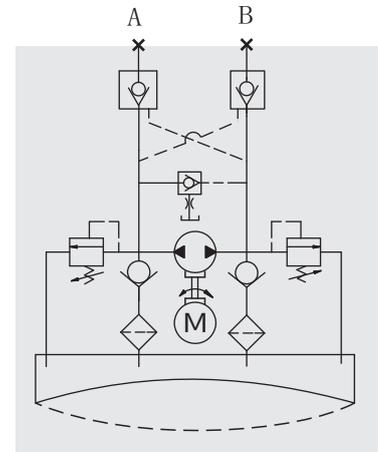


DTS-31 *Double Acting*

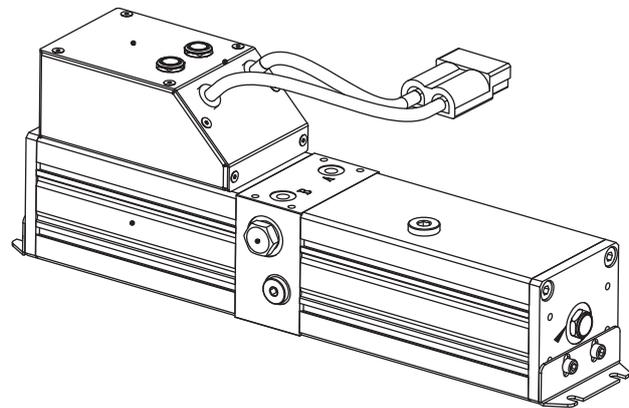
Mini DC Hydraulic Power Unit

- Miniature design, super compact size.
- Enclosed bi-rotation DC motor, low running noise.
- Sealed anodized aluminum oil tank with pressure balance diagram.
- High protection grade, up to IP67.
- All-weather capability, working stable even in worst conditions.

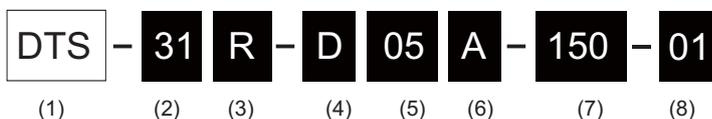


General Specifications

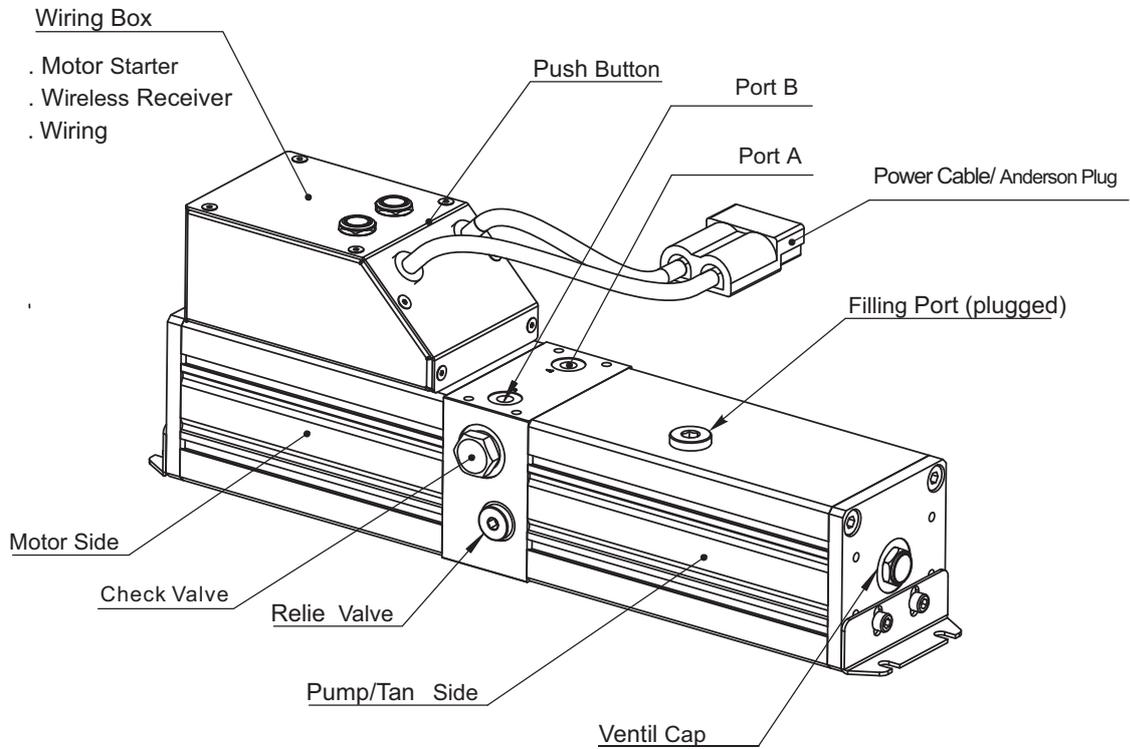
- Driving double acting hydraulic actuator.
- Max Pressure: P max = 210Bar
- Max Flow Rate Q max = 3LPM
- Rated Power 150, 350, 550, 800W
- Tank Volume: Min 600ml (standard),
- Mounting Direction: Any Direction, horizontal, vertical, angled
- Duty Cycle: Intermittent or short-term operation, S2=30s, S3=15% ED.



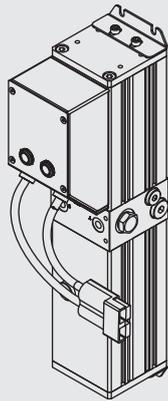
Coding



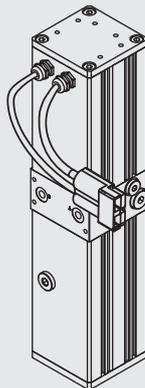
- (1) DTS Series Mini DC Hydraulic Power Unit
- (2) Function code : 31- Birotation double acting circuit
- (3) Configuration Style: R - Standard with wireless remote, C - Standard with cable handset
E - without wiring box, N-without wiring box and motor cover. ..
- (4) Motor Type : D - DC Motor, S - Brushless DC motor
- (5) Rated Motor Power: 01 - 150W, 03 - 350W, 05 - 500W, 08 - 800W
- (6) Voltage of DC Motor: A - DC12V, B - DC24V
- (7) Tank Length : millimeter
- (8) Design Number, specified by Mocen.



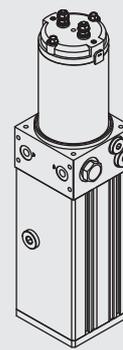
Optional Configuration



R (standard) IP55
Built-in motor starter /Wireless Remote



E IP67
Motor covered



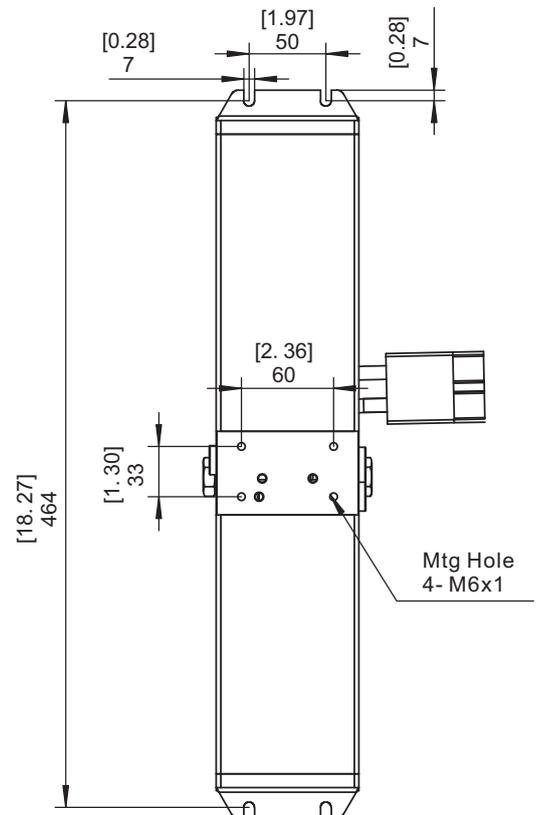
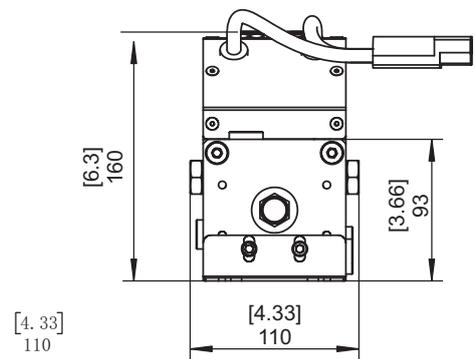
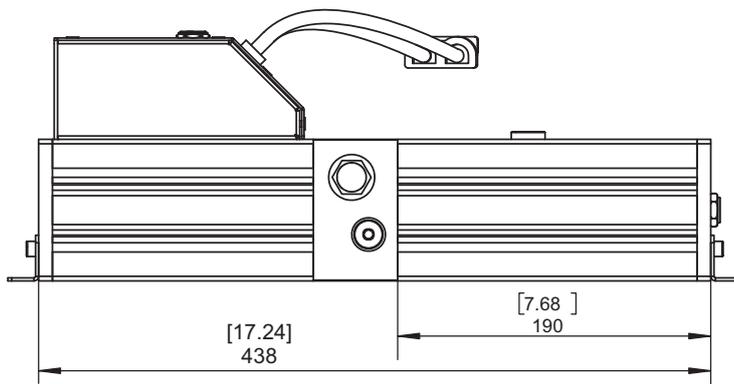
N IP55

C IP55
Built-in motor starter /Cable Handset

DTS-31 *Double Acting*

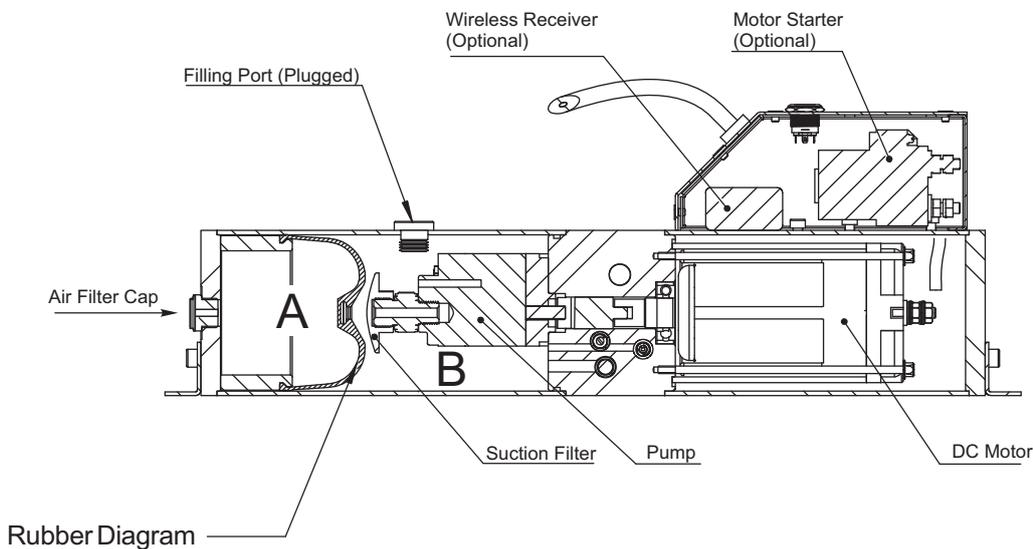
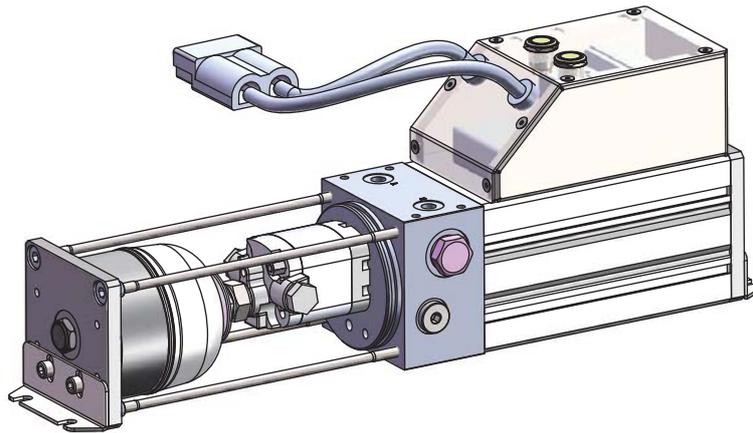
Dimensions

Unit: mm[inch]



Why sealed tank with rubber diagram?

- The power unit could be mounted in any direction.
- The tank size could be very compact.
- The power unit could be made to reach higher protect grade



How rubber diagram working

- 1) The interior space of tank is divided into two chambers by rubber diaphragms: A and B.
- 2) Chamber A is connected to the atmosphere thru the air filter.
- 3) Chamber B is totally sealed and full of oil at any time.
- 4) During the power unit running, chamber B will expand or contract along with cylinder retracts or extends, the rubber diagram will balance the internal air pressure differential.
- 5) The tank is able to tolerance max 250mm volume differential of the cylinder.

How to fill the tank:

Step 1 - Wiring up the power unit and connect the port A and B to cylinder.

Step 2 - Remove the port plug, fill up the tank.

Step 3 - Running the power unit to drive cylinder extending and retracting, cycling to eliminate internal air.

Step 4 - Drive cylinder rod extended fully, fill up the tank.

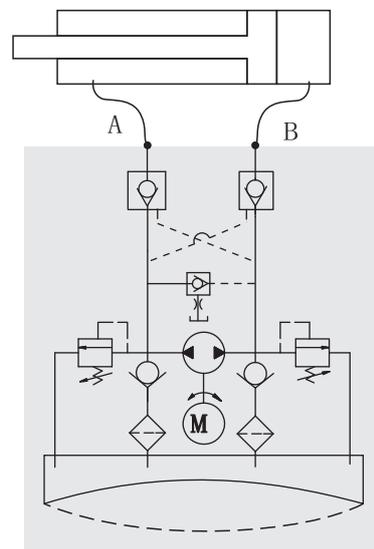
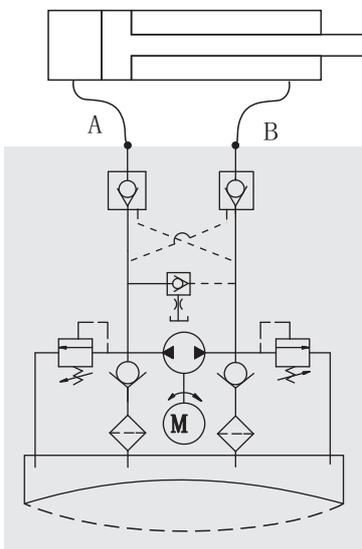
Step 5 - Plug filling port.



1) The volume differential between the rod side and the piston side of the hydraulic cylinder must be less than 250ml.

$$\Delta V = V_p - V_r, \Delta V < 250\text{ml}$$

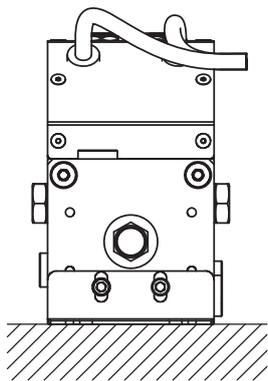
2) Port "A" must be connected to piston side of hydraulic cylinder, port "B" connected to rod side.



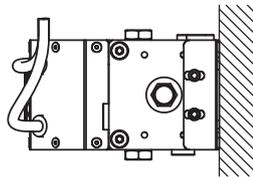
Available Mounting Direction

DTS hydraulic power Unit is able to be mounted in any direction, any side down or up.

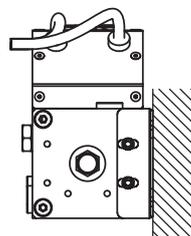
- Horizontal Mounting



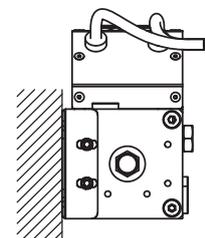
H1



H2

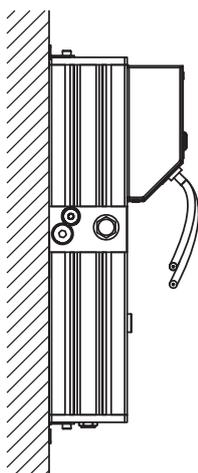


H3

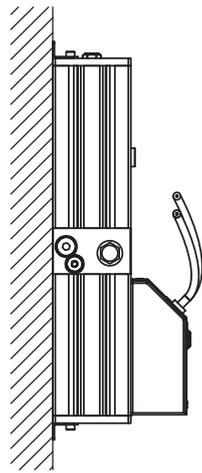


H4

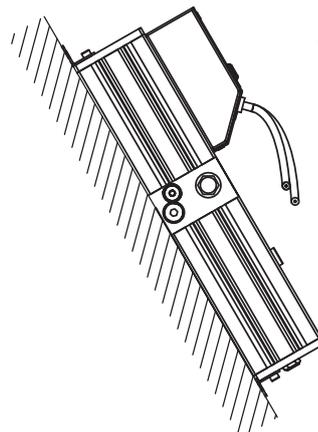
- Vertical Mounting



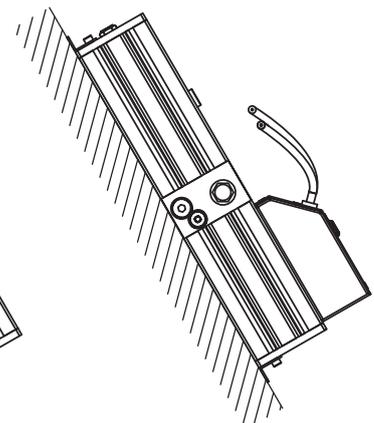
V1



V2



V3



V4

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

Pump Displacement	0.26cc	0.38cc	0.50cc
<i>Rated Pressure</i>	20MPa(2900PSI)	14MPa (2000PSI)	10MPa(1450PSI)
<i>Flow Rate @ Rated Pressure</i>	0.47LPM(0.12GPM)	0.68LPM(0.18GPM)	0.9LPM(0.23GPM)
<i>Max Pressure</i>	21MPa(3050PSI)	18MPa(2600PSI)	13MPa(1900PSI)
<i>Flow Rate @ Max. Pressure</i>	0.23LPM(0.06GPM)	0.4LPM(0.1GPM)	0.54LPM(0.14GPM)

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

Pump Displacement	0.5cc	0.65cc	0.75cc
<i>Rated Pressure</i>	16MPa (2300PSI)	13MPa(1900PSI)	11MPa(1600PSI)
<i>Flow Rate @ Rated Pressure</i>	0.9LPM(0.23GPM)	1.1LPM(0.29GPM)	1.2LPM(0.31GPM)
<i>Max Pressure</i>	21MPa(3050PSI)	16MPa(2300PSI)	15MPa(2200PSI)
<i>Flow Rate @ Max. Pressure</i>	0.5LPM(0.13GPM)	0.7LPM(0.18GPM)	0.8LPM(0.21GPM)

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

Pump Displacement	0.65cc	0.75cc	0.88cc
<i>Rated Pressure</i>	18MPa (2600PSI)	15MPa (2200PSI)	12MPa (1700PSI)
<i>Flow Rate @ Rated Pressure</i>	1.3LPM (0.34GPM)	1.5LPM (0.4GPM)	2LPM (0.52GPM)
<i>Max Pressure</i>	21MPa (3050PSI)	17MPa (2500PSI)	15MPa (2200PSI)
<i>Flow Rate @ Max. Pressure</i>	0.9LPM (0.23GPM)	1.2LPM (0.31GPM)	1.6LPM (0.42GPM)

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

Pump Displacement	0.75cc	0.88cc	1.0cc	1.25cc
<i>Rated Pressure</i>	18MPa (2900PSI)	13MPa (1900PSI)	11MPa (1600PSI)	9MPa (1300PSI)
<i>Flow Rate @ Rated Pressure</i>	1.8LPM (0.4GPM)	2.3LPM (0.52GPM)	2.6LPM (0.68GPM)	3.2LPM (0.84LPM)
<i>Max Pressure</i>	21MPa (3050PSI)	16MPa (2300PSI)	14MPa (2000PSI)	11MPa (1600PSI)
<i>Flow Rate @ Max. Pressure</i>	1.1LPM (0.29GPM)	1.8LPM (0.40GPM)	2.0LPM (0.52GPM)	2.6LPM (0.68GPM)