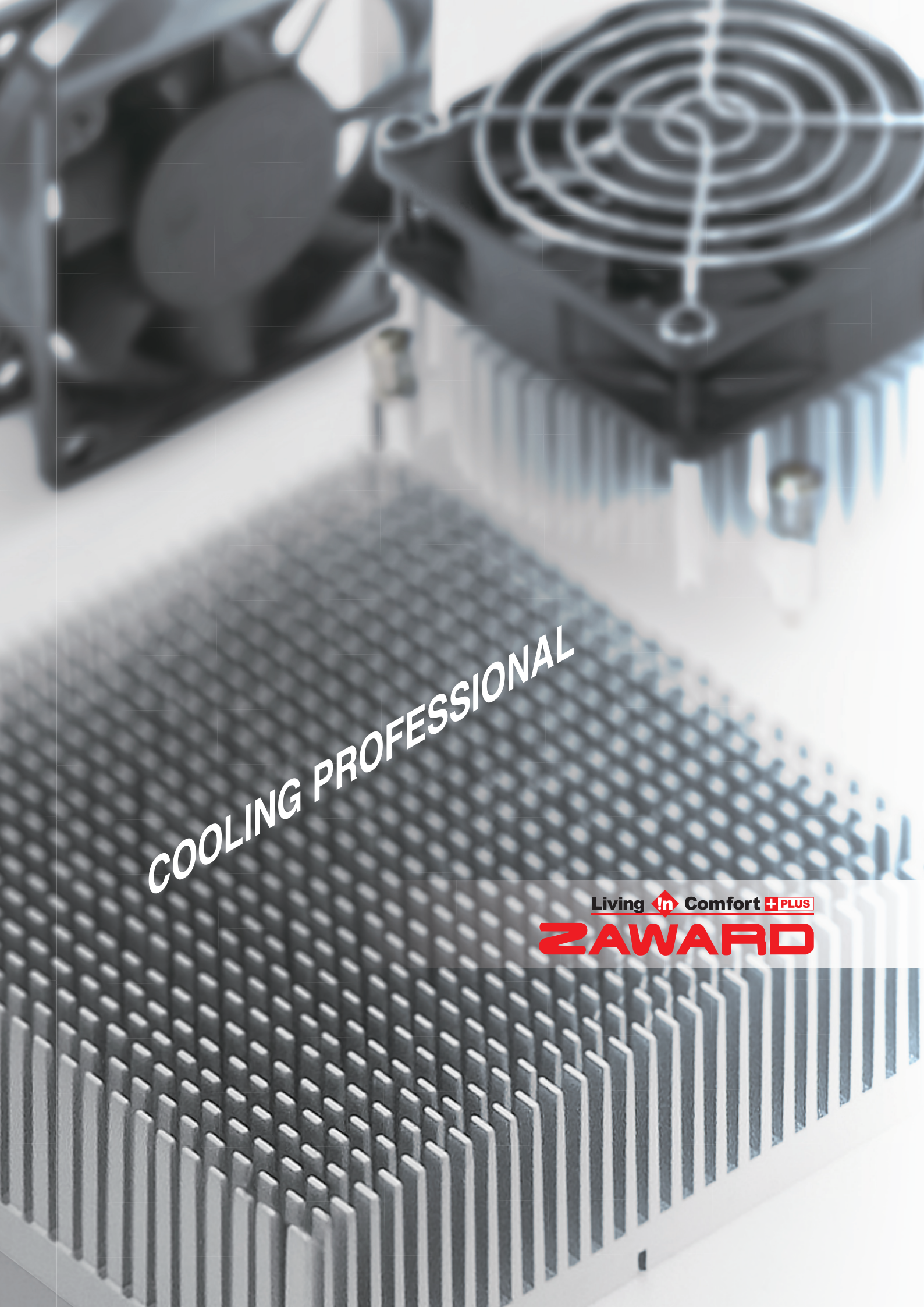

COOLING PROFESSIONAL
Living In Comfort PLUS
ZAWARD

ZAWARD CORPORATION

ZAWARD Corporation provides OEM/ ODM thermal solution products from concept to design, manufacturing and sufficient after service supports.

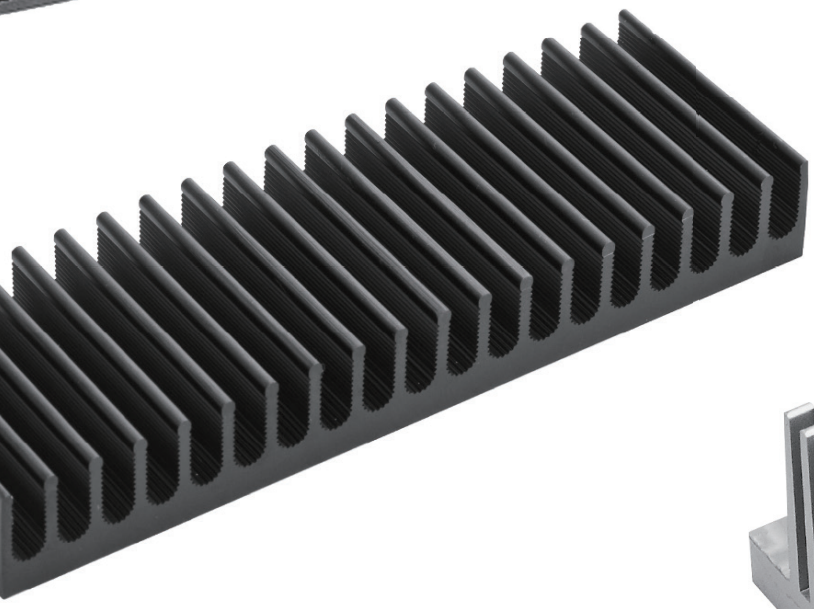
Our product series include: AC/DC Fan / Blower / VGA Fan / CPU Cooler / Vapor Chamber / Heat Pipe / LED Heat Sink/ Heat Sink (by following processes: Extrusion / Skiving / Bonded Fin / Stamping / Stacked / Forging / CNC Machining / Die-Casting / Friction Stir Welding, etc.)

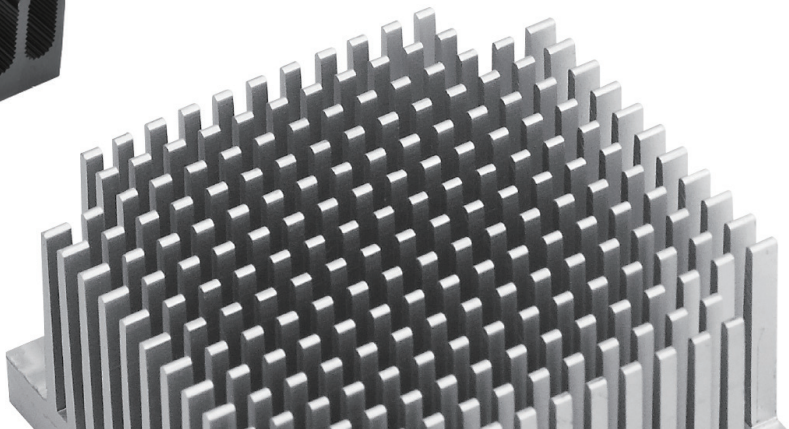
All our products comply with RoHS compliance.

Certified with ISO9001:2008/ ISO14001:2004, ZAWARD has organized and efficient product lines; decades experiences has developed close bond with all supplier chains for sufficient and competitive costs, well trained experienced labors bring highly productive and quality products.

bsi. ISO 9001 Quality Management

bsi. ISO 14001 Environmental Management





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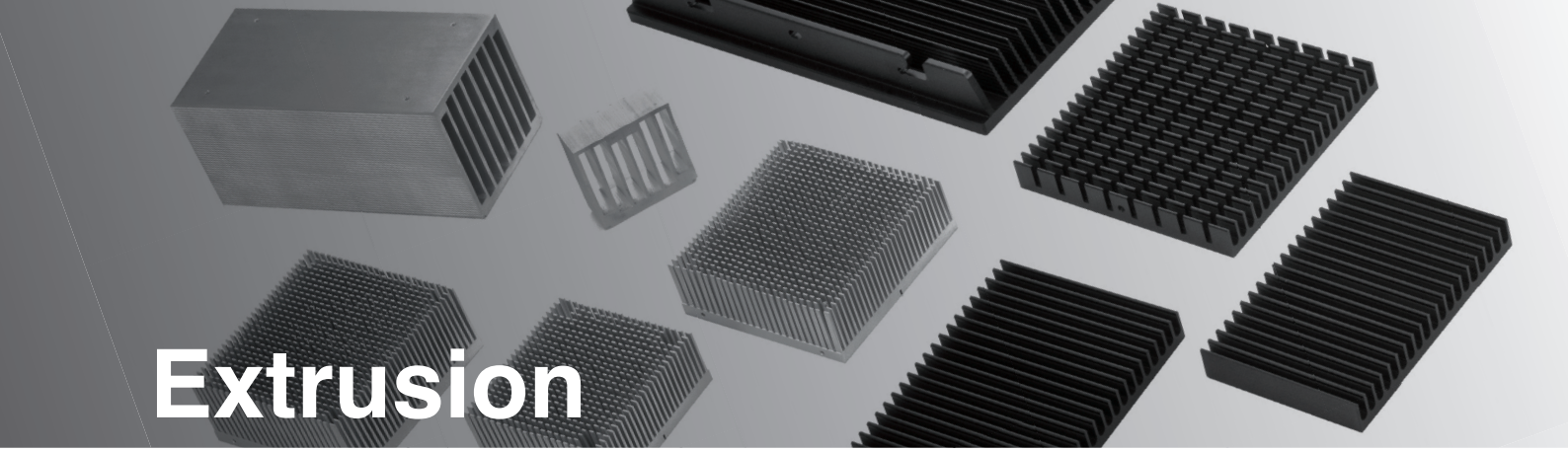


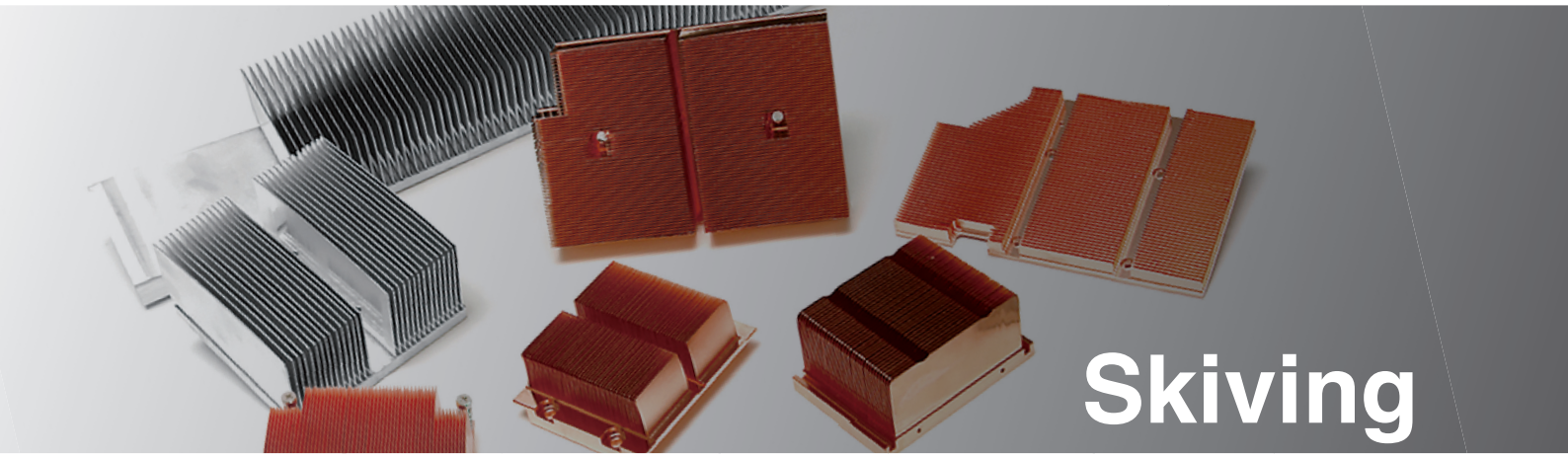
Extrusion

Extrusion is a process forcing material rod into a die mold under high temperature, creating aluminum section material. Aluminum extrusion is widely used in various ranges due to aluminum's unique physical characteristics; it provides products with strength, ductility and conductivity. Also being able to produce complex profile, efficient cost, short lead-time, wide range of specification, smooth surface finish.

This process has been commonly applied to industry filed, medical equipment, embedded system, server, PC and industrial computer cooling, LED light and precision engineering.

Unit: mm

	Length	Width	Height	Fin Thickness	Pitch	Torque Rate
Maximum	9000	470	240	10	-	17
Minimum	5	5	3	0.6	1.8	



Skiving

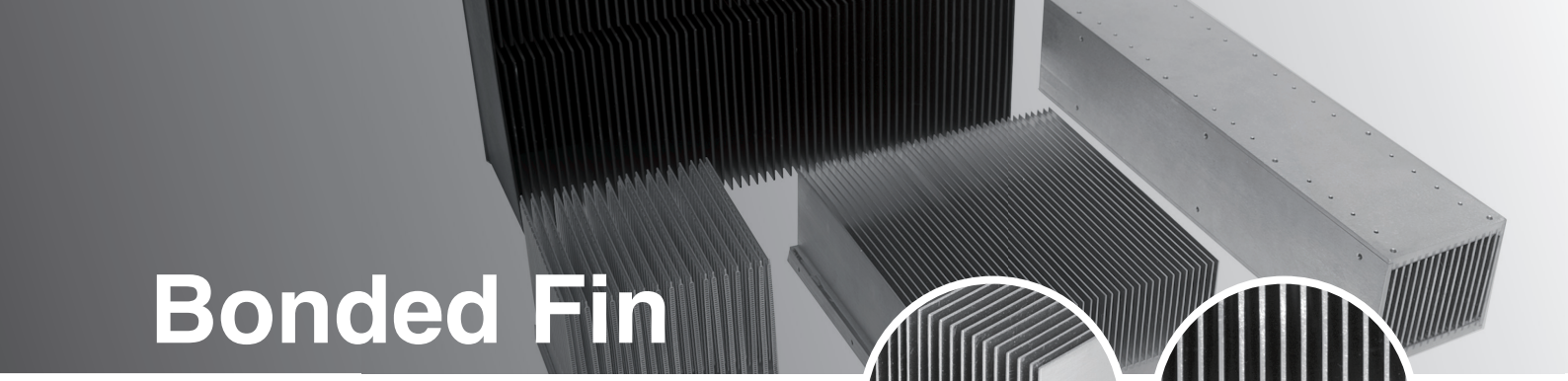
Carved out of a single block of metal to produce heat sink with a series of fine fins in a specific designed shape and size. This seamless base and fin structure minimize thermal loss in-between and enhance thermal conductivity as well as low development cost. Recommended for small quantity with short lead time.

Application in water cooling, communication equipment, industrial equipment, PC, server and industrial computer.

Unit: mm

	Length	Width	Height	Fin Thickness	Pitch	Material
Maximum	3000	800	<120	1.5	10	Aluminum Alloy
Minimum	-	25	6	0.15	0.3	

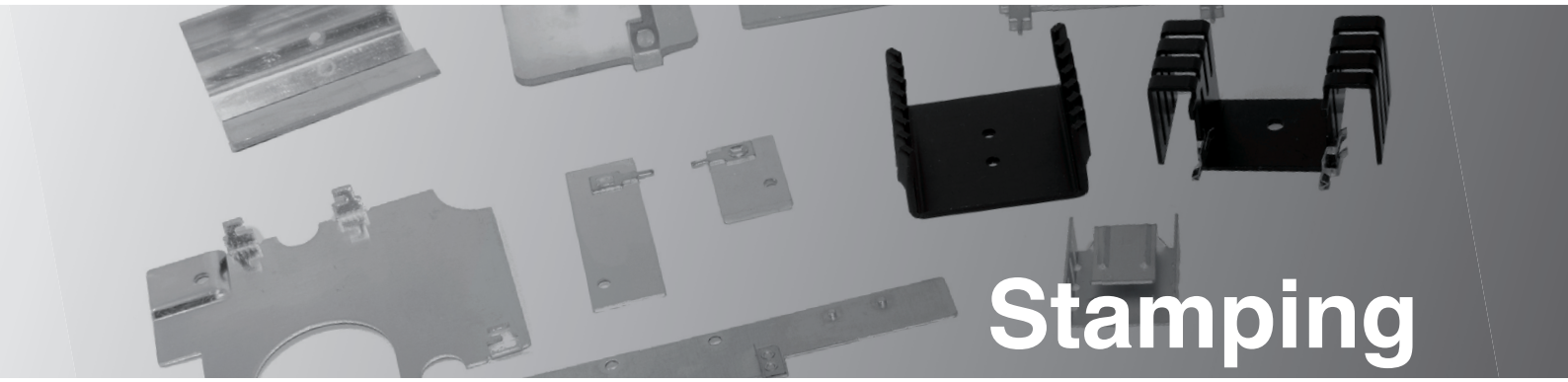
	Length	Width	Height	Fin Thickness	Pitch	Material
Maximum	3000	800	50	0.8	10	Copper Alloy
Minimum	-	25	6	0.12	0.2	



Bonded Fin

Adopted for high power thermal solutions, individual fins bonded to base with thermal conductive epoxy and maximizes flexibility in fin dimension of width and length.

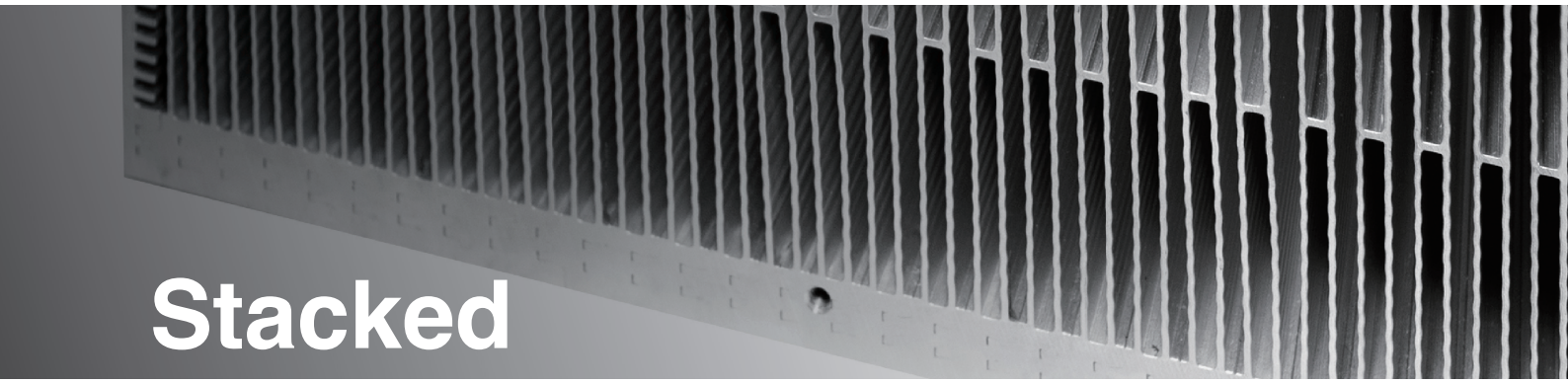
Application in thermo-electrical product, solar, energy system, telecommunication, LED light.



Stamping

Stamping is the process of placing flat sheet metal into a desired form, producing light weighted heat sinks, various range of shapes and sizes in high productivity. Stamped heat sinks can be welded with pins, tin-plated aluminum, cooper plates, nuts or applied thermal pad for optimizing thermal conductivity. It is widely used in PCB due to its minimal sizes.

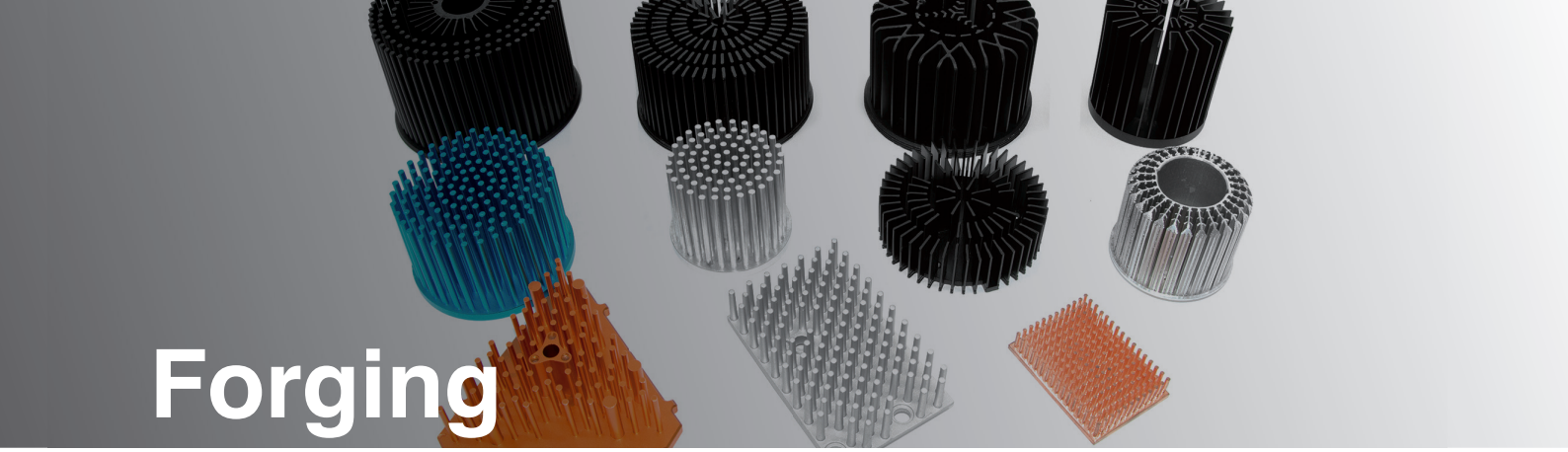
Application in PCB standard heat sinks to TO220s, TO-3s, TO-5s, TO-126s, TO127s, TO-202s, TO-218s, etc.



Stacked

Stacking is a process to utilize cold press fitting to stack all single extruded fins together. This process enables making large heat sinks and more cost-effective than conventional extruded heat sinks.

Application in industrial field and power electronics.



Forging

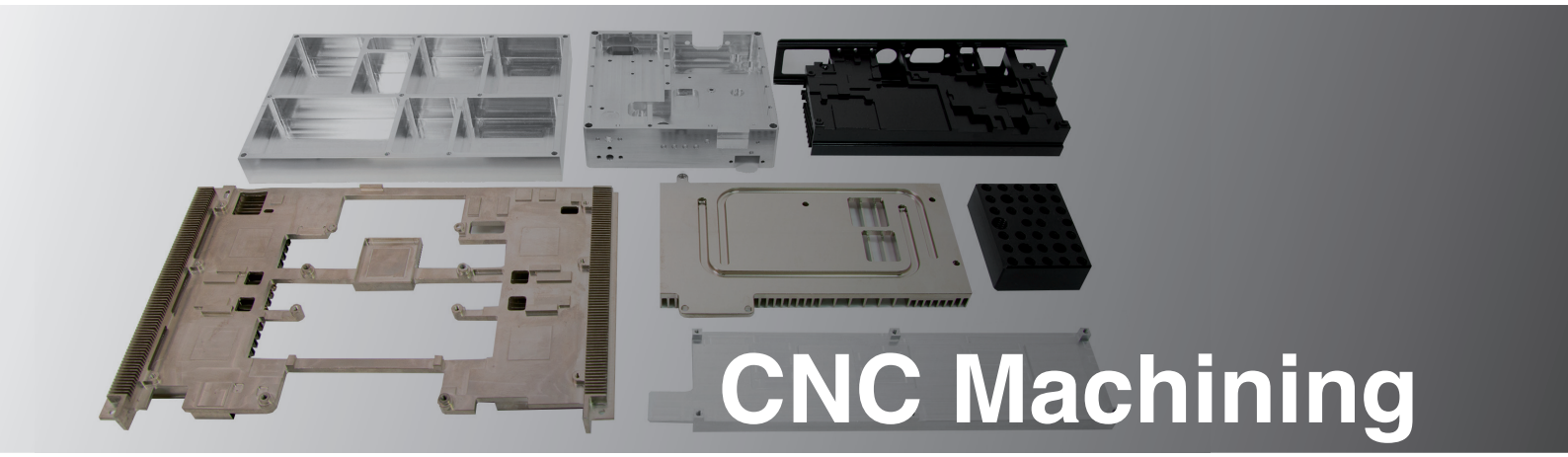
Cold forging is a process formed under high pressure and in room temperature. The heat sinks have superior surface finish, accurate dimension, efficient use of raw materials, high production rate and low cost.

Application in high power lighting, electronic components, power module, industrial machine and equipment.

Unit: mm

	Length	Width	Height	Fin Thickness	Pitch	Material
Maximum	200	200	100	10	-	Aluminum Alloy
Minimum	5	5	5	0.8	1.8	

	Length	Width	Height	Fin Thickness	Pitch	Material
Maximum	100	200	50	8	-	Copper Alloy
Minimum	5	5	5	0.8	1.8	



CNC Machining

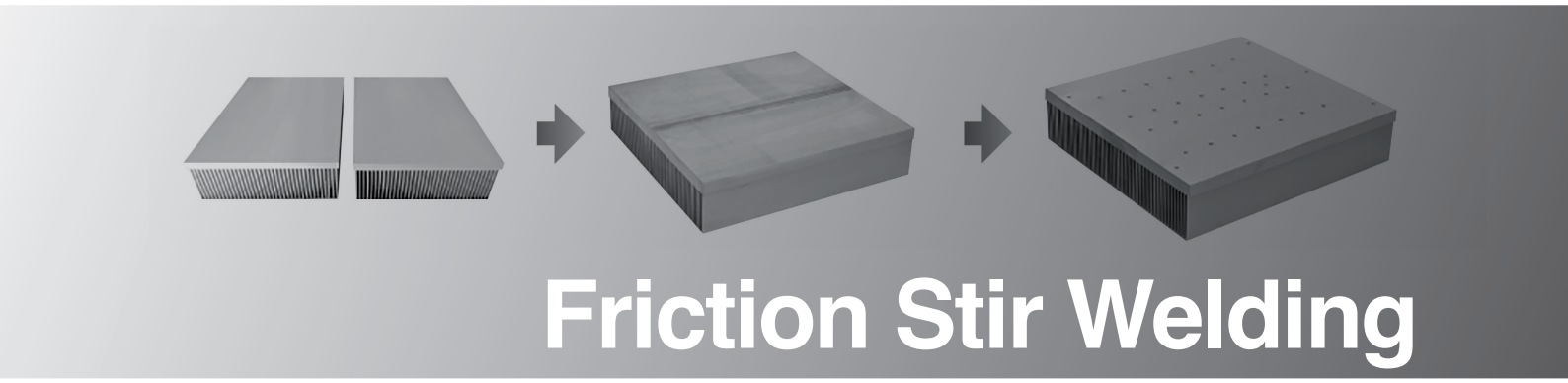
CNC machining is a sophisticated process often used in high precision level of mechanical parts, it is used to form raw material in a desired shape and size, improved surface finish /coating and design; frequently applied in high strength aluminum alloys.

Application in aerospace equipment, industrial electronics and housing parts.

Die-Casting

Die casting is a process that forces molten metal under high pressure into a mold cavity. It produces high structural integrity, smooth cast surface without additional machinery operation. Offering diverse range of products in competitive prices, efficiency and high productivity.

Application in energy, power, telecommunication and transportation equipment.



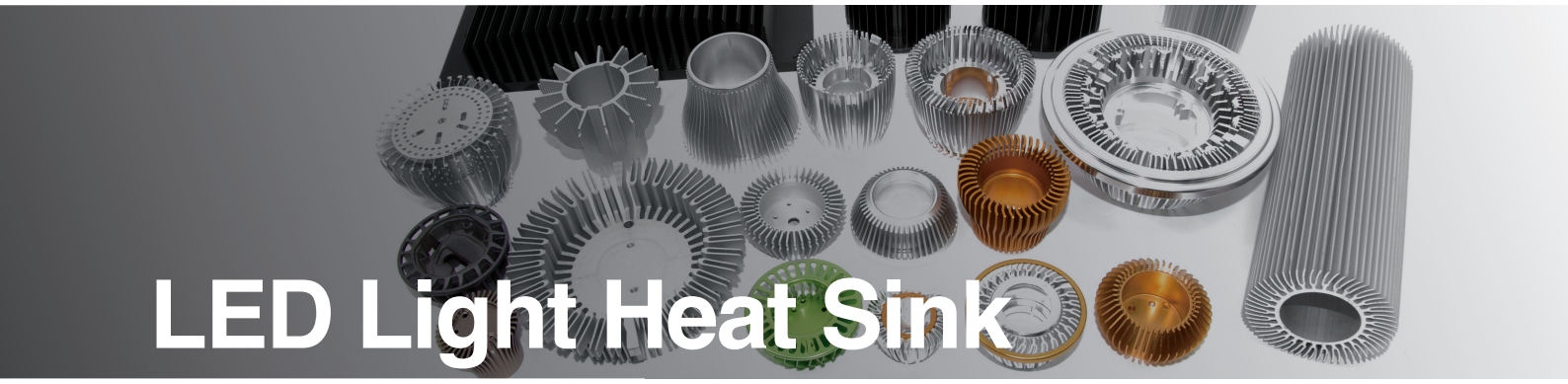
Friction Stir Welding

Friction Stir Welding (FSW) is a solid-state joining process (no welding materials) that uses a third body tool to generate heat between two heat sinks and intermixes each other at the place of the joint. This innovative process enables to connect multiple heat sinks together without size limitation.

Application in industrial equipment, telecommunication, energy, transportation equipment and liquid cooling, recommends for high power demand solutions.

Unit: mm

	Length	Width	Height	Base Thickness	Pitch
Maximum	1200	∞	240	30	-



LED Light Heat Sink

Standard model or in diverse processes, such as extrusion, forging, die casting, CNC machining; compatible with heat pipes to enhance thermal dissipation as well as customized shapes and sizes.

Application in high power consumption LED lightings.

Heat Pipe

Structured in multiple layers of vacuum cooper formed tube, adopting liquid evaporation and condensation theory, removing heat sufficiently. Heat pipe is widely used as parts of thermal solutions.

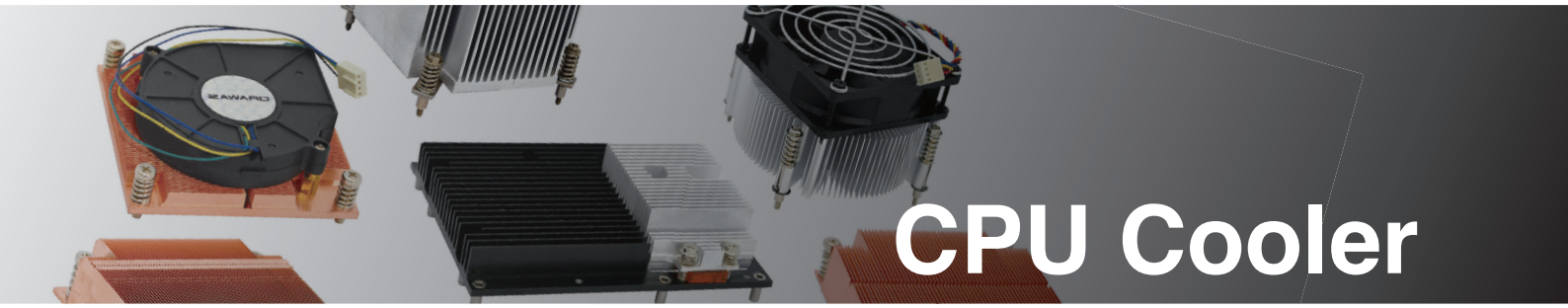
Application in CPU cooler, water cooling equipment.

Unit: mm

	Length	Diameter	Thickness
Maximum	450	12.7	-
Minimum	80	2	0.6

Flat Heat Pipe Specification: Tolerance: +0.1 / -0.0 Unit: mm

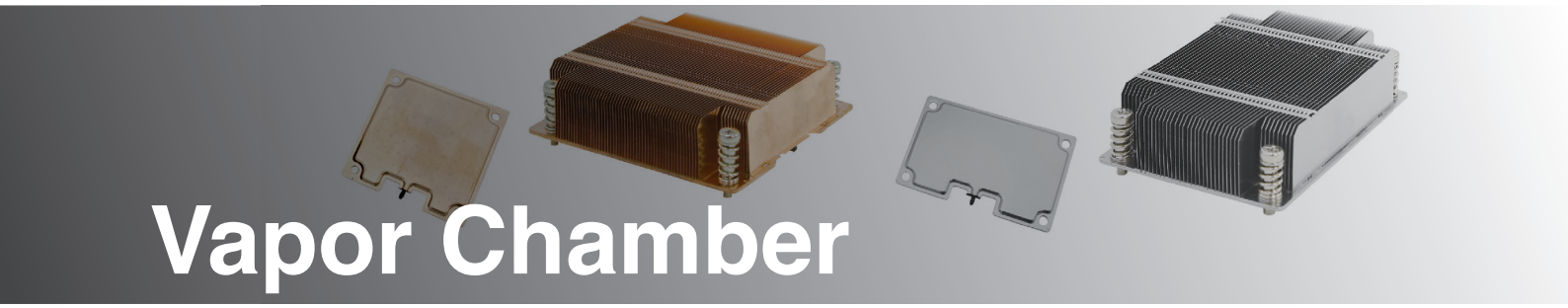
External diameter	Ø5						Ø6								Ø8										
Thickness	1.5	2	2.5	3	3.5	4	1.5	2	2.5	3	3.5	4	4.5	5	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
Width	7.35	7.01	6.68	6.34	6.01	5.67	9.25	8.9	8.55	8.2	7.85	7.5	7.15	6.8	12.36	12.02	11.69	11.35	11.02	10.68	10.35	10.01	9.68	9.34	9.01



CPU Cooler

Specific heat sink for CPU cooler assembled with ZAWARD cooling fan compatible with Intel and AMD CPU socket in aluminum or copper material. It can be equipped with heat pipes or vapor chamber, according to various requirements.

Available CPU cooler specification:
INTEL- LGA7755, 1150, 1151, 1155, 1156, 2011, 2011 Sandy Bridge, 2011 Sandy Bridge Square, 2011 Sandy Bridge Narrow
AMD- AM2, AM3



Vapor Chamber

Vapor Chamber follows heat pipe theory and structure with flatter and larger surface optimizing supreme heat dissipation. Unlike conventional heat pipe one, it has two ways transferring heats through the purified and degassed water for efficient dissipation.

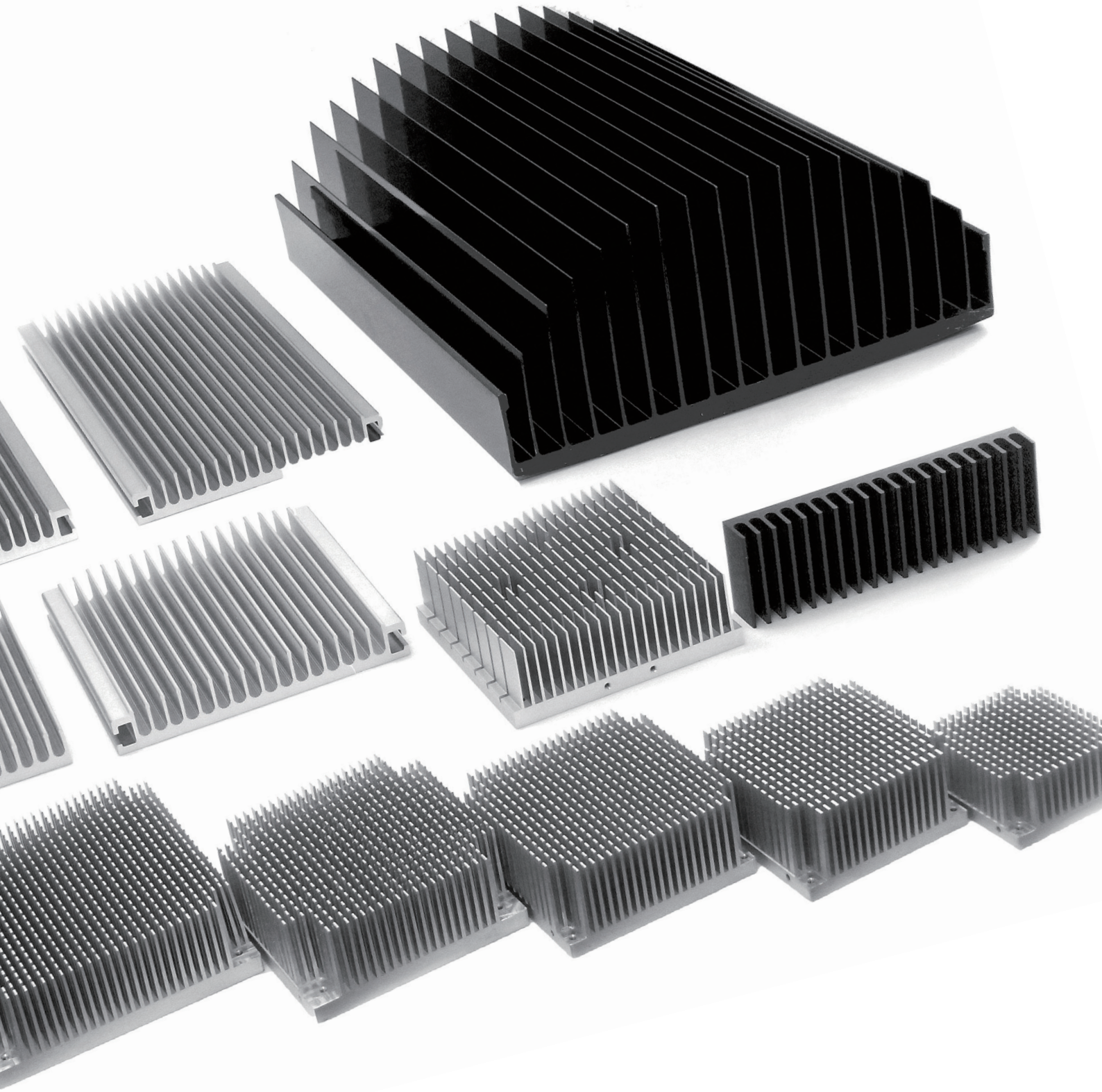
Application in high demands of heat dissipation such as high power LED light, PC, server, telecommunication equipment.

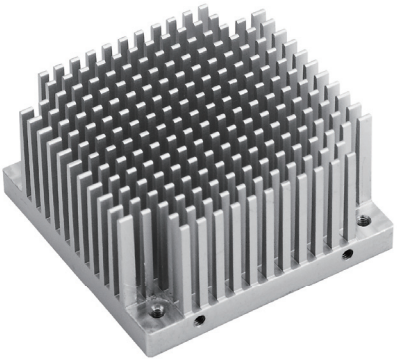
Unit: mm

	Length	Width	Thickness
Maximum	400	400	3-4.2

Extrusion Heat Sink

Wide application in various fields
with standard or customized shape



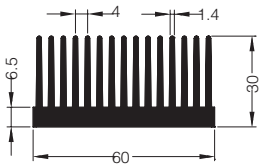


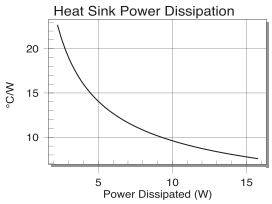
Extrusion Heat Sink Series

Material: AL6063-T5
Finish: Clean Anodized
RoHS Compliance

Model No. ZH001

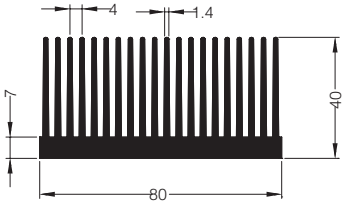
Dimension: 60(W)x60(L)x30(H)mm
Thermal Resistance: 2.800°C/W

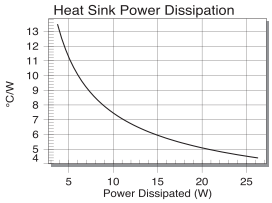




Model No. ZH002

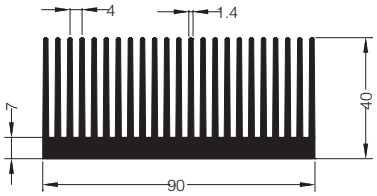
Dimension: 80(W)x80(L)x40(H)mm
Thermal Resistance: 2.365°C/W

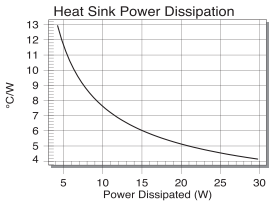




Model No. ZH003

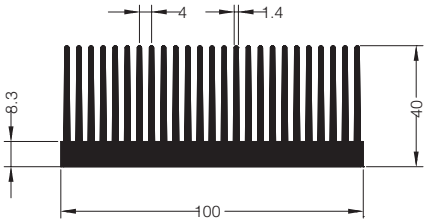
Dimension: 90(W)x90(L)x40(H)mm
Thermal Resistance: 2.135°C/W

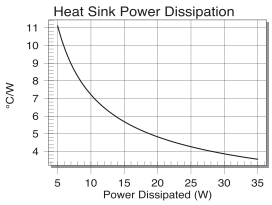




Model No. ZH004

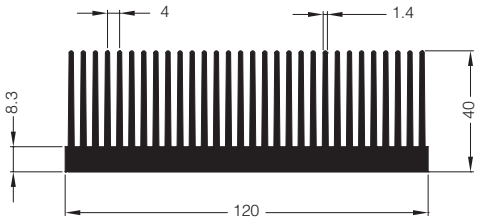
Dimension: 100(W)x100(L)x40(H)mm
Thermal Resistance: 1.965°C/W

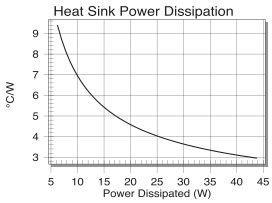




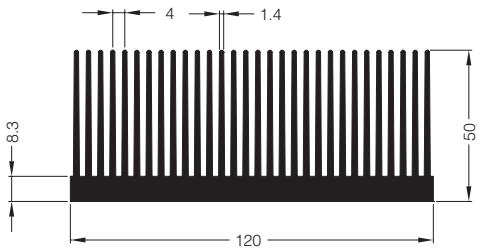
Model No. ZH005

Dimension: 120(W)x120(L)x40(H)mm
Thermal Resistance: 1.685°C/W

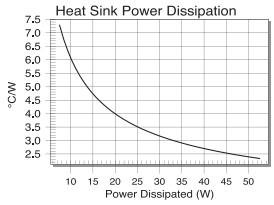




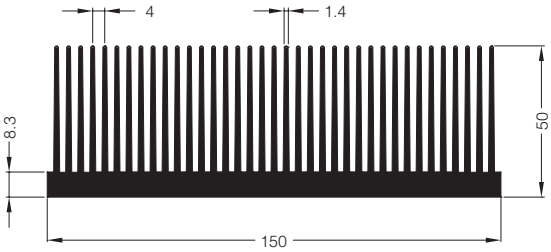
Model No. ZH006



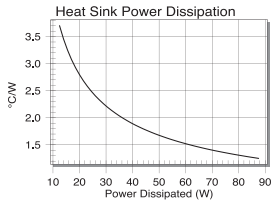
Dimension: 120(W)x120(L)x50(H)mm
Thermal Resistance: 1.570°C/W



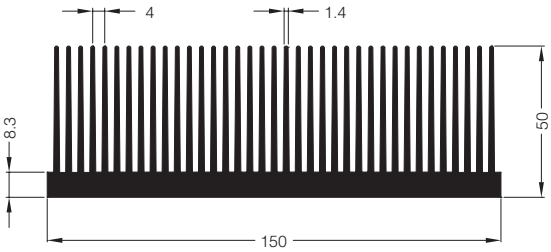
Model No. ZH007



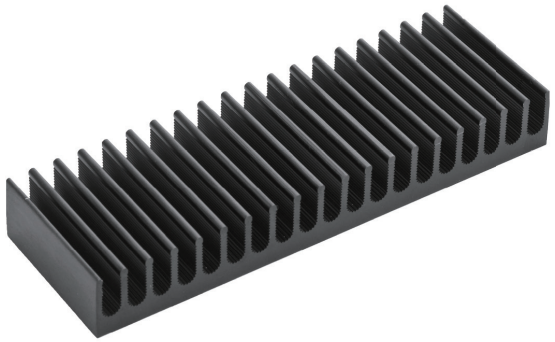
Dimension: 150(W)x150(L)x50(H)mm
Thermal Resistance: 1.163°C/W



Model No. ZH008



Dimension: 150(W)x220(L)x50(H)mm
Thermal Resistance: 0.856°C/W

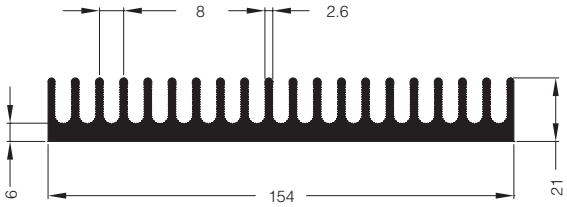


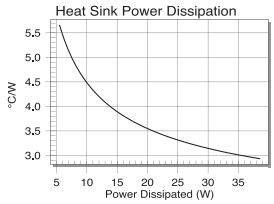
Extrusion Heat Sink Series

Material: AL6063-T5
Finish: Black Anodized
RoHS Compliance

Model No. ZH009

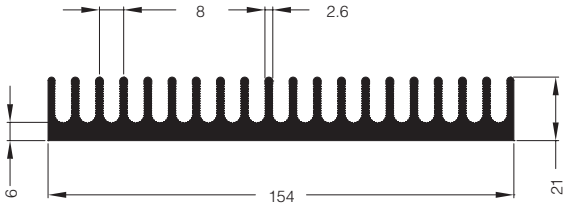
Dimension: 154(W)x50(L)x21(H)mm
Thermal Resistance: 2.525°C/W

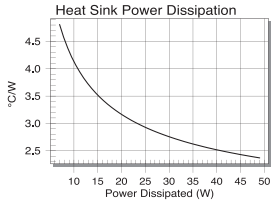




Model No. ZH010

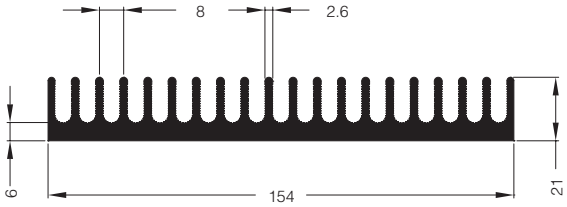
Dimension: 154(W)x70(L)x21(H)mm
Thermal Resistance: 2.210°C/W

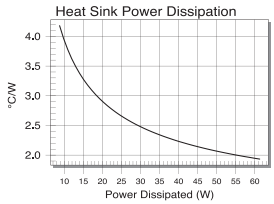




Model No. ZH011

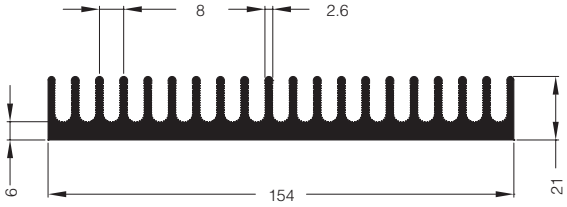
Dimension: 154(W)x100(L)x21(H)mm
Thermal Resistance: 1.813°C/W

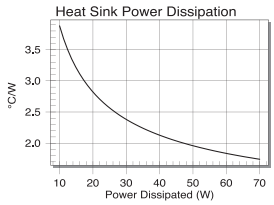




Model No. ZH012

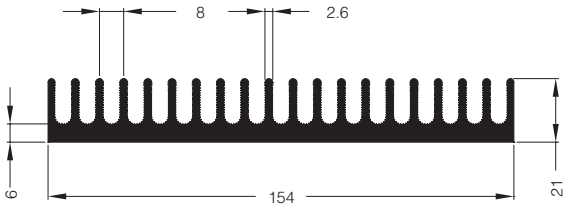
Dimension: 154(W)x120(L)x21(H)mm
Thermal Resistance: 1.727°C/W

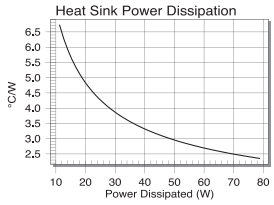


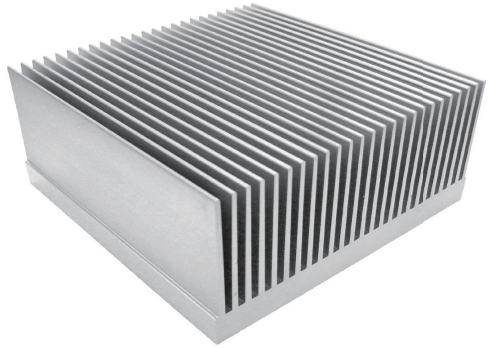


Model No. ZH013

Dimension: 154(W)x154(L)x21(H)mm
Thermal Resistance: 1.453°C/W





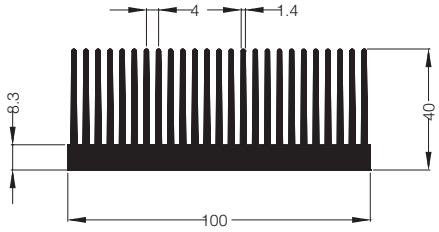


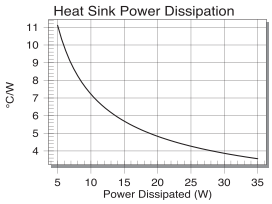
Extrusion Heat Sink Series

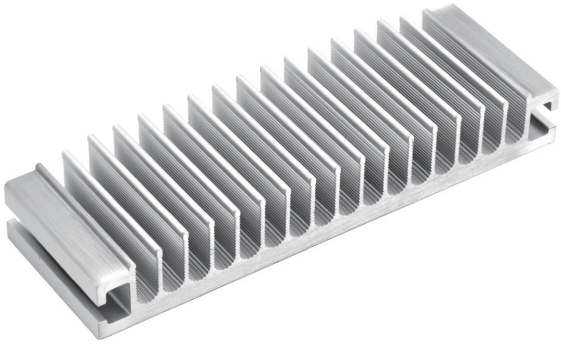
Material: AL6063-T5
Finish: Clean Anodized
RoHS Compliance

Model No. ZH014

Dimension: 100(W)x100(L)x40(H)mm
Thermal Resistance: 2.025°C/W





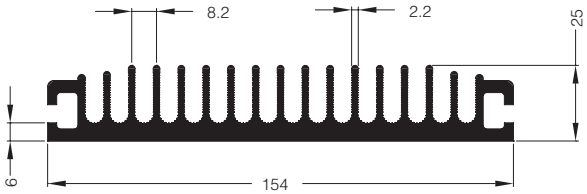


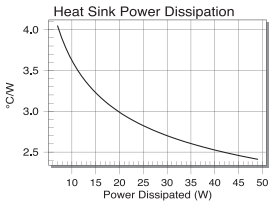
Extrusion Heat Sink Series

Material: AL6063-T5
Finish: Clean Anodized
RoHS Compliance

Model No. ZH015

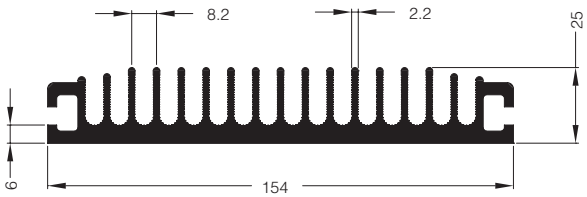
Dimension: 154(W)x50(L)x25(H)mm
Thermal Resistance: 2.330°C/W

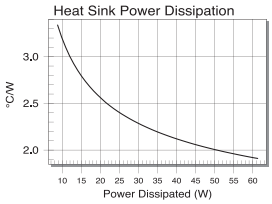




Model No. ZH016

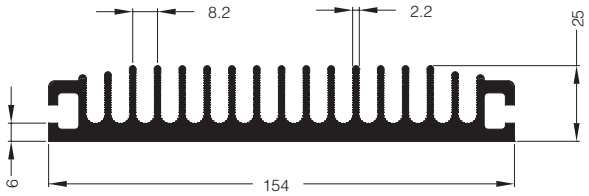
Dimension: 154(W)x70(L)x25(H)mm
Thermal Resistance: 2.120°C/W

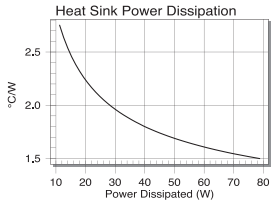




Model No. ZH017

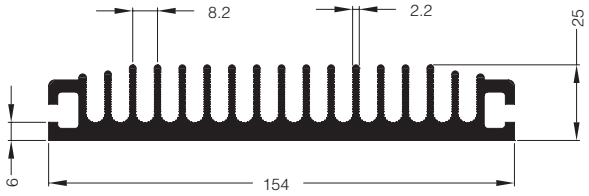
Dimension: 154(W)x100(L)x25(H)mm
Thermal Resistance: 1.677°C/W

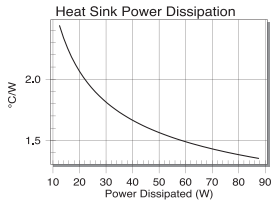




Model No. ZH018

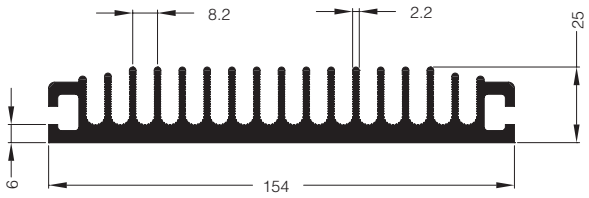
Dimension: 154(W)x120(L)x25(H)mm
Thermal Resistance: 1.547°C/W

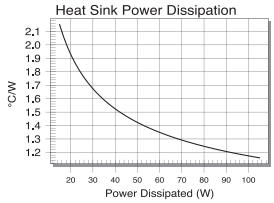




Model No. ZH019

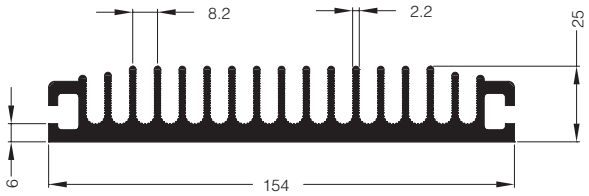
Dimension: 154(W)x150(L)x25(H)mm
Thermal Resistance: 1.530°C/W

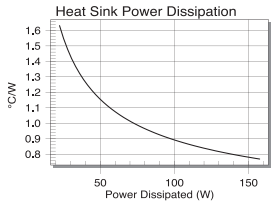


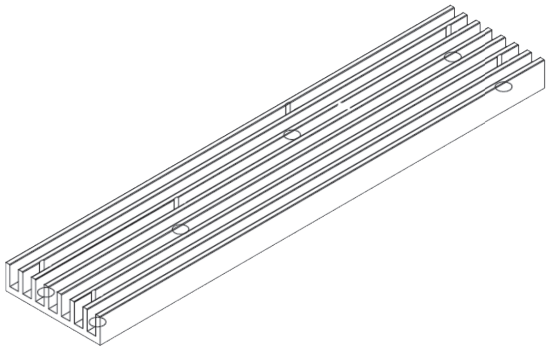


Model No. ZH020

Dimension: 154(W)x304(L)x25(H)mm
Thermal Resistance: 0.977°C/W



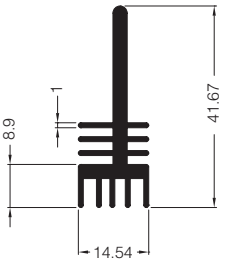




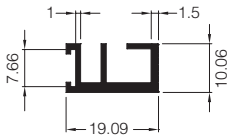
Extrusion Heat Sink Series

Material: AL6063-T5
RoHS Compliance

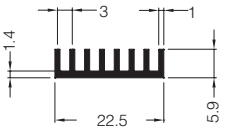
Model No. ZH021 Dimension: 14.54(W)x41.67(H)mm



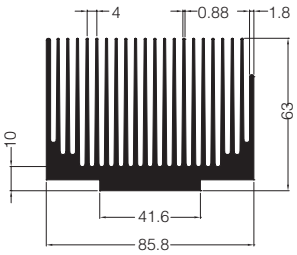
Model No. ZH022 Dimension: 19.09(W)x10.06(H)mm



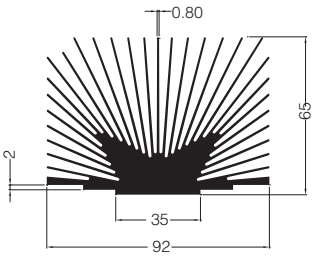
Model No. ZH023 Dimension: 22.5(W)x5.9(H)mm



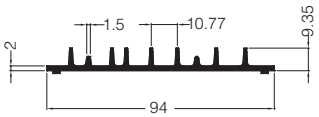
Model No. ZH024 Dimension: 85.8(W)x63(H)mm



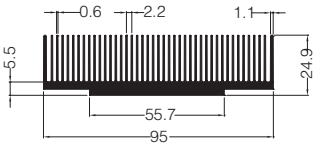
Model No. ZH025 Dimension: 92(W)x65(H)mm



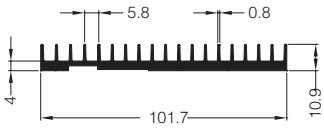
Model No. ZH026 Dimension: 94(W)x9.35(H)mm



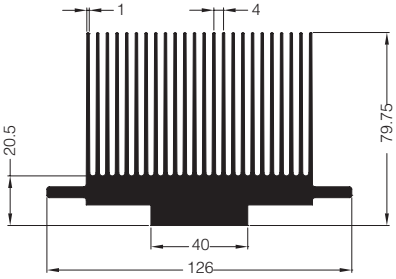
Model No. ZH027 Dimension: 95W)x24.9(H)mm



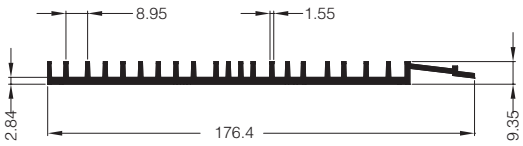
Model No. ZH028 Dimension: 101.7(W)x10.9(H)mm



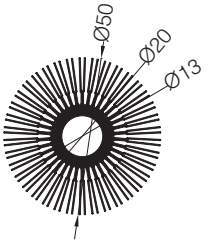
Model No. ZH029 Dimension: 126(W)x79.75(H)mm



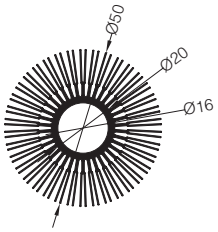
Model No. ZH030 Dimension: 176.4(W)x9.35(H)mm



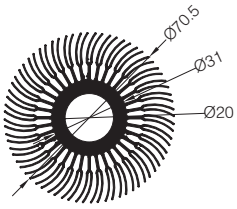
Model No. ZH031 Dimension: Ø50mm



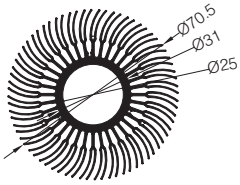
Model No. ZH032 Dimension: Ø50mm



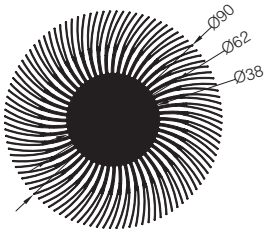
Model No. ZH033 Dimension: Ø70.5mm



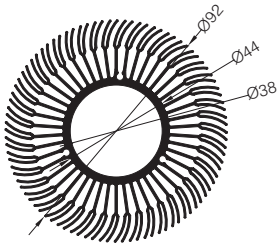
Model No. ZH034 Dimension: Ø70.5mm



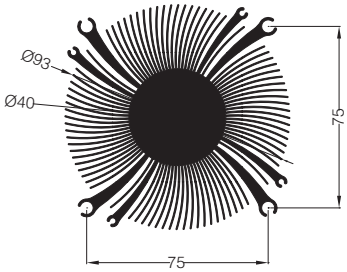
Model No. ZH035 Dimension: Ø90mm



Model No. ZH036 Dimension: Ø92mm



Model No. ZH037 Dimension: Ø93mm



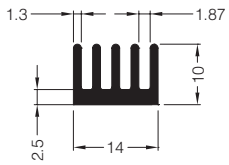
Extrusion Heat Sink

Extrusion Heat Sink Series

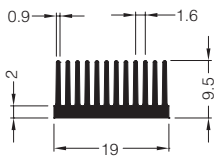
Clipset Cooler

Material: AL6063-T5
RoHS Compliance

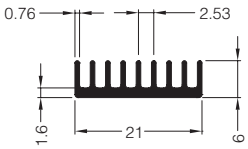
Model No. ZH038 Dimension: 14(W)x10(H)mm



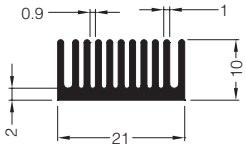
Model No. ZH039 Dimension: 19(W)x9.5(H)mm



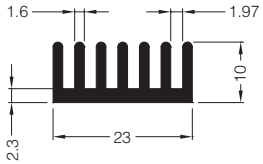
Model No. ZH040 Dimension: 21(W)x6(H)mm



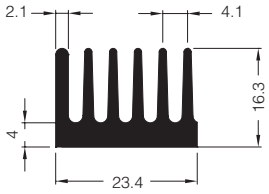
Model No. ZH041 Dimension: 21(W)x10(H)mm



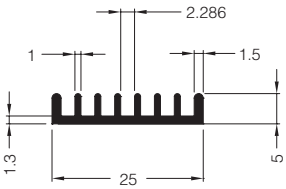
Model No. ZH042 Dimension: 23(W)x10(H)mm



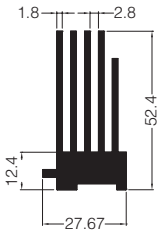
Model No. ZH043 Dimension: 23.4(W)x16.3(H)mm



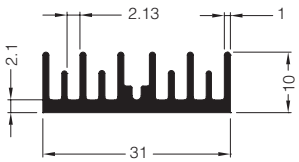
Model No. ZH044 Dimension: 25(W)x5(H)mm



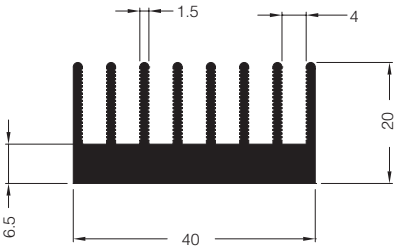
Model No. ZH045 Dimension: 27.67(W)x52.4(H)mm



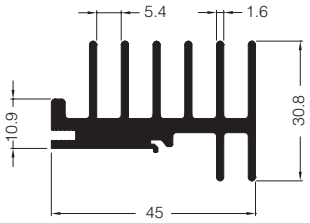
Model No. ZH046 Dimension: 31(W)x10(H)mm



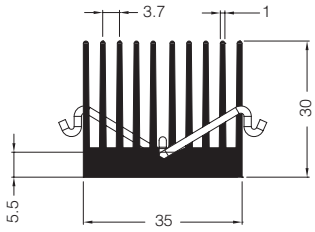
Model No. ZH047 Dimension: 40(W)x20(H)mm



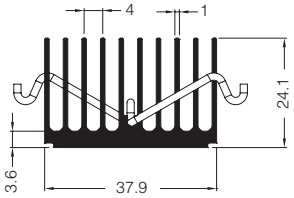
Model No. ZH048 Dimension: 45(W)x30.8(H)mm



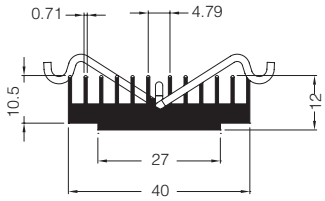
Model No. ZH049 Dimension: 35(W)x30(H)mm



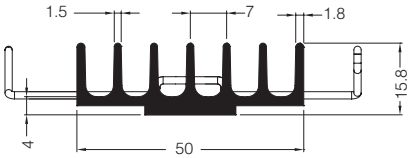
Model No. ZH050 Dimension: 37.9(W)x24.1(H)mm



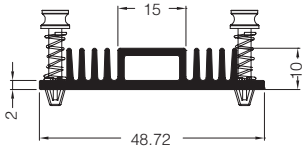
Model No. ZH051 Dimension: 40(W)x12(H)mm



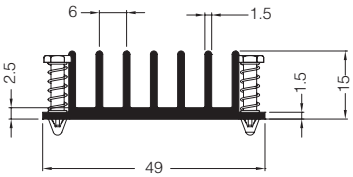
Model No. ZH052 Dimension: 50(W)x15.8(H)mm



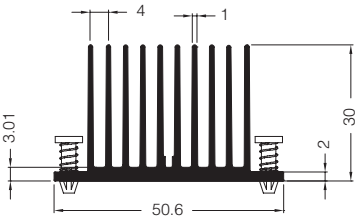
Model No. ZH053 Dimension: 48.72(W)x10(H)mm



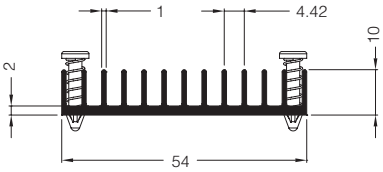
Model No. ZH054 Dimension: 49(W)x15(H)mm



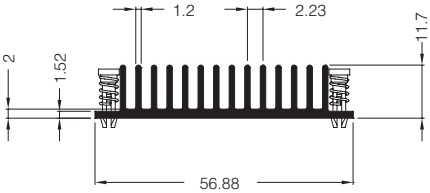
Model No. ZH055 Dimension: 50.6(W)x30(H)mm

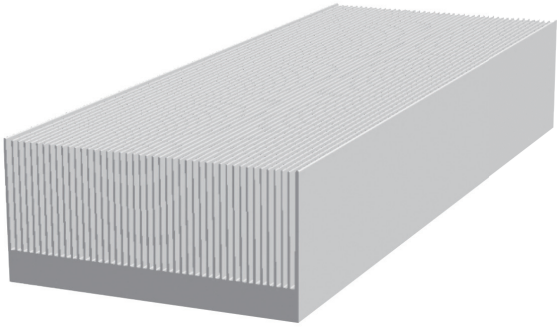


Model No. ZH056 Dimension: 54(W)x10(H)mm



Model No. ZH057 Dimension: 56.88(W)x11.7(H)mm



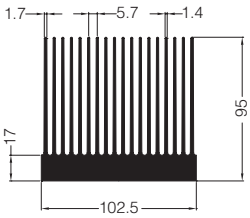


Extrusion Heat Sink Series

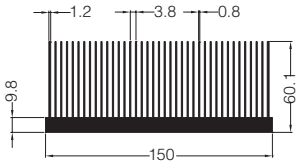
High Torque Ratio

Material: AL6063-T5
RoHS Compliance

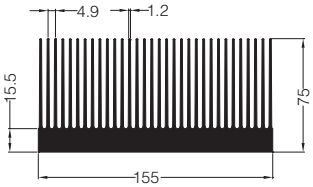
Model No. ZH058 Dimension: 102.5(W)x95(H)mm



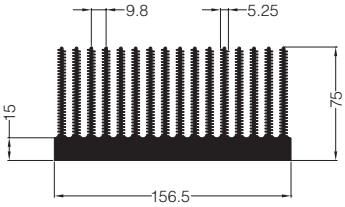
Model No. ZH059 Dimension: 150(W)x60.1(H)mm



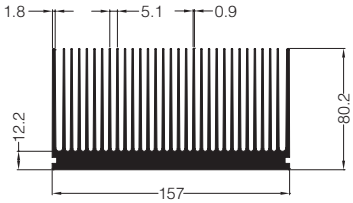
Model No. ZH060 Dimension: 155(W)x75(H)mm



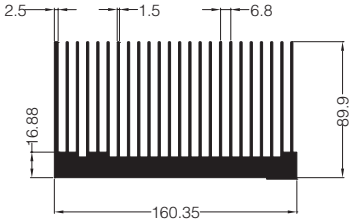
Model No. ZH061 Dimension: 156.5(W)x75(H)mm



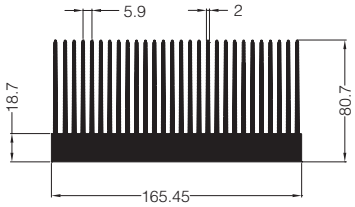
Model No. ZH062 Dimension: 157(W)x80.2(H)mm



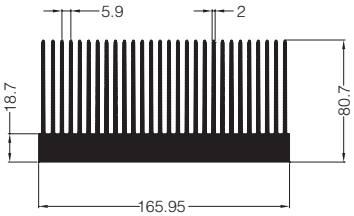
Model No. ZH063 Dimension: 160.35(W)x89.9(H)mm



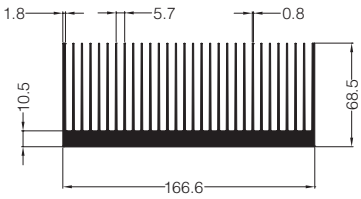
Model No. ZH064 Dimension: 165.45(W)x80.7(H)mm



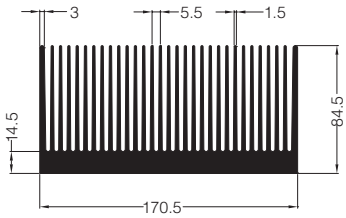
Model No. ZH065 Dimension: 165.95W)x80.7(H)mm



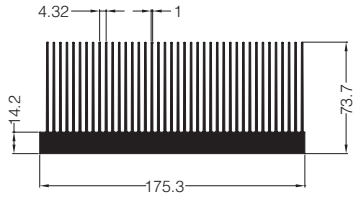
Model No. ZH066 Dimension: 166.6(W)x68.5(H)mm



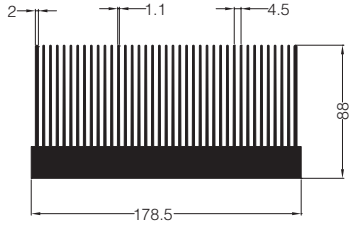
Model No. ZH067 Dimension: 170.5(W)x84.5(H)mm



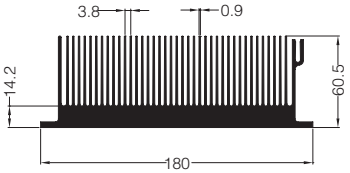
Model No. ZH068 Dimension: 175.3(W)x73.7(H)mm



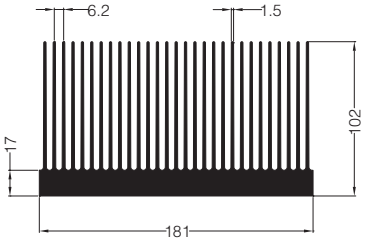
Model No. ZH069 Dimension: 178.5(W)x88(H)mm



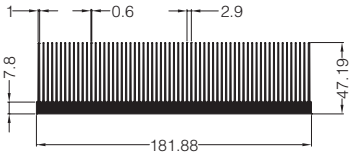
Model No. ZH070 Dimension: 180(W)x60.5(H)mm



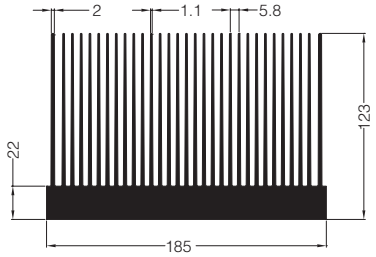
Model No. ZH071 Dimension: 181(W)x102(H)mm



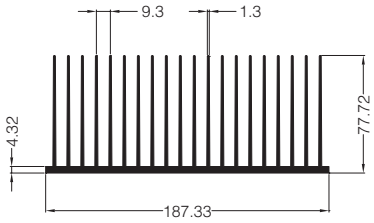
Model No. ZH072 Dimension: 181.88(W)x47.19(H)mm



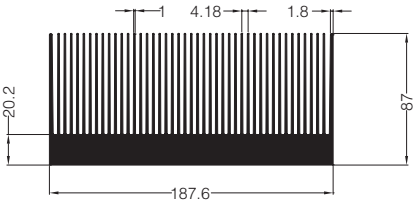
Model No. ZH073 Dimension: 185(W)x123(H)mm



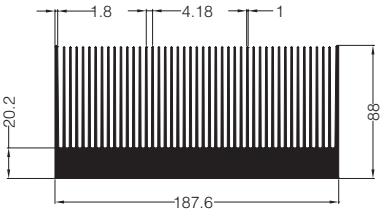
Model No. ZH074 Dimension: 187.33(W)x77.72(H)mm



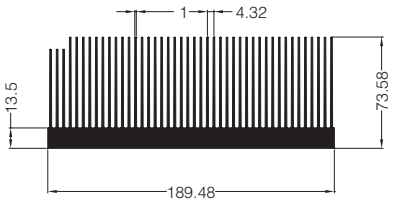
Model No. ZH075 Dimension: 187.6(W)x87(H)mm



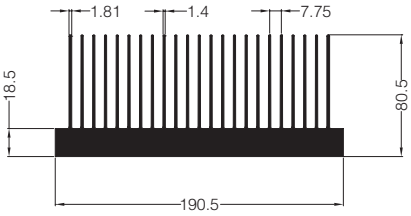
Model No. ZH076 Dimension: 187.6(W)x88(H)mm



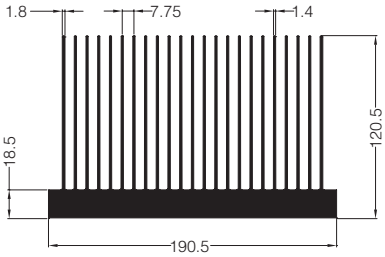
Model No. ZH077 Dimension: 189.48(W)x73.58(H)mm



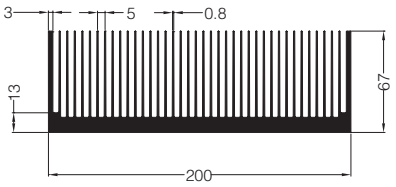
Model No. ZH078 Dimension: 190.5(W)x80.5(H)mm



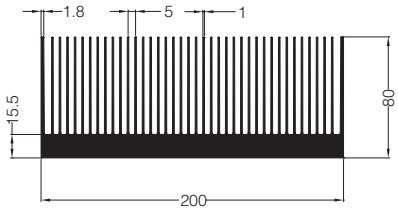
Model No. ZH079 Dimension: 190.5(W)x120.5(H)mm



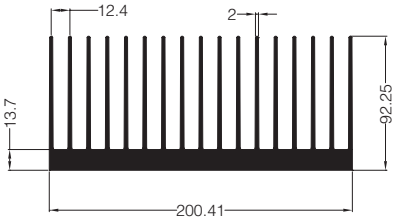
Model No. ZH080 Dimension: 200(W)x67(H)mm



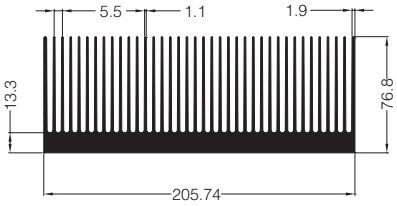
Model No. ZH081 Dimension: 200(W)x80(H)mm



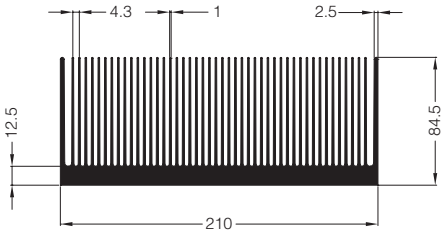
Model No. ZH082 Dimension: 200.41(W)x92.25(H)mm



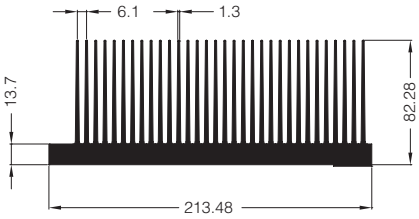
Model No. ZH083 Dimension: 205.74(W)x76.8(H)mm



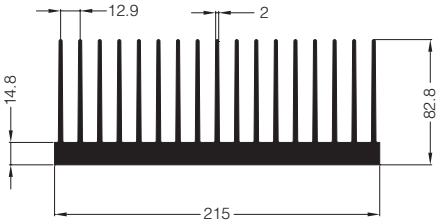
Model No. ZH084 Dimension: 210(W)x84.5(H)mm



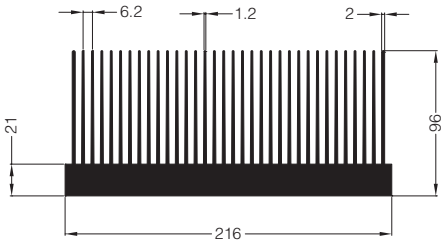
Model No. ZH085 Dimension: 213.48(W)x82.28(H)mm



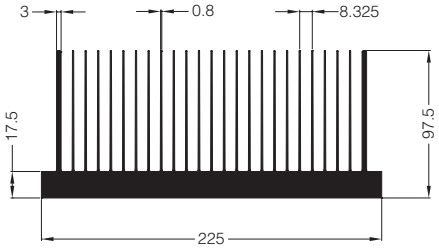
Model No. ZH086 Dimension: 215(W)x82.8(H)mm



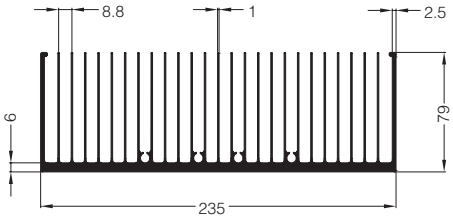
Model No. ZH087 Dimension: 216(W)x96(H)mm



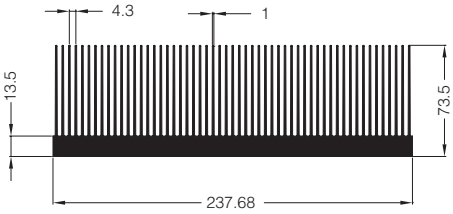
Model No. ZH088 Dimension: 225(W)x97.5(H)mm



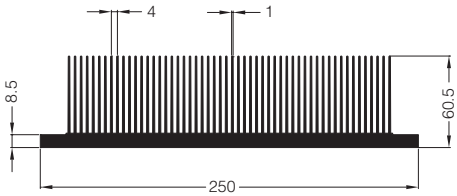
Model No. ZH089 Dimension: 235W)x79(H)mm



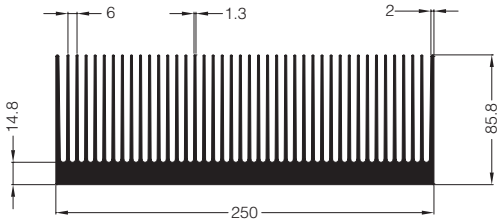
Model No. ZH090 Dimension: 237.68(W)x73.5(H)mm



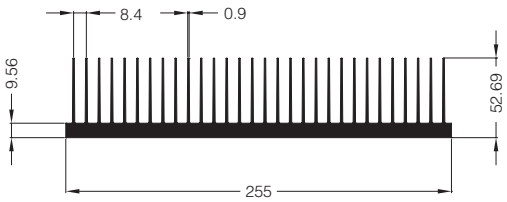
Model No. ZH091 Dimension: 250(W)x60.5(H)mm



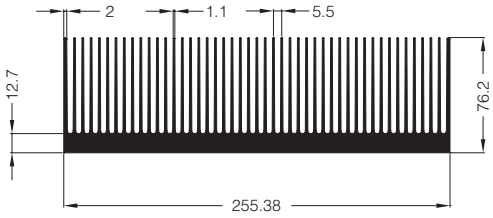
Model No. ZH092 Dimension: 250(W)x85.8(H)mm



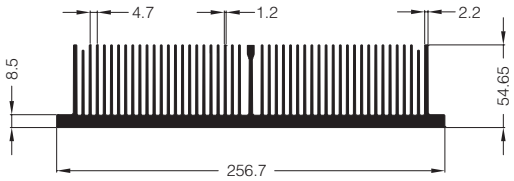
Model No. ZH093 Dimension: 255(W)x52.69(H)mm



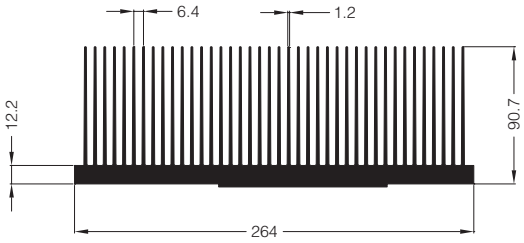
Model No. ZH094 Dimension: 255.38(W)x76.2(H)mm



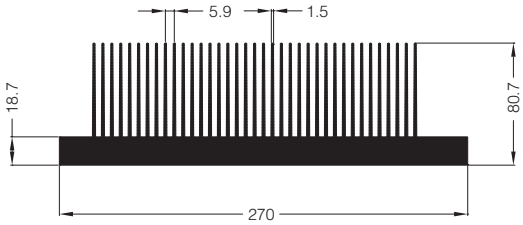
Model No. ZH095 Dimension: 256.7(W)x54.65(H)mm



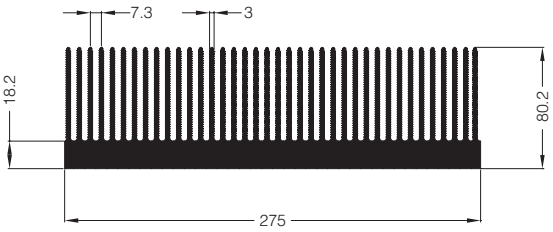
Model No. ZH096 Dimension: 264(W)x90.7(H)mm



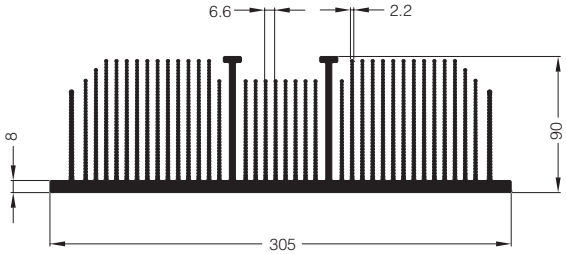
Model No. ZH097 Dimension: 270W)x80.7(H)mm



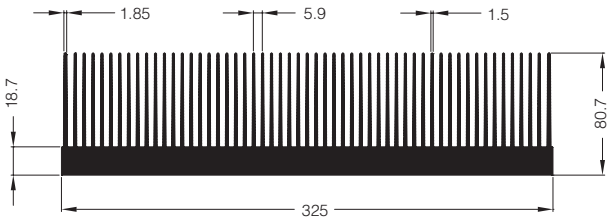
Model No. ZH098 Dimension: 275(W)x80.2(H)mm



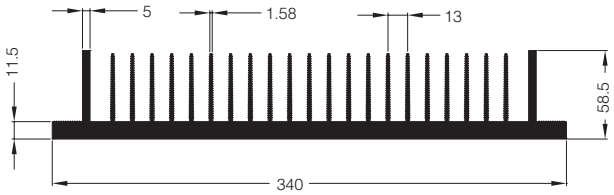
Model No. ZH099 Dimension: 305(W)x90(H)mm



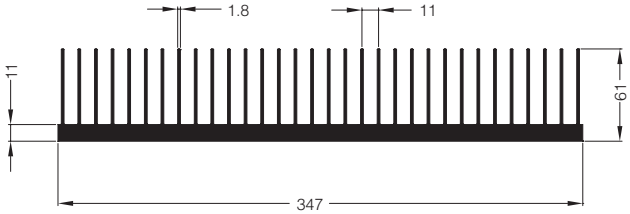
Model No. ZH100 Dimension: 325(W)x80.7(H)mm



Model No. ZH101 Dimension: 340(W)x58.5(H)mm



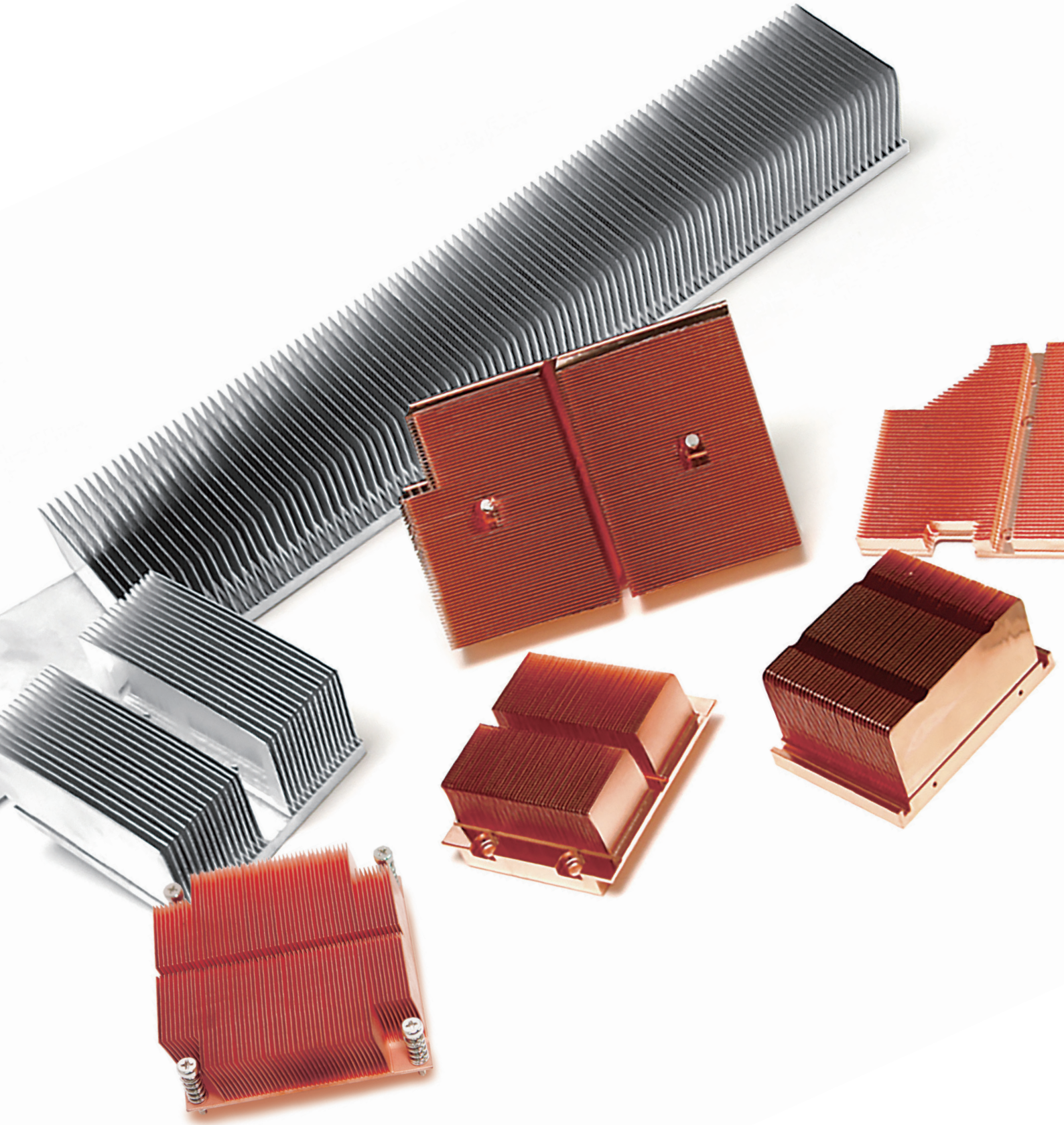
Model No. ZH102 Dimension: 347(W)x61(H)mm

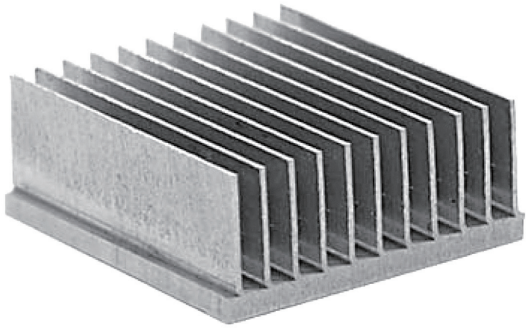


Extrusion Heat Sink

Skiving Heat Sink

High dissipation performance
with series of fine fin spread and lower cost



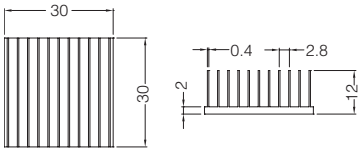


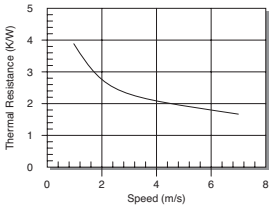
Skiving Heat Sink Series

Material: AL6063-T5
Finish: Degreasing
RoHS Compliance

Model No. ZH103

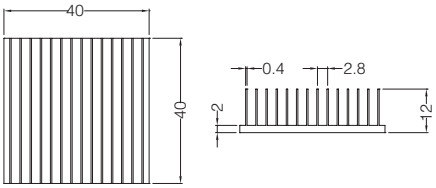
Dimension: 30(W)x30(L)x12(H)mm
Thermal Resistance: 8.064°C/W

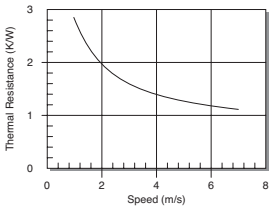




Model No. ZH104

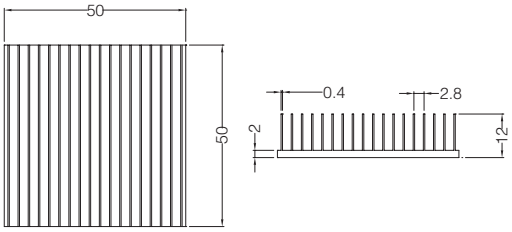
Dimension: 40(W)x40(L)x12(H)mm
Thermal Resistance: 6.283°C/W

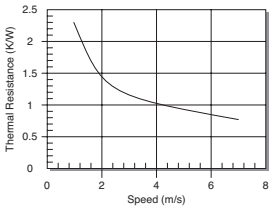


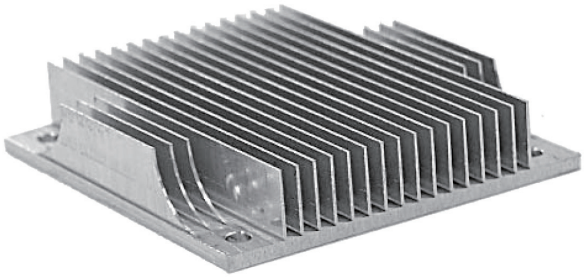


Model No. ZH105

Dimension: 50(W)x50(L)x12(H)mm
Thermal Resistance: 5.233°C/W





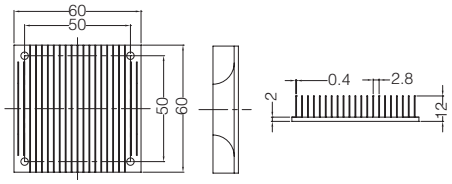


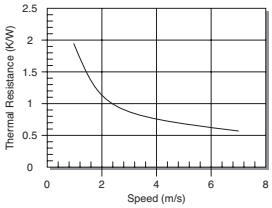
Skiving Heat Sink Series

Material: AL6063-T5
Finish: Degreasing
RoHS Compliance

Model No. ZH106

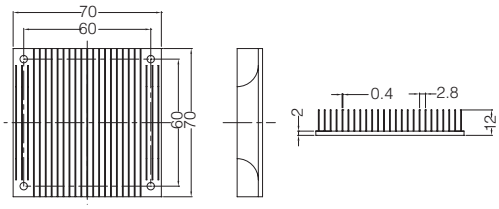
Dimension: 60(W)x60(L)x12(H)mm
Thermal Resistance: 4.468°C/W

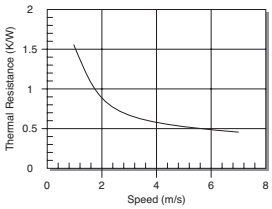




Model No. ZH107

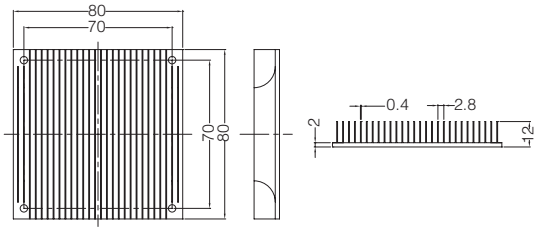
Dimension: 70(W)x70(L)x12(H)mm
Thermal Resistance: 3.825°C/W

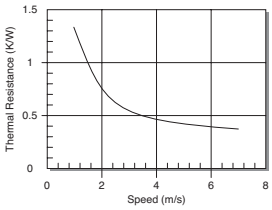




Model No. ZH108

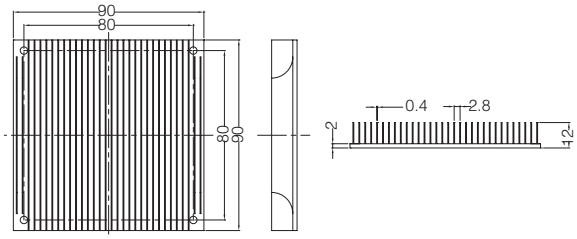
Dimension: 80(W)x80(L)x12(H)mm
Thermal Resistance: 3.323°C/W

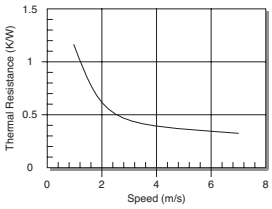




Model No. ZH109

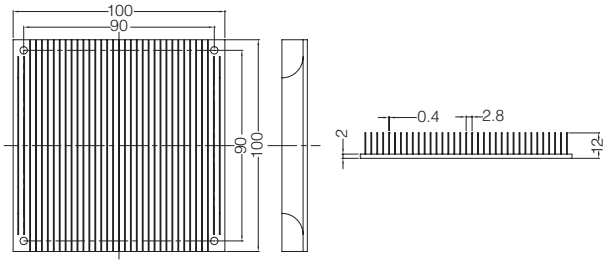
Dimension: 90(W)x90(L)x12(H)mm
Thermal Resistance: 2.943°C/W

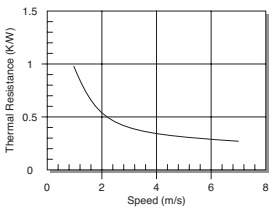




Model No. ZH110

Dimension: 100(W)x100(L)x12(H)mm
Thermal Resistance: 2.606°C/W





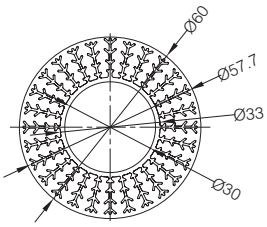
LED Light Heat Sink

Solution for over-heated LED light
by standard or customized ZAWARD product

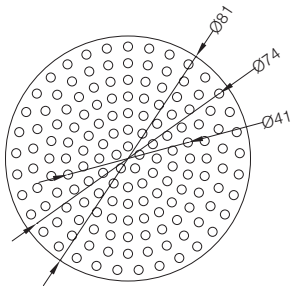
LED Light Heat Sink Series

Material: AL6063-T5
Process: Forging
RoHS Compliance

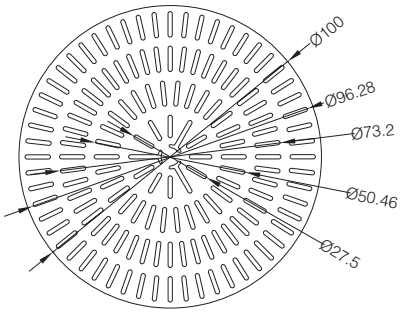
Model No. ZH111 Dimension: Ø60x53(H)mm
Thermal Wattage: 3W
Application: Downlight



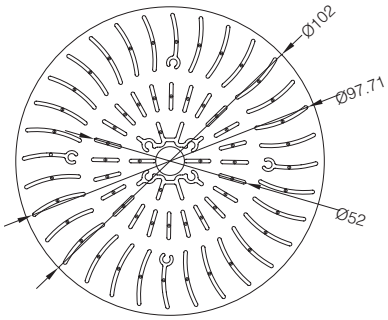
Model No. ZH112 Dimension: Ø81x50(H)mm
Thermal Wattage: 6W
Application: Downlight



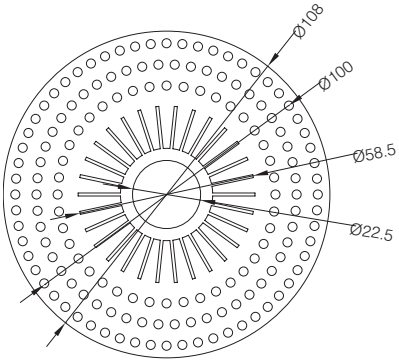
Model No. ZH113 Dimension: Ø100x55(H)mm
Thermal Wattage: 7W
Application: Downlight



Model No. ZH114 Dimension: Ø102x68(H)mm
Thermal Wattage: 7W
Application: Downlight



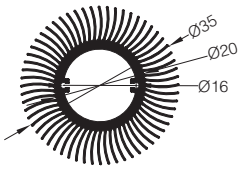
Model No. ZH115 Dimension: Ø108x69(H)mm
Thermal Wattage: 10W
Application: Downlight



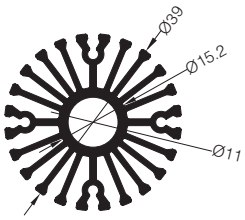
LED Light Heat Sink Series

Material: AL6063-T5
Process: Extrusion
RoHS Compliance

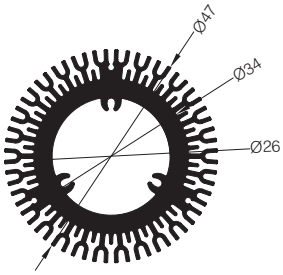
Model No. ZH116 Dimension: Ø35mm
Application: Spotlight, Bulb Light



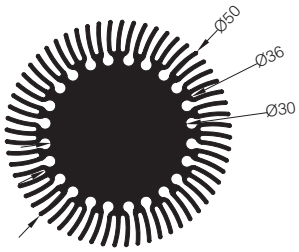
Model No. ZH117 Dimension: Ø39mm
Application: Spotlight, Bulb Light



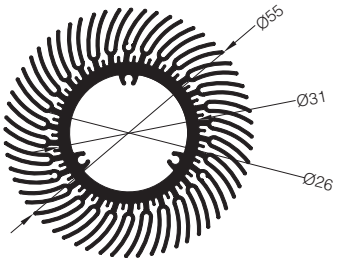
Model No. ZH118 Dimension: Ø47mm
Application: Spotlight, Bulb Light



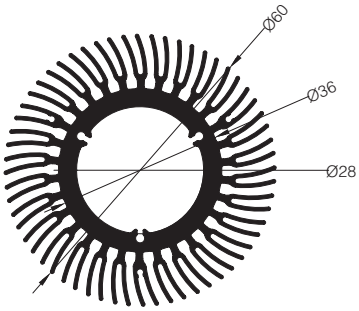
Model No. ZH119 Dimension: Ø50mm
Application: Spotlight, Bulb Light



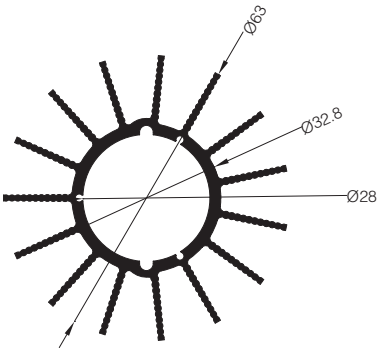
Model No. ZH120 Dimension: Ø55mm
Application: Spotlight, Bulb Light



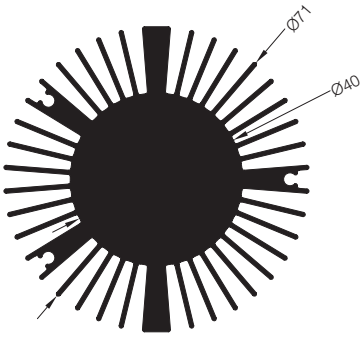
Model No. ZH121 Dimension: Ø60mm
Application: Spotlight, Bulb Light



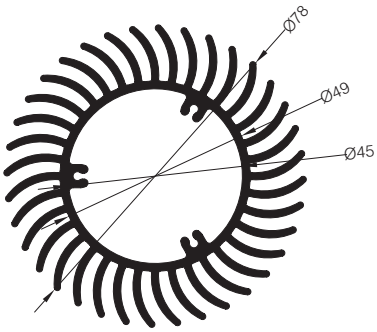
Model No. ZH122 Dimension: Ø63mm
Application: Spotlight



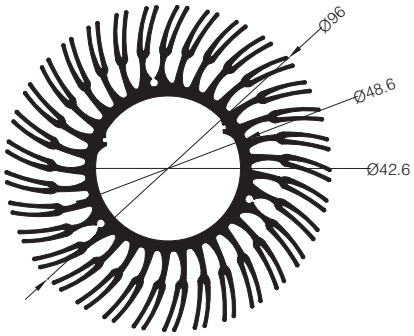
Model No. ZH123 Dimension: Ø71mm
Application: Spotlight



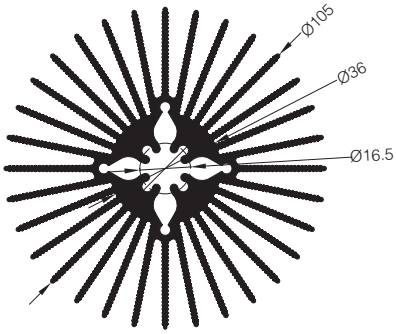
Model No. ZH124 Dimension: Ø78mm
Application: Spotlight



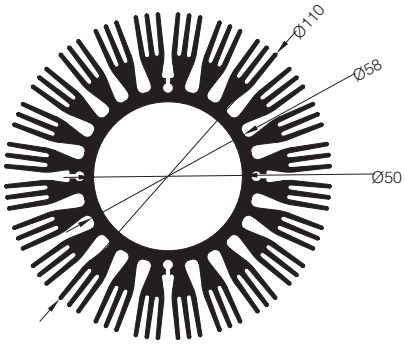
Model No. ZH125 Dimension: Ø96mm
Application: Spotlight



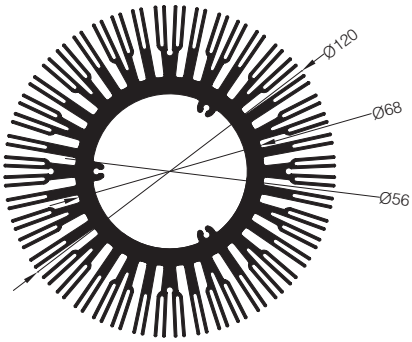
Model No. ZH126 Dimension: Ø105mm
Application: Spotlight



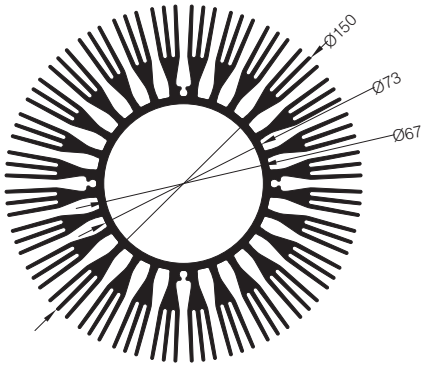
Model No. ZH127 Dimension: Ø110mm
Application: Spotlight



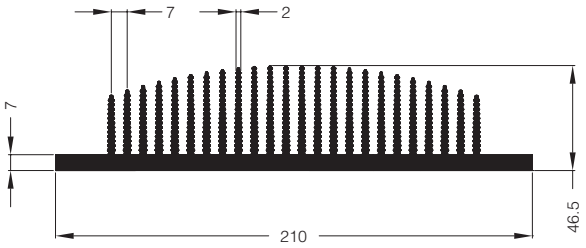
Model No. ZH128 Dimension: Ø120mm
Application: Spotlight



Model No. ZH129 Dimension: Ø150mm
Application: Spotlight

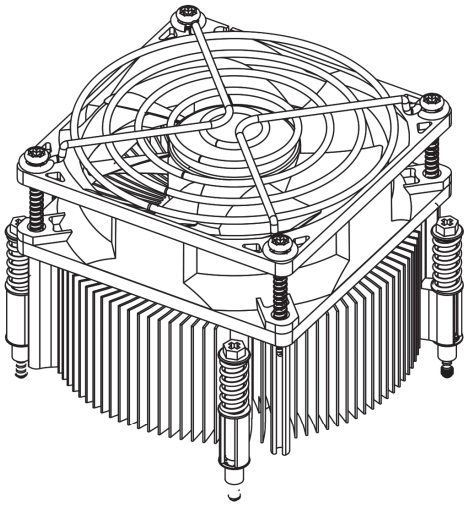


Model No. ZH130 Dimension: 210(W)x46.5(H)mm
Application: Street Light



CPU Cooler

High thermal performance heat sink
compatible with ZAWARD cooling fan
to enhance the device efficiency



CPU Cooler Series

Active Cooler
RoHS Compliance

Model No. ZH131

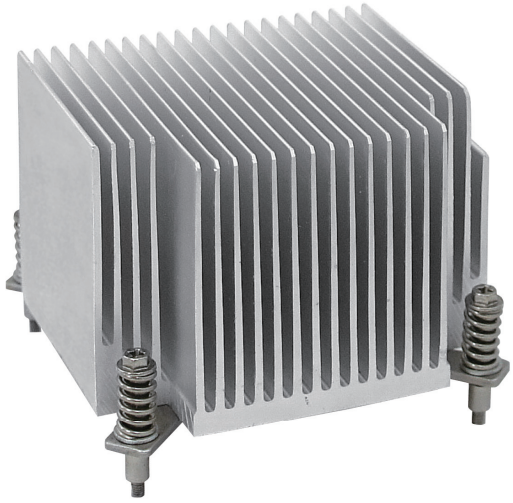
Heat Sink Dimension:	80(W)x78(L)x40(H)mm
Material:	AL6063-T5
Fan Dimension:	80x80x25mm
Rated Speed:	1000-3000 RPM (PWM)
Max Air Flow:	39.8 CFM
Bearing:	Sleeve/ 2 Ball
Thermal Resistance:	0.41 °C/W
Noise:	32.6 dBA
Application:	AMD AM2

Model No. ZH132

Heat Sink Dimension:	Ø93x40(H)mm
Material:	AL6063-T5
Fan Dimension:	80x80x25mm
Rated Speed:	1100-4200 RPM (PWM)
Max Air Flow:	62 CFM
Bearing:	Sleeve/ 2 Ball/ Duro
Thermal Resistance:	0.248 °C/W
Noise:	43.5 dBA
Application:	Intel LGA 1150, 1151, 1155, 1156

Model No. ZH133

Heat Sink Dimension:	Ø90x40(H)mm
Material:	AL6063-T5
Fan Dimension:	Ø95x25mm
Rated Speed:	1000-3500 RPM (PWM)
Max Air Flow:	88.03 CFM
Bearing:	Sleeve/ 2 Ball
Thermal Resistance:	0.35 °C/W
Noise:	42.8 dBA
Application:	Intel LGA 775

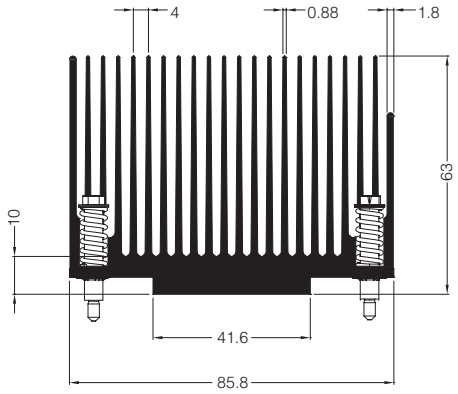


CPU Cooler Series

Passive Cooler

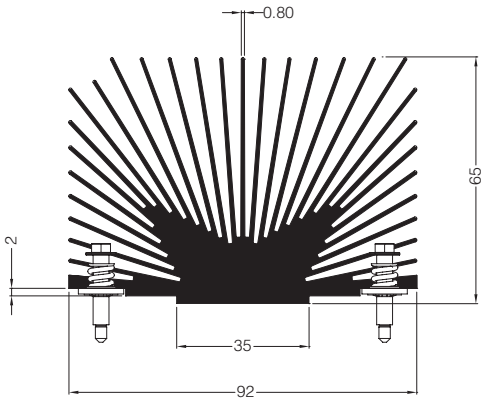
Material: AL6063-T5
RoHS Compliance

Model No. ZH134



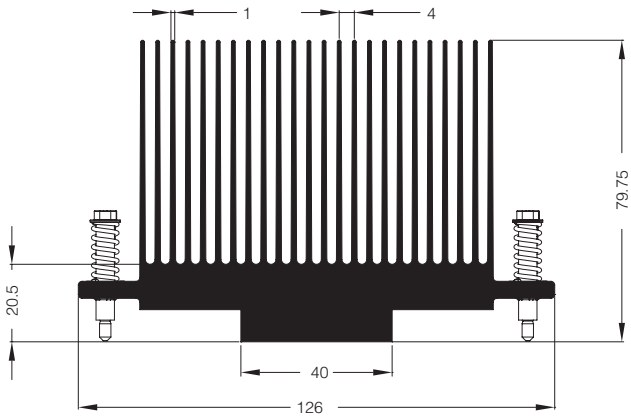
Dimension: 85.8(W)x71(L)x63(H)mm
Material: AL6063-T5
Thermal Resistance: 2.359 °C/W
Application: Intel LGA 1155, 1156

Model No. ZH135

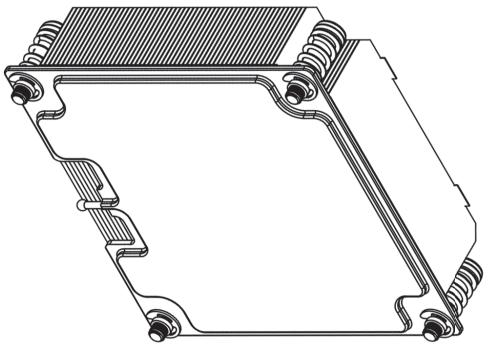


Dimension: 92(W)x87(L)x65(H)mm
Material: AL6063-T5
Thermal Resistance: 1.996°C/W
Application: Intel LGA 1155, 1156

Model No. ZH136



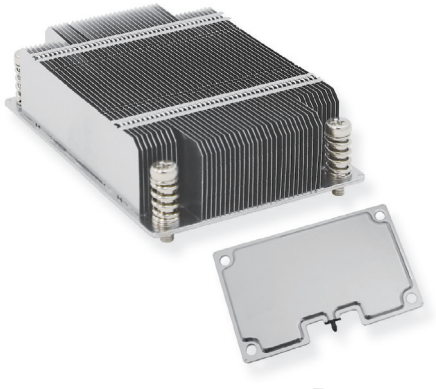
Dimension: 126(W)x81(L)x79.75(H)mm
Material: AL6063-T5
Thermal Resistance: 1.095°C/W
Application: AMD 754



CPU Cooler Series

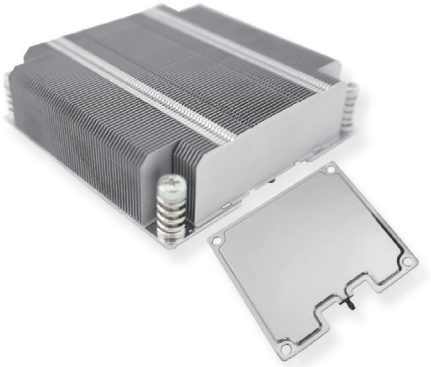
Vapor Chamber Passive Cooler
RoHS Compliance

Model No. ZH137



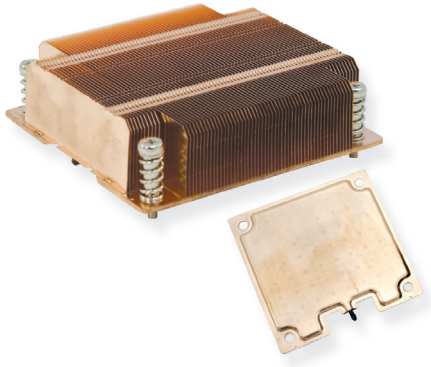
Dimension:	70(W)x106(L)x25.5(H)mm
Material:	VC, AL Fin (Nickel Plating)
Solution:	1U Passive
Capability:	135W
Grease:	X-23-7762
Application:	2011 Sandy Bridge Narrow

Model No. ZH138



Dimension:	90(W)x90(L)x25.5(H)mm
Material:	VC, AL Fin (Nickel Plating)
Solution:	1U Passive
Capability:	150W
Grease:	X-23-7762
Application:	2011 Sandy Bridge

Model No. ZH139



Dimension:	90(W)x90(L)x25.5(H)mm
Material:	VC, CU Fin
Solution:	1U Passive
Capability:	150W
Grease:	X-23-7762
Application:	2011 Sandy Bridge Square

Fan

High quality, low noise and high efficiency DC/AC fan
applies to audiovisual equipment, instrument,
ventilation system, computer peripheral, industry

DC Fan

Including DC fan, DC blower and industrial fan, size ranges are from 25mm to 220mm, application in option features as following:

- PWM (Pulse-Width Modulation):
  A digital output consists temperature controlling.
- FG (Signal Output):
  Electric control circuit to detect fan rotation and monitor operation.
- AR (Auto Restart):
  The ultimate and effective protection to prevent fan's malfunction.
- TC (Temperature Control):
  A thermistor to detect working environment and adjust fan speed accordingly.
- RD (Rotating Detection):
  A lock sensor to detect if fan motor is operating or stopped.
- HP (Humidity Protection):
  The fan is protected from humidity and moisture.

Life expectancy is the key for fan's performance which is mostly dominated by bearing system and working environment.
ZAWARD offers four bearing system under operating conditions of 45°C as following.

Types	2 Ball	Duro	FLB	Sleeve
Life Expectancy	70,000 hours	60,000 hours	40,000 hours	26,000~40,000 hours

AC Fan

Size ranges are from 60mm to 400mm. High CFM, low noise, low power consumption, long life expectancy and corrosion resistance; suitable for harsh temperature extremes environment. Using high quality bearings, silicon steel and enameled wire with higher reliability to fit operating temperature, -30°C to +70°C. Rapid production lead time in 2 to 3 weeks.

DC Fan Series

RoHS Compliance

Functions for option
- Thermo Control Speed (Signal Output Function)
- RD (Rotate Detection Function)
- Automatic Restart & Locked Current Protection
- PWM (Pulse Width Modulation)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
30 x 30 x 10 mm							
ZDAA03010X05LB	5	0.07	0.35	5000	1.36	0.95	19.0
ZDAA03010X12LB	12	0.06	0.72				
ZDAA03010X05MB	5	0.08	0.40	6500	2.37	1.10	21.5
ZDAA03010X12MB	12	0.07	0.84				
ZDAA03010X05HB	5	0.20	1.00	8000	3.15	1.55	23.4
ZDAA03010X12HB	12	0.09	1.08				
ZDAA03010X12VB	12	0.14	1.68	10000	3.95	2.60	25.5
40 x 40 x 10 mm							
ZDAA04010X12LA	12	0.10	1.20	4000	4.81	1.49	12.3
ZDAA04010X12MA	12	0.15	1.80	5000	6.22	2.33	20.2
ZDAA04010X12HA	12	0.20	2.40	6000	7.79	3.35	24.1
40 x 40 x 10 mm, Version B							
ZDAA04010X05LB	5	0.10	0.50	4400	3.88	2.00	25.0
ZDAA04010X12LB	12	0.05	0.60				
ZDAA04010X05MB	5	0.15	0.75	5500	4.60	3.22	28.0
ZDAA04010X12MB	12	0.07	0.84				
ZDAA04010X05HB	5	0.20	1.00	6600	5.72	4.72	35.0
ZDAA04010X12HB	12	0.09	1.08				
ZDAA04010X12VB	12	0.16	1.92	8000	9.23	5.56	38.4
40 x 40 x 20 mm							
ZDAA04020X12SA	12	0.13	1.56	4500	6.80	2.33	20.4
ZDAA04020X12LA	12	0.15	1.80	5000	7.41	2.78	22.3
ZDAA04020X12MA	12	0.22	2.64	6300	9.36	4.41	28.1
ZDAA04020X12HA	12	0.30	3.60	7600	11.68	6.43	31.5
ZDAA04020X12VA	12	0.38	4.56	9000	14.03	9.11	37.1
40 x 40 x 28 mm (ball bearing only)							
ZDAA04028B12LA	12	0.25	3.00	8000	9.12	5.74	31.4
ZDAA04028B12MA	12	0.35	4.20	10000	12.08	8.61	37.5
ZDAP04028B12HA	12	0.40	4.80	12000	15.25	11.85	41.3
ZDAP04028B12VA	12	0.45	5.40	15000	18.79	17.95	47.9
50 x 50 x 10 mm							
ZDAA05010X12LA	12	0.06	0.72	4000	8.67	1.88	20.6
ZDAA05010X12MA	12	0.10	1.20	5000	11.14	2.89	31.4
ZDAA05010X12HA	12	0.15	1.80	6000	13.78	3.92	35.1

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
50 x 50 x 10mm, Version B							
ZDAA05010X05LB	5	0.16	0.80	3500	8.93	2.30	24.5
ZDAA05010X12LB	12	0.06	0.72				
ZDAA05010X05MB	5	0.19	0.95	4000	10.10	2.90	28.5
ZDAA05010X12MB	12	0.08	0.96				
ZDAA05010X05HB	5	0.21	1.05	4500	11.10	3.40	32.5
ZDAA05010X12HB	12	0.09	1.08				
ZDAA05010X12VB	12	0.12	1.44	5000	13.50	4.30	37.5
50 x 50 x 15 mm							
ZDAA05015X12LA	12	0.12	1.44	4000	14.35	2.14	20.1
ZDAA05015X12MA	12	0.17	2.04	5000	16.18	3.18	25.3
ZDAA05015X12HA	12	0.25	3.00	6000	19.69	4.47	31.4
50 x 50 x 15 mm, Version B							
ZDAA05015X05LB	5	0.16	0.80	3500	7.42	1.75	24.5
ZDAA05015X12LB	12	0.06	0.72				
ZDAA05015X24LB	24	0.04	0.96				
ZDAA05015X05MB	5	0.19	0.95	4500	9.51	2.87	28.5
ZDAA05015X12MB	12	0.08	0.96				
ZDAA05015X24MB	24	0.05	1.20				
ZDAA05015X05HB	5	0.21	1.05	5500	11.20	4.21	32.5
ZDAA05015X12HB	12	0.09	1.08				
ZDAA05015X24HB	24	0.08	1.92				
ZDAA05015X05VB	5	0.25	1.25	6500	13.50	5.80	37.5
ZDAA05015X12VB	12	0.12	1.44				
ZDAA05015X24VB	24	0.10	2.40				
60 x 60 x 10 mm							
ZDAA06010X12LA	12	0.15	1.80	3000	14.85	1.49	21.2
ZDAA06010X12MA	12	0.20	2.40	3500	16.14	1.94	24.7
ZDAA06010X12HA	12	0.30	3.60	4000	19.84	2.67	28.7
ZDAA06010X12VA	12	0.33	3.96	4500	22.25	3.35	32.0
60 x 60 x 10 mm, Version B							
ZDAA06010X05LB	5	0.20	1.00	3000	13.42	1.65	24.5
ZDAA06010X12LB	12	0.12	1.44				
ZDAA06010X05MB	5	0.22	1.10	3600	15.54	2.40	29.0
ZDAA06010X12MB	12	0.16	1.92				
ZDAA06010X05HB	5	0.25	1.25	4200	18.01	3.35	33.0
ZDAA06010X12HB	12	0.20	2.40				
ZDAA06010X12VB	12	0.25	3.00	5300	23.30	4.57	38.0
60 x 60 x 15 mm							
ZDAA06015X12LA	12	0.10	1.20	3500	14.21	2.41	23.9
ZDAA06015X12MA	12	0.12	1.44	4000	16.64	3.11	27.7
ZDAA06015X12HA	12	0.15	1.80	4500	18.94	3.77	30.8
60 x 60 x 15 mm, Version A (II)							
ZDAA06015X12LA	12	0.15	1.80	3500	18.58	2.23	25.3
ZDAA06015X12MA	12	0.18	2.16	4000	21.12	2.80	27.9
ZDAA06015X12HA	12	0.25	3.00	4500	23.54	3.55	31.4

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
60 x 60 x 15 mm, Version B							
ZDAA06015X05LB	5	0.15	0.75	2800	11.25	2.52	24.3
ZDAA06015X12LB	12	0.10	1.20				
ZDAA06015X05MB	5	0.24	1.20	3300	12.56	3.14	29.2
ZDAA06015X12MB	12	0.15	1.80				
ZDAA06015X12HB	12	0.18	2.16	3800	14.74	4.32	31.4
ZDAA06015X24HB	24	0.10	2.40				
ZDAA06015X12VB	12	0.22	2.64	4300	17.21	5.65	35.6
ZDAA06015X24VB	24	0.12	2.88				
60 x 60 x 20 mm							
ZDAA06020X12LA	12	0.08	0.10	2500	7.00	1.23	20.8
ZDAA06020X12MA	12	0.10	1.20	3000	9.17	1.72	23.6
ZDAA06020X12HA	12	0.15	1.80	3500	14.15	2.47	27.1
ZDAA06020X12VA	12	0.20	2.40	5000	20.12	4.81	36.3
60 x 60 x 20 mm, Version B							
ZDAA06020X05LB	5	0.14	0.70	3200	13.06	3.03	24.0
ZDAA06020X12LB	12	0.07	0.84				
ZDAA06020X24LB	24	0.04	0.96				
ZDAA06020X05MB	5	0.24	1.20	4000	16.60	4.80	28.0
ZDAA06020X12MB	12	0.11	1.32				
ZDAA06020X24MB	24	0.05	1.20				
ZDAA06020X12HB	12	0.18	2.16	4800	19.78	7.00	33.0
ZDAA06020X24HB	24	0.09	2.16				
60 x 60 x 25 mm							
ZDAA06025X12SA	12	0.10	1.20	2400	16.07	1.82	12.8
ZDAA06025X12LA	12	0.12	1.44	3000	18.90	2.44	22.1
ZDAA06025X12MA	12	0.15	1.80	3600	22.81	3.50	26.1
ZDAA06025X12HA	12	0.17	2.04	4200	27.02	4.73	30.4
ZDAA06025X12VA	12	0.22	2.64	5000	33.29	6.71	35.5
60 x 60 x 25 mm, Version B							
ZDAA06025X05LB	5	0.15	0.75	3100	13.67	2.36	23.8
ZDAA06025X12LB	12	0.13	1.56				
ZDAA06025X24LB	24	0.12	2.88				
ZDAA06025X48LB	48	0.11	5.28				
ZDAA06025X05MB	5	0.22	1.10	3600	16.24	3.60	27.6
ZDAA06025X12MB	12	0.16	1.92				
ZDAA06025X24MB	24	0.14	3.36				
ZDAA06025X48MB	48	0.12	5.76				
ZDAA06025X12HB	12	0.18	2.16	5000	22.95	6.96	33.0
ZDAA06025X24HB	24	0.09	2.16				
ZDAA06025X48HB	48	0.06	2.88				
ZDAA06025X24VB	24	0.20	4.80	6000	31.70	10.80	42.5
ZDAA06025X48VB	48	0.11	5.28				
70 x 70 x 15 mm							
ZDAA07015X12SA	12	0.20	2.40	2800	27.32	2.38	29.8
ZDAA07015X12LA	12	0.20	2.40	3500	34.16	3.49	33.6
ZDAA07015X12MA	12	0.30	3.60	4000	38.84	4.45	36.3
ZDAA07015X12HA	12	0.40	4.80	4500	41.87	5.34	40.1

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
70 x 70 x 15 mm, Version A (II)							
ZDAA07015X12LA	12	0.14	1.68	3000	23.76	2.08	27.1
ZDAA07015X12MA	12	0.25	3.00	4000	31.28	3.26	36.6
ZDAA07015X12HA	12	0.35	4.20	4500	35.76	3.61	38.4
70 x 70 x 15 mm, Version A (III)							
ZDAP07015X12SA	12	0.10	1.20	1000~ 2500	18.47	1.33	22.4
ZDAP07015X12LA	12	0.13	1.56	1000~ 3000	23.76	2.08	27.1
ZDAP07015X12MA	12	0.30	3.60	1000~ 3500	28.50	2.78	33.4
ZDAP07015X12HA	12	0.35	4.20	1000~ 4500	35.76	3.61	38.4
ZDAP07015X12VA	12	0.45	5.40	1000~ 5500	42.26	4.55	43.2
70 x 70 x 15 mm, Version B							
ZDAA07015X05LB	5	0.22	1.10	2800	23.38	2.27	26.5
ZDAA07015X12LB	12	0.15	1.80				
ZDAA07015X24LB	24	0.08	1.92				
ZDAA07015X05MB	5	0.25	1.25	3300	28.18	3.12	31.0
ZDAA07015X12MB	12	0.18	2.16				
ZDAA07015X24MB	24	0.10	2.40				
ZDAA07015X12HB	12	0.25	3.00	3800	33.20	4.12	34.5
ZDAA07015X24HB	24	0.15	3.60				
ZDAA07015X12VB	12	0.30	3.60	4300	37.54	5.33	38.5
ZDAA07015X24VB	24	0.18	4.32				
70 x 70 x 25 mm							
ZDAA07025X12LA	12	0.12	1.44	3000	31.50	3.07	26.6
ZDAA07025X12MA	12	0.17	2.04	3600	37.92	4.36	30.2
ZDAA07025X12HA	12	0.23	2.76	4200	44.64	5.69	35.4
ZDAA07025X12VA	12	0.33	3.96	5000	52.17	7.22	40.6
80 x 80 x 10 mm							
ZDAA08010X05LB	5	0.24	1.20	1800	9.32	0.86	11.0
ZDAA08010X12LB	12	0.10	1.20				
ZDAA08010X24LB	24	0.08	1.92				
ZDAA08010X05MB	5	0.33	1.65	2500	17.98	1.19	18.3
ZDAA08010X12MB	12	0.18	2.16				
ZDAA08010X24MB	24	0.11	2.64				
ZDAA08010X12HB	12	0.20	2.40	3000	25.90	1.43	22.1
ZDAA08010X24HB	24	0.13	3.12				
80 x 80 x 15 mm							
ZDAA08015X12LA	12	0.11	1.32	2000	25.26	1.39	20.4
ZDAA08015X20LA	20	0.08	1.60				
ZDAA08015X24LA	24	0.15	3.60				
ZDAA08015X12MA	12	0.13	1.56	2500	32.14	2.04	25.5
ZDAA08015X20MA	20	0.15	3.00				
ZDAA08015X24MA	24	0.18	4.32				
ZDAA08015X12HA	12	0.19	2.28	3000	36.81	2.73	30.3
ZDAA08015X20HA	20	0.20	4.00	2800	34.96	2.53	26.7
ZDAA08015X24HA	24	0.20	4.80	3000	34.96	2.53	26.7
ZDAA08015X12VA	12	0.35	4.20	3500	42.73	3.50	34.1

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
80 x 80 x 15 mm, Version A (II)							
ZDAA08015X12LA	12	0.11	1.32	2000	17.56	1.21	21.8
ZDAA08015X12MA	12	0.13	1.56	2500	27.00	1.83	27.2
ZDAA08015X12HA	12	0.19	2.28	3000	32.43	2.26	31.7
80 x 80 x 15 mm, LED Fan							
ZDAL08015X12LA	12	0.19	2.28	2000	24.38	1.28	20.9
ZDAL08015X12MA	12	0.23	2.76	2500	31.68	1.94	29.4
ZDAL08015X12HA	12	0.27	3.24	3000	37.86	2.65	31.3
80 x 80 x 15 mm, Version B							
ZDAA08015X05LB	5	0.24	1.20	2500	24.70	2.20	27.5
ZDAA08015X12LB	12	0.15	1.80				
ZDAA08015X24LB	24	0.08	1.92				
ZDAA08015X05MB	5	0.33	1.65	2700	28.30	2.71	30.5
ZDAA08015X12MB	12	0.18	2.16				
ZDAA08015X24MB	24	0.11	2.64				
ZDAA08015X12HB	12	0.20	2.40	3000	32.50	3.40	32.5
ZDAA08015X24HB	24	0.13	3.12				
ZDAA08015X12VB	12	0.25	3.00	3300	34.67	3.95	36.5
ZDAA08015X24VB	24	0.09	2.16				
80 x 80 x 20 mm							
ZDAL08020X12LA	12	0.23	2.76	2000	28.63	1.42	21.9
ZDAL08020X12MA	12	0.30	3.60	2500	36.13	2.19	29.4
ZDAL08020X12HA	12	0.36	4.32	3000	43.94	2.99	31.3
80 x 80 x 25 mm							
ZDAA08025X12LA	12	0.12	1.44	2000	26.54	1.55	21.0
ZDAA08025X24LA	24	0.08	1.92				
ZDAA08025X12MA	12	0.17	2.04	2500	32.37	3.26	27.4
ZDAA08025X24MA	24	0.10	2.40				
ZDAA08025X12HA	12	0.23	2.76	3000	39.80	3.58	32.6
ZDAA08025X24HA	24	0.17	4.08				
80 x 80 x 25 mm, Version A (II)							
ZDAL08025X12LA	12	0.12	1.44	2000	27.15	1.77	22.5
ZDAL08025X12MA	12	0.17	2.04	2500	34.01	2.64	27.3
ZDAL08025X12HA	12	0.23	2.76	3000	41.47	3.79	32.0
80 x 80 x 25 mm, Version B							
ZDAA08025X05LB	5	0.24	1.20	2400	27.90	2.59	25.1
ZDAA08025X12LB	12	0.09	1.08				
ZDAA08025X24LB	24	0.05	1.20				
ZDAA08025X48LB	48	0.06	2.88				
ZDAA08025X05MB	5	0.43	2.15	3000	35.31	4.04	31.5
ZDAA08025X12MB	12	0.16	1.92				
ZDAA08025X24MB	24	0.07	1.68				
ZDAA08025X48MB	48	0.07	3.36				
ZDAA08025X12HB	12	0.26	3.12	3600	42.02	5.51	38.2
ZDAA08025X24HB	24	0.14	3.36				
ZDAA08025X48HB	48	0.07	3.36				
ZDAA08025X12VB	12	0.34	4.08	4000	46.62	6.78	40.0
ZDAA08025X24VB	24	0.16	3.84				
ZDAA08025X48VB	48	0.08	3.84				

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
80 x 80 x 25 mm, LED Fan							
ZDAL08025X12LA	12	0.20	2.40	2000	32.37	1.76	21.5
ZDAL08025X12MA	12	0.25	3.00	2500	39.07	2.53	26.5
ZDAL08025X12HA	12	0.31	3.72	3000	47.49	3.59	31.4
ZDAL08025X12VA	12	0.35	4.20	3500	56.86	4.65	35.6
92 x 92 x 15 mm							
ZDAA09215X12LA	12	0.20	2.40	2000	28.49	1.43	19.6
ZDAA09215X12MA	12	0.23	2.76	2500	34.85	1.96	24.3
ZDAA09215X12HA	12	0.30	3.60	3000	41.22	2.68	29.5
ZDAA09215X12VA	12	0.40	4.80	3500	46.29	3.20	34.7
92 x 92 x 25 mm							
ZDAA09225X12SA	12	0.18	2.16	1800	48.15	1.66	23.1
ZDAA09225X12LA	12	0.18	2.16	2000	53.14	2.01	25.9
ZDAA09225X12MA	12	0.27	3.24	2500	59.12	3.36	32.8
ZDAA09225X12HA	12	0.45	5.40	3000	72.18	4.88	39.0
92 x 92 x 25 mm, Version A (II)							
ZDAA09225X12LA	12	0.26	3.12	2000	38.13	1.57	22.4
ZDAA09225X12MA	12	0.35	4.20	2500	47.94	2.47	27.4
ZDAA09225X12HA	12	0.53	6.36	3000	58.78	3.31	33.6
ZDAA09225D12SA	12	0.12	1.44	1200	18.80	0.48	13.0
ZDAA09225D12LA	12	0.15	1.80	1500	25.13	0.75	15.2
ZDAA09225D12MA	12	0.18	2.16	1900	36.22	1.49	19.5
ZDAA09225D12HA	12	0.26	3.12	2500	47.94	2.47	29.3
Φ 92 x 25 mm							
ZDAA09225X05LB	5	0.16	0.80	2100	37.08	2.53	25.0
ZDAA09225X12LB	12	0.07	0.84				
ZDAA09225X24LB	24	0.06	1.44				
ZDAA09225X48LB	48	0.05	2.40				
ZDAA09225X05MB	5	0.26	1.30	2450	43.79	3.25	30.0
ZDAA09225X12MB	12	0.11	1.32				
ZDAA09225X24MB	24	0.08	1.92				
ZDAA09225X48MB	48	0.05	2.40				
ZDAA09225X12HB	12	0.25	3.00	3200	57.92	5.62	38.0
ZDAA09225X24HB	24	0.13	3.12				
ZDAA09225X48HB	48	0.09	4.32				
ZDAA09225X12VB	12	0.40	4.80	3800	67.80	7.67	45.0
ZDAA09225X24VB	24	0.22	5.28				
Φ 92 x 25 mm, Frameless							
ZDFA09225X12LA	12	0.26	3.12	2300	57.36	2.50	27.4
ZDFA09225X12MA	12	0.35	4.20	2500	59.12	3.36	31.9
ZDFA09225X12HA	12	0.45	5.40	3000	72.18	4.88	36.7
95 x 95 x 25 mm							
ZDAA09525X12LA	12	0.18	2.16	2200	37.84	1.53	26.6
ZDAP09525X12MA	12	0.40	4.80	1000~ 2500	60.87	3.57	29.8
ZDAP09525X12HA	12	0.60	7.20	1000~ 3000	73.46	5.10	36.3
ZDAP09525X12VA	12	0.60	7.20	1000~ 3500	87.18	6.75	42.8

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
95 x 95 x 25 mm, Version A (II)							
ZDAA09525X12SA	12	0.25	3.00	2000	44.78	1.83	23.8
ZDAA09525X12LA	12	0.25	3.00	2500	64.13	3.16	33.5
ZDAA09525X12MA	12	0.50	6.00	3000	78.33	4.76	38.8
ZDAA09525X12HA	12	0.60	7.20	3500	88.03	5.95	42.8
100 x 100 x 25 mm, LED Fan							
ZDAL10025X12LA	12	0.25	3.00	2000	64.48	2.37	31.1
ZDAL10025X12MA	12	0.45	5.40	2400	77.15	3.32	35.7
ZDAL10025X12HA	12	0.55	6.60	2800	88.55	4.37	40.6
120 x 120 x 15 mm (ball bearing only)							
ZDAA12015B12LA	12	0.20	2.40	1500	48.56	1.33	27.3
ZDAA12015B12MA	12	0.25	3.00	1800	61.02	1.86	32.3
ZDAA12015B12HA	12	0.38	4.56	2200	75.41	2.75	38.4
120 x 120 x 20 mm (ball bearing only)							
ZDAA12020B12LA	12	0.20	2.40	1500	48.92	1.67	31.4
ZDAA12020B12MA	12	0.30	3.60	1800	60.90	2.43	36.5
ZDAA12020B12HA	12	0.40	4.80	2200	67.81	3.05	40.9
120 x 120 x 25 mm, Version A							
ZDAA12025X12LA	12	0.18	2.16	2000	90.92	3.06	34.0
ZDAA12025X12MA	12	0.30	3.60	2400	103.26	4.23	39.0
ZDAA12025X12HA	12	0.52	6.24	2800	124.11	5.79	43.6
120 x 120 x 25 mm, Version A (II) (bearing: F or D only)							
ZDAA12025X12SA	12	0.18	2.16	1000	42.33	0.83	15.2
ZDAA12025X12LA	12	0.20	2.40	1800	87.19	2.75	33.0
ZDAA12025X12MA	12	0.55	6.60	2400	109.44	4.59	41.2
ZDAA12025X12HA	12	0.65	7.80	2800	124.80	5.33	44.9
120 x 120 x 25 mm, Version B							
ZDAA12025X12LB	12	0.18	2.16	1900	62.93	3.93	32.5
ZDAA12025X24LB	24	0.10	2.40				
ZDAA12025X12MB	12	0.20	2.40	2200	74.84	5.15	35.5
ZDAA12025X24MB	24	0.12	2.88				
ZDAA12025X12HB	12	0.23	2.76	2500	82.67	6.25	38.5
ZDAA12025X24HB	24	0.14	3.36				
ZDAA12025X12VB	12	0.33	3.96	2800	95.14	7.73	41.5
ZDAA12025X24VB	24	0.18	4.32				
120 x 120 x 38 mm, Version A (ball bearing only)							
ZDAA12038B12LA	12	1.20	14.40	2500	147.00	10.50	49.1
ZDAA12038B24LA	24	0.70	24.00				
ZDAA12038B48LA	48	0.50	24.00				
ZDAA12038B12MA	12	1.50	18.00	3000	170.00	14.00	53.2
ZDAA12038B24MA	24	0.85	28.80				
ZDAA12038B48MA	48	0.60	28.80				
ZDAA12038B12HA	12	1.80	21.60	3500	187.00	16.60	56.9
ZDAA12038B24HA	24	1.00	34.80				
ZDAA12038B48HA	48	0.70	33.60				

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
120 x 120 x 38 mm, Version B (Ball bearing only)							
ZDAA12038B12LB	12	0.30	3.60	2000	84.76	4.56	32.5
ZDAA12038B24LB	24	0.15	3.60				
ZDAA12038B48LB	48	0.08	3.84				
ZDAA12038B12MB	12	0.40	4.80	2300	95.00	6.00	35.5
ZDAA12038B24MB	24	0.18	4.32				
ZDAA12038B48MB	48	0.10	4.80				
ZDAA12038B12HB	12	0.70	8.40	2600	105.94	7.60	38.5
ZDAA12038B24HB	24	0.30	7.20				
ZDAA12038B48HB	48	0.18	8.64				
ZDAA12038B12VB	12	0.90	10.80	2900	120.07	9.00	41.5
ZDAA12038B24VB	24	0.40	9.60				
ZDAA12038B48VB	48	0.25	12.00				
135 x 135 x 25 mm, LED Fan							
ZDAL13525X12LA	12	0.20	2.40	900	62.93	0.75	18.4
ZDAL13525X12MA	12	0.28	3.36	1200	90.68	1.33	23.3
ZDAL13525X12HA	12	0.33	3.96	1500	106.86	2.03	29.2
ZDAL13525X12VA	12	0.45	5.40	1800	129.76	2.88	33.9
135 x 135 x 25 mm, LED Fan, Version A (II)							
ZDAL13525X12LA	12	0.28	3.36	1500	78.46	1.64	35.9
ZDAL13525X12MA	12	0.38	4.56	1800	103.81	2.49	40.4
ZDAL13525X12HA	12	0.70	8.40	2000	123.00	3.48	44.1
138 x 138 x 20 mm							
ZDAA13820X12LA	12	0.20	2.40	1200	77.43	1.54	23.2
ZDAA13820X12MA	12	0.30	3.60	1500	95.62	2.08	28.2
ZDAA13820X12HA	12	0.40	4.80	1800	112.04	2.95	33.5
ZDAA13820X12VA	12	0.60	7.20	2100	132.46	3.77	38.1
140 x 140 x 25 mm							
ZDAA14025X12LA	12	0.20	2.40	900	74.63	0.94	15.5
ZDAA14025X12MA	12	0.30	3.60	1200	92.16	1.46	24.9
ZDAA14025X12HA	12	0.40	4.80	1500	119.34	2.17	31.7
ZDAA14025X12VA	12	0.50	6.00	1800	135.74	3.01	36.7
140 x 140 x 25 mm, Version A (II)							
ZDAA14025X12LA	12	0.10	1.80	900	62.14	0.92	13.9
ZDAA14025X12MA	12	0.15	2.16	1200	74.14	1.36	20.3
ZDAA14025X12HA	12	0.20	2.40	1500	88.62	1.84	25.5
140 x 140 x 25 mm, LED Fan							
ZDAL14025X12LA	12	0.20	2.40	1000	62.48	0.76	18.8
ZDAL14025X12MA	12	0.30	3.60	1300	78.50	1.20	27.6
ZDAL14025X12HA	12	0.40	4.80	1500	96.72	1.89	29.3
ZDAL14025X12VA	12	0.50	6.00	1800	108.98	2.06	33.7
140 x 140 x 25 mm, LED Fan, Version A (II)							
ZDAL14025X12LA	12	0.15	1.80	900	48.75	0.60	22.0
ZDAL14025X12MA	12	0.35	4.20	1500	82.84	1.80	33.0
ZDAL14025X12HA	12	0.45	5.40	1600	103.5	2.62	38.0
ZDAL14025X12VA	12	0.60	7.20	2100	109.52	3.23	40.0

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
Φ 180 x 25 mm, LED Fan							
ZDAL18025X12LA	12	0.28	3.36	800	59.42	0.57	22.5
ZDAL18025X12MA	12	0.38	4.56	1000	87.57	0.69	29.9
ZDAL18025X12HA	12	0.42	5.04	1200	101.27	0.90	36.9
Φ 220 x 30 mm, LED Fan							
ZDAL22030X12LA	12	0.25	3.00	350	69.84	0.21	14.4
ZDAL22030X12MA	12	0.45	5.40	500	124.71	0.43	21.0
ZDAL22030X12HA	12	0.60	7.20	650	164.30	0.72	27.8

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

DC Blower Series

RoHS Compliance

Functions for option
- Thermo Control Speed (Signal Output Function)
- RD (Rotate Detection Function)
- Automatic Restart & Locked Current Protection
- PWM (Pulse Width Modulation)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
45 x 45 x 8 mm							
ZDBA04508X05LB	5	0.10	0.50	4000	1.17	4.70	18.0
ZDBA04508X12LB	12	0.06	0.72				
ZDBA04508X05MB	5	0.15	0.75	5000	1.46	7.35	22.8
ZDBA04508X12MB	12	0.10	1.20				
ZDBA04508X05HB	5	0.30	1.50	5800	1.70	9.89	26.0
ZDBA04508X12HB	12	0.20	2.40				
50 x 50 x 10 mm							
ZDBA05010X05LB	5	0.10	0.50	4000	1.87	3.18	22.5
ZDBA05010X12LB	12	0.60	7.20				
ZDBA05010X24LB	24	0.40	9.60				
ZDBA05010X05MB	5	0.15	0.75	5000	2.40	5.64	28.0
ZDBA05010X12MB	12	0.10	1.20				
ZDBA05010X24MB	24	0.06	1.44				
ZDBA05010X12HB	12	0.15	1.80	6000	3.05	9.47	32.5
ZDBA05010X24HB	24	0.10	2.40				
ZDBA05010X12VB	12	0.22	2.64	7000	3.88	13.43	37.5
ZDBA05010X24VB	24	0.12	2.88				
50 x 50 x 15 mm							
ZDBA05015X05LB	5	0.10	0.50	4000	2.20	7.20	22.5
ZDBA05015X12LB	12	0.60	7.20				
ZDBA05015X24LB	24	0.40	9.60				
ZDBA05015X05MB	5	0.15	0.75	5000	3.10	13.60	28.0
ZDBA05015X12MB	12	0.10	1.20				
ZDBA05015X24MB	24	0.06	1.44				
ZDBA05015X12HB	12	0.15	1.80	6000	3.85	17.50	32.5
ZDBA05015X24HB	24	0.10	2.40				
ZDBA05015X12VB	12	0.22	2.64	7000	4.50	22.00	37.5
ZDBA05015X24VB	24	0.12	2.88				
60 x 60 x 15 mm							
ZDBA06015X05LB	5	0.22	1.10	3000	6.48	3.12	26.5
ZDBA06015X12LB	12	0.15	1.80				
ZDBA06015X24LB	24	0.10	2.40				
ZDBA06015X05MB	5	0.25	1.25	3600	9.01	3.50	29.8
ZDBA06015X12MB	12	0.18	2.16				
ZDBA06015X24MB	24	0.13	3.12				
ZDBA06015X12HB	12	0.20	2.40	4200	12.08	4.04	32.5
ZDBA06015X24HB	24	0.15	3.60				
ZDBA06015X12VB	12	0.25	3.00	4800	16.53	4.67	37.0
ZDBA06015X24VB	24	0.20	4.80				

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
70 x 70 x 15 mm							
ZDBA07015X12LB	12	0.12	1.44	2500	5.12	1.08	10.5
ZDBA07015X24LB	24	0.10	2.40				
ZDBA07015X12MB	12	0.15	1.80	3000	6.14	1.56	14.6
ZDBA07015X24MB	24	0.13	3.12				
ZDBA07015X12HB	12	0.20	2.40	3800	7.78	2.50	19.6
ZDBA07015X24HB	24	0.15	3.60				
ZDBA07015X12VB	12	0.25	3.00	4500	9.21	3.50	22.3
ZDBA07015X24VB	24	0.20	4.80				
75 x 75 x 25 mm							
ZDBA07525X12LA	12	0.13	1.56	2200	5.77	2.84	28.5
ZDBA07525X12MA	12	0.25	3.00	2700	7.33	4.70	33.0
ZDBA07525X12HA	12	0.35	4.20	3200	8.80	7.05	37.5
ZDBA07525X12VA	12	0.40	4.80	4200	12.24	14.01	42.3
75 x 75 x 25 mm, Version B							
ZDBA07525X05LB	5	0.30	1.50	2500	9.30	7.80	31.5
ZDBA07525X12LB	12	0.18	2.16				
ZDBA07525X24LB	24	0.09	2.16				
ZDBA07525X12MB	12	0.26	3.12	2900	11.00	11.95	36.5
ZDBA07525X24MB	24	0.13	3.12				
ZDBA07525X12HB	12	0.30	3.60	3200	12.10	14.10	39.5
ZDBA07525X24HB	24	0.15	3.60				
ZDBA07525X12VB	12	0.30	3.60	3700	13.10	15.30	43.2
ZDBA07525X24VB	24	0.15	3.60				
75 x 75 x 30 mm							
ZDBA07530X05LB	5	0.30	1.50	2400	9.50	7.95	32.5
ZDBA07530X12LB	12	0.18	2.16				
ZDBA07530X24LB	24	0.09	2.16				
ZDBA07530X12MB	12	0.20	2.40	2800	11.10	12.05	37.5
ZDBA07530X24MB	24	0.15	3.60				
ZDBA07530X12HB	12	0.25	3.00	3100	12.30	14.76	40.5
ZDBA07530X24HB	24	0.15	3.60				
ZDBA07530X12VB	12	0.35	4.20	3600	13.50	15.80	43.5
ZDBA07530X24VB	24	0.25	6.00				
97 x 97 x 33 mm							
ZDBA09733X12LB	12	0.26	3.12	2400	16.55	9.40	41.0
ZDBA09733X24LB	24	0.13	3.12				
ZDBA09733X12MB	12	0.35	4.20	2800	19.30	13.45	45.0
ZDBA09733X24MB	24	0.18	4.32				
ZDBA09733X12HB	12	0.50	6.00	3200	22.10	18.50	49.0
ZDBA09733X24HB	24	0.28	6.72				
ZDBA09733X12VB	12	0.80	9.60	3600	25.40	24.85	52.0
ZDBA09733X24VB	24	0.40	9.60				

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

Model No.	Rated Voltage	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise
	V	A	W	RPM	CFM	mmH_2O	dBA
120 x 120 x 32 mm							
ZDBA12032X12LB	12	0.45	5.40	2100	24.66	14.00	46.0
ZDBA12032X24LB	24	0.24	5.76				
ZDBA12032X48LB	48	0.12	5.76				
ZDBA12032X12MB	12	0.85	10.20	2500	28.94	21.10	50.5
ZDBA12032X24MB	24	0.36	8.64				
ZDBA12032X48MB	48	0.18	8.64				
ZDBA12032X12HB	12	1.10	13.20	2800	32.40	26.95	53.5
ZDBA12032X24HB	24	0.50	12.00				
ZDBA12032X48HB	48	0.25	12.00				
ZDBA12032X12VB	12	1.25	15.00	3100	36.00	36.60	56.0
ZDBA12032X24VB	24	0.63	15.12				
ZDBA12032X48VB	48	0.30	14.40				

Bearing system: X= S (sleeve bearings), B (ball bearings), D (duro bearings), or F (fluid dynamic bearings)

AC Fan Series

RoHS Compliance
Frame material: Aluminum
Impeller material: Plastic

Model No.	Rated Voltage	Frequency	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise	UL	TUV	CE
	V	Hz	A	W	RPM	CFM	mmH_2O	dBA			
80 x 80 x 25 mm											
ZAAN08025X11LC	115	50/60	0.07/0.07	9.0/8.0	2000/2200	13/14	2.70	20/21	•	•	•
ZAAN08025X22LC	220/240	50/60	0.05/0.05	9.0/8.0	2000/2200	13/14	2.70	20/21	•	•	•
ZAAN08025X11MC	115	50/60	0.09/0.08	11.0/10.0	2300/2600	16/19	3.00/3.50	24/30	•	•	•
ZAAN08025X22MC	220/240	50/60	0.06/0.06	11.0/10.0	2300/2600	16/19	3.00/3.50	24/30	•	•	•
ZAAN08025X11HC	115	50/60	0.12/0.10	14.0/13.5	2550/2900	18/22	3.30/4.83	29/33	•	•	•
ZAAN08025X22HC	220/240	50/60	0.07/0.06	14.0/13.5	2550/2900	18/22	3.30/4.83	29/33	•	•	•
80 x 80 x 38 mm											
ZAAN08038X11LC	115	50/60	0.10/0.09	10.0/9.0	1800/1600	18/17	2.90/2.70	19/17	•	•	•
ZAAN08038X22LC	220/240	50/60	0.08/0.07	10.0/9.0	1800/1600	18/17	2.90/2.70	19/17	•	•	•
ZAAN08038X11MC	115	50/60	0.13/0.11	14.0/12.0	2200/2400	22/23	3.01/3.60	27/31	•	•	•
ZAAN08038X22MC	220/240	50/60	0.09/0.08	14.0/12.0	2200/2400	22/23	3.01/3.60	27/31	•	•	•
ZAAN08038X11HC	115	50/60	0.15/0.13	16.0/14.0	2400/2900	24/31	3.30/4.83	31/35	•	•	•
ZAAN08038X22HC	220/240	50/60	0.11/0.10	16.0/14.0	2400/2900	24/31	3.30/4.83	31/35	•	•	•
92 x 92 x 25 mm											
ZAAN09225X11LC	115	50/60	0.07/0.07	9.0/8.0	2000/2200	21/22	2.60/2.70	22/24	•	•	•
ZAAN09225X22LC	220/240	50/60	0.05/0.05	9.0/8.0	2000/2200	21/22	2.60/2.70	22/24	•	•	•
ZAAN09225X11MC	115	50/60	0.09/0.08	11.0/10.0	2300/2600	25/30	3.00/3.50	25/33	•	•	•
ZAAN09225X22MC	220/240	50/60	0.06/0.06	11.0/10.0	2300/2600	25/30	3.00/3.50	25/33	•	•	•
ZAAN09225X11HC	115	50/60	0.12/0.10	14.0/13.5	2550/2900	30/37	3.30/4.83	32/37	•	•	•
ZAAN09225X22HC	220/240	50/60	0.07/0.06	14.0/13.5	2550/2900	30/37	3.30/4.83	32/37	•	•	•
92 x 92 x 38 mm											
ZAAN09238X11LC	115	50/60	0.10/0.09	10.0/9.0	1800/1600	24/23	3.00/2.70	20/18			•
ZAAN09238X22LC	220/240	50/60	0.08/0.07	10.0/9.0	1800/1600	24/23	3.00/2.70	20/18			•
ZAAN09238X11MC	115	50/60	0.13/0.11	14.0/12.0	2200/2400	28/32	3.50/4.20	27/31			•
ZAAN09238X22MC	220/240	50/60	0.09/0.08	14.0/12.0	2200/2400	28/32	3.50/4.20	27/31			•
ZAAN09238X11HC	115	50/60	0.16/0.14	16.0/14.0	2400/2900	43/50	4.50/5.50	32/36			•
ZAAN09238X22HC	220/240	50/60	0.12/0.11	16.0/14.0	2400/2900	43/50	4.50/5.50	32/36			•
120 x 120 x 25 mm											
ZAAN12025X11LC	115	50/60	0.13/0.11	14.0/13.0	1800/1700	50/48	2.78/2.68	30/29	•	•	•
ZAAN12025X22LC	220/240	50/60	0.05/0.05	14.0/13.0	1800/1700	50/48	2.78/2.68	30/29	•	•	•
ZAAN12025X11MC	115	50/60	0.16/0.15	16.0/15.0	2000/2000	58/58	3.00/3.20	35/35	•	•	•
ZAAN12025X22MC	220/240	50/60	0.07/0.07	16.0/15.0	2000/2000	58/58	3.00/3.20	35/35	•	•	•
ZAAN12025X11HC	115	50/60	0.19/0.18	19.0/18.0	2200/2400	66/78	3.56/4.06	38/40	•	•	•
ZAAN12025X22HC	220/240	50/60	0.09/0.09	19.0/18.0	2200/2400	66/78	3.56/4.06	38/40	•	•	•

Bearing system: X= S (sleeve bearings) or B (ball bearings)

Model No.	Rated Voltage	Frequency	Rated Current	Rated Input Power	Speed (±10%)	Max Air Flow	Max Air Pressure	Noise	UL	TUV	CE
	V	Hz	A	W	RPM	CFM	mmH_2O	dBA			
120 x 120 x 38 mm											
ZAAN12038X11LC	115	50/60	0.14/0.12	12.0/10.5	2000/1800	66/60	4.80/4.50	30/29	•	•	•
ZAAN12038X22LC	220/240	50/60	0.08/0.08	12.0/10.5	2000/1800	66/60	4.80/4.50	30/29	•	•	•
ZAAN12038X11MC	115	50/60	0.17/0.15	16.0/14.0	2400/2200	75/70	5.60/5.00	37/35	•	•	•
ZAAN12038X22MC	220/240	50/60	0.09/0.08	16.0/14.0	2400/2200	75/70	5.60/5.00	37/35	•	•	•
ZAAN12038X11HC	115	50/60	0.22/0.18	21.0/18.0	2650/2950	91/113	7.35/8.62	40/45	•	•	•
ZAAN12038X22HC	220/240	50/60	0.12/0.11	20.0/19.0	2650/2950	91/113	7.35/8.62	40/45	•	•	•
ZAAN12038X22VC	220/240	50/60	0.14/0.12	22.0/21.0	2700/3100	95/115	8.38/9.65	42/47	•	•	•
172 x 51 x 51 mm											
ZAAN17251X11LC	115	50/60	0.35/0.35	26.0/25.0	1900/1500	125/105	8.00/6.00	32/30			•
ZAAN17251X22LC	220/240	50/60	0.16/0.16	26.0/25.0	1900/1500	125/105	8.00/6.00	32/30			•
ZAAN17251X11MC	115	50/60	0.41/0.39	32.0/30.0	2400/2300	170/160	15.0/14.0	41/40			•
ZAAN17251X22MC	220/240	50/60	0.19/0.18	30.0/28.0	2400/2300	170/160	15.0/14.0	41/40			•
ZAAN17251X11HC	115	50/60	0.50/0.45	37.0/36.0	2700/3100	190/235	16.0/17.78	45/50			•
ZAAN17251X22HC	220/240	50/60	0.22/0.21	34.0/33.0	2700/3100	190/235	16.0/17.78	45/50			•
ZAAN17251X11VC	115	50/60	0.22/0.23	25.0/27.0	2800/3200	203/239	17.1/18.88	51/58			•
ZAAN17251X22VC	220/240	50/60	0.11/0.11	25.0/26.0	2800/3200	203/239	17.1/18.88	51/58			•
Φ 220 x 60 mm											
ZAAN22060B11HC	115	50/60	0.76/0.77	57.0/58.0	2400	388	25.40	56			•
ZAAN22060B22HC	220/240	50/60	0.28/0.29	40.0/38.0	2400	388	25.40	56			•
ZAAN22060B11VC	115	50/60	0.42/0.46	50.0/60.0	2800/3200	400/450	28.0/36.0	61/66			•
ZAAN22060B22VC	220/240	50/60	0.26/0.26	50.0/60.0	2800/3200	400/450	28.0/36.0	61/66			•

Bearing system: X= S (sleeve bearings) or B (ball bearings)

NOTE :

Living In Comfort PLUS

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