

| Model                                |             | AQM8-B1 | AQM24-B1 | AQM30-B1 | AQM30-B2 | AQM50-B1 | AQM50-B2 | AQM80-B1 | AQM80-B2 |
|--------------------------------------|-------------|---------|----------|----------|----------|----------|----------|----------|----------|
| Performance Parameters               | Unit        | Series  | Series   | Series   | Parallel | Series   | Parallel | Series   | Parallel |
| Continuous Force @100 °C             | N           | 20.3    | 60.8     | 75.9     | 151.9    | 126.6    | 253.1    | 202.5    | 405.0    |
| Peak Force                           | N           | 51.0    | 153.1    | 191.4    | 382.7    | 318.9    | 637.9    | 510.3    | 1020.6   |
| Force Constant                       | N/Arms      | 8.1     | 24.3     | 30.4     | 30.4     | 50.6     | 50.6     | 81.0     | 81.0     |
| Back EMF Constant                    | Vpeak/(m/s) | 6.6     | 19.8     | 24.8     | 24.8     | 41.3     | 41.3     | 66.1     | 66.1     |
| Motor Constant                       | N/Sqrt(W)   | 3.6     | 8.7      | 10.1     | 14.4     | 14.3     | 20.2     | 19.1     | 26.9     |
| Resistance (Terminal to Terminal)    | Ω           | 3.3     | 5.2      | 6.0      | 3.0      | 8.4      | 4.2      | 12.0     | 6.0      |
| Inductance (Terminal to Terminal)    | mH          | 26.0    | 41.3     | 47.1     | 23.5     | 66.2     | 33.1     | 94.9     | 47.5     |
| Electrical Time Constant             | ms          | 7.9     | 7.9      | 7.9      | 7.9      | 7.9      | 7.9      | 7.9      | 7.9      |
| Continuous Current @100 °C           | Arms        | 2.5     | 2.5      | 2.5      | 5.0      | 2.5      | 5.0      | 2.5      | 5.0      |
| Peak Current                         | Arms        | 9.0     | 9.0      | 9.0      | 18.0     | 9.0      | 18.0     | 9.0      | 18.0     |
| Continuous Power Dissipation @100 °C | W           | 30.9    | 49.2     | 56.0     | 112.0    | 78.8     | 157.6    | 113.0    | 225.9    |
| Max. Coil Temperature                | °C          | 100.0   | 100.0    | 100.0    | 100.0    | 100.0    | 100.0    | 100.0    | 100.0    |
| Thermal Dissipation Constant         | W/°C        | 0.4     | 0.7      | 0.7      | 1.5      | 1.1      | 2.1      | 1.5      | 3.0      |
| Max. Bus Voltage                     | Vdc         | 600.0   | 600.0    | 600.0    | 600.0    | 600.0    | 600.0    | 600.0    | 600.0    |
| Magnetic Period                      | mm          | 30.0    | 30.0     | 30.0     | 30.0     | 30.0     | 30.0     | 30.0     | 30.0     |
| Cogging Force (pk to pk)             | N           | 0.5     | 1.5      | 1.9      | 6.5      | 3.1      | 10.8     | 5.0      | 17.3     |
| Attraction Force                     | N           | 74.7    | 224.0    | 280.0    | 560.0    | 466.6    | 933.3    | 746.6    | 1493.2   |

Note: All parameters vary in the range of ± 10% except dimensions.

Motor Coil

| Motor | Size | Length (mm) | Mass (Kg) |
|-------|------|-------------|-----------|
| AQM8  | B1   | 133         | 0.44      |
| AQM24 | B1   | 133         | 0.83      |
| AQM30 | B1   | 133         | 0.95      |
|       | B2   | 268         | 1.91      |
| AQM50 | B1   | 133         | 1.35      |
|       | B2   | 268         | 2.71      |
| AQM80 | B1   | 133         | 1.94      |
|       | B2   | 268         | 3.91      |

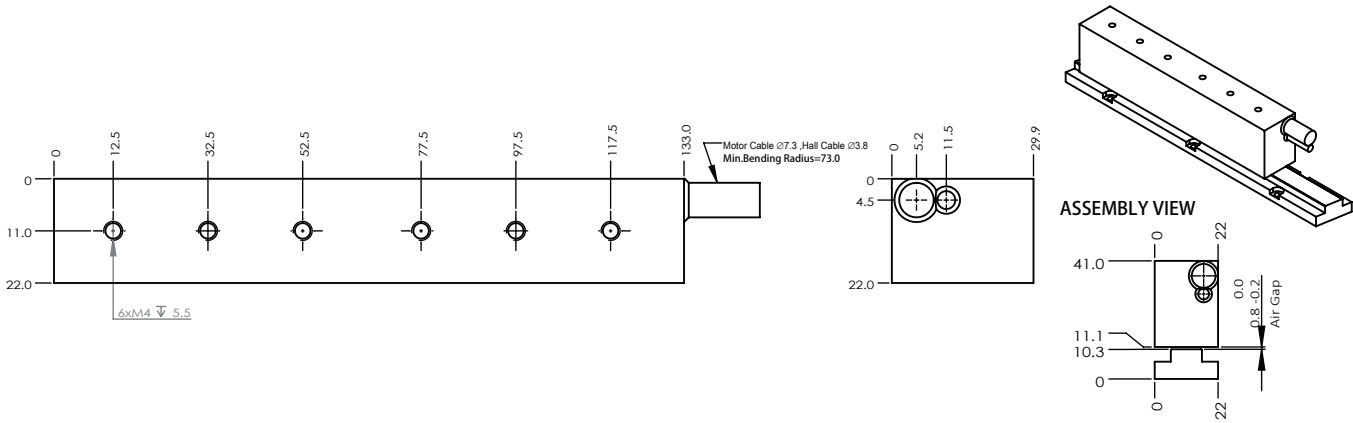
Motor Track

| Motor | Size  | Length (mm) | Mass (Kg) |
|-------|-------|-------------|-----------|
| AQM8  | TL180 | 180         | 0.24      |
|       | TL300 | 300         | 0.40      |
|       | TL420 | 420         | 0.56      |
| AQM24 | TL180 | 180         | 0.48      |
|       | TL300 | 300         | 0.81      |
|       | TL420 | 420         | 1.13      |
| AQM30 | TL180 | 180         | 0.55      |
|       | TL300 | 300         | 0.92      |
|       | TL420 | 420         | 1.28      |
| AQM50 | TL180 | 180         | 0.83      |
|       | TL300 | 300         | 1.38      |
|       | TL420 | 420         | 1.92      |
| AQM80 | TL180 | 180         | 1.10      |
|       | TL300 | 300         | 1.84      |
|       | TL420 | 420         | 2.56      |

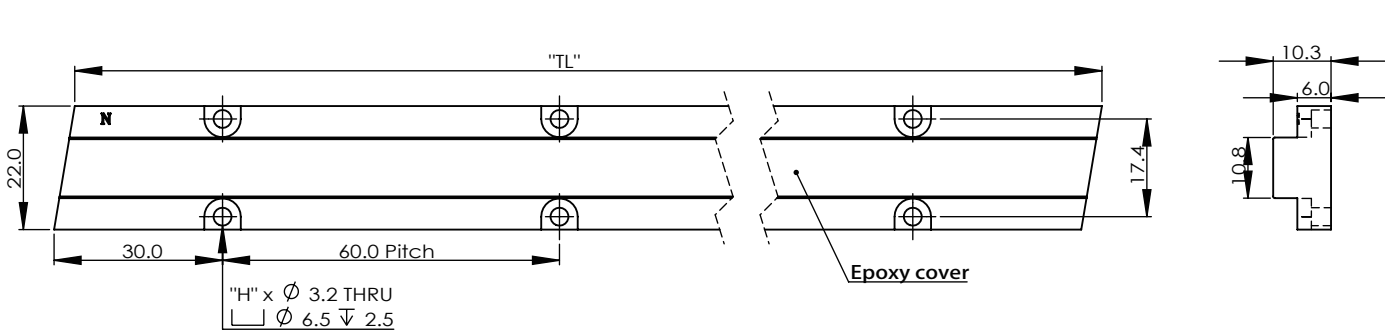
# AQM

■ Dimensions

## ■ AQM8-B1



## ■ AQM8

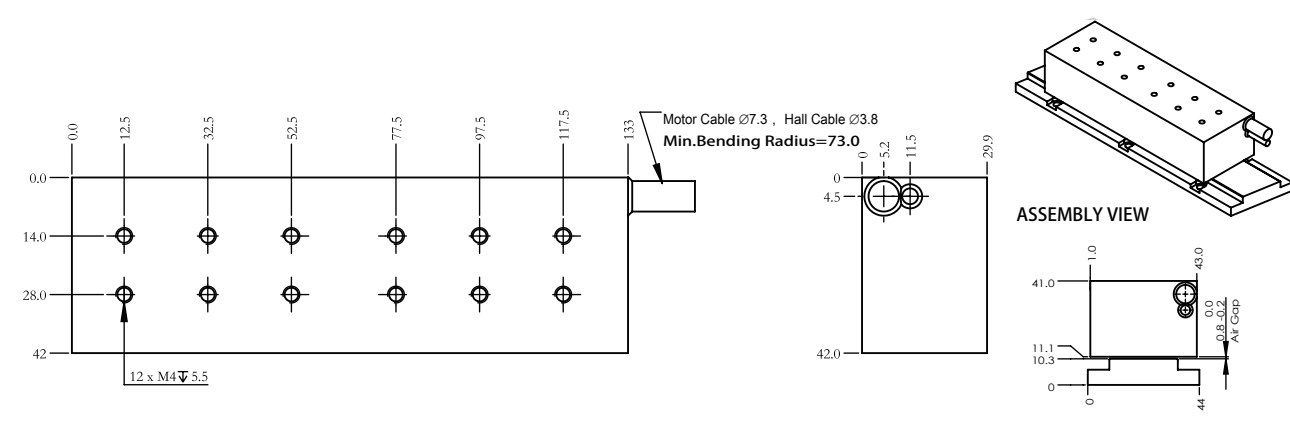


| Magnet Track<br>P / N: | Track Length<br>"TL" | No.of Holes<br>"H" |
|------------------------|----------------------|--------------------|
| AQM8-TL180E            | 180                  | 6                  |
| AQM8-TL300E            | 300                  | 10                 |
| AQM8-TL420E            | 420                  | 14                 |

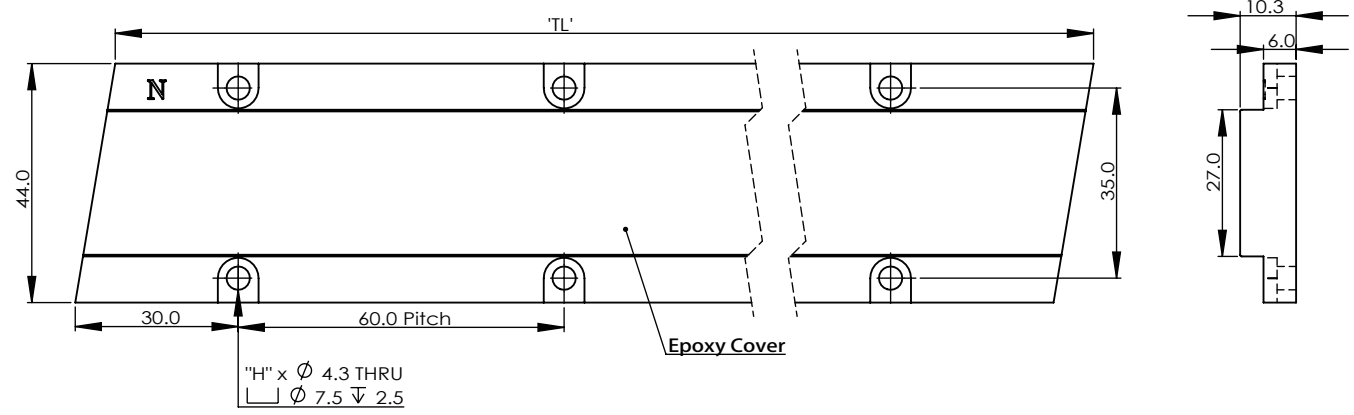
# AQM

■ Dimensions

## ■ AQM24-B1



## ■ AQM24

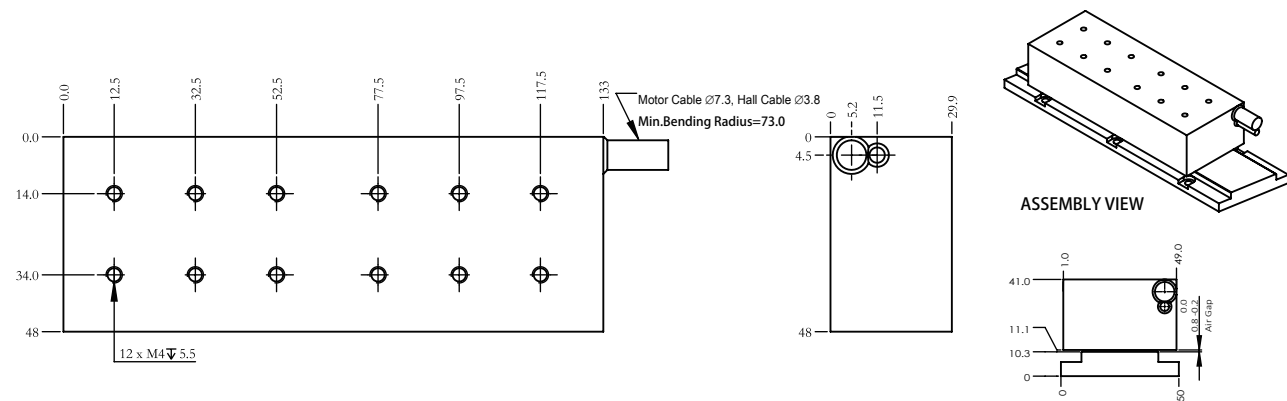


| Magnet Track<br>P / N: | Track Length<br>"TL" | No.of Holes<br>"H" |
|------------------------|----------------------|--------------------|
| AQM24-TL180E           | 180                  | 6                  |
| AQM24-TL300E           | 300                  | 10                 |
| AQM24-TL420E           | 420                  | 14                 |

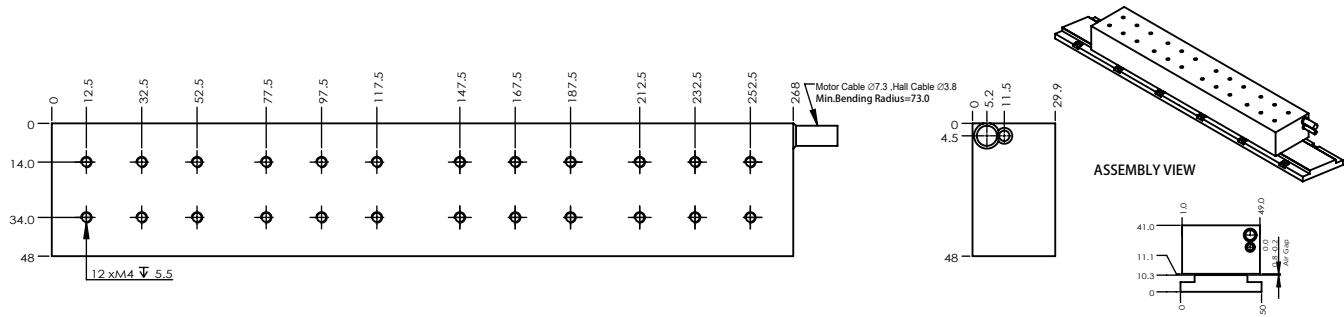
# AQM

## ■ Dimensions

### ■ AQM30-B1



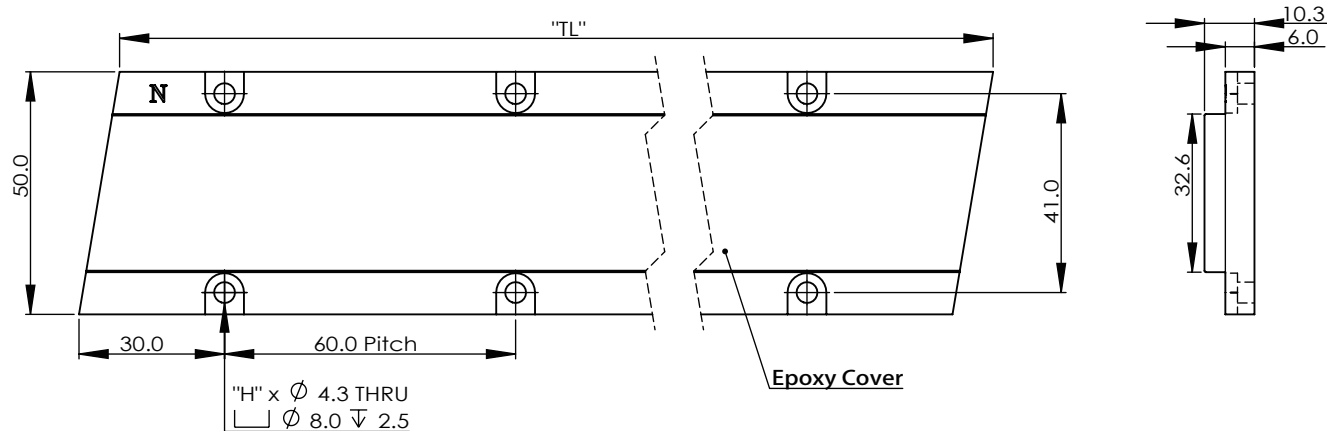
### ■ AQM30-B2



## ■ Track

# AQM

### ■ AQM30

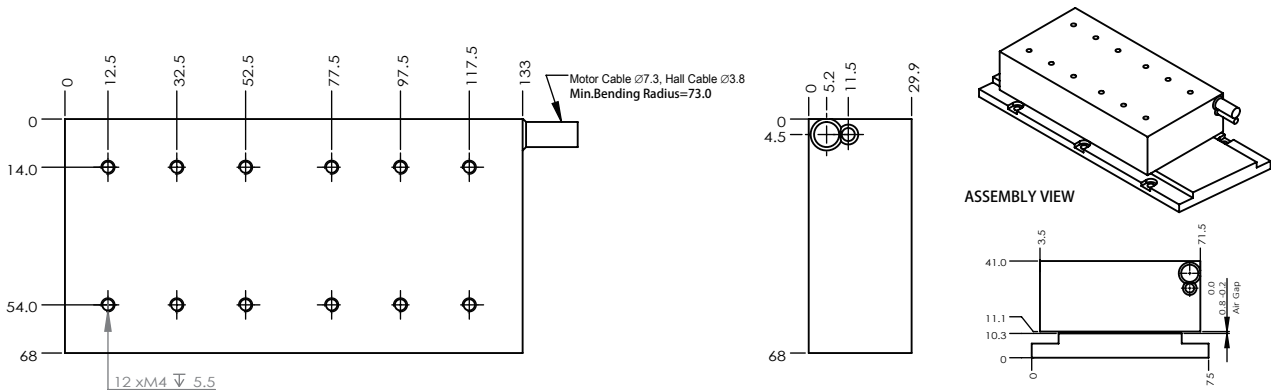


| Magnet Track<br>P / N: | Track Length<br>"TL" | No. of Holes<br>"H" |
|------------------------|----------------------|---------------------|
| AQM30-TL180E           | 180                  | 6                   |
| AQM30-TL300E           | 300                  | 10                  |
| AQM30-TL420E           | 420                  | 14                  |

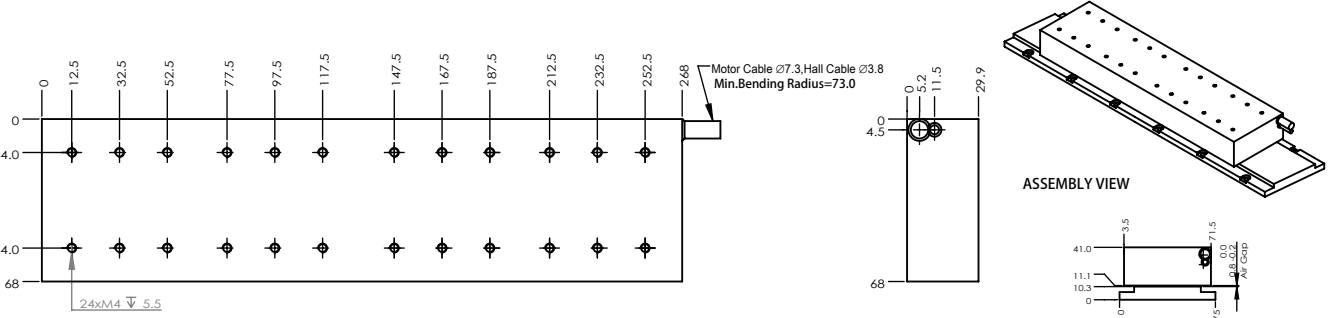
# AQM

■ Dimensions

## AQM50-B1



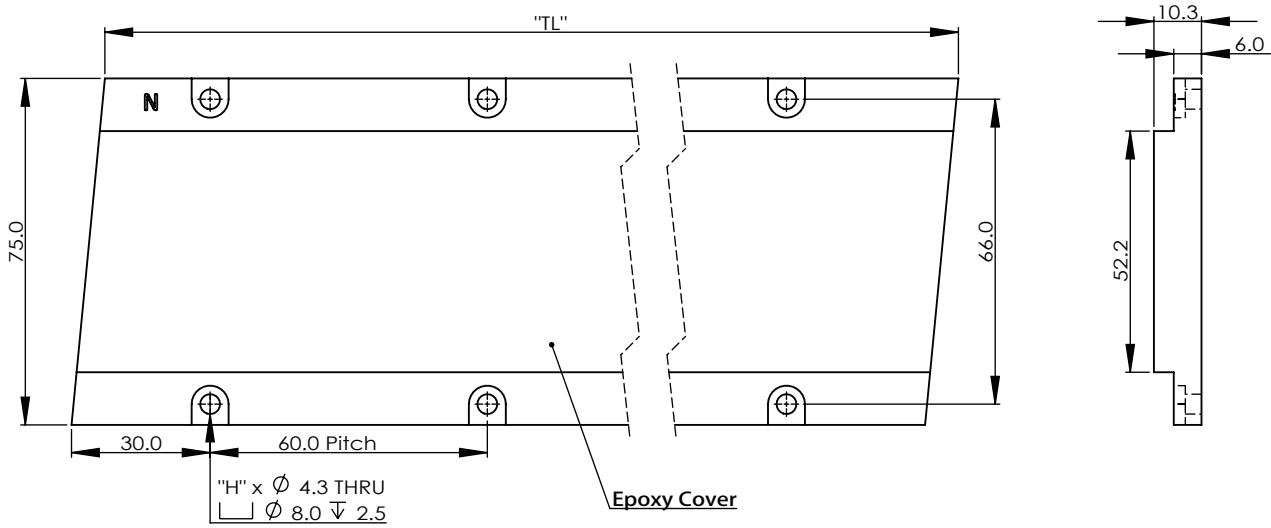
## AQM50-B2



# AQM

■ Track

## AQM50

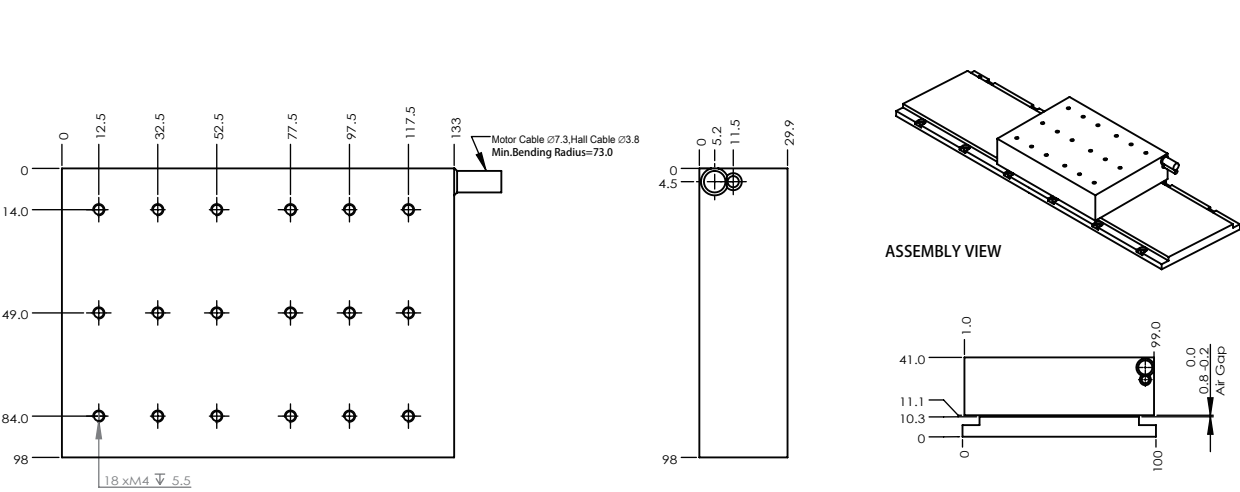


| Magnet Track<br>P / N: | Track Length<br>"TL" | No.of Holes<br>"H" |
|------------------------|----------------------|--------------------|
| AQM50-TL180E           | 180                  | 6                  |
| AQM50-TL300E           | 300                  | 10                 |
| AQM50-TL420E           | 420                  | 14                 |

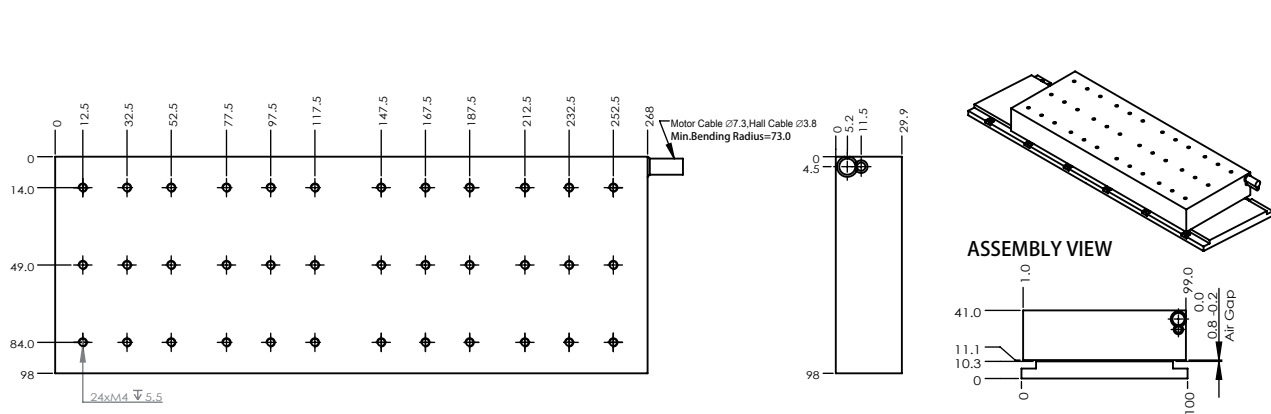
# AQM

■ Dimensions

## ■ AQM80-B1

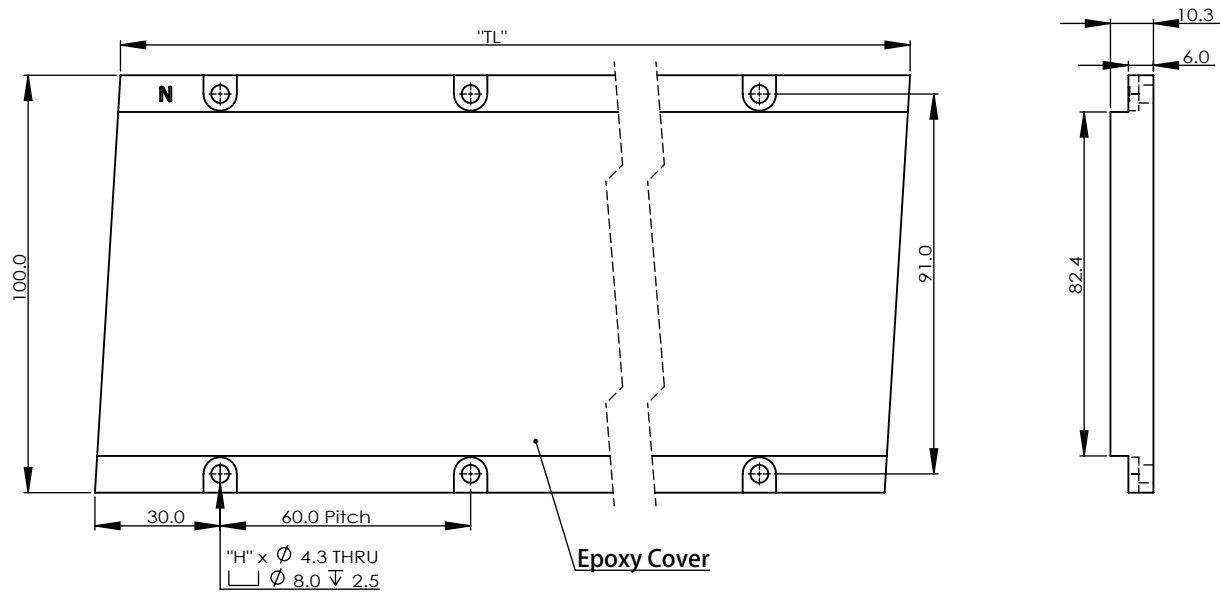


## ■ AQM80-B2



■ Track

## ■ AQM80



| Magnet Track<br>P / N: | Track Length<br>"TL" | No.of Holes<br>"H" |
|------------------------|----------------------|--------------------|
| AQM80-TL180E           | 180                  | 6                  |
| AQM80-TL300E           | 300                  | 10                 |
| AQM80-TL420E           | 420                  | 14                 |

# AQM

Part Numbering



Coil

AQM30-B1-J-H9D-3.0-FB

Model

AQM8/AQM24/AQM30  
AQM50/AQM80

Size

B1/B2

Thermal Sensor

J = Thermostat (standard), K = PT100 (RTD)  
K4 = PTC Thermistor, KTY81/121  
K5 = RTD, PT1000 Sensor

Ferrite Bead Options

Blank<sup>3</sup>, FB<sup>4</sup>

Cable Length (m)

3.0

Hall Options

Blank<sup>1</sup>, H9D<sup>2</sup>



Track

AQM30-TL420E

Model

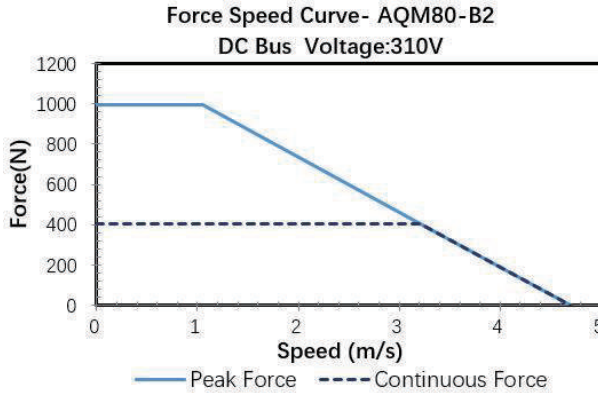
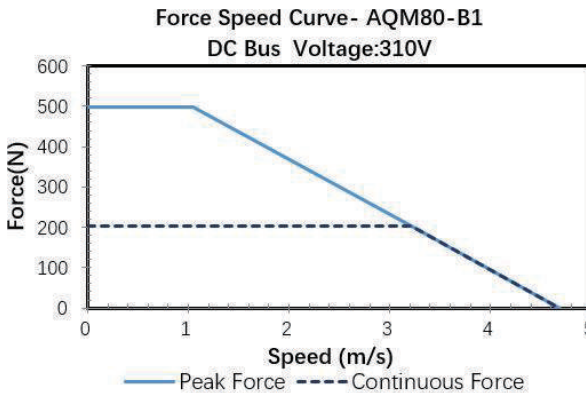
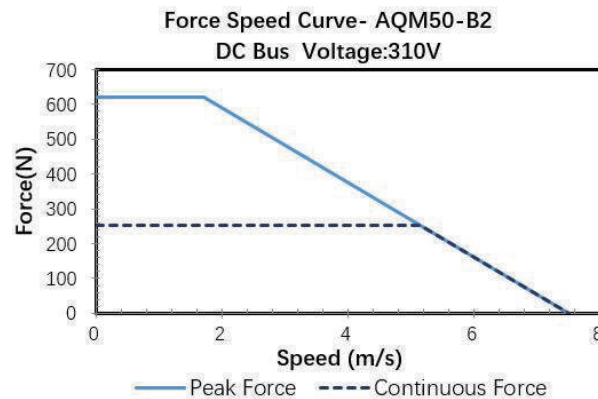
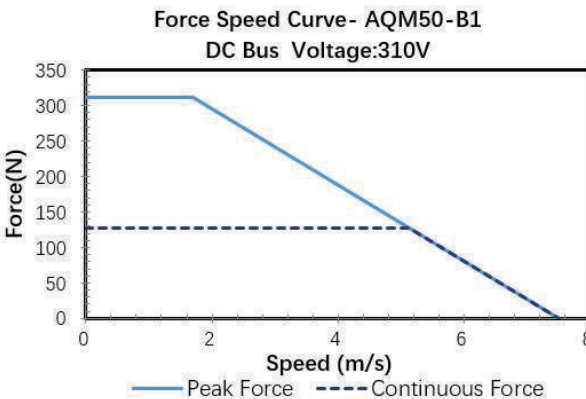
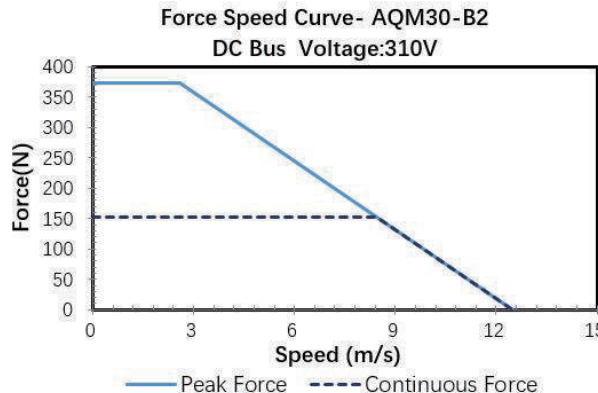
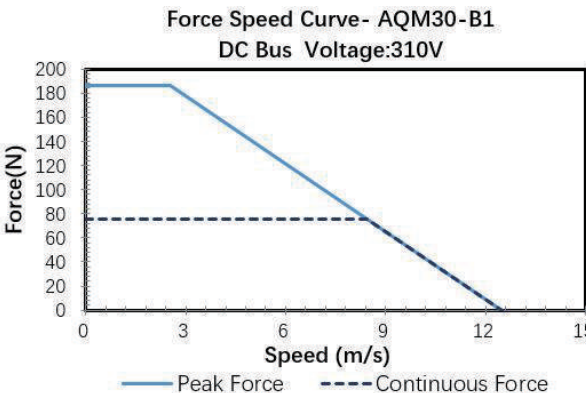
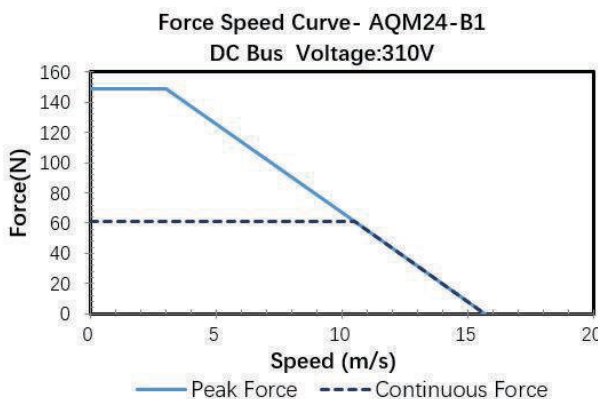
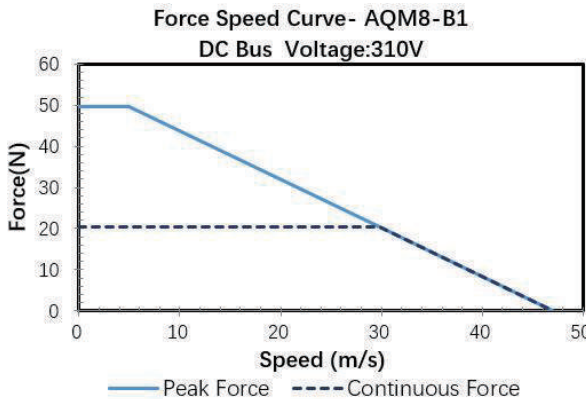
AQM30

Track Length

TL180E/ TL300E/ TL420E

- Blank = comes with built-in hall sensor & hall cable terminated in flying leads. (standard)
- H9D = comes with built-in hall sensor & hall cable terminated with 9-Pins D-Sub connector.
- Blank = motor cable terminated in flying leads.(standard)
- FB = motor cable terminated with ferrite bead.

DC Bus Voltage = 310 Vdc





■ DC Bus Voltage = 600 Vdc

■ Motor & Hall Cable Wiring

AQM

