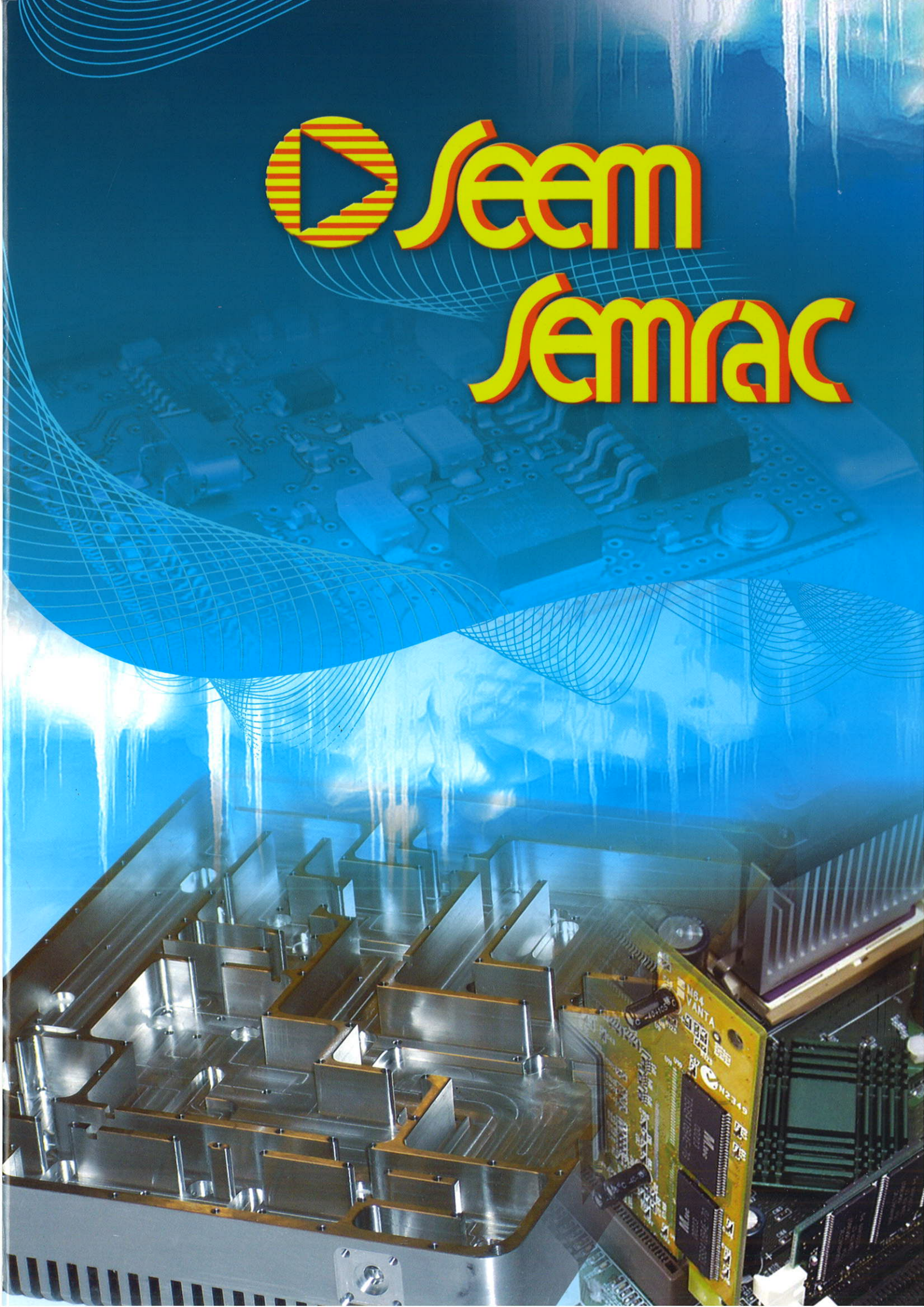


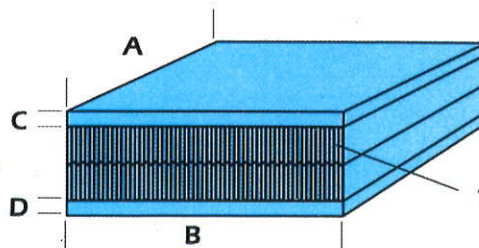
The background of the entire image is a vibrant blue. It features a large, semi-transparent circuit board in the upper half and a detailed, metallic-looking mechanical assembly in the lower half. The assembly includes various components like heat sinks, capacitors, and integrated circuits. Overlaid on the blue background are several white, glowing, curved lines that resemble magnetic field lines or data paths. The logo, consisting of a stylized 'S' inside a circle with horizontal stripes, is positioned to the left of the company name.

# Seem Semrac



**APC**

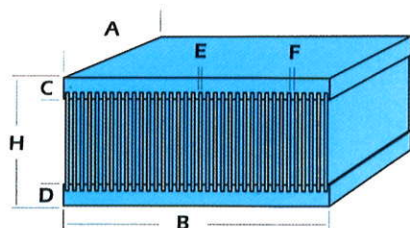
**Ailettes plissées collées ou brasées**



|   |                                    |             |
|---|------------------------------------|-------------|
| A | longueur                           | 400 mm max. |
| B | Largeur                            | 400 mm max. |
| C | Epaisseur 1 <sup>ère</sup> semelle | 8 à 20 mm   |
| D | Epaisseur 2 <sup>ème</sup> semelle | 1 à 20 mm   |
| 1 | Plissé                             |             |

**AIC F**

**Ailettes insérées collées simple ou double face**



|   |                                    |                   |
|---|------------------------------------|-------------------|
| A | longueur                           | 400 mm max.       |
| B | Largeur                            | 400 mm max.       |
| C | Epaisseur 1 <sup>ère</sup> semelle | 8 à 20 mm (alu)   |
| D | Epaisseur 2 <sup>ème</sup> semelle | 1 à 20 mm (alu)   |
| H | Hauteur                            | 130 mm max.       |
| E | Epaisseur ailettes                 | 1/1, 5/2 mm (alu) |
| F | intervalles entre ailettes         | 2/3/4 mm          |



Le **leader** sur le marché de la

**dissipation thermique**

depuis plus de 40 ans, vous propose une

**ligne complète de dissipateurs**

et de **tôlerie sur mesure**



Votre partenaire pour l'avenir

ISO 9001 : 2000  
N° FR-04/07-0017

**ENTREPRISE CERTIFIEE ISO 9001 v. 2000**  
(Certificat FR-04/07 - 0017)



## DISSIPATEURS

|                   |                   |                    |                    |
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### Commercial & usine

Rue du 8 Mai 1945 - Z.I. de Saint Ulfrant  
 27500 **PONT-AUDEMER**

Tél. : **02 32 56 79 70** - Fax : 02 32 56 79 81

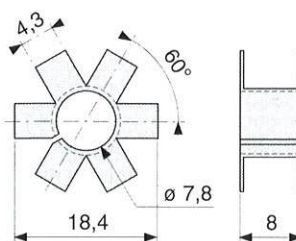
E-mails : [dissipateurs@seem-semrac.com](mailto:dissipateurs@seem-semrac.com), [rack@seem-semrac.com](mailto:rack@seem-semrac.com)

site : [www.seem-semrac.com](http://www.seem-semrac.com)

### CO 439

Ech. / Scale : 1/1

|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 60 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 410439                   |

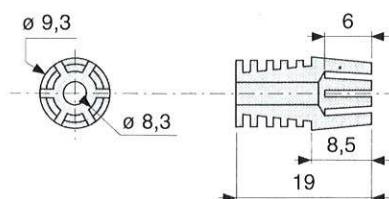


Epaisseur / Thickness : 0,3mm

### CO 343

Ech. / Scale : 1/1

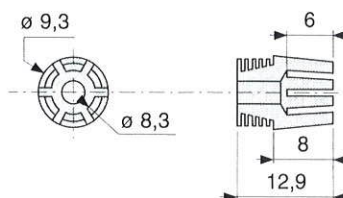
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 50 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 410343                   |



### CO 343/1

Ech. / Scale : 1/1

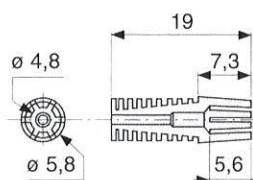
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 57 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 41034301                 |



### CO 343/2

Ech. / Scale : 1/1

|                                 |          |
|---------------------------------|----------|
| Anodisé noir<br>Black anodized  | CODE     |
| Rth = 60 K / W                  | 41034302 |
| Pour boîtier / For case : TO 18 |          |

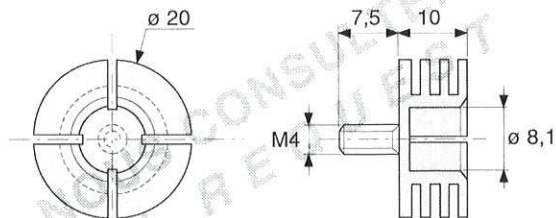




### CO 93

Ech. / Scale : 1/1

|                          |                         |
|--------------------------|-------------------------|
| Pour boîtier<br>For case | TO 5                    |
| Rth                      | 45 K/W                  |
| Finition /Finishing      | Anod. Rouge / Red anod. |
| <b>CODE</b>              | <b>410093</b>           |

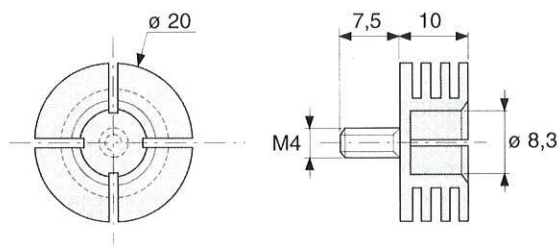


nous consulter

### CO 93/1

Ech. / Scale : 1/1

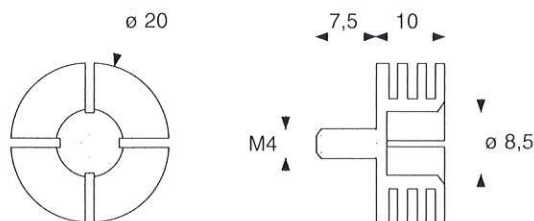
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 45 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| <b>CODE</b>              | <b>41009301</b>          |



nous consulter

### CO 93/2

|                                  |                 |
|----------------------------------|-----------------|
| Anodisé Jaune<br>Yellow anodized | <b>CODE</b>     |
| Rth = 45 K / W                   | <b>41009302</b> |
| Pour boîtier / For case : TO 5   |                 |

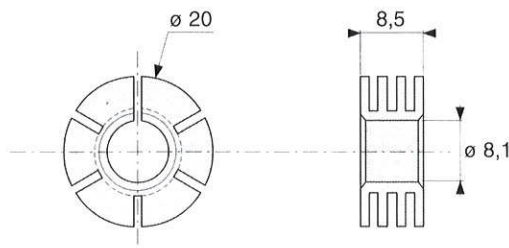


nous consulter

### CO 92

Ech. / Scale : 1/1

|                          |                         |
|--------------------------|-------------------------|
| Pour boîtier<br>For case | TO 5                    |
| Rth                      | 55 K/W                  |
| Finition /Finishing      | Anod. Rouge / Red anod. |
| <b>CODE</b>              | <b>410092</b>           |

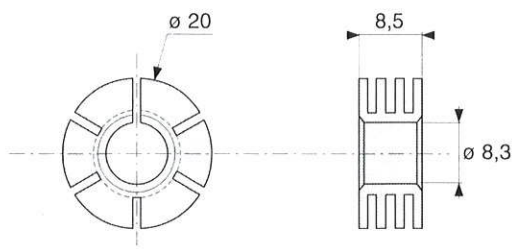




### CO 92/1

Ech. / Scale : 1/1

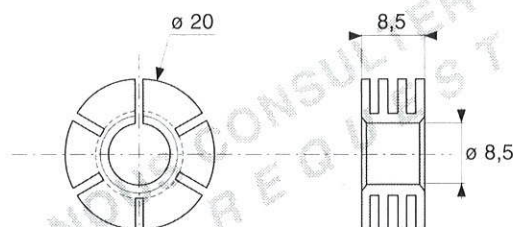
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 55 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 41009201                 |



### CO 92/2

Ech. / Scale : 1/1

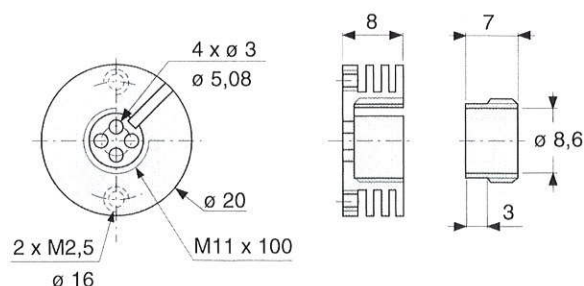
|                          |                            |
|--------------------------|----------------------------|
| Pour boîtier<br>For case | TO 5                       |
| Rth                      | 55 K/W                     |
| Finition /Finishing      | Anod. Jaune / Yellow anod. |
| CODE                     | 41009202                   |



### CO 215

Ech. / Scale : 1/1

|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 45 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 410215                   |

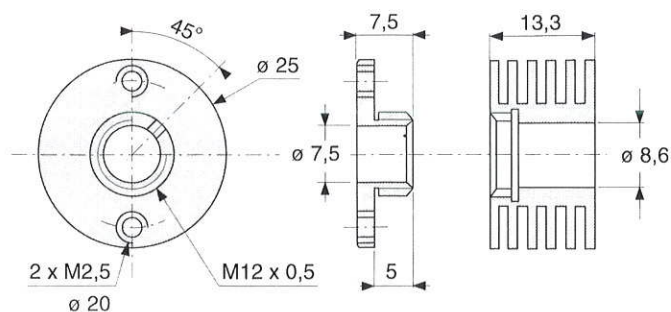


### CO 180/1

Ech. / Scale : 1/1

GAM. T1.

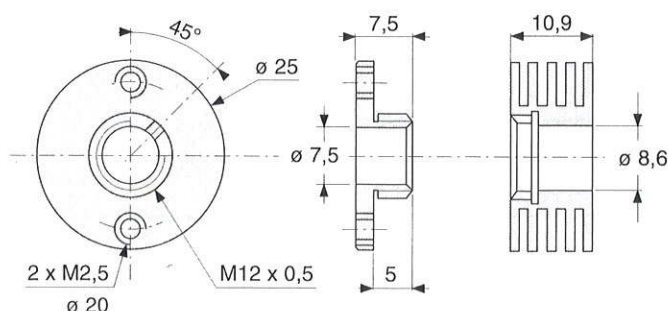
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 28 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 41018001                 |



### CO 180/2

Ech. / Scale : 1/1

|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 31 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 41018002                 |

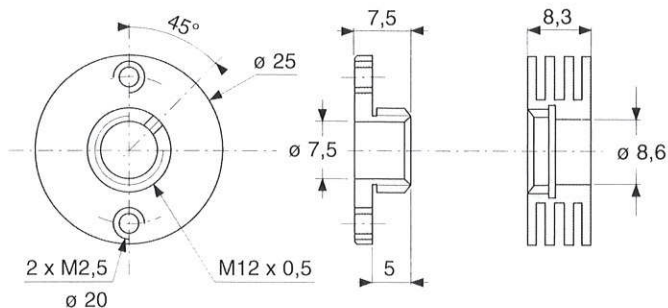




### CO 180/3

Ech. / Scale : 1/1

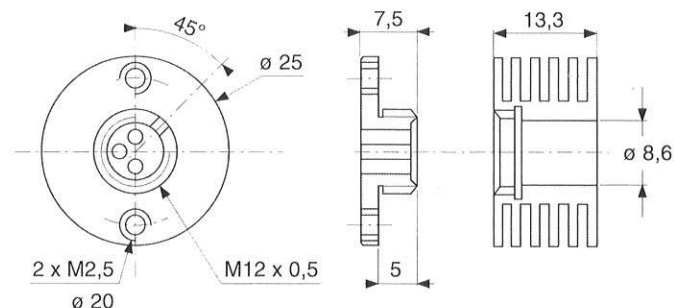
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 35 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| <b>CODE</b>              | <b>41018003</b>          |



### CO 180/4

Ech. / Scale : 1/1

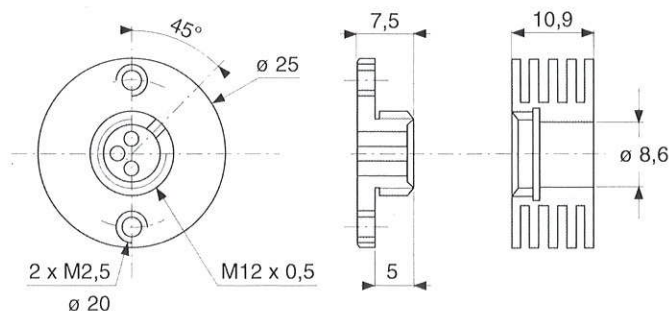
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 28 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| <b>CODE</b>              | <b>31018094</b>          |



### CO 180/5

Ech. / Scale : 1/1

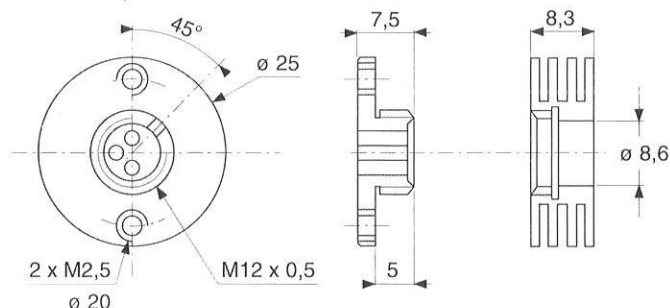
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 31 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| <b>CODE</b>              | <b>31018095</b>          |



### CO 180/6

Ech. / Scale : 1/1

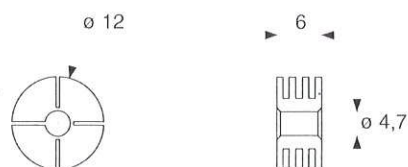
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | TO 5                     |
| Rth                      | 35 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| <b>CODE</b>              | <b>31018096</b>          |



### CO 170

Ech. / Scale : 1/1  
GAM. T1.

|                                 |               |
|---------------------------------|---------------|
| Anodisé noir<br>Black anodized  | <b>CODE</b>   |
| Rth = 90 K / W                  | <b>410170</b> |
| Pour boîtier / For case : TO 18 |               |





### CO 248

Ech. / Scale : 1/1

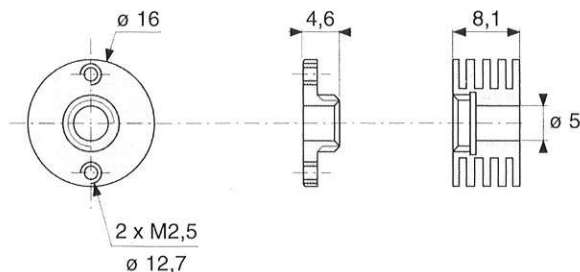
Anodisé noir  
Black anodized

CODE

Rth = 65 K / W

410248

Pour boîtier / For case : TO 18



### CO 331/1

Ech. / Scale : 1/1

GAM. T1.

Pour boîtier  
For case

TO 5

Rth

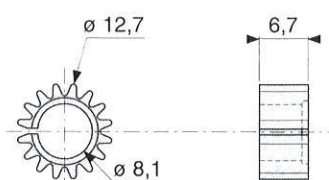
85 K/W

Finition / Finishing

Anod. Rouge / Red anod.

CODE

41033191



### CO 331/2

GAM. T1.

Ech. / Scale : 1/1

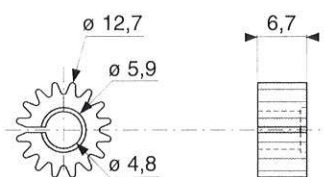
Anodisé Rouge  
Red anodized

CODE

Rth = 80 K / W

41033192

Pour boîtier / For case : TO 18



### CO 2253

GAM. T1.

Ech. / Scale : 1/1

Anodisé noir  
Black anodized

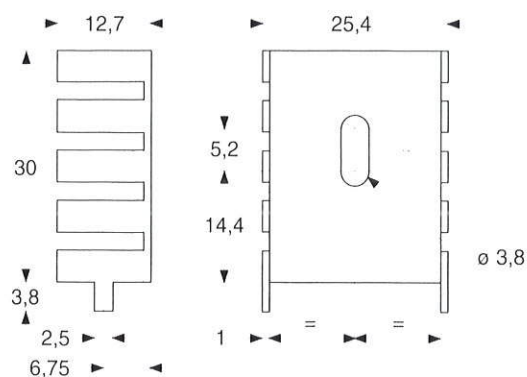
CODE

Rth = 20 K / W

31025334

Pattes non étamées  
Un-tinned tabs

Boîtier / For case : TO 220



### RA 37/1

GAM. T1.

Ech. / Scale : 1/1

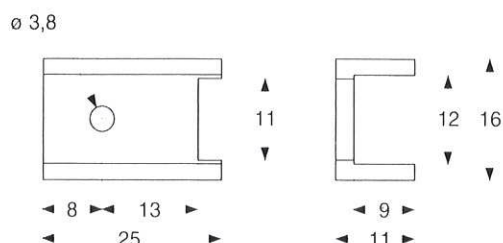
Anodisé noir  
Black anodized

CODE

Rth = 18 K / W

31003717

Boîtier / For case : TO 220

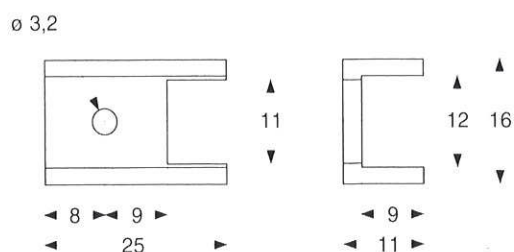


### RA 37/2

GAM. T1.

Ech. / Scale : 1/1

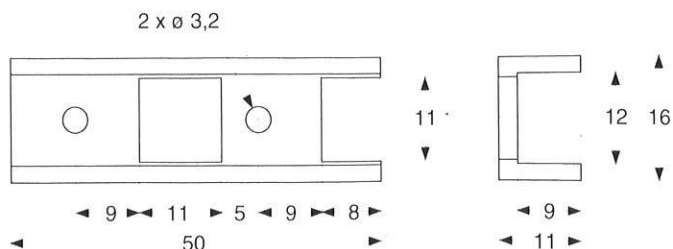
|                                      |          |
|--------------------------------------|----------|
| Anodisé noir<br>Black anodized       | CODE     |
| Rth = 18 K / W                       | 31003718 |
| Boîtier / For case : TO 202 - TO 220 |          |



### RA 37/3

Ech. / Scale : 1/1

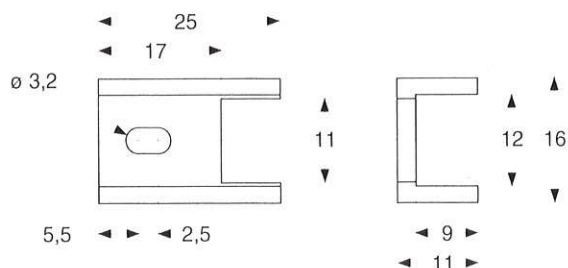
|                                |          |
|--------------------------------|----------|
| Anodisé noir<br>Black anodized | CODE     |
| Rth = 16 K / W                 | 31003719 |
| Boîtier / For case : TO 220    |          |



### RA 37/5

Ech. / Scale : 1/1

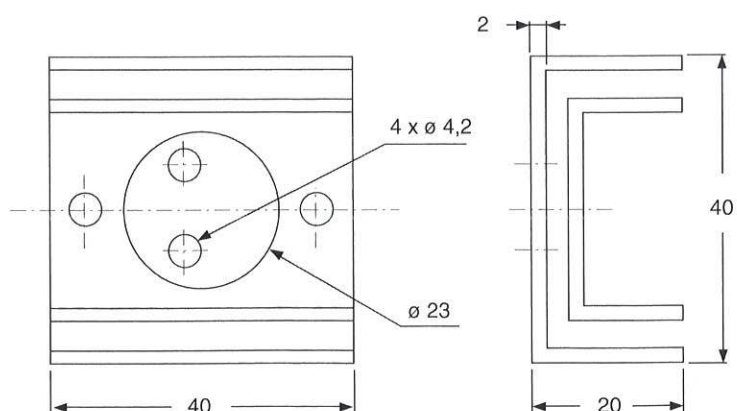
|                                      |          |
|--------------------------------------|----------|
| Anodisé noir<br>Black anodized       | CODE     |
| Rth = 18 K / W                       | 31003731 |
| Boîtier / For case : TO 202 - TO 220 |          |



### RA 38

Ech. / Scale : 1/1

|                          |                            |
|--------------------------|----------------------------|
| Pour boîtier<br>For case | TO 3 (spécif. page : A- 5) |
| Rth                      | 9 K/W                      |
| Finition /Finishing      | Anod. Noir / Black anod.   |
| CODE                     | 310002                     |

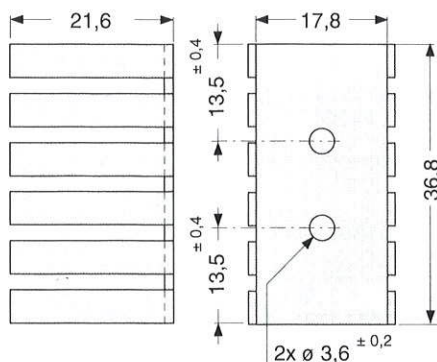




### CO 504222 M

Ech. / Scale : 1/1

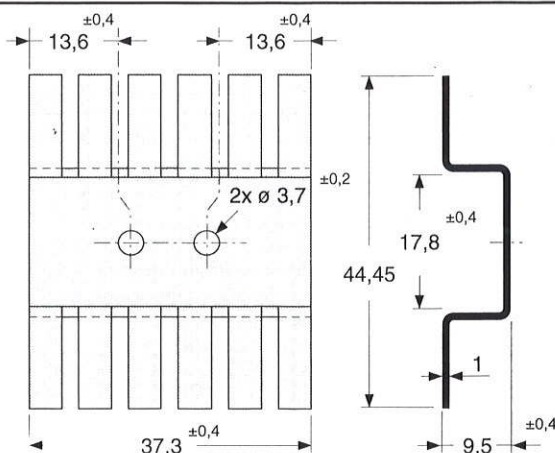
|                                  |        |
|----------------------------------|--------|
| Anodisé noir<br>Black anodized   | CODE   |
| Rth = 8 K / W                    | 411042 |
| Pour boîtier / For case : TO 220 |        |



### CO 507222 M

Ech. / Scale : 1/1

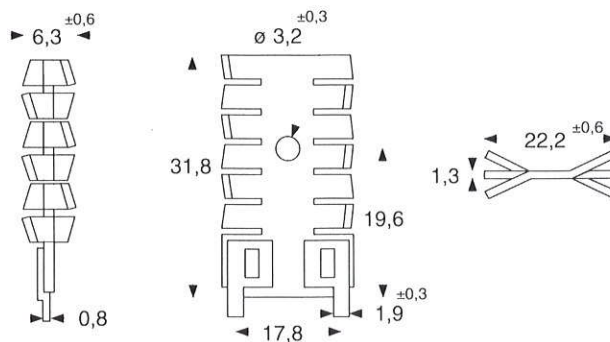
|                                  |        |
|----------------------------------|--------|
| Anodisé noir<br>Black anodized   | CODE   |
| Rth = 8,5 K / W                  | 411072 |
| Pour boîtier / For case : TO 220 |        |



### CO 592502 M

Ech. / Scale : 1/1

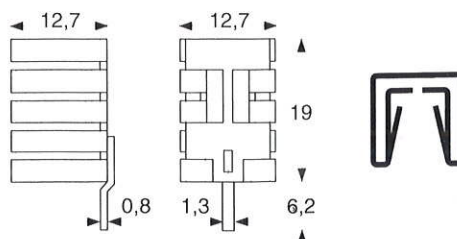
|                                  |        |
|----------------------------------|--------|
| Anodisé noir<br>Black anodized   | CODE   |
| Rth = 22 K / W                   | 411925 |
| Pour boîtier / For case : TO 220 |        |



### CO 576802 M

Ech. / Scale : 1/1

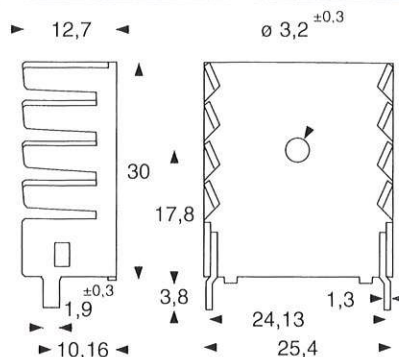
|                                  |          |
|----------------------------------|----------|
| Anodisé noir<br>Black anodized   | CODE     |
| Rth = 17,5 K/W                   |          |
| Sans picots / Without tabs       | 41176801 |
| Avec picots / With tabs          | 411768   |
| Pour boîtier / For case : TO 220 |          |



### CO 593002 M

Ech. / Scale : 1/1

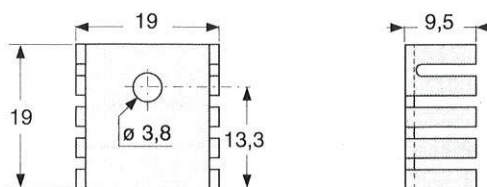
|                                |        |
|--------------------------------|--------|
| Anodisé noir<br>Black anodized | CODE   |
| Rth : 14 K / W                 | 411930 |
| Boîtier / For case : TO 220    |        |



### CO 507302 M

Ech. / Scale : 1/1

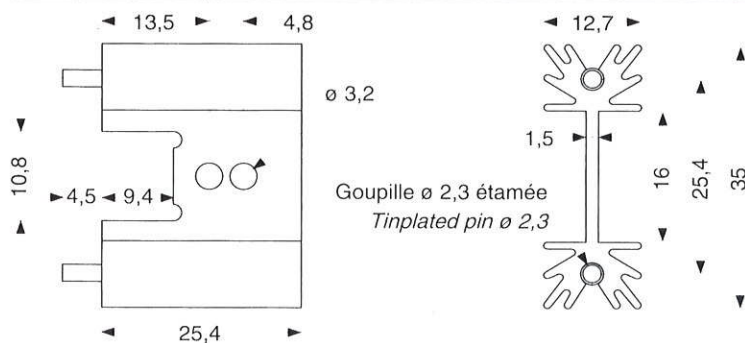
|                                             |        |
|---------------------------------------------|--------|
| Anodisé noir<br>Black anodized              | CODE   |
| Rth = 25 K / W                              | 411073 |
| Boîtiers / Cases : TO 126 - TO 127 - TO 220 |        |



### CO 2245/1

Ech. / Scale : 1/1

|                                                        |          |
|--------------------------------------------------------|----------|
| Anodisé noir<br>Black anodized                         | CODE     |
| Rth : 14 K / W                                         | 31024500 |
| Boîtier / For case : TO 202 - TO220                    |          |
| Clip de maintien / Retaining clip :<br>CODE : 44118901 |          |



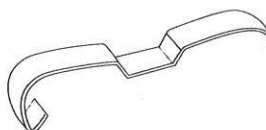
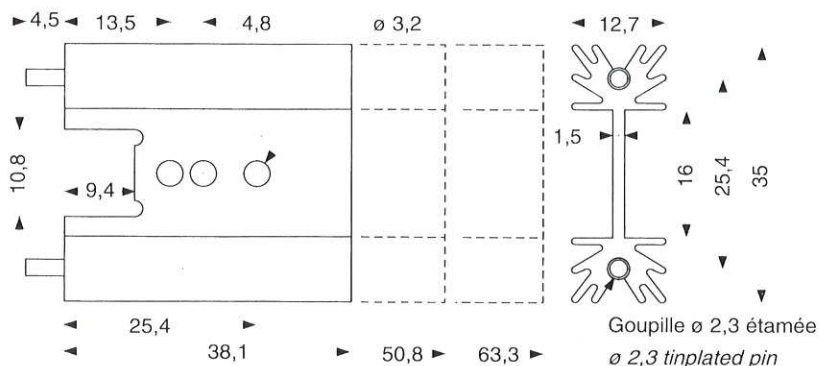
### CO 2245/2

### CO 2245/3

### CO 2245/4

Ech. / Scale : 1/1

|                                                        |          |
|--------------------------------------------------------|----------|
| Anodisé noir<br>Black anodized                         | CODE     |
| 38,1mm 11 K / W                                        | 31024532 |
| 50,8mm 9 K / W                                         | 31024533 |
| 63,3mm 7 K / W                                         | 31024534 |
| Boîtier / For case : TO 202 - TO220                    |          |
| Clip de maintien / Retaining clip :<br>CODE : 44118901 |          |





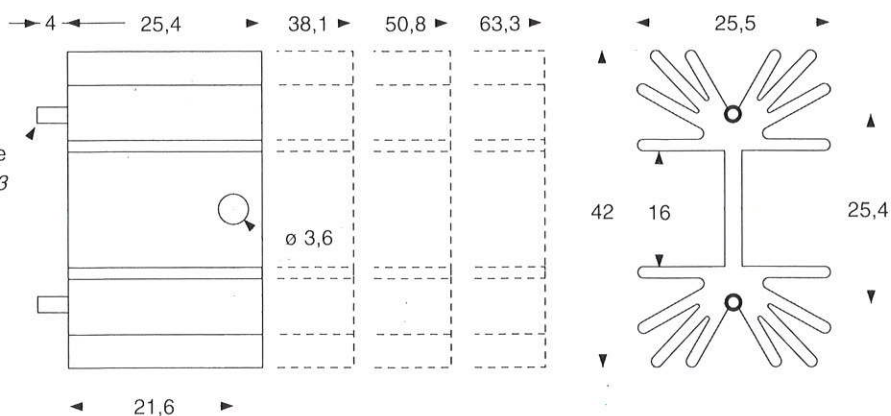
### CO 2546 P

Ech. / Scale : 1/1

Goupille ø 2,3 étamée  
Tinplated pin ø 2,3

| Anodisé noir<br>Black anodized | CODE            |
|--------------------------------|-----------------|
| 25,4mm 6,3 K / W               | <b>31054600</b> |
| 38,1mm 5,0 K / W               | <b>31054632</b> |
| 50,8mm 4,1 K / W               | <b>31054633</b> |
| 63,3mm 3,5 K / W               | <b>31054638</b> |

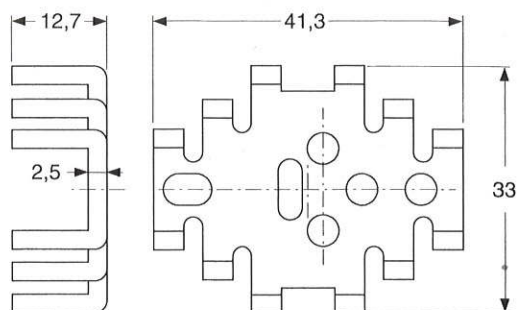
Pour boîtier / For case : TO 3 P



### CO 1533

Ech. / Scale : 1/1  
GAM. T1.

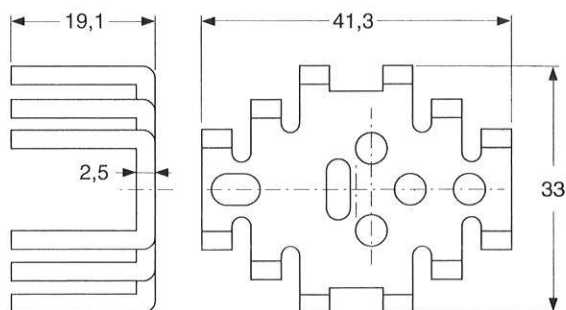
| Usinage / Layout     | Universel / Universal    |
|----------------------|--------------------------|
| Rth                  | 14 K/W                   |
| Finition / Finishing | Anod. Noir / Black anod. |
| <b>CODE</b>          | <b>31053323</b>          |



### CO 1534

Ech. / Scale : 1/1  
GAM. T1.

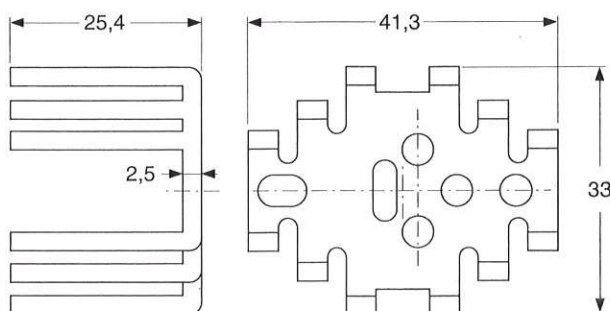
| Usinage / Layout     | Universel / Universal    |
|----------------------|--------------------------|
| Rth                  | 12 K/W                   |
| Finition / Finishing | Anod. Noir / Black anod. |
| <b>CODE</b>          | <b>31053423</b>          |



### CO 1535

Ech. / Scale : 1/1  
GAM. T1.

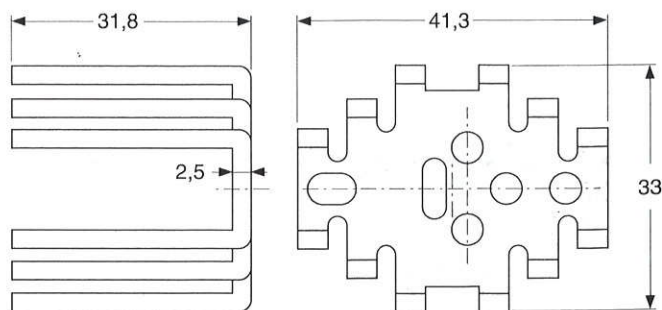
| Usinage / Layout     | Universel / Universal    |
|----------------------|--------------------------|
| Rth                  | 10,5 K/W                 |
| Finition / Finishing | Anod. Noir / Black anod. |
| <b>CODE</b>          | <b>31053523</b>          |



### CO 1536

Ech. / Scale : 1/1  
GAM. T1.

|                      |                          |
|----------------------|--------------------------|
| Usinage / Layout     | Universel / Universal    |
| Rth                  | 9 K/W                    |
| Finition / Finishing | Anod. Noir / Black anod. |
| CODE                 | 31053623                 |

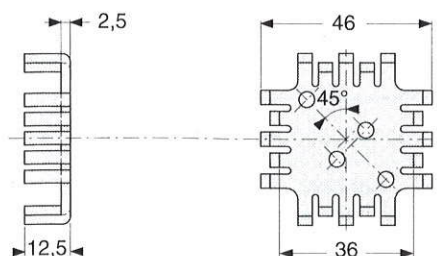


### CO 865

GAM. T1.

Ech. / Scale : 1/2

|                               |          |
|-------------------------------|----------|
| Rth : 7 K/W                   | CODE     |
| • Non percé<br>Undrilled      | 41086520 |
| • Universel<br>Universal      | 41086523 |
| • TO 3                        | 41086521 |
| Anodisé noir / Black anodized |          |

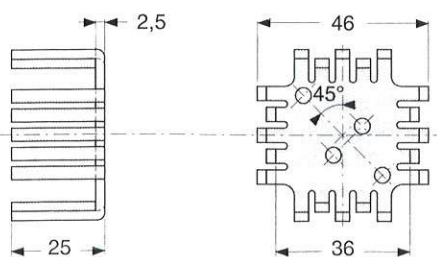


### CO 867

GAM. T1.

Ech. / Scale : 1/2

|                               |          |
|-------------------------------|----------|
| Rth : 6 K/W                   | CODE     |
| • Non percé<br>Undrilled      | 41086720 |
| • Universel<br>Universal      | 41086723 |
| • TO 3                        | 41086721 |
| Anodisé noir / Black anodized |          |

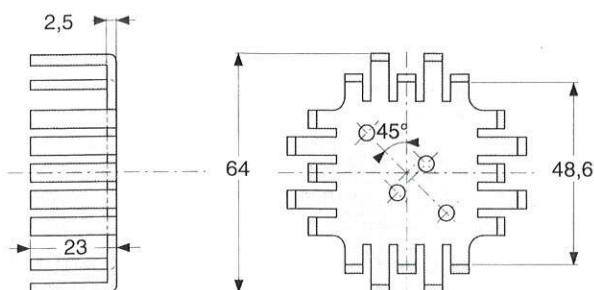


### CO 890

GAM. T1.

Ech. / Scale : 1/2

|                               |          |
|-------------------------------|----------|
| Rth : 4,5 K/W                 | CODE     |
| • Non percé<br>Undrilled      | 41089020 |
| • Universel<br>Universal      | 41089023 |
| • TO 3                        | 41089021 |
| Anodisé noir / Black anodized |          |

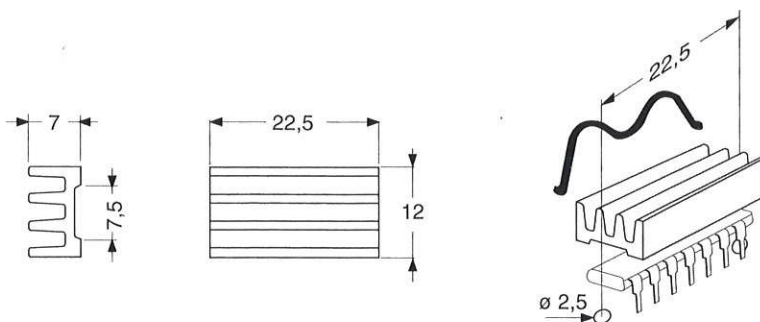




### RA 734

Ech. / Scale : 1/1

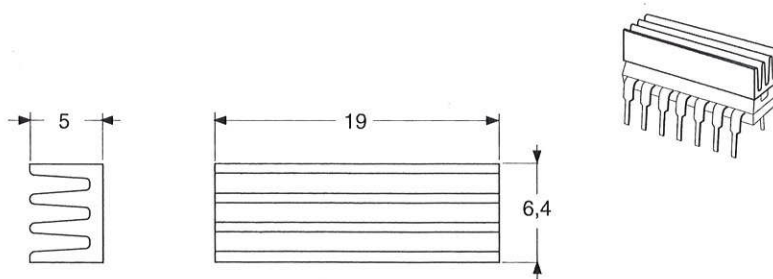
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | -                        |
| Rth                      | 15 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 310734                   |



### RA 1365

Ech. / Scale : 2/1

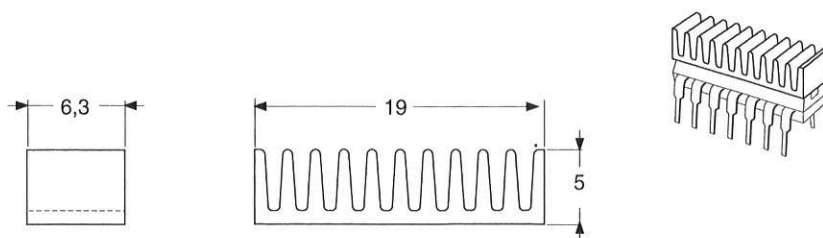
|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | -                        |
| Rth                      | 46 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 410365                   |



### RA 1366

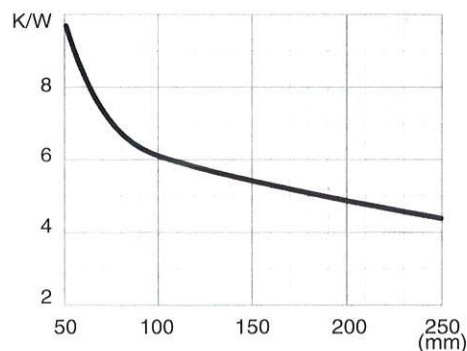
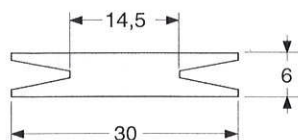
Ech. / Scale : 2/1

|                          |                          |
|--------------------------|--------------------------|
| Pour boîtier<br>For case | -                        |
| Rth                      | 48 K/W                   |
| Finition /Finishing      | Anod. Noir / Black anod. |
| CODE                     | 410366                   |



### CO 153 P

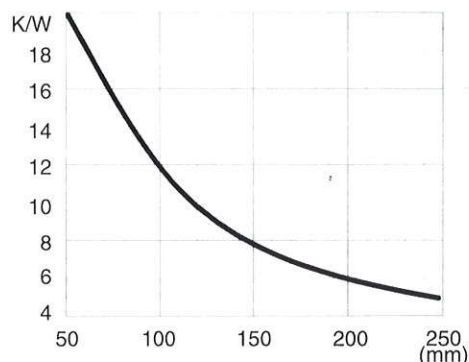
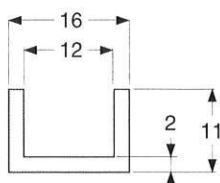
Ech. / Scale : 1/1  
GAM. T1.



|                   |            |                               |          |          |          |
|-------------------|------------|-------------------------------|----------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 40       | 40       | 40       |
| Usinage / Layout  | -          | -                             | -        | TO 66    | TO 3     |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |          |
| CODE              | 31015310   | 31015313                      | 31015308 | 31015314 | 31015312 |

### CO 37 P

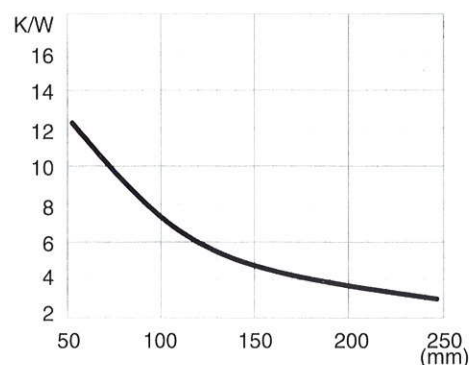
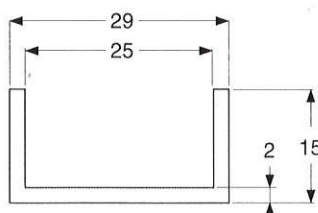
Ech. / Scale : 1/1  
GAM. T1.



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31003710  | 31003713                     |

### CO 12 P

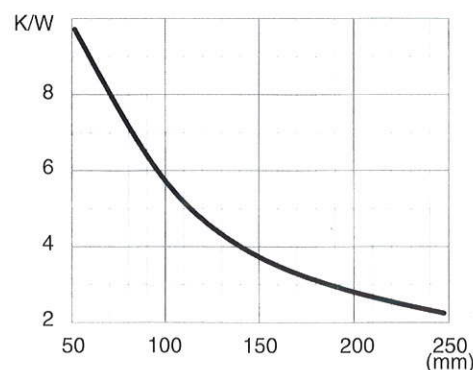
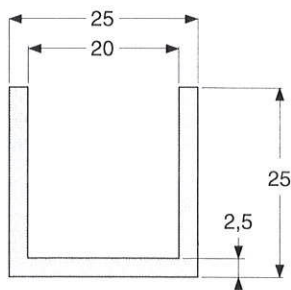
Ech. / Scale : 1/1  
GAM. T1.



|                   |           |                               |          |          |          |
|-------------------|-----------|-------------------------------|----------|----------|----------|
| Longueur / Length | 1000      | 1000                          | 40       | 40       | 40       |
| Usinage / Layout  | -         | -                             | -        | TO 66    | TO 3     |
| Finition / Finish | Brut /Raw | Anodisé Noir / Black anodized |          |          |          |
| CODE              | 31001210  | 31001213                      | 31001208 | 31001214 | 31001212 |

### CO 11 P

Ech. / Scale : 1/1

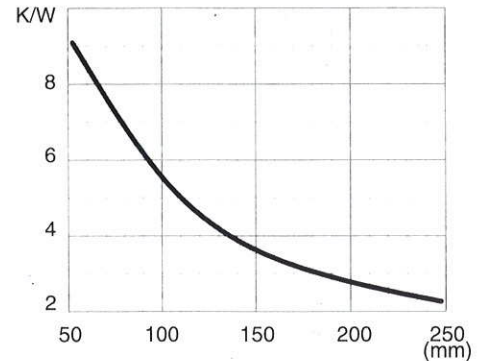
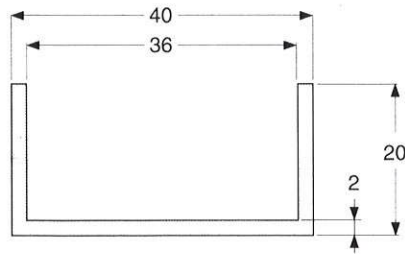


|                   |           |                               |          |          |
|-------------------|-----------|-------------------------------|----------|----------|
| Longueur / Length | 1000      | 1000                          | 40       | 40       |
| Usinage / Layout  | -         | -                             | -        | TO 66    |
| Finition / Finish | Brut /Raw | Anodisé Noir / Black anodized |          |          |
| CODE              | 31001110  | 31001113                      | 31001108 | 31001114 |



### CO 13 P

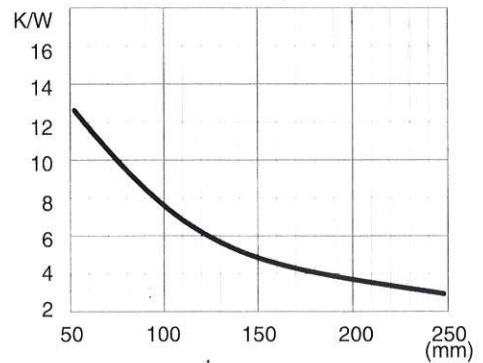
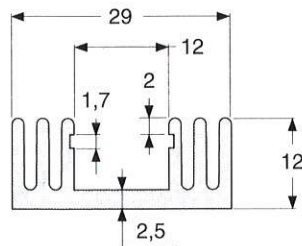
Ech. / Scale : 1/1  
GAM. T1.



|                   |           |                              |          |          |
|-------------------|-----------|------------------------------|----------|----------|
| Longueur / Length | 1000      | 1000                         | 40       | 40       |
| Usinage / Layout  | -         | -                            | -        | TO 3     |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |          |          |
| CODE              | 31001310  | 31001313                     | 31001308 | 31001312 |

### CO 843 P

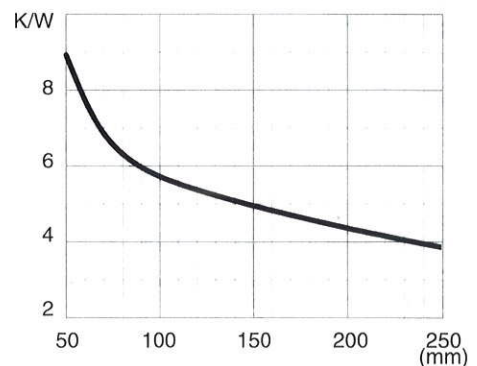
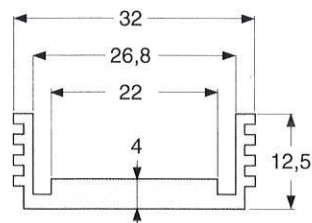
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31084310  | 31084313                     |

### CO 2041P

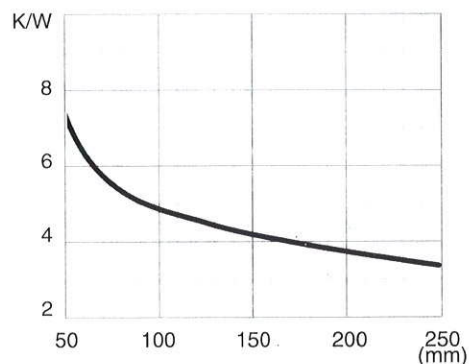
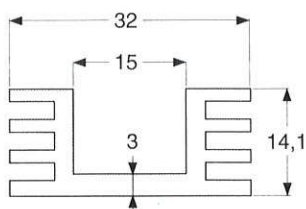
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31004110  | 31004113                     |

### CO 232 P

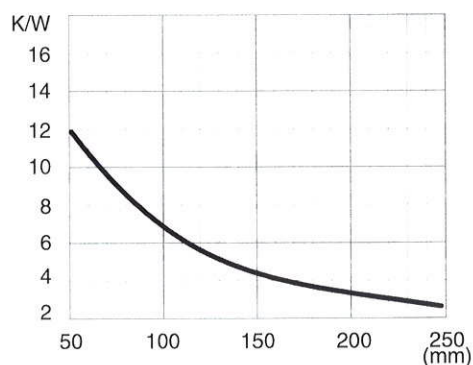
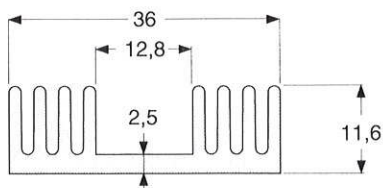
Ech. / Scale : 1/1  
GAM. T1.



|                   |            |                               |          |          |
|-------------------|------------|-------------------------------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 32       | 25       |
| Usinage / Layout  | -          | -                             | -        | TO 220   |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |
| CODE              | 31023210   | 31023213                      | 31023204 | 31023217 |

### CO 251 P

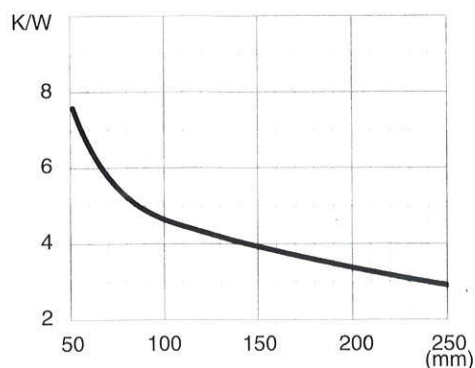
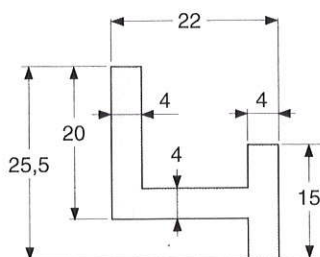
Ech. / Scale : 1/1



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31025110   | 31025113                      |

### CO 257 P

Ech. / Scale : 1/1

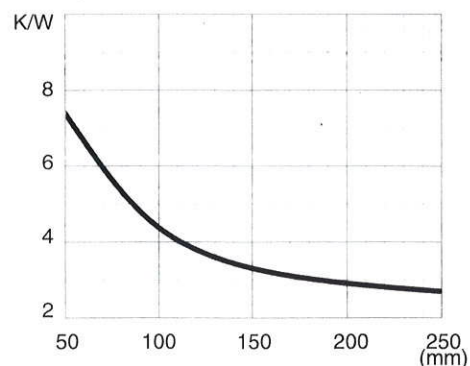
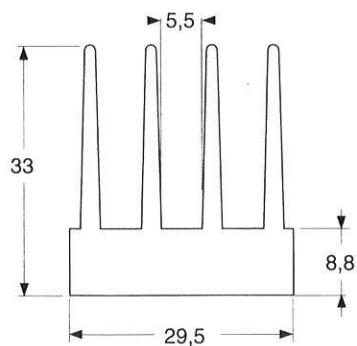


|                   |            |                               |                               |
|-------------------|------------|-------------------------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          | 20                            |
| Usinage / Layout  | -          | -                             | DO 5                          |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized | Anodisé Noir / Black anodized |
| CODE              | 31025710   | 31025713                      | 31025702                      |



### CO 108 P

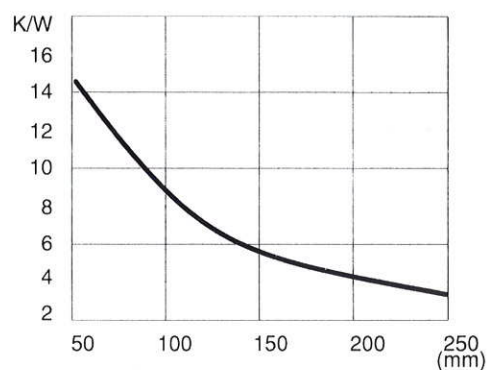
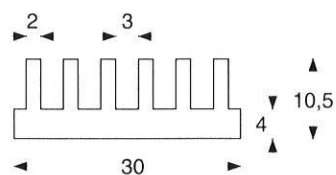
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31010810  | 31010813                     |

### CO 925 P

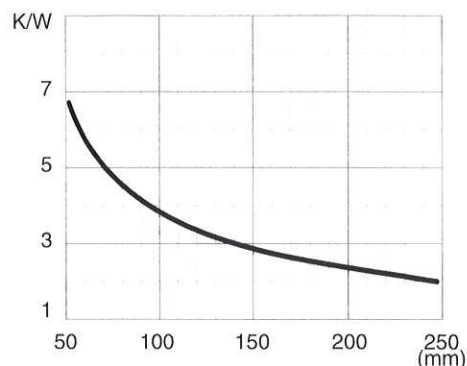
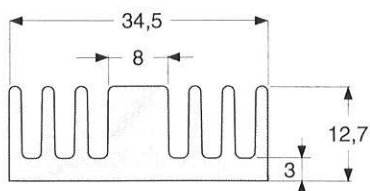
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31095210  | 31092513                     |

### CO 929 P

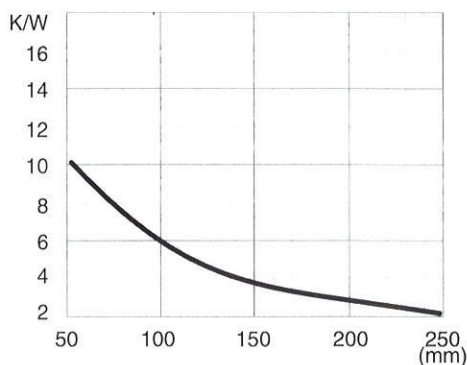
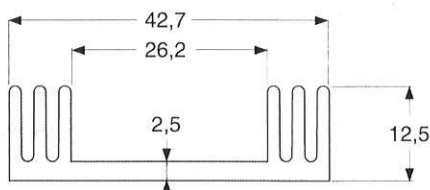
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31092910  | 31092913                     |

### CO 531 P

Ech. / Scale : 1/1

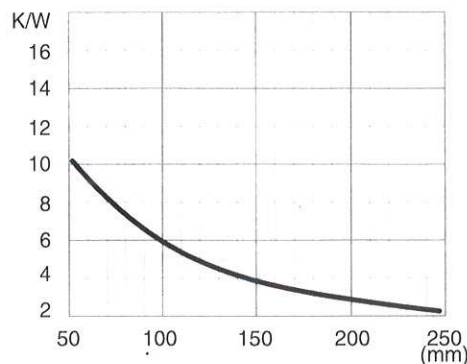
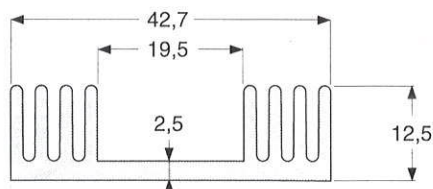


|                   |           |                              |          |          |          |          |
|-------------------|-----------|------------------------------|----------|----------|----------|----------|
| Longueur / Length | 1000      | 1000                         | 75       | 40       | 37,5     | 37,5     |
| Usinage / Layout  | -         | -                            | TO 3     | TO 3     | TO 3     | -        |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |          |          |          |          |
| CODE              | 31053110  | 31053113                     | 31053109 | 31053112 | 31053103 | 31053101 |

### CO 399 P

GAM. T1.

Ech. / Scale : 1/1

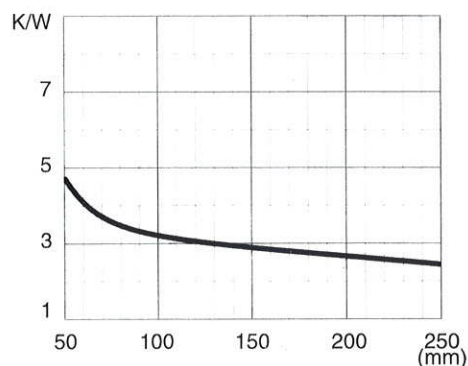
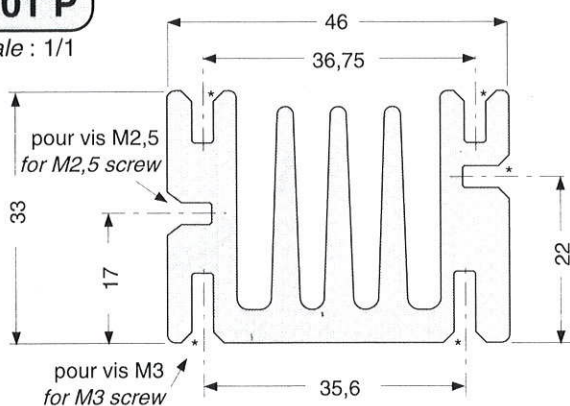


|                   |           |                              |          |          |          |
|-------------------|-----------|------------------------------|----------|----------|----------|
| Longueur / Length | 1000      | 1000                         | 75       | 37,5     | 37,5     |
| Usinage / Layout  | -         | -                            | -        | TO 66    | -        |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |          |          |          |
| CODE              | 31039910  | 31039913                     | 31039907 | 31039905 | 31039901 |



### CO 2701 P

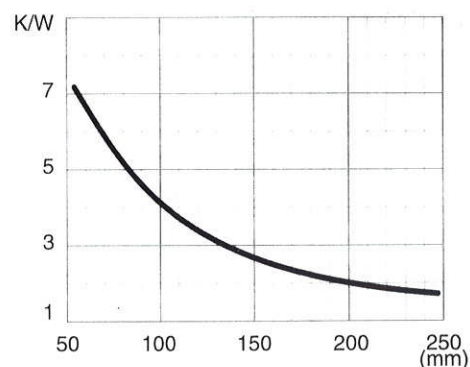
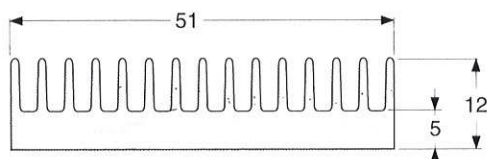
Ech. / Scale : 1/1



|                   |            |                               |          |          |          |
|-------------------|------------|-------------------------------|----------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 75       | 40       | 37,5     |
| Usinage / Layout  | -          | -                             | -        | -        | -        |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |          |
| CODE              | 31070110   | 31070113                      | 31070107 | 31070108 | 31070101 |

### CO 1139 P

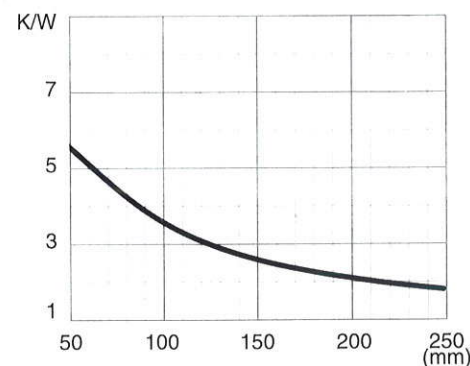
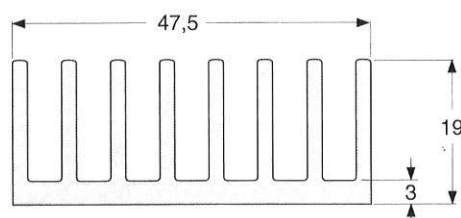
Ech. / Scale : 1/1



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31013910   | 31013913                      |

### CO 928 P

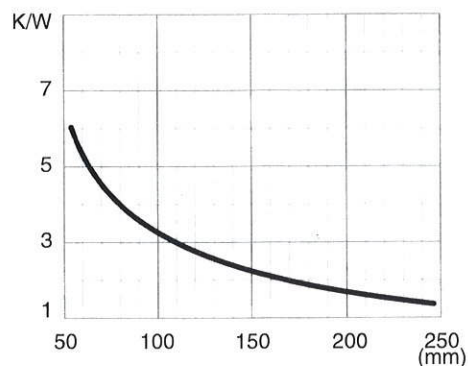
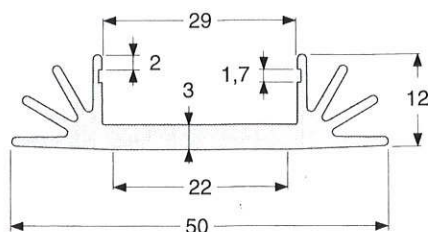
Ech. / Scale : 1/1



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31092810   | 31092813                      |

### CO 862 P

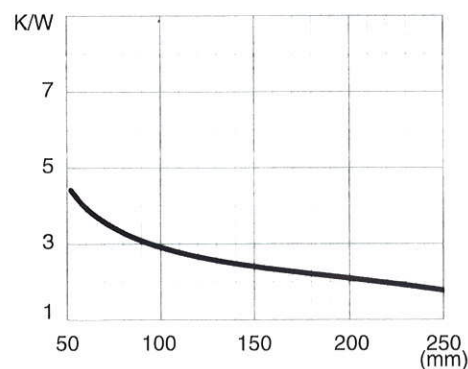
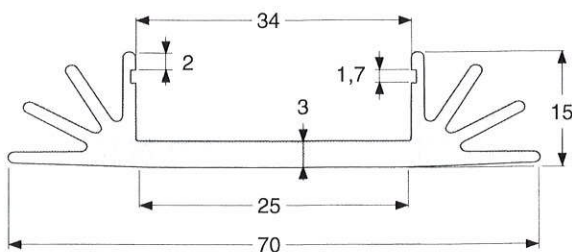
Ech. / Scale : 1/1



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31086210   | 31086213                      |

### CO 844 P

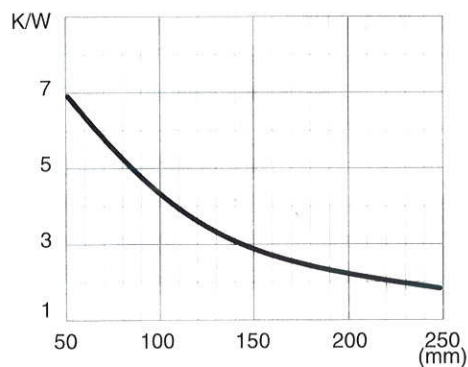
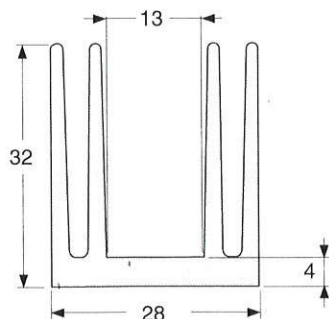
Ech. / Scale : 1/1



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31084410   | 31084413                      |

### CO 336 P

Ech. / Scale : 1/1

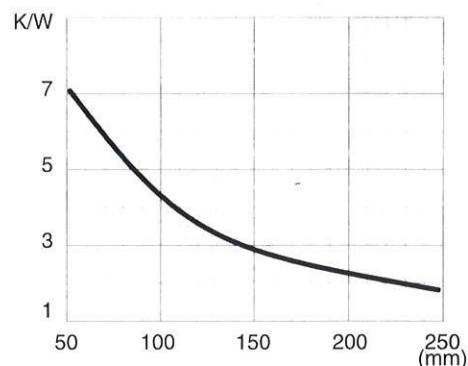
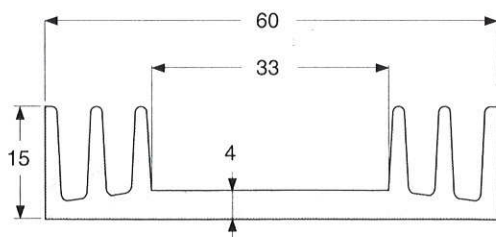


|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31033610   | 31033613                      |



### CO 341 P

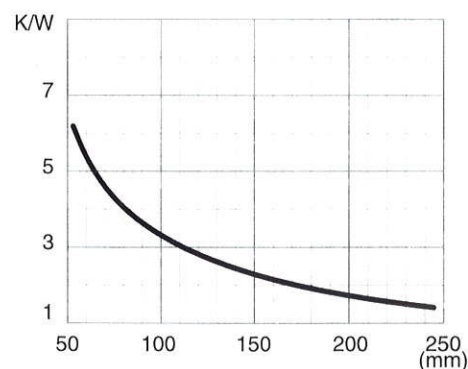
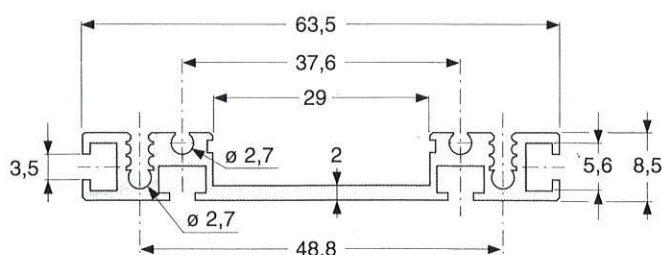
Ech. / Scale : 1/1  
GAM. T1.



|                   |            |                               |          |          |          |          |
|-------------------|------------|-------------------------------|----------|----------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 75       | 75       | 37,5     | 37,5     |
| Usinage / Layout  | -          | -                             | TO 3     | 2 TO 3   | -        | TO 3     |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |          |          |
| CODE              | 31034110   | 31034113                      | 31034109 | 31034116 | 31034101 | 31034103 |

### CO 1116 P

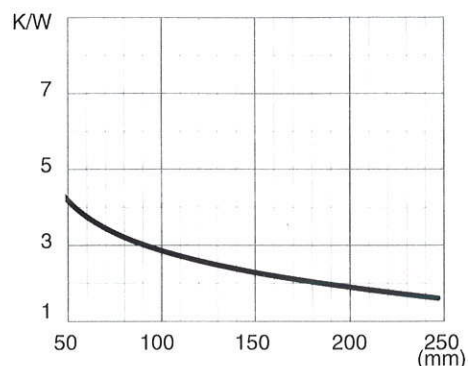
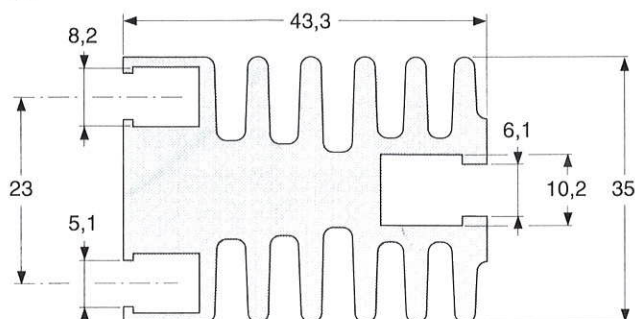
Ech. / Scale : 1/1



|                   |            |                               |          |          |
|-------------------|------------|-------------------------------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 37,5     | 37,5     |
| Usinage / Layout  | -          | -                             | TO 66    | -        |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |
| CODE              | 31011610   | 31011613                      | 31011603 | 31011601 |

### CO 5011 P

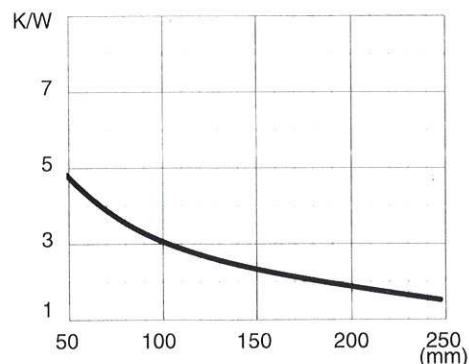
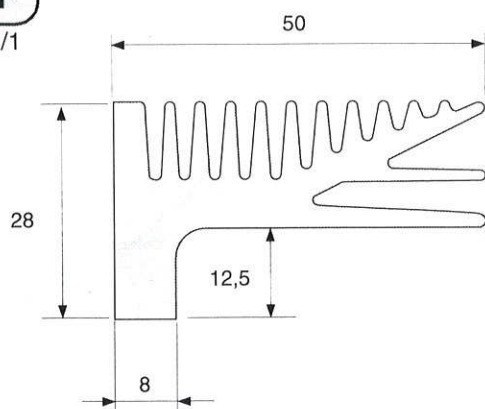
Ech. / Scale : 1/1



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31701110   | 31701113                      |

### CO 2620 P

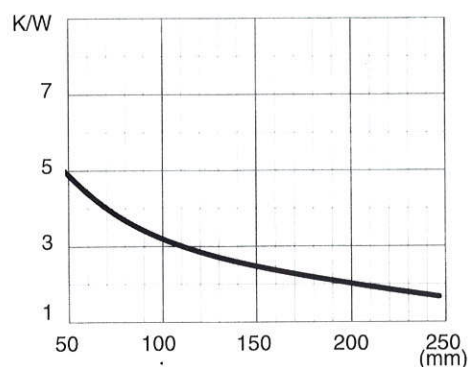
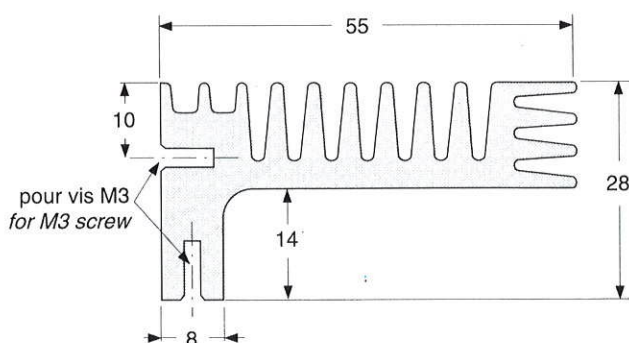
Ech. / Scale : 1/1



|              |            |                               |          |          |          |          |          |          |
|--------------|------------|-------------------------------|----------|----------|----------|----------|----------|----------|
| Lg. / Length | 1000       | 1000                          | 150      | 120      | 100      | 75       | 50       | 37,5     |
| Usin./Layout | sans       | without                       | TO 247   |          | TO 220   | TO 66    | TO 3P    |          |
| Fini./Finish | Brut / Raw | Anodisé noir / Black anodised |          |          |          |          |          |          |
| CODE         | 31062010   | 31062013                      | 31062029 | 31062023 | 31062022 | 31062021 | 31062020 | 31062001 |

### CO 2704 P

Ech. / Scale : 1/1

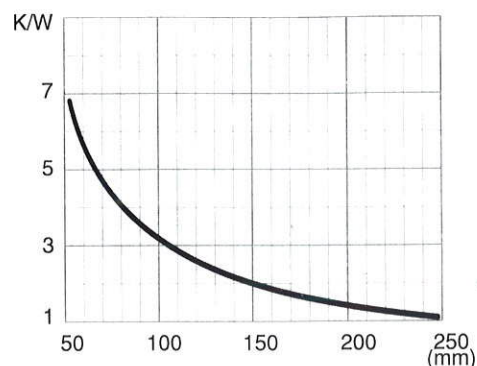
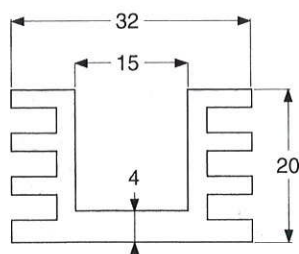


|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31070410   | 31070413                      |

### CO 202 P

Ech. / Scale : 1/1

GAM. T1.

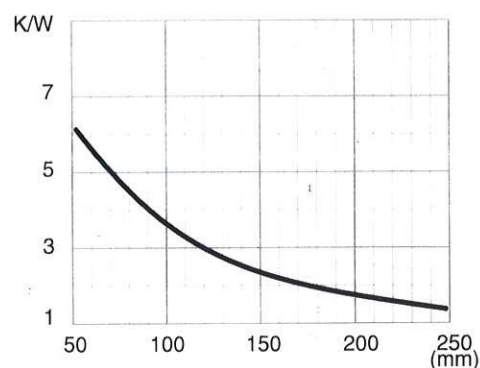
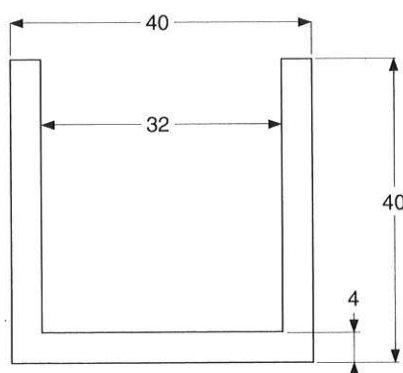


|                   |            |          |                               |          |
|-------------------|------------|----------|-------------------------------|----------|
| Longueur / Length | 1000       | 1000     | 32                            | 25       |
| Usinage / Layout  | -          | -        | -                             | TO 220   |
| Finition / Finish | Brut / Raw |          | Anodisé Noir / Black anodized |          |
| CODE              | 31020210   | 31020213 | 31020204                      | 31020217 |



## CO 96 P

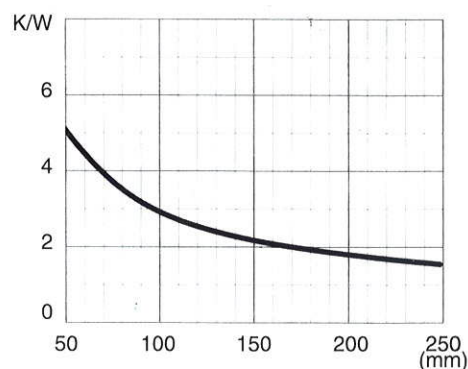
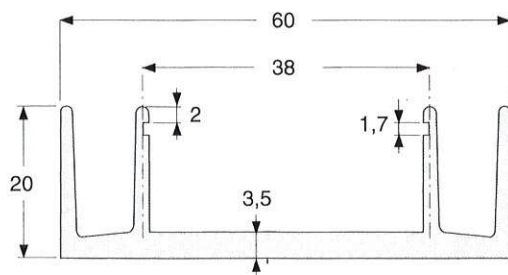
Ech. / Scale : 1/1



|                          |                   |                                      |
|--------------------------|-------------------|--------------------------------------|
| Longueur / <i>Length</i> | 1000              | 1000                                 |
| Usinage / <i>Layout</i>  | -                 | -                                    |
| Finition / <i>Finish</i> | Brut / <i>Raw</i> | Anodisé Noir / <i>Black anodized</i> |
| <b>CODE</b>              | <b>31009610</b>   | <b>31009613</b>                      |

**CO 850 P**

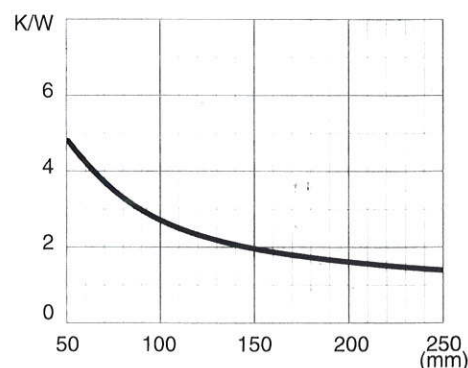
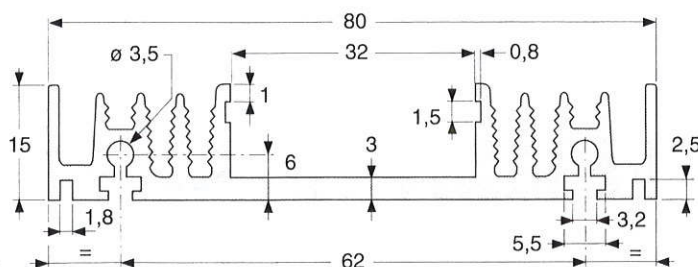
Ech. / Scale : 1/1



|                          |                   |                                      |
|--------------------------|-------------------|--------------------------------------|
| Longueur / <i>Length</i> | 1000              | 1000                                 |
| Usinage / <i>Layout</i>  | -                 | -                                    |
| Finition / <i>Finish</i> | Brut / <i>Raw</i> | Anodisé Noir / <i>Black anodized</i> |
| <b>CODE</b>              | <b>31085010</b>   | <b>31085013</b>                      |

**CO 1176 P**

Ech. / Scale : 1/1

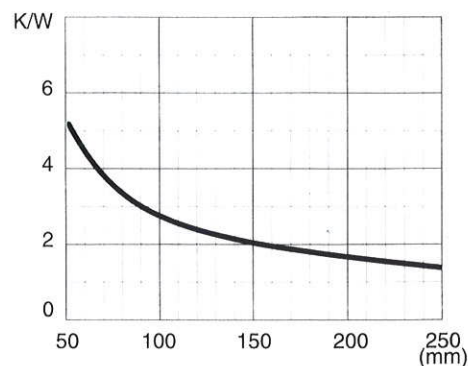
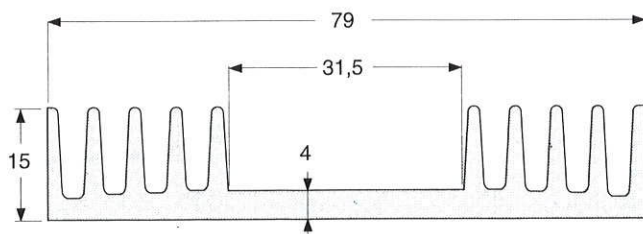


|                          |                   |                                      |
|--------------------------|-------------------|--------------------------------------|
| Longueur / <i>Length</i> | 1000              | 1000                                 |
| Usinage / <i>Layout</i>  | -                 | -                                    |
| Finition / <i>Finish</i> | Brut / <i>Raw</i> | Anodisé Noir / <i>Black anodized</i> |
| <b>CODE</b>              | <b>31017610</b>   | <b>31017613</b>                      |

### CO 220 P

Ech. / Scale : 1/1

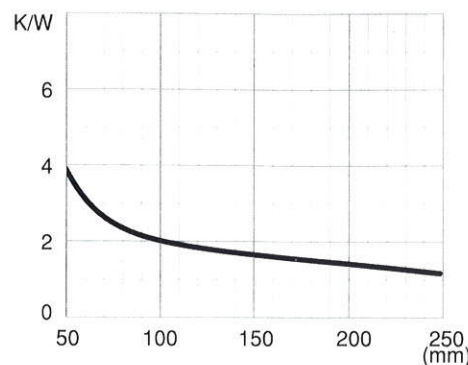
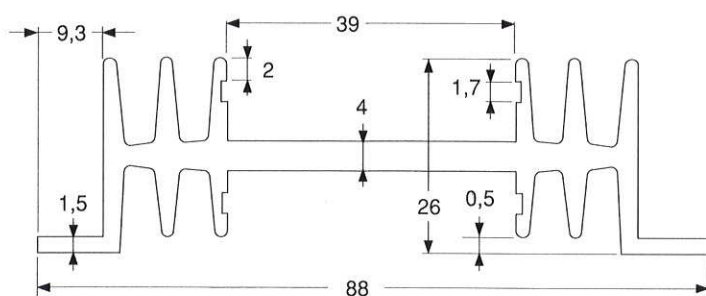
GAM. T1.



|                   |           |                              |          |          |          |          |
|-------------------|-----------|------------------------------|----------|----------|----------|----------|
| Longueur / Length | 1000      | 1000                         | 75       | 75       | 37,5     | 37,5     |
| Usinage / Layout  | -         | -                            | TO 3     | 2 TO 3   | -        | TO 3     |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |          |          |          |          |
| CODE              | 31022010  | 31022013                     | 31022009 | 31022016 | 31022001 | 31022003 |

### CO 860 P

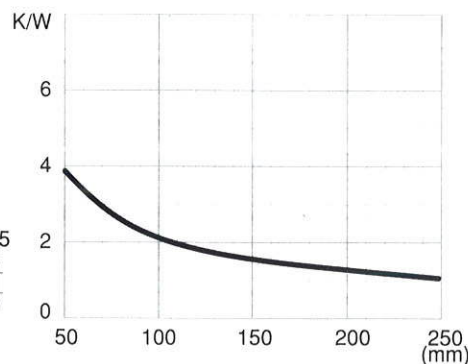
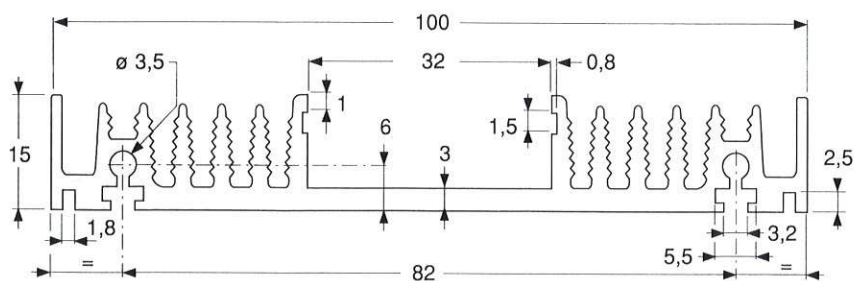
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31086010  | 31086013                     |

### CO 1175 P

Ech. / Scale : 1/1

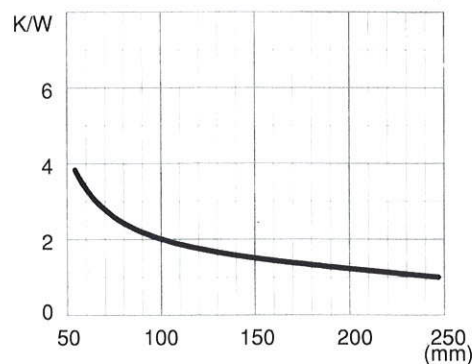
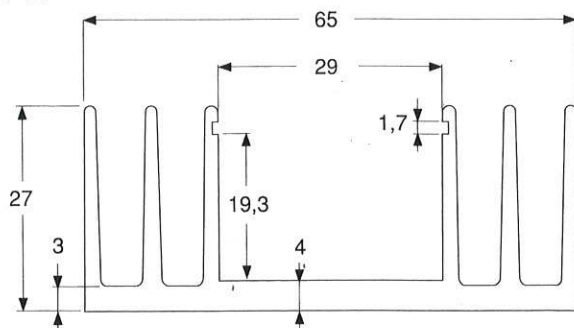


|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31017510  | 31017513                     |



### CO 863 P

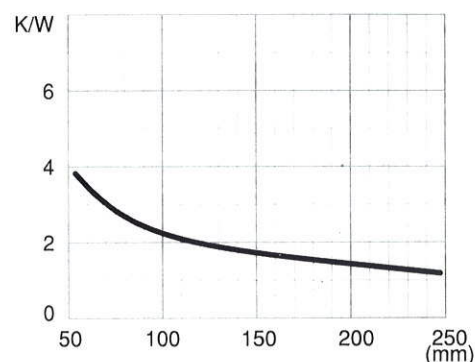
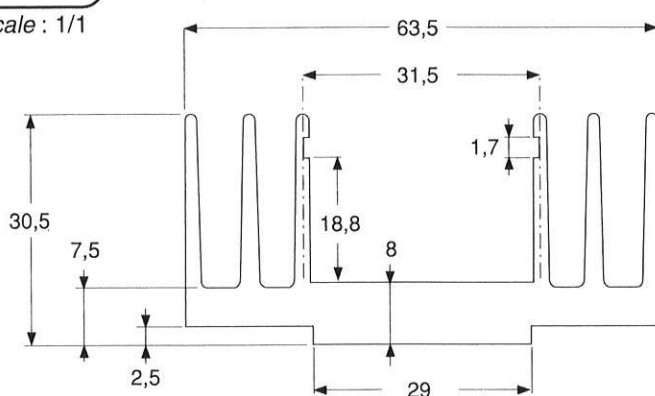
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31086310  | 31086313                     |

### CO 851 P

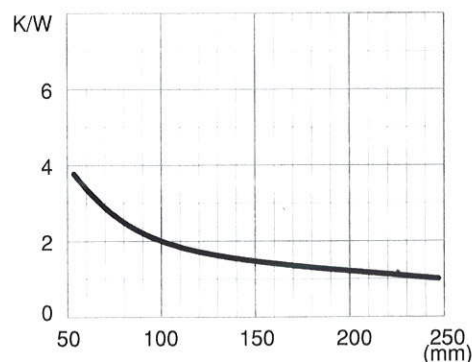
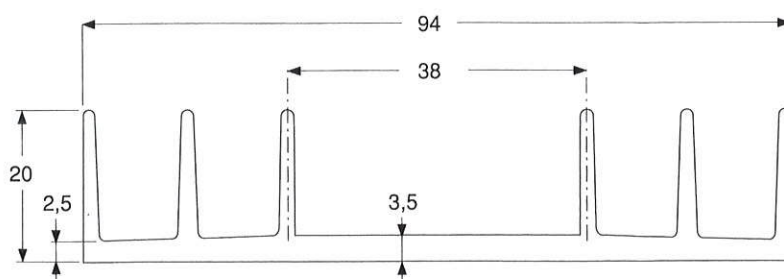
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31085110  | 31085113                     |

### CO 857 P

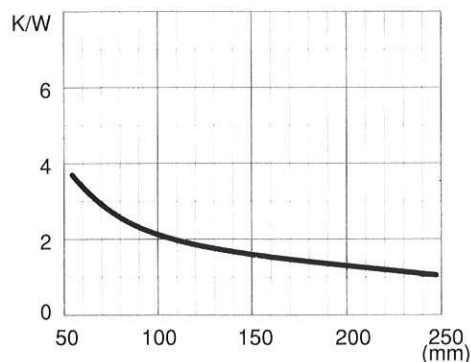
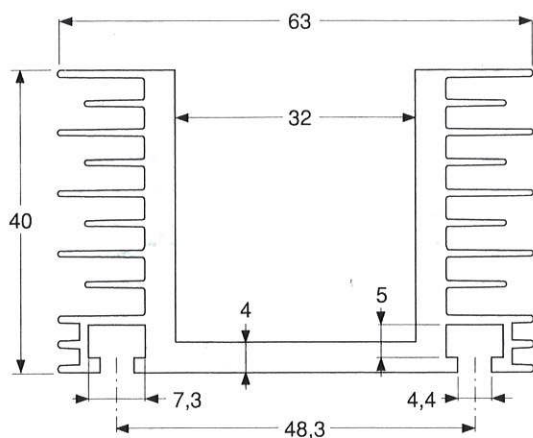
Ech. / Scale : 1/1



|                   |           |                              |          |          |
|-------------------|-----------|------------------------------|----------|----------|
| Longueur / Length | 1000      | 1000                         | 75       | 37,5     |
| Usinage / Layout  | -         | -                            | TO 3     | TO 3     |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |          |          |
| CODE              | 31085710  | 31085713                     | 31085709 | 31085703 |

### CO 335 P

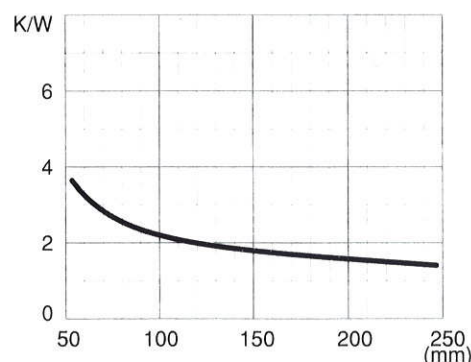
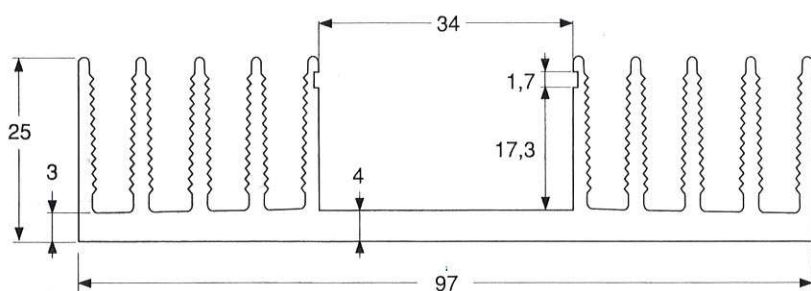
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31033510  | 31033513                     |

### CO 864 P

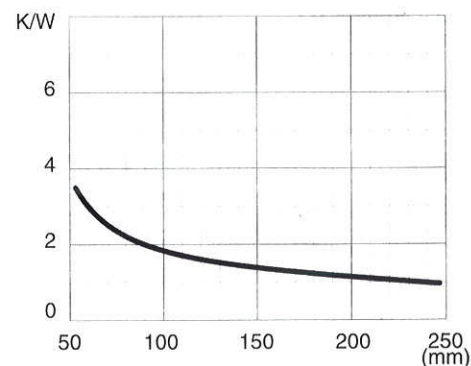
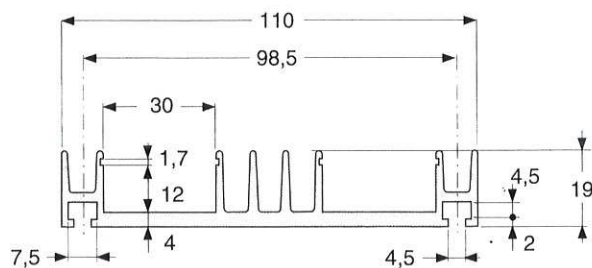
Ech. / Scale : 1/1



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31086410  | 31086413                     |

### CO 301 P

Ech. / Scale : 1/2

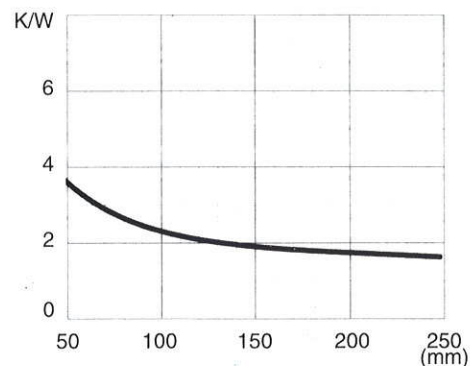
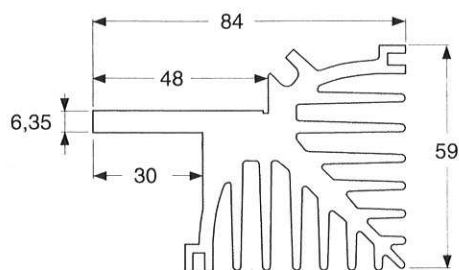


|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31030110  | 31030113                     |



### CO 124 P

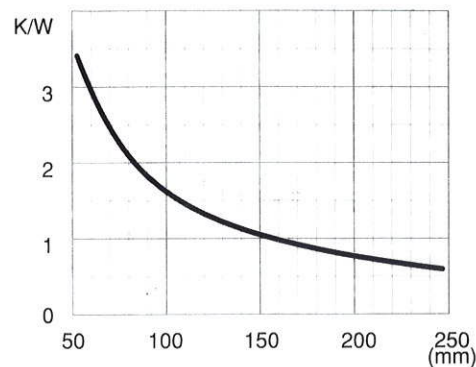
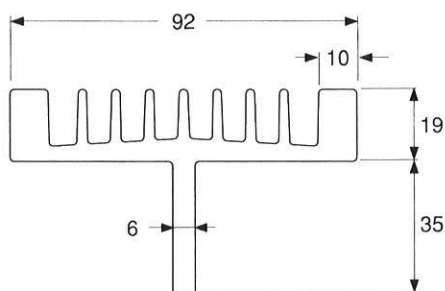
Ech. / Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31012410  | 31012413                     |

### CO 508 P

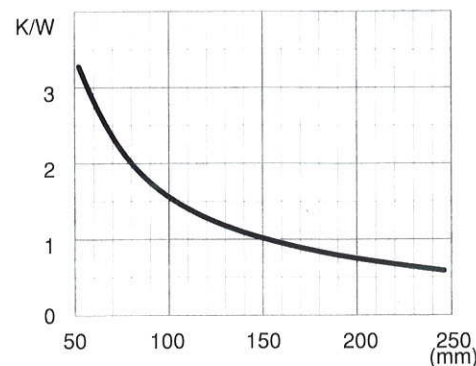
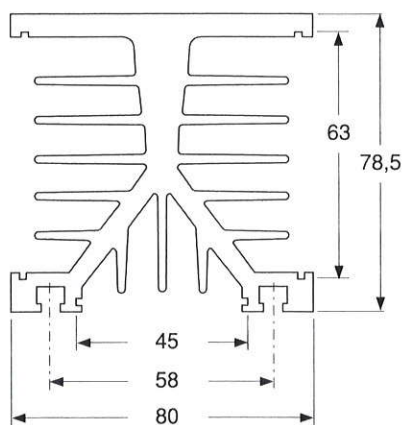
Ech. / Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31050810  | 31050813                     |

### CO 164 M

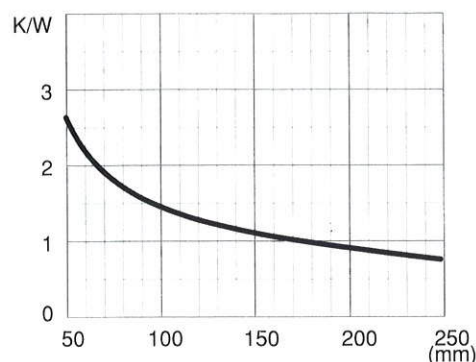
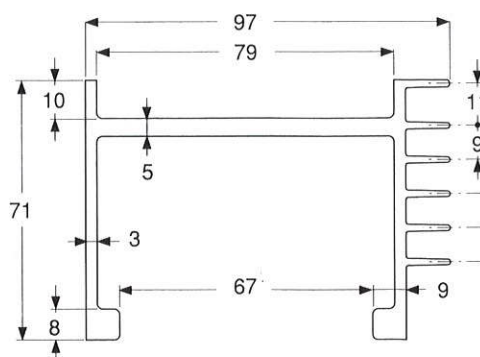
Ech. / Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31016410  | 31016413                     |

### CO 739 P

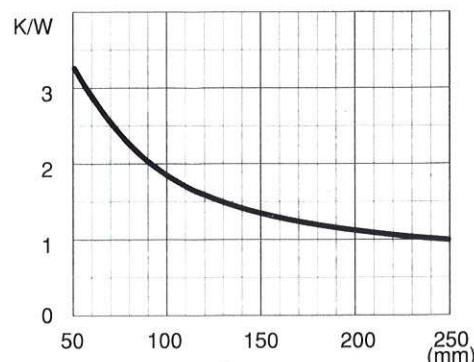
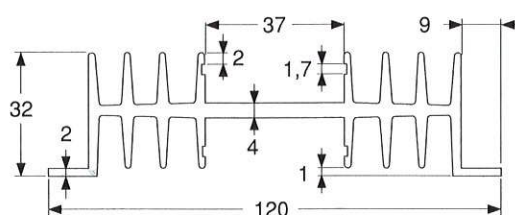
Ech. / Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31073910  | 31073913                     |

### CO 842 P

Ech. / Scale : 1/2

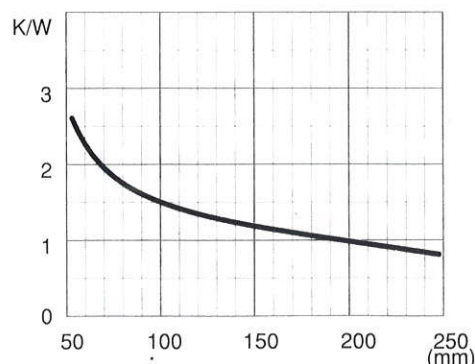
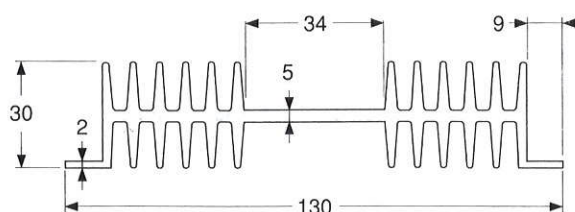


Usinage d'encoches de fixation possible suivant spécification page A- 5  
Machining of mounting notches is possible as shown page A- 5

|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31084210  | 31084213                     |

### CO 225 P

Ech. / Scale : 1/2  
GAM. T1.



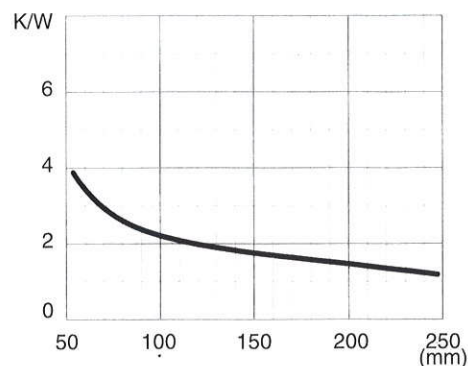
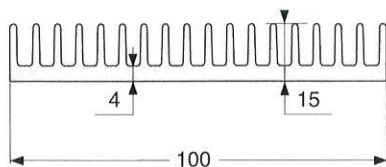
Usinage d'encoches de fixation possible suivant spécification page A- 5  
Machining of mounting notches is possible as shown page A- 5

|                   |           |                              |          |          |          |
|-------------------|-----------|------------------------------|----------|----------|----------|
| Longueur / Length | 1000      | 1000                         | 75       | 75       | 37,5     |
| Usinage / Layout  | -         | -                            | -        | TO 3     | TO 3     |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |          |          |          |
| CODE              | 31022510  | 31022513                     | 31022507 | 31022509 | 31022503 |



### CO 956 P

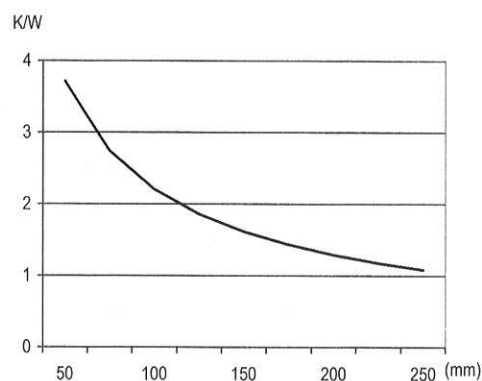
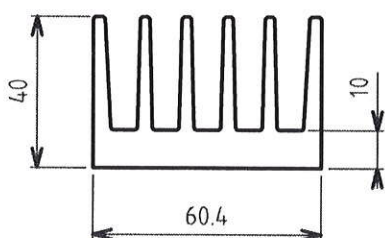
Ech. / Scale : 1/2



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31095610   | 31095613                      |

### CO 2756 P

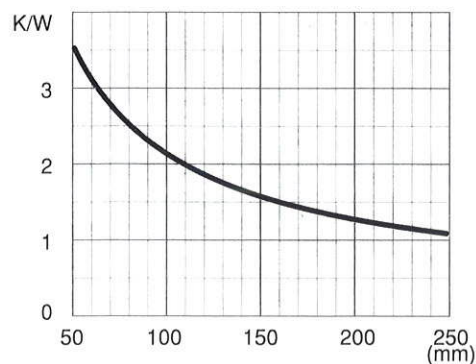
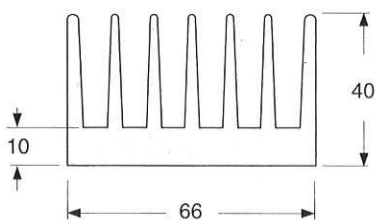
Ech. / Scale : 1/1



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31075610   | 31075613                      |

### CO 2752 P

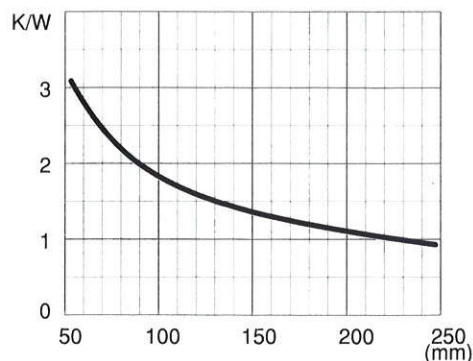
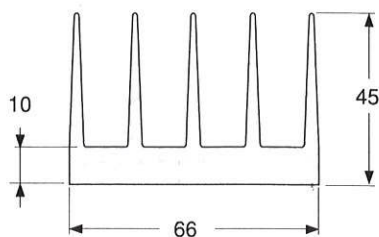
Ech. / Scale : 1/2



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31075210   | 31075213                      |

### CO 284 P

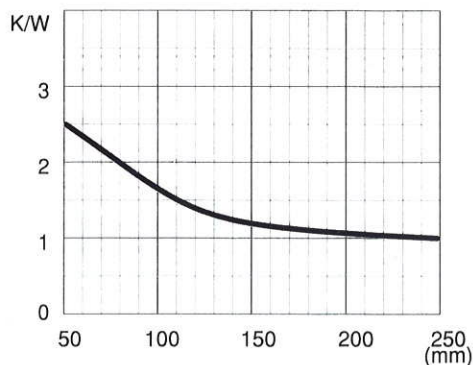
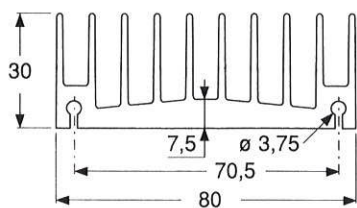
Ech. / Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31028410  | 31028413                     |

### CO 147 P

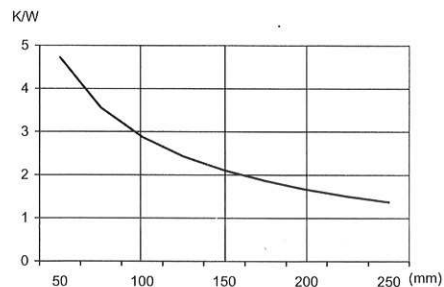
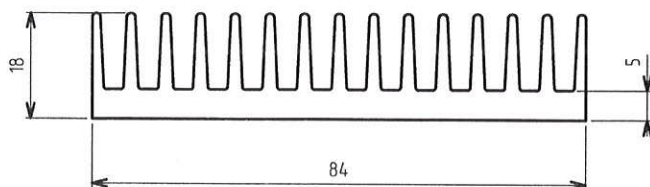
Ech. / Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31014710  | 31014713                     |

### CO 2776 P

Ech. / Scale : 1/1

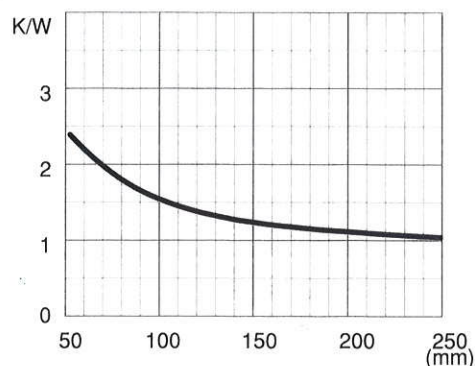
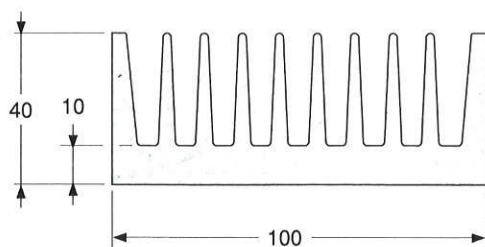


|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31077610  | 31077613                     |



### CO 143 P

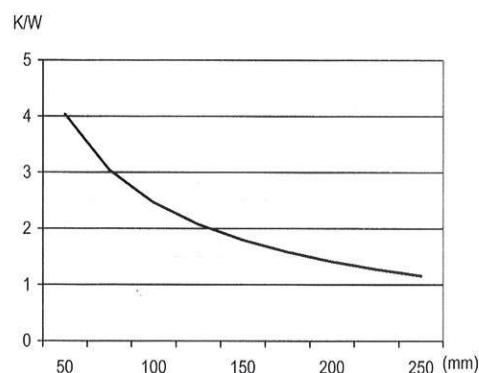
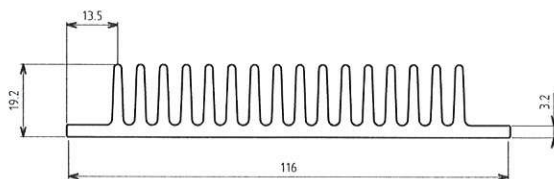
Ech. / Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31014310  | 31014313                     |

### CO 2764 P

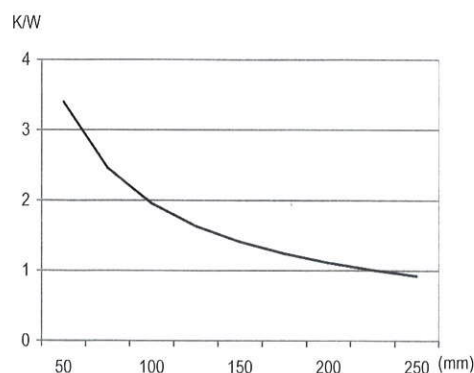
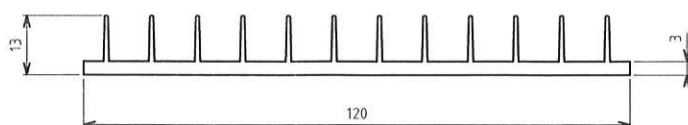
Ech./ Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 00000000  | 00000000                     |

### CO 2760 P

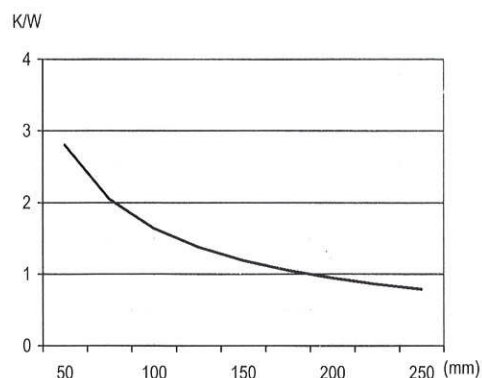
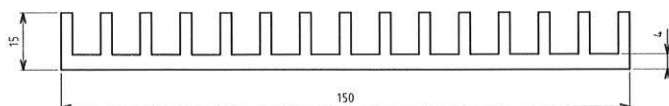
Ech./ Scale : 1/2



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31076010  | 31076013                     |

### CO 2749 P

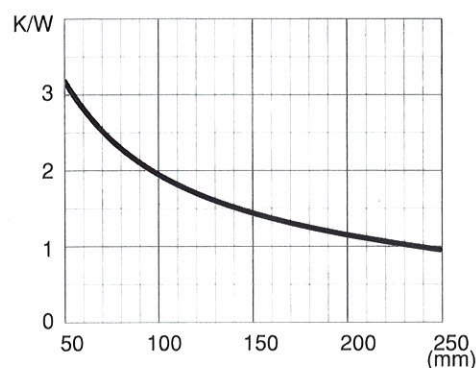
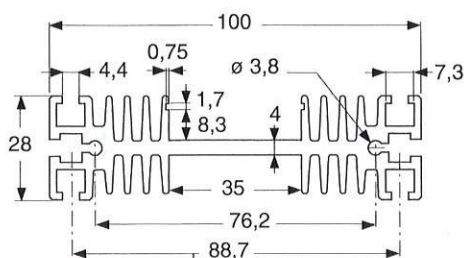
Ech. / Scale : 1/2



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31074910   | 31074913                      |

### CO 854 P

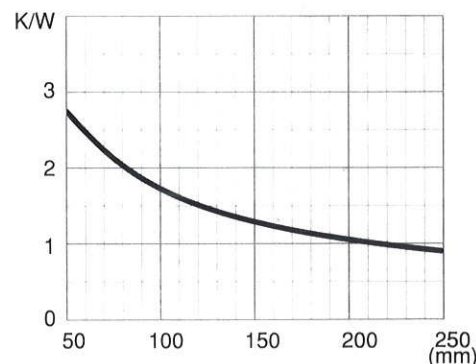
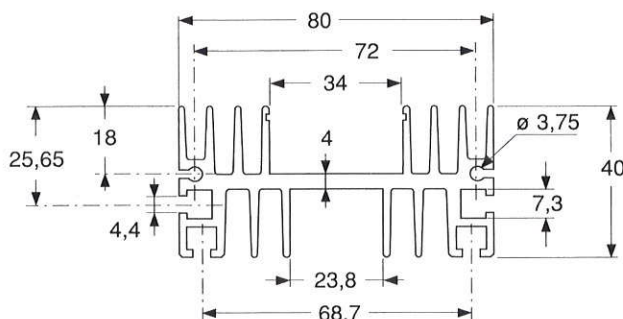
Ech. / Scale : 1/2  
GAM. T1.



|                   |            |                               |          |          |          |
|-------------------|------------|-------------------------------|----------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 75       | 75       | 37,5     |
| Usinage / Layout  | -          | -                             | TO 3     | 2 TO 3   | TO 3     |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |          |
| CODE              | 31085410   | 31085413                      | 31085409 | 31085416 | 31085403 |

### CO 512 P

Ech. / Scale : 1/2  
GAM. T1.

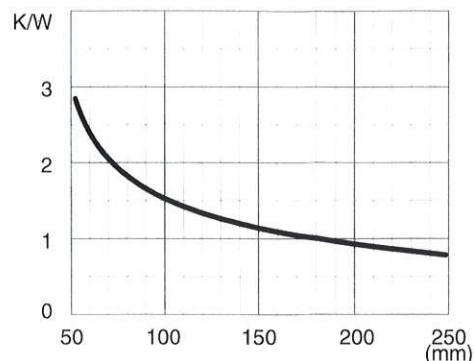
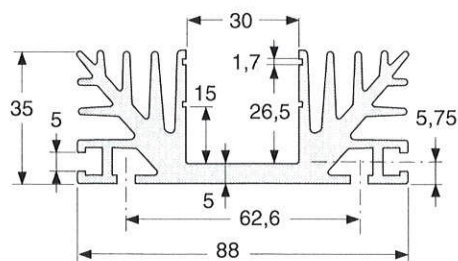


|                   |            |                               |          |          |
|-------------------|------------|-------------------------------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 75       | 37,5     |
| Usinage / Layout  | -          | -                             | TO 3     | TO 3     |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |
| CODE              | 31051210   | 31051213                      | 31051209 | 31051203 |



### CO 1158 P

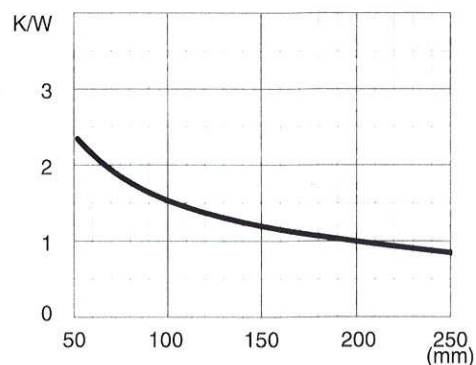
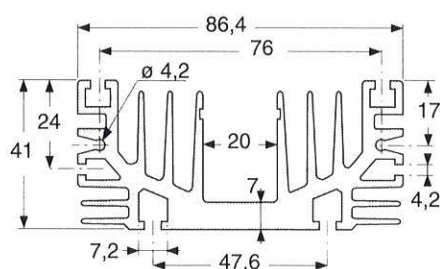
Ech. / Scale : 1/2  
GAM. T1.



|                   |            |                               |          |          |
|-------------------|------------|-------------------------------|----------|----------|
| Longueur / Length | 1000       | 1000                          | 75       | 37,5     |
| Usinage / Layout  | -          | -                             | TO 3     | TO 3     |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |          |          |
| CODE              | 31015810   | 31015813                      | 31015809 | 31015803 |

### CO 5600 P

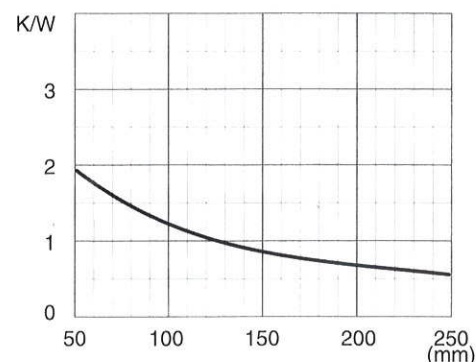
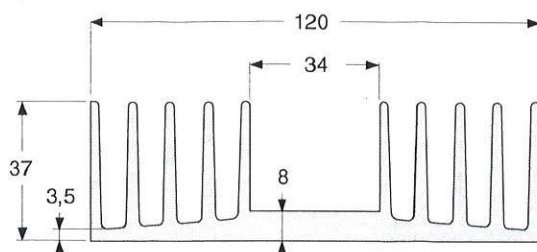
Ech. / Scale : 1/2  
GAM. T1.



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31760010   | 31760013                      |

### CO 156 P

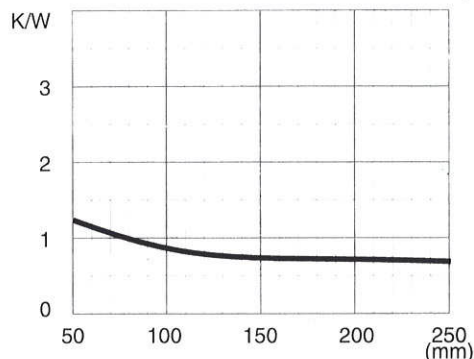
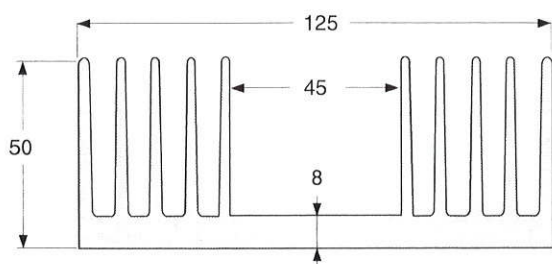
Ech. / Scale : 1/2  
\* GAM. T1.



|                     |            |                               |      |      |
|---------------------|------------|-------------------------------|------|------|
| Longueur / Length   | 1000       | 1000                          | 75   | 37,5 |
| Usinage / Layout    | -          | -                             | TO 3 | TO 3 |
| Finition / Finish   | Brut / Raw | Anodisé Noir / Black anodized |      |      |
| CODE CO 156 P (C=8) | 31015610   | 31015613                      | -    | -    |

### CO 190 M

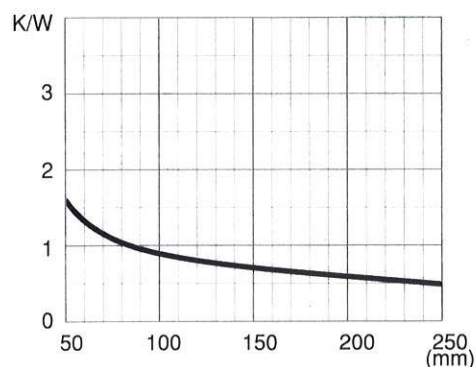
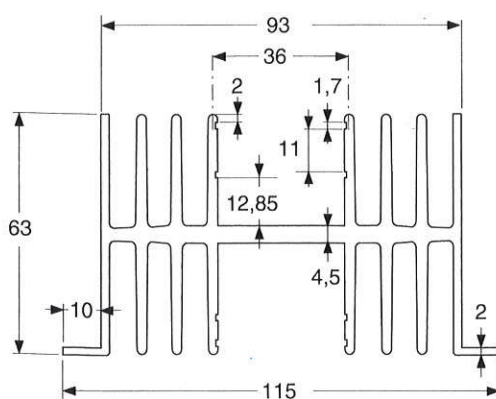
Ech. / Scale : 1/2



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31019010   | 31019013                      |

### CO 902 P

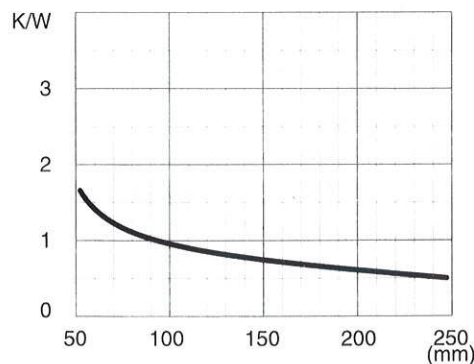
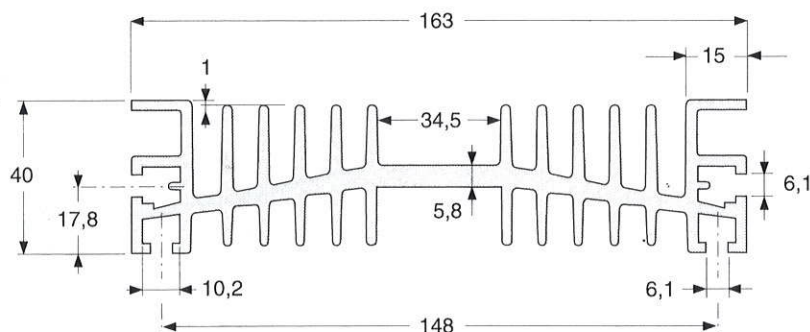
Ech. / Scale : 1/2



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31090210   | 31090213                      |

### CO 2415 P

Ech. / Scale : 1/2

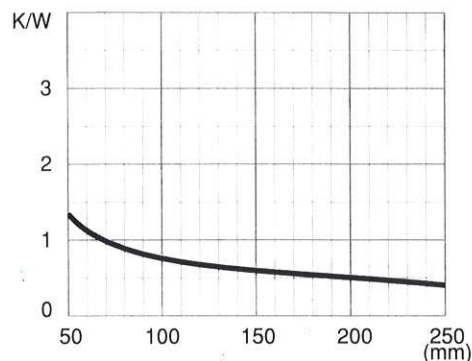
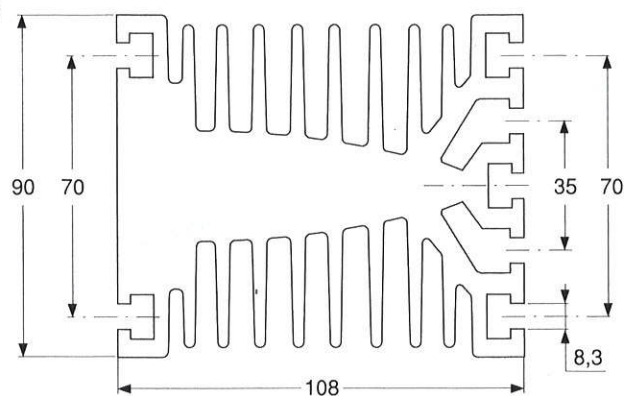


|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31041510   | 31041513                      |



### CO 5014 P

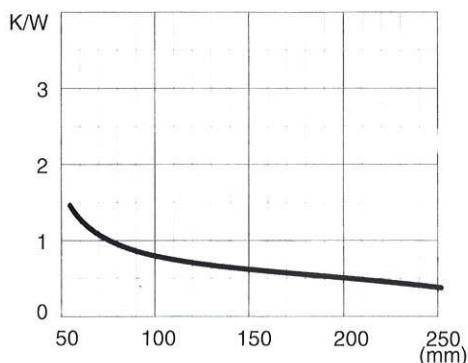
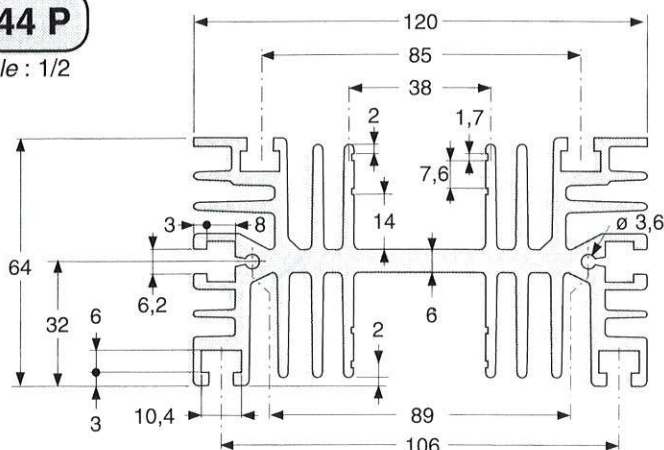
Ech. / Scale : 1/2



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31701410   | 31701413                      |

### CO 2044 P

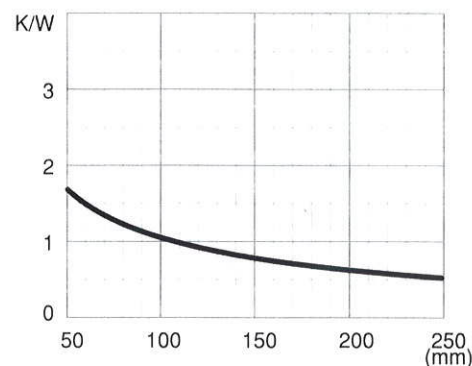
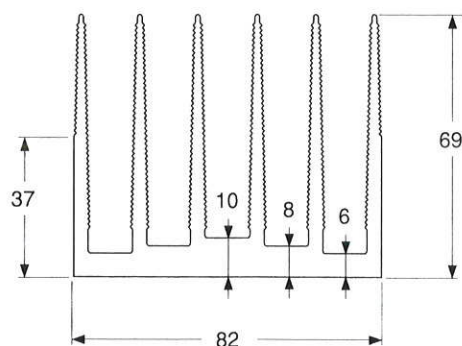
Ech. / Scale : 1/2  
GAM. T1.



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31004410   | 31004413                      |

### CO 386 P

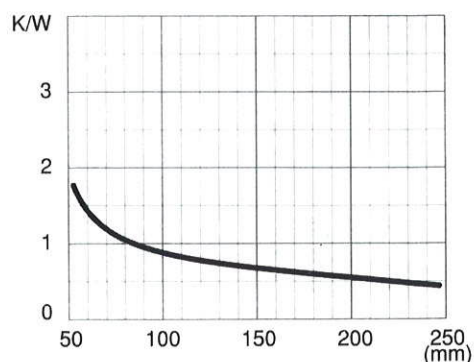
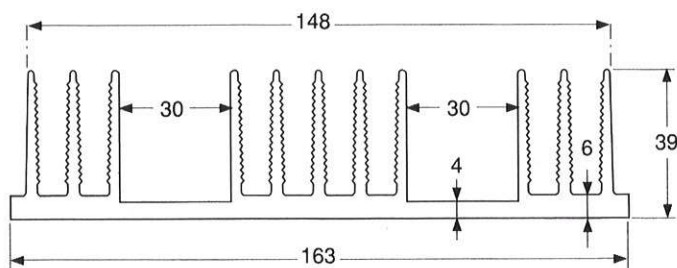
Ech. / Scale : 1/2



|                   |            |                               |
|-------------------|------------|-------------------------------|
| Longueur / Length | 1000       | 1000                          |
| Usinage / Layout  | -          | -                             |
| Finition / Finish | Brut / Raw | Anodisé Noir / Black anodized |
| CODE              | 31038610   | 31038613                      |

### CO 1745 P

Ech. / Scale : 1/2

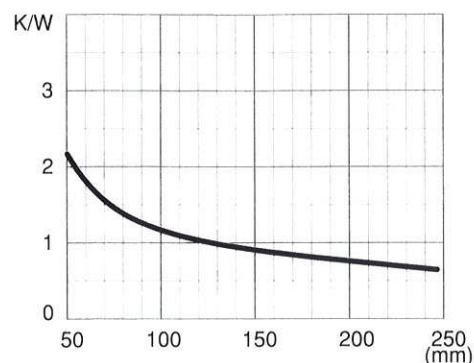
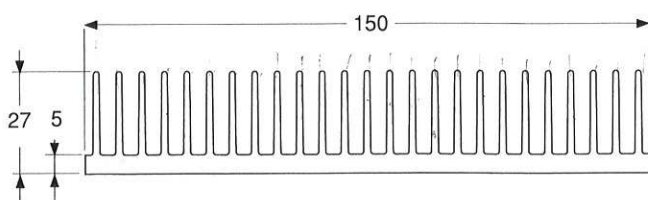


|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31074510  | 31074513                     |

### CO 553 P

Ech. / Scale : 1/2

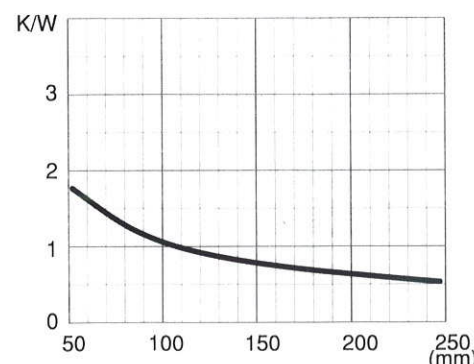
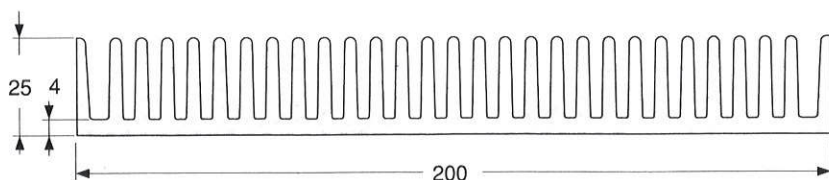
GAM. T1.



|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31055310  | 31055313                     |

### CO 2129 P

Ech. / Scale : 1/2

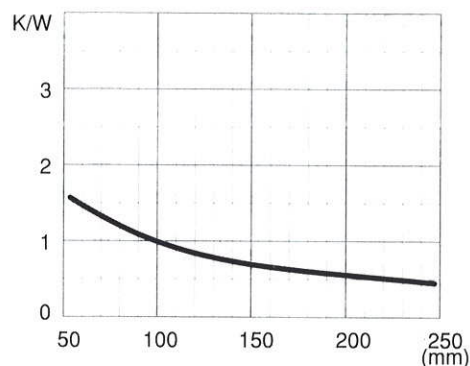
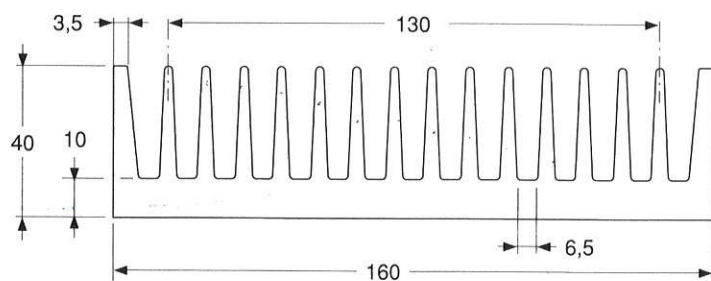


|                   |           |                              |
|-------------------|-----------|------------------------------|
| Longueur / Length | 1000      | 1000                         |
| Usinage / Layout  | -         | -                            |
| Finition / Finish | Brut /Raw | Anodisé Noir /Black anodized |
| CODE              | 31012910  | 31012913                     |



### CO 2625 P

Ech. / Scale : 1/2

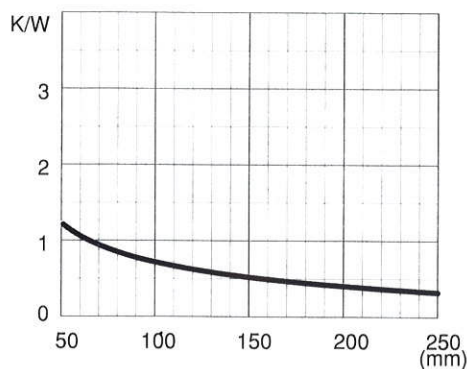
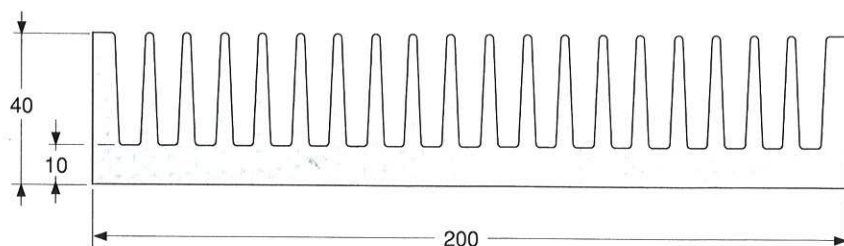


|                   |                 |                              |
|-------------------|-----------------|------------------------------|
| Longueur / Length | 1000            | 1000                         |
| Usinage / Layout  | -               | -                            |
| Finition / Finish | Brut /Raw       | Anodisé Noir /Black anodized |
| <b>CODE</b>       | <b>31062510</b> | <b>31062513</b>              |

### CO 270 P

Ech. / Scale : 1/2

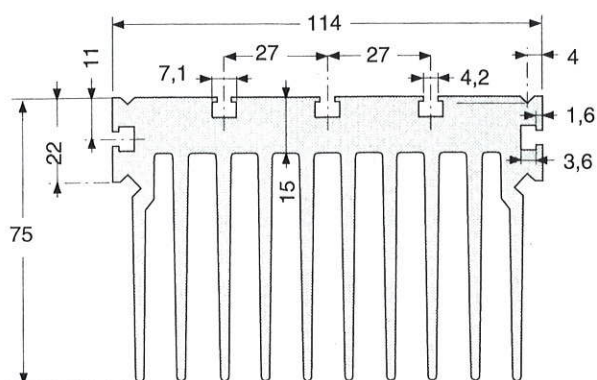
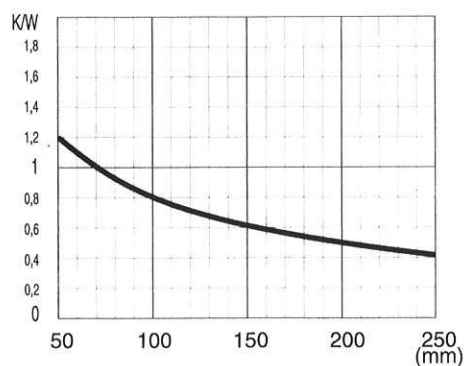
GAM. T1.



|                   |                 |                              |
|-------------------|-----------------|------------------------------|
| Longueur / Length | 1000            | 1000                         |
| Usinage / Layout  | -               | -                            |
| Finition / Finish | Brut /Raw       | Anodisé Noir /Black anodized |
| <b>CODE</b>       | <b>31027010</b> | <b>31027013</b>              |

**CO 5063 P**

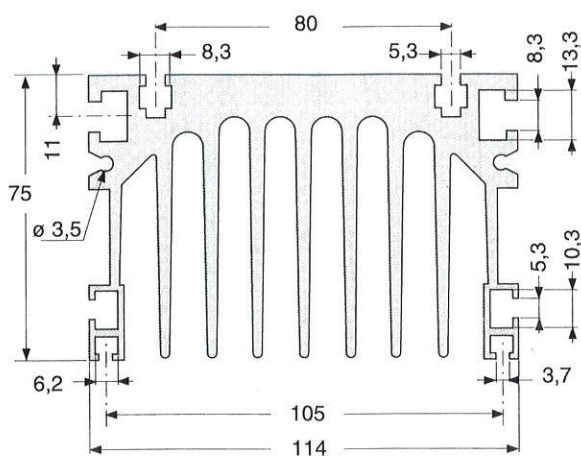
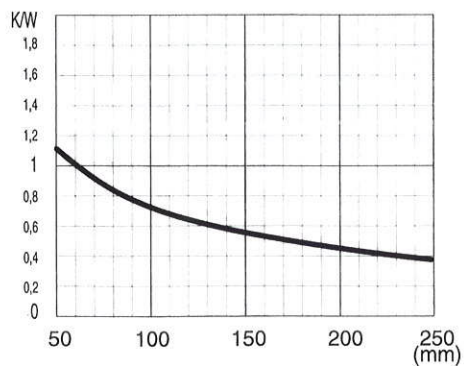
Ech. / Scale : 1/2



|                                       |                 |
|---------------------------------------|-----------------|
| (1000 mm)<br>Finition / <i>Finish</i> | <b>CODE</b>     |
| Brut / <i>Raw</i>                     | <b>31706310</b> |
| Anod. Noir<br><i>Black anod.</i>      | <b>31706313</b> |

**CO 2781 P**

Ech. / Scale : 1/2

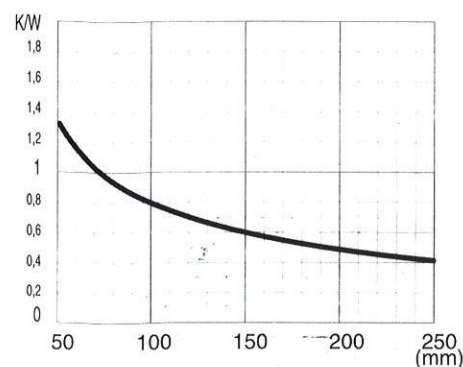
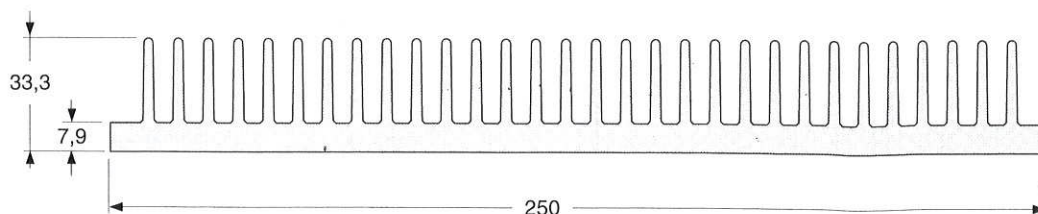


|                                       |                 |
|---------------------------------------|-----------------|
| (1000 mm)<br>Finition / <i>Finish</i> | <b>CODE</b>     |
| Brut / <i>Raw</i>                     | <b>31740910</b> |
| Anod. Noir<br><i>Black anod.</i>      | <b>31740913</b> |



### CO 2539 P

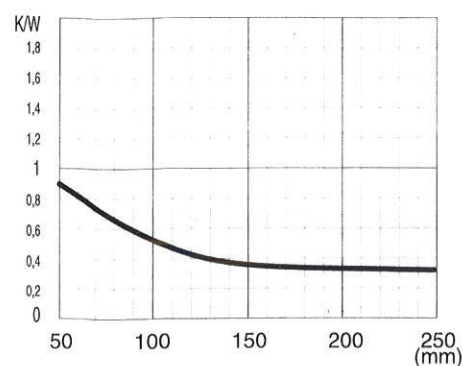
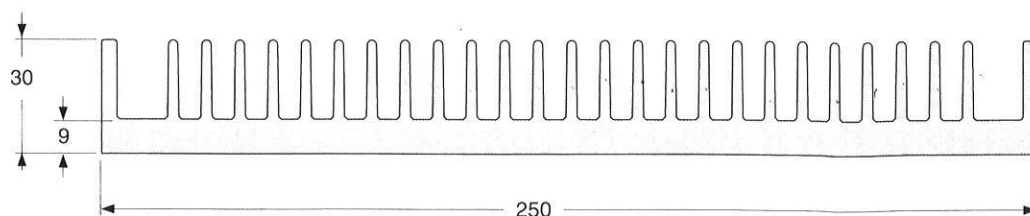
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31053910 |
| Anod. Noir<br>Black anod.      | 31053913 |

### CO 293 P

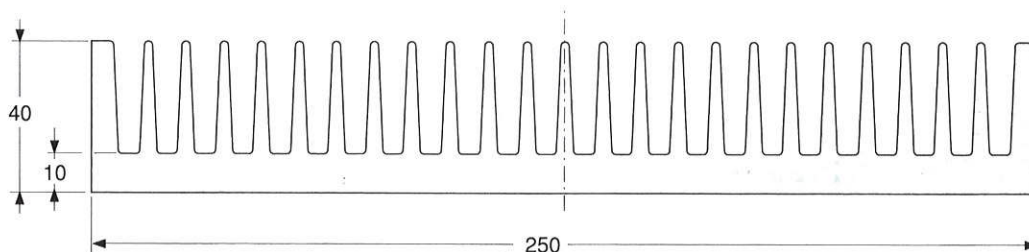
Ech. / Scale : 1/2



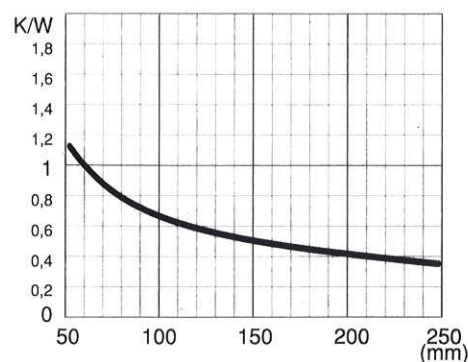
| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31029310 |
| Anod. Noir<br>Black anod.      | 31029313 |

### CO 2761 P

Ech. / Scale : 1/2

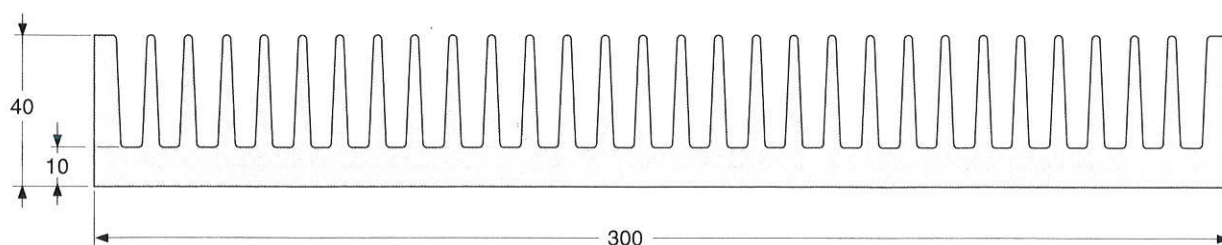


| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31076110 |
| Anod. Noir<br>Black anod.      | 31076113 |

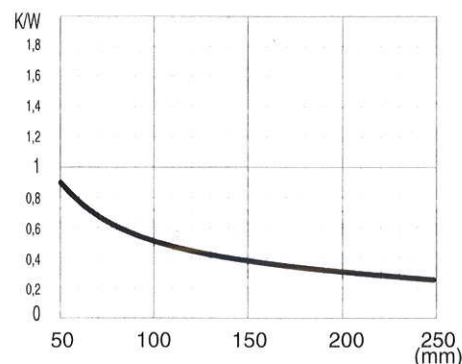


### CO 2077 P

Ech. / Scale : 1/2



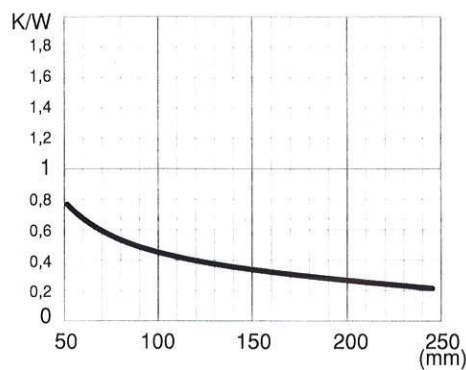
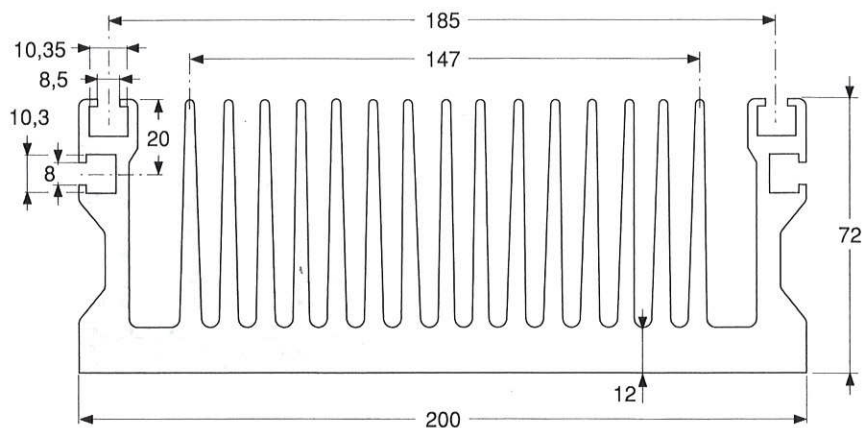
| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31007710 |
| Anod. Noir<br>Black anod.      | 31007713 |





### CO 2700 P

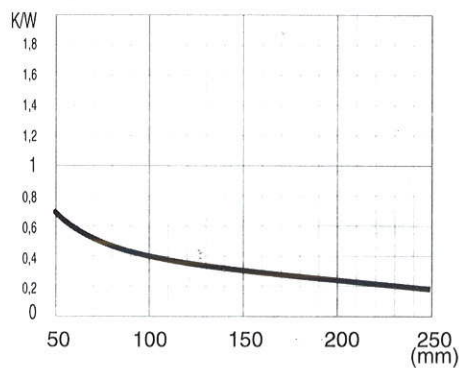
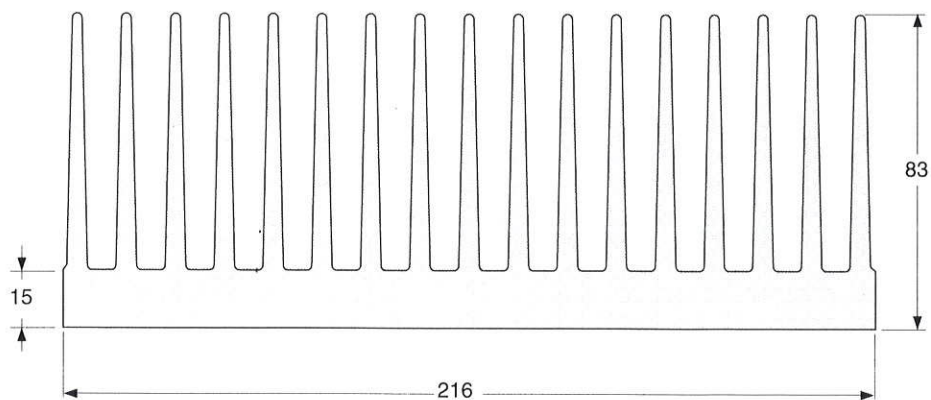
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31070010 |
| Anod. Noir<br>Black anod.      | 31070013 |

### CO 2702 P

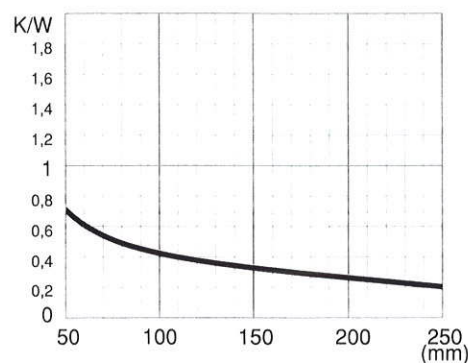
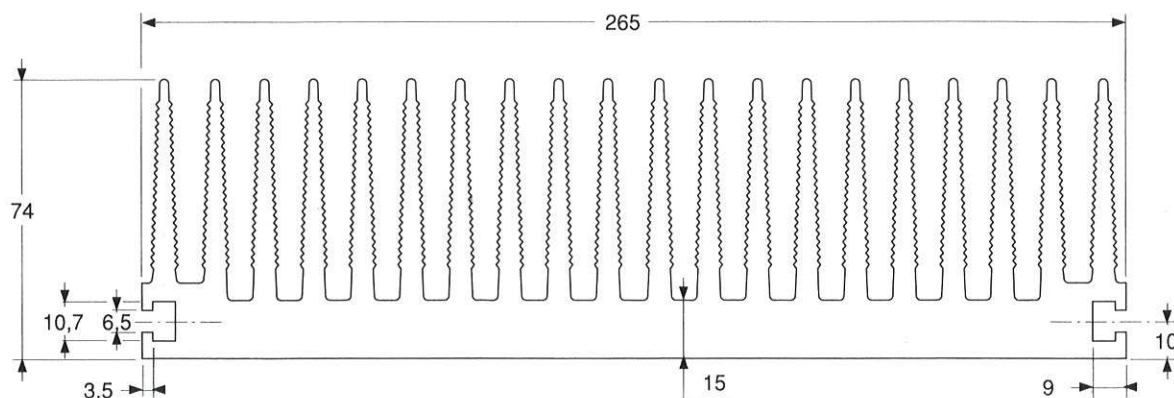
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31070210 |
| Anod. Noir<br>Black anod.      | 31070213 |

### CO 2719 P

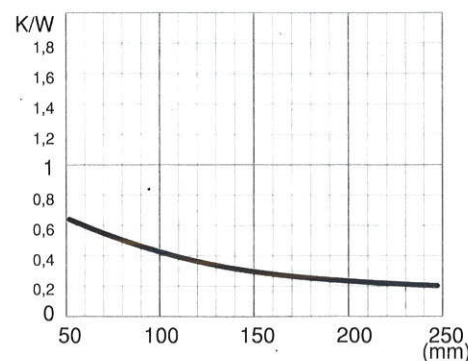
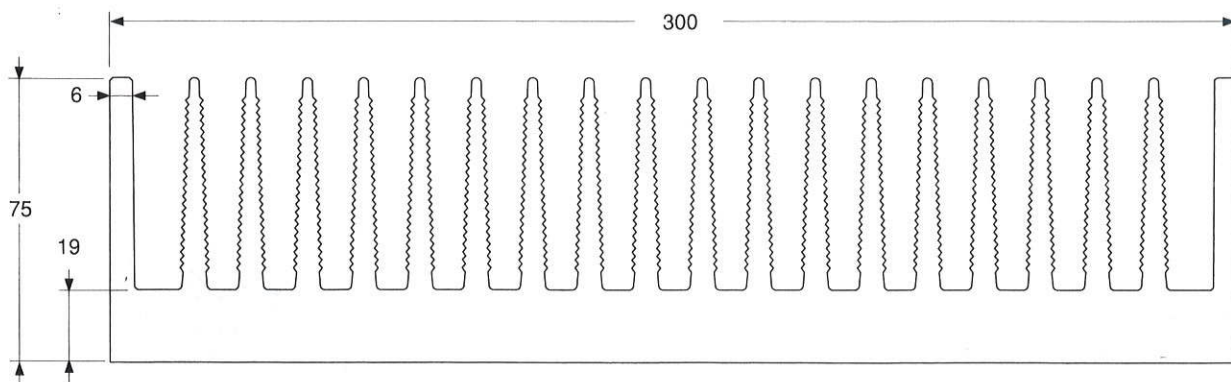
Ech. / Scale : 1/2



|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Brut / Raw                     | 31071910 |
| Anod. Noir<br>Black anod.      | 31071913 |

### CO 2735 P

Ech. / Scale : 1/2

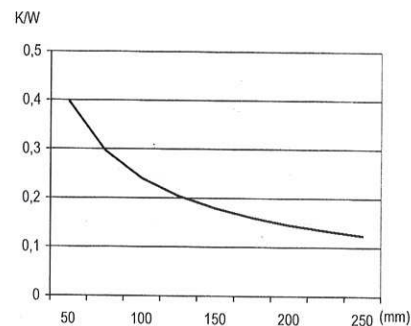
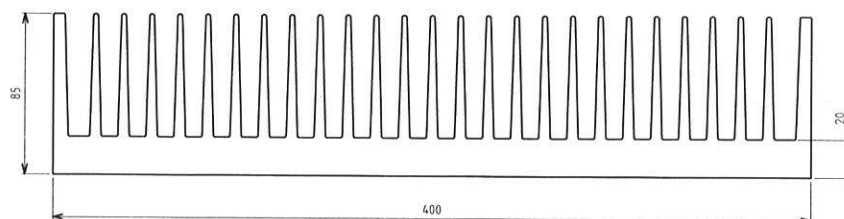


|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Brut / Raw                     | 31073510 |
| Anod. Noir<br>Black anod.      | 31073513 |



### CO 2782 P

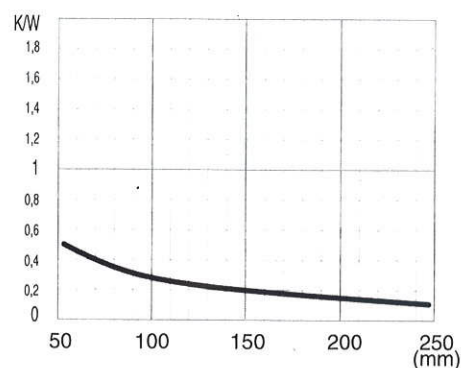
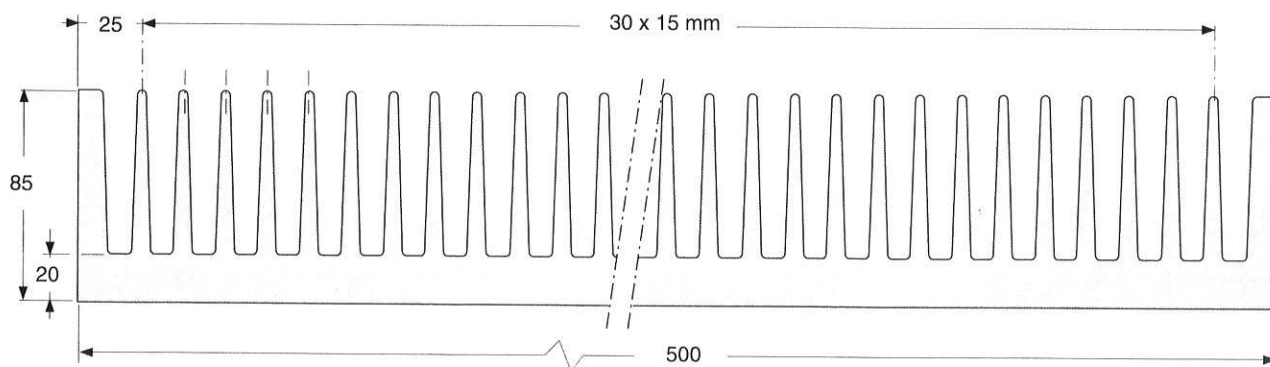
Ech./ Scale : 1/3



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31078210 |
| Anod. Noir<br>Black anod.      | 31078213 |

### CO 2708 P

Ech. / Scale : 1/2

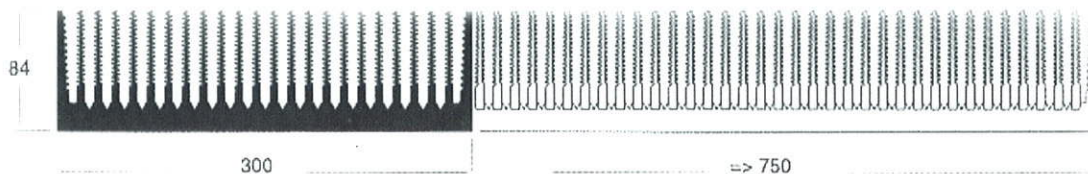


| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31070810 |
| Anod. Noir<br>Black anod.      | 31070813 |

### CO 2679

Rth : NOUS CONSULTER  
Rth : CONSULT US

CO 2680 - CO 2684 - CO 2686 - CO 2690 P



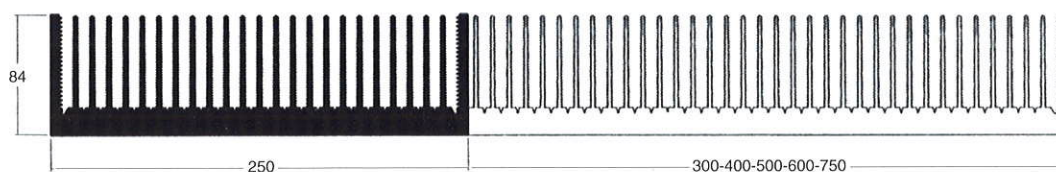
$R_{th} < 0.2 \text{ K/W}$

|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Anod. Noir<br>Black anod.      | 31067910 |

### CO 2660 P

Rth : NOUS CONSULTER  
Rth : CONSULT US

CO 2661 - CO 2662P - CO 2663P  
CO 2664P - CO 2665 P



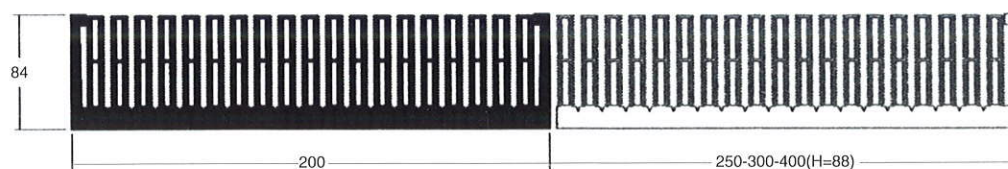
$R_{th} < 0.15 \text{ K/W}$

|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Anod. Noir<br>Black anod.      | 31066010 |

### CO 2640 P

Rth : NOUS CONSULTER  
Rth : CONSULT US

CO 2641 - CO 2642P - CO 2643P



$R_{th} < 0.1 \text{ K/W}$

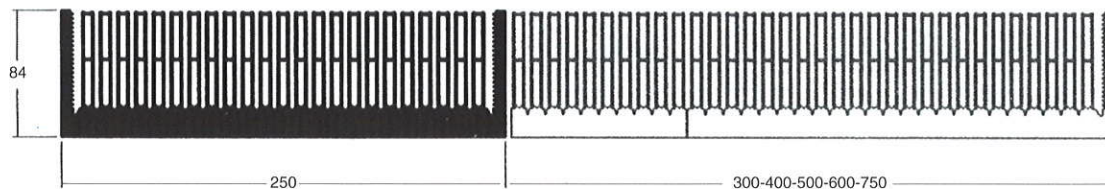
|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Anod. Noir<br>Black anod.      | 31064010 |



### CO 2650 P

CO 2651 - CO 2652P - CO 2653P  
CO 2654P - CO 2655 P

Rth : NOUS CONSULTER  
Rth : CONSULT US



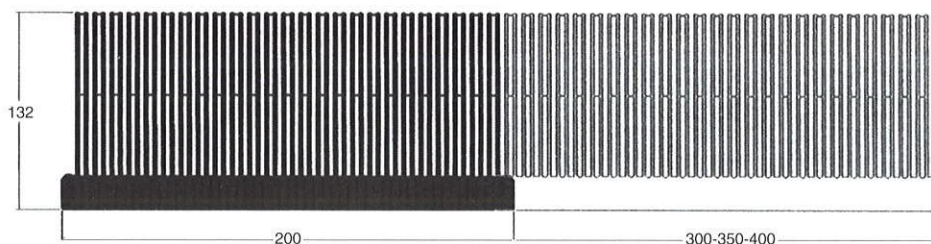
$R_{th} < 0.11 \text{ K/W}$

|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Anod. Noir<br>Black anod.      | 31065010 |

### CO 2630 P

CO 2631 - CO 2632P - CO 2633P

Rth : NOUS CONSULTER  
Rth : CONSULT US

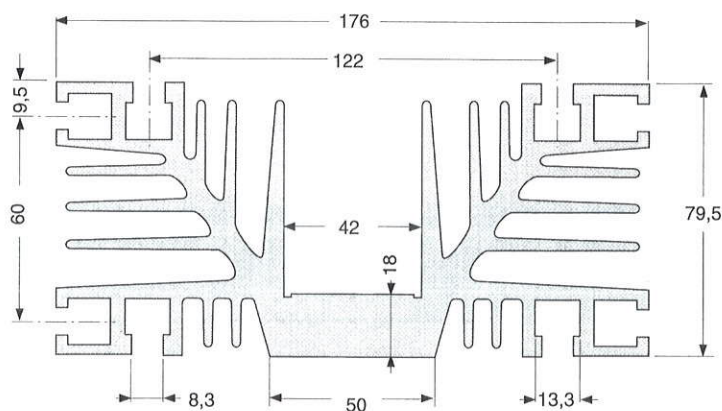


$R_{th} < 0.08 \text{ K/W}$

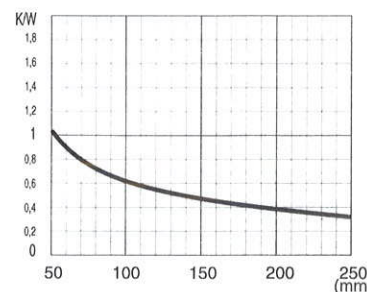
|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Anod. Noir<br>Black anod.      | 31063010 |

### CO 5540 P

Ech. / Scale : 1/2

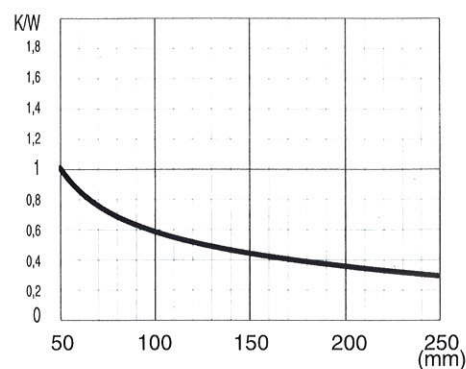
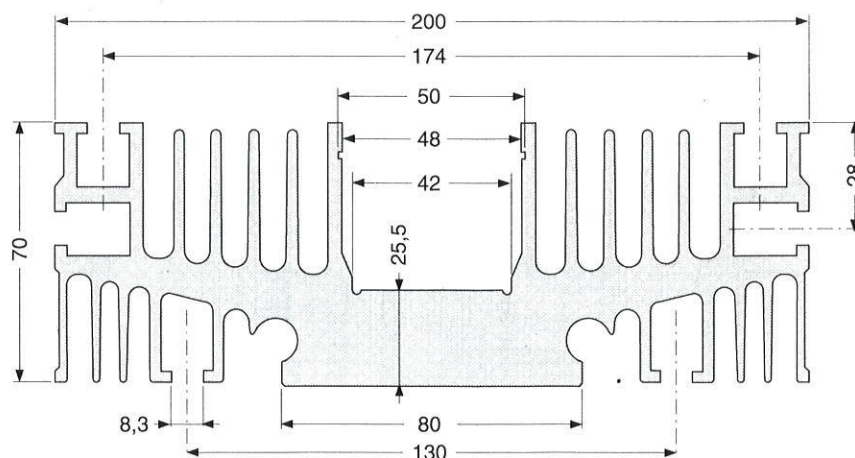


|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Brut / Raw                     | 31754010 |
| Anod. Noir<br>Black anod.      | 31754013 |



### CO 5700 P

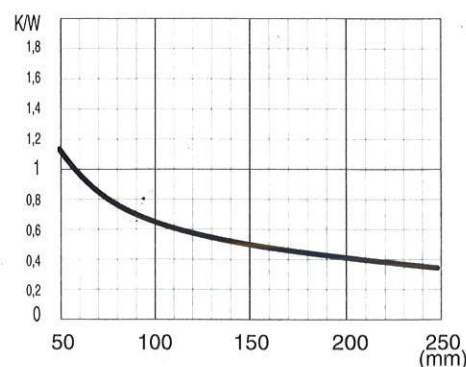
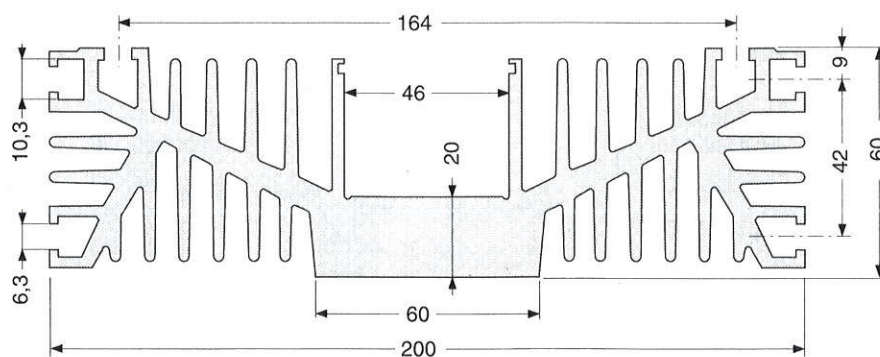
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31770010 |
| Anod. Noir<br>Black anod.      | 31770013 |

### CO 5570 P

Ech. / Scale : 1/2

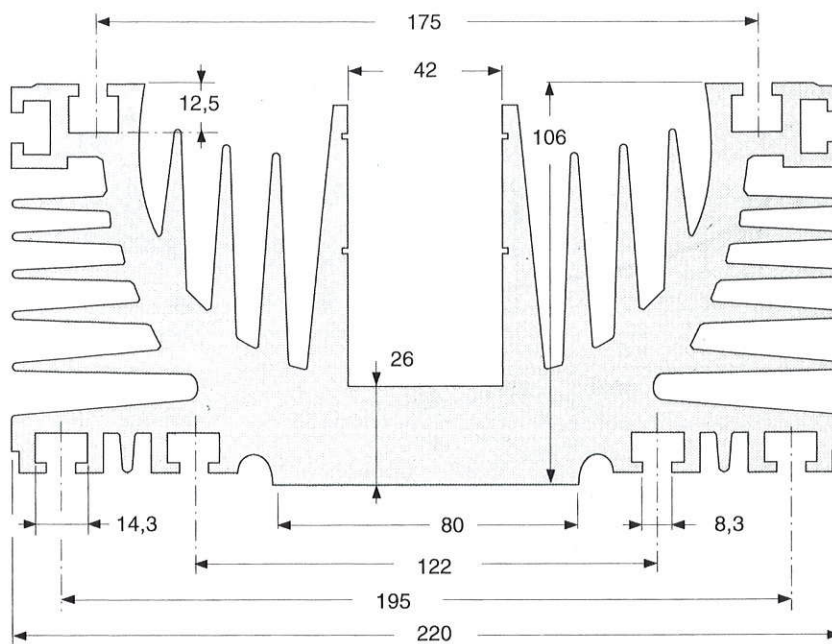
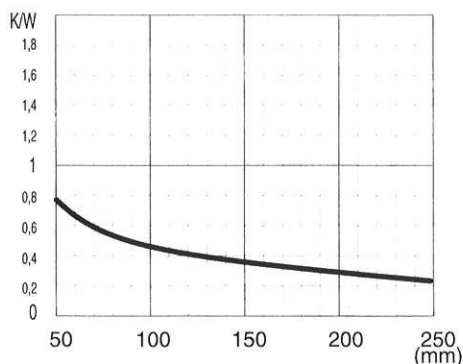


| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31757010 |
| Anod. Noir<br>Black anod.      | 31757013 |



### CO 5750 P

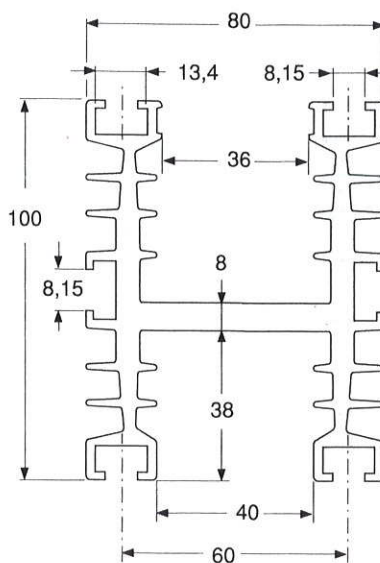
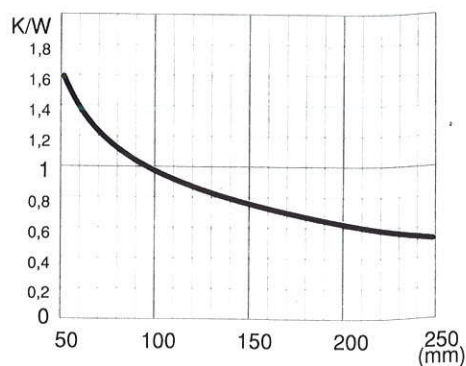
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31775010 |
| Anod. Noir<br>Black anod.      | 31775013 |

### CO 5405 P

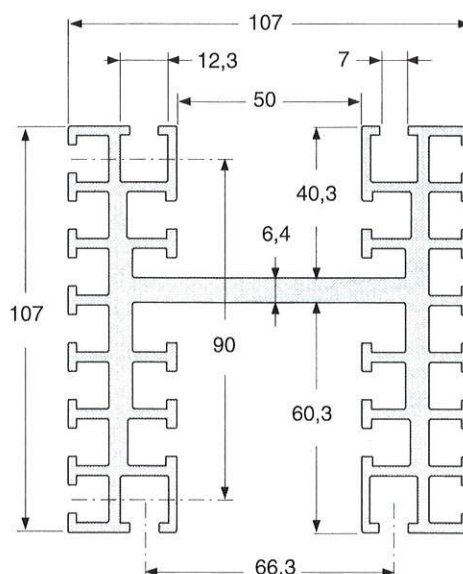
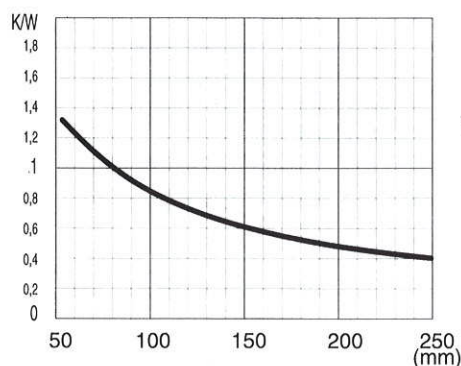
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31740510 |
| Anod. Noir<br>Black anod.      | 31740513 |

### CO 443 P

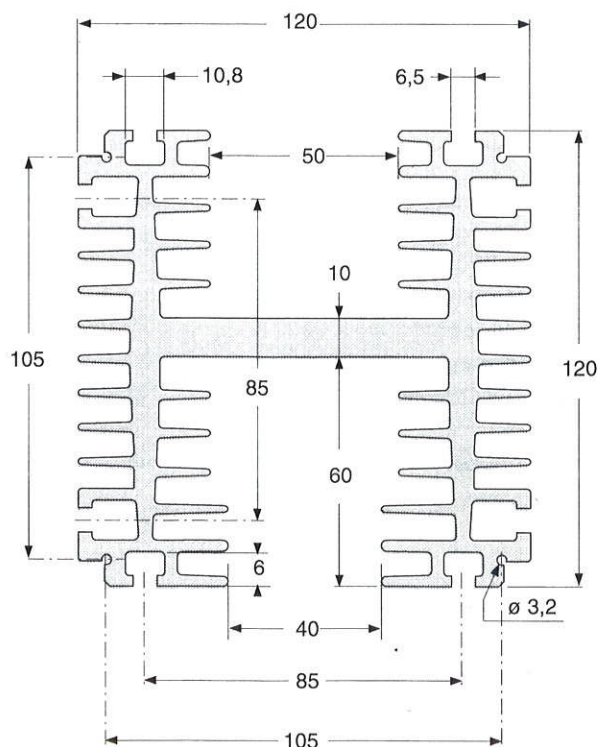
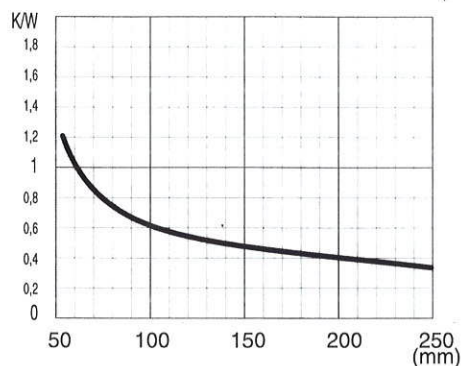
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31044310 |
| Anod. Noir<br>Black anod.      | 31044313 |

### CO 222 P

Ech. / Scale : 1/2

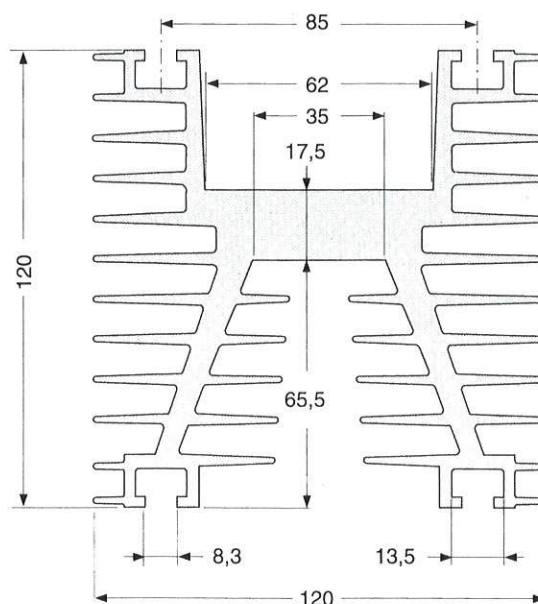
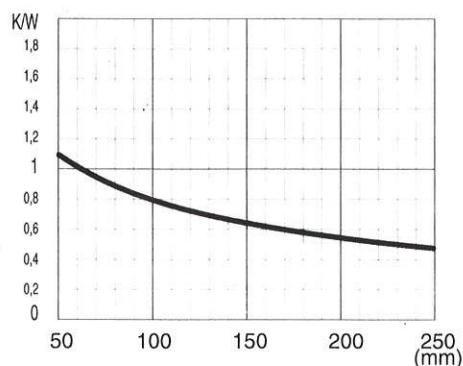


| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31022210 |
| Anod. Noir<br>Black anod.      | 31022213 |



### CO 2711 P

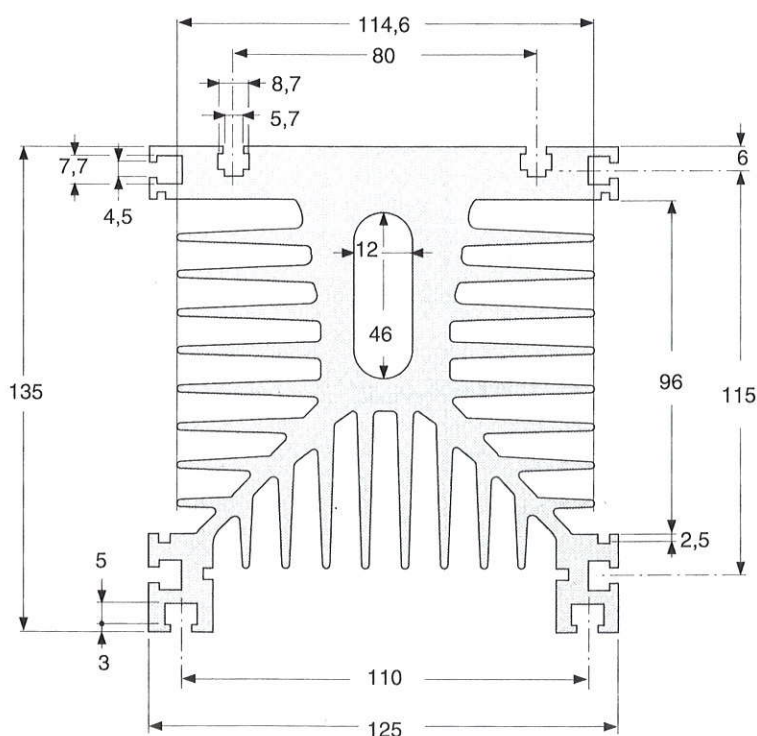
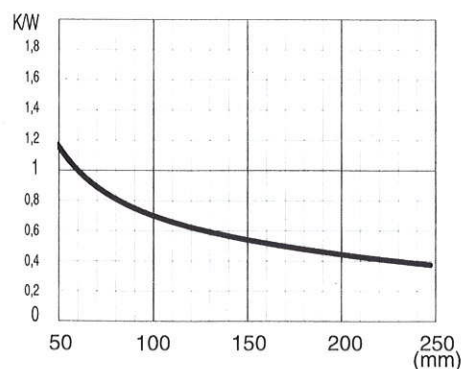
Ech. / Scale : 1/2



|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Brut / Raw                     | 31071110 |
| Anod. Noir<br>Black anod.      | 31071113 |

### CO 2712 P

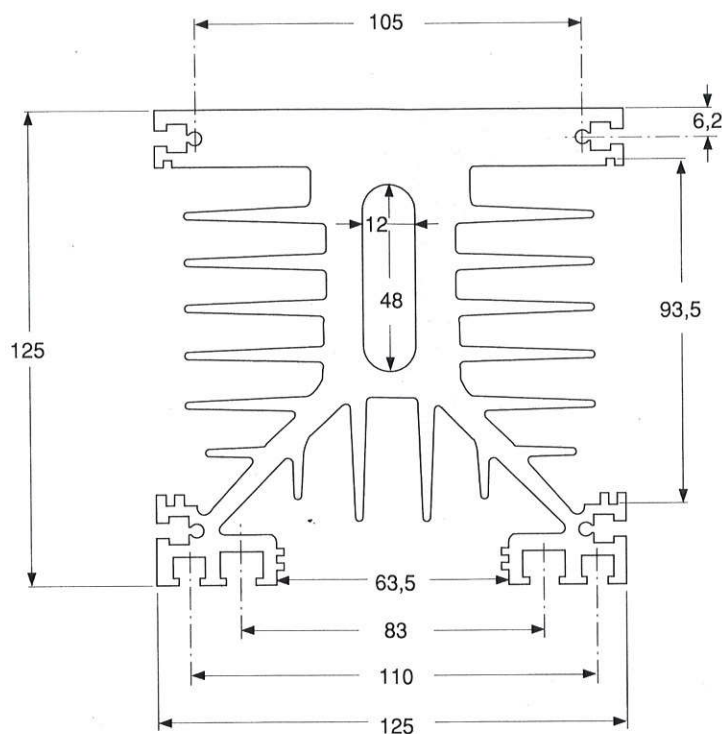
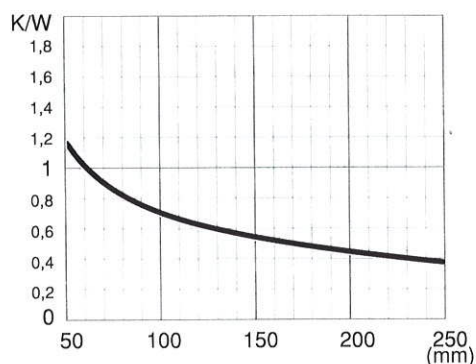
Ech. / Scale : 1/2



|                                |          |
|--------------------------------|----------|
| (1000 mm)<br>Finition / Finish | CODE     |
| Brut / Raw                     | 31071210 |
| Anod. Noir<br>Black anod.      | 31071213 |

### CO 2714 P

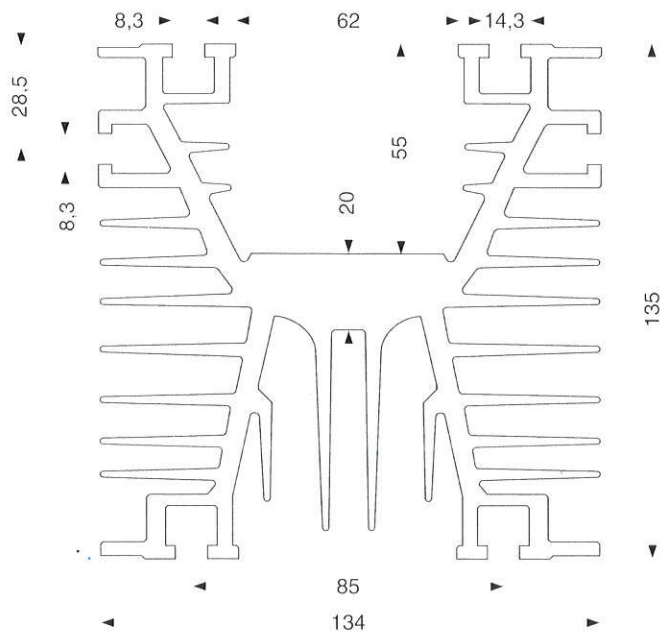
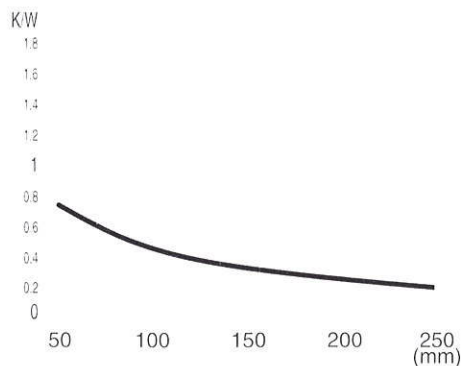
Ech. / Scale : 1/2



| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31071410 |
| Anod. Noir<br>Black anod.      | 31071413 |

### CO 5140 P

Ech. / Scale : 1/2



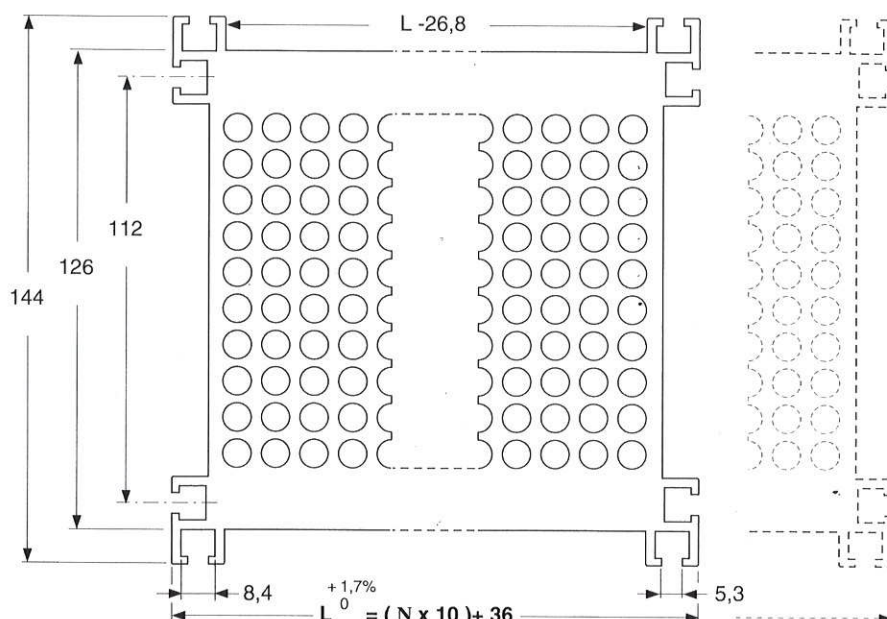
| (1000 mm)<br>Finition / Finish | CODE     |
|--------------------------------|----------|
| Brut / Raw                     | 31714010 |
| Anod. Noir<br>Black anod.      | 31714013 |



### DV 2901

DISSIPATEUR POUR VENTILATION FORCEE  
FORCED AIR COOLED HEATSINK

Ech. / Scale : 1/2



RH : NOUS CONSULTER  
RH : CONSULT US

Version sans rainures disponible,  
nous consulter.

Cubic version (with no grooves),  
available on request.

"N" : Nb modules

"L" et "P" = variables, nous pouvons fournir toute autre dimension suivant vos besoins, veuillez nous consulter.

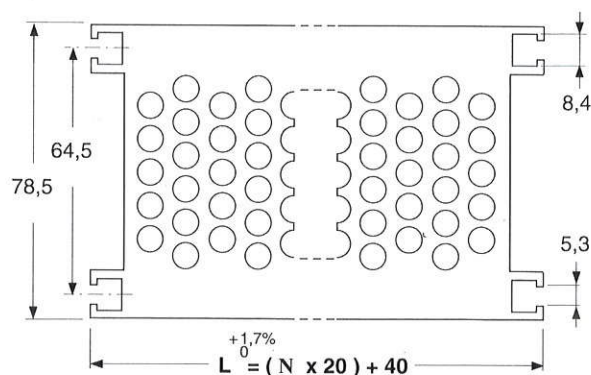
"L" and "P" are variable values, we can offer any other dimensions as you need, please consult us.

| L (mm) | N  | Prof. = 150 (mm) | Prof. = 200 (mm) | Prof. = 250 (mm) | Prof. = 300 (mm) | Prof. = 350 (mm) | Prof. = 400 (mm) |
|--------|----|------------------|------------------|------------------|------------------|------------------|------------------|
| 146    | 11 | 31090111         | 31090112         | 31090113         | 31090114         | 31090115         | 31090116         |
| 266    | 23 | 31090121         | 31090122         | 31090123         | 31090124         | 31090125         | 31090126         |
| 386    | 35 | 31090131         | 31090132         | 31090133         | 31090134         | 31090135         | 31090136         |

### DV 2905

DISSIPATEUR POUR VENTILATION FORCEE  
FORCED AIR COOLED HEATSINK

Ech. / Scale : 1/2



RH : NOUS CONSULTER  
RH : CONSULT US

"N" : Nb modules

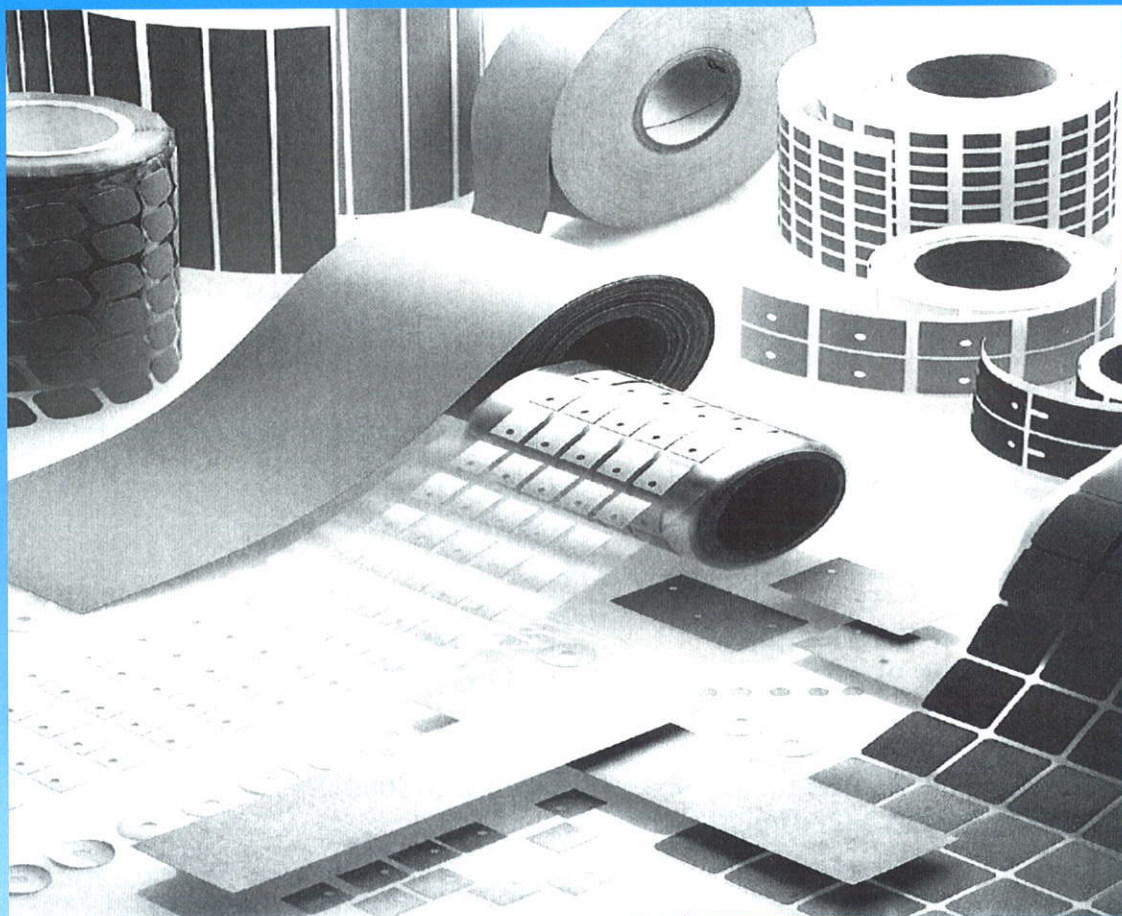
"L" et "P" = variables, nous pouvons fournir toute dimension suivant vos besoins, veuillez nous consulter.

"L" and "P" are variable values, we can supply any dimensions as you need, please consult us.

DISPONIBLE, NOUS CONSULTER.

AVAILABLE, PLEASE CONSULT US





## INTERFACES THERMIQUES

Thermo-conductible isolant ou non électrique

SIL PAD ®

GAP PAD ®

HI FLOW ®

Intercalaire mica

Intercalaire alumine

Formats spéciaux

Graisse thermique



|                                                      |                                                                             |
|------------------------------------------------------|-----------------------------------------------------------------------------|
| LES SIL PAD AVEC TISSU DE VERRE                      | SP400<br>SP800<br>SP900<br>SP1500 ST<br>SP A 2000                           |
| LES SIL PAD AVEC KAPTON                              | K4<br>K10                                                                   |
| REEMPLACEMENT DE GRAISSE<br>STYLE PADS               | QPAD II<br>QPAD III                                                         |
| REEMPLACEMENT DE GRAISSE<br>CHANGEMENT DE PHASE      | HI FLOW 105<br>HI FLOW 225 FAC                                              |
| CHANGEMENT DE PHASE<br>AVEC ISOLATION ELECTRIQUE     | HI FLOW 300P-1.5                                                            |
| JOINT THERMIQUE<br>ISOLANT ELECTRIQUE                | GAP PAD ULTRA SOFT<br>GAP PAD 2000S40<br>GAP PAD 2500S20<br>GAP PAD 3000S30 |
| GAP PAD "LIQUIDES"                                   | GAP FILLER 1000<br>GAP FILLER 2000                                          |
| COLLANT ISOLANT ELECTRIQUE<br>ET TRANSFERT THERMIQUE | BOND PLY 100                                                                |
| GRAISSE THERMIQUE                                    | PATE 340<br>TIC 1000A                                                       |
| ACCESSOIRES                                          | ALUMINE, MICA                                                               |

### SIL PAD 400

Silicone et fibre de verre  
Isolant électrique  
Conducteur de chaleur  
Performance thermique en fonction de la pression  
Epaisseurs disponibles : 0.18mm, 0.23mm  
Conductivité thermique: 0.9 W /m.k

### SIL PAD 800

Isolant électrique 1.7 KV  
Conducteur de chaleur  
Performance thermique en fonction de la pression  
Conductivité thermique: 1.6 W /m.k  
Recommande pour montage faible pression

### SIL PAD 900S

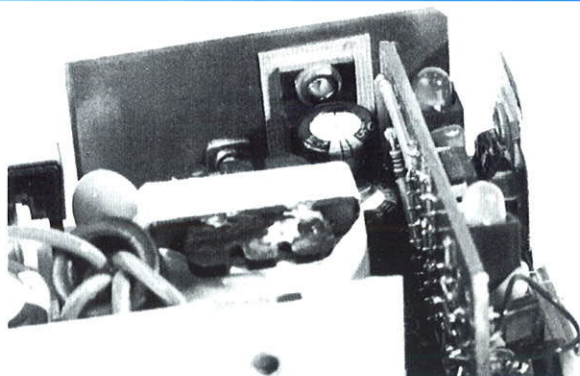
Isolant électrique 5.5 KV  
Conducteur de chaleur  
Performance thermique en fonction de la pression  
Epaisseur : 0.229mm  
Conductivité thermique : 1.6 W/m.k  
Recommande pour montage faible pression

### SIL PAD 1500 ST

Matériau renforcé fibre de verre  
Isolant électrique 3 KV  
Conducteur de chaleur  
Performance thermique en fonction de la pression  
Epaisseur : 0.203mm  
Conductivité thermique: 1.8 W /m.k  
Recommande pour montage faible pression  
Haut de gamme,

### SIL PAD A2000

Base elastomere  
Isolant électrique  
Conducteur thermique  
Performance thermique en fonction de la pression  
Epaisseur : 0.381, 0.508 mm  
Conductivité thermique : 3 W/m.k  
Recommande pour transfert thermique élevé



### SIL PAD K4

Base silicone sur film kapton  
Isolant électrique 6KV  
Performance thermique en fonction de la pression  
Epaisseur : 0.152 mm  
Conductivité thermique : 0.9 W/m.k  
Recommande pour résister à une tension élevée

### SIL PAD K10

Base silicone sur film kapton, haut de gamme  
isolant électrique 6 KV  
Performance thermique en fonction de la pression  
Epaisseur : 0.127 mm  
Conductivité thermique : 1.3 W/m.k  
Recommande pour remplacer les isolants en oxyde de béryllium ou nitrure de bore

### QPAD II

Remplacement de graisse (base aluminium)  
Non isolant électrique  
Conducteur thermique  
Performance thermique en fonction de la pression  
Epaisseur : 0.152 mm  
Conductivité thermique : 2.5 W/m.k

### QPAD III

Remplacement de graisse à trame fibre de verre  
Non isolant électrique  
Conducteur thermique  
Performance thermique en fonction de la pression  
Epaisseur : 0.152 mm  
Conductivité thermique : 2.0 W/m.k



### HI FLOW 105

Remplacement de graisse  
Substrat aluminium revetu de materiaux a  
changement de phase sur les deux faces  
Conductivite thermique : 0.9 W/m-K  
Epaisseur 0.139 mm  
Temperature d'utilisation: 130°C continu  
Changement de phase : 65°C

### HI FLOW 300P-1.5

Substrat polyamide revetu de materiaux a  
changement de phase sur les deux faces  
Isolant electrique 5 KV  
Conductivite thermique : 1.6 W/m-K  
Epaisseur 0.1143 mm  
Temperature d'utilisation: 150°C continu  
Changement de phase : 55°C

### GAP FILLER 1000

Produit de remplissage conducteur thermique  
Isolant electrique  
Conductivité thermique : 1.0 W/m-K  
Temperature d'utilisation : -60/+175°C

### BOND PLY 100

Adhesif double face conducteur thermique  
Isolant electrique  
Epaisseur : 0.127mm à 0.179mm  
Conductivite thermique : 0.8 W/m-K  
Temperature d'utilisation : -30/+120°C

### GAP PAD ULTRA SOFT

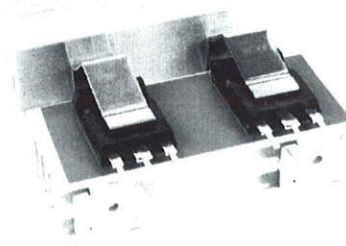
Joint conducteur thermique  
Isolant electrique  
Epaisseur : 0.5 à 6.35 mm  
Conductivité thermique : 1.0 W/m-K  
Temperature d'utilisation : -60/+200°C  
Absorbion des chocs et des vibrations

### GAP PAD 2500S20

Joint conducteur thermique  
Isolant electrique  
Epaisseur : 0.254 à 3.1 mm  
Conductivité thermique : 2.4 W/m-K  
Temperature d'utilisation : -60/+200°C  
Absorbion des chocs et des vibrations  
Produit mou qui limite les resistances de contact

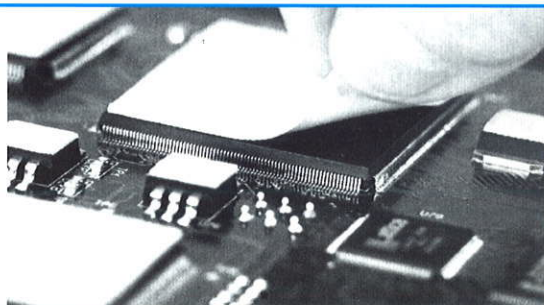
### HI FLOW 225-AC

Remplacement de graisse  
Substrat aluminium revetu de materiaux a changement de  
phase sur les deux faces  
Conductivite thermique : 1.0 W/m-K  
Epaisseur 0.102 mm  
Temperature d'utilisation: 120°C continu  
Changement de phase : 55°C



### GAP FILLER 2000

Produit de remplissage conducteur thermique  
Isolant electrique  
Conductivité thermique : 2.0 W/m-K  
Temperature d'utilisation : -60/+200°C



### GAP PAD 2000S40

Joint conducteur thermique  
Isolant electrique  
Epaisseur : 0.5 à 3.1mm  
Conductivité thermique : 2.0 W/m-K  
Temperature d'utilisation : -60/+200°C  
Absorbion des chocs et des vibrations

### GAP PAD 3000S30

Joint conducteur thermique  
Isolant electrique  
Epaisseur : 0.254 à 3.1 mm  
Conductivité thermique : 3.0 W/m-K  
Temperature d'utilisation : -60/+200°C  
Absorbion des chocs et des vibrations  
Produit mou qui limite les resistances de contact

| CARACTERISTIQUES<br>DES MATERIAUX | SIL PAD<br>400     | SIL<br>PAD<br>800  | SIL<br>PAD<br>900  | SIL<br>PAD<br>1500ST | SIL<br>PAD<br>A2000 | SIL PAD<br>K4 | SIL PAD<br>K10 | QPAD II        | QPAD III          | HI<br>FLOW<br>105 | HI<br>FLOW<br>225<br>FAC | HI<br>FLOW<br>300P-<br>1,5 | GAP PAD<br>ULTRA<br>SOFT | GAP PAD<br>2000 S40 | GAP<br>PAD<br>2500<br>S20 | GAP<br>PAD<br>3000<br>S30 | GAP<br>FILLE<br>R 1000 | GAP<br>FILLER<br>2000 | BOND<br>PLY<br>100 | TIC<br>1000A |
|-----------------------------------|--------------------|--------------------|--------------------|----------------------|---------------------|---------------|----------------|----------------|-------------------|-------------------|--------------------------|----------------------------|--------------------------|---------------------|---------------------------|---------------------------|------------------------|-----------------------|--------------------|--------------|
| Couleur                           | gris               | or                 | rose               | bleu                 | blanc               | gris          | jaune          | noir           | noir              | gris<br>noir      | noir                     | vert                       | mauve                    | gris                | jaune<br>clair            | bleu<br>clair             | gris<br>blanc          | rose<br>blanc         | blanc              | gris         |
| Construction                      | silicone/fi<br>bre | silicone/<br>fibre | silicone/<br>fibre | silicone/<br>fibre   | silicone/<br>fibre  | kapton        | kapton         | alu            | Fibre de<br>verre | alu               | alu                      | polyami<br>de              | sil pad                  | sil pad             | sil pad                   | sil pad                   | -                      | -                     | silicone/<br>fibre | -            |
| Epaisseur                         | 0,18<br>0,229      | 0,127              | 0,229              | 0,203                | 0,381<br>0,508      | 0,152         | 0,127          | 0,152          | 0,127             | 0,139             | 0,102                    | 0,102<br>0,127             | 0,508<br>6,350           | 0,508<br>3,175      | 0,254<br>3,175            | 0,254<br>3,175            | -                      | -                     | 0,127<br>0,279     | -            |
| Conductivite thermique<br>W/m.k   | 0,9                | 1,6                | 1,6                | 1,8                  | 3                   | 0,9           | 1,3            | 2,5            | 2                 | 0,9               | 1                        | 1,6                        | 1                        | 2                   | 2,4                       | 3                         | 1                      | 2                     | 0,8                | 1,5          |
| Tension de rupture                | 3500               | 1700               | 5500               | 3000                 | 4000                | 6000          | 6000           | non<br>isolant | non<br>isolant    | -                 | -                        | 5000                       | 6000                     | 13,4<br>Kvac/mm     | 3000                      | 2500                      | 500                    | -                     | 3000<br>6000       | -            |
| temp. En regime<br>continu        | -60<br>+180        | -60<br>+180        | -60<br>+180        | -60<br>+180          | -60<br>+200         | -60<br>+180   | -20<br>+180    | -60<br>+180    | -60<br>+180       | 130               | 120                      | 150                        | -60<br>+200              | -60<br>+200         | -60<br>+200               | -60<br>+200               | -60<br>+180            | -60<br>+180           | -30<br>+120        | 150          |
| Dureté, Shore A                   | 85                 | 91                 | 92                 | 71                   | 90                  | 90            | 90             | 93             | 86                | -                 | -                        | -                          | 5                        | 35                  | 20                        | 55-30                     | -                      | -                     | -                  | -            |
| Resistance a la traction<br>(Mpa) | 20                 | 12                 | 9                  | 1,64                 | -                   | 34            | 34             | -              | -                 | -                 | -                        | 48                         | -                        | -                   | -                         | -                         | -                      | -                     | 6                  | -            |
| Elongation nominale               | 40                 | 20                 | 20                 | 22                   | -                   | 40            | 40             | -              | -                 | -                 | -                        | 40                         | -                        | -                   | -                         | -                         | -                      | -                     | 70                 | -            |
| constance dielectrique            | 5,5                | 6                  | 6                  | 6,1                  | 7                   | 5             | 3,7            | -              | -                 | -                 | -                        | 4,5                        | 5,5                      | 6                   | 6,6                       | 6                         | -                      | -                     | -                  | -            |



|                         |                                            | pression (psi) |      |      |      |      |
|-------------------------|--------------------------------------------|----------------|------|------|------|------|
|                         |                                            | 10             | 25   | 50   | 100  | 200  |
| <b>SILPAD 400</b>       | TO 220 Performance thermique (°C/W) 0,007  | 6,62           | 5,93 | 5,14 | 4,38 | 3,61 |
|                         | TO 220 Performance thermique (°C/W) 0,009  | 8,51           | 7,62 | 6,61 | 5,63 | 4,64 |
|                         | Impedance thermique (°C-in2/W) 0,007       | 1,82           | 1,42 | 1,13 | 0,82 | 0,54 |
|                         | Impedance thermique (°C-in2/W) 0,009       | 2,34           | 1,83 | 1,45 | 1,05 | 0,69 |
| <b>SILPAD 800</b>       | TO 220 Performance thermique (°C/W)        | 3,56           | 3,01 | 2,45 | 2,05 | 1,74 |
|                         | Impedance thermique (°C-in2/W)             | 0,92           | 0,6  | 0,45 | 0,36 | 0,29 |
| <b>SILPAD 900S</b>      | TO 220 Performance thermique (°C/W)        | 3,96           | 3,41 | 2,9  | 2,53 | 2,32 |
|                         | Impedance thermique (°C-in2/W)             | 0,95           | 0,75 | 0,61 | 0,47 | 0,41 |
| <b>SILPAD 1500ST</b>    | TO 220 Performance thermique (°C/W)        | 1,54           | 1,52 | 1,51 | 1,49 | 1,46 |
|                         | Impedance thermique (°C-in2/W)             | 0,37           | 0,28 | 0,23 | 0,21 | 0,2  |
| <b>SILPAD A2000</b>     | TO 220 Performance thermique (°C/W)        | 2,05           | 1,94 | 1,86 | 1,79 | 1,72 |
|                         | Impedance thermique (°C-in2/W)             | 0,53           | 0,4  | 0,32 | 0,28 | 0,26 |
| <b>SILPAD K4</b>        | TO 220 Performance thermique (°C/W)        | 3,66           | 3,43 | 3,13 | 2,74 | 2,42 |
|                         | Impedance thermique (°C-in2/W)             | 1,07           | 0,68 | 0,48 | 0,42 | 0,38 |
| <b>SILPAD K10</b>       | TO 220 Performance thermique (°C/W)        | 3,76           | 3,35 | 2,75 | 2,3  | 2,03 |
|                         | Impedance thermique (°C-in2/W)             | 0,86           | 0,56 | 0,41 | 0,29 | 0,24 |
| <b>Q-PAD II</b>         | TO 220 Performance thermique (°C/W)        | 2,44           | 1,73 | 1,23 | 1,05 | 0,92 |
|                         | Impedance thermique (°C-in2/W)             | 0,52           | 0,3  | 0,22 | 0,15 | 0,12 |
| <b>Q-PAD III</b>        | TO 220 Performance thermique (°C/W)        | 2,26           | 1,99 | 1,76 | 1,53 | 1,3  |
|                         | Impedance thermique (°C-in2/W)             | 0,65           | 0,48 | 0,35 | 0,24 | 0,16 |
| <b>HI FLOW 105</b>      | TO 220 Performance thermique (°C/W)        | 0,95           | 0,8  | 0,74 | 0,69 | 0,64 |
|                         | Impedance thermique (°C-in2/W)             | 0,39           | 0,37 | 0,36 | 0,33 | 0,3  |
| <b>HI FLOW 225 FAC</b>  | TO 220 Performance thermique (°C/W)        | 0,87           | 0,68 | 0,57 | 0,5  | 0,45 |
|                         | Impedance thermique (°C-in2/W)             | 0,12           | 0,1  | 0,09 | 0,08 | 0,07 |
| <b>HI FLOW 300P-1,5</b> | TO 220 Performance thermique (°C/W) 0,001  | 0,95           | 0,94 | 0,92 | 0,91 | 0,9  |
|                         | TO 220 Performance thermique (°C/W) 0,0015 | 1,19           | 1,17 | 1,16 | 1,14 | 1,12 |
|                         | TO 220 Performance thermique (°C/W) 0,002  | 1,38           | 1,37 | 1,35 | 1,33 | 1,32 |
|                         | Impedance thermique (°C-in2/W) 0,001       | 0,13           | 0,13 | 0,12 | 0,12 | 0,12 |
|                         | Impedance thermique (°C-in2/W) 0,0015      | 0,17           | 0,16 | 0,16 | 0,16 | 0,15 |
|                         | Impedance thermique (°C-in2/W) 0,002       | 0,19           | 0,19 | 0,19 | 0,18 | 0,18 |
| <b>TIC 1000 A</b>       | TO 220 Performance thermique (°C/W)        | 0,32           | 0,32 | 0,3  | 0,31 | 0,28 |

|                            |                                                                                                                                                                                                                                |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EN PLAQUE</b>           | SIL PAD : 300x300 mm<br>GAP PAD : 200 x 400 mm<br>HI FLOW : 300 x 300 mm<br>sauf HI FLOW 300 : 200 x 200 mm<br>QPAD : 300 x 300 mm<br>BOND PLY : 279 x 300 mm                                                                  |
| <b>EN ROULEAU</b>          | Définir la largeur<br>Longueur : 30 ou 100 mètres                                                                                                                                                                              |
| <b>EN BOÎTIER STANDARD</b> | Voir conditions standard jointes                                                                                                                                                                                               |
| <b>EN DÉCOUPE "CUSTOM"</b> | Fournir : <ul style="list-style-type: none"> <li>• nom du client</li> <li>• plan avec référence, indice</li> <li>• indiquer matériau et épaisseur</li> <li>• quantités annuelles</li> <li>• quantités par livraison</li> </ul> |

**Tolerances :**

Typical converting tolerances are held on length (L), width (W), hole diameter and hole location for most materials as noted below.

**TYPICAL SIL-PAD / HI FLOW TOLERANCES**

| Part Dimension | Length & width Tolerance | Hole Location & Diameter |
|----------------|--------------------------|--------------------------|
| < 6"           | ± 0,010"                 | ± 0,005"                 |
| 6" - 12"       | ± 0,015"                 | ± 0,010"                 |
| > 12"          | ± 0,020"                 | TBD                      |

**TYPICAL GAP PAD TOLERANCES**

| Material Thickness | Length & width Tolerance | Hole Location & Diameter |
|--------------------|--------------------------|--------------------------|
| 10 mil             | ± 0,015"                 | ± 0,015"                 |
| 15 mil             | ± 0,015"                 | ± 0,015"                 |
| 20 mil             | ± 0,020"                 | ± 0,020"                 |
| 40 mil             | ± 0,035"                 | ± 0,035"                 |
| 60 mil             | ± 0,050"                 | ± 0,050"                 |
| 80 mil             | ± 0,050"                 | ± 0,050"                 |
| 100 mil            | ± 0,060"                 | ± 0,060"                 |
| 125 mil            | ± 0,075"                 | ± 0,075"                 |
| 160 mil            | ± 0,100"                 | ± 0,100"                 |
| 200 mil            | ± 0,125"                 | ± 0,125"                 |
| 250 mil            | ± 0,160"                 | ± 0,160"                 |

Note : Dependent upon material and application requirements tighter tolerances may be possible and available. Please contact Bergquist. Sales for these requests and additional information regarding tolerances.



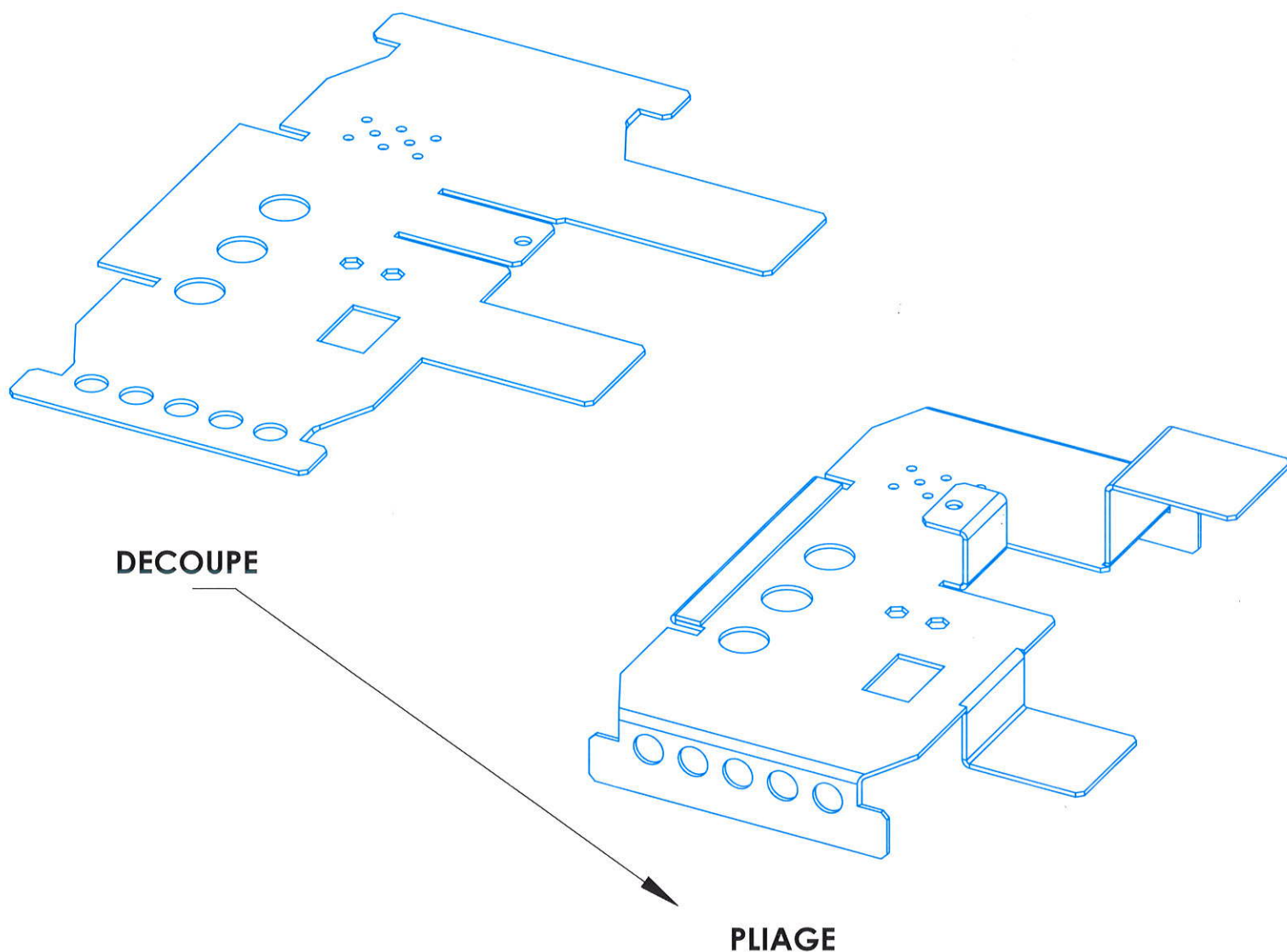
## Département tôlerie

*Forte de son expérience dans le domaine de l'habillage 19" pour l'électronique, la société SEEM-SEMRAC vous propose une activité en sous-traitant de tôlerie fine avec intégration d'ensemble.*

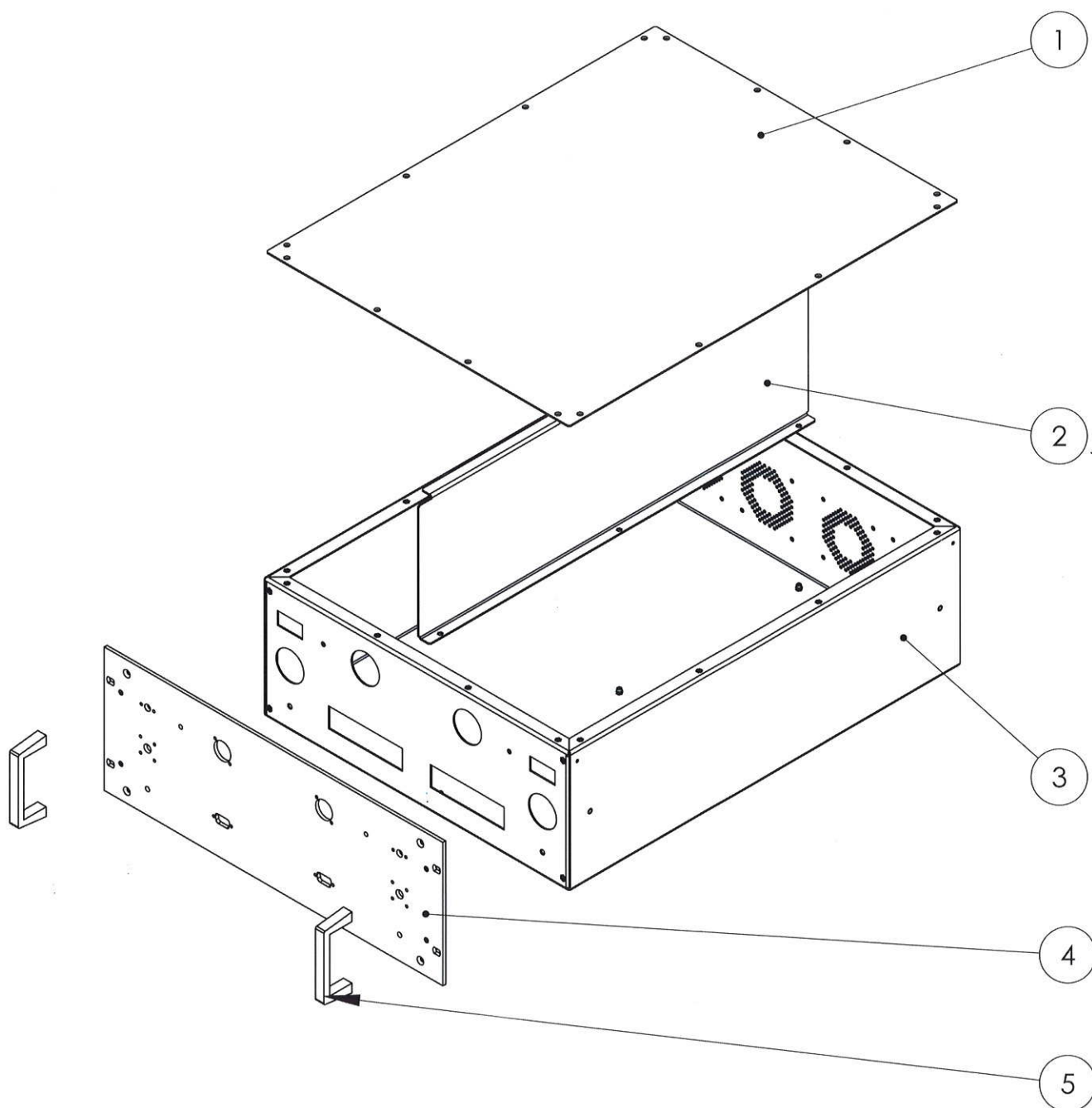
*Nous sommes en mesure de réaliser vos pièces suivant plan, à partir de tôles d'aluminium (5754H11), acier (brut, EZ, Al.Zg, Galvanisé) ou inox (430, 304, 304L, 316L) avec nos équipements de découpe (poinçonnage, laser), pliage, soudure (TIG, MIG, par points), sertissage, peinture, sérigraphie, et traitements suivant spécifications.*

*De plus, notre équipe technique peut vous apporter un soutien dans vos conceptions ou lors de vos développements de projets avec son équipement CAO 3D.*

*Notre équipe commerciale reste à votre disposition pour prendre en compte vos besoins et vous conseiller.*



## *Exemple de produit personnalisé*



1. Capot en inox 430 15/10°, avec fraisurages pour vis de fixation. Autres matières, épaisseurs et usinages personnalisés sur demande.
2. Exemple d'aménagement intérieur : cloison verticale en inox 430 15/10°.
3. Caisson en inox 430 15/10° avec retours soudés par points. Autres matières, épaisseurs et usinages personnalisés sur demande, possibilité de sertissage de colonnettes ou goujons pour fixation d'éléments internes, possibilité de marquage par sérigraphie de la face arrière.
4. Face avant en Alu. 5754H111 40/10° finition brossée oxydée. Autres épaisseurs et finitions sur demande (peinture, chromatisation, ...), possibilité de marquage par sérigraphie.
5. Exemple d'accessoires : poignées aluminium.



## EQUIPEMENTS DE PRODUCTION

- 3 Centres d'usinage STAMA MC 320 à palettisation - 12 outils  
cours : X = 500 ; Y = 300 ; Z = 450
- 1 Centre d'usinage DAHLIHC MCV 1450  
30 outils - cours : X = 1.450 ; Y = 750 ; Z = 750
- 1 Centre d'usinage STAMA MC 340 à palettisation - 40 outils  
cours : X = 800 ; Y = 550 ; Z = 550
- 1 Centre d'usinage FANUC Type M - 7 outils  
cours : X = 500 ; Y = 380 ; Z = 380
- 1 Centre d'usinage PILOTE à palettisation - 20 outils  
cours : X = 600 ; Y = 500 ; Z = 500
- 1 Centre d'usinage DMC à palettisation - 30 outils  
cours : X = 600 ; Y = 500 ; Z = 450
- 1 Etuve ARPIN L = 2 300 l = 1 000 h = 1 200 P = 15 KW
- 1 Machine à graver CNC GRAVOGRAPH
- 1 Monteuse automatique de goupilles sur dissipateurs
- 2 Presses 15 T ROUX
- 1 Presse 40 T BILLAUD
- 1 Presse 100 T SAHINLER
- 1 Chaîne automatique d'oxydation anodique noire ou incolore  
de l'aluminium. Dimension des bains : 2.000 x 1.000 x 500
- 3 Fraiseuses traditionnelles ERNAULT-SOMUA et ANAYAK
- 2 Perceuses numériques CINCINNATTI F30  
cours : X = 40 Y = 300 ; Z = 350
- 4 Tronçonneuses (EISELE, SAT, WINTER)
- 1 Atelier de sérigraphie/tampographie/étuves
- 2 Brosseuses et 2 tanks à ébavurer
- 3 Bancs de perçage/taraudage CINCINNATTI
- 1 Découpe Laser LCE 645 Puissance 1000 W
- 1 Fraiseuse à copier BRIDGESTONE
- 1 Ligne de déroulage/poinçonnage /pliage/soudure ABL/MIB
- 1 Machine à déposer les joints (ASYMPTEC)
- 1 Microbilleuse MATRASUR
- 1 Poinçonneuse 30 T - CN AMADA (VIPROS 255)
- 1 Poinçonneuse 30 T - CN AMADA (ARCAD 210)
- 2 Postes soudure MIG
- 2 Postes soudure TIG
- 1 Presse 30 T - ABL
- 2 Presses plieuses COLLY 50 T 2 m dont 1 à CN - 2 Axes
- 1 Presse plieuse CN 8 axes AMADA HFB 80 25 (80T 2,5 m)
- 1 Sertisseuse PEM
- 2 Soudeuses par points ARO
- 1 Soudeuse par points SOUDAX
- 1 Soudeuse ULTRASON MEGASONIC
- 1 Soudeuse goujons SIFI KESTO
- 1 Pont roulant 1,5 T. Chariots FENWICK

### MOYENS DE CONTROLE :

- 1 Banc de prééclage d'outils CNC ZOLLER
- 1 Machine de mesure tridimensionnelle BROWN & SHARPE
- Bancs d'essais thermiques, bancs de tests électriques.



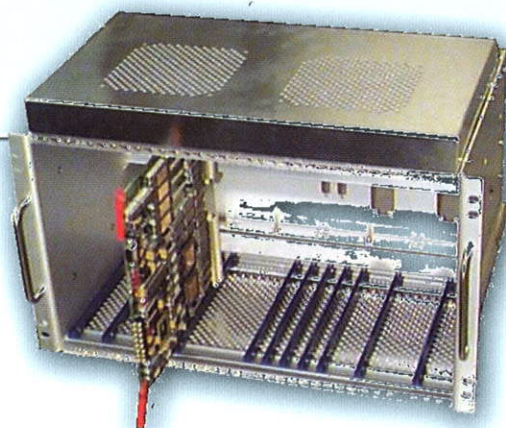
*Châssis électrique*



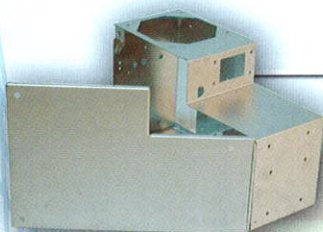
*Armoire*



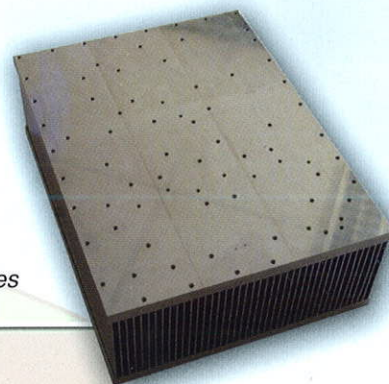
*Bac à carte*



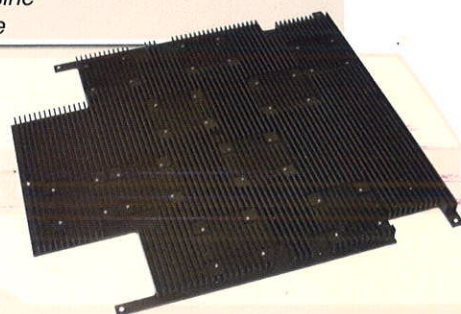
*Tôlerie spécifique*



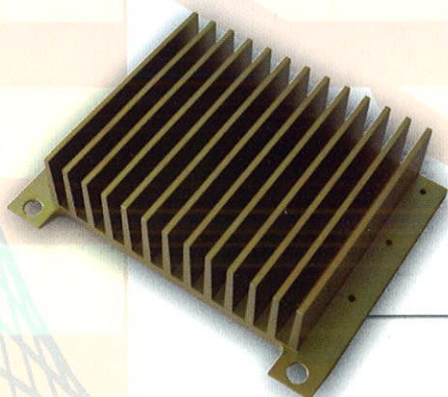
*Dissipateur ailettes  
insérées collées*



*Dissipateur usiné  
dans la masse*



*Dissipateur extrudé*





**Commercial & usine :**

Rue du 8 Mai 1945 - Z.I. de Saint Ulfrant - 27500 **PONT-AUDEMER**

Tél. : **02 32 56 79 70** - Fax : 02 32 56 79 81

E-mails : [dissipateurs@seem-semrac.com](mailto:dissipateurs@seem-semrac.com) • [rack@seem-semrac.com](mailto:rack@seem-semrac.com)

site : [www.seem-semrac.com](http://www.seem-semrac.com)

