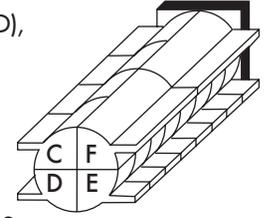


Order example (see drawing on the right)

Semiconductor cooling package, consisting of 4 heatsinks LA 1 - 2 A (segment C), 1 heatsink LA 1 - 8 A (segment D), 8 heatsinks LA 1 - 1 A (segment E) and 2 heatsinks LA 1 - 4 A (segment F).
Total dissipation 1280 W.



How to tick off?

1. Tick on the left hand side the circles corresponding to an eight element long package, and also at the end of each row of the segments C, D, E and F to define the length.
2. For segment C: 4 marks for four double length elements, insulated from each other. This indicates 4 units LA 1 - 2.
3. For segment D: 1 mark for one single length of heatsink, 290.5 mm long. This indicates 1 unit LA 1 - 8.
4. For segment E: 8 marks for 8 elements of the standard length (35 mm) each insulated from the other. This indicates 8 units LA 1 - 1.
5. For segment F: 2 marks for each two heatsinks of 144.5 mm length, each insulated from the other. This indicates 2 units LA 1 - 4.
6. For each segment the profile types, either A or B, must be indicated for aggregate LA 1.
7. In the rectangle corresponding to the heatsink elements, the pin layouts for the transistor should also be indicated.
8. In the order form please indicate whether the cooling-aggregate is to be supplied with a fan and whether this is equipped with a protection-grid, or if it is to be supplied without a fan.

Upon request, it is possible to supply fans for special voltages and higher temperatures.

LA 1 **LA 2**

date: _____

pieces p. order: _____

company: _____

name/dept.: _____

town: _____

street: _____

signature: _____

with fan 230 Volt Volt
 protection grid voltage: ~ =
 without fan ~ =

length units: mm	segment: C	segment: D	segment: E	segment: F
35.0 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
71.5 <input type="checkbox"/>	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
108.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
144.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
181.0 <input type="checkbox"/>	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
217.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
254.0 <input type="checkbox"/>	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
290.5 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole
327.0 <input type="checkbox"/>	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
363.5 <input type="checkbox"/>	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input checked="" type="checkbox"/> Typ. A <input type="checkbox"/> B <input checked="" type="checkbox"/> TO-3 holder <input checked="" type="checkbox"/> TO-3 hole <input checked="" type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A <input type="checkbox"/> B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole

C **D** **E** **F**

cable connection

The segment-line C-D-E-F is shown against air-escape orifice, thus on the other side of the axial fan. From this view also tick off cable terminal with axial fan.

Please check off here total length of the cooling aggregate.



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A

LA 1 ○

LA 2 ○

B

date: _____

pieces p. order: _____

company: _____

C

name/dept.: _____

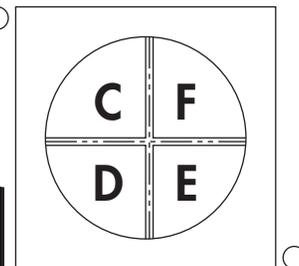
town: _____

street: _____

D

signature: _____

- with fan 230 Volt Volt
 protection grid voltage:
 without fan ~ =



cable connection

length units:
mm

○

segment:

segment:

segment:

segment:

35.0 1 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

71.5 2 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

108.0 3 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 Fassung
 TO-3 Lochung
 Preßfit-Bohrg.

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

144.5 4 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

181.0 5 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

217.5 6 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

254.0 7 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

290.5 8 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

327.0 9 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

363.5 10 ○

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

 Typ. A ○ B
 TO-3 holder
 TO-3 hole
 pressfit hole

C

D

E

F

Please check off here total length of the cooling aggregate.

The segment-line C-D-E-F is shown against air-escape orifice, thus on the other side of the axial fan. From this view also tick off cable terminal with axial fan.

N

D 3



LA 1 ○

LA 2 ○

date: _____

pieces p. order: _____

company: _____

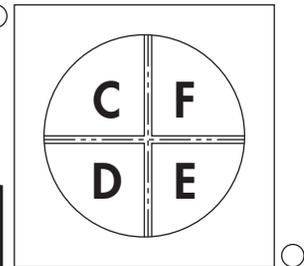
name/dept.: _____

town: _____

street: _____

signature: _____

with fan 230 Volt Volt
 protection grid voltage:
 without fan ~ ○ =



cable connection

length units:
mm

segment:	segment:	segment:	segment:
<input type="checkbox"/> Typ. A ○ B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A ○ B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A ○ B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole	<input type="checkbox"/> Typ. A ○ B <input type="checkbox"/> TO-3 holder <input type="checkbox"/> TO-3 hole <input type="checkbox"/> pressfit hole
35.0 1			
71.5 2			
108.0 3	<input type="checkbox"/> Typ. A ○ B <input type="checkbox"/> TO-3 Fassung <input type="checkbox"/> TO-3 Lochung <input type="checkbox"/> Präßfit-Bohrg.		
144.5 4			
181.0 5			
217.5 6			
254.0 7			
290.5 8			
327.0 9			
363.5 10			
	C	D	E F

The segment-line C-D-E-F is shown against air-escape orifice, thus on the other side of the axial fan. From this view also tick off cable terminal with axial fan.

Please check off here total length of the cooling aggregate.



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A

Segment cooling aggregates

B

C

D

E

F

G

H

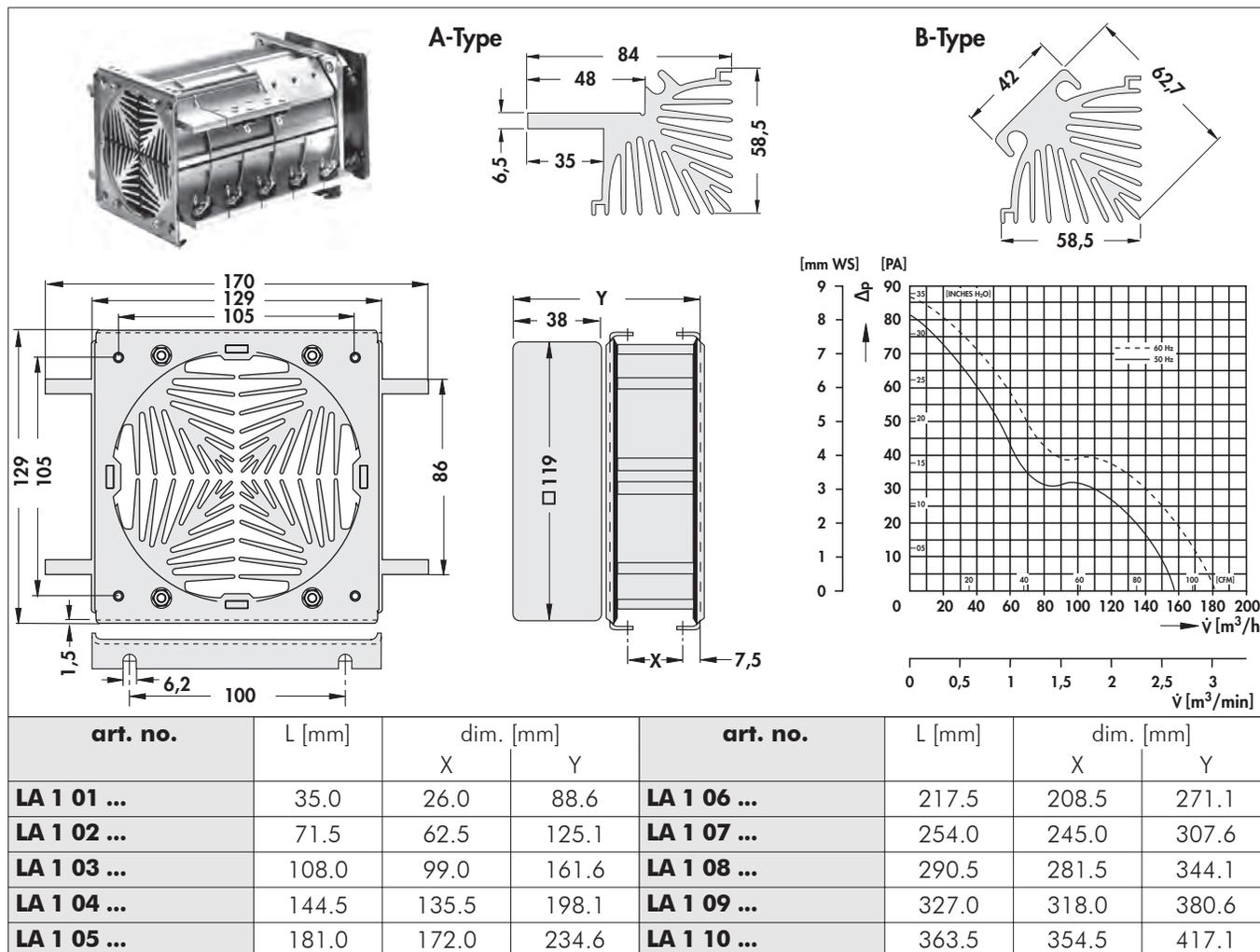
I

K

L

M

N



... for A-types: please add an "A", for B-types: please add a "B".

L: unit lengths of the segments incl. insulation; **X:** mounting distance; **Y:** length of the cooling aggregate incl. fan

24 V DC fan on request

In case of order please use order form.

segments also available in meter length:

art. no. for A-type: LA 1 1000 A; art. no. for B-type: LA 1 1000 B

Other fan types and fan voltages on request.

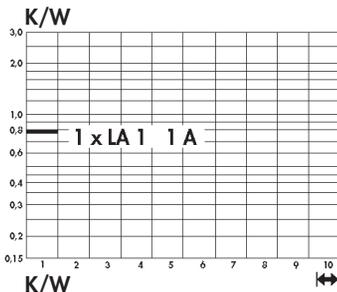
Technical data of the fans

	... 230
type	ebmpapst 4656N
dimensions	119x119x38 mm
tension	230 V AC
power inout	19 W
max. air volume	160 m^3/h
temperature range	-40°C... +85°C
noise level	47 dB(A)
speed	2,650 min^{-1}
weight	550 g
failure rate (L₁₀)	L ₁₀ > 37,500 h (40°C)

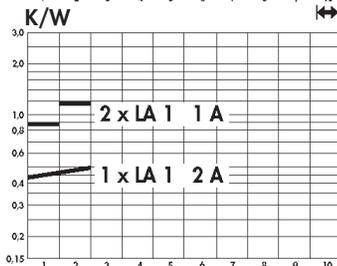


Thermal resistance LA 1

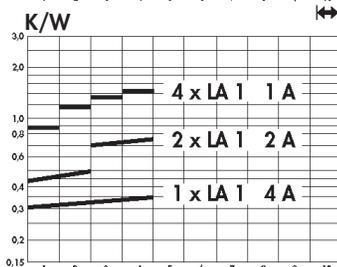
The thermal resistance in the following diagrams is given on the base of a total dissipation of 40 Watt per heatsink of the „A“-type. When using „B“-types this value increases by 3 %.



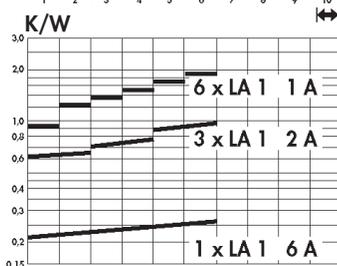
1. Cooling aggregate consisting of 4 heatsinks LA 1 - 1 A.
Total dissipation 160 W.



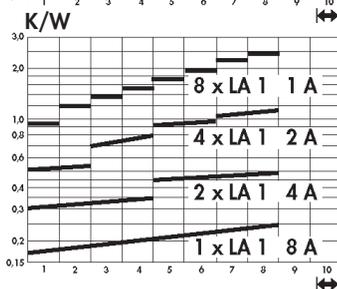
2. Cooling aggregate consisting of 4 heatsinks LA 1 - 1 A and 2 x 1 heatsink LA 1 - 2 A.
Total dissipation 320 W.



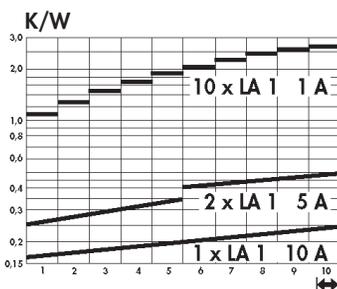
3. Cooling aggregate consisting of 4 heatsinks LA 1 - 1 A, 2 heatsinks LA 1 - 2 A and 2 x 1 heatsink LA 1 - 4 A. Total dissipation 640 W.



4. Cooling aggregate consisting of 6 heatsinks LA 1 - 1 A, 3 heatsinks LA 1 - 2 A and 2 x 1 heatsink LA 1 - 6 A. Total dissipation 960 W.



5. Cooling aggregate consisting of 8 heatsinks LA 1 - 1 A, 4 heatsinks LA 1 - 2 A, 2 heatsinks LA 1 - 4 A and 1 heatsink LA 1 - 8 A. Total dissipation 1280 W.

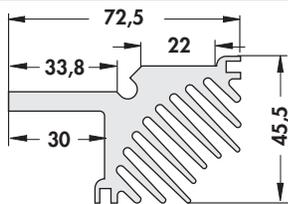


6. Cooling aggregate consisting of 10 heatsinks LA 1 - 1 A, 2 heatsinks LA 1 - 5 A, and 2 x 1 heatsink LA 1 - 10 A. Total dissipation 1600 W.

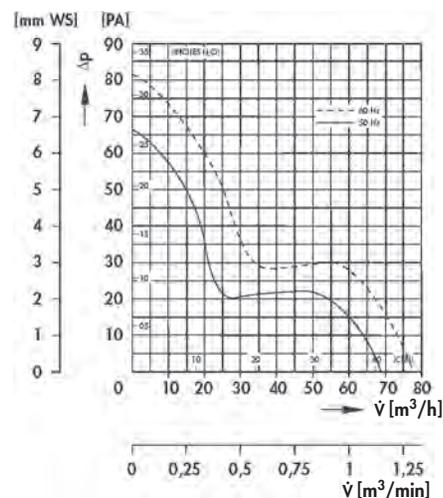
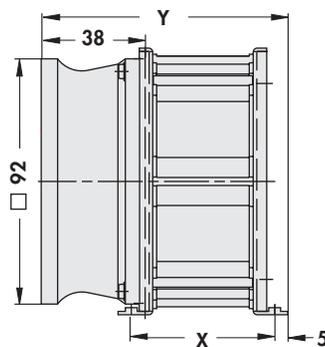
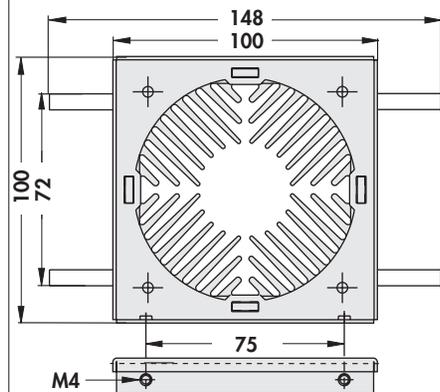
A

Segment cooling aggregates

B



C



D

E

F

art. no.	L [mm]	dim. [mm]		art. no.	L [mm]	dim. [mm]	
		X	Y			X	Y
LA 2 01 ...	35.0	54.2	92.0	LA 2 06 ...	217.5	236.7	274.5
LA 2 02 ...	71.5	90.7	128.5	LA 2 07 ...	254.0	273.2	311.0
LA 2 03 ...	108.0	127.2	165.0	LA 2 08 ...	290.5	309.7	347.5
LA 2 04 ...	144.5	163.7	201.5	LA 2 09 ...	327.0	346.2	384.0
LA 2 05 ...	181.0	200.2	238.0	LA 2 10 ...	363.5	382.7	420.5

G

L: unit lengths of the segments incl. insulation; **X:** mounting distance; **Y:** length of the cooling aggregate incl. fan

H

24 V DC fan on request

In case of order please use order form.

segments also available in meter length: **art. no. LA 2 1000**

Other fan types and fan voltages on request.

I

Technical data of the fans

	... 230
type	ebmpapst 3656
dimensions	92x92x38 mm
tension	230 V AC
power inout	12 W
max. air volume	75 m ³ /h
temperature range	-40°C... +75°C
noise level	37 dB(A)
speed	2,700 min ⁻¹
weight	420 g
failure rate (L₁₀)	L ₁₀ > 52,500 h (40°C)

K

L

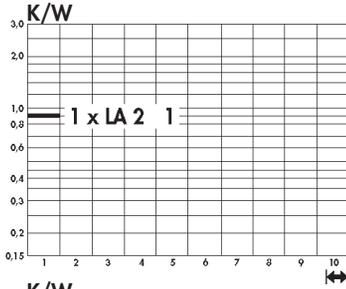
M

N

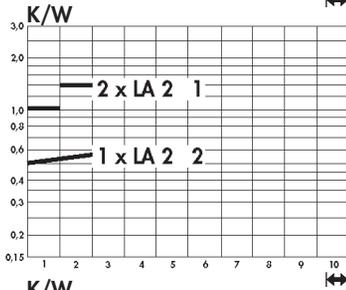
D 7

Thermal resistance LA 2

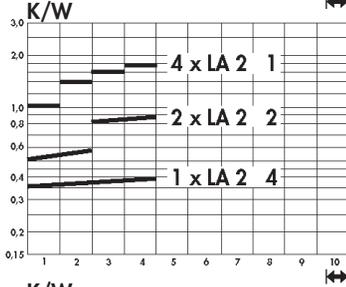
The thermal resistance in the following diagrams is given on the base of a total dissipation of 40 Watt per heatsink of the „A“-type.



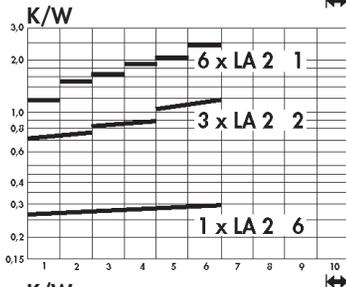
1. Cooling aggregate consisting of 4 heatsinks LA 2 - 1. Total dissipation 160 W maximal.



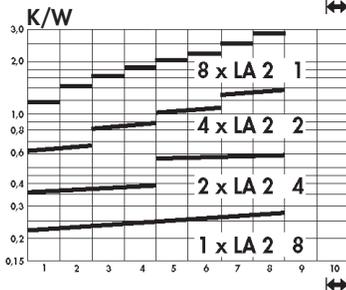
2. Cooling aggregate consisting of 4 heatsinks LA 2 - 1 and 2 x 1 heatsink LA 2 - 2. Total dissipation 320 W.



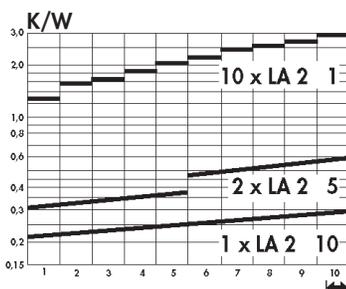
3. Cooling aggregate consisting of 4 heatsinks LA 2 - 1, 2 heatsinks LA 2 - 2 and 2 x 1 heatsink LA 2 - 4. Total dissipation 640 W.



4. Cooling aggregate consisting of 6 heatsinks LA 2 - 1, 3 heatsinks LA 2 - 2 and 2 x 1 heatsink LA 2 - 6. Total dissipation 960 W.



5. Cooling aggregate consisting of 8 heatsinks LA 2 - 1, 4 heatsinks LA 2 - 2, 2 heatsinks LA 2 - 4 and 1 heatsink LA 2 - 8. Total dissipation 1280 W.



6. Cooling aggregate consisting of 10 heatsinks LA 2 - 1, 2 heatsinks LA 2 - 5, and 2 x 1 heatsink LA 2 - 10. Total dissipation 1600 W.

