

# FAIL SAFE HYDRAULIC MOTOR/BRAKE UNIT TYPE - MSSB



| TYPE               |                 | MS SERIES |       |       |       |       |       |       |       |
|--------------------|-----------------|-----------|-------|-------|-------|-------|-------|-------|-------|
| MOTOR SIZE         |                 | 75        | 100   | 125   | 150   | 200   | 250   | 300   | 400   |
| DISPLACEMENT       | cm <sup>3</sup> | 81.8      | 101.3 | 126.3 | 161.0 | 201.2 | 251.2 | 315.9 | 400.4 |
|                    | in <sup>3</sup> | 4.91      | 5.00  | 7.72  | 9.85  | 12.31 | 15.36 | 19.32 | 24.49 |
| MAX. SPEED         | rpm cont.       | 810       | 750   | 600   | 450   | 375   | 300   | 240   | 190   |
|                    | rpm int.        | 1000      | 900   | 720   | 560   | 450   | 360   | 285   | 230   |
| MAX. TORQUE        | Nm cont.        | 240       | 305   | 375   | 490   | 610   | 720   | 825   | 865   |
|                    | lbf.in cont.    | 2120      | 2700  | 3318  | 4340  | 5400  | 6370  | 7300  | 7660  |
|                    | Nm int.         | 310       | 390   | 490   | 600   | 720   | 870   | 1000  | 990   |
|                    | lbf.in int.     | 2740      | 3450  | 4340  | 5310  | 6370  | 7700  | 8850  | 8760  |
| MAX. PRESSURE DROP | bar cont.       | 210       | 210   | 210   | 210   | 210   | 200   | 200   | 160   |
|                    | psi int.        | 3050      | 3050  | 3050  | 3050  | 3050  | 2900  | 2900  | 2320  |
|                    | bar int.        | 275       | 275   | 275   | 260   | 250   | 250   | 240   | 190   |
|                    | psi int.        | 3990      | 3990  | 3990  | 3770  | 3630  | 3630  | 3480  | 2760  |
| MAX. OIL FLOW      | lpm cont.       | 65        | 75    | 75    | 75    | 75    | 75    | 75    | 75    |
|                    | gpm cont.       | 14.3      | 16.5  | 16.5  | 16.5  | 16.5  | 16.5  | 16.5  | 16.5  |
|                    | lpm int.        | 80        | 90    | 90    | 90    | 90    | 90    | 90    | 90    |
|                    | gpm int.        | 17.6      | 19.8  | 19.8  | 19.8  | 19.8  | 19.8  | 19.8  | 19.8  |

Spring applied pressure release  
 Static brake torque 10,000 lbf.in - 1100 Nm  
 Brake release pressure 450 psi - 31 bar  
 Maximum brake pressure 300 bar  
 Motor drain line must be used, back to tank  
 without obstruction.

Maximum inlet pressure 3250 psi - 224 bar  
 Maximum pressure drop and speed must not be reached simultaneously.  
 Intermittent operation may occur for 10% max. of every minute.

At speeds lower than 10 rpm please consult our Technical Department.  
 Mineral based hydraulic fluids with anti-wear additives are recommended  
 with a viscosity of 35 mm<sup>2</sup>/s at a temperature of 50°C.  
 Minimum recommended oil viscosity 13 mm<sup>2</sup>/s at operating temperature.  
 Recommended oil cleanliness ISO 19/14 with a nominal filtration of  
 25 micron or better.  
 Where non-flammable fluids are to be used it is advisable to consult our  
 Technical Department.  
 Ambient temperature should be between -30°C and +90°C.  
 Normal operating temperature should be between +30°C and +60°C.  
 Maximum operating temperature +85°C.

### Motor / Brake Precautions

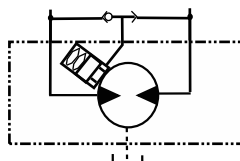
To ensure proper operation of the brake, a separate case drain back to tank must be used due to the possibility of return line pressure spikes. A simple schematic of a system utilizing a motor/ brake is shown in the diagram below.

To achieve proper brake release operation, it is necessary to bleed out any trapped air and fill brake release cavity and hoses before all connections are tightened. It is advisable that the brake release port should be positioned as near the top of the unit in the installed position.

### Caution

All Adan motor / brakes are intended to operate as static parking brakes, the system should be designed to bring the load to a stop before the brake is applied. With large displacement motors it is possible for the motor to produce higher torques than the brake will hold, it is critical that the maximum system pressure is limited in these applications. It is vital that the system relief be set low enough to ensure the motor is not able to produce more torque than the brake can hold. Failure to do so may result in serious injury or death.

SYMBOL c/w MSV

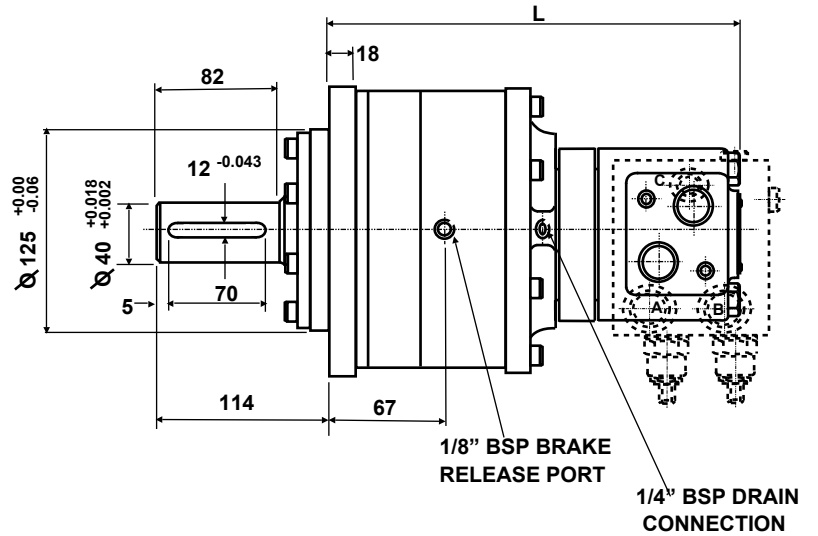
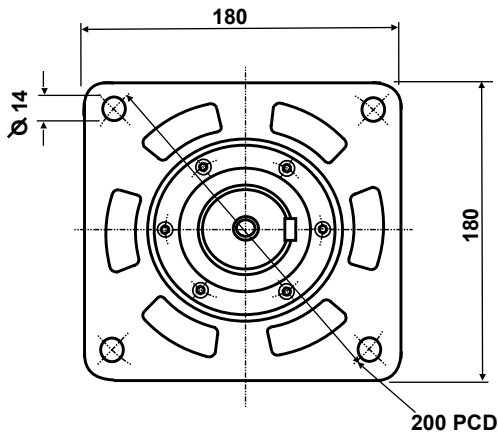


The policy of Adan Limited is one of continual development and the right is reserved to alter specifications without notice.



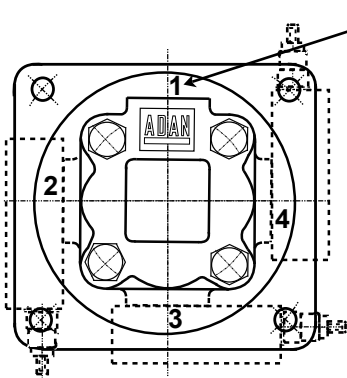
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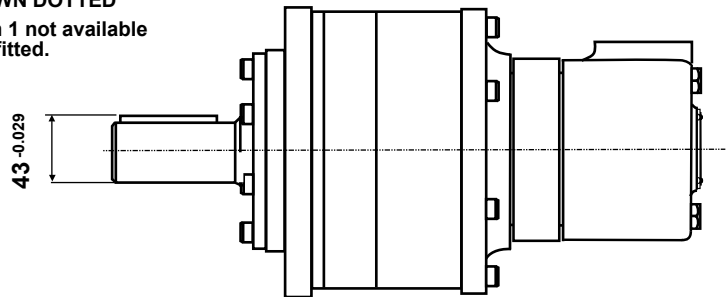


Please note drain connection must be piped to tank without obstructions.

**PORT POSITIONS**



Please specify port position required.  
1, 2, 3 or 4  
OCV25 VALVE SHOWN DOTTED  
Please note position 1 not available  
When OCV valve is fitted.



For motor performance see MS performance graphs

|                    |      |      |      |      |      |      |      |      |
|--------------------|------|------|------|------|------|------|------|------|
| MSSB               | 75   | 100  | 125  | 150  | 200  | 250  | 300  | 400  |
| DIM <sup>N</sup> L | 220  | 223  | 229  | 234  | 241  | 249  | 261  | 275  |
| WEIGHT Kg          | 26.6 | 26.8 | 27.1 | 27.5 | 28.0 | 28.6 | 29.3 | 30.1 |

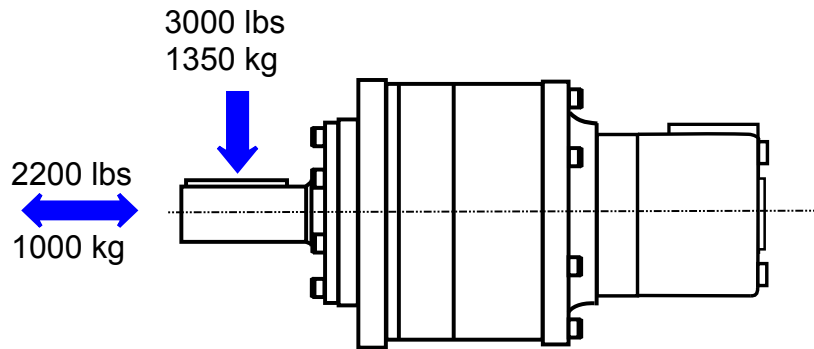
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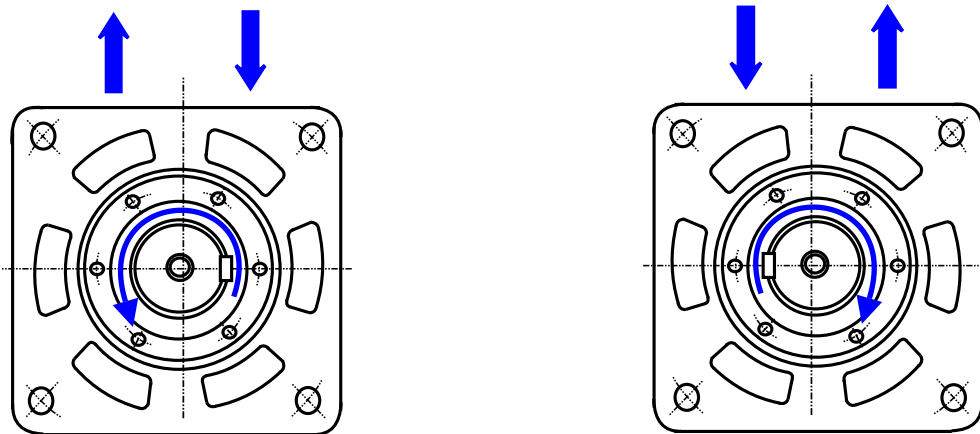
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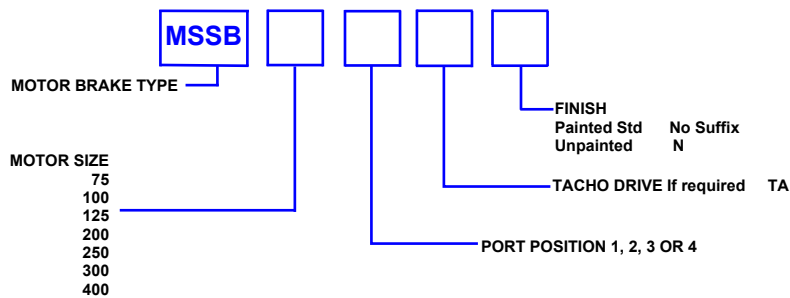
**SHAFT LOADING**



**SHAFT ROTATION**



**ORDERING CODE**



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