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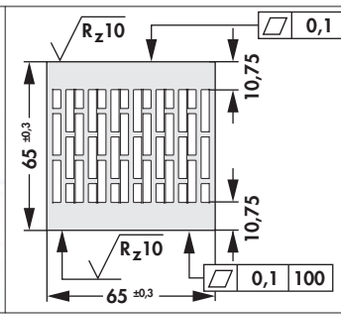
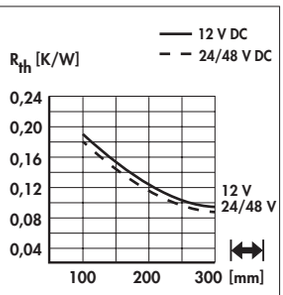
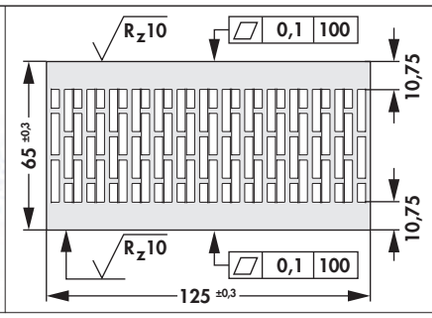
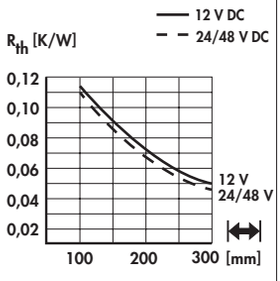
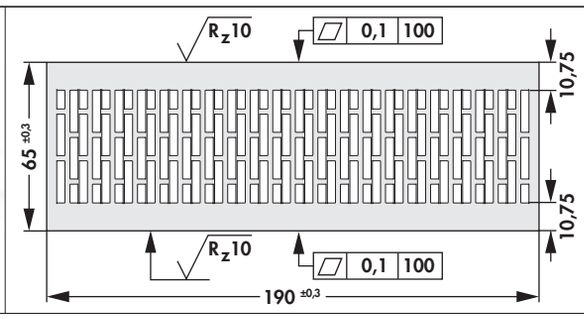
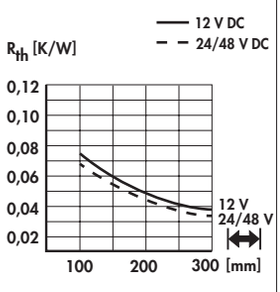
Cooling aggregates with axial fan

High performance cooling aggregate

– compact construction by means of connected extruded profiles
– excellent efficiency by means of flow-optimised hollow fin structure
– powerful axial fans
– double-sided precise milled semiconductor mounting surfaces
– different width dimensions, customised machinings, surfaces, fan types and fan voltages upon request

art. no.			
LA 28 ...			
	without air flow chamber		
art. no.			
LA 29 ...			
	without air flow chamber		
art. no.			
LA 30 ...			
	without air flow chamber		

please indicate: **... ↔**
100 150 200 250 300 mm

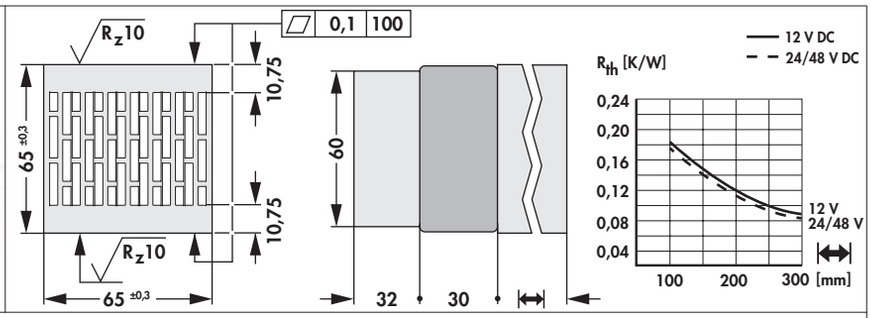
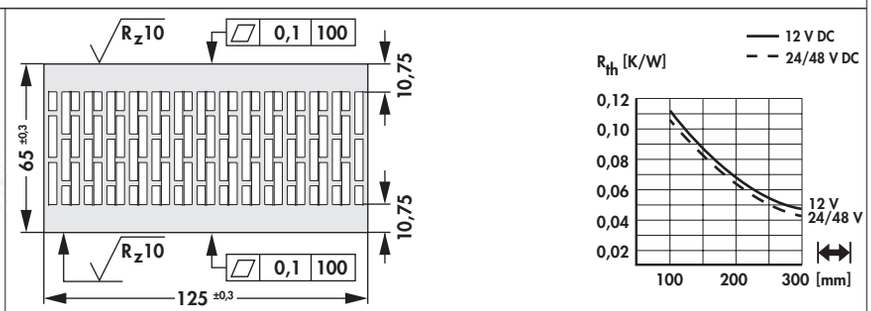
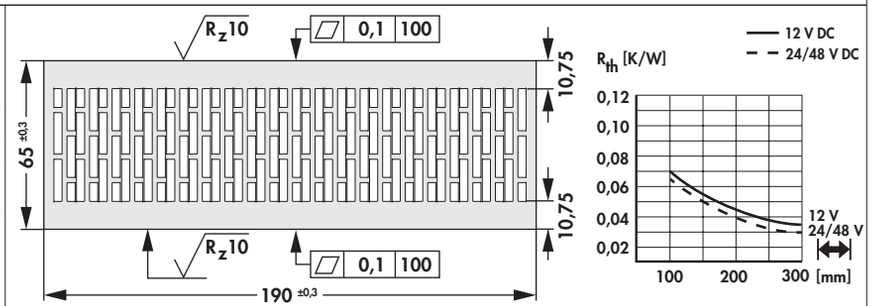
... fan type
12 = 12 V DC
24 = 24 V DC
48 = 48 V DC

Technical data of the fans

	... 12	... 24	... 48
type	ebmpapst 612 JH	ebmpapst 614 J/2HHP	ebmpapst 618 J/2HHP
dimensions	60x60x32 mm	60x60x32 mm	60x60x32 mm
tension	12 V DC	24 V DC	48 V DC
power inout	7.7 W	14.6 W	14.6 W
max. air volume	70 m^3/h	82 m^3/h	82 m^3/h
temperature range	-20°C... +70°C	-20°C... 75°C	-20°C... 75°C
noise level	53 dB(A)	62 dB(A)	62 dB(A)
speed	11,700 min^{-1}	15,000 min^{-1}	15,000 min^{-1}
weight	100 g	100 g	100 g
failure rate (L_{10})	L_{10} > 57,500 h (40°C)	L_{10} > 65,000 h (40°C)	L_{10} > 65,000 h (40°C)

High performance cooling aggregate

– additional efficiency enhancement and noise reduction by means of air-technically adjusted airflow chambers
– excellent thermal efficiency in connection with powerful axial fans
– double-sided precise milled semiconductor mounting surfaces
– different width dimensions, customised machinings, surfaces, fan types and fan voltages upon request

art. no.		
LA V 28 ...		
	with air flow chamber	
art. no.		
LA V 29 ...		
	with air flow chamber	
art. no.		
LA V 30 ...		
	with air flow chamber	

please indicate: **... ↔**
100 150 200 250 300 mm

... fan type
12 = 12 V DC
24 = 24 V DC
48 = 48 V DC

Technical data of the fans

	... 12	... 24	... 48
type	ebmpapst 612 JH	ebmpapst 614 J/2HHP	ebmpapst 618 J/2HHP
dimensions	60x60x32 mm	60x60x32 mm	60x60x32 mm
tension	12 V DC	24 V DC	48 V DC
power inout	7.7 W	14.6 W	14.6 W
max. air volume	70 m^3/h	82 m^3/h	82 m^3/h
temperature range	-20°C... +70°C	-20°C... 75°C	-20°C... 75°C
noise level	53 dB(A)	62 dB(A)	62 dB(A)
speed	11,700 min^{-1}	15,000 min^{-1}	15,000 min^{-1}
weight	100 g	100 g	100 g
failure rate (L_{10})	L_{10} > 57,500 h (40°C)	L_{10} > 65,000 h (40°C)	L_{10} > 65,000 h (40°C)

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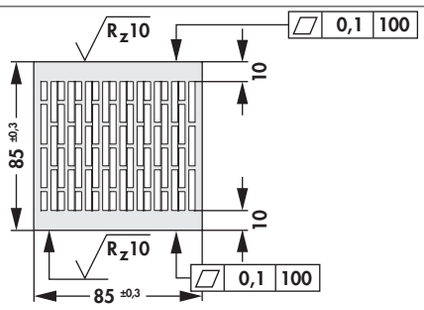
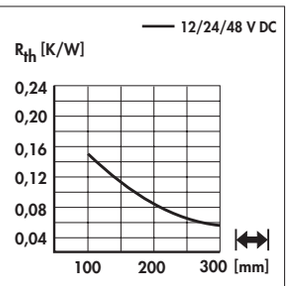
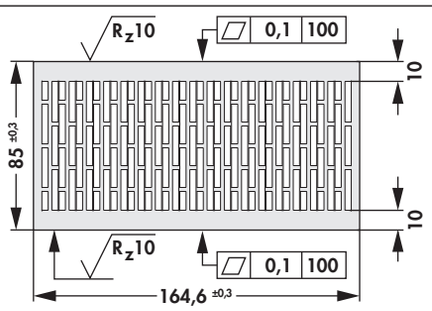
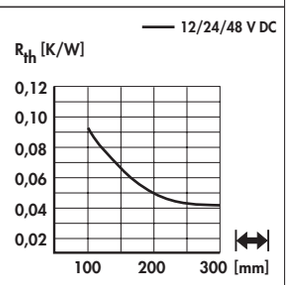
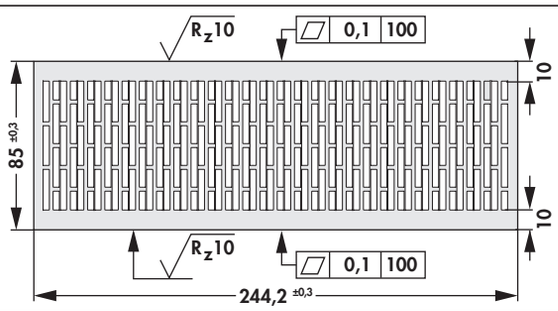
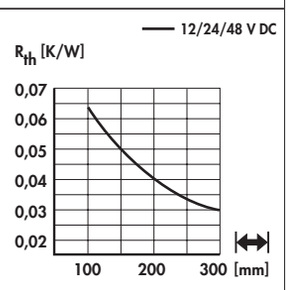
Cooling aggregates with axial fan

High performance cooling aggregate

– compact construction by means of connected extruded profiles
– excellent efficiency by means of flow-optimised hollow fin structure
– powerful axial fans
– double-sided precise milled semiconductor mounting surfaces
– different width dimensions, customised machinings, surfaces, fan types and fan voltages upon request

art. no.		
LA 31 ...		 
	without air flow chamber	
art. no.		
LA 32 ...		 
	without air flow chamber	
art. no.		
LA 33 ...		 
	without air flow chamber	

please indicate: **... ↔**
100 150 200 250 300 mm

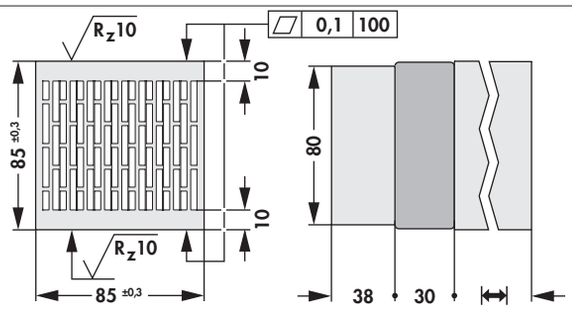
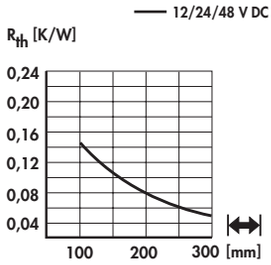
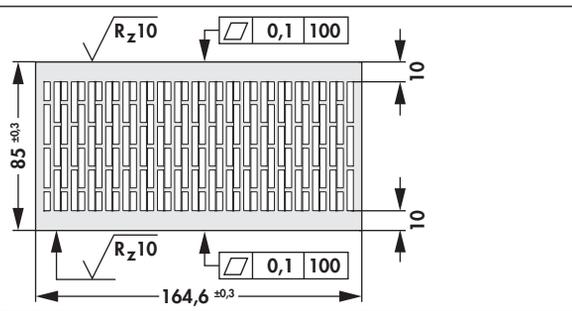
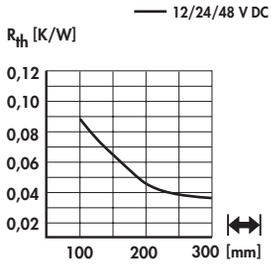
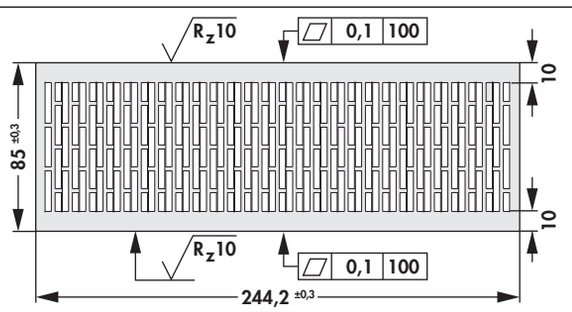
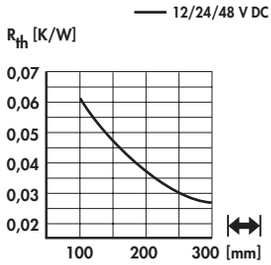
... fan type
12 = 12 V DC
24 = 24 V DC
48 = 48 V DC

Technical data of the fans

	... 12	... 24	... 48
type	ebmpapst 8212 JH4	ebmpapst 8214 JH4	ebmpapst 8218 JH4
dimensions	80x80x38 mm	80x80x38 mm	80x80x38 mm
tension	12 V DC	24 V DC	48 V DC
power inout	39 W	38 W	36 W
max. air volume	222 m^3/h	222 m^3/h	222 m^3/h
temperature range	-20°C... +70°C	-20°C... +70°C	-20°C... +70°C
noise level	71 dB(A)	71 dB(A)	71 dB(A)
speed	14,000 min^{-1}	14,000 min^{-1}	14,000 min^{-1}
weight	200 g	200 g	200 g
failure rate (L_{10})	L_{10} > 50,000 h (40°C)	L_{10} > 50,000 h (40°C)	L_{10} > 50,000 h (40°C)

High performance cooling aggregate

– additional efficiency enhancement and noise reduction by means of air-technically adjusted airflow chambers
– excellent thermal efficiency in connection with powerful axial fans
– double-sided precise milled semiconductor mounting surfaces
– different width dimensions, customised machinings, surfaces, fan types and fan voltages upon request

art. no.			
LA V 31 ...			
	with air flow chamber		
art. no.			
LA V 32 ...			
	with air flow chamber		
art. no.			
LA V 33 ...			
	with air flow chamber		

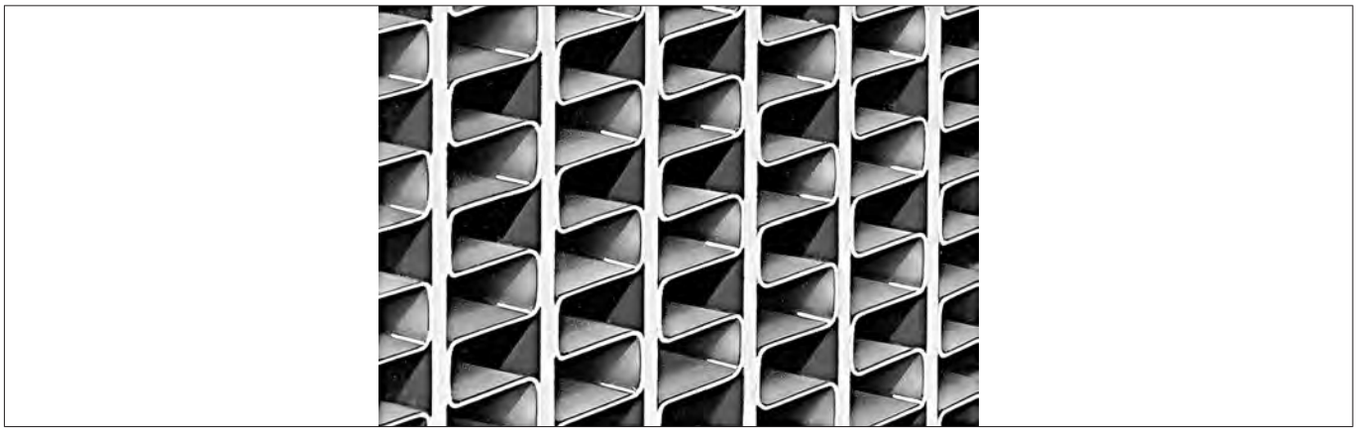
please indicate: **... ⟷** **100 150 200 250 300 mm**

... fan type
12 = 12 V DC
24 = 24 V DC
48 = 48 V DC

Technical data of the fans

	... 12	... 24	... 48
type	ebmpapst 8212 JH4	ebmpapst 8214 JH4	ebmpapst 8218 JH4
dimensions	80x80x38 mm	80x80x38 mm	80x80x38 mm
tension	12 V DC	24 V DC	48 V DC
power inout	39 W	38 W	36 W
max. air volume	222 m^3/h	222 m^3/h	222 m^3/h
temperature range	-20°C... +70°C	-20°C... +70°C	-20°C... +70°C
noise level	71 dB(A)	71 dB(A)	71 dB(A)
speed	14,000 min^{-1}	14,000 min^{-1}	14,000 min^{-1}
weight	200 g	200 g	200 g
failure rate (L_{10})	L_{10} > 50,000 h (40°C)	L_{10} > 50,000 h (40°C)	L_{10} > 50,000 h (40°C)

High performance cooling aggregate



extremely low losses of air flow as compared to cooling aggregates with extruded aluminium
– compact dimensions, that means high performance density due to large heat-conducting surfaces
– maximum heat flow due to brazing or thermal adhesion
– high performance cooling aggregates are only effective with forced ventilation by means of the fan, but not with free convection
– other fan types and fan voltages on request

material: solder-plated aluminium sheet, thus minimal weight due to the thickness of the material

An optimised unit for any application can be produced from the wide range of existing components upon request.
The specific capacity will be determined by a test run upon customer´s 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 (L_{10})	L_{10} > 37,500 h (40°C)

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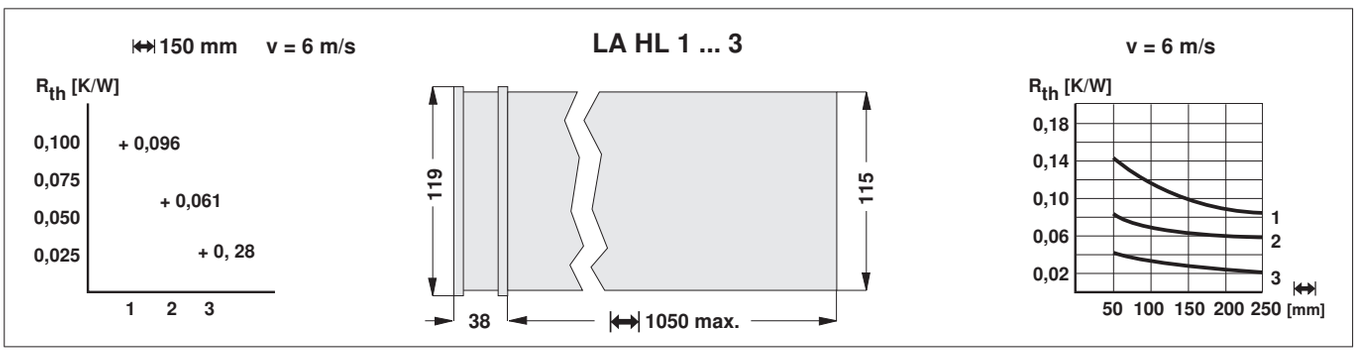
Cooling aggregates with axial fan

High performance cooling aggregate



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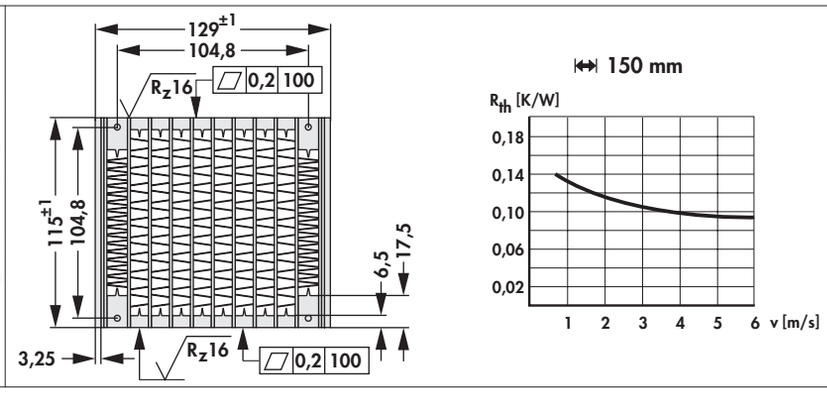
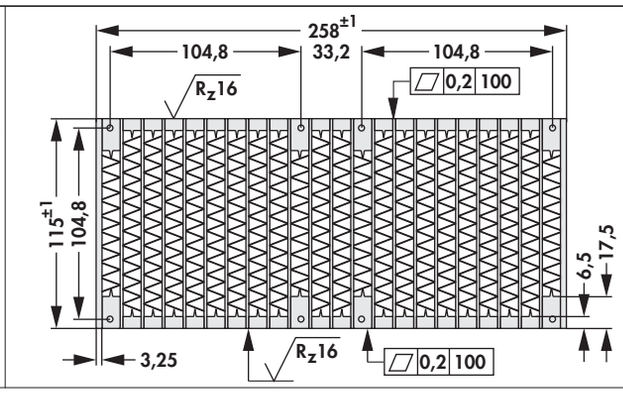
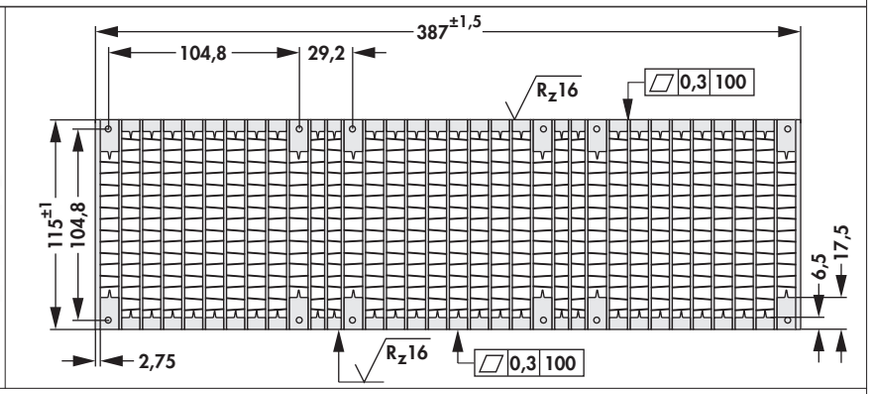
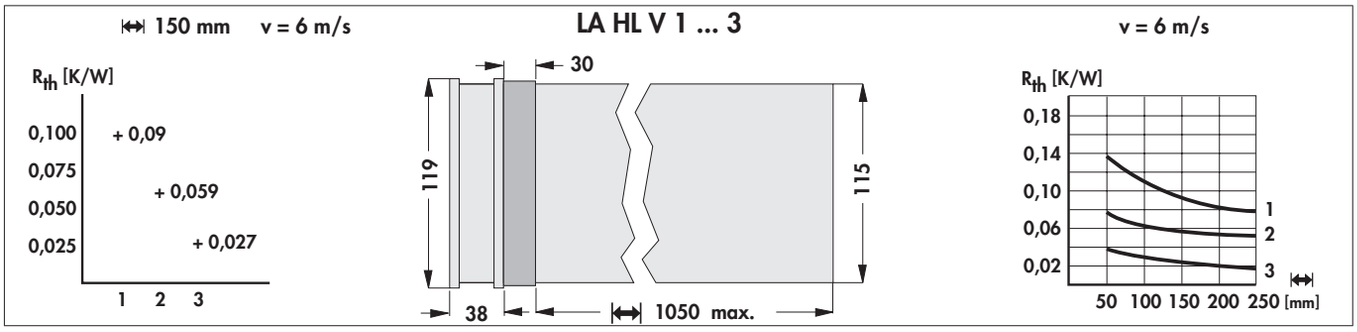
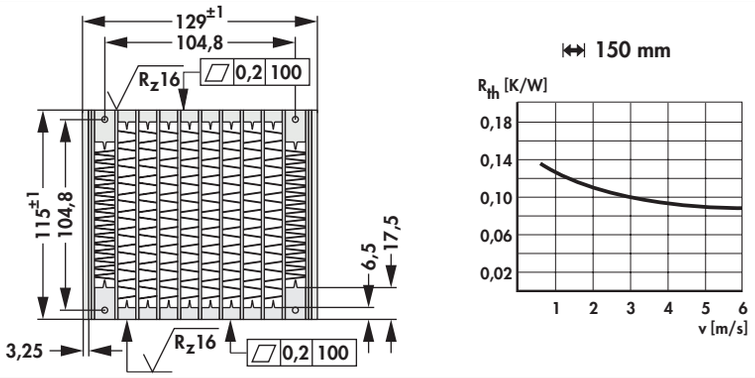
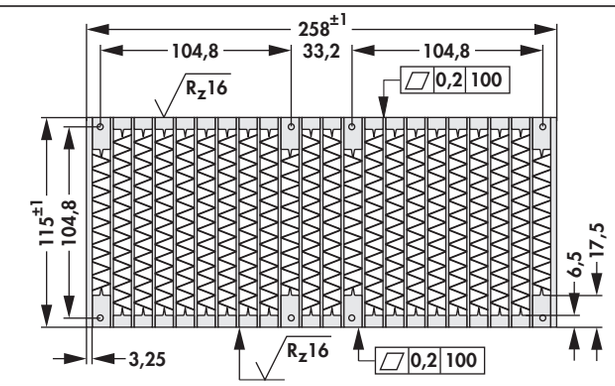
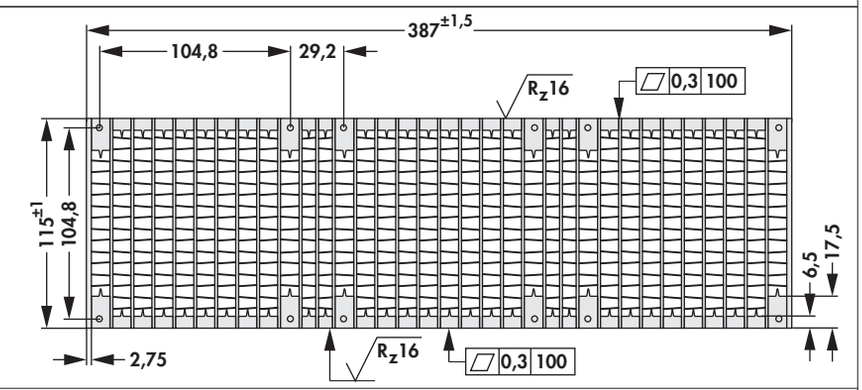
LA HL 1 ...		
	without air flow chamber	
art. no.		
LA HL 2 ...		
	without air flow chamber	
art. no.		
LA HL 3 ...		
	without air flow chamber	

please indicate: ... ↔
100 150 200 250 300 400 mm

High performance cooling aggregate



art. no.		
LA HLV 1 ...		
	with air flow chamber	
art. no.		
LA HLV 2 ...		
	with air flow chamber	
art. no.		
LA HLV 3 ...		
	with air flow chamber	

please indicate: ... ⟷
100 150 200 250 300 400 mm

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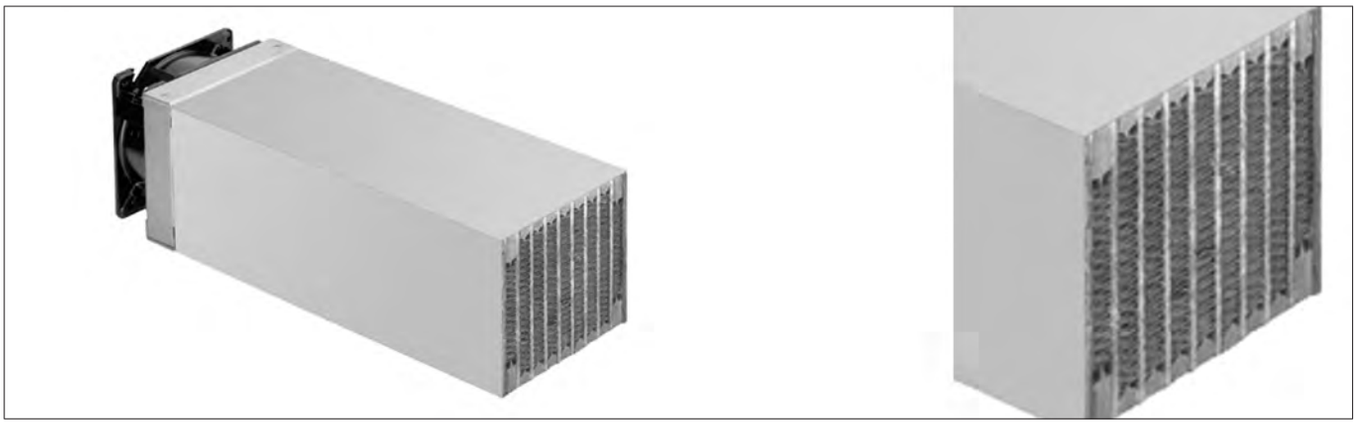
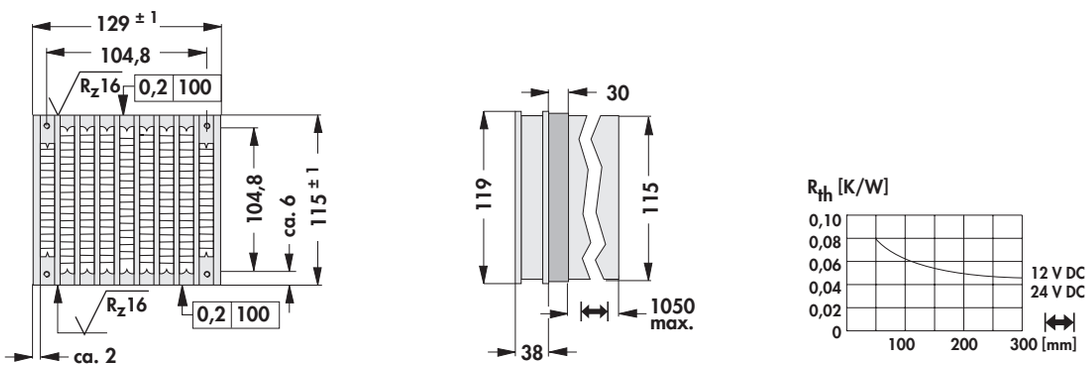
Cooling aggregates with axial fan



High performance cooling aggregate

- innovative, efficient heatsink design
- thick multiwall sheets for maximum heat dissipation
- specially formed laminated structures ensure optimum heat exchange with the air flow
- powerful mixed axial fan for highly effcient heat dissipation
- reduced noise output achieved by an optimised adaption of fan and heatsink
- additional treatment and modifications upon customer's request
- double and triple versions upon request

art. no.	
LAHL D 1 ...	

please indicate:

... ⟷
100 150 200 250 300 400 mm

... fan type
12 = 12 V DC
24 = 24 V DC

Technical data of the fans

	... 12	... 24
type	ebmpapst 4112NH3	ebmpapst 4114NH3
dimensions	119x119x38 mm	119x119x38 mm
tension	12 V DC	24 V DC
power inout	21 W	19.5 W
max. air volume	310 m^3/h	310 m^3/h
temperature range	-20°C... +65°C	-20°C... +65°C
noise level	65 dB(A)	65 dB(A)
speed	6,000 min^{-1}	6,000 min^{-1}
weight	390 g	390 g
failure rate (L_{10})	L_{10} > 60,000 h (40°C) L_{10} > 37,500 h (tmax)	L_{10} > 65,000 h (40°C) L_{10} > 37,500 h (tmax)