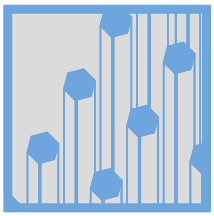


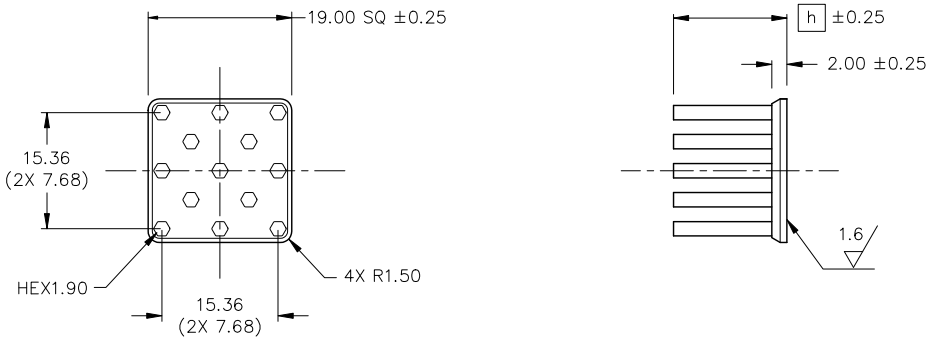
N Series

Natural Convection Heat Sink

ALPHA

ALPHA Natural Convection Heat Sink N19

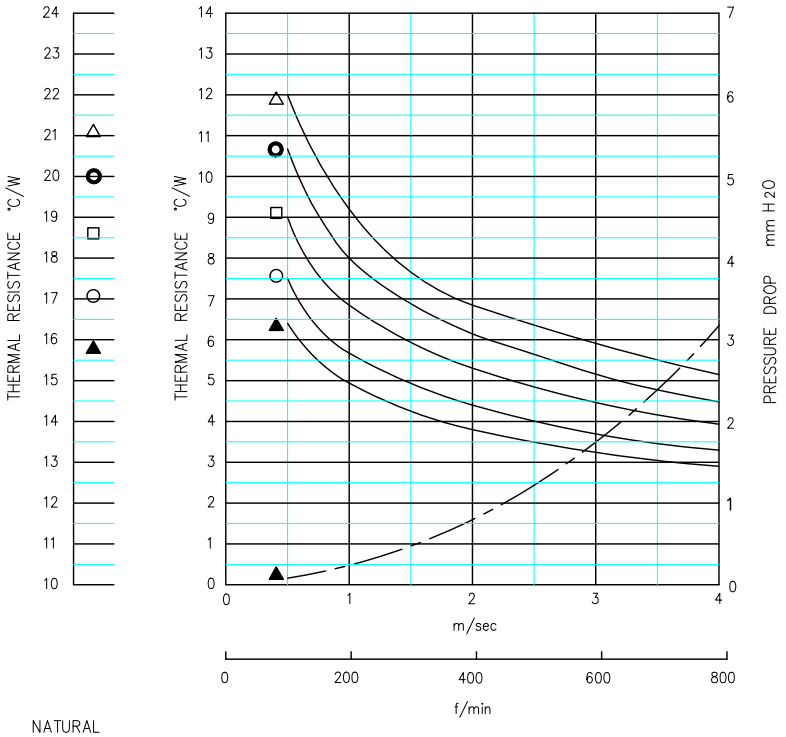
DIM



MODEL	HEIGHT h	WEIGHT (grams)
N19-10B	10	2.8
N19-12B	12	3.0
N19-15B	15	3.3
N19-20B	20	3.8
N19-25B	25	4.3

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



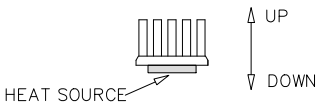
NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

△ N19-10B
○ N19-12B
□ N19-15B
○ N19-20B
▲ N19-25B

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

● NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 3.0 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

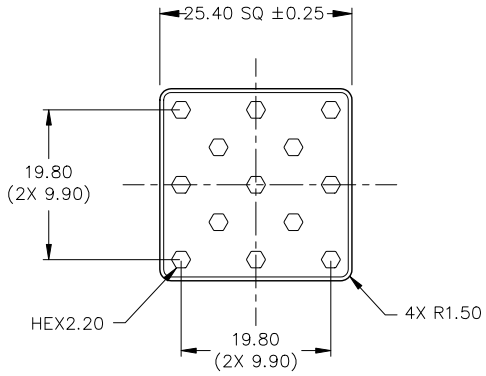
■ BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

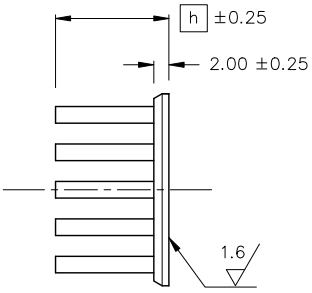
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N25

DIM

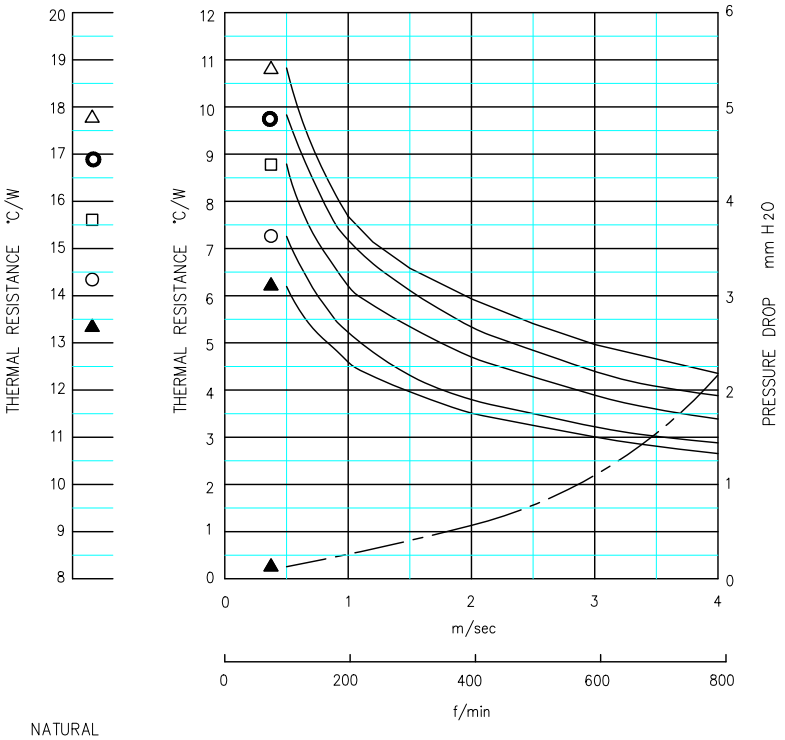




MODEL	HEIGHT [h]	WEIGHT (grams)
N25-10B	10	4.6
N25-12B	12	4.9
N25-15B	15	5.3
N25-20B	20	6.0
N25-25B	25	6.7

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



NATURAL CONVECTION

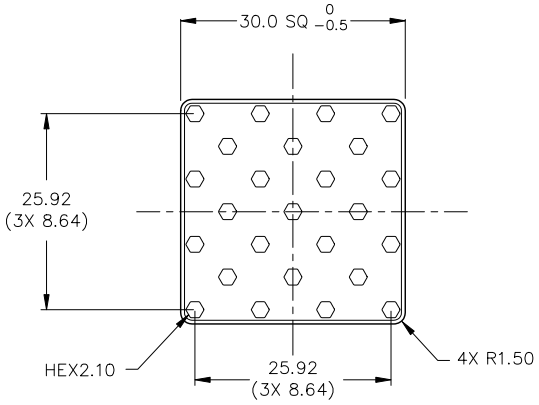
AIR VELOCITY: DUCTED CONDITION

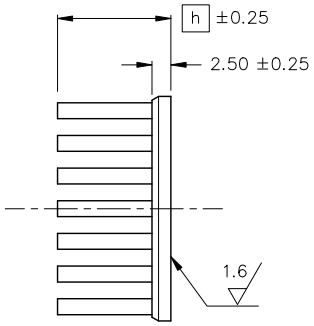
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N30

DIM

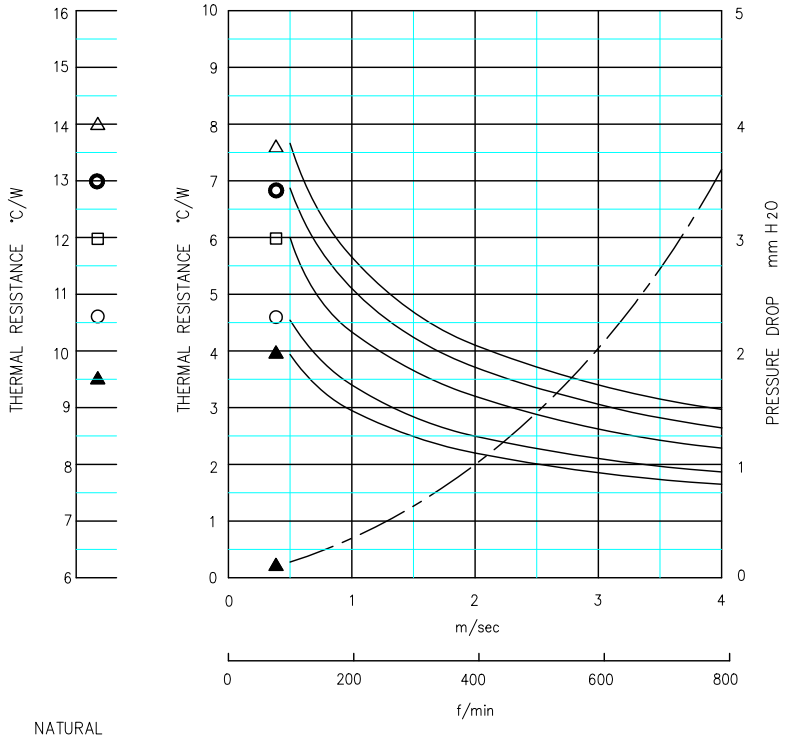




MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

MODEL	HEIGHT h	WEIGHT (grams)
N30-10B	10	7.8
N30-12B	12	8.4
N30-15B	15	9.2
N30-20B	20	10.6
N30-25B	25	12.0

DATA



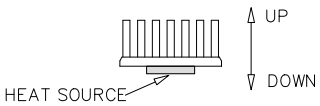
NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

△ N30-10B
○ N30-12B
□ N30-15B
○ N30-20B
▲ N30-25B

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

NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 4.9 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

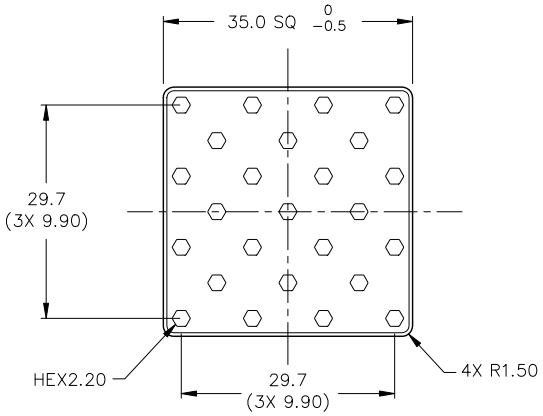
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

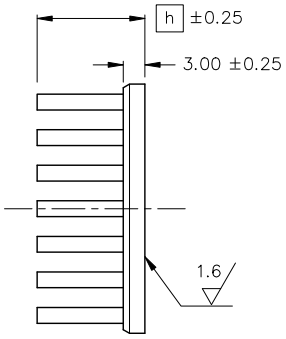
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N35

DIM

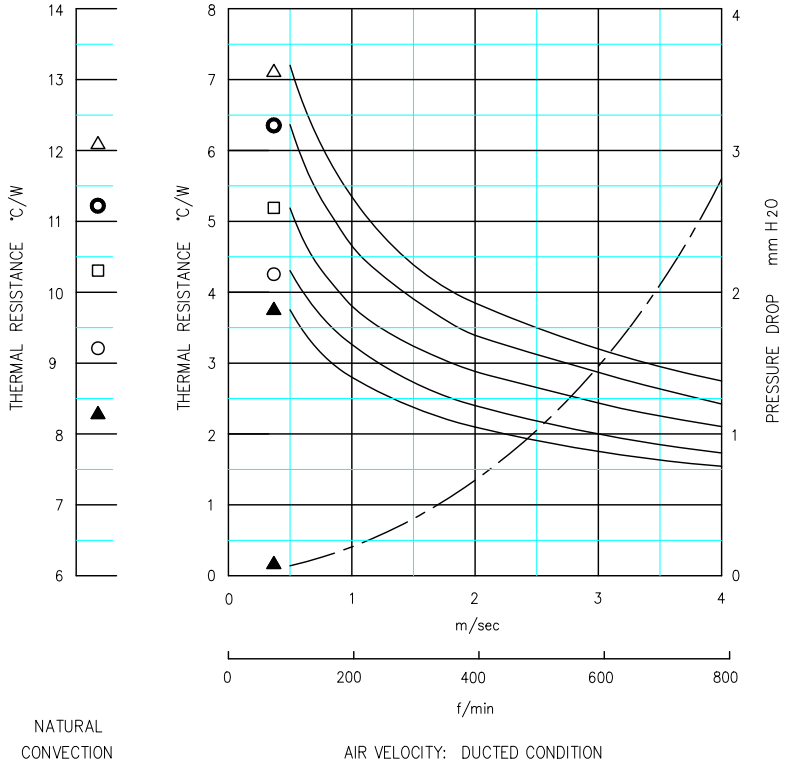




MODEL	HEIGHT h	WEIGHT (grams)
N35-10B	10	11.7
N35-12B	12	12.3
N35-15B	15	13.1
N35-20B	20	14.5
N35-25B	25	15.9

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



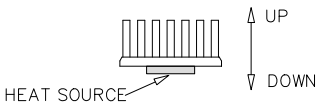
NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

△ N35-10B
○ N35-12B
□ N35-15B
○ N35-20B
▲ N35-25B

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

NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 5.7 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

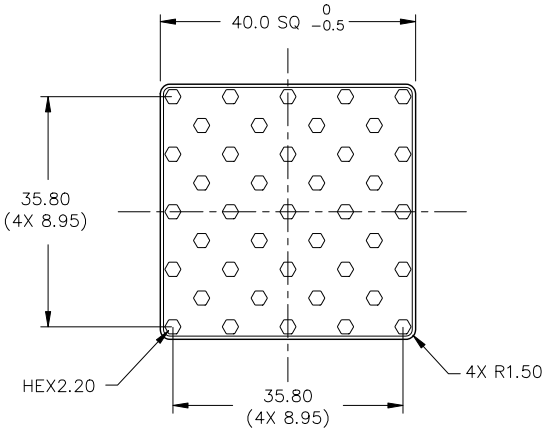
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

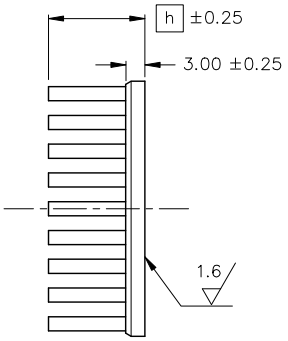
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N40

DIM

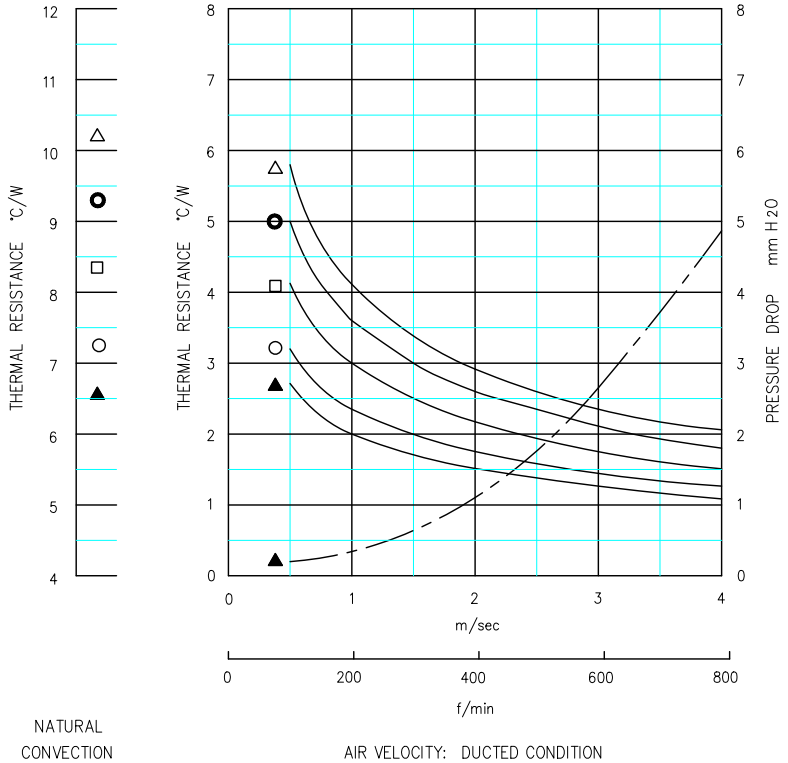




MODEL	HEIGHT h	WEIGHT (grams)
N40-10B	10	16.3
N40-12B	12	17.2
N40-15B	15	18.5
N40-20B	20	20.7
N40-25B	25	22.9

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



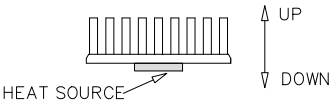
NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

△ N40-10B
○ N40-12B
□ N40-15B
○ N40-20B
▲ N40-25B

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

NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 6.4 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

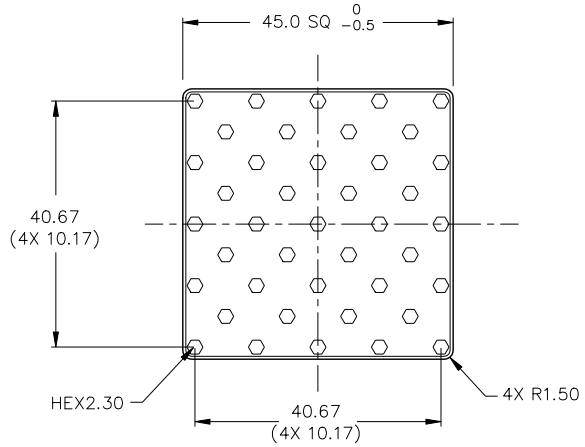
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

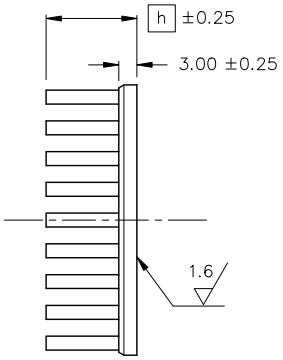
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N45

DIM

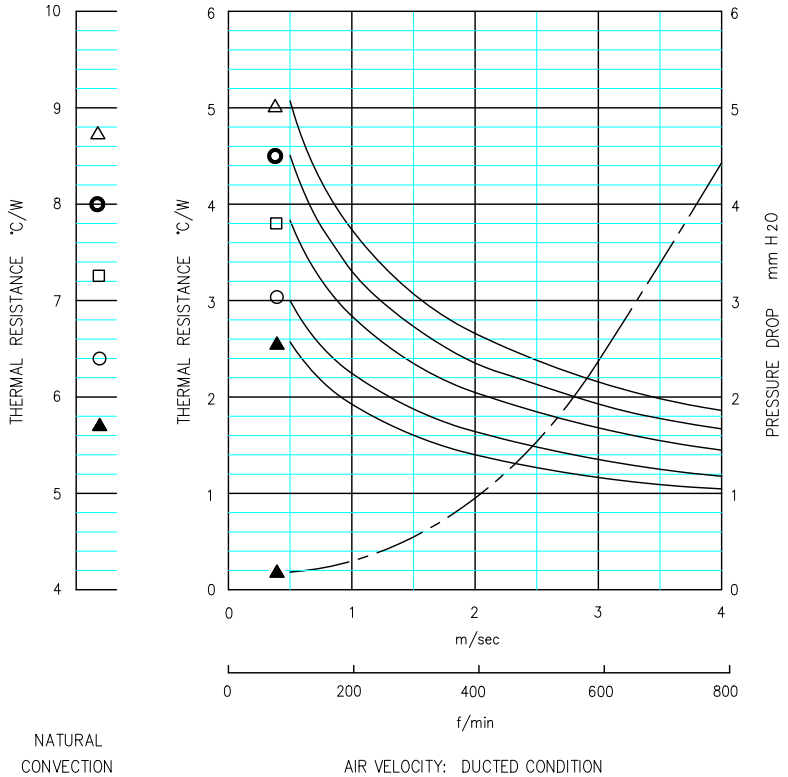




MODEL	HEIGHT [h]	WEIGHT (grams)
N45-10B	10	20.2
N45-12B	12	21.2
N45-15B	15	22.6
N45-20B	20	25.0
N45-25B	25	27.4

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



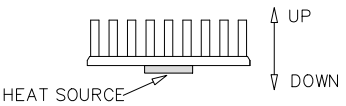
NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

△ N45-10B
○ N45-12B
□ N45-15B
○ N45-20B
▲ N45-25B

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

NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 8.0 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

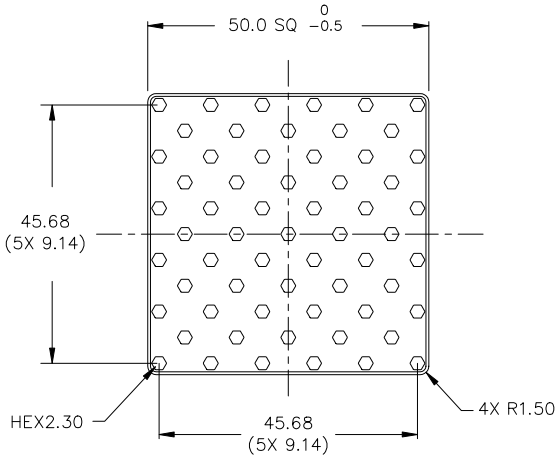
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

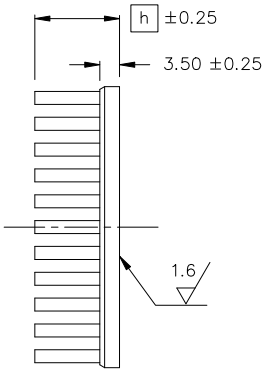
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N50

DIM

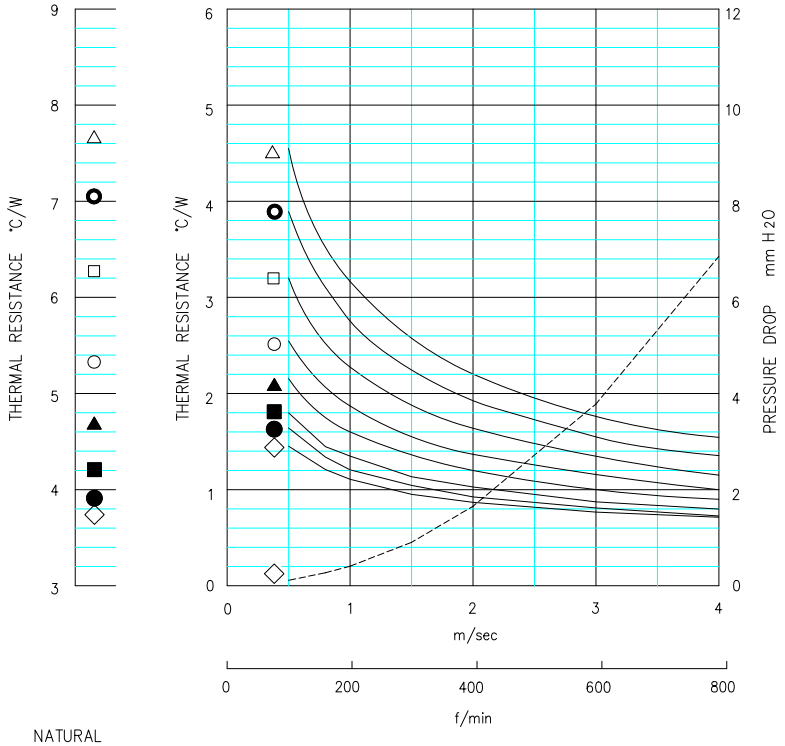




MODEL	HEIGHT h	WEIGHT (grams)
N50-10B	10	28.9
N50-12B	12	30.3
N50-15B	15	32.4
N50-20B	20	35.8
N50-25B	25	39.4

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

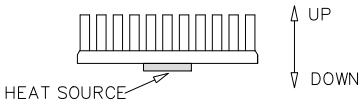
DATA



△ N50-10B
○ N50-12B
□ N50-15B
○ N50-20B
▲ N50-25B
■ N50-30B
● N50-35B
◇ N50-40B

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

NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 9.7 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

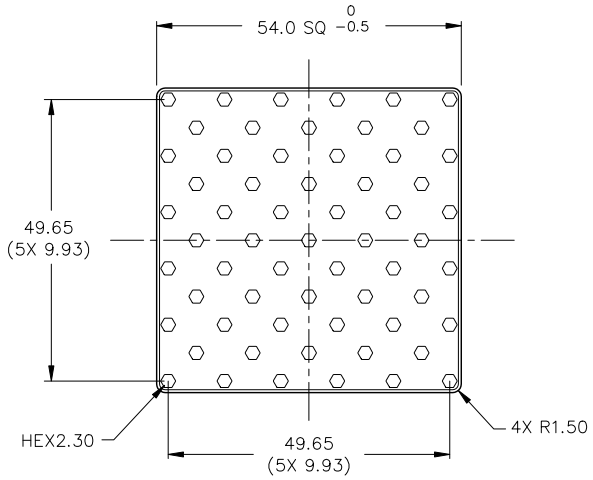
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

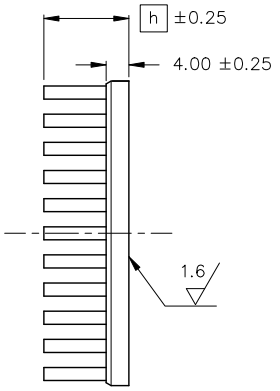
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : https://www.micforg.co.jp

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 : https://www.alphanovatech.com

ALPHA Natural Convection Heat Sink N54

DIM

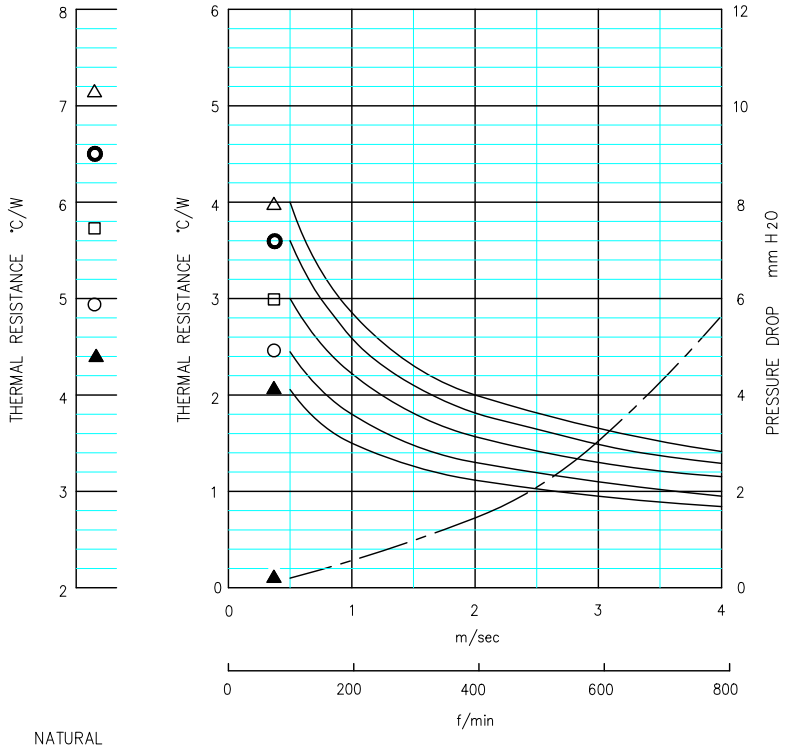




MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

MODEL	HEIGHT h	WEIGHT (grams)
N54-10B	10	36.4
N54-12B	12	37.8
N54-15B	15	39.9
N54-20B	20	43.5
N54-25B	25	46.8

DATA



NATURAL CONVECTION

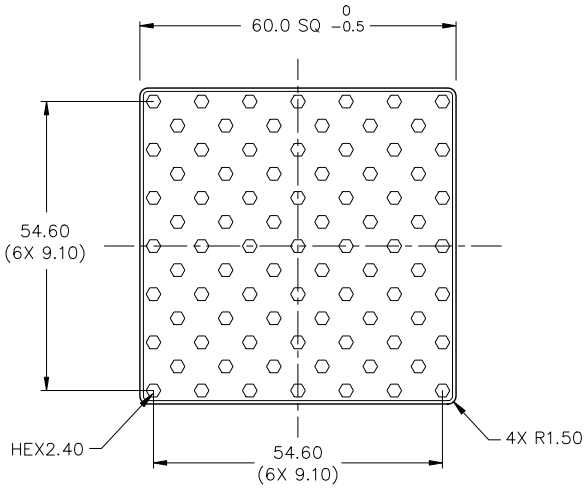
AIR VELOCITY: DUCTED CONDITION

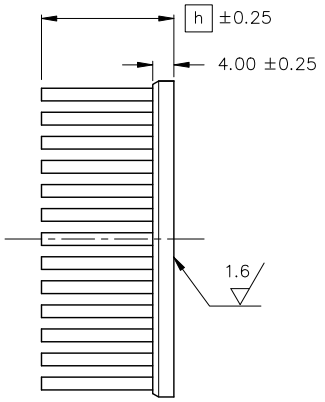
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N60

DIM

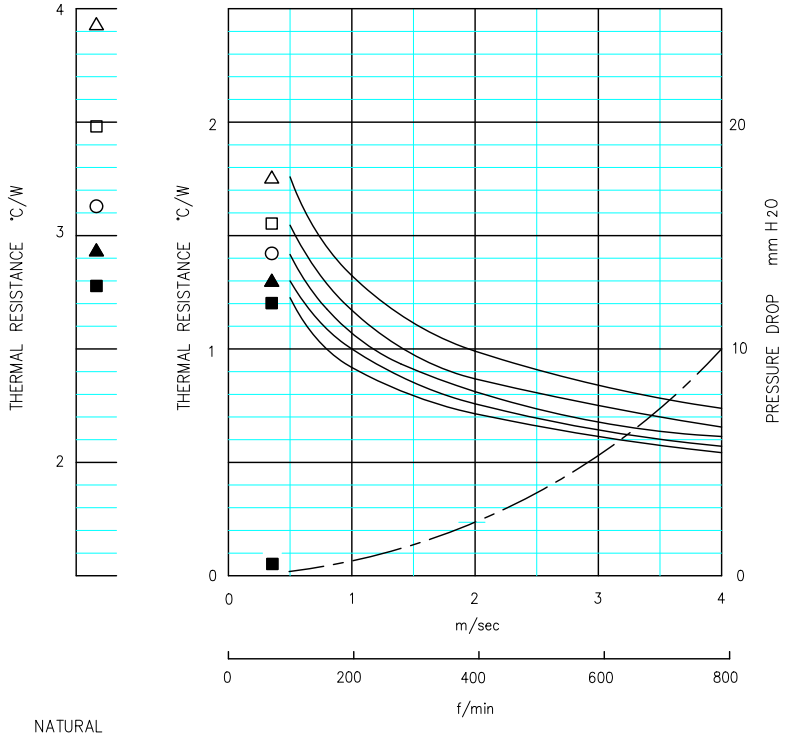




MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

MODEL	HEIGHT h	WEIGHT (grams)
N60-20B	20	57.0
N60-25B	25	62.5
N60-30B	30	68.0
N60-35B	35	73.5
N60-40B	40	79.0

DATA



NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

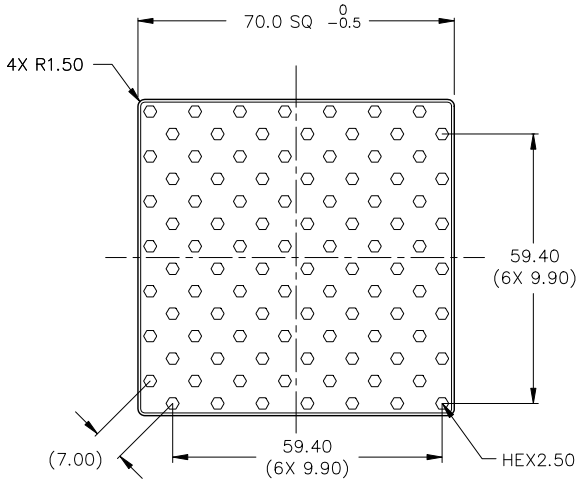
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

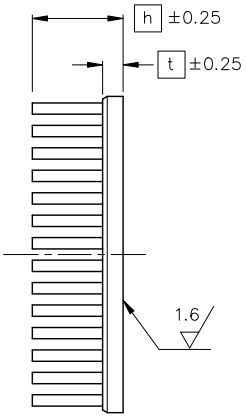
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N70

DIM

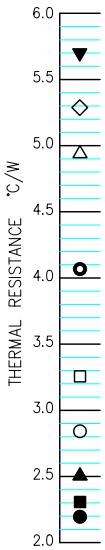




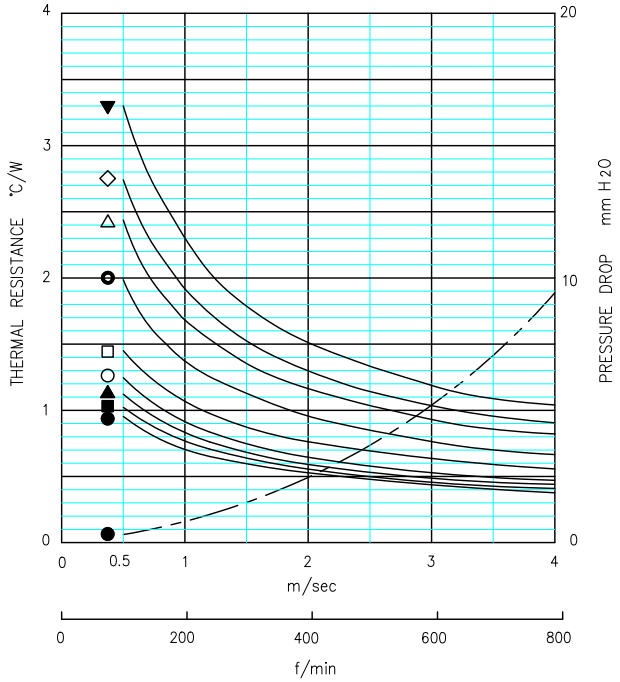
MODEL	HEIGHT h	THICKNESS t	WEIGHT (grams)
N70-8B	8	3.00	46.5
N70-10B	10		49.4
N70-12B	12		52.2
N70-15B	15	4.50	74.0
N70-20B	20		81.2
N70-25B	25		88.3
N70-30B	30		95.5
N70-35B	35		102.6
N70-40B	40		109.8
N70-hB	h ≦ 12	3.00	–
	12 < h ≦ 40	4.50	–

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



NATURAL CONVECTION

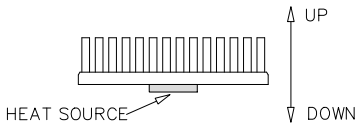


AIR VELOCITY: DUCTED CONDITION

▼ N70-8B
◇ N70-10B
△ N70-12B
○ N70-15B
□ N70-20B
○ N70-25B
▲ N70-30B
■ N70-35B
● N70-40B

DUCTED CONDITION
DUMMY HEATER SIZE: 25.4 SQ
THERMAL RESISTANCE ——————
PRESURE DROP —— - ——

NATURAL CONVECTION
DUMMY HEATER SIZE: 25.4 SQ
DISSPATED POWER:
N70-8B ~ 12B = 8.0 (W)
N70-15B ~ 40B = 16.0 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

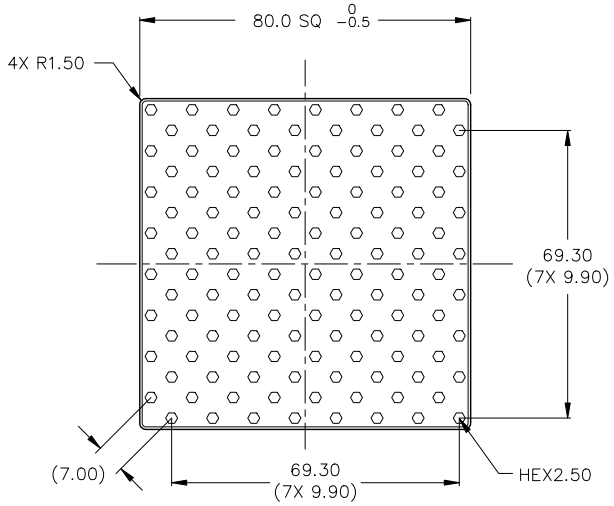
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

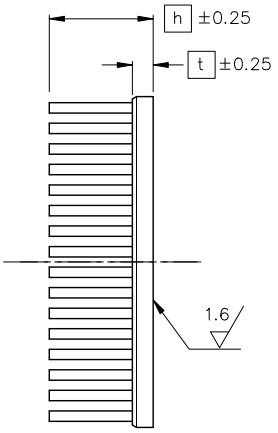
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : http://www.micforg.co.jp

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 Natural Convection Heat Sink N80

DIM

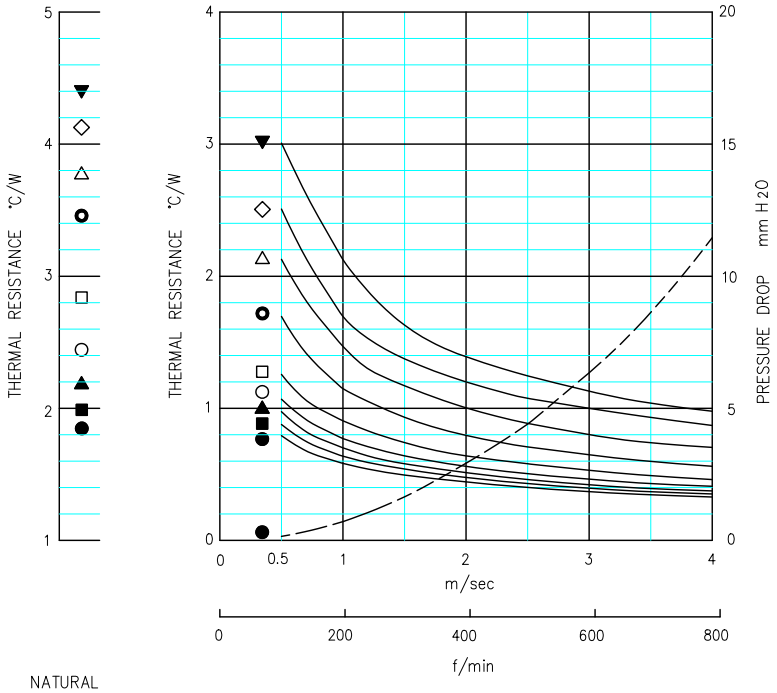




MODEL	HEIGHT [h]	THICKNESS [t]	WEIGHT (grams)
N80−8B	8	4.00	76.1
N80−10B	10		79.8
N80−12B	12		84.2
N80−15B	15	5.00	105.3
N80−20B	20		114.5
N80−25B	25		123.8
N80−30B	30		133.0
N80−35B	35		142.2
N80−40B	40		151.5
N80−[h]B	[h] ≦ 12	4.00	−
	12 < [h] ≦ 40	5.00	−

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

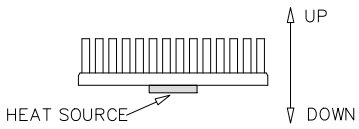
DATA



▼ N80−8B ○ N80−25B
◇ N80−10B ▲ N80−30B
△ N80−12B ■ N80−35B
○ N80−15B ● N80−40B
□ N80−20B

DUCTED CONDITION
DUMMY HEATER SIZE: 25.4 SQ
THERMAL RESISTANCE ——
PRESURE DROP — - —

NATURAL CONVECTION
DUMMY HEATER SIZE: 25.4 SQ
DISSPATED POWER: 18.5 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

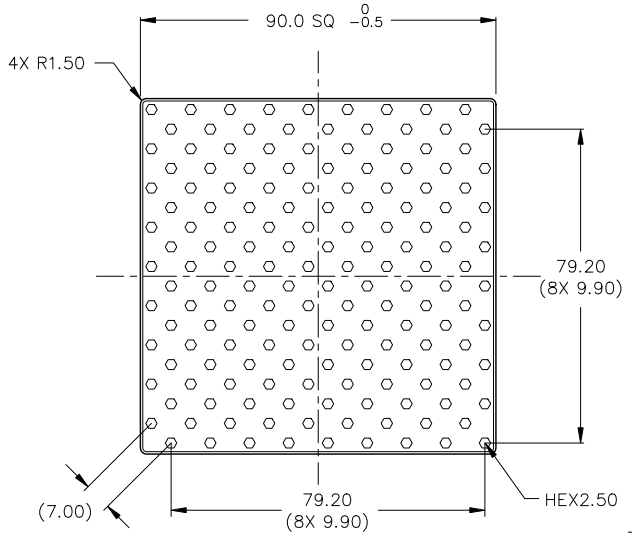
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

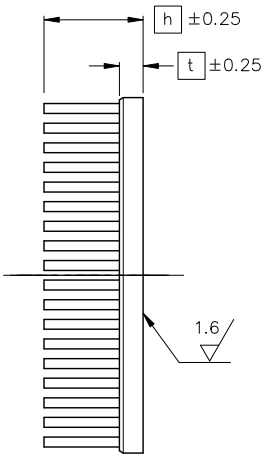
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : https://www.micforg.co.jp

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 : https://www.alphanovatech.com

ALPHA Natural Convection Heat Sink N90

DIM

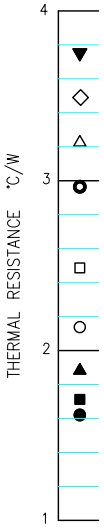




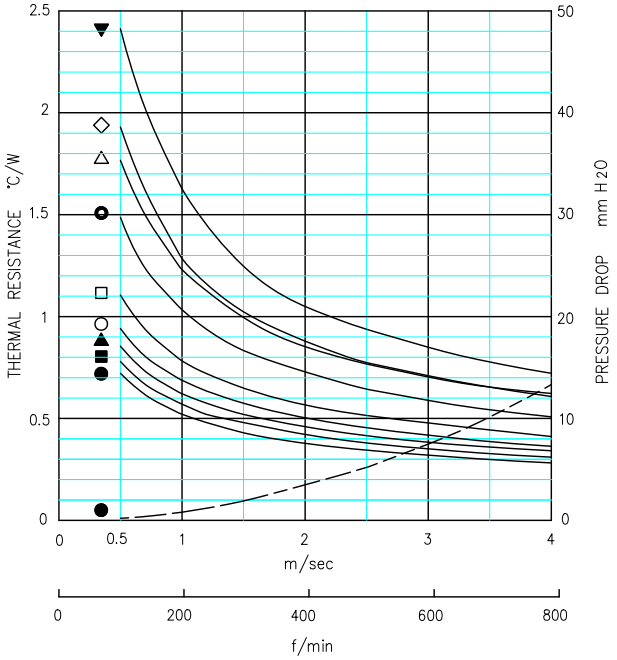
MODEL	HEIGHT [h]	THICKNESS [t]	WEIGHT (grams)
N90-8B	8	4.00	96.3
N90-10B	10		101.1
N90-12B	12		105.6
N90-15B	15	5.50	141.6
N90-20B	20		153.6
N90-25B	25		165.7
N90-30B	30		177.7
N90-35B	35		189.8
N90-40B	40		201.8
N90-[h]B	[h] ≦ 12	4.00	–
	12 < [h] ≦ 40	5.50	–

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



NATURAL CONVECTION

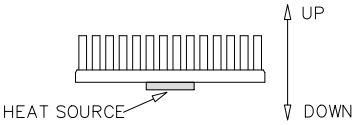


AIR VELOCITY: DUCTED CONDITION

▼ N90-8B
◇ N90-10B
△ N90-12B
○ N90-15B
□ N90-20B
○ N90-25B
▲ N90-30B
■ N90-35B
● N90-40B

DUCTED CONDITION
DUMMY HEATER SIZE: 25.4 SQ
THERMAL RESISTANCE ——
PRESURE DROP — - —

NATURAL CONVECTION
DUMMY HEATER SIZE: 25.4 SQ
DISSPATED POWER: 21.0 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

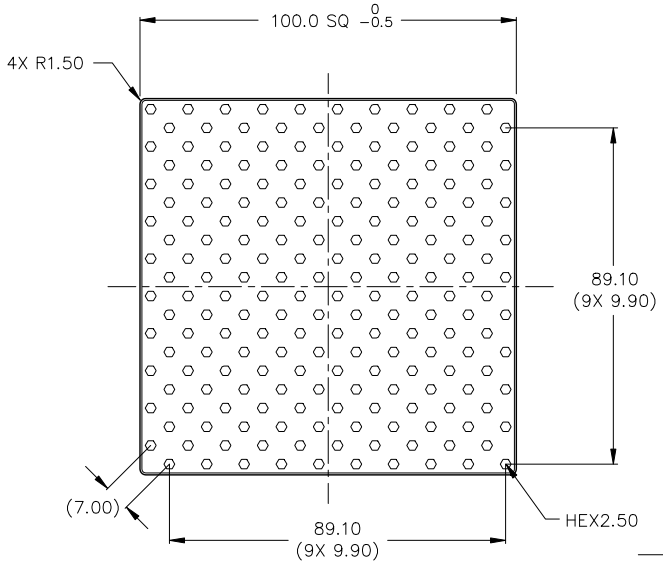
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

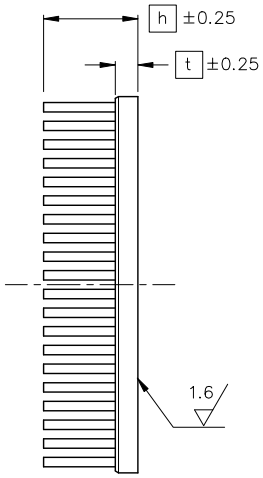
Alpha Company Ltd.
256-1 UEDA,NUMAZU-CITY SHIZUOKA-PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : https://www.micforg.co.jp

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 : https://www.alphanovatech.com

ALPHA Natural Convection Heat Sink N100

DIM

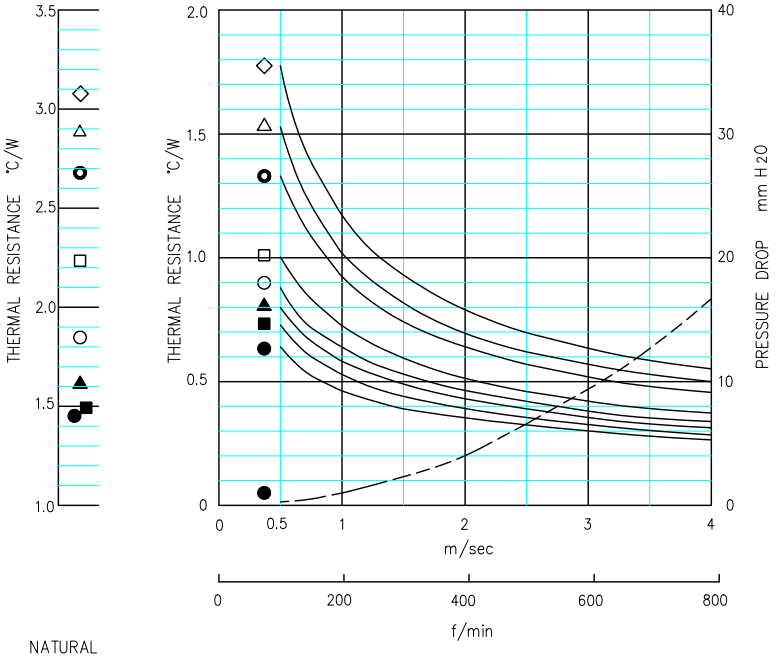




MODEL	HEIGHT [h]	THICKNESS [t]	WEIGHT (grams)
N100−10B	10	4.50	136.8
N100−12B	12		142.6
N100−15B	15	6.00	201.4
N100−20B	20		215.4
N100−25B	25		229.4
N100−30B	30		243.4
N100−35B	35		257.4
N100−40B	40		
N100−[h]B	[h] ≦ 12	4.50	−
	12 < [h] ≦ 40	6.00	−

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

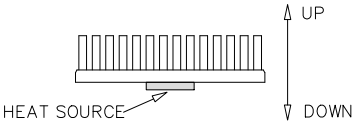
DATA



◇ N100−10B ○ N100−25B
△ N100−12B ▲ N100−30B
◎ N100−15B ■ N100−35B
□ N100−20B ● N100−40B

DUCTED CONDITION
DUMMY HEATER SIZE: 25.4 SQ
THERMAL RESISTANCE ——
PRESURE DROP — — —

NATURAL CONVECTION
DUMMY HEATER SIZE: 25.4 SQ
DISSPATED POWER: 24.0 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

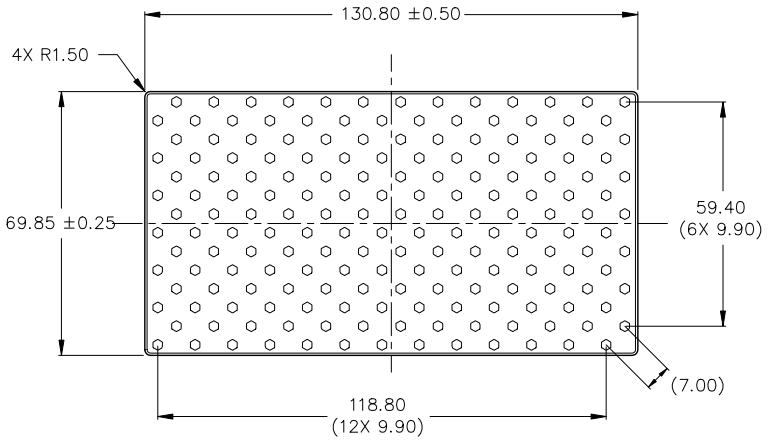
BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

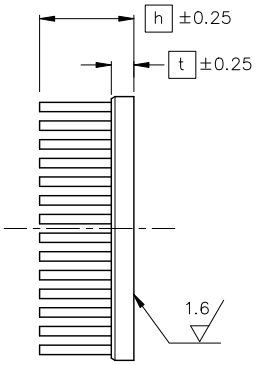
Alpha Company Ltd.
256−1 UEDA,NUMAZU−CITY SHIZUOKA−PREF.,JAPAN
PHONE +81(55)966 0789
FAX +81(55)966 9192
E mail : alpha@micforg.co.jp
URL : https://www.micforg.co.jp

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 : https://www.alphanovatech.com

ALPHA Natural Convection Heat Sink N13070

DIM

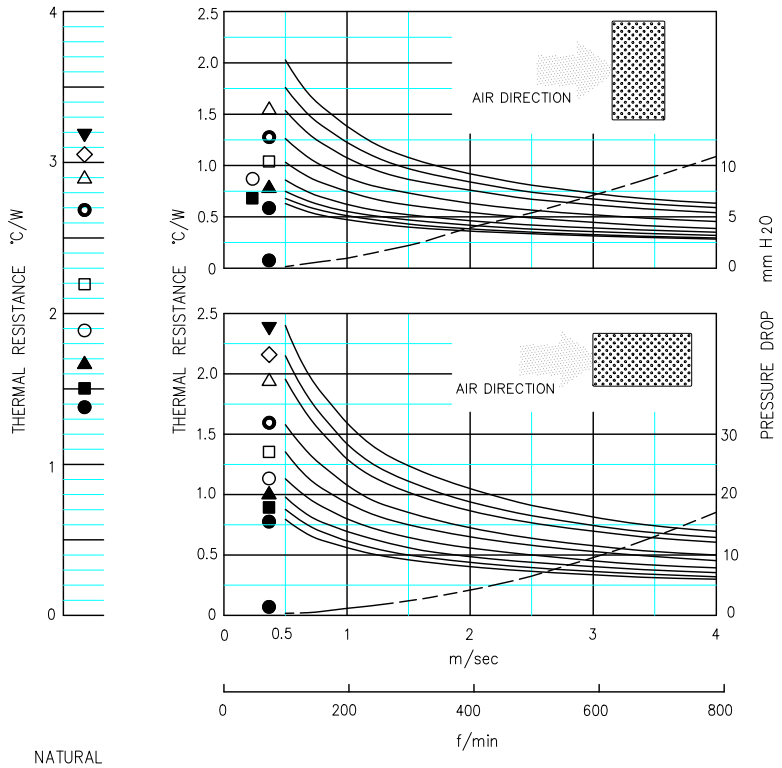




MODEL	HEIGHT h	THICKNESS t	WEIGHT (grams)
N13070-8B	8	4.00	108.6
N13070-10B	10		113.9
N13070-12B	12	5.00	141.0
N13070-15B	15	6.00	170.7
N13070-20B	20		183.6
N13070-25B	25		196.5
N13070-30B	30		209.4
N13070-35B	35		222.3
N13070-40B	40		235.2
N13070-hB	h ≦ 10	4.00	–
	10 < h ≦ 12	5.00	–
	12 < h ≦ 40	6.00	–

MATERIAL : A6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



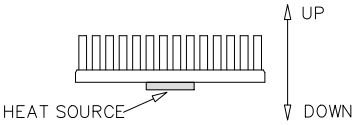
NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

▼ N13070-8B
◇ N13070-10B
△ N13070-12B
○ N13070-15B
□ N13070-20B
○ N13070-25B
▲ N13070-30B
■ N13070-35B
● N13070-40B

DUCTED CONDITION
DUMMY HEATER SIZE: 25.4 SQ
THERMAL RESISTANCE ——
PRESURE DROP — - —

NATURAL CONVECTION
DUMMY HEATER SIZE: 25.4 SQ
DISSPATED POWER: 31.5 (W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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 : https://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 : https://www.alphanovatech.com