

L3

1U Liquid Cooler

PRODUCT SPECIFICATIONS



DYNATRON

The Thermal Solution Architect

NEW PRODUCT SPEC SHEET

Model Number: L3

- Liquid Cooling Solution Recommended for CPU Models As Following,
 - Intel® Processor, Socket LGA2011, Square ILM Mounting
 - Intel® Processor, Socket LGA2066, Square ILM Mounting
 - Intel® Processor, Socket LGA1356, 1366
 - Intel® Processor, Socket LGA1150, 1151, 1155, 1156
 - Intel® Processor, Socket LGA1200
 - Intel® Processor, Socket LGA1700
 - AMD® Processor, Socket AM2, AM2+, AM3, AM4, AM5, FM1, FM2

- For One-U Server

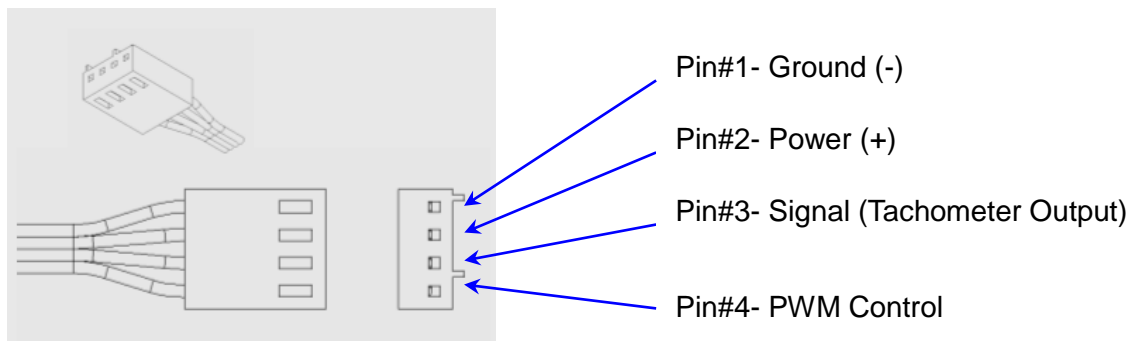
Overall Description :

- Cold Plate Module with Copper Base
- Space Saver Light Weight Radiator
- 4cm Cooling Fans with 4-Pin PWM Connector
- Stand-alone Water Pump with Powerful Flow Rate 1.7 Liter Per Minute
- 30cm Black Pair EPDM Tube Assembled
- Mounting Accessories are included
- Shin-Etsu 7762 Thermal Compound Pre-Printed on Base
- Support CPU Overclocking Power 250 Watts Heat Dissipation

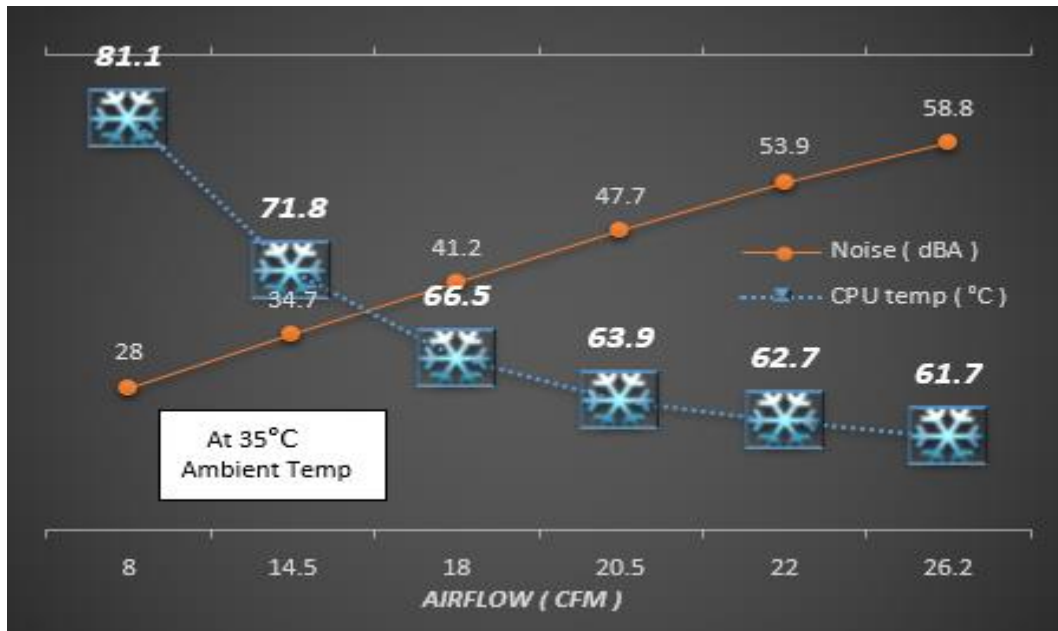
Cooling Fan Specification:

- Model Number: DF124028BM - PWMG
- Dimension: 40mm x 40mm x 28mm
- Bearing Type: Ball, Dual
- Rated Voltage: 12V
- Rated Speed:
 - At Duty Cycle 0~20%: 3300±10% RPM
 - At Duty Cycle 50%: 5700±10% RPM
 - At Duty Cycle 100%: 12000±10% RPM

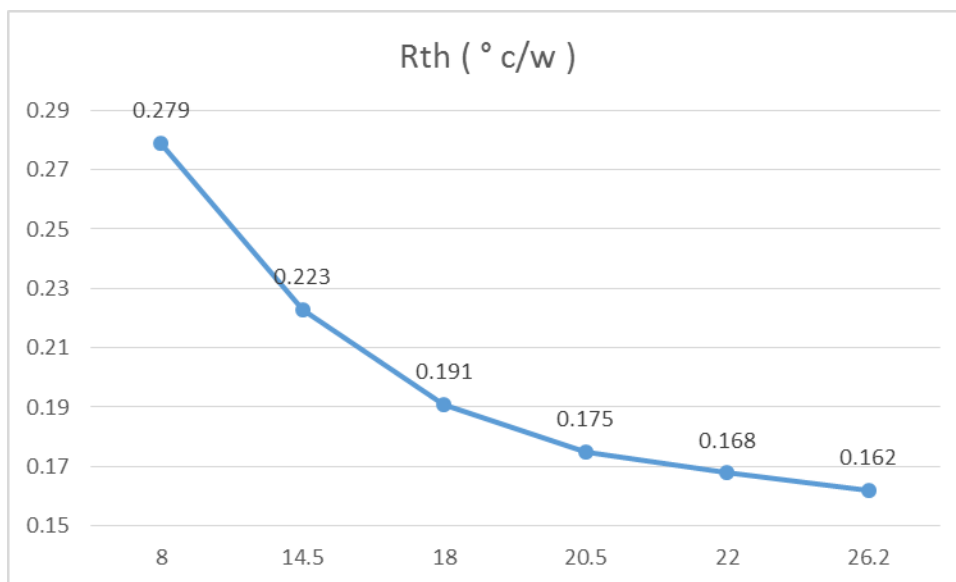
- Rated Input Power:
 - At Duty Cycle 0~20%: 0.72 W
 - At Duty Cycle 50%: 1.56 W
 - At Duty Cycle 100%: 8.40 W
- Rated Airflow:
 - At Duty Cycle 0~20%: 5.92 CFM
 - At Duty Cycle 50%: 10.23 CFM
 - At Duty Cycle 100%: 21.53 CFM
- Rated Static Pressure:
 - At Duty Cycle 0~20%: 1.73 mm-H₂O
 - At Duty Cycle 50%: 5.17 mm-H₂O
 - At Duty Cycle 100%: 22.91 mm-H₂O
- Rated Acoustical Noise:
 - At Duty Cycle 0~20%: 25.9 dBA
 - At Duty Cycle 50%: 37.8 dBA
 - At Duty Cycle 100%: 54.0 dBA
- Lead Wire Pin Out Diagram :



Liquid Cooler L3 Thermal Performance (Airflow VS. CPU Temperature & Noise)



(Airflow VS. Thermal Resistance)



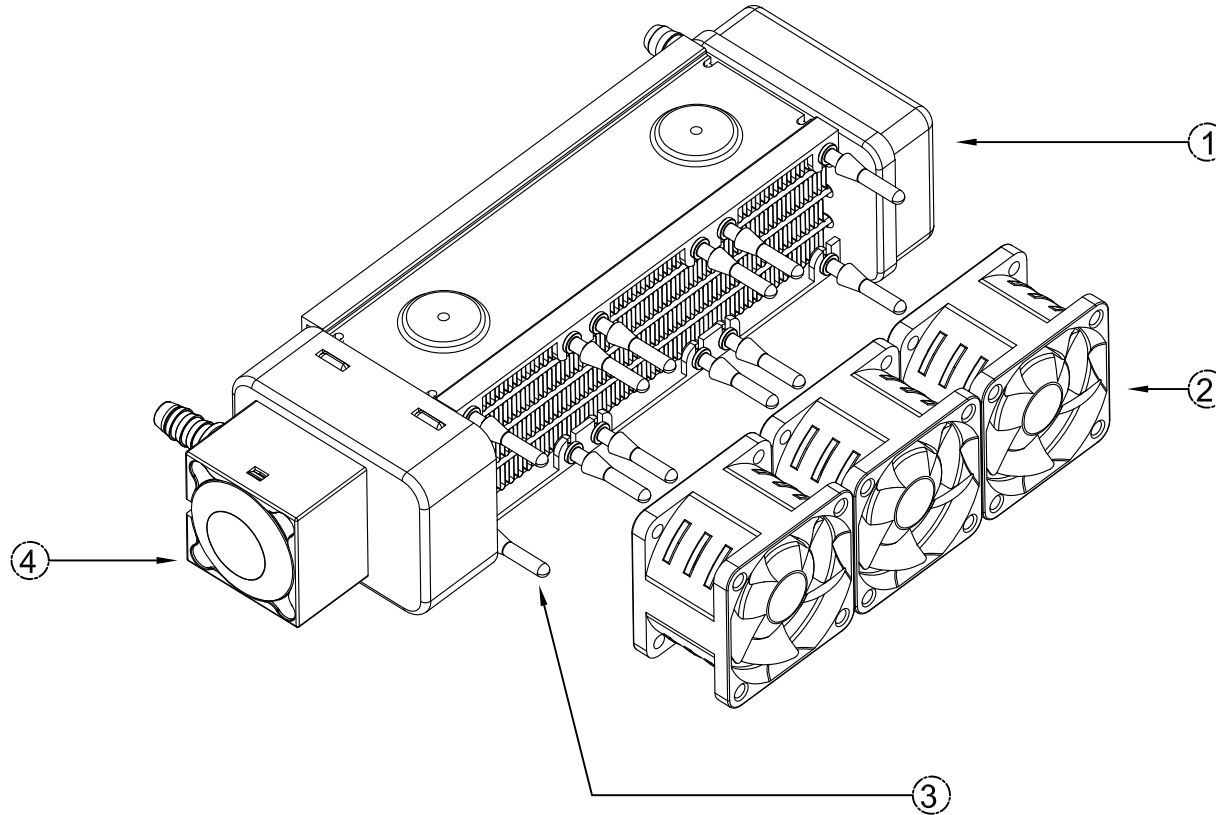
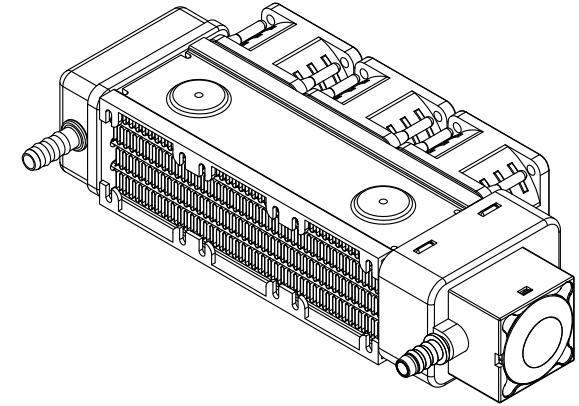
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REV#	DESCRIPTION	CHECKER	DATE
0.0	INITIAL RELEASE	LANG	10/08/2015

ASSEMBLY PARTS


WHOLE SET OF CONDENSER



4	Pump Enclosure	Plastic	1
3	Grommet	Rubber	12
2	Fan, DF124028BM-PWM, 12000RPM	Plastic	3
1	Radiator	Aluminum Alloy	1
ITEM#	DESCRIPTION	MATERIAL	QTY.

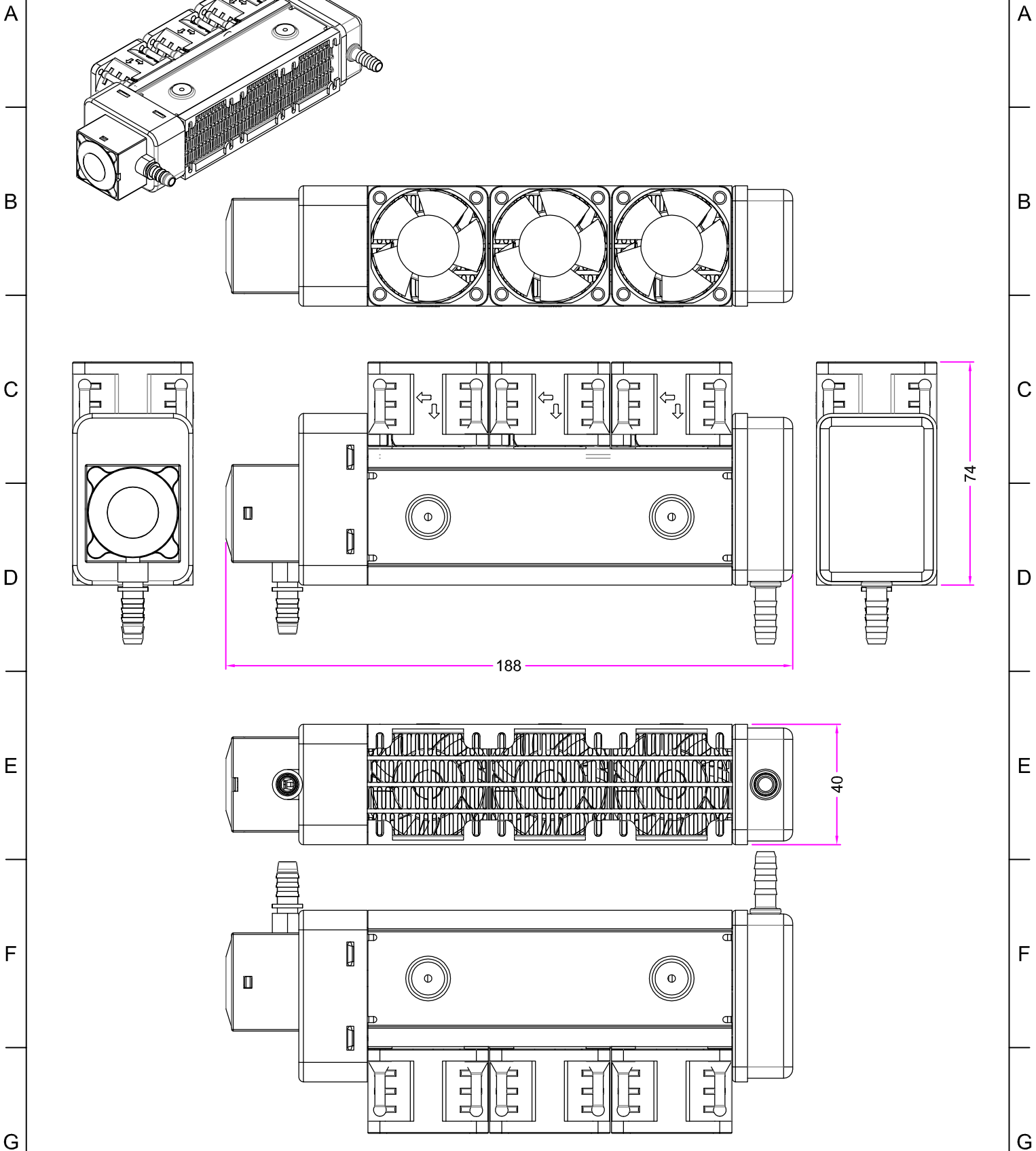
Notes:

1. The Figure is For Reference Only, and Not For Scale
2. Overall Dimension: 188 x 74 x 40 mm

DATE	NAME	 DYNATRON CORPORATION
DRAWN	ENGR	
CHECKED	LANG	
ENG. APPR.		
MFG. APPR.		
Q.A.		TITLE: 1U Liquid Cooler L3 Condenser BOM & Exploded Assembly Drawing
COMMENTS:		
DWG. No:		REV
DYN-EP-L3		0.0

1 2 3 4 5 6 7

REV#	DESCRIPTION	CHECKER	DATE
0.0	INITIAL RELEASE	LANG	03/31/2015



	NAME	DATE
DRAWN BY	ENGR	03/31/15
CHECKED BY	LANG	03/31/15
ENG. APPROVED		
MFG. APPROVED	-	-



DYNATRON CORPORATION

TOP MOTOR

TITLE: 1U Server Liquid Cooler Condenser L3
Overall Dimension Drawing

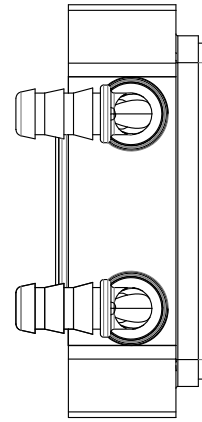
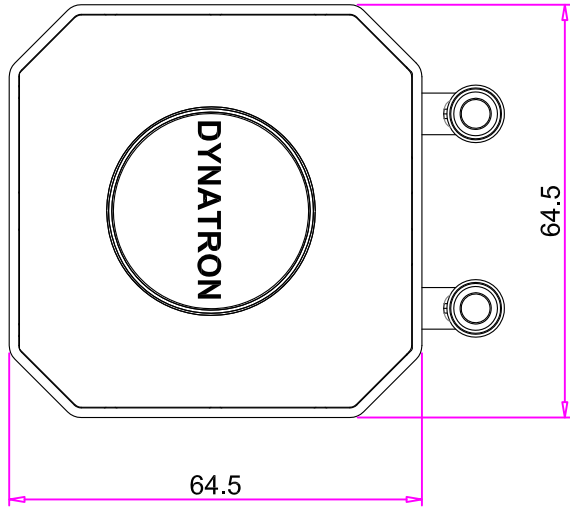
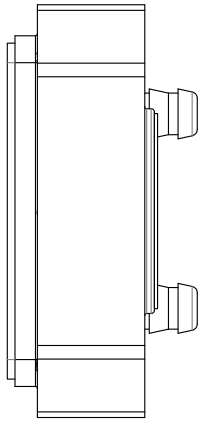
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VIEW	
UNITS	MM

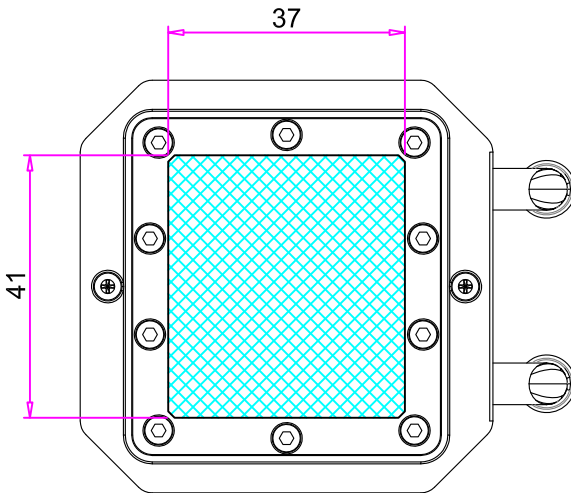
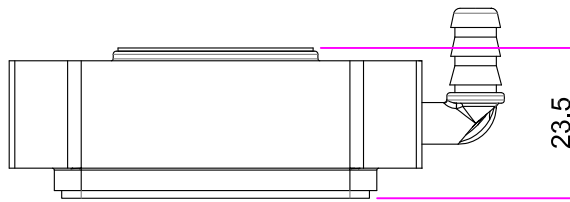
DWG. No: REV. 0.0

1 2 3 4 5 6 7

REV#	DESCRIPTION	CHECKER	DATE
0.0	INITIAL RELEASE	LANG	10/07/15
1.0	ADD THERMAL GREASE PRE-APPLIED, F-3	LANG	12/04/15



0.10
Ra < 1.2
Grind



ITEM#	DESCRIPTION	MATERIAL	QTY.
8	Thermal Grease, Pre-applied	Shin-Etsu 7762	1
7	Retaining Ring	Rubber	1
6	O-ring	Rubber	6
5	Nipple, 90° Angle	Plastic	2
4	Cold Plate Screw	Steel	10
3	Cold Plate Lid Screw	Steel	2
2	Cold Plate Lid	Plastic	1
1	Cold Plate Set	Enclosure Base	1
		Base	

	NAME	DATE
DRAWN BY	ENGR	12/04/2015
CHECKED BY	LANG	12/04/2015
ENG.APPROVED		
MFG.APPROVED	-	-



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TITLE: Liquid Cooler Cold Plate
BOM & Overall Dimension Drawing

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VIEW	
UNITS	MM

DWG. No: **DYN-BD-LCP**

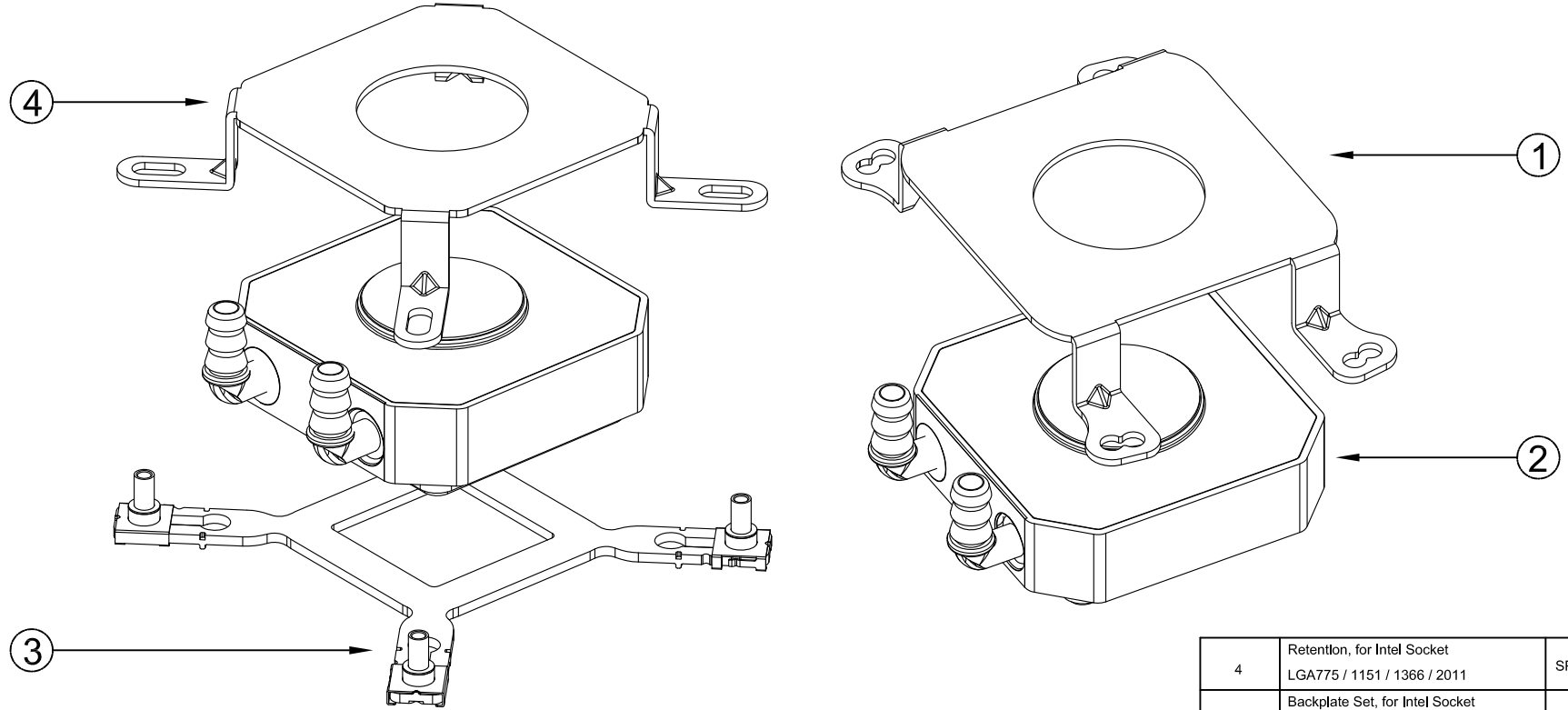
REV. **1.0**

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REV#	DESCRIPTION	CHECKER	DATE
0.0	Initial Release	LANG	10/07/15

ASSEMBLY PARTS



4	Retention, for Intel Socket LGA775 / 1151 / 1366 / 2011	SPCC	1
3	Backplate Set, for Intel Socket LGA775 / 1151 / 1366 / 2011	Steel	1
2	Cold Plate Set	Enclosure	Plastic
		Base	Copper 1100
1	Retention for Intel Socket2011 Narrow for AMD Socket AM3 / AM2 / FM1 / FM2	SPCC	1
ITEM NO.	DESCRIPTION	MATERIAL	QTY.

DATE	NAME	 DYNATRON CORPORATION	
DRAWN	10/07/15 ENGR		TITLE:
CHECKED	10/07/15 LANG		Liquid Cooler Cold Plate BOM & Exploded Drawing
ENG. APPR.			
MFG. APPR.			
Q.A.			
COMMENTS:		DWG. No:	REV
		DYN-EP-LCP	0.0



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

Specification for Approval

Customer:		
Model Number:	watercooler pump	
Part Number:		
Issued Date:	Wednesday, August 31, 2016	
Version:	A	
Customer Approval		
Approval:	Check:	
Corporate Headquarters Dynatron Corporation 33200 Western Avenue Union City, CA 94587 U.S.A. Tel: 510-498-8888 Fax: 510-498-8488	<i>Taipei Office</i> <i>(Taiwan, R.O.C.)</i> 8F, No. 35, Lane:221 Gang Cian. Road, Taipei, Taiwan, R.O.C. Tel: 886-2-27995799 (Rep.) Fax: 886-2-2799-9577	Manufactory TOP MOTOR TECHNOLOGY(HUI ZHOU)CO,LTD Baishi Village, QiuchangTown, Huiyang Dist, HuizhouCity, Guangdong Province, P.R.China Tel: 86-752-822-8000 (Rep.) Fax: 86-752-822-8999
Approval:	Check:	Handler:
Simon Wang	-	Hui mei



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

	CONTENTS	Page
1.	SCOPE	3
2.	ELECTRICAL CHARACTERISTICS	3
3.	MECHANICAL CHARACTERISTICS	4
4.	ENVIRONMENTAL	4
5.	PROTECTION	5
6.	ATTACHMENTS	5
	6.1. Product Dimension	6



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TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

1. SCOPE

This specification defines the electrical and mechanical characteristics of the AC / DC Brush Less (Sleeve Bearing / 2-Balls Bearing) axial flow fan, which is carefully designed and manufactured for your special needs by Dynatron Corporation.

2. ELECTRICAL CHARACTERISTICS

Items		Description
1.	Rated Voltage	DC 12 V
2.	Start Voltage	DC 9 V
3.	Operating Voltage	10.2V~13.8V
4.	Flow Rate (minimal value)	1.7 LPM
5.	Input Current	0.25 A (Max)
6.	Input Power	3.0 W
7.	Speed	4000RPM \pm 10%
8.	Insulation Resistance – Between Frame and Terminal	10 M ohm at DC 500 V
9.	Dielectric Strength – Between Frame and Terminal	5 mA (Max.) @ AC 500 V 60 Hz 1 min.
10.	Life – Continuous operating under normal temperature (40 °C or 104 °F)	50,000 hours
11.	Rotation	Counterclockwise Air Discharged
12.	Autorestart Time	3-5sec
13.	Lead Wires	UL 2468, awg 26 or Equivalent “-”: Black; “+”: Black; “s”: Black.
14.	Acoustical Noise	30.00dBA



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3. MECHANICAL CHARACTERISTICS

Items		Description
1.	Dimension	Display as Drawing
2.	Frame	PPS UL94V-0 (Black GP)
3.	Impeller	PPS UL94V-0 (Black GP)
4.	Bearing System	Ceramic Bearing
5.	Weight	56±5grams

4. ENVIRONMENTAL

Items		Description
1.	Operating Temperature	- 10 °C ~ + 65 °C (65 %RH)
2.	Storage Temperature	- 30 °C ~ + 70 °C (65 %RH)
3.	Vibration Test	Displacement Amplitude: 0.75mm(Equivalent 10G) Frequency Range: 10Hz<->55Hz/30SEC. Linear Scanning 120 Cycle Endurance Timer Per Axis: 30Min. Orientation:X,Y,Z.
4.	Drop Test	Motor withstands one free body drop from 30 cm in high onto 10 mm thickness of wooden board for each of the three faces in minimum packing condition.
5.	Acoustic Noise	30.00dBA – Curve (30.50Max) Measuring Condition – Under rated voltage in semi-anechoic chamber equipment sound level meter. (Figure A.)

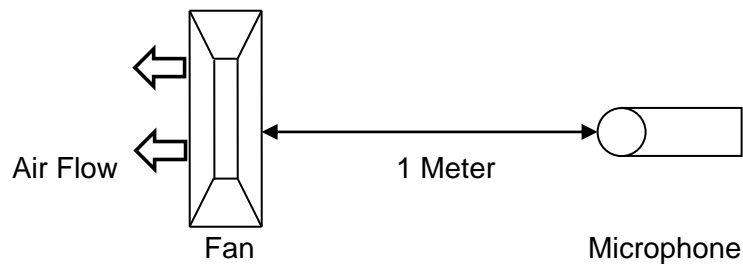


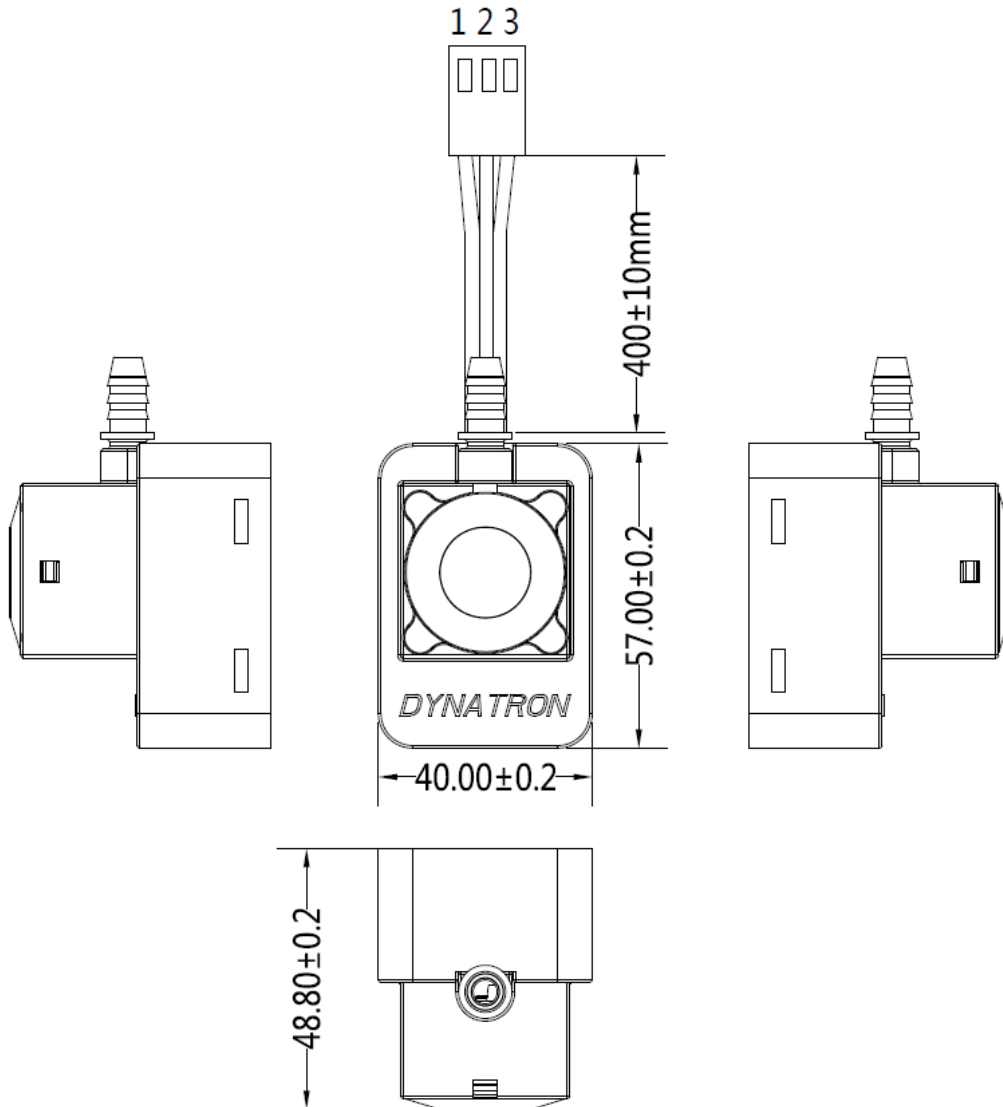
Figure A – Noise Level is measure at rated voltage in anechoic chamber in free air as above.



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DIMENSION:



1.Note:

1.Leed Wire:UL2468 #26AWG

PIN 1: Black Wire ----Ground

PIN 2: Black Wire ----Power

PIN 3: Black Wire ----Signal

2.Connector:2510-3P