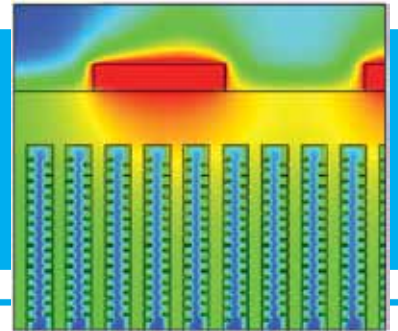


HEAT SINKS

2021

the WEBRA Aluminum Heat Sink Solution



After more than 50 years of business WEBRA continue to break new barriers in thermal technology for our customers.

We pride ourselves with delivering high performance thermal solutions with extraordinary value. Our deep engineering expertise in thermal management and designs for heat transfer are optimised and manufactured for each need.

The WEBRA patented high efficient heat sink profile gives excellent performance and exceptionally high fin ratio of performance through the extrusion of a homogenous material.

This catalogue shows our wide array of standard profiles, thermal performance data and information needed to specify what is most suitable for your needs. To ensure the best solution for your application, our engineers are ready to assist on any custom design.

Exceptional performance

The WEBRA patented and protected technology optimizes the geometry of heat sink profiles.

SURFACE ENLARGEMENT - for optimized heat transfer

UNHINDERED HEAT CONDUCTION - from the heat sources to the fin surface

PERFORMANCE - verified in wind tunnel

Safety and longevity

The WEBRA patented heat sink profiles are manufactured from a single homogenous aluminum extrusion. This offers a significant advantage compared to competitors' profiles as the risk for thermal resistances at the joints of pressed-in, rolled-in or glued-in fins and thus risk of aging and performance loss is eliminated.

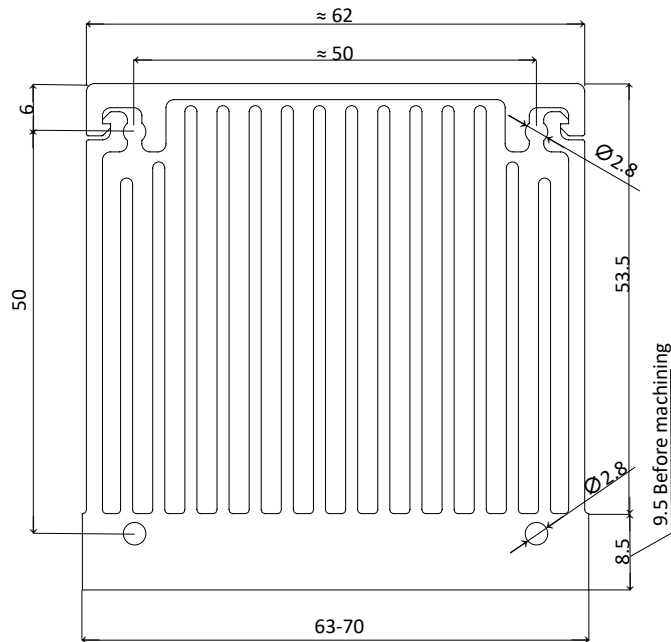
WEBRA's design made of a single homogenous piece is of outstanding quality, the high thermal performance always remains the same.



Overview Heat Sinks

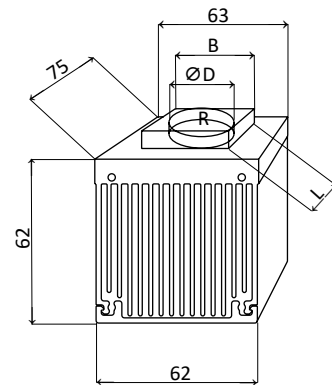
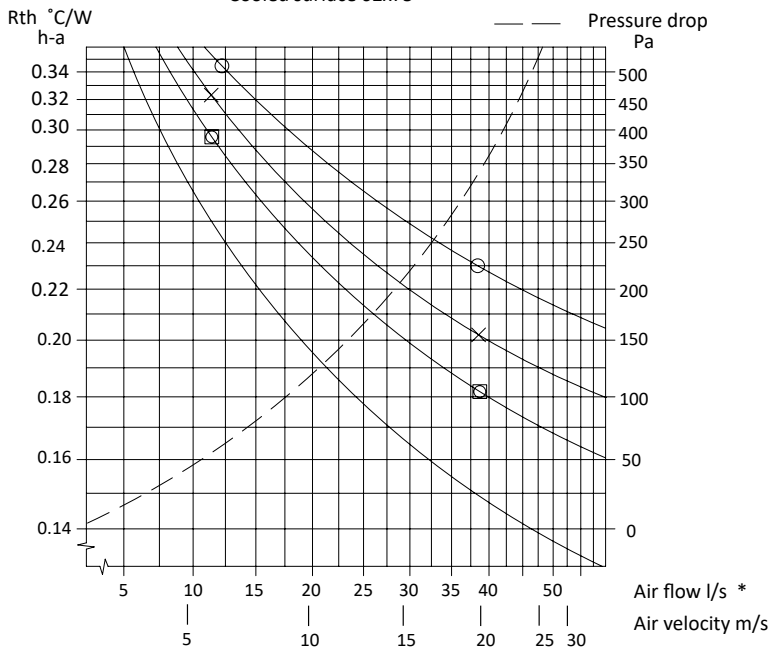
Webra profile	Width x Height W x H mm ²	Weight kg/m	Length test heat sink mm	Flow rate @ Δp	Heat sources (mm) wind tunnel test	Rth for reference operational conditions °C/W	Page
W- 62-51-9-16	63 x 62	5,7	75	w/60 x 60 axial fan	40 x 40 mm	0,292	1
W- 91-19-7-30	92 x 26	4,7	100	8 l/s @ 65 Pa	Ø 52 mm	0,212	2
W- 92-81-10-13	92 x 92	12,8	120	20 l/s @ 50 Pa	Ø 85 mm	0,15	3
W- 98-19-6-38	98 x 26	4,4	100	8 l/s @ 70 Pa	Ø 52 mm	0,198	4
W- 109-70-10-26	109 x 78	14,3	100	35 l/s @ 30 Pa	Ø 52 mm	0,083	5
W- 125-35-10-15	124 x 45	9,45	200	35 l/s @ 250 Pa 35 l/s @ 250 Pa	Ø 52 mm 104 x 58 mm Comp 3	0,088 0,184	6
W- 125-66-14-14	124,4 x 80	16,848	200	60 l/s @ 275 Pa 60 l/s @ 275 Pa	Ø 52 mm 104x58 mm Comp 3	0,068 0,129	7
W- 137-37-10-28	137 x 47	7,3	200	50 l/s @ 240 Pa	62 x 122 mm	0,09	8
W- 148-35-10-21	148 x 45	11,6	120	25 l/s @ 75 Pa	Ø 52 mm (2 x)	0,09	9
W- 150-44-11-22	150 x 55	14,2	200	35 l/s @ 150 Pa	Ø 52 mm (2 x)	0,065	10
W- 155-60-15-16	155 x 75	21,0	200	40 l/s @ 80 Pa 40 l/s @ 80 Pa	Ø 52 mm 140 x 130 mm	0,053 0,092	11
W- 169-65-14-22	169 x 79		170	40 l/s @ 75 Pa	Ø 85 mm	0,09	12
W- 172-62-13-24	172 x 75	20,2	360	85 l/s @ 550 Pa	130 x 140 mm	0,0426	13
W- 175-35-10-22	175 x 45	13,036	200	50 l/s @ 300 Pa	Ø 85 mm	0,06	14
W- 175-44-11-26	175 x 55	16,6	360	70 l/s @ 650 Pa	130 x 140 mm	0,046	15
W- 177-66-18-16	177 x 82	18,7	525	120 l/s @ 525 Pa	140 x 190	0,032	16
W- 194-60-15-20	194 x 75	26,0	200	80 l/s @ 105 Pa 80 l/s @ 105 Pa	Ø 85 mm 186 x 142 mm	0,051 0,03	17
W- 198-62-12-28	198 x 74	23,6	200	80 l/s @ 170 Pa 80 l/s @ 170 Pa	Ø 85 mm 188 x 142 mm	0,0425 0,03	18
W- 209-60-15-22	209 x 75	26,6	200	80 l/s @ 150 Pa 80 l/s @ 150 Pa	Ø 85 mm 186 x 142 mm	0,054 0,033	19-20
W- 209-60-15-34	209 x 76	26,0	200	120 l/s @ 425 Pa	190 x 140 mm	0,021	21
W- 209-60-15-41	215 x 75	25,0	200	100 l/s @ 180 Pa	190 x 140 mm	0,028	22-23
W- 209-61-15-50	209 x 75	25,0	200	80 l/s @ 125 Pa	186 x 142 mm	0,029	24
W- 209-75-17-21	209 x 92	31,5	200	75 l/s @ 125 Pa	186 x 142 mm	0,027	25
W- 210-60-16-18	210 x 75	24,7	200	110 l/s @ 100 Pa	186 x 142 mm	0,034	26
W- 229-50-12-29	229 x 62	19,9	200	100 l/s @ 325 Pa	190 x 140 mm	0,026	27
W- 231-103-17-18	231 x 120	37,3	200	140 l/s @ 75 Pa	186 x 142 mm	0,032	28
W- 240-64-15-23	240 x 79	26,0	400	240 l/s @ 760 Pa	250 x 90 mm (3x)	0,030	29-30
W- 275-73-15-26	275 x 87	38,2	200	160 l/s @ 155 Pa	186 x 142 mm (2x)	0,023	31
W- 343-35-12-40	343 x 45	26,0	200	80 l/s @ 170 Pa	Ø 85 mm (6x)	0,145	32
W- 351-41-10-83	351 x 41,5	22,0	400	120 l/s @ 225 Pa	130 x 140mm	0,036	33
W- 473-44-11-70	473 x 55	44,8	200	120 l/s @ 170 Pa	Ø 52 mm (6x)	0,019	34
W- ELA-44							35
W- EKD-44							36
W- GTM-45	151,5 * 45	2,6 kg/pc.	180	15 l/s @ 350 Pa	Ø 100 mm (2x)	0,075	37
W- GTL-75	151,5 * 75	3,9 kg/pc.	180	60 l/s @ 700 Pa	Ø 100 mm (2x)	0,023	38
W- GTK - 105	151,5 * 105	5,25 kg/pc.	180	80 l/s @ 550 Pa	Ø 100 mm (2x)	0,020	39

DIMENSIONS



PERFORMANCE

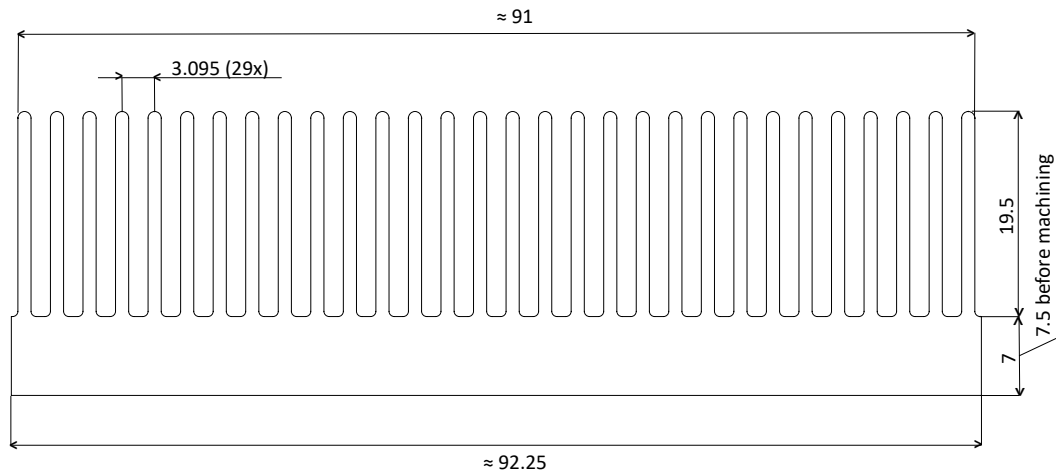
- Cooled surface Ø25
- × Cooled surface Ø34
- ◻ Cooled surface 40 x40
- Cooled surface 62x75



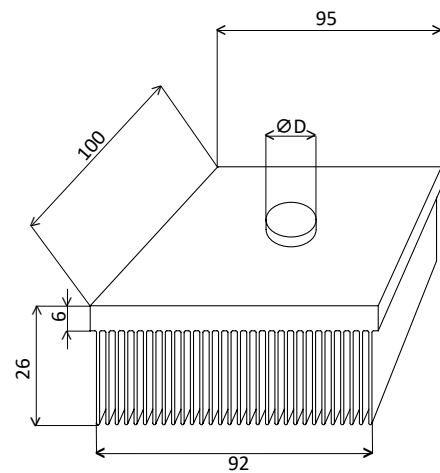
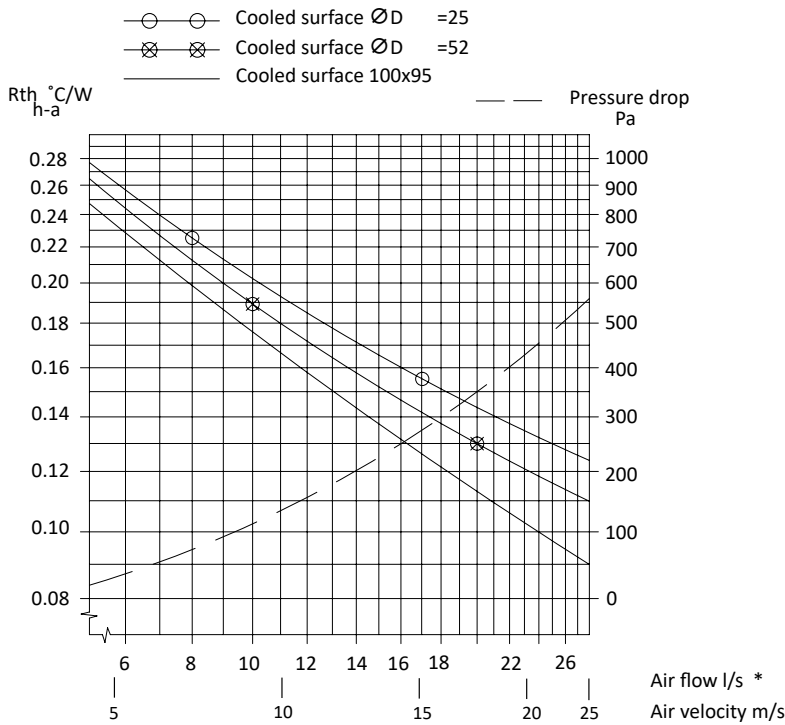
Fan. PRP ST				
Typ 612 NGH				
12V DC				
200 mA				
2.4 W				
Comp.	Ø25	Ø34	37x24	40x40
Rth (°C/W) h-a	0.310	0.303	0.305	0.292

* 20°C 1013 hPa (mbar)

DIMENSIONS

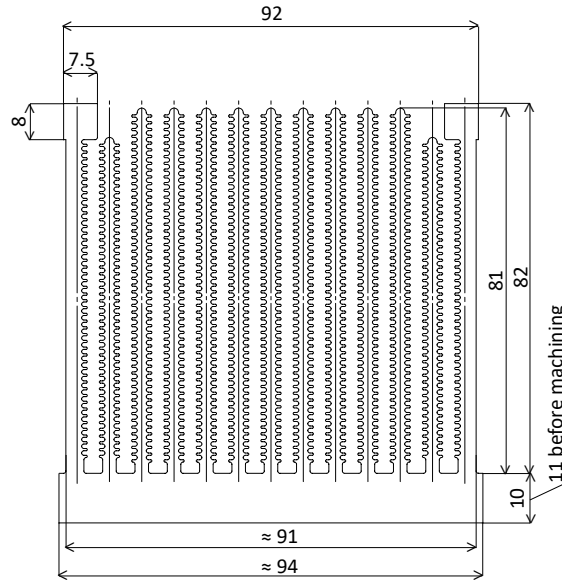


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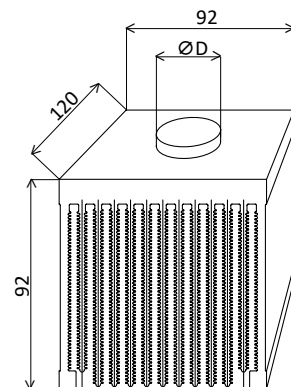
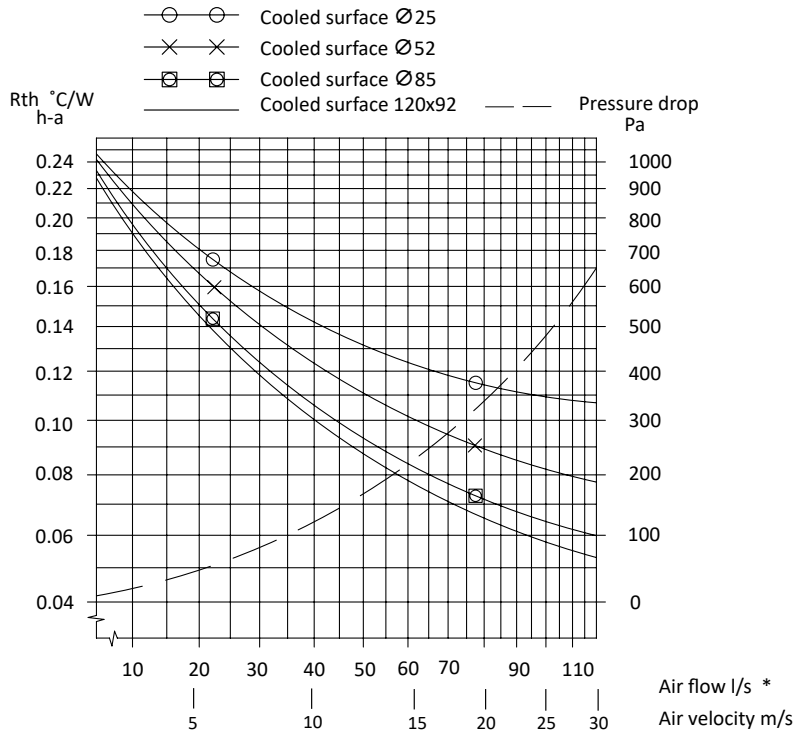


* 20°C 1013 hPa (mbar)

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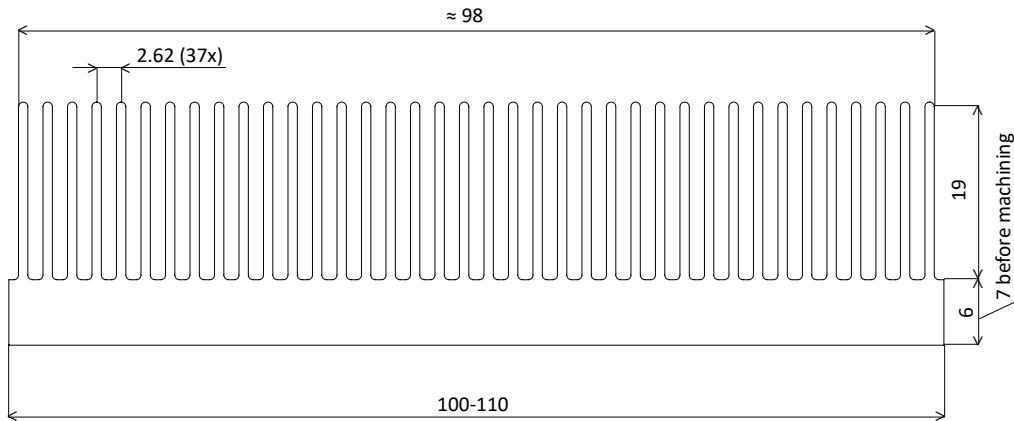


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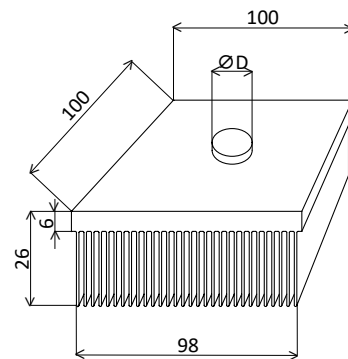
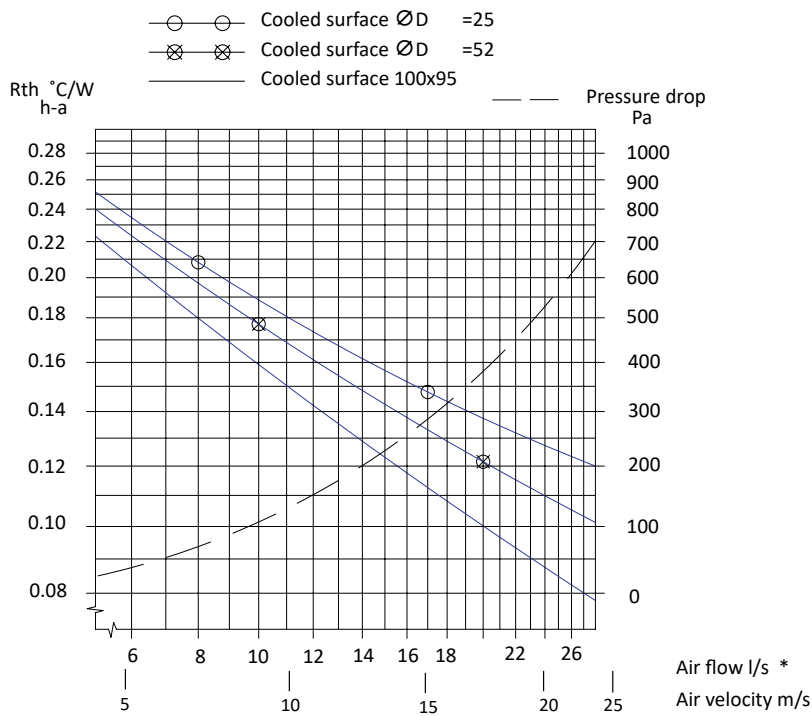


* 20°C 1013 hPa (mbar)

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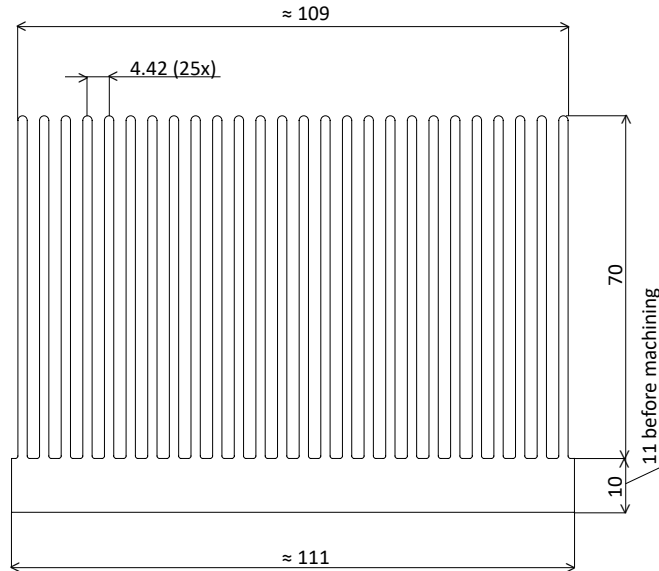


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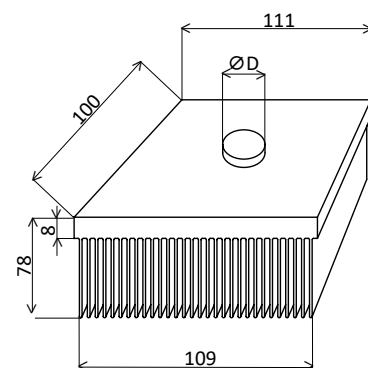
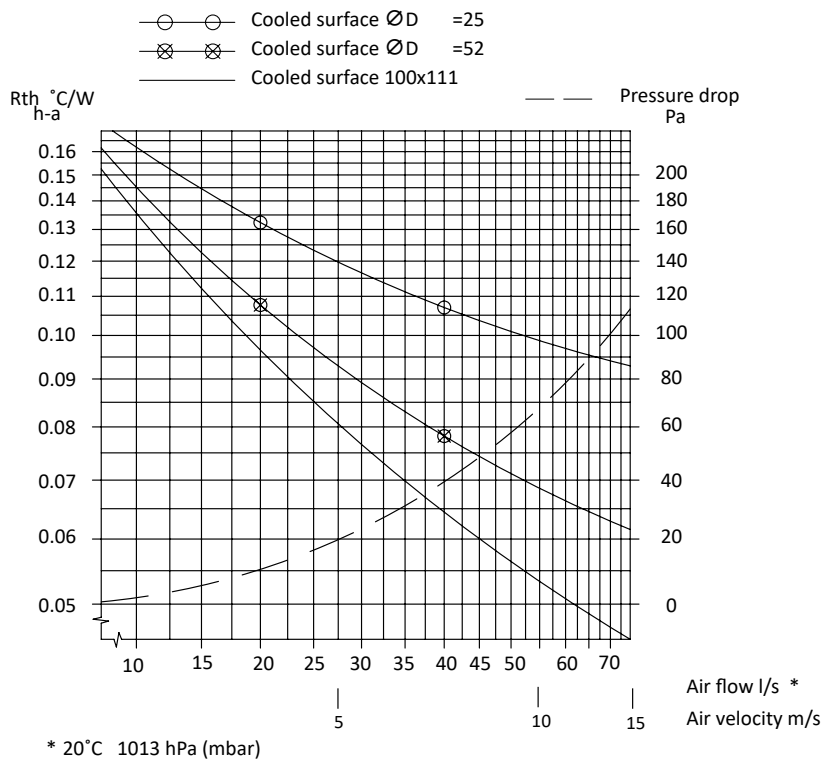


* 20°C 1013 hPa (mbar)

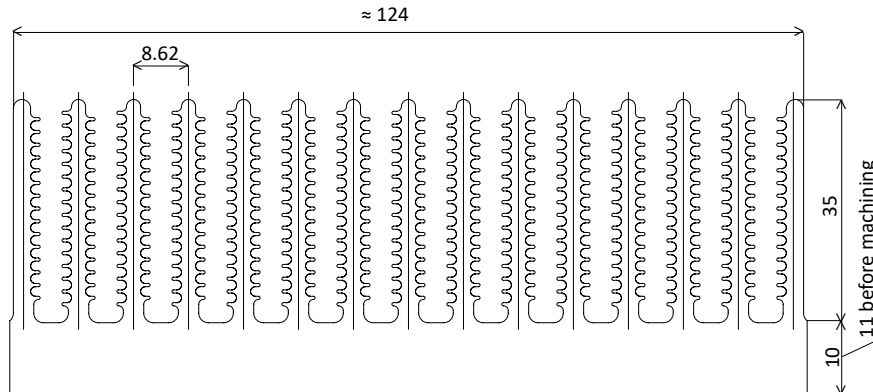
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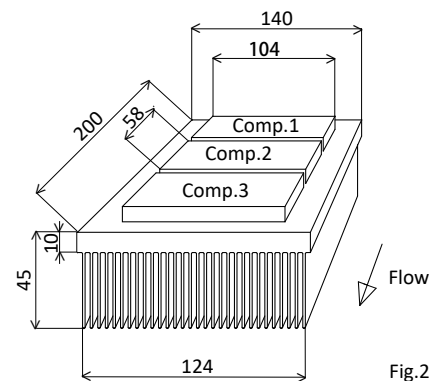
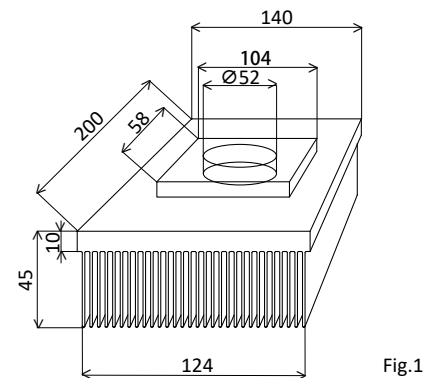
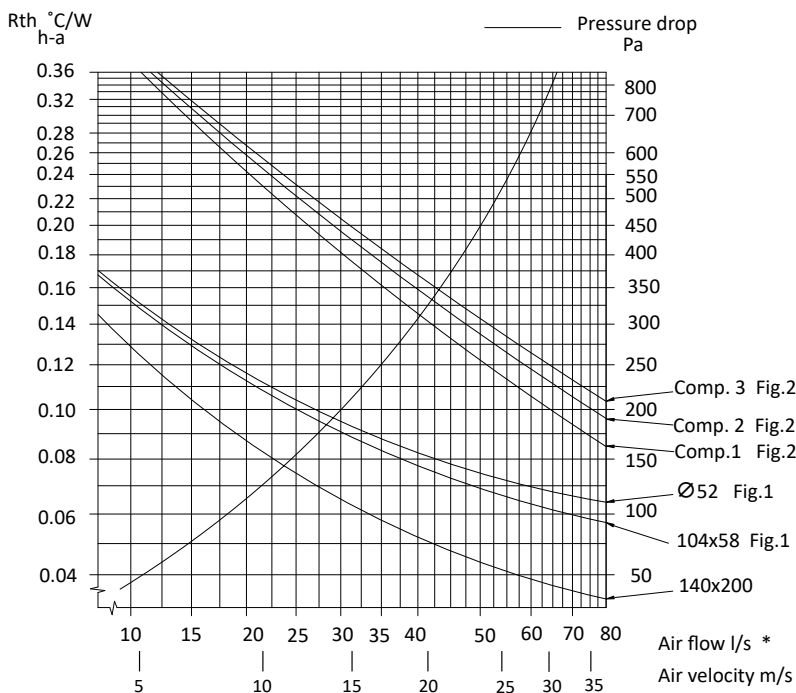
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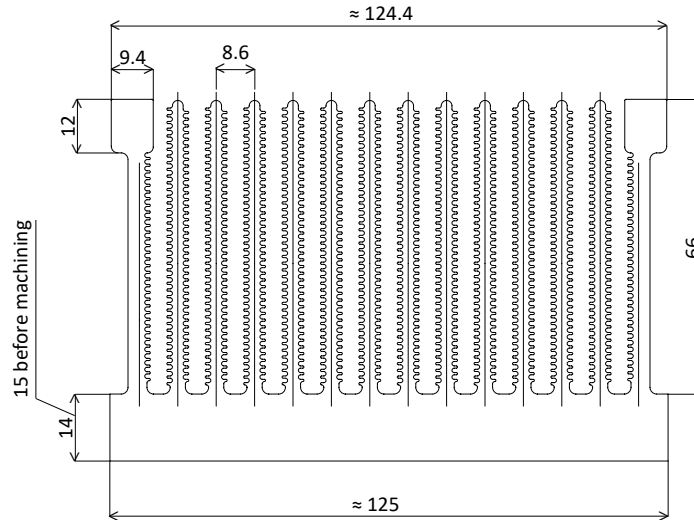


PERFORMANCE



* 20°C 1013 hPa (mbar)

DIMENSIONS



PERFORMANCE

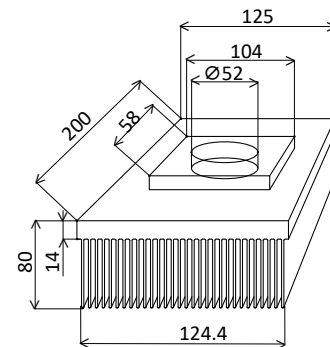
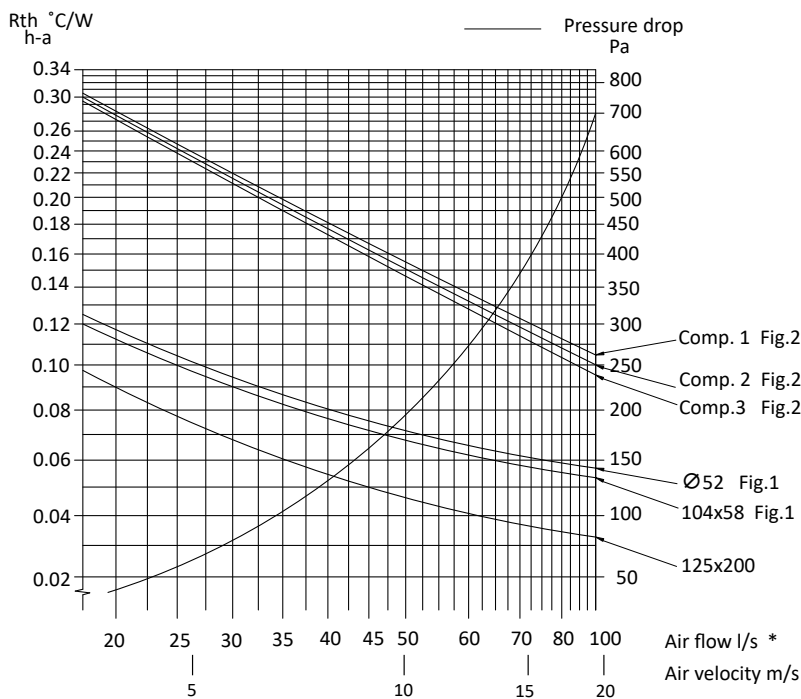


Fig.1

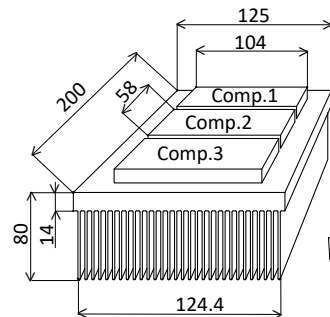
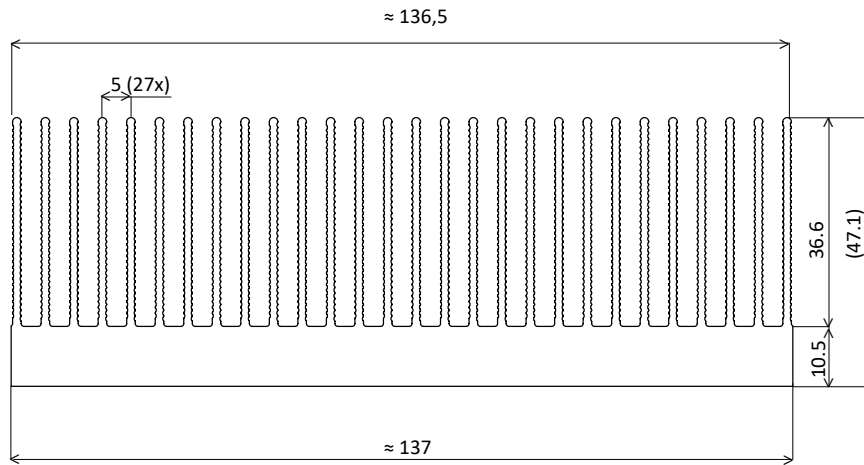


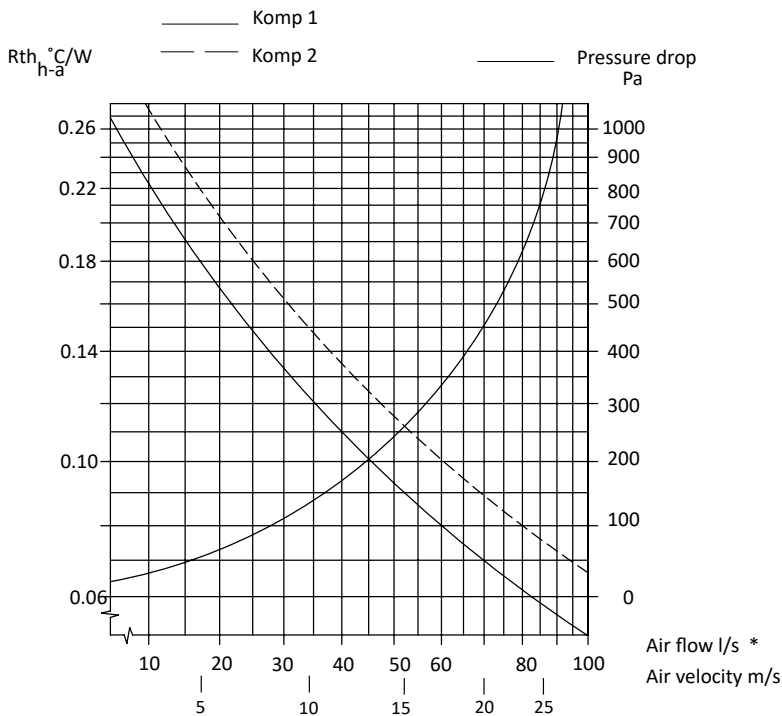
Fig.2

* 20°C 1013 hPa (mbar)

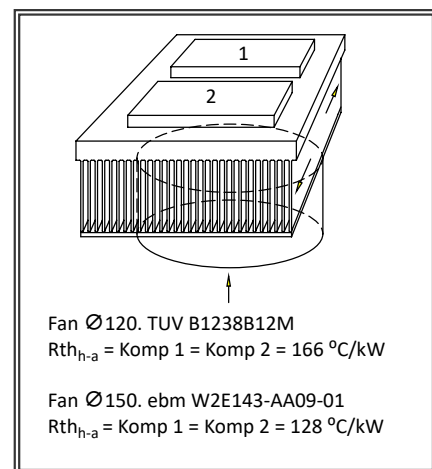
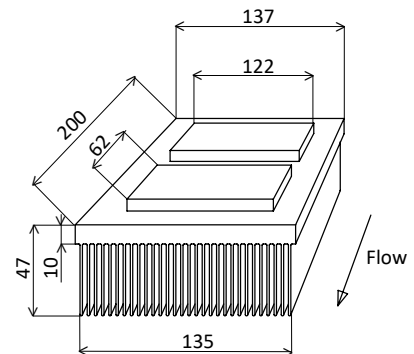
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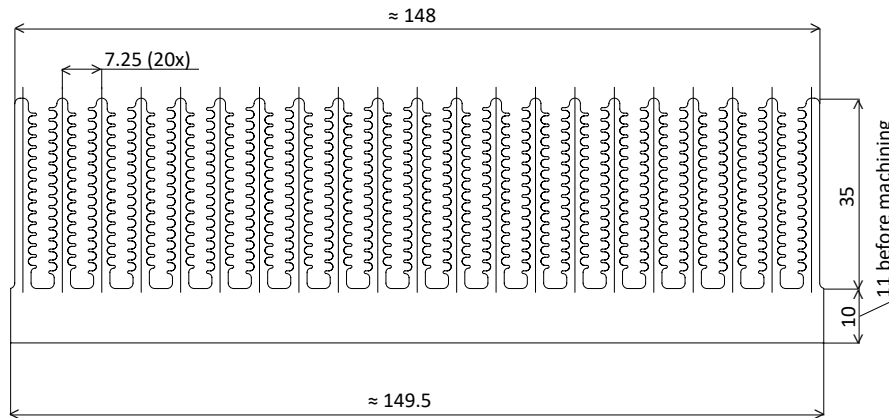
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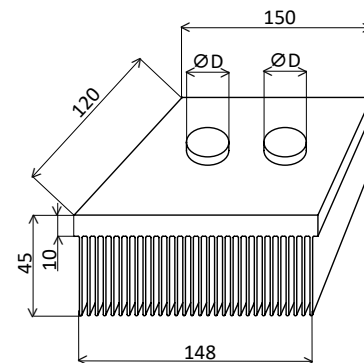
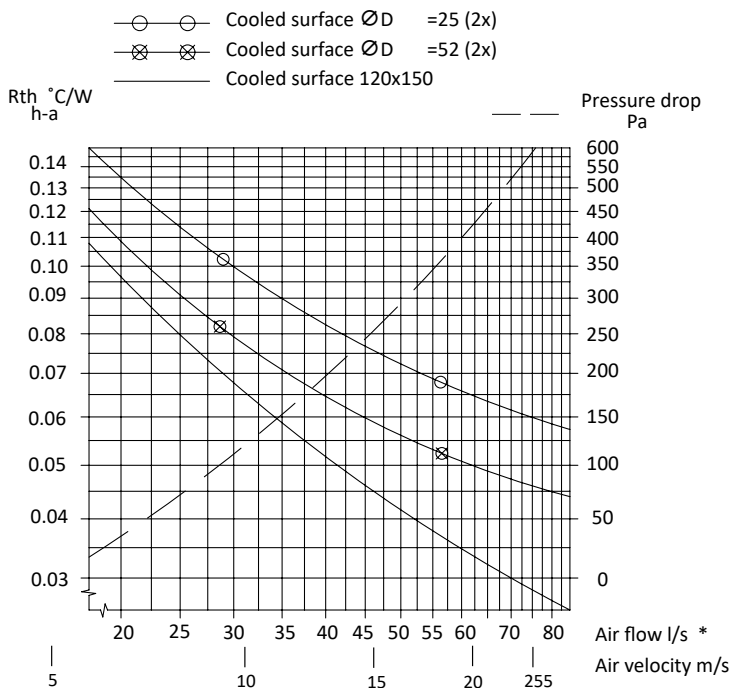
* 20°C 1013 hPa (mbar)



DIMENSIONS

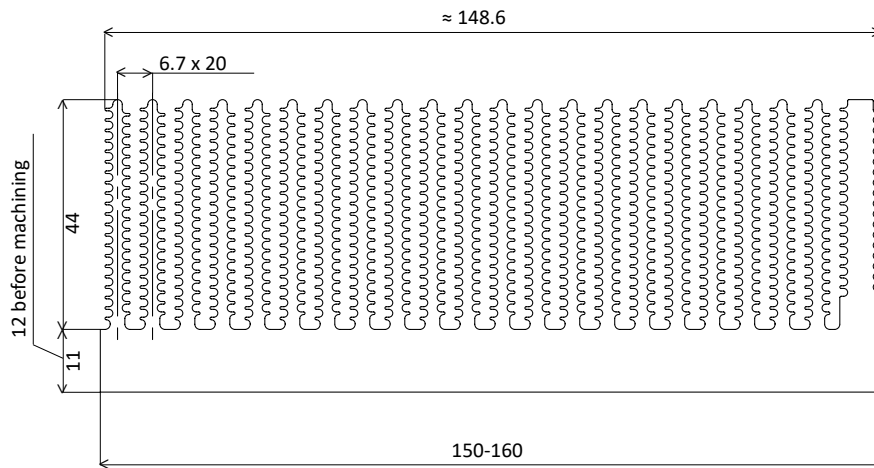


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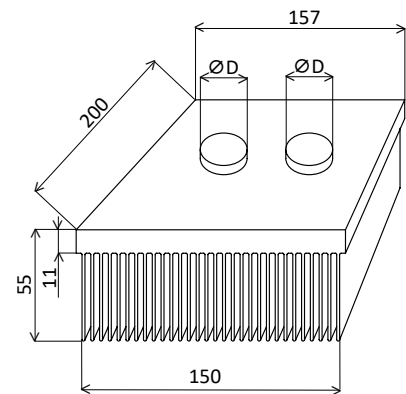
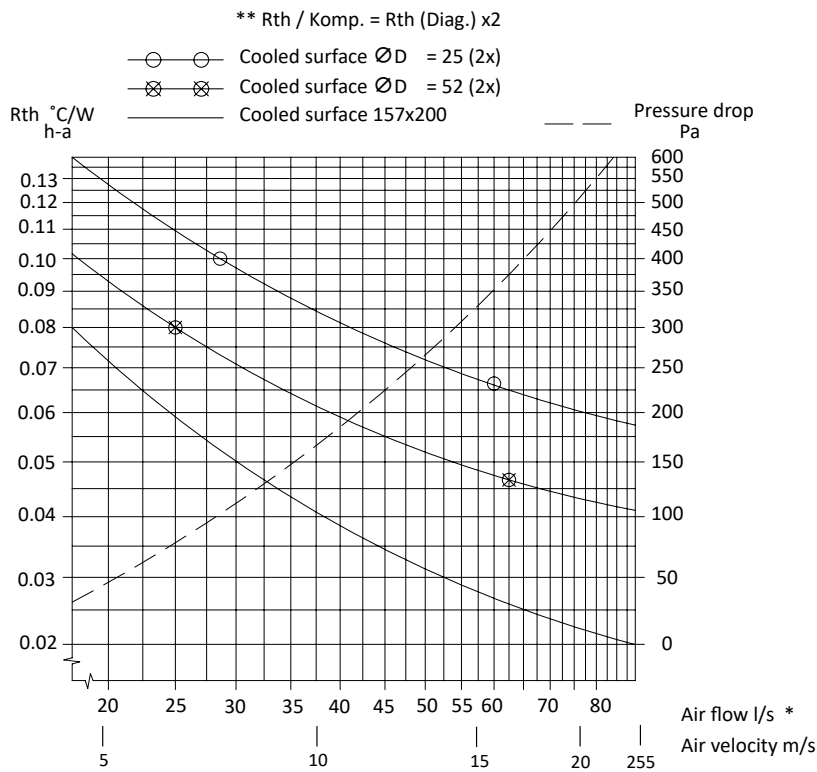


* 20°C 1013 hPa (mbar)

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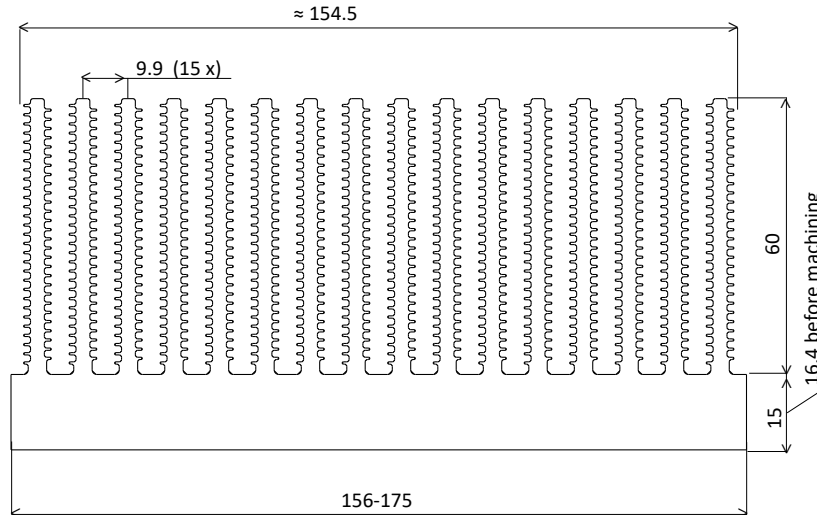


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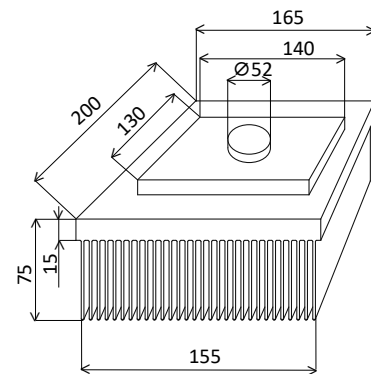
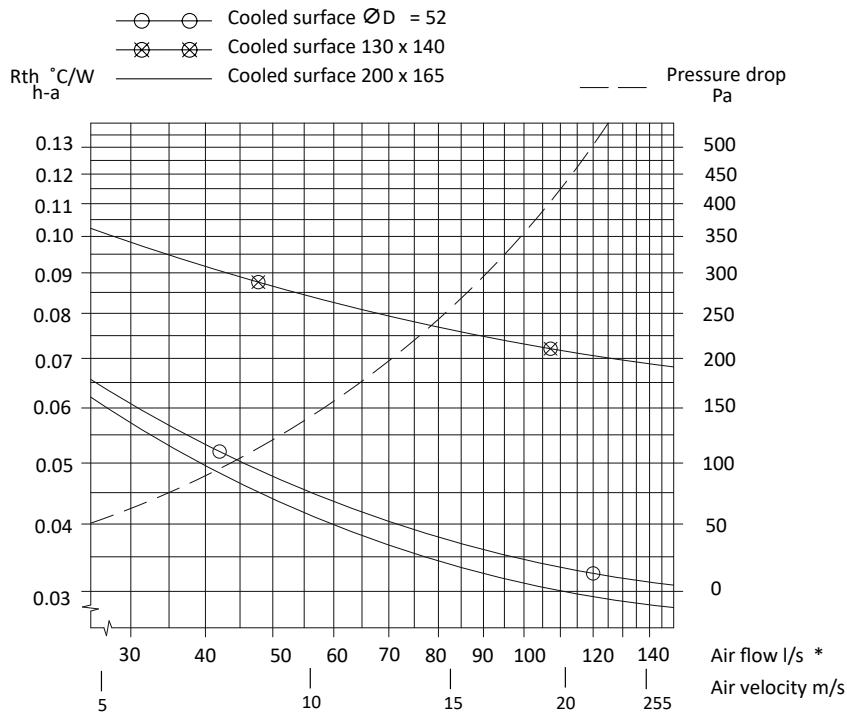


* 20°C 1013 hPa (mbar)

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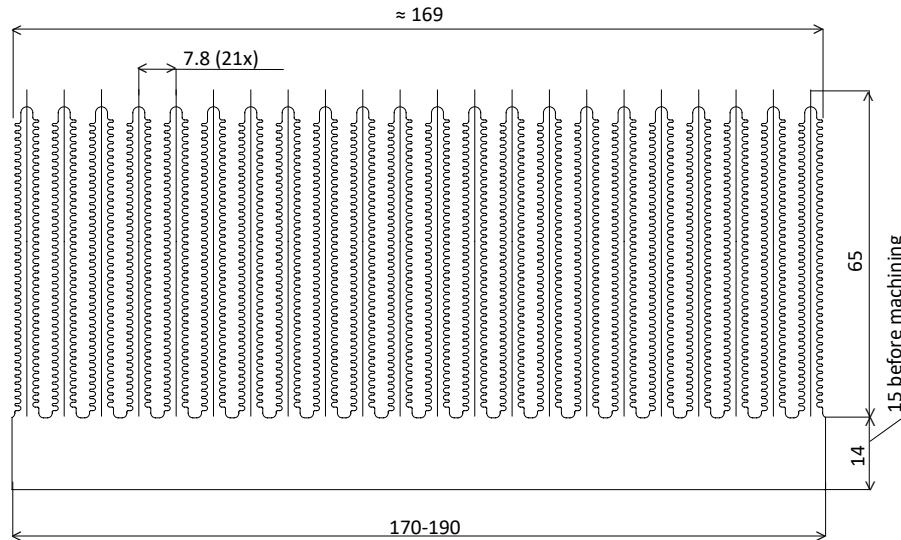


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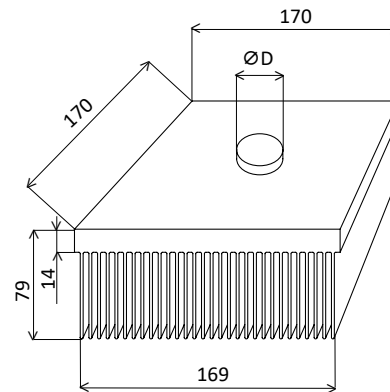
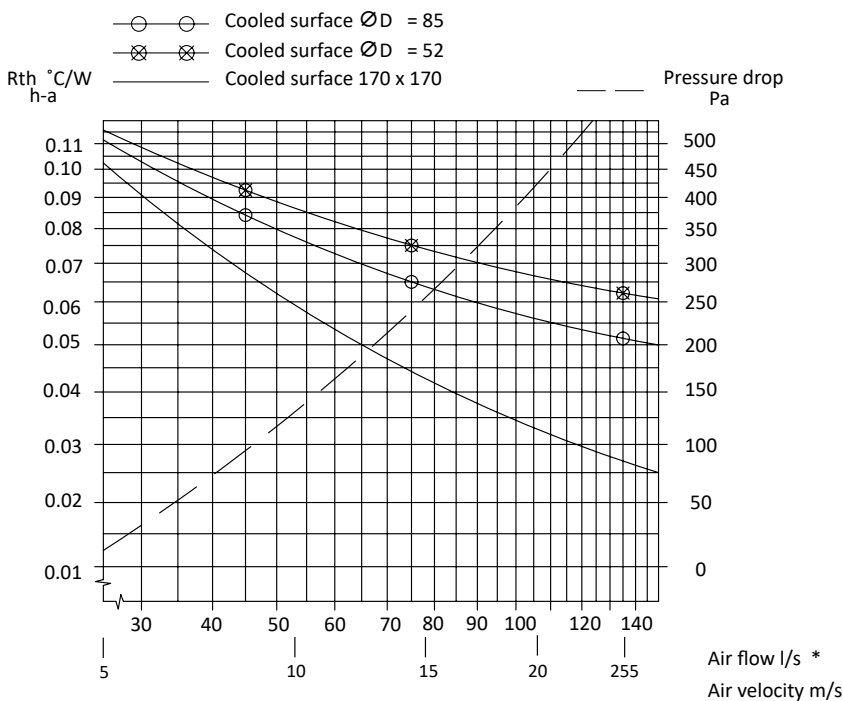


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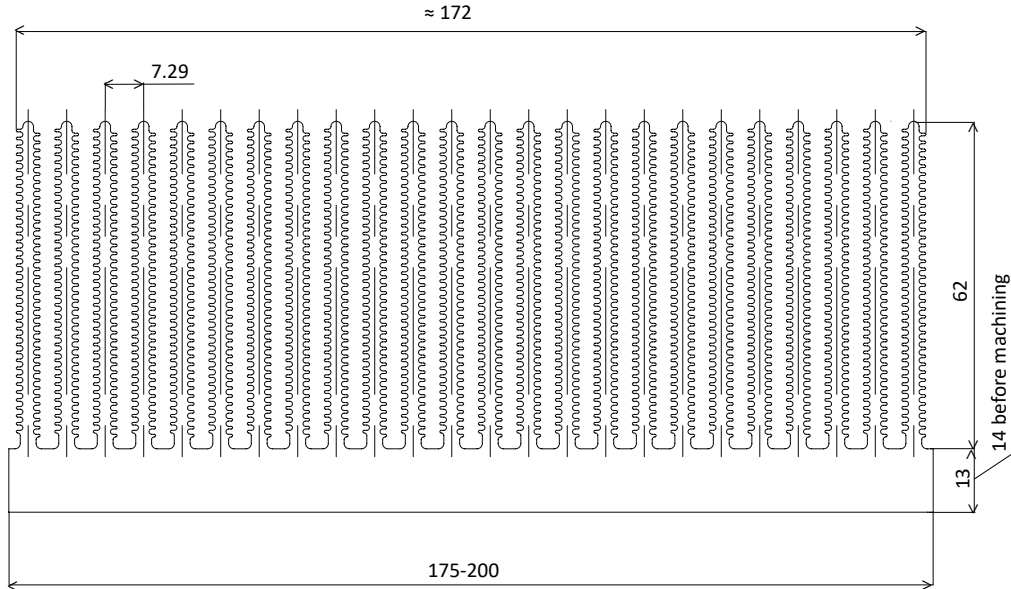


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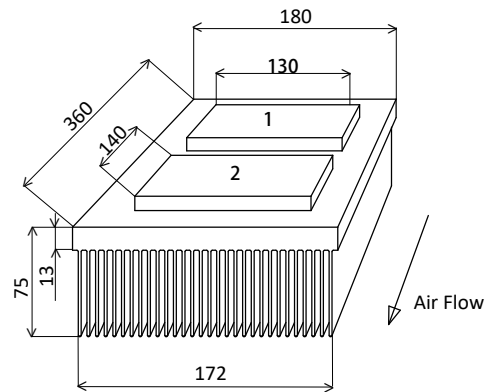
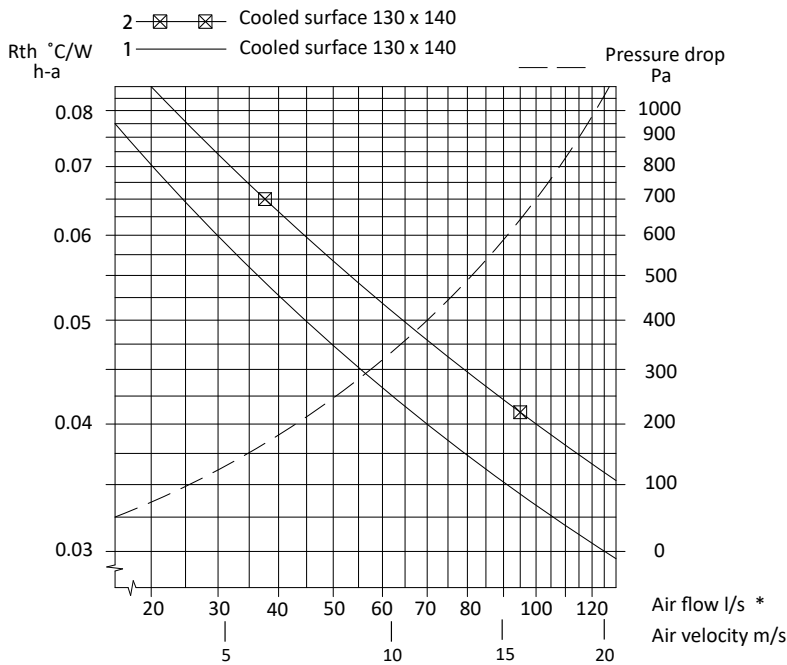


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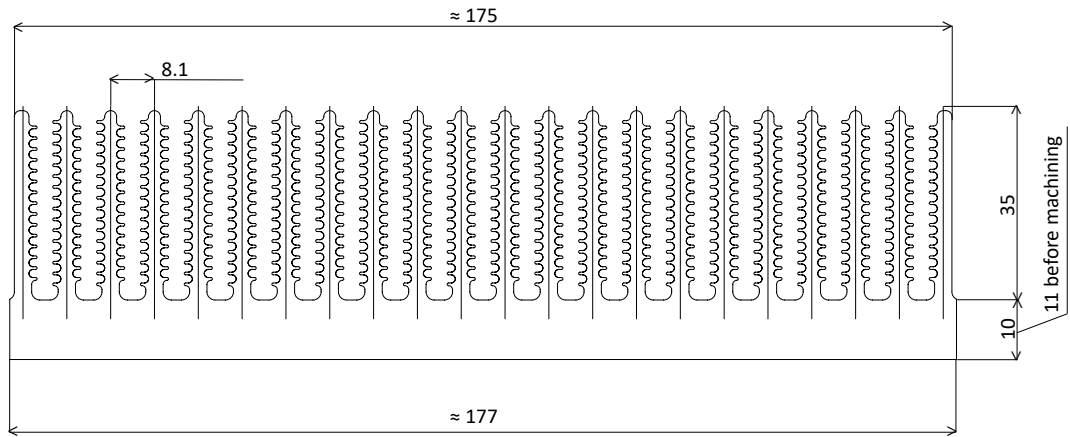


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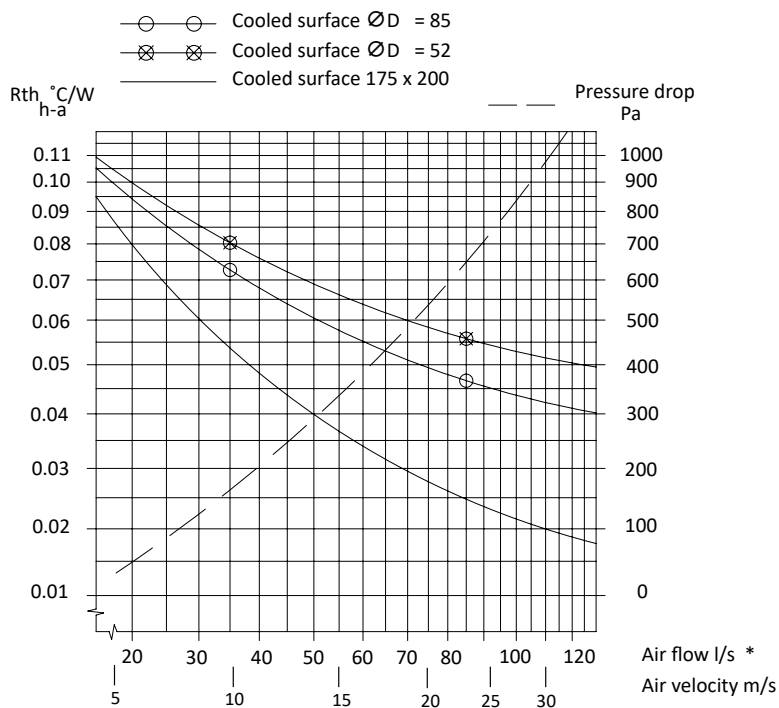


* 20°C 1013 hPa (mbar)

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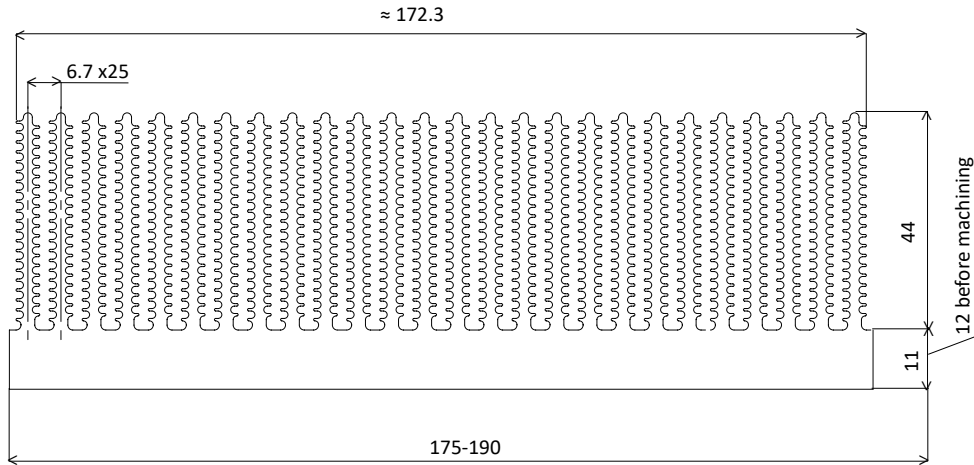


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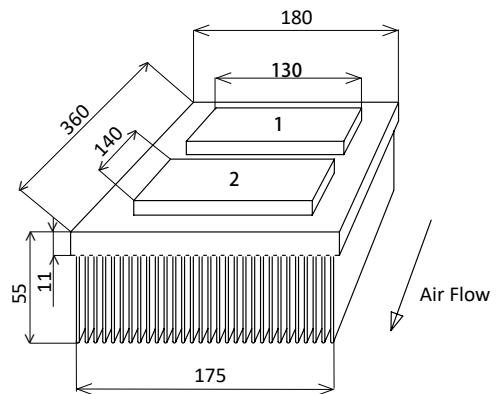
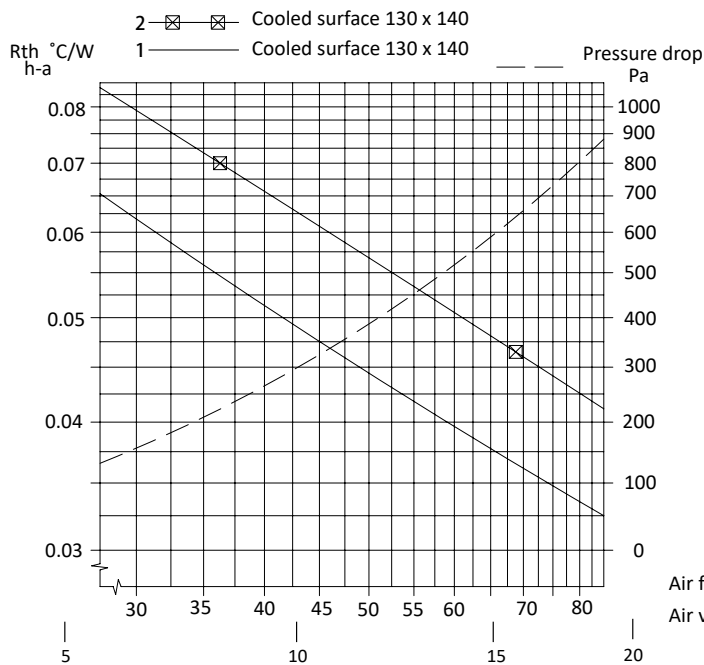


* 20°C 1013 hPa (mbar)

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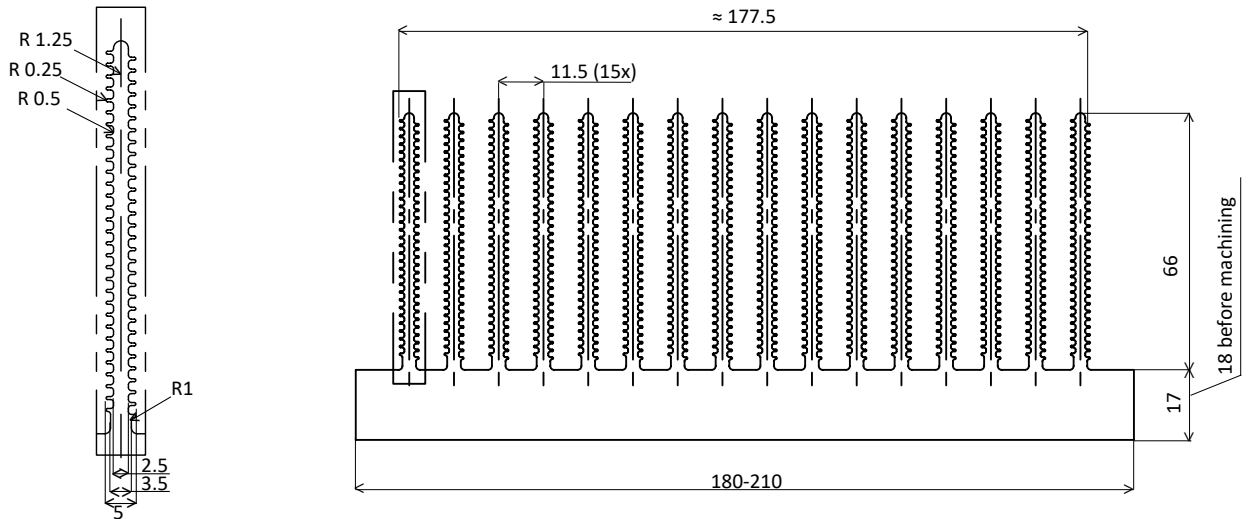


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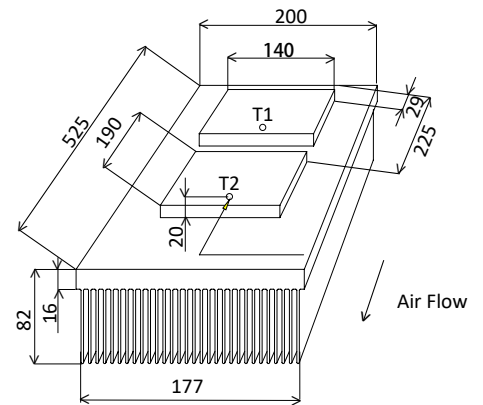
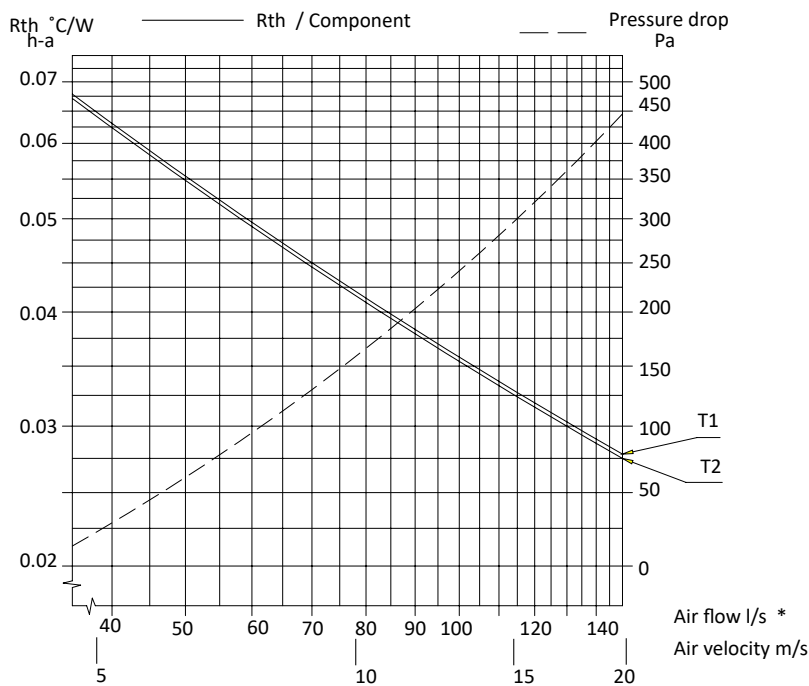


* 20°C 1013 hPa (mbar)

DIMENSIONS

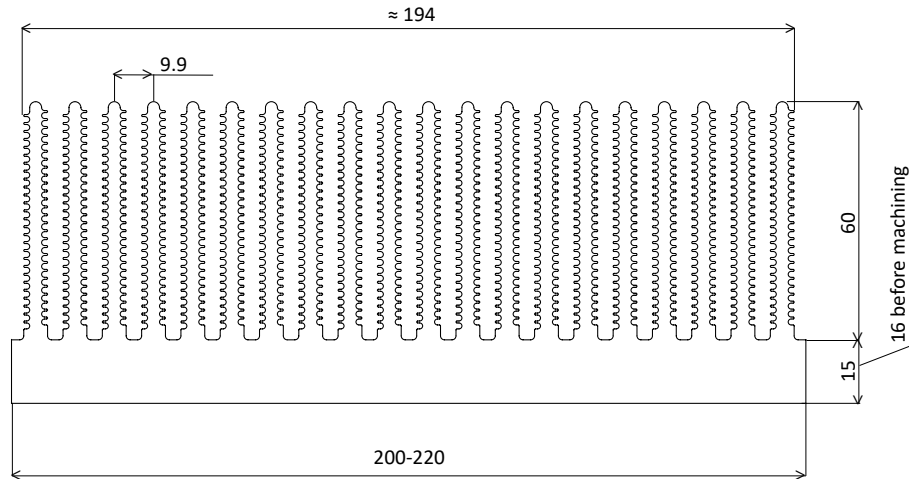


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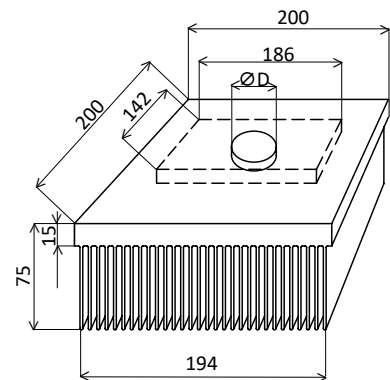
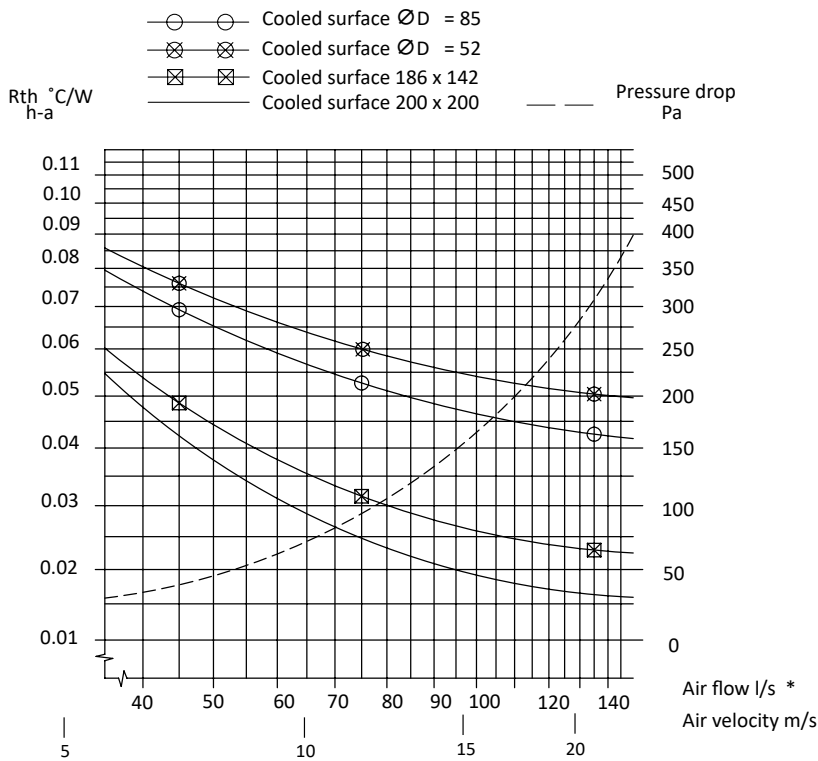


* 20°C 1013 hPa (mbar)

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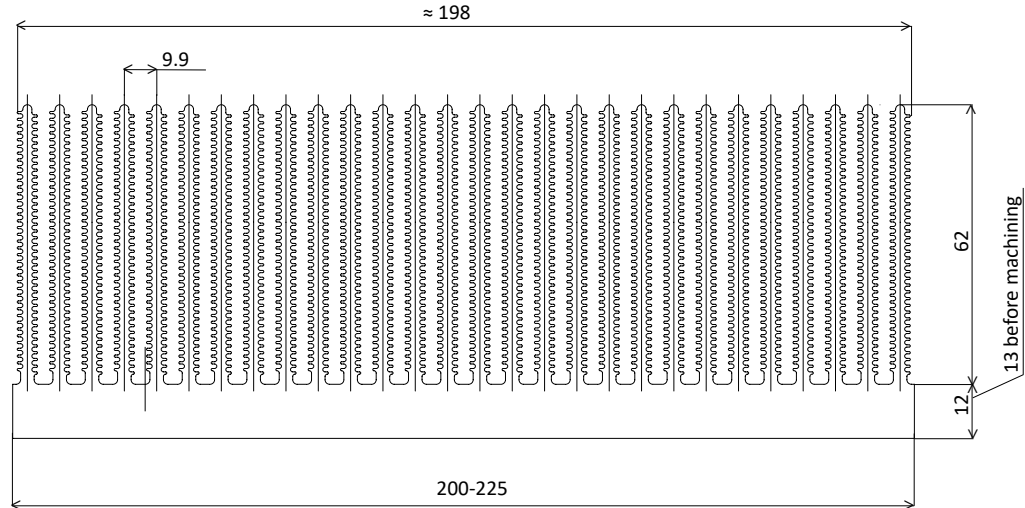


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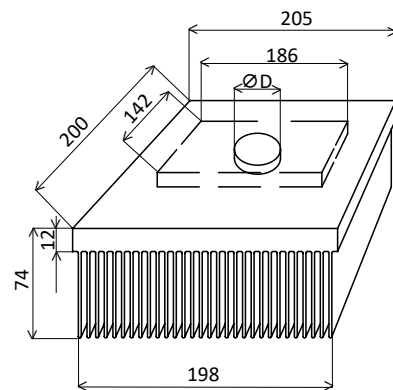
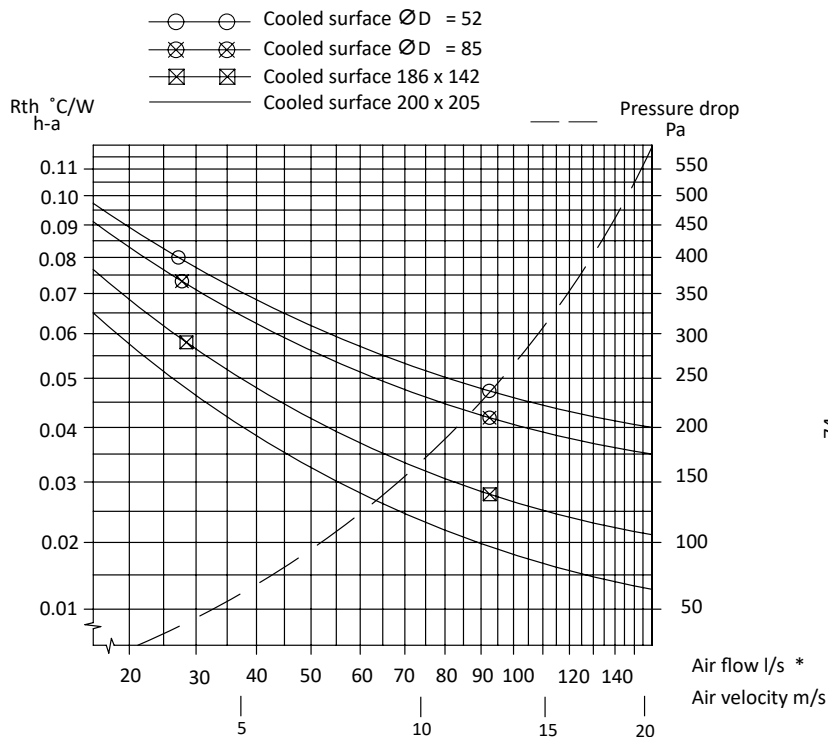


* 20°C 1013 hPa (mbar)

DIMENSIONS

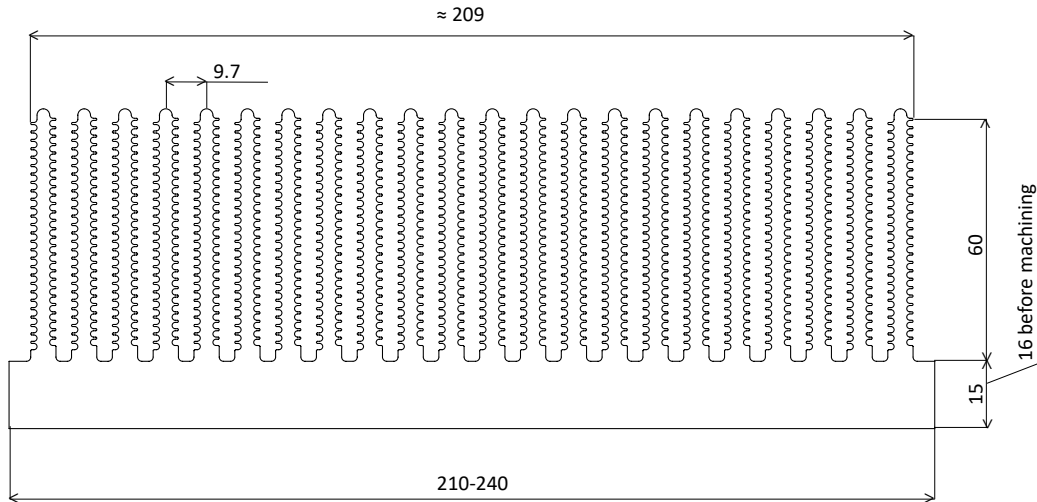


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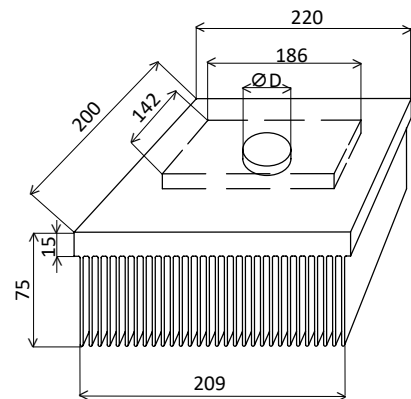
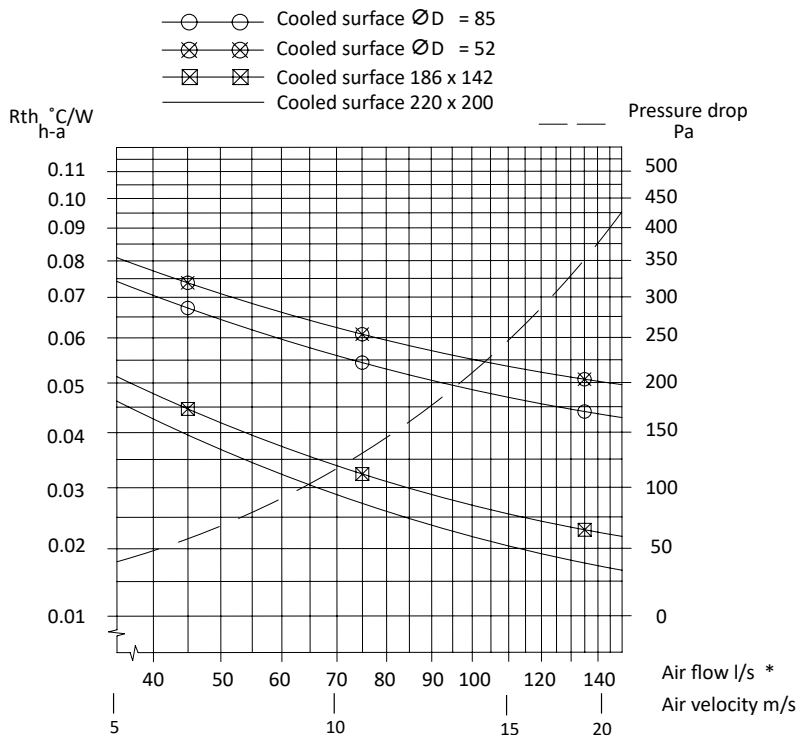


* 20°C 1013 hPa (mbar)

DIMENSIONS

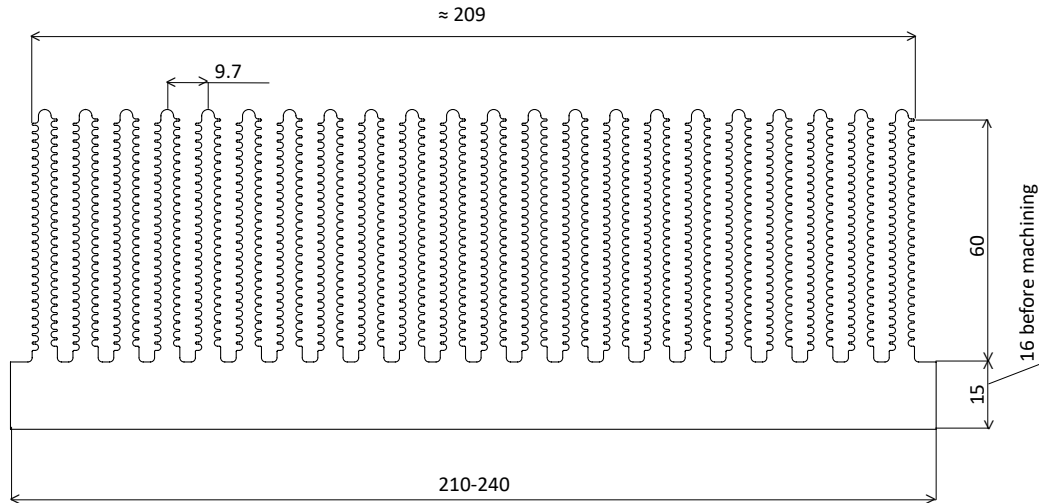


PERFORMANCE

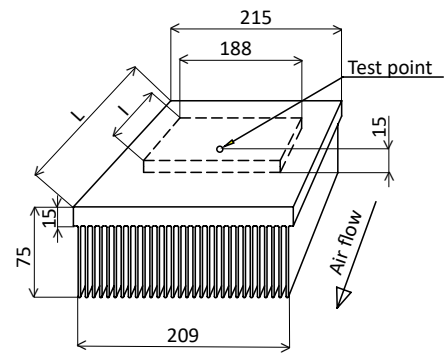
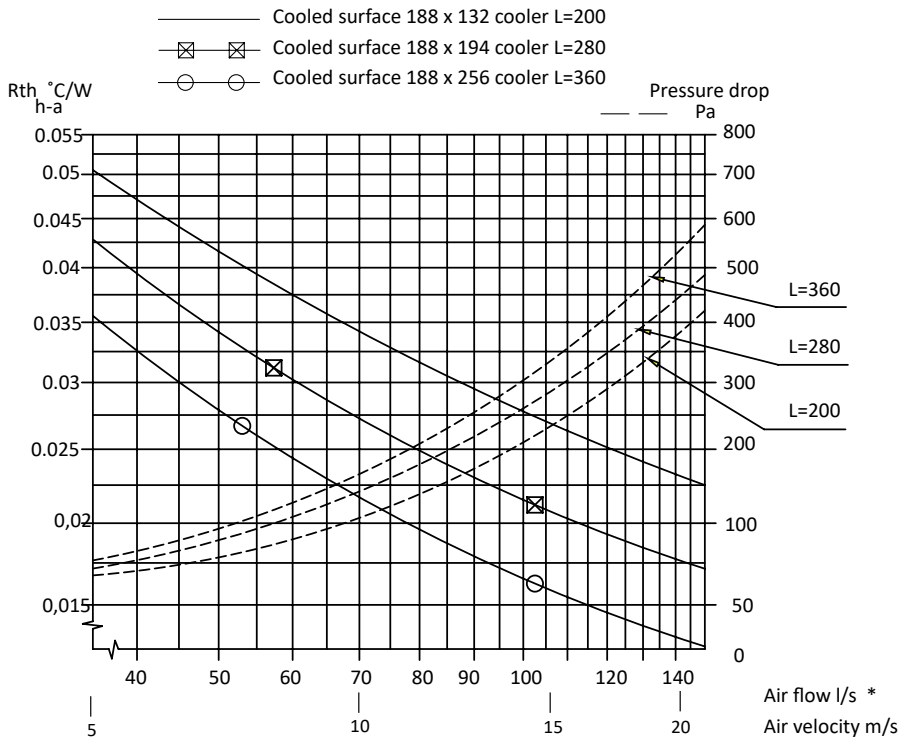


* 20°C 1013 hPa (mbar)

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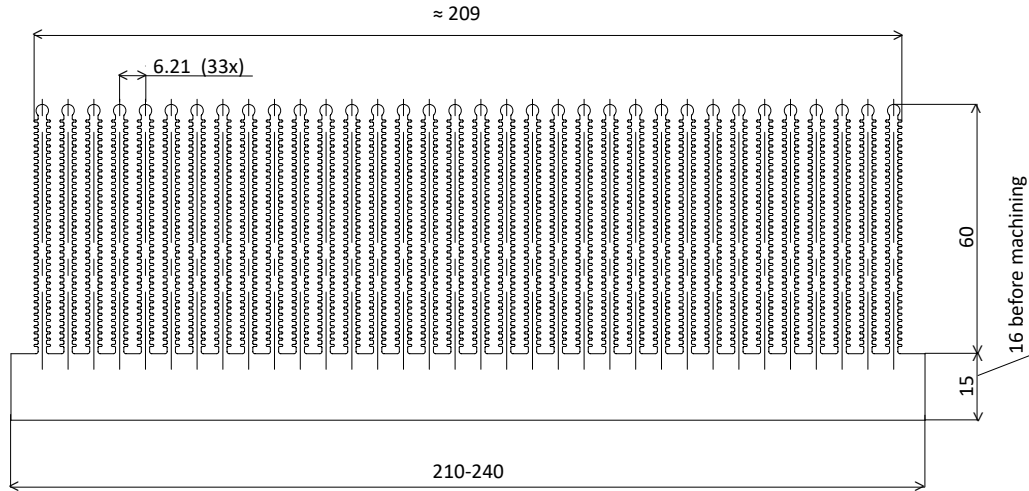


PERFORMANCE L = 200, L = 280, L = 360

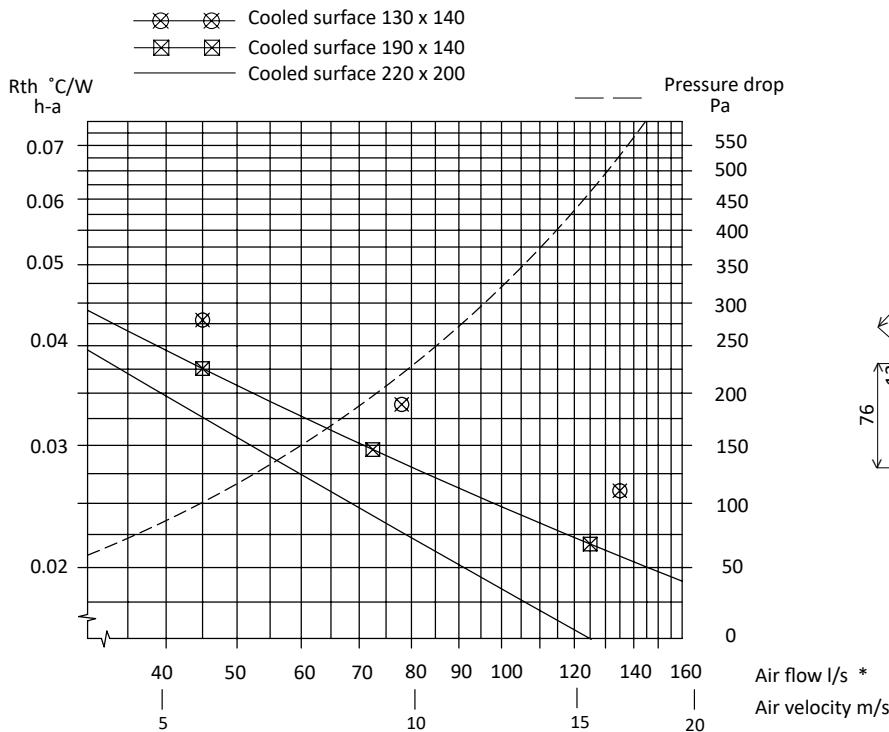


* 20°C 1013 hPa (mbar)

DIMENSIONS

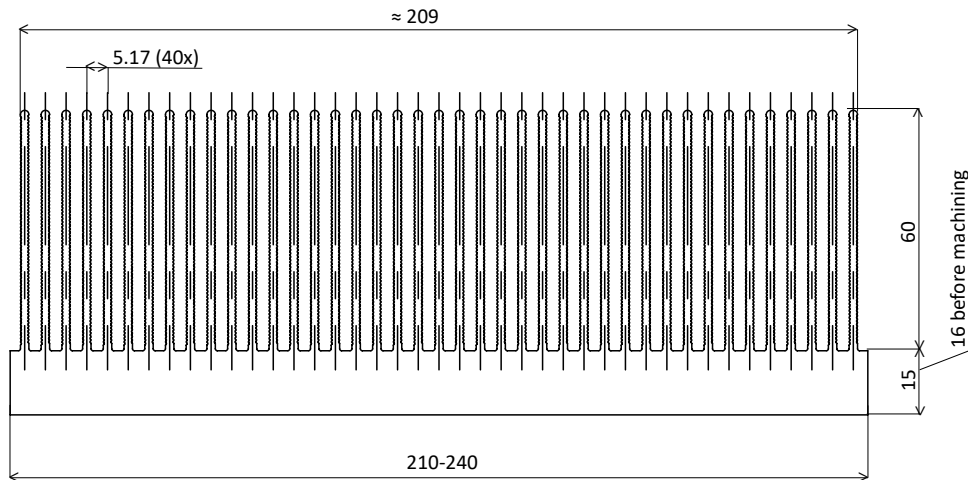


PERFORMANCE

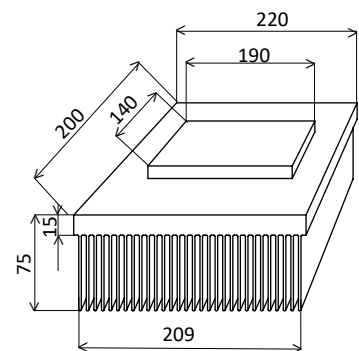
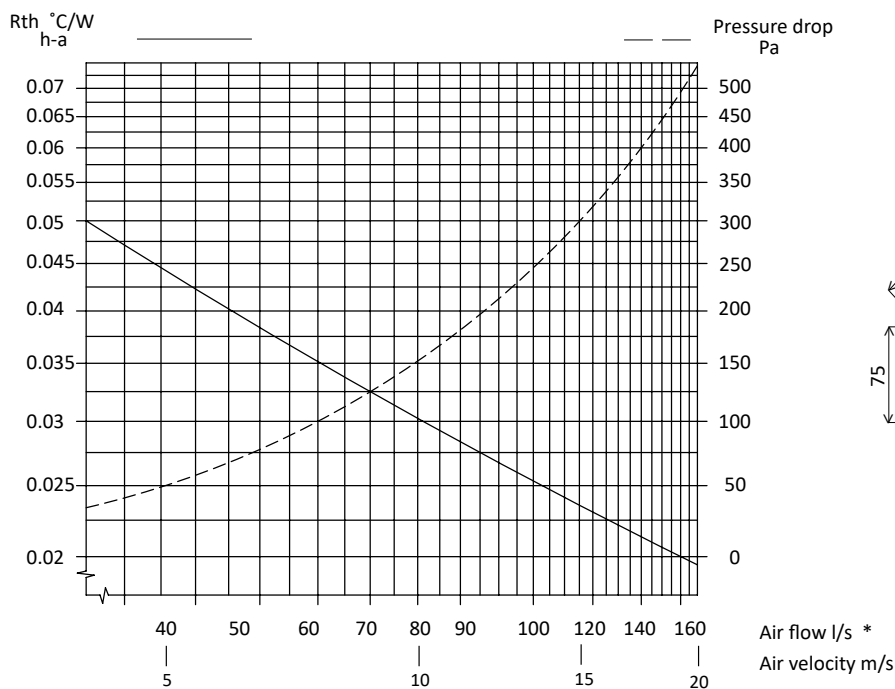


* 20°C 1013 hPa (mbar)

DIMENSIONS

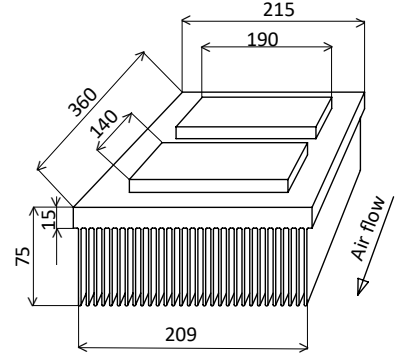
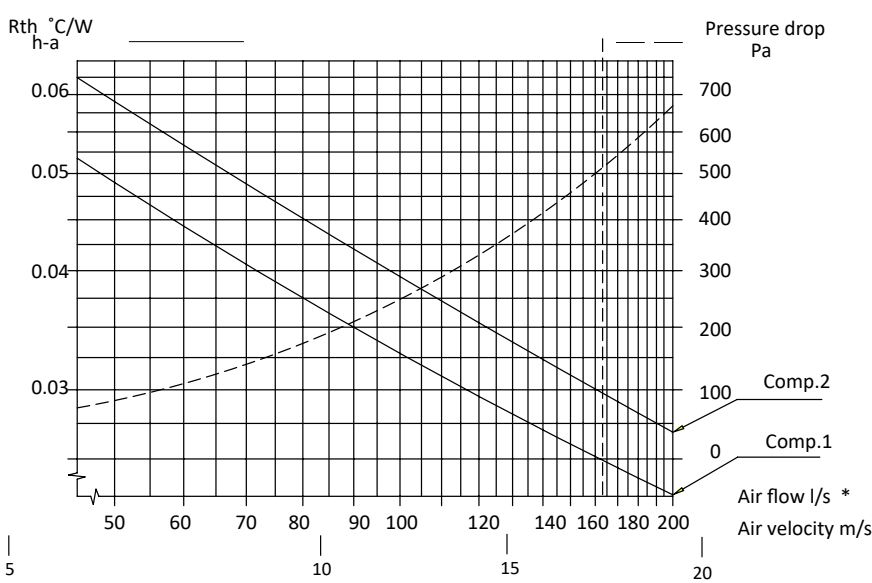


PERFORMANCE

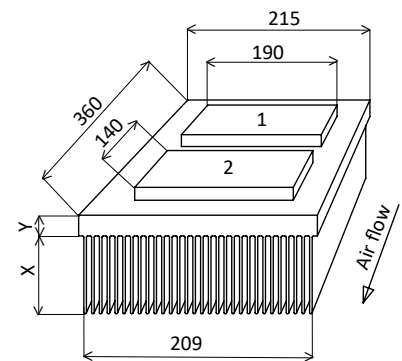
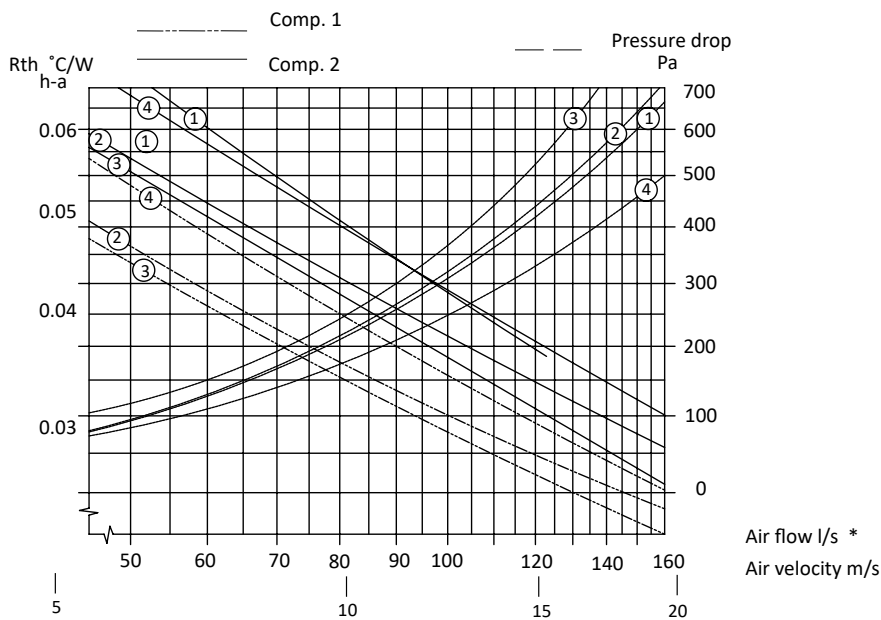


* 20°C 1013 hPa (mbar)

DIMENSIONS

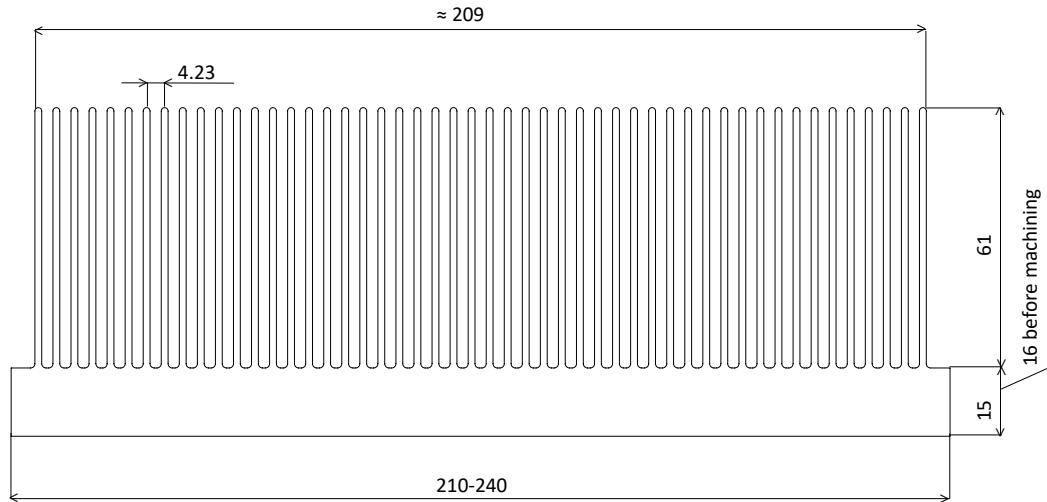


PERFORMANCE

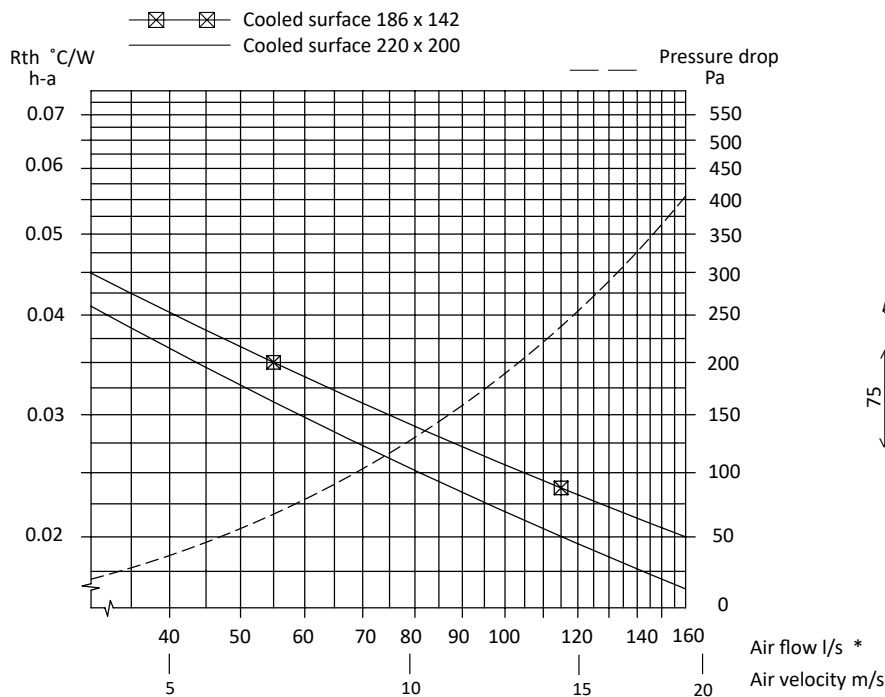


* 20°C 1013 hPa (mbar)

DIMENSIONS

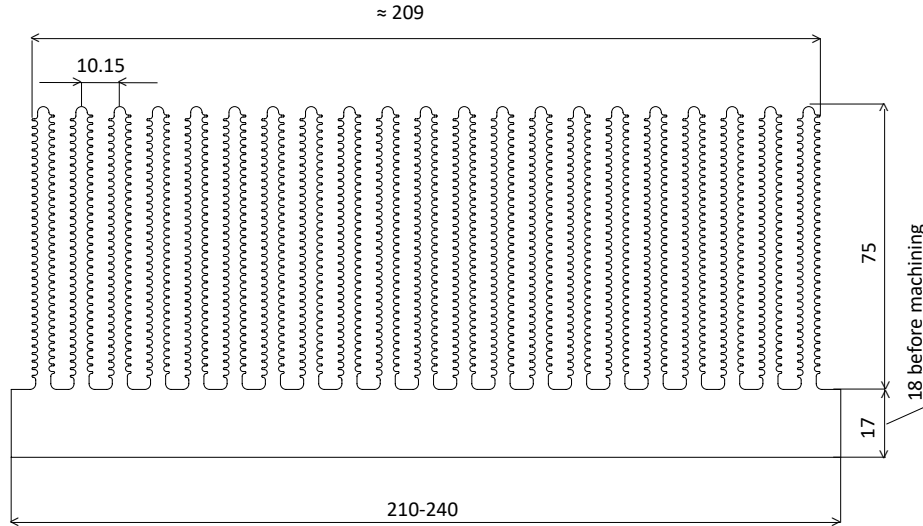


PERFORMANCE

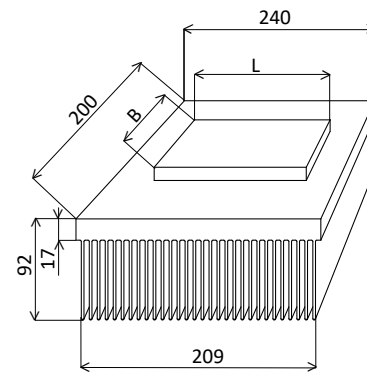
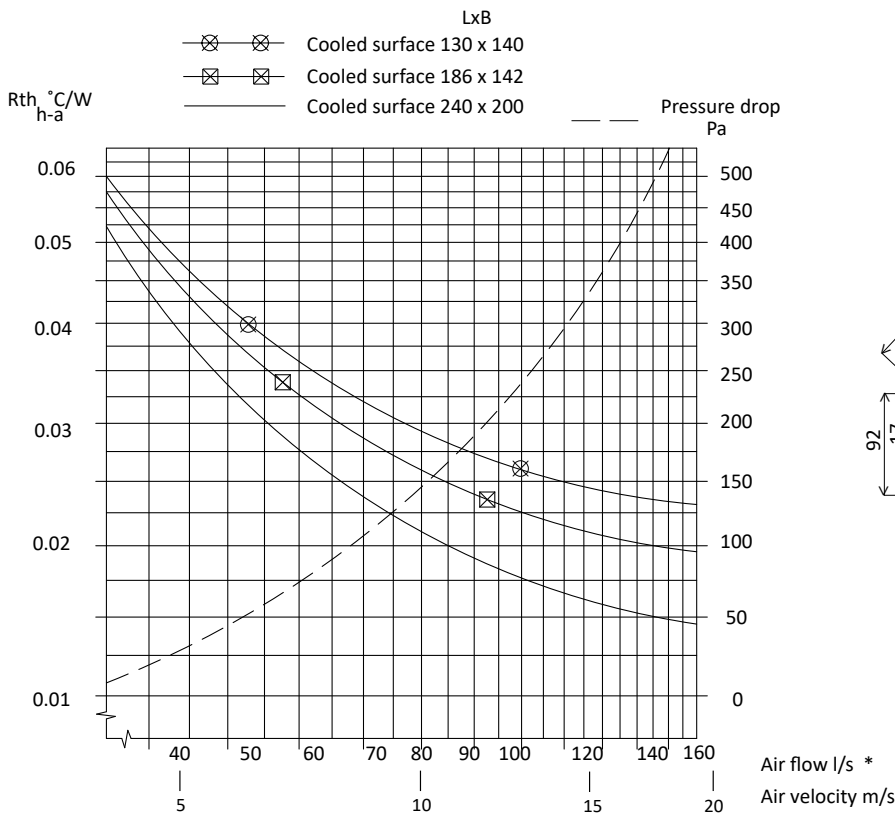


* 20°C 1013 hPa (mbar)

DIMENSIONS

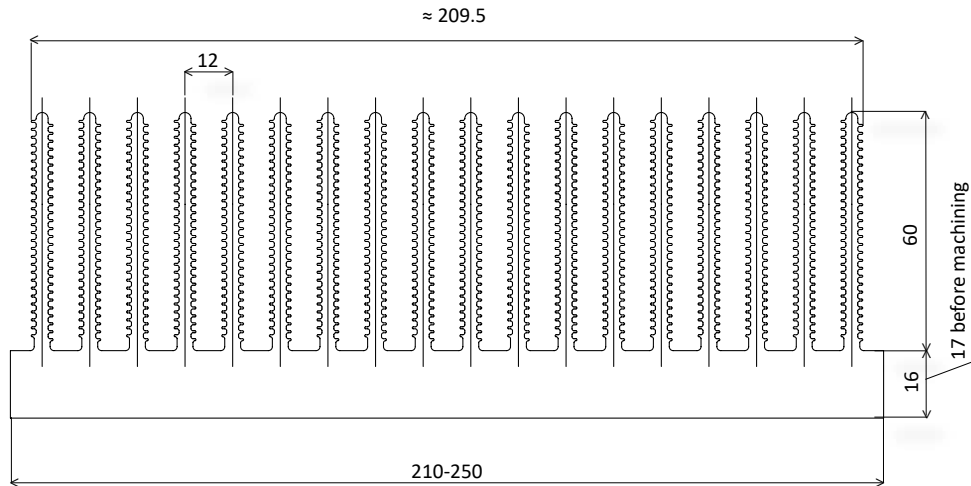


PERFORMANCE

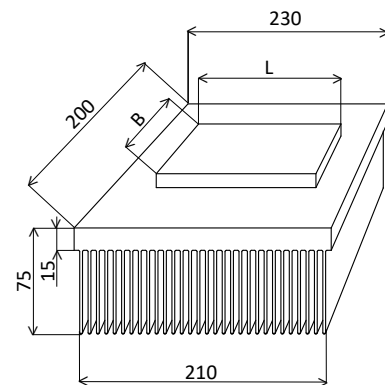
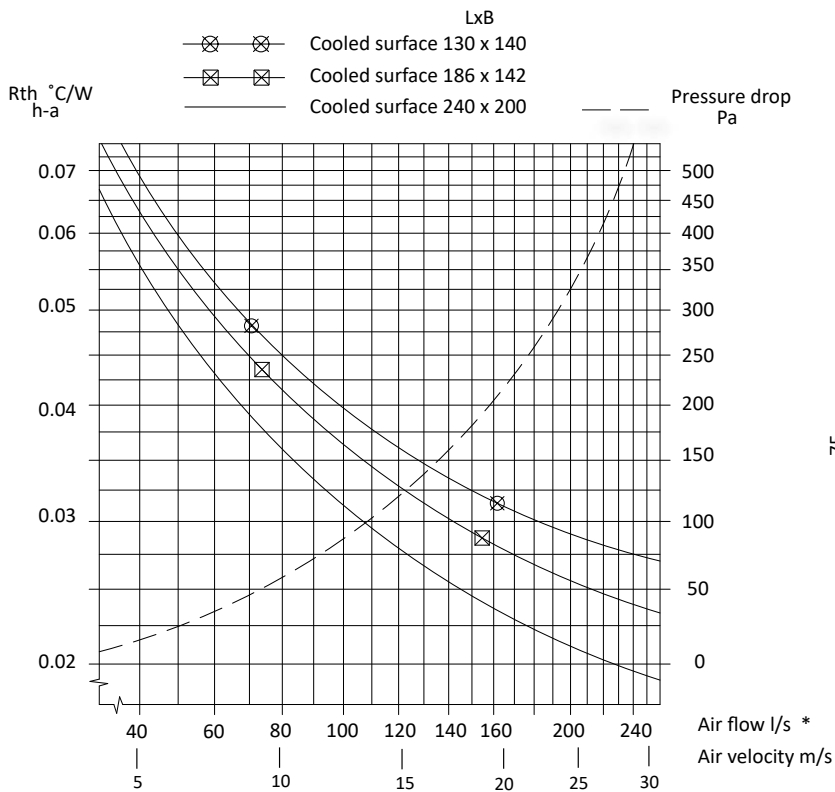


* 20°C 1013 hPa (mbar)

DIMENSIONS

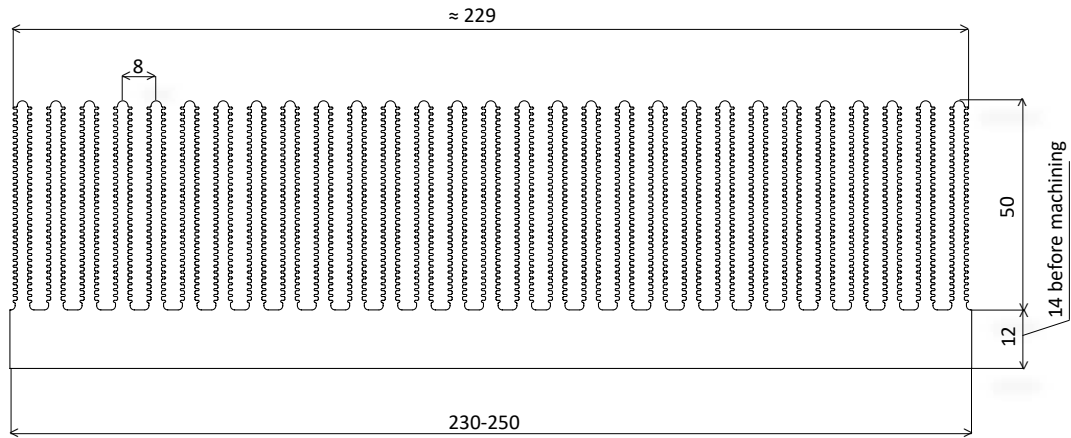


PERFORMANCE

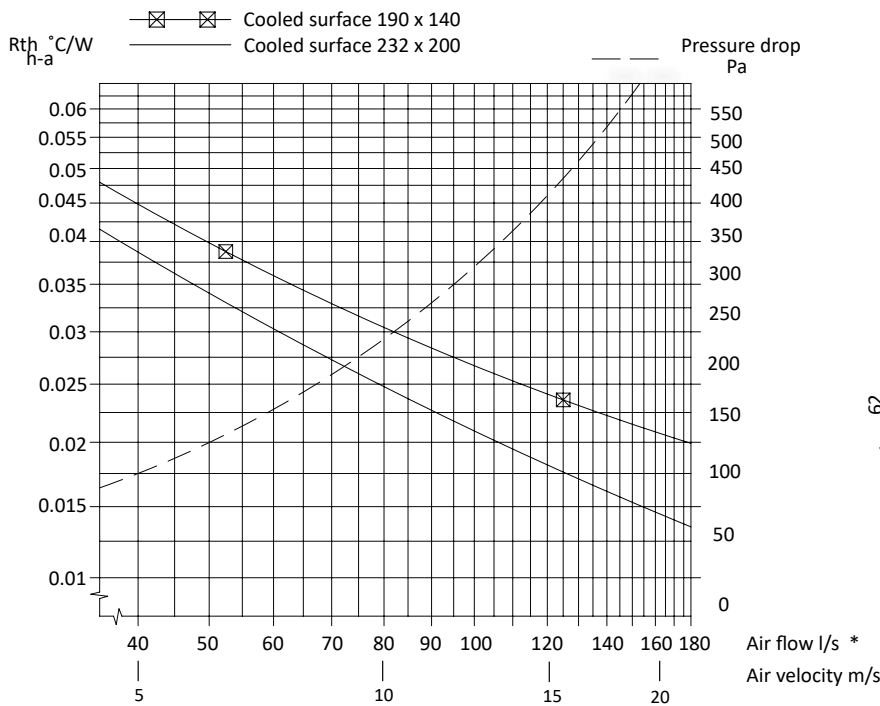


* 20°C 1013 hPa (mbar)

DIMENSIONS

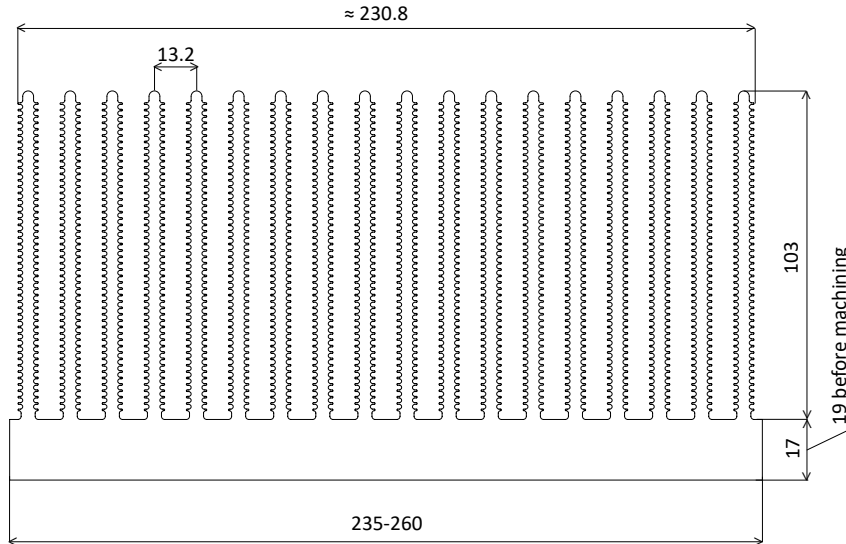


PERFORMANCE

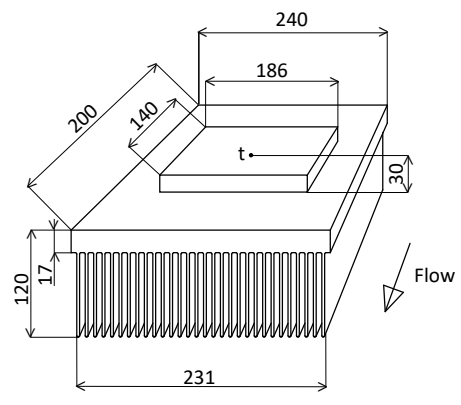
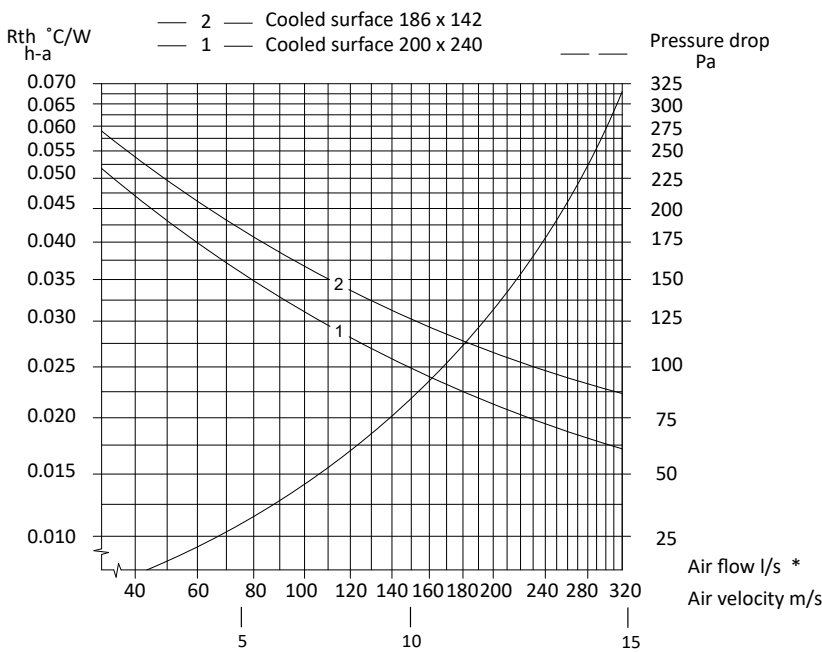


* 20°C 1013 hPa (mbar)

DIMENSIONS



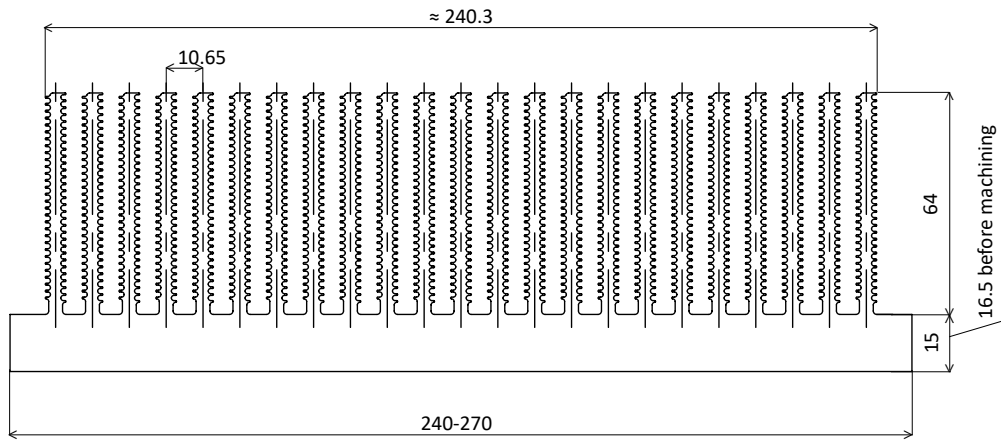
PERFORMANCE



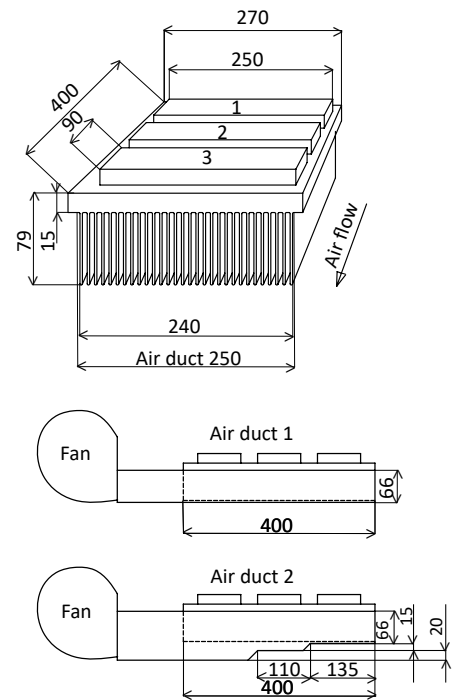
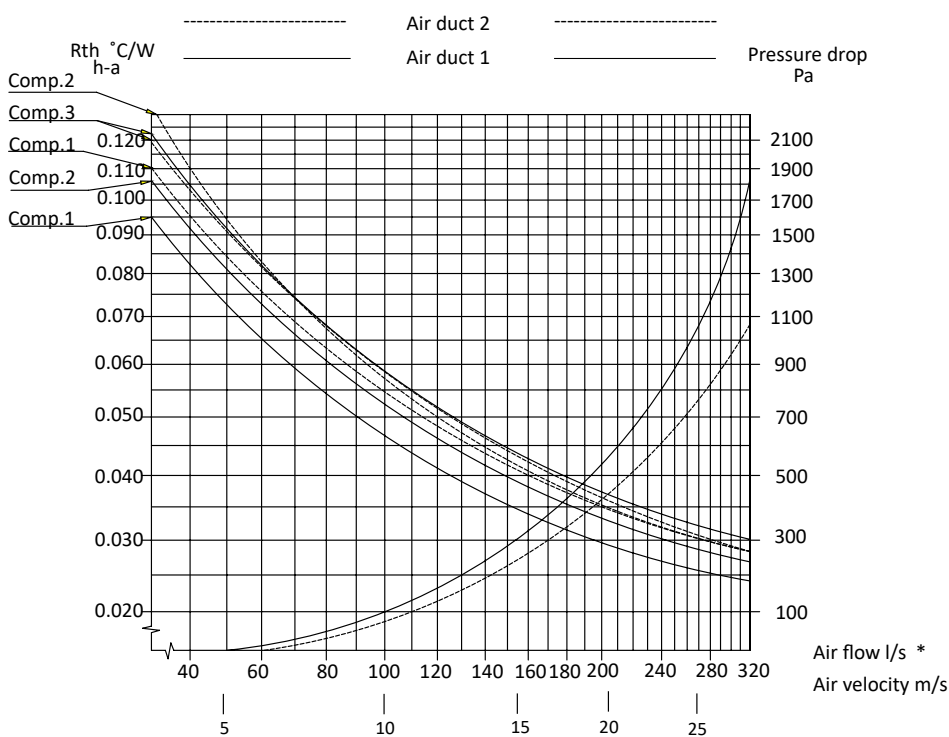
t = Test point
Self convection 0.1-0.2 m/s $R_{th} = 0.214$ $^{\circ}C/W$

* $20^{\circ}C$ 1013 hPa (mbar)

DIMENSIONS

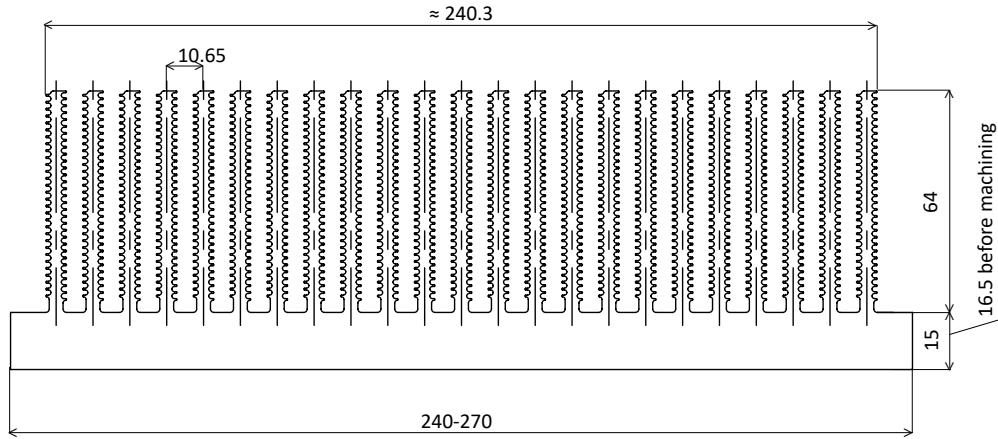


PERFORMANCE

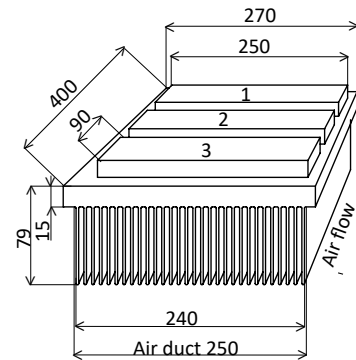
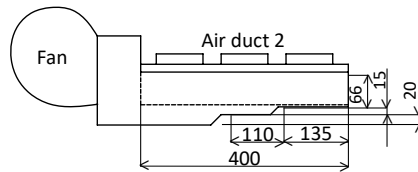
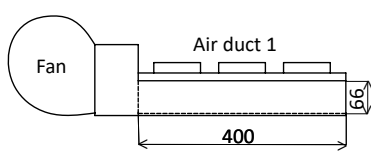


* 20°C 1013 hPa (mbar)

DIMENSIONS



PERFORMANCE



Fan	Pressure drop (PA)	Air duct	Comp.1	Comp.2	Comp.3
RE22P-2DK.3F.1R	910	1	27.4	31.3	34.2
ebm D2E135-AM47-70	280	1	39.1	48.1	55.1
RD135-2EP.WC.2R	98	1	56.6	70.9	79.7
RE22P-2DK.3F.1R	760	2	30.2	32.9	33.1
ebm D2E135-AM47-70	240	2	44.1	51.3	53.9
RD135-2EP.WC.2R	94	2	63.8	73.6	77.3
RE22P-2DK.3F.1R	420	3	30.5	27.7	30.5
ebm D2E135-AM47-70	100	3	44.9	40.6	44.9
RD135-2EP.WC.2R	40	3	68.5	63.5	68.5

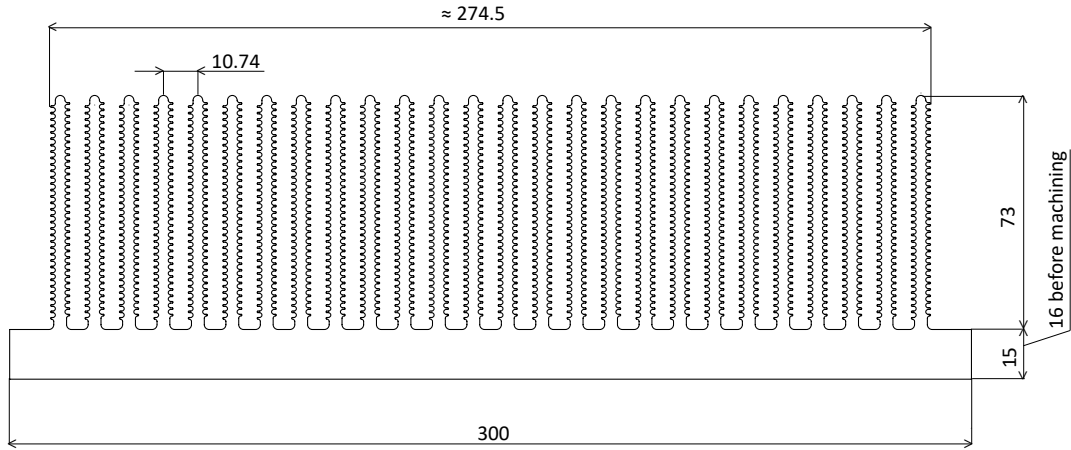
Rem. ambient air temperature before fan.

Rth cannot be appreciably reduced in the concept air duct 1 and 2. A prolonged cooler will only give 4-5% and an increased air flow will result in an air speed above 28 m/s, which will cause a very high sound level.

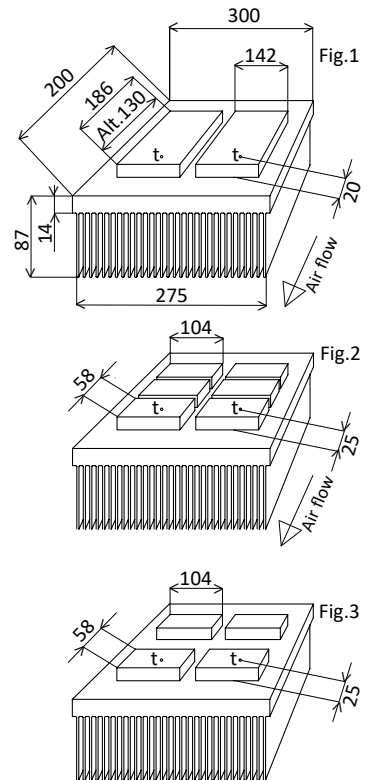
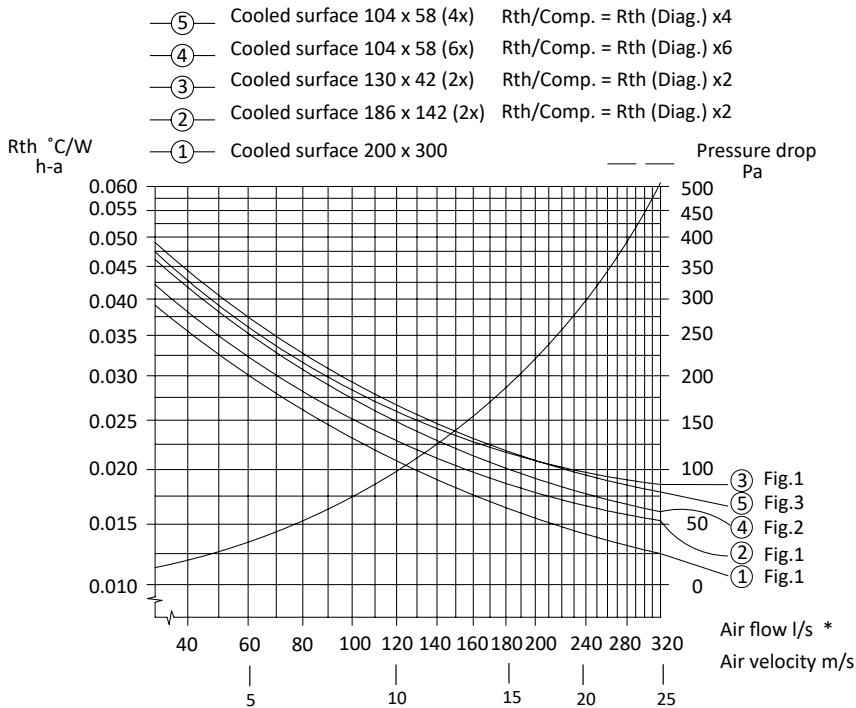
Rth may be reduced 25-30% in the concept air duct 3. A prolongation of the cooler of 100-200 mm will give 8-12%. Increase of air speed and flow from 16 m/s and 350 l/s to 25 m/s and 550 l/s will give about 20% lower Rth. This will demand a 2750 rpm fan with B-wheel of Ø280-300 mm or an F-wheel of Ø250-270 mm.

For Rth values below 22°C/kW water cooling is recommended.

DIMENSIONS

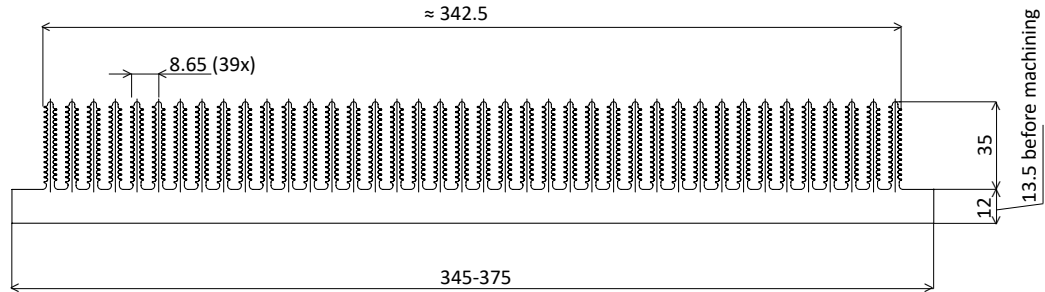


PERFORMANCE

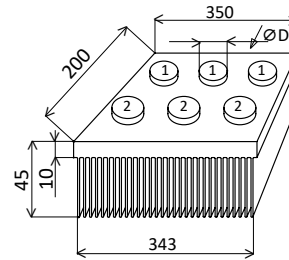
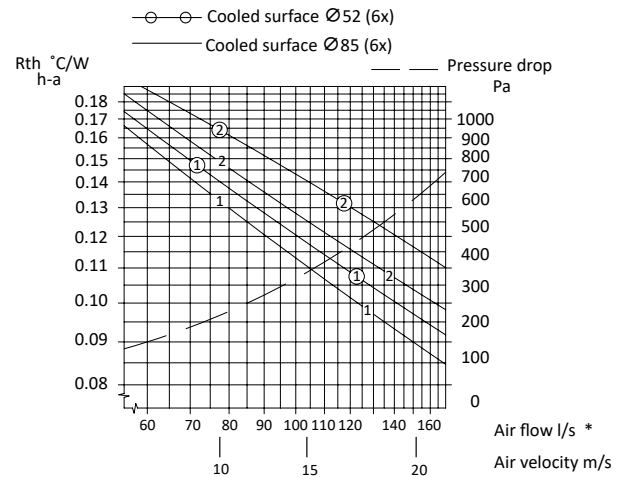
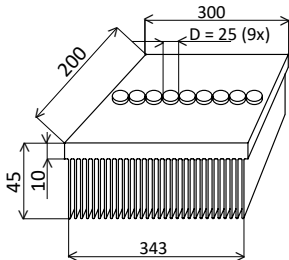
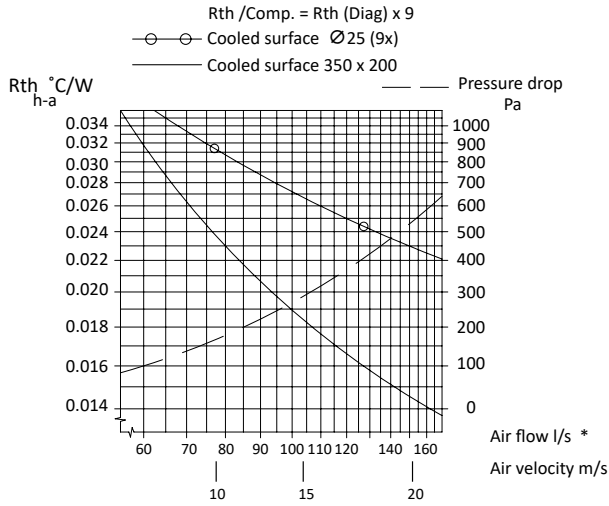


* 20°C 1013 hPa (mbar)

DIMENSIONS

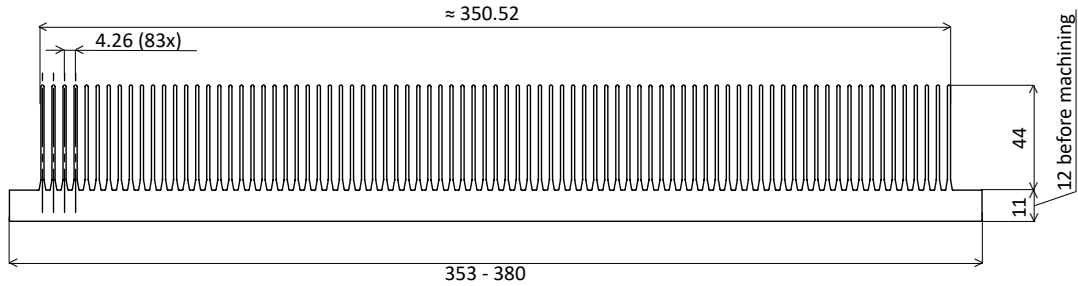


PERFORMANCE

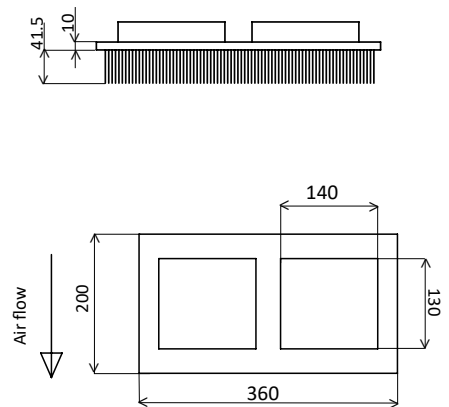
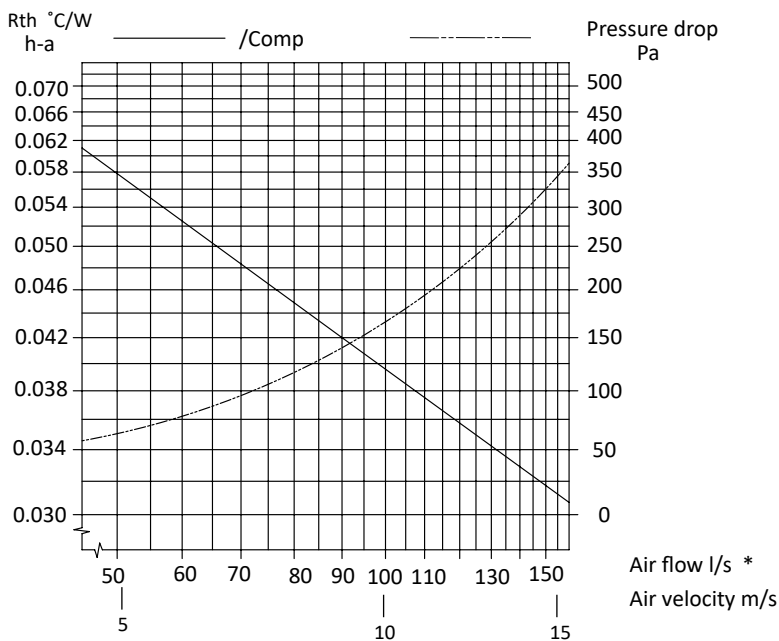


* 20°C 1013 hPa (mbar)

DIMENSIONS



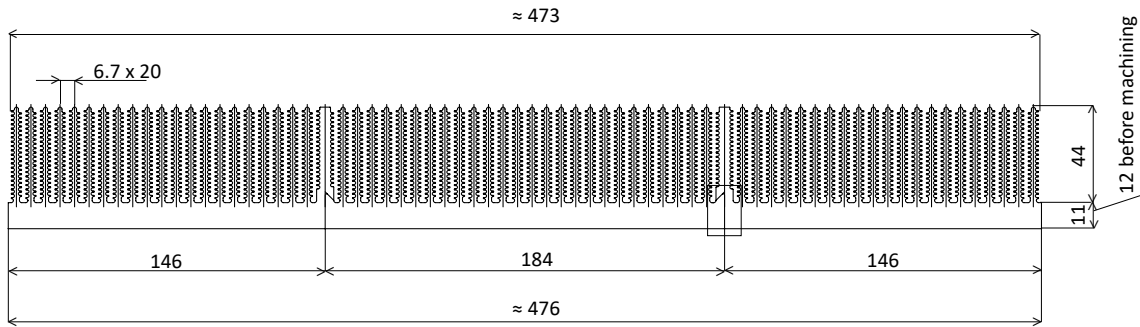
PERFORMANCE



P = 1 kW/Comp.

* 20°C 1013 hPa (mbar)

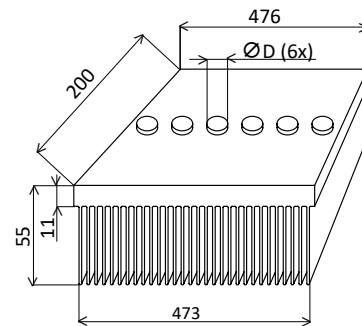
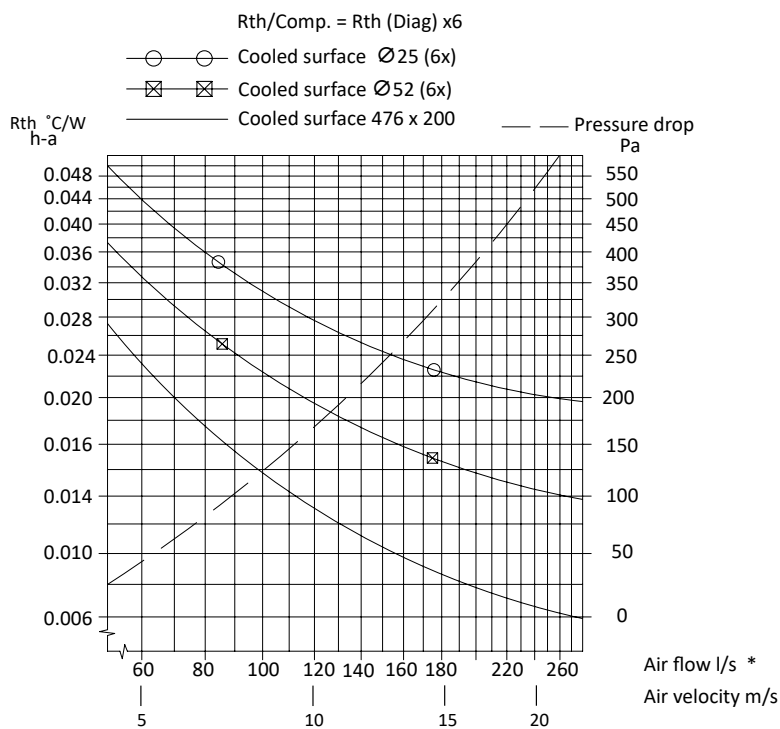
DIMENSIONS



*** 2 pcs P - 150 - 44 - 11 - 22

***1 pcs P - 175 - 44 - 11 - 26

PERFORMANCE

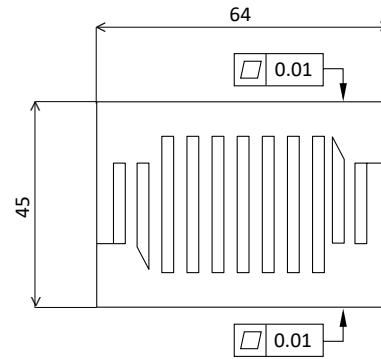


* 20°C 1013 hPa (mbar)

DIMENSIONS

Heatsinks for double-sided mounting

All models are available in lengths up to 300 mm.



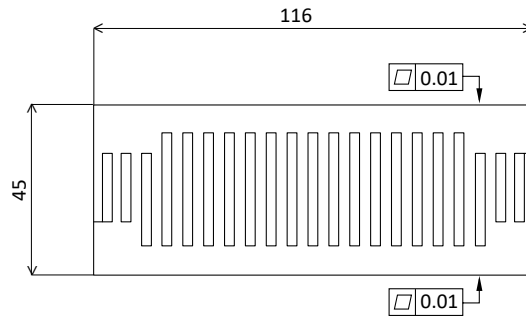
PERFORMANCE

* 20°C 1013 hPa (mbar)

DIMENSIONS

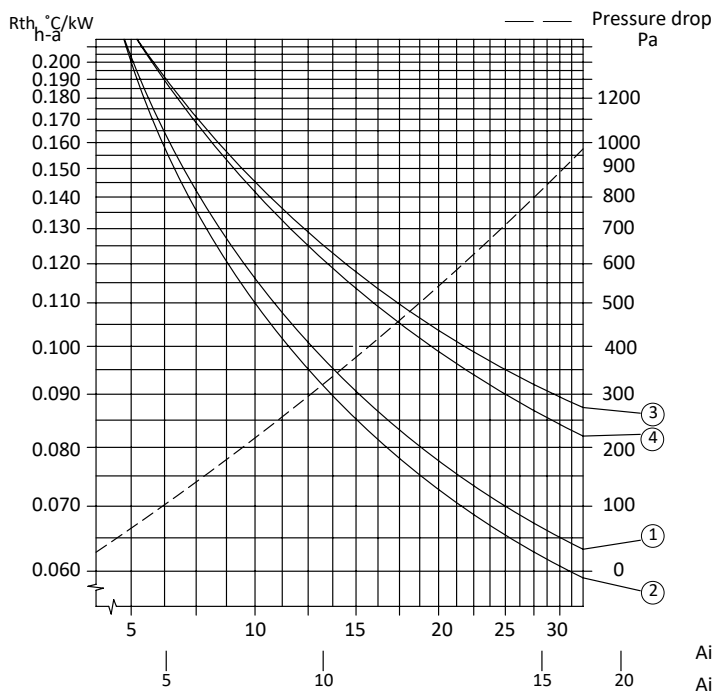
Heatsinks for double-sided mounting

All models are available in lengths up to 300 mm.

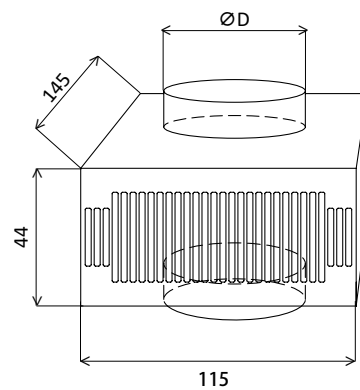


PERFORMANCE

- ① Cooled surface $\varnothing 34$ (2x) Rth/Comp. = Rth (Diag.) x2
- ② Cooled surface $\varnothing 47$ (2x) Rth/Comp. = Rth (Diag.) x2
- ③ Cooled surface $\varnothing 34$ One side of the cooler is utilized
- ④ Cooled surface $\varnothing 47$ One side of the cooler is utilized

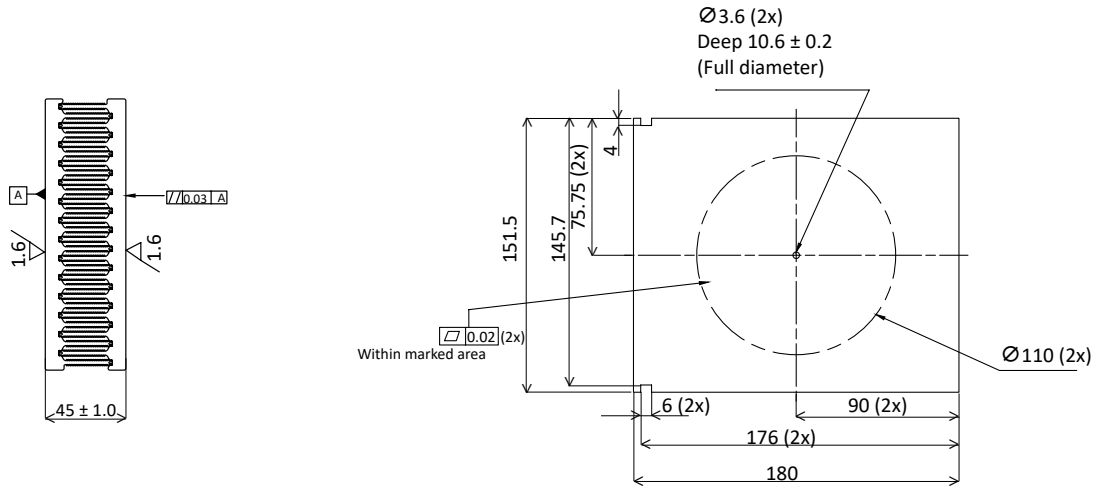


* 20°C 1013 hPa (mbar)



Air flow l/s *
Air velocity m/s

DIMENSIONS

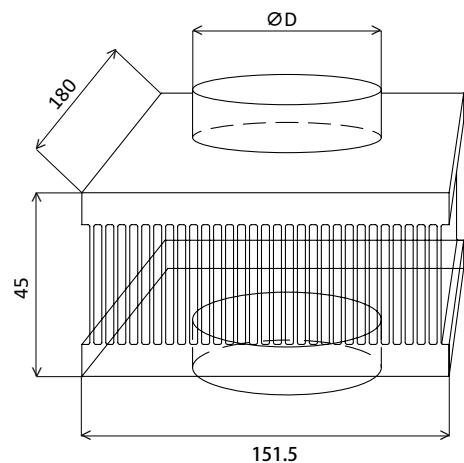
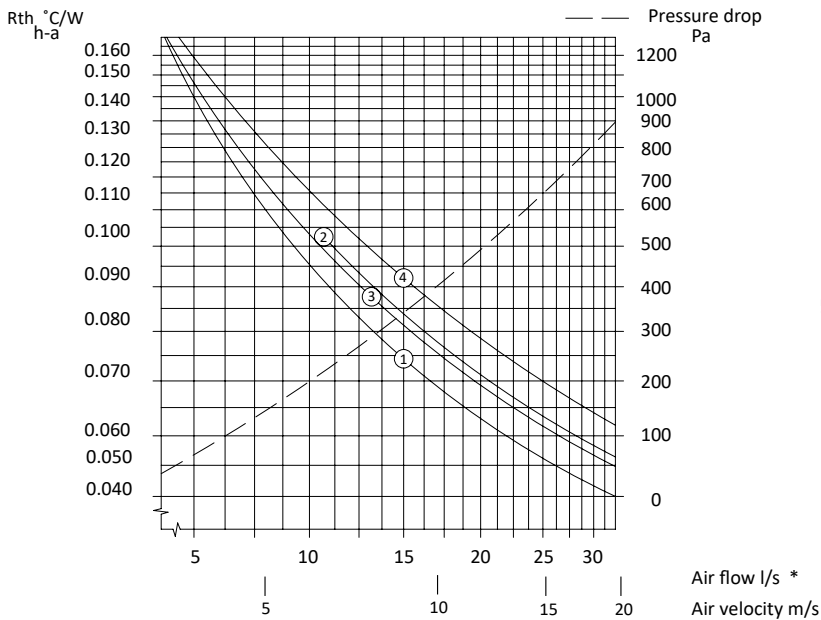


Order designation

GTM 45-0 No surface treatment
GTM 45-0/Ni With surface treatment: AL/Ni 6B acc. to 2062 021-1

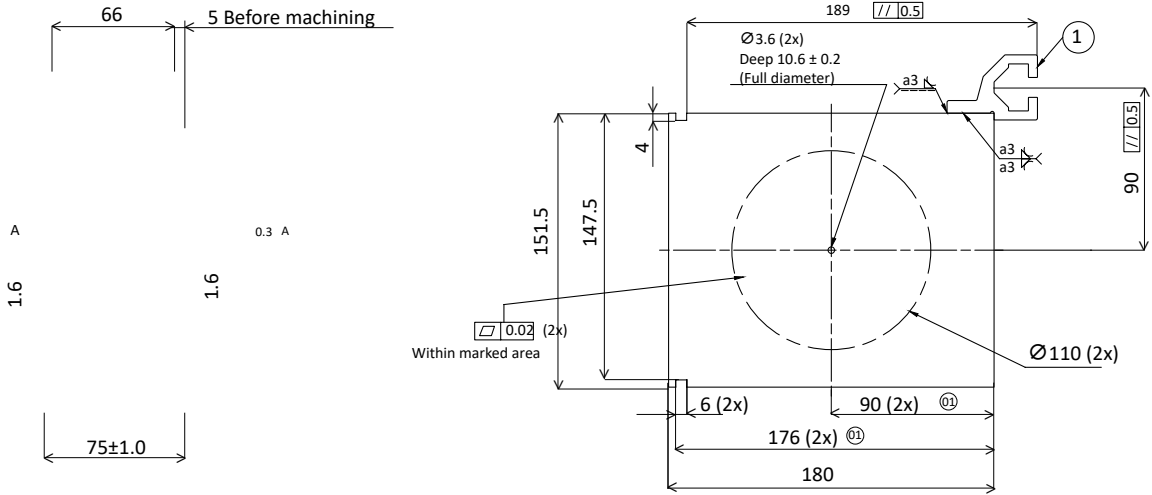
PERFORMANCE

- ① Cooled surface Ø100 (2x) Rth/Comp. = Rth (Diag.) x2
- ② Cooled surface Ø78 (2x) Rth/Comp. = Rth (Diag.) x2
- ③ Cooled surface Ø100 One side of the cooler is utilized
- ④ Cooled surface Ø78 One side of the cooler is utilized



* 20°C 1013 hPa (mbar)

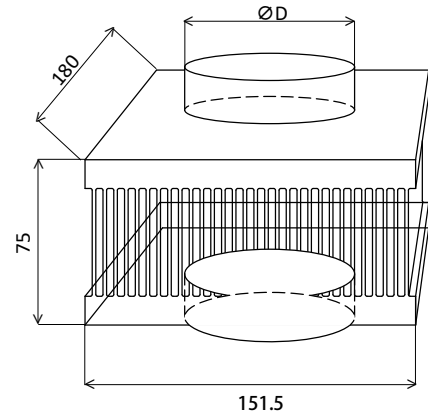
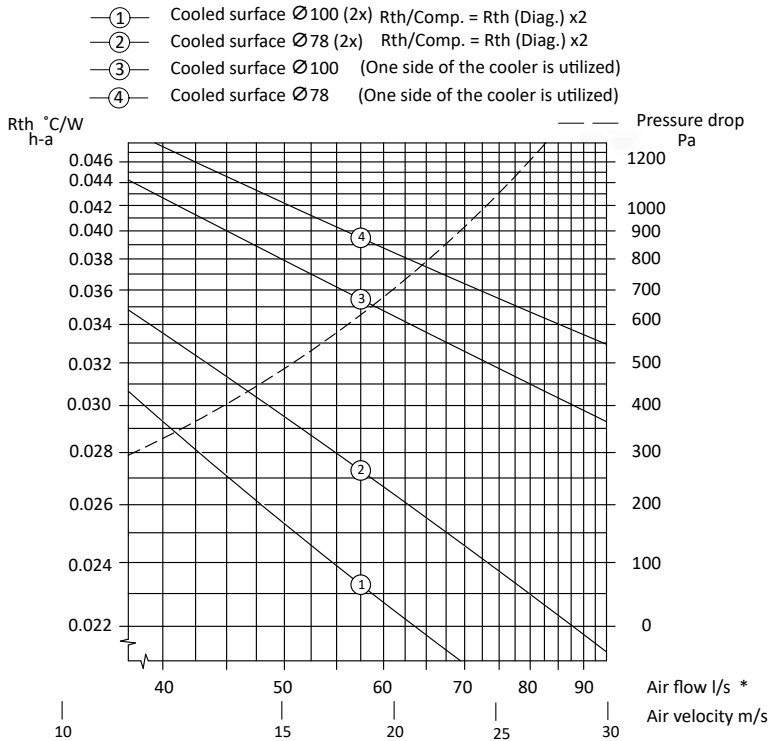
DIMENSIONS



Order designation

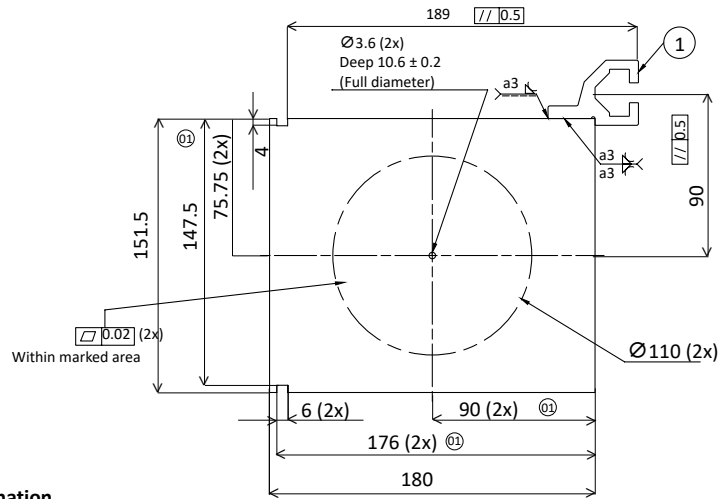
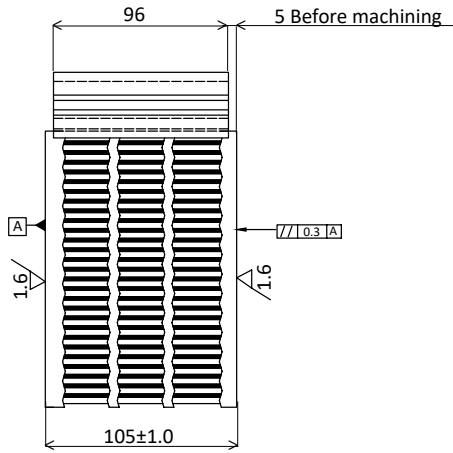
- GTM 75-0
- GTM 75-0/Ni With surface treatment: AL/Ni 6B acc. to 2062 021-1
- ① GTM 75-1 With one busbar
- ① GTM 75-1/Ni With surface treatment: AL/Ni 6B acc. to 2062 021-1

PERFORMANCE



* 20°C 1013 hPa (mbar)

DIMENSIONS



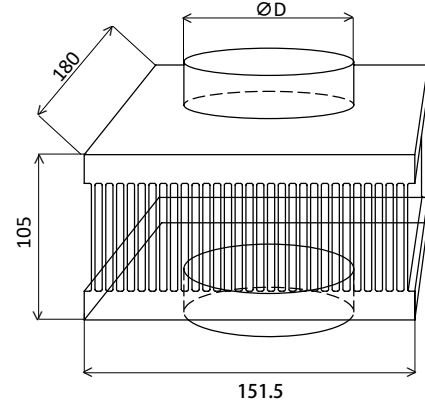
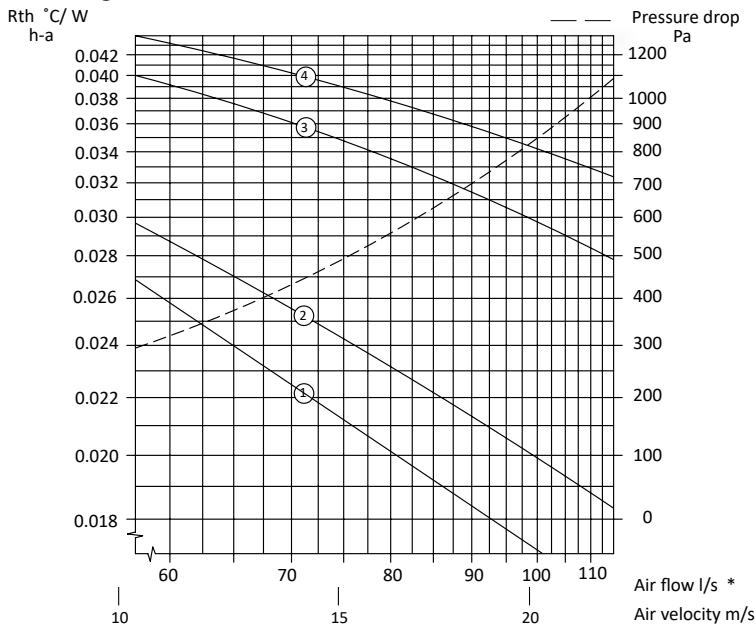
Order designation

GTM 105-0
GTM 105-0/Ni with surface treatment: AL/Ni 6B acc. to 2062 021-1

① GTM 105-1 with one busbar
GTM 105-1/Ni with surface treatment: AL/Ni 6B acc. to 2062 021-1

PERFORMANCE

- ① Cooled surface Ø100 (2x) Rth/Comp. = Rth (Diag.) x2
- ② Cooled surface Ø78 (2x) Rth/Comp. = Rth (Diag.) x2
- ③ Cooled surface Ø100 (One side of the cooler is utilized)
- ④ Cooled surface Ø78 (One side of the cooler is utilized)



* 20°C 1013 hPa (mbar)



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