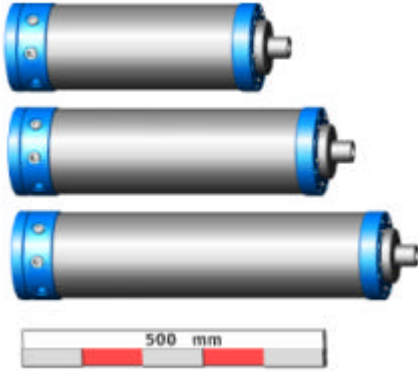


ADVANCED MOTION TECHNOLOGIES Inc

S100 Series ServoRam™



| Description | Rail Voltage | Model No | | | | | | | |
|------------------------------------|--------------|------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| | | S100C/30/10/MkIV | S100C/60/9/MkIV | S100C/90/8/MkIV | S100C/120/7/MkIV | S100C/150/6/MkIV | S100C/180/5/MkIV | S100C/210/4/MkIV | S100C/240/3/MkIV |
| Stroke Length (mm) | - | 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 |
| Magnet Sets | - | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| Peak Static Thrust (N) | 300V | 4800 | 4320 | 3840 | 3360 | 2880 | 2400 | 1920 | 1440 |
| | 600V | 6900 | 6210 | 5520 | 4830 | 4140 | 3450 | 2760 | 2070 |
| Thrust at Continuous Rated Current | 300/600V | 750 | 675 | 600 | 525 | 450 | 375 | 300 | 225 |
| Thrust Co-efficient (N/A) | - | 300 | 270 | 240 | 210 | 180 | 150 | 120 | 90 |
| Damping Coefficient (A/Ms-1) | - | 20 | 18 | 16 | 14 | 12 | 10 | 8 | 6 |
| Peak Current (A) | 300V | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | 600V | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| Continuous Rated Current (A) | 300/600V | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Max Velocity (Ms-1 at zero thrust) | 300V | 0.4 | 0.8 | 1.2 | 1.6 | 2.0 | 2.4 | 2.6 | 2.9 |
| | 600V | 0.5 | 1.1 | 1.6 | 2.2 | 2.7 | 3.3 | 3.4 | 3.5 |
| Efficiency (N/W) | | 0.87 | 0.78 | 0.7 | 0.61 | 0.52 | 0.43 | 0.35 | 0.26 |
| Phase Resistance (Ohms) | - | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| Approximate Closed Length (mm) | - | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| External Diameter (mm) | - | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| Approximate Mass (Kgs) | - | 39.4 | 37.8 | 36.2 | 34.6 | 33 | 31.4 | 29.8 | 28.2 |

Please note the forces shown above ARE NOT REQUIRED TO SUPPORT A DEAD LOAD. They are therefore fully available to manoeuvre it. The dead load is supported by the self-tuning gas spring, integral to the ram.

| | | | | | | | |
|----------------------|-----|-----|-----|-----|------|------|------|
| Gas Pressure (psi) | 20 | 40 | 60 | 80 | 100 | 120 | 140 |
| Load Supported (kg) | 110 | 220 | 330 | 440 | 550 | 660 | 770 |
| Load Supported (lbs) | 242 | 484 | 726 | 968 | 1210 | 1452 | 1694 |

It is important to note that a ServoRam™ should not be considered to be a direct replacement for a fluid ram in any machine application. The dynamic forces need to be distinguished from the static forces, so that the electro-magnetic part of the machine handles the precision dynamic actions, whilst the slowly changing and kinetic energy recycling actions are handled by the gas spring.



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