

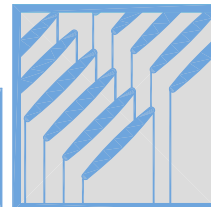
# MD Series

Middle Density Heat Sink

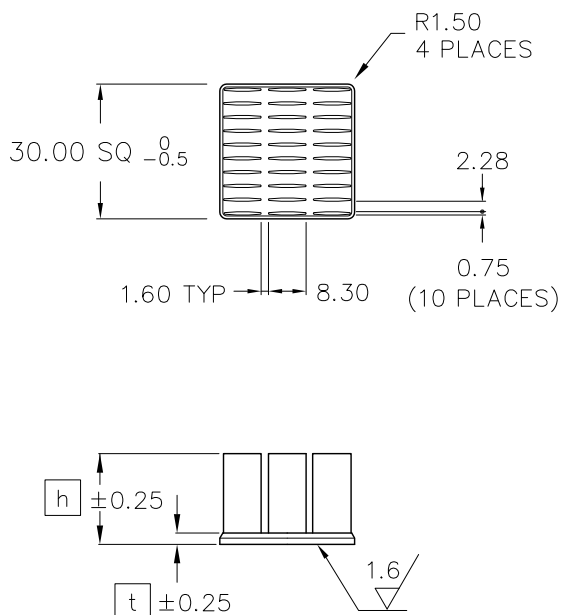
**ALPHA**

**ALPHA**

Middle Density Heat Sink

**MD30**

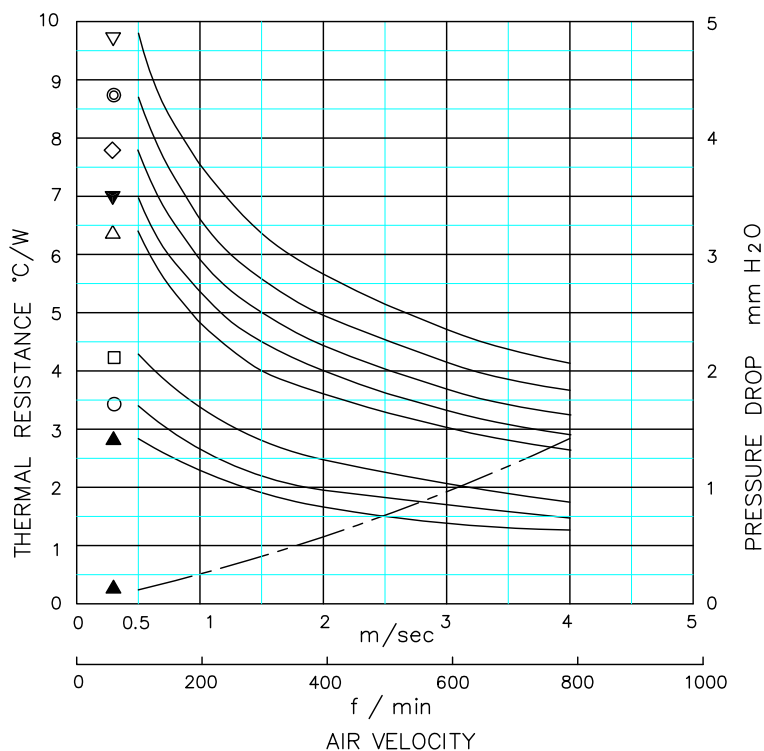
DIM



| MODEL    | HEIGHT<br>[h] | THICKNESS<br>[t] | WEIGHT<br>(grams) |
|----------|---------------|------------------|-------------------|
| MD30-6B  | 6             | 2.0              | 6.4               |
| MD30-7B  | 7             |                  | 6.8               |
| MD30-8B  | 8             |                  | 7.2               |
| MD30-9B  | 9             |                  | 7.6               |
| MD30-10B | 10            |                  | 8.0               |
| MD30-15B | 15            | 2.5              | 11.2              |
| MD30-20B | 20            |                  | 13.2              |
| MD30-25B | 25            |                  | 15.2              |

MATERIAL : A 6063  
 FINISH : BLACK ANODIZE  
 DIMENSIONS : mm

DATA



- ▽ MD30-6B
- ⊙ MD30-7B
- ◇ MD30-8B
- ▼ MD30-9B
- △ MD30-10B
- MD30-15B
- MD30-20B
- ▲ MD30-25B

● DUCTED CONDITION  
 DUMMY HEATER SIZE: 12.7 SQ  
 THERMAL RESISTANCE ———  
 PRESURE DROP - - - -

■ BASED ON ALPHA'S STANDARD TEST PROCEDURE.  
 REFER TO TECHNICAL INFORMATION.

Alpha Company Ltd.

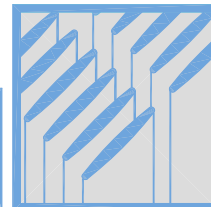
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

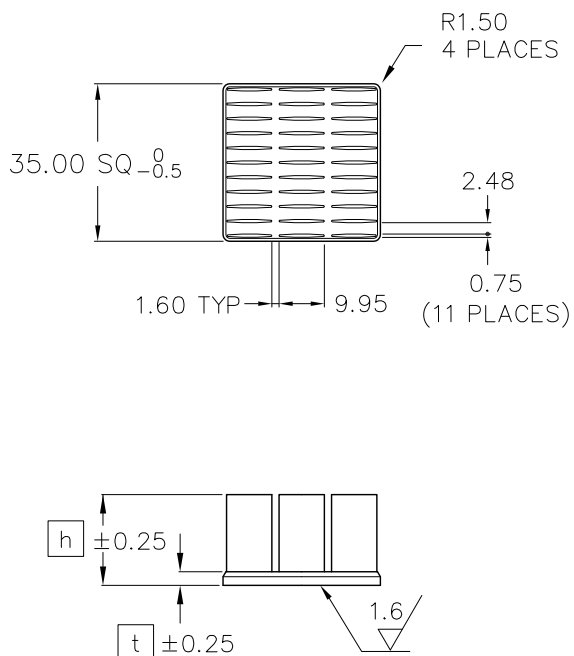
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD35**

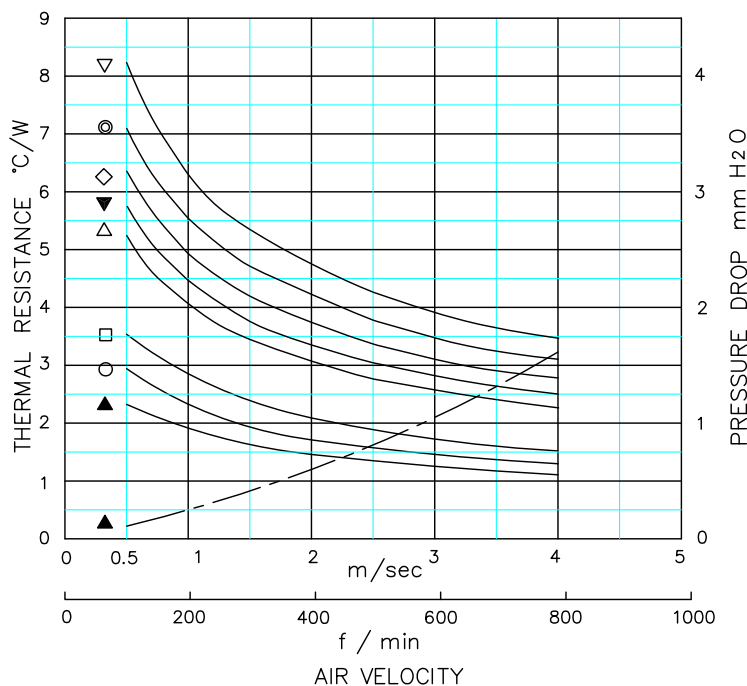
DIM



| MODEL    | HEIGHT<br>[h] | THICKNESS<br>[t] | WEIGHT<br>(grams) |
|----------|---------------|------------------|-------------------|
| MD35-6B  | 6             | 2.0              | 8.7               |
| MD35-7B  | 7             |                  | 9.2               |
| MD35-8B  | 8             |                  | 9.7               |
| MD35-9B  | 9             |                  | 10.3              |
| MD35-10B | 10            |                  | 10.8              |
| MD35-15B | 15            | 2.5              | 14.8              |
| MD35-20B | 20            |                  | 18.8              |
| MD35-25B | 25            |                  | 21.5              |

MATERIAL : A 6063  
FINISH : BLACK ANODIZE  
DIMENSIONS : mm

DATA



Alpha Company Ltd.

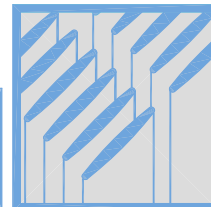
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
PHONE +81(55)966 0789  
FAX +81(55)966 9192  
E mail : alpha@micforg.co.jp  
URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

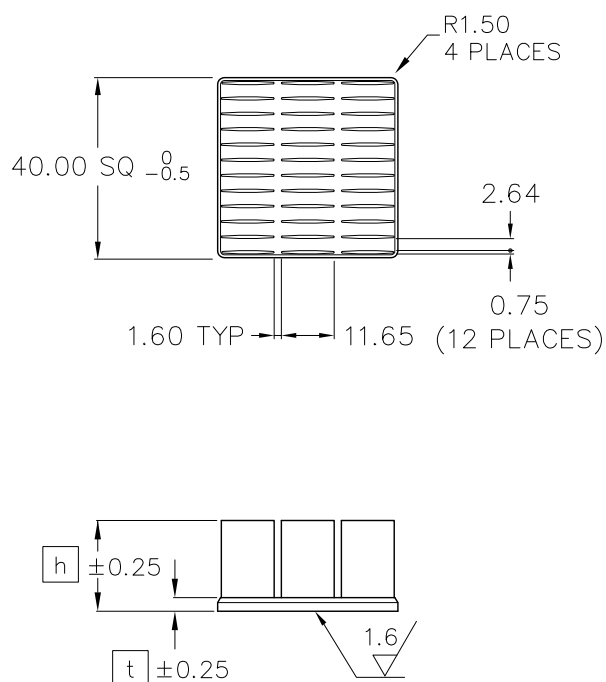
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
PHONE +1(408)567-8082  
FAX +1(408)567-8053  
E mail : sales@alphanovatech.com  
URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD40**

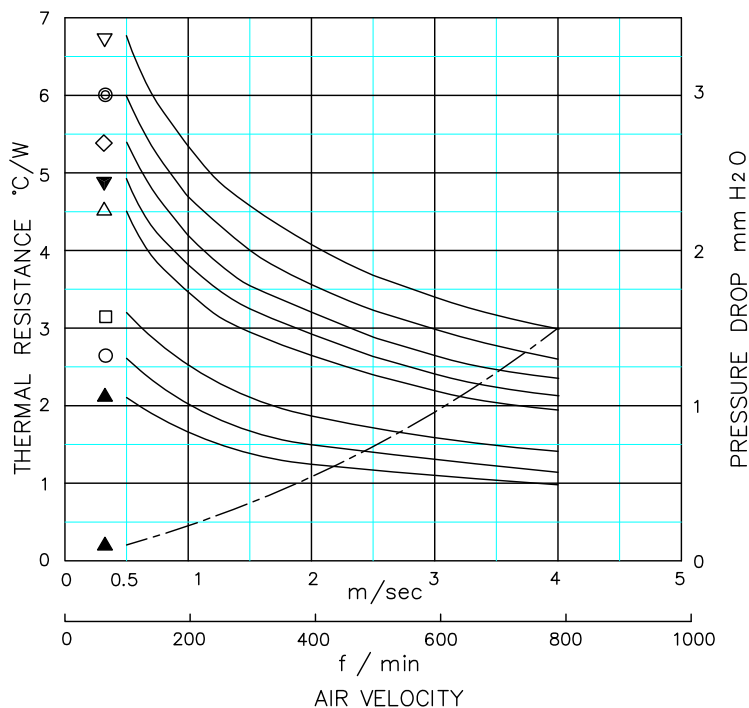
DIM



| MODEL    | HEIGHT<br>[h] | THICKNESS<br>[t] | WEIGHT<br>(grams) |
|----------|---------------|------------------|-------------------|
| MD40-6B  | 6             | 2.0              | 11.2              |
| MD40-7B  | 7             |                  | 11.9              |
| MD40-8B  | 8             |                  | 12.6              |
| MD40-9B  | 9             |                  | 13.3              |
| MD40-10B | 10            |                  | 14.0              |
| MD40-15B | 15            | 2.5              | 19.7              |
| MD40-20B | 20            |                  | 25.0              |
| MD40-25B | 25            |                  | 28.5              |

MATERIAL : A 6063  
 FINISH : BLACK ANODIZE  
 DIMENSIONS : mm

DATA



- ▽ MD40-6B
- ⊙ MD40-7B
- ◇ MD40-8B
- ▼ MD40-9B
- △ MD40-10B
- MD40-15B
- MD40-20B
- ▲ MD40-25B

● DUCTED CONDITION  
 DUMMY HEATER SIZE: 12.7 SQ  
 THERMAL RESISTANCE ———  
 PRESURE DROP - - - - -

■ BASED ON ALPHA'S STANDARD TEST PROCEDURE.  
 REFER TO TECHNICAL INFORMATION.

Alpha Company Ltd.

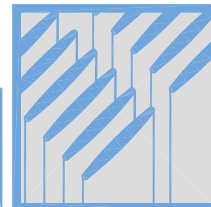
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

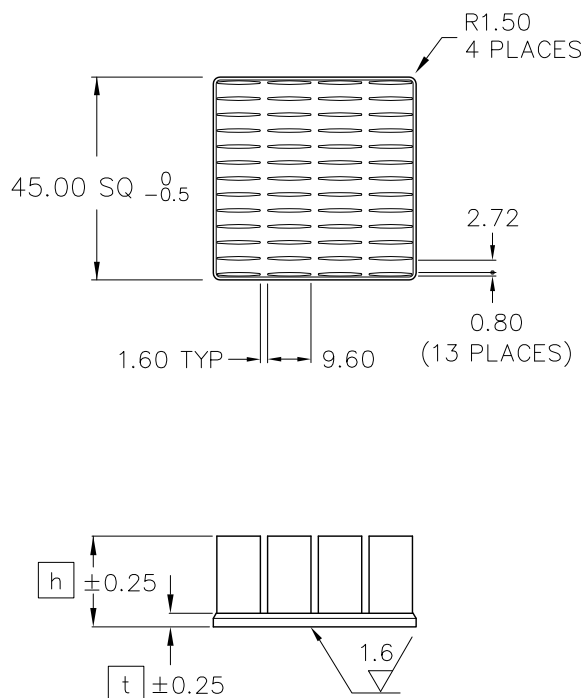
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD45**

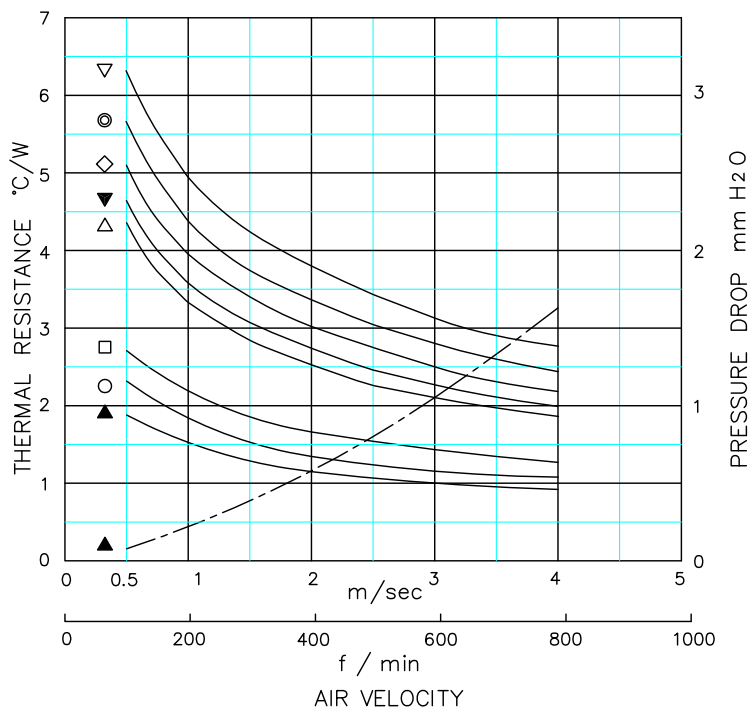
DIM



| MODEL    | HEIGHT<br>[h] | THICKNESS<br>[t] | WEIGHT<br>(grams) |
|----------|---------------|------------------|-------------------|
| MD45-6B  | 6             | 2.5              | 16.3              |
| MD45-7B  | 7             |                  | 17.1              |
| MD45-8B  | 8             |                  | 18.0              |
| MD45-9B  | 9             | 3.0              | 18.8              |
| MD45-10B | 10            |                  | 22.3              |
| MD45-15B | 15            |                  | 26.4              |
| MD45-20B | 20            |                  | 30.4              |
| MD45-25B | 25            |                  | 34.4              |

MATERIAL : A 6063  
 FINISH : BLACK ANODIZE  
 DIMENSIONS : mm

DATA



- ▽ MD45-6B
- ⊙ MD45-7B
- ◇ MD45-8B
- ▼ MD45-9B
- △ MD45-10B
- MD45-15B
- MD45-20B
- ▲ MD45-25B

● DUCTED CONDITION  
 DUMMY HEATER SIZE: 12.7 SQ  
 THERMAL RESISTANCE ———  
 PRESURE DROP - - - - -

■ BASED ON ALPHA'S STANDARD TEST PROCEDURE.  
 REFER TO TECHNICAL INFORMATION.

Alpha Company Ltd.

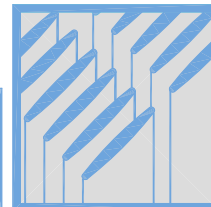
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

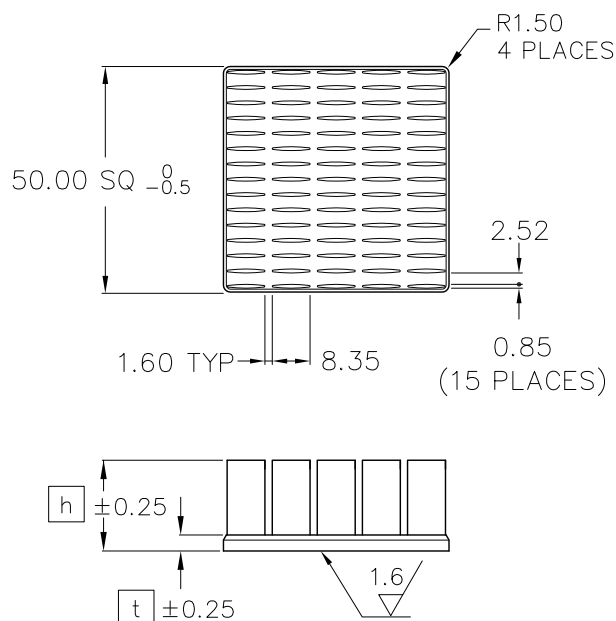
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD50**

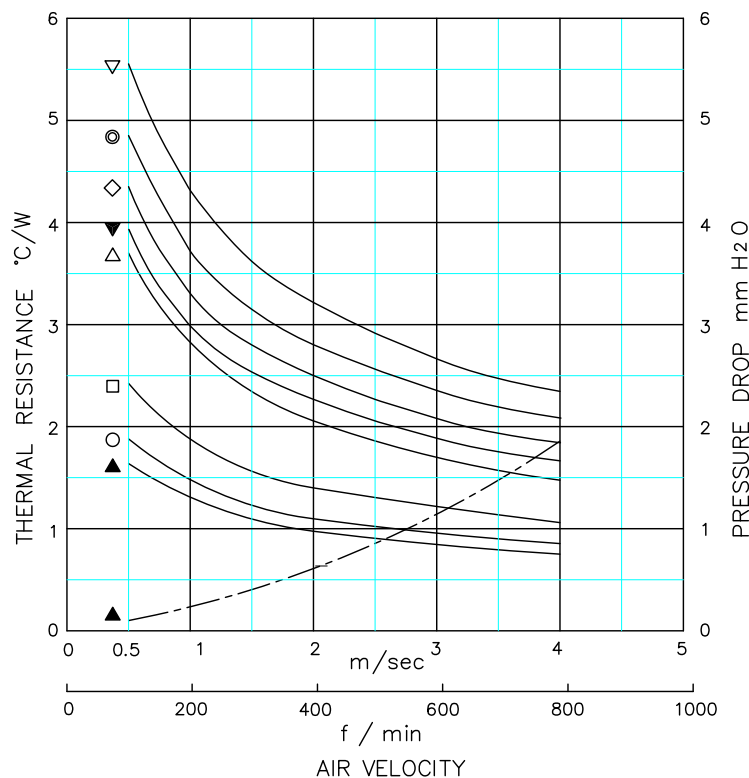
DIM



| MODEL    | HEIGHT<br>[h] | THICKNESS<br>[t] | WEIGHT<br>(grams) |
|----------|---------------|------------------|-------------------|
| MD50-6B  | 6             | 2.5              | 20.6              |
| MD50-7B  | 7             |                  | 21.7              |
| MD50-8B  | 8             |                  | 22.8              |
| MD50-9B  | 9             |                  | 23.9              |
| MD50-10B | 10            | 3.5              | 30.7              |
| MD50-15B | 15            |                  | 36.0              |
| MD50-20B | 20            |                  | 41.3              |
| MD50-25B | 25            |                  | 46.6              |

MATERIAL : A 6063  
 FINISH : BLACK ANODIZE  
 DIMENSIONS : mm

DATA



▽ MD50-6B  
 ⊙ MD50-7B  
 ◇ MD50-8B  
 ▼ MD50-9B  
 △ MD50-10B  
 □ MD50-15B  
 ○ MD50-20B  
 ▲ MD50-25B

● DUCTED CONDITION  
 DUMMY HEATER SIZE: 12.7 SQ  
 THERMAL RESISTANCE ———  
 PRESURE DROP - - - - -

■ BASED ON ALPHA'S STANDARD TEST PROCEDURE.  
 REFER TO TECHNICAL INFORMATION.

Alpha Company Ltd.

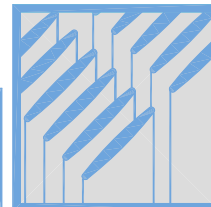
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

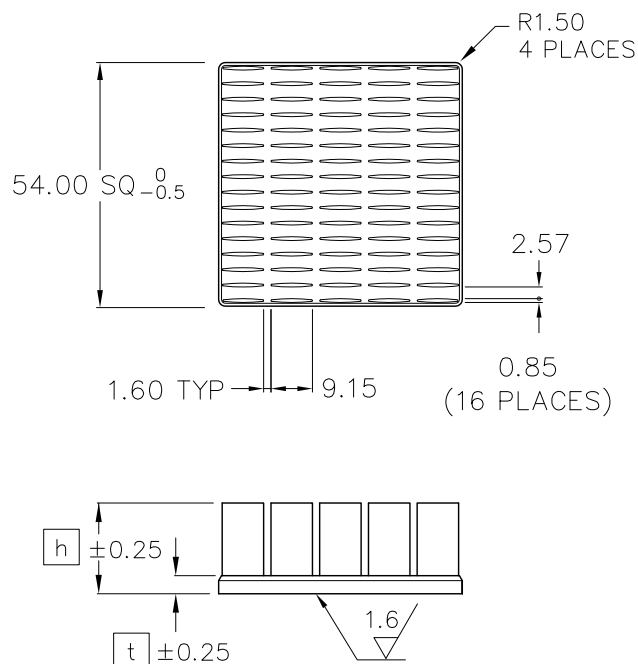
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD54**

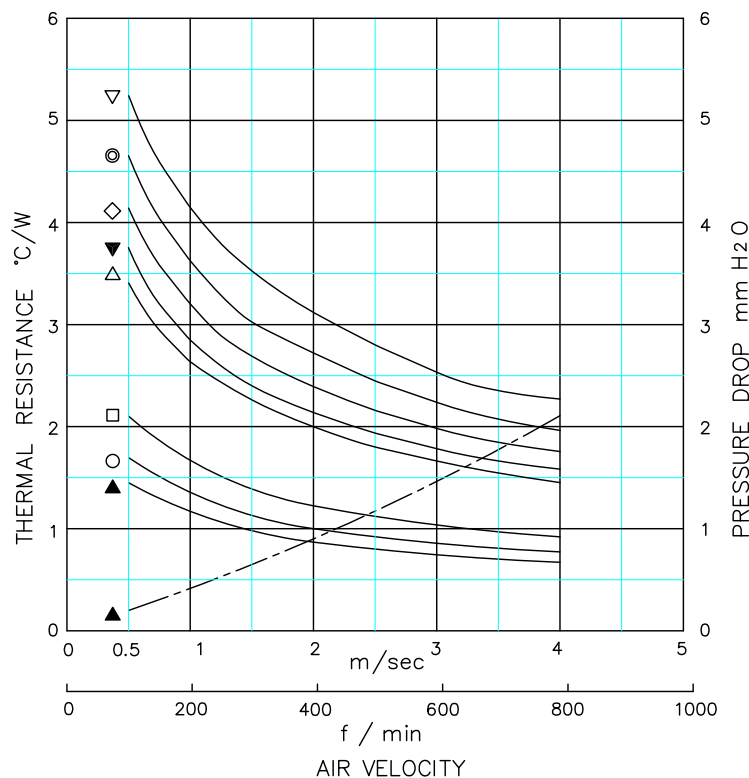
DIM



| MODEL    | HEIGHT<br>[h] | THICKNESS<br>[t] | WEIGHT<br>(grams) |
|----------|---------------|------------------|-------------------|
| MD54-6B  | 6             | 3                | 26.9              |
| MD54-7B  | 7             |                  | 28.2              |
| MD54-8B  | 8             |                  | 29.5              |
| MD54-9B  | 9             |                  | 30.8              |
| MD54-10B | 10            | 4                | 39.3              |
| MD54-15B | 15            |                  | 45.6              |
| MD54-20B | 20            |                  | 51.9              |
| MD54-25B | 25            |                  | 58.2              |

MATERIAL : A 6063  
 FINISH : BLACK ANODIZE  
 DIMENSIONS : mm

DATA



- ▽ MD54-6B
- ⊙ MD54-7B
- ◇ MD54-8B
- ▼ MD54-9B
- △ MD54-10B
- MD54-15B
- MD54-20B
- ▲ MD54-25B

● DUCTED CONDITION  
 DUMMY HEATER SIZE: 12.7 SQ  
 THERMAL RESISTANCE ———  
 PRESURE DROP - - - - -

■ BASED ON ALPHA'S STANDARD TEST PROCEDURE.  
 REFER TO TECHNICAL INFORMATION.

Alpha Company Ltd.

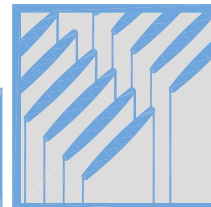
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

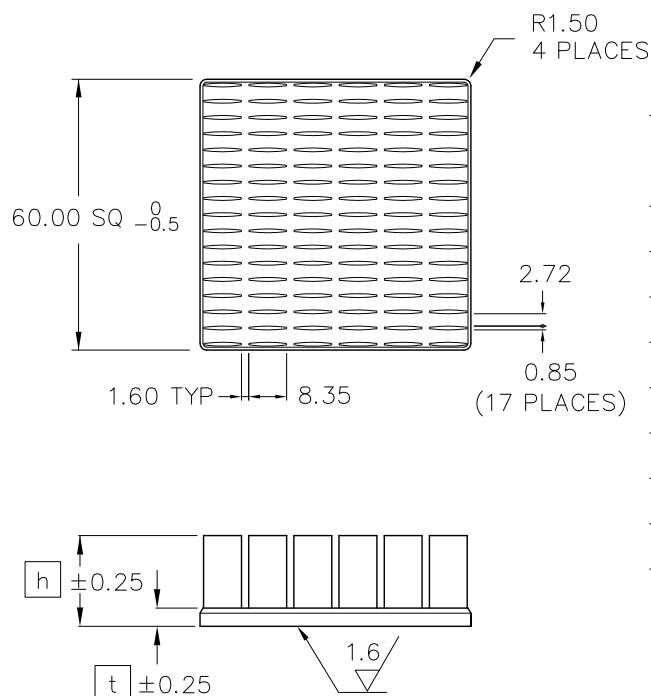
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD60**

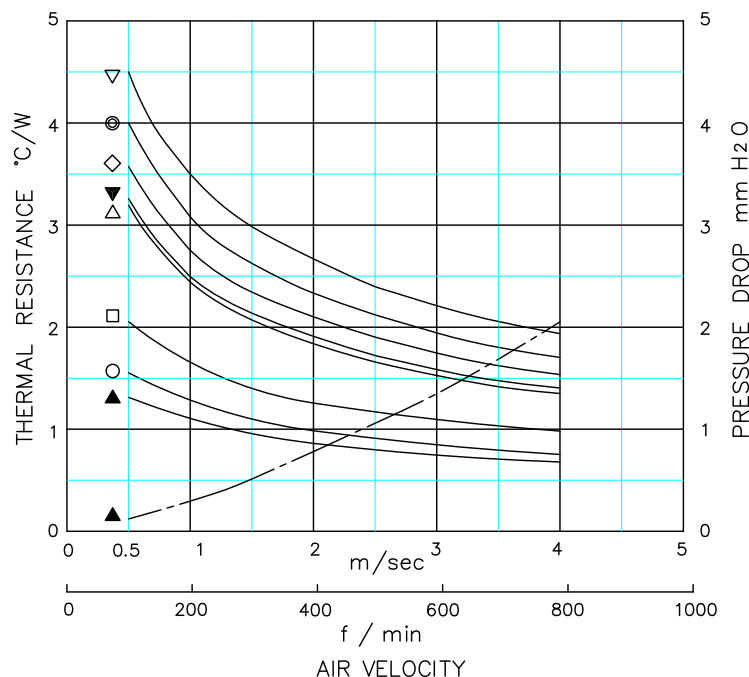
DIM



| MODEL    | HEIGHT<br>$h$ | THICKNESS<br>$t$ | WEIGHT<br>(grams) |
|----------|---------------|------------------|-------------------|
| MD60-6B  | 6             | 3                | 33.1              |
| MD60-7B  | 7             |                  | 34.9              |
| MD60-8B  | 8             |                  | 36.7              |
| MD60-9B  | 9             |                  | 38.6              |
| MD60-10B | 10            | 4                | 47.3              |
| MD60-15B | 15            |                  | 54.7              |
| MD60-20B | 20            |                  | 62.1              |
| MD60-25B | 25            |                  | 69.5              |

MATERIAL : A 6063  
 FINISH : BLACK ANODIZE  
 DIMENSIONS : mm

DATA



- ▽ MD60-6B
- ⊙ MD60-7B
- ◇ MD60-8B
- ▼ MD60-9B
- △ MD60-10B
- MD60-15B
- MD60-20B
- ▲ MD60-25B

● DUCTED CONDITION  
 DUMMY HEATER SIZE: 12.7 SQ  
 THERMAL RESISTANCE ———  
 PRESURE DROP - - - -

■ BASED ON ALPHA'S STANDARD TEST PROCEDURE.  
 REFER TO TECHNICAL INFORMATION.

Alpha Company Ltd.

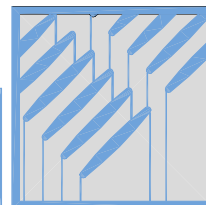
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

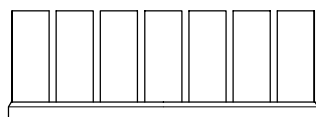
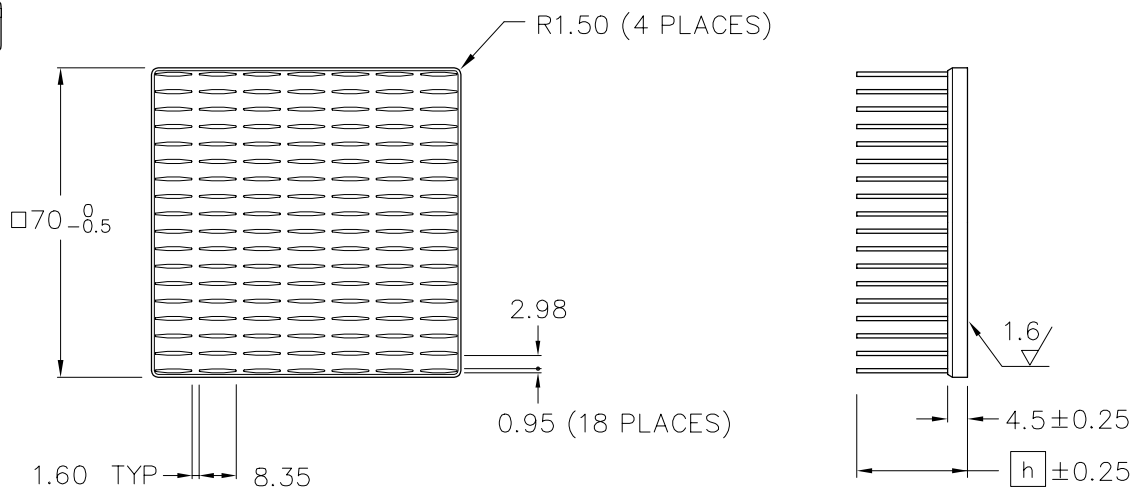
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD70**

DIM

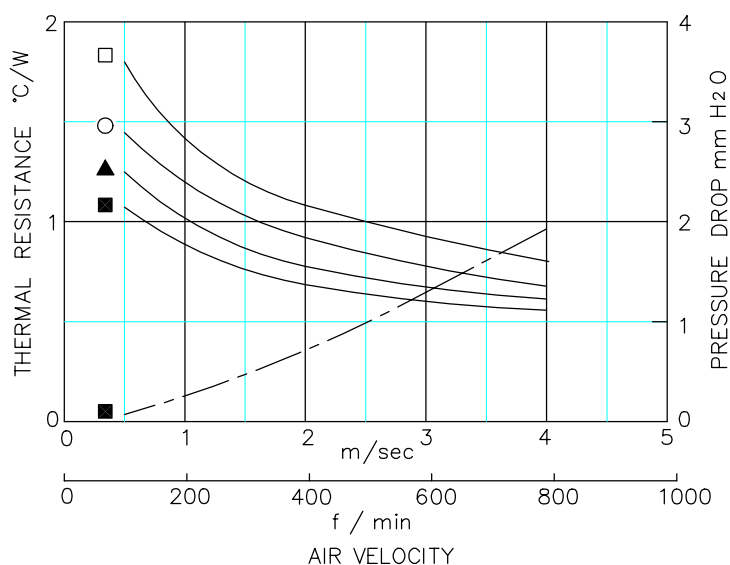


HEAT SINK  
 MATERIAL : A 6063  
 FINISH : BLACK ANODIZE

| MODEL    | HEIGHT $\square h$ | WEIGHT (grams) |
|----------|--------------------|----------------|
| MD70-15B | 15                 | 81.8           |
| MD70-20B | 20                 | 91.0           |
| MD70-25B | 25                 | 100.2          |
| MD70-30B | 30                 | 109.4          |

Dimensions : mm

DATA



- Thermal Resistance ( Ducted )  
( Solid Line )
- Pressure Drop  
( Center Line )

- $\square$  MD70-15B
- $\circ$  MD70-20B
- $\blacktriangle$  MD70-25B
- $\blacksquare$  MD70-30B

■ Based on Alpha's Standard Test Procedure. (Refer to page marked Technical Information.)  
 Dummy Heater Size :  $\square 12.7(\text{mm})$

Alpha Company Ltd.

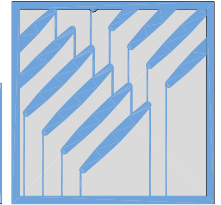
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : [alpha@micforg.co.jp](mailto:alpha@micforg.co.jp)  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

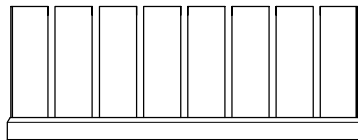
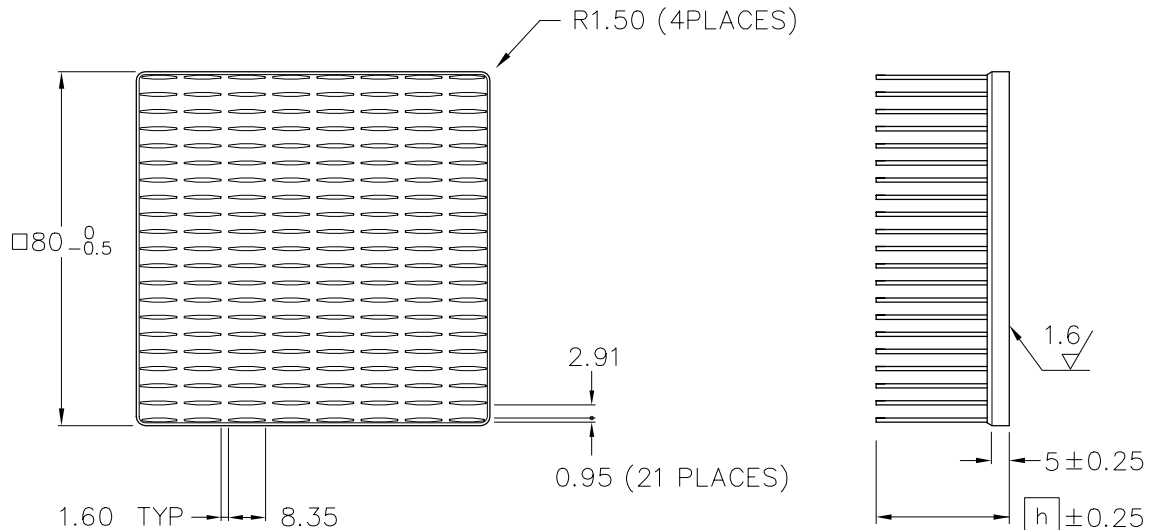
473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : [sales@alphanovatech.com](mailto:sales@alphanovatech.com)  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

**MD 80**

DIM

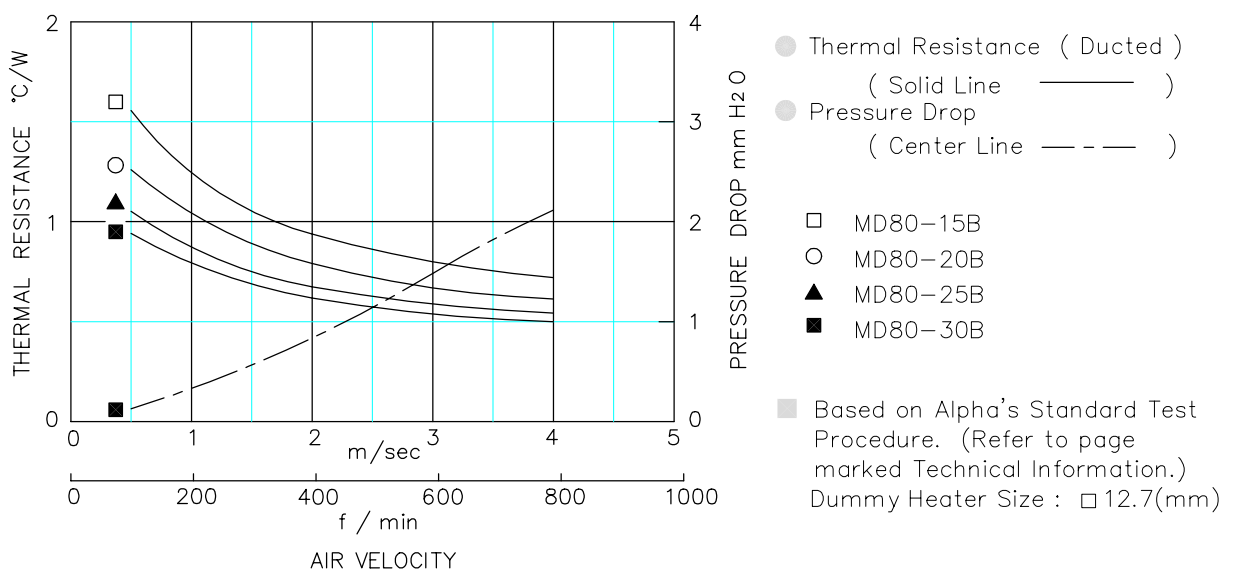


| MODEL    | HEIGHT $h$ | WEIGHT (grams) |
|----------|------------|----------------|
| MD80-15B | 15         | 114.2          |
| MD80-20B | 20         | 127.3          |
| MD80-25B | 25         | 140.4          |
| MD80-30B | 30         | 153.5          |

HEAT SINK  
 MATERIAL : A 6063  
 FINISH : BLACK ANODIZE

Dimensions : mm

DATA



Alpha Company Ltd.

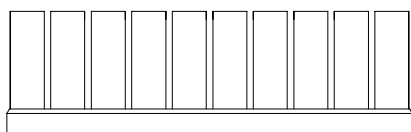
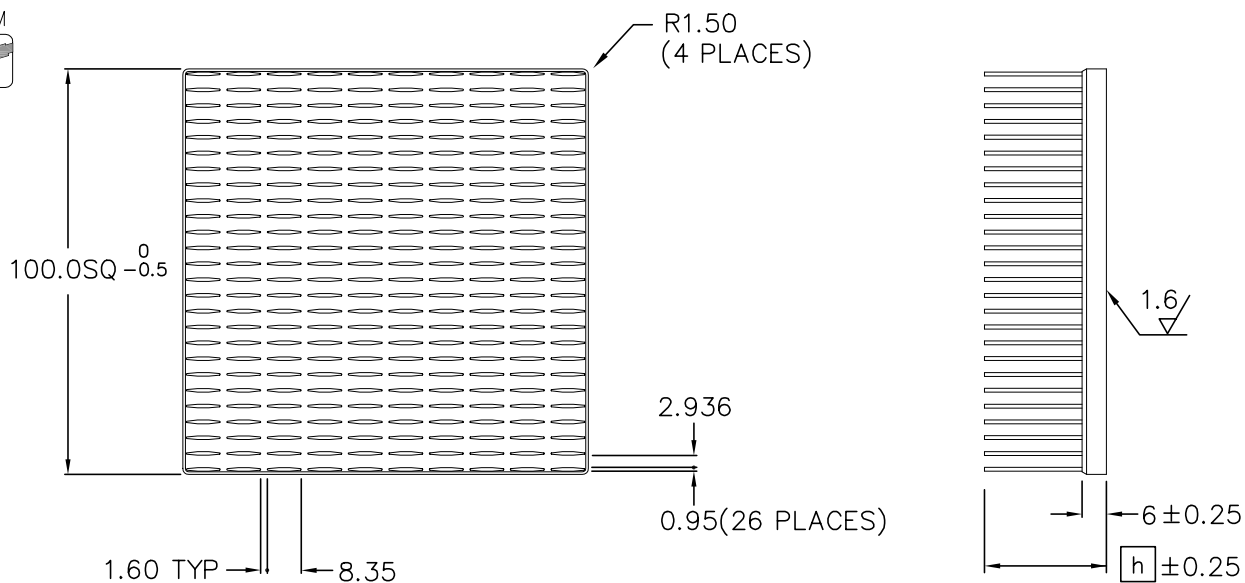
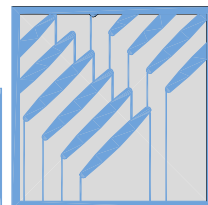
256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : <http://www.micforg.co.jp>

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : <http://www.alphanovatech.com>

**ALPHA**

Middle Density Heat Sink

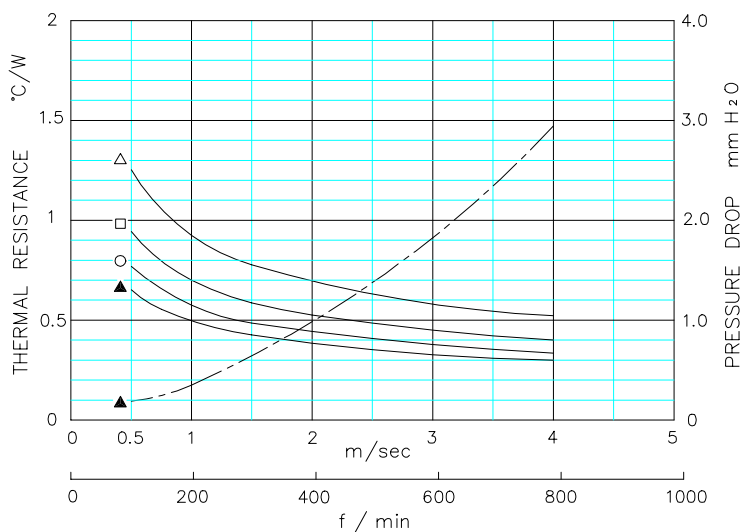
**MD100**

HEAT SINK  
 MATERIAL : A 6063  
 FINISH : BLACK ANODIZE

| MODEL     | HEIGHT [h] | WEIGHT (grams) |
|-----------|------------|----------------|
| MD100-15B | 15         | 196.5          |
| MD100-20B | 20         | 216.8          |
| MD100-25B | 25         | 237.1          |
| MD100-30B | 30         | 257.4          |

Dimensions : mm

DATA



- Thermal Resistance ( Ducted )  
( Solid Line — )
- Pressure Drop  
( Center Line - - - )

- △ MD100-15B
- MD100-20B
- MD100-25B
- ▲ MD100-30B

■ Based on Alpha's Standard Test Procedure. (Refer to page marked Technical Information.)  
 Dummy Heater Size : □ 25.4(mm)

Alpha Company Ltd.

256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN  
 PHONE +81(55)966 0789  
 FAX +81(55)966 9192  
 E mail : alpha@micforg.co.jp  
 URL : http://www.micforg.co.jp

Alpha Novatech, Inc. - a subsidiary of Alpha Company.

473 Sapena Ct. #12 Santa Clara, CA 95054 USA  
 PHONE +1(408)567-8082  
 FAX +1(408)567-8053  
 E mail : sales@alphanovatech.com  
 URL : http://www.alphanovatech.com