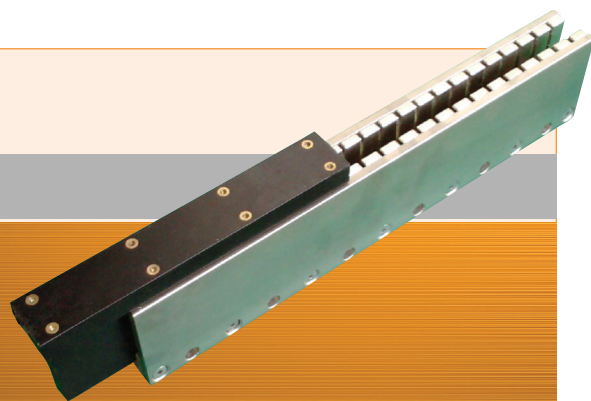


# SWL-DMI SERIES

## Coreless Linear Motor



### BASIC SPECIFICATIONS

- ▣ Rating Condition : Continuous
- ▣ Voltage Endurance : AC1500V, 1Min
- ▣ Operating Temperature : 0~40℃
- ▣ Coil Insulation Class : F Class (155℃)
- ▣ Hall Effect Device : Optional
- ▣ Air cooling available at no extra cost.
- Power Supply Requirement : Trapezoidal or Sinusoidal  
3-phase Brushless Amplifier.



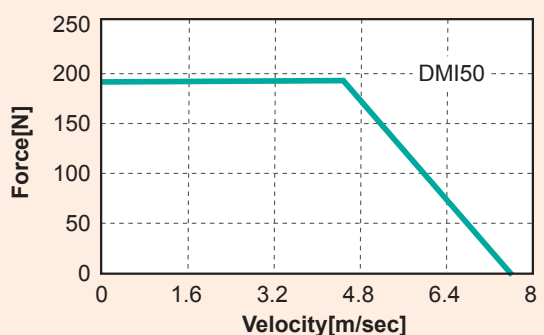
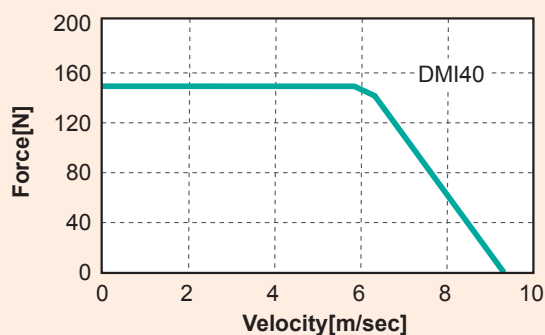
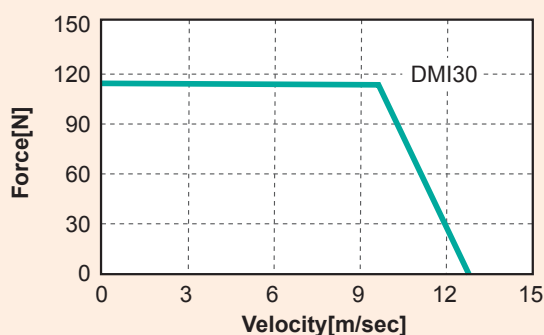
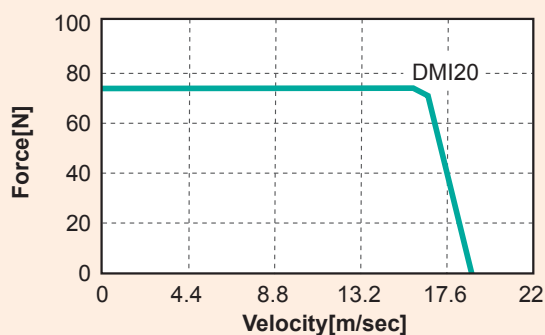
### PERFORMANCE SPECIFICATIONS

|                           |         | Unit           | SWL-DMI20 | SWL-DMI30 | SWL-DMI40 | SWL-DMI50 |
|---------------------------|---------|----------------|-----------|-----------|-----------|-----------|
| Continuous                | Force   | N              | 24.7      | 37.0      | 49.4      | 61.7      |
|                           | Current | Arms           | 1.3       | 1.3       | 1.3       | 1.3       |
| Max.                      | Force   | N              | 74.1      | 111.1     | 148.2     | 185.2     |
|                           | Current | Arms           | 3.9       | 3.9       | 3.9       | 3.9       |
| Force Constant (Kf)       |         | N / Arms       | 19.0      | 28.5      | 38.0      | 47.5      |
| Back EMF Constant (Ke)    |         | Vrms / (m/sec) | 6.78      | 10.17     | 13.56     | 16.95     |
| Electrical Time Constant  |         | msec           | 0.38      | 0.38      | 0.38      | 0.38      |
| Resistance (Line to line) |         | $\Omega$       | 10.39     | 15.59     | 20.78     | 25.98     |
| Inductance (Line to line) |         | mH             | 3.95      | 5.93      | 7.91      | 9.89      |
| Power Loss                |         | W              | 26.3      | 39.5      | 52.7      | 65.8      |
| Mover Weight              |         | kg             | 0.25      | 0.35      | 0.45      | 0.55      |

◆ Magneter Pole pitch (N-N) : 24mm, Stator Weight : 7.9kg/m

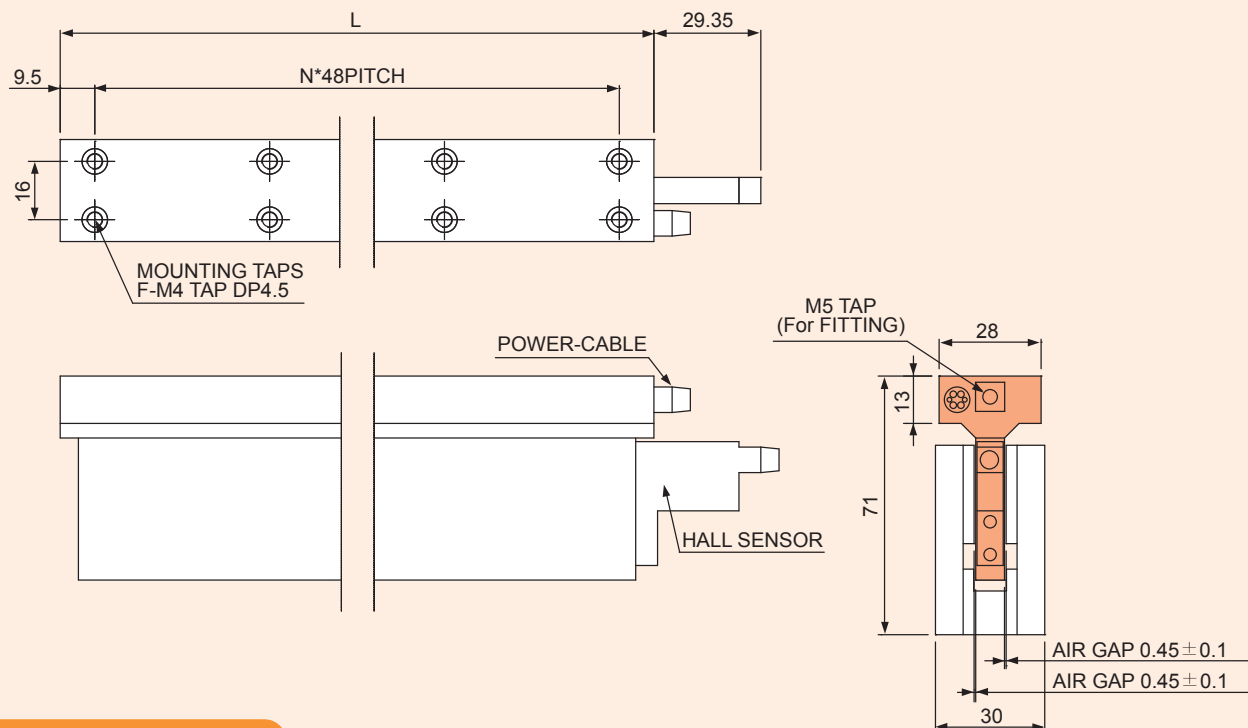


### FORCE VS. VELOCITY CHARACTERISTICS

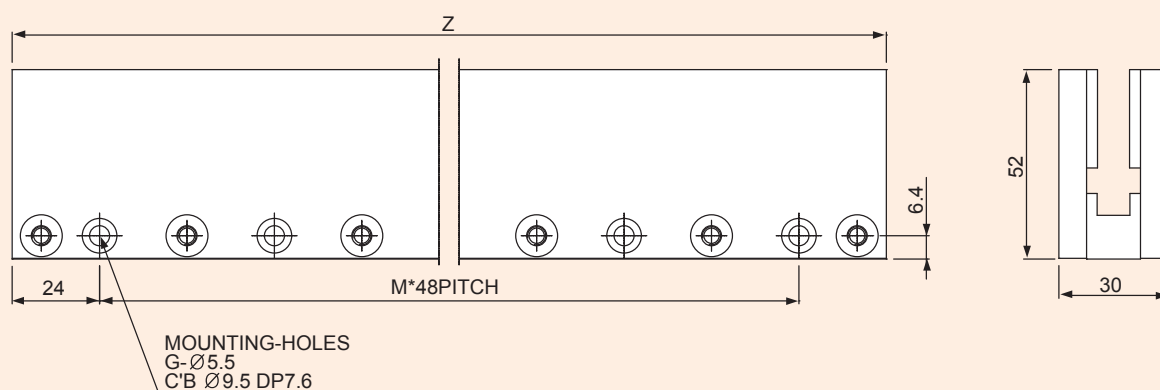


## MECHANICAL DIMENSIONS

### Mover Dimensions



### Stator Dimensions



### Mover

| Model<br>SWL-DMI | L   | N | F  |
|------------------|-----|---|----|
| 20               | 115 | 2 | 6  |
| 30               | 163 | 3 | 8  |
| 40               | 211 | 4 | 10 |
| 50               | 259 | 5 | 12 |

◆ Check the page 64 for cable and connector types

### Stator

| Model<br>SWL-DMI | Z   | M | G  |
|------------------|-----|---|----|
| 96               | 96  | 1 | 2  |
| 144              | 144 | 2 | 3  |
| 192              | 192 | 3 | 4  |
| 240              | 240 | 4 | 5  |
| 288              | 288 | 5 | 6  |
| 336              | 336 | 6 | 7  |
| 384              | 384 | 7 | 8  |
| 432              | 432 | 8 | 9  |
| 480              | 480 | 9 | 10 |

The specifications above are subject to change for enhancement of product performance, Without any prior notice.