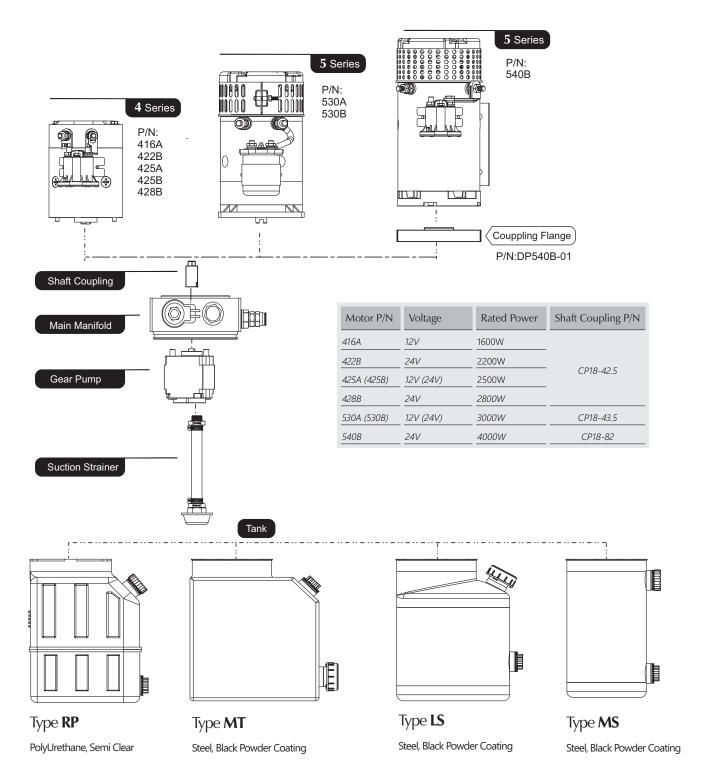
### **DP13M07**

DC Motor 4 Series,5 Series,(1600w-4kw)

Main Manifold UD07A-01 (Machined Aluminum Manifold)

Gear Pump G Series (Details refer to page G1-1)

Tank Type RP, LS, LT, MS, MT, MR (Details refer to page N1)







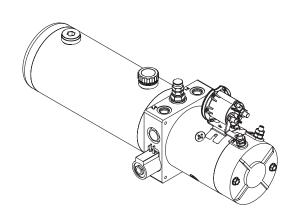
DC Hydraulic Power Unit

### **DP13M07-4**

with 4" DC Motor

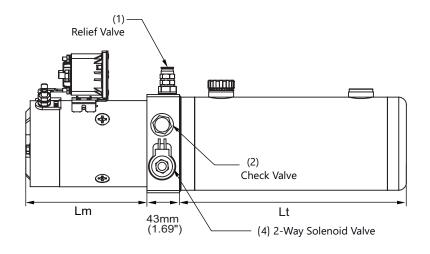
#### **Outline Diemnsions**

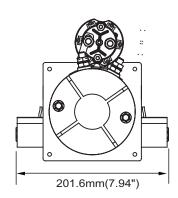
Group 16D/22D/25D/28D

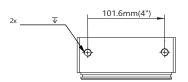


	DP13M21	DP13M21	DP13M21	DP13M21
	- <b>416</b>	- <b>422</b>	- <b>425</b>	- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

**MS** tank showed in following drawings. The dimension "Lt" of MS tank or other optional tanks, please refer to Page N1-1.







**Bottom Mounting Hole** 





### **DP13M97**

Group 16D/22D/25D/28D/30D/40D (1.6kW to 4KW)

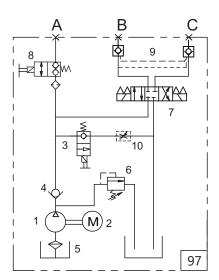
- Driving double acting hydraulic cylinder extending and retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- More options for 3W4P directional valve(3), more details refer to page DD.
- 1. Solenoid Valve.
- 2. Solenoid Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads, please consult us.
- Port A and B, standard options:
  - 1. G3/8 (BSPP 3/8")
  - 2. SAE#6 (9/16-18UNF),
- 3 M14

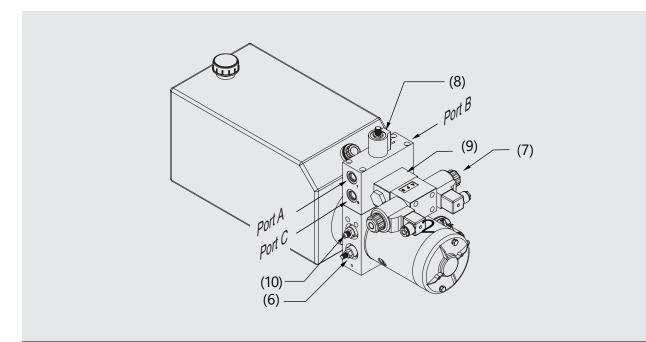
To custom-built other port size, please consult us.

- Optional Tanks:

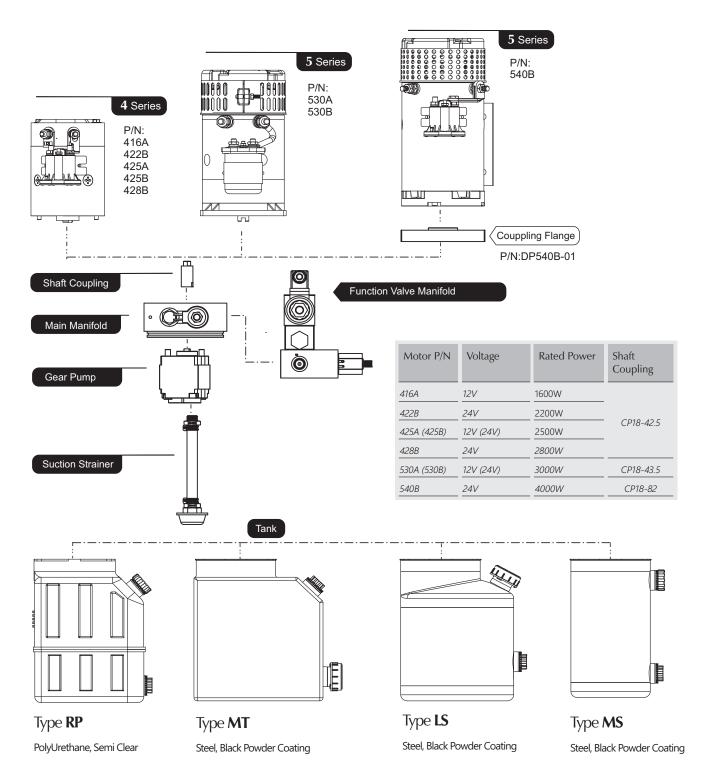
Series RP, LS, LT, MS, MT, details refer to page BB.

- Controller Options:
  - 1) KCB42, the basic remote control handset. More details please refer to N2-1





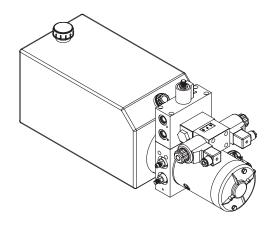
#### **DP13M97**



### **DP13M97-4**

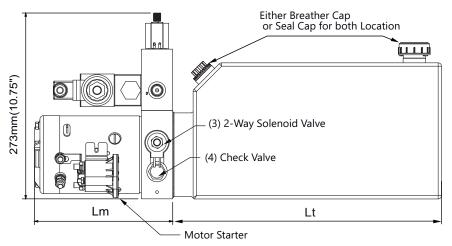
#### **Outline Diemnsions**

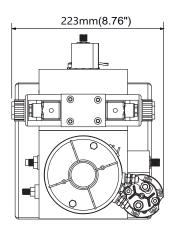
Group 16D/22D/25D/28D

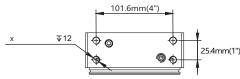


	DP13M21	DP13M21	DP13M21	DP13M21
	- <b>416</b>	- <b>422</b>	- <b>425</b>	- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

**MT** tank showed in following drawings. The dimension "Lt" of MT tank or other optional tanks, please refer to Page N1-1.







**Bottom Mounting Hole** 





#### **DP13M39**

- Driving 2 single acting hydraulic cylinder individually extending and retracting.
- Choose the appropriate power and pump size according to the load of your application. Please refer to Page A1-1 or consult us.
- Options for 2-way solenoid valve(7,8).
  - 1. Solenoid Valve.
  - 2. Solenoid Valve with Manual Override
- Duty cycle is generally S2-1 minute, S3 15%. It may be varies with loads, please consult us.
- Port P1 and P2, standard options:
  - 1. G3/8 (BSPP 3/8")
  - 2. SAE#6(9/16-18UNF),
  - 3. M14

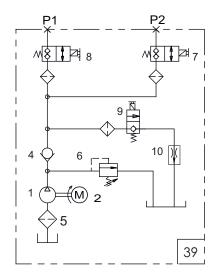
To custom-built other port size, please consult us.

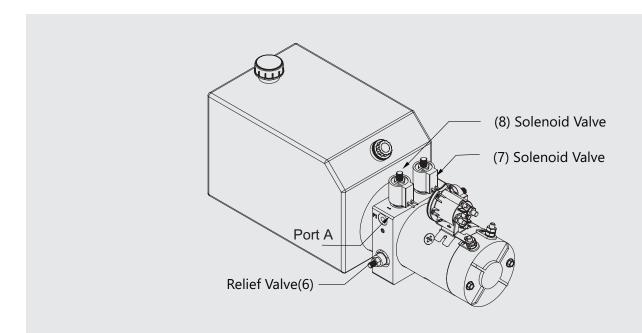
- Optional Tanks: Series RP, LS, LT, MS, MT, details refer to page BB.

- Controller Options:

KCB42, 4-button basic remote control handset.

Consult us for more details.









DC Hydraulic Power Unit

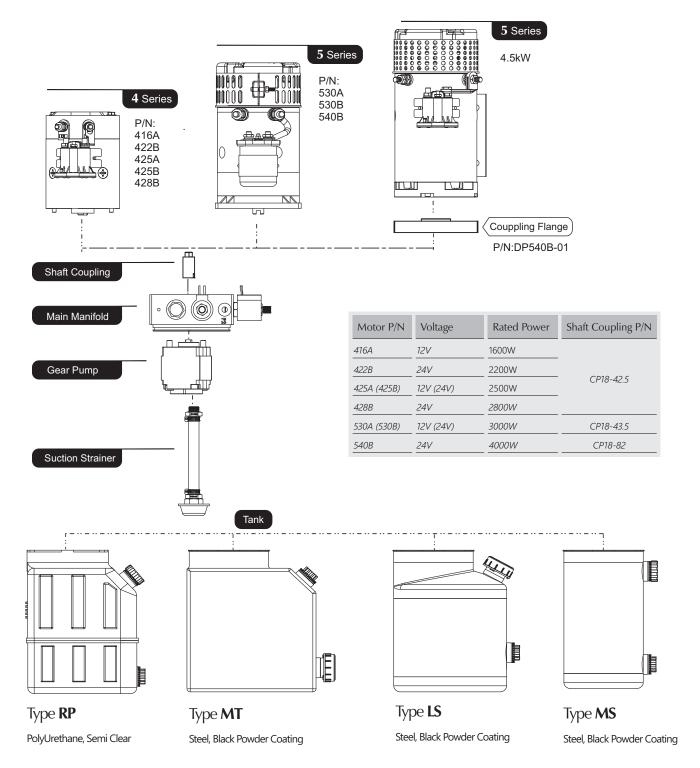
### **DP13M39**

DC Motor 4 Series, 5 Series, (1600w-4kw)

Main Manifold UD39A-01 (Machined Aluminum Manifold)

Gear Pump G Series (Details refer to page G1-1)

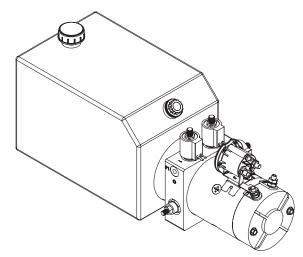
Tank Type RP, LS, LT, MS, MT, MR (Details refer to page N1)



### **DP13M39-4**

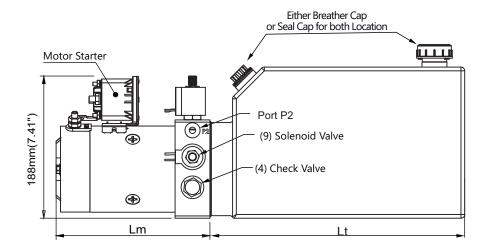
#### **Outline Diemnsions**

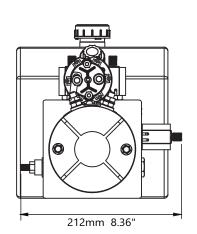
Group 16D/22D/25D/28D

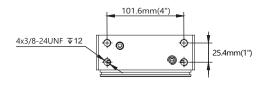


	DP13M39	DP13M39	DP13M39	DP13M39
	- <b>416</b>	- <b>422</b>	- <b>425</b>	- <b>428</b>
Dim "Lm"	8"	8"	8.78"	9.85"
	(203mm)	(203mm)	(223mm)	(250mm)
Rated	1.6kW	2.2kW	2.5kW	2.8kw
Power	(12V)	(24V)	(12&24V)	(24V)

**MT** tank showed in following drawings. The dimension "Lt" of MT tank or other optional tanks, please refer to page N1-1.







Bottom Mounting Hole



