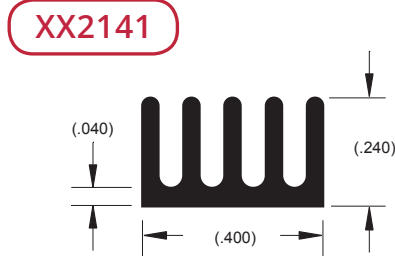
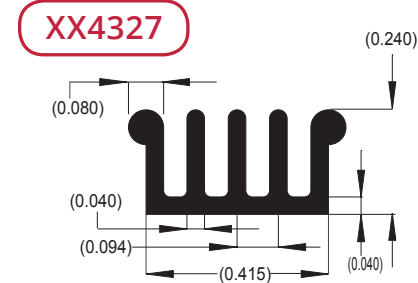


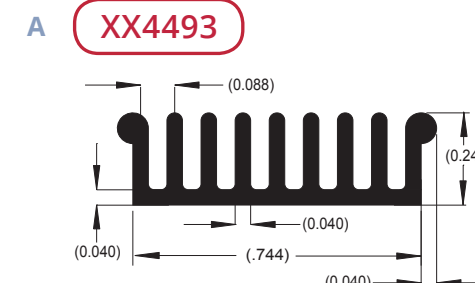
Per.	1.79	in.
WT.	0.04	lb/ft
θsa	42.00	°C/w/3"



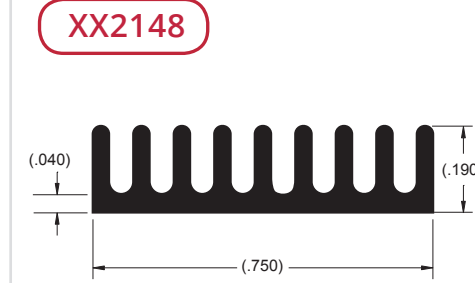
Per.	2.71	in.
WT.	0.06	lb/ft
θsa	20.30	°C/w/3"



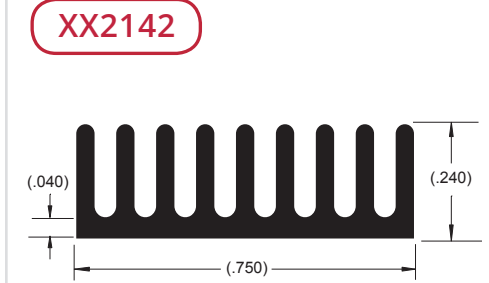
Per.	2.83	in.
WT.	0.07	lb/ft
θsa	26.00	°C/w/3"



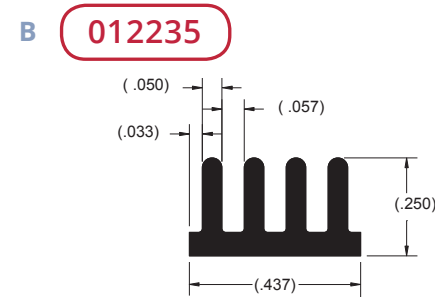
Per.	5.01	in.
WT.	0.13	lb/ft
θsa	18.00	°C/w/3"



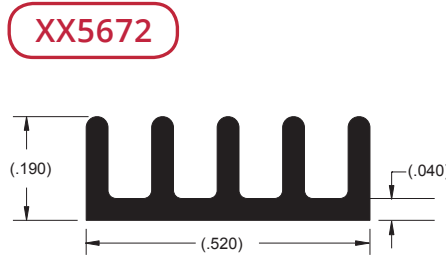
Per.	3.96	in.
WT.	0.09	lb/ft
θsa	7.00	°C/w/3"



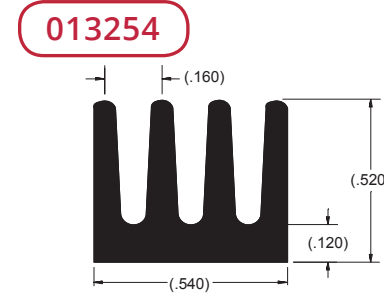
Per.	4.86	in.
WT.	0.11	lb/ft
θsa	8.20	°C/w/3"



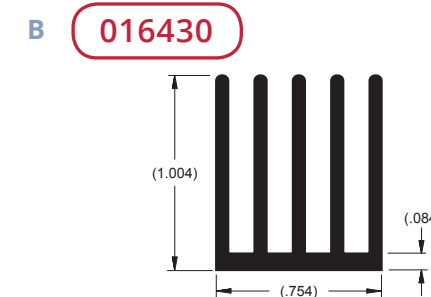
Per.	2.39	in.
WT.	0.07	lb/ft
θsa	29.16	°C/w/3"



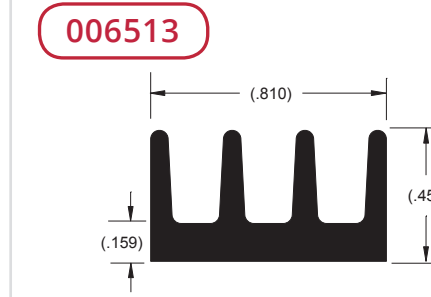
Per.	2.48	in.
WT.	0.06	lb/ft
θsa	28.50	°C/w/3"



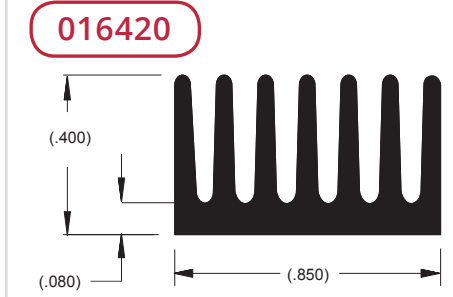
Per.	4.24	in.
WT.	0.21	lb/ft
θsa	14.00	°C/w/3"



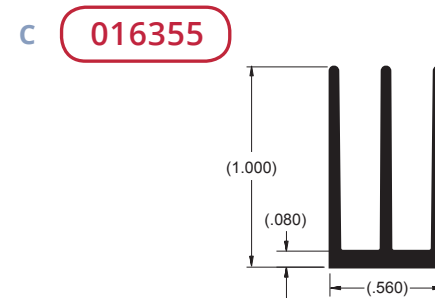
Per.	10.76	in.
WT.	0.37	lb/ft
θsa	7.90	°C/w/3"



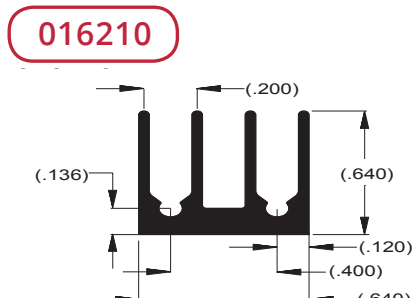
Per.	4.63	in.
WT.	0.24	lb/ft
θsa	15.10	°C/w/3"



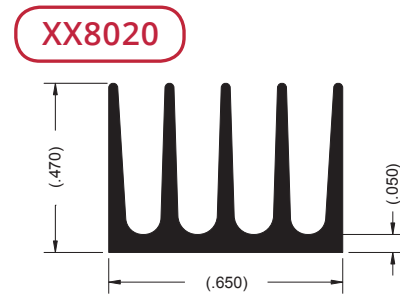
Per.	5.91	in.
WT.	0.24	lb/ft
θsa	12.50	°C/w/3"



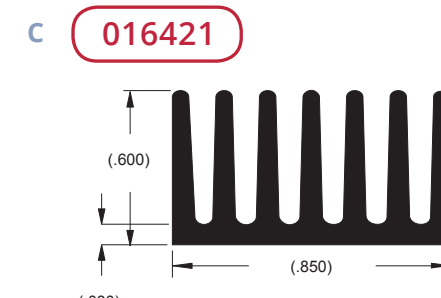
Per.	6.69	in.
WT.	0.20	lb/ft
θsa	9.50	°C/w/3"



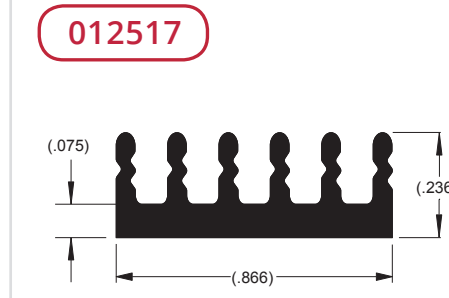
Per.	5.53	in.
WT.	0.20	lb/ft
θsa	11.10	°C/w/3"



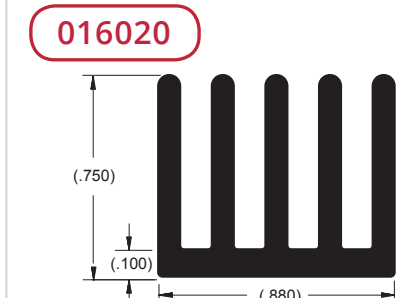
Per.	5.25	in.
WT.	0.14	lb/ft
θsa	12.00	°C/w/3"



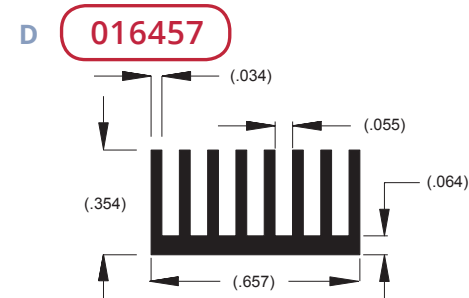
Per.	8.71	in.
WT.	0.34	lb/ft
θsa	9.70	°C/w/3"



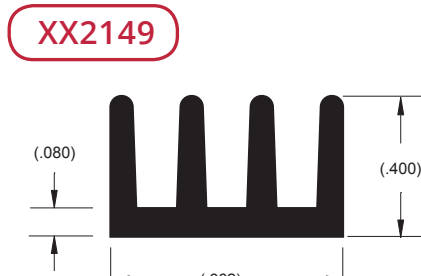
Per.	3.79	in.
WT.	0.13	lb/ft
θsa	17.10	°C/w/3"



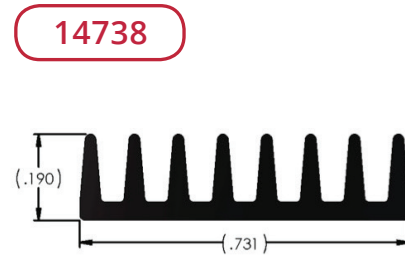
Per.	8.90	in.
WT.	0.41	lb/ft
θsa	8.40	°C/w/3"



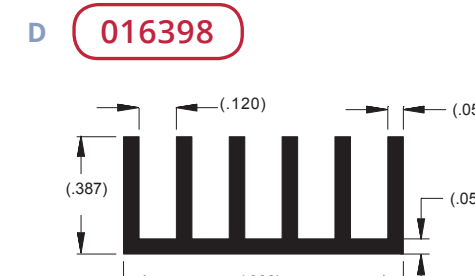
Per.	6.08	in.
WT.	0.15	lb/ft
θsa	15.80	°C/w/3"



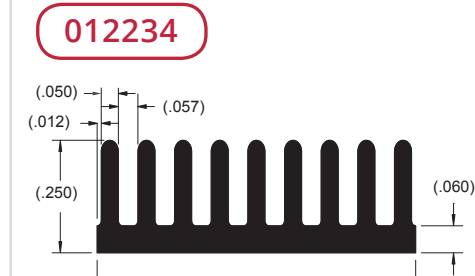
Per.	3.86	in.
WT.	0.14	lb/ft
θsa	8.80	°C/w/3"



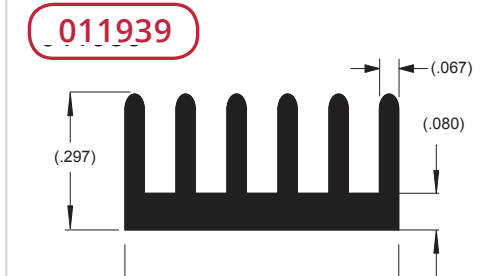
Per.	3.63	in.
WT.	0.08	lb/ft
θsa	19.29	°C/w/3"



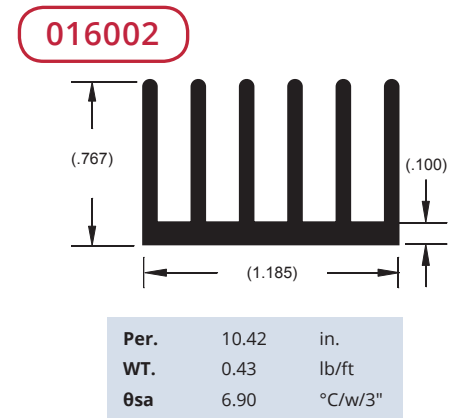
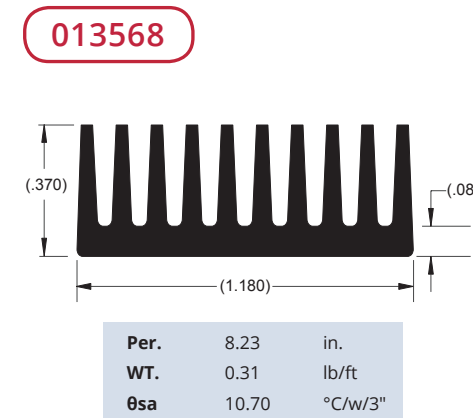
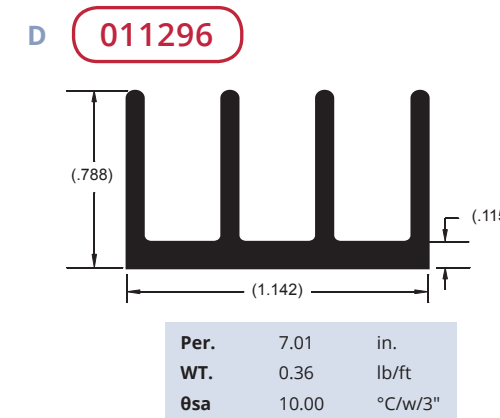
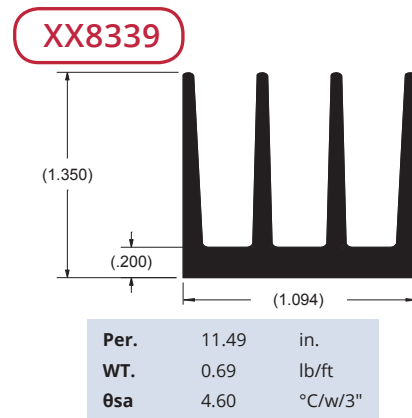
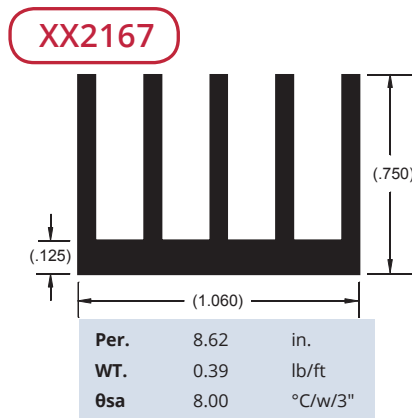
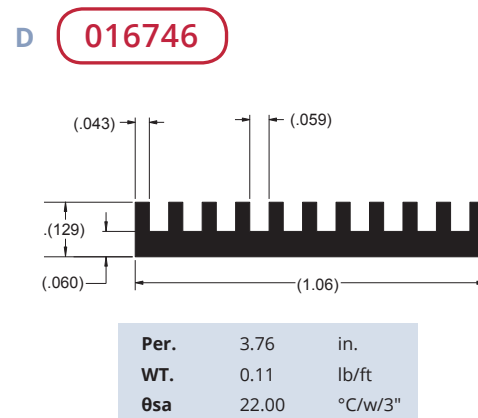
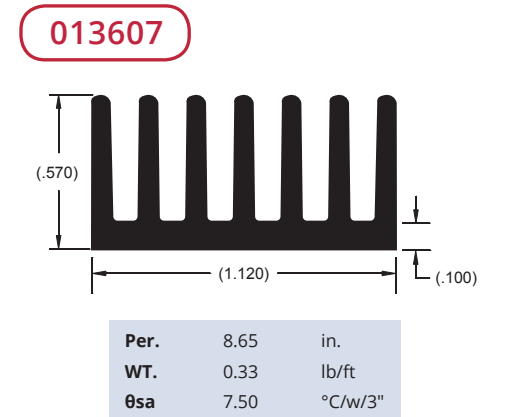
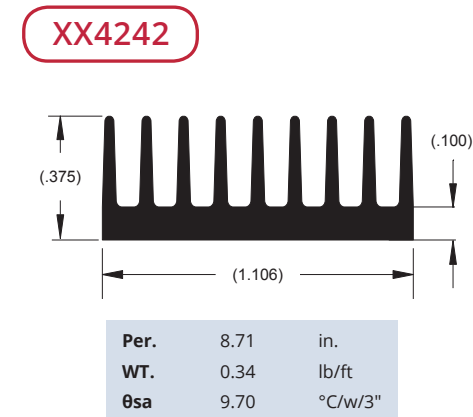
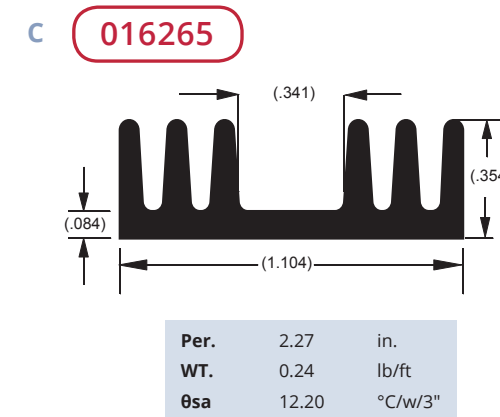
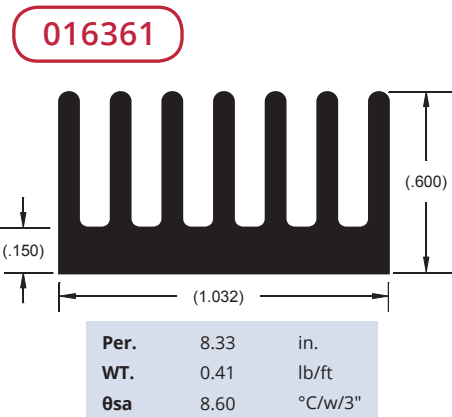
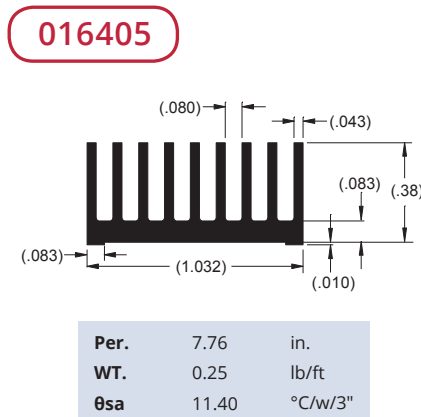
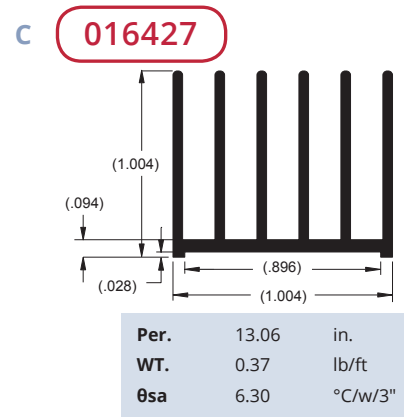
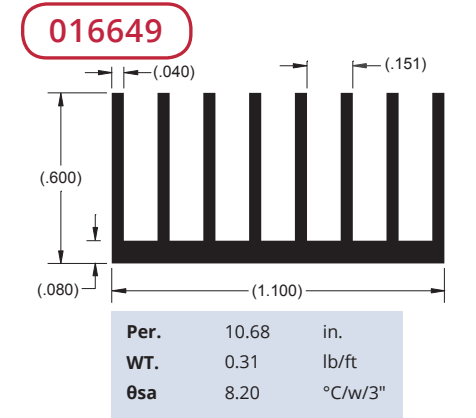
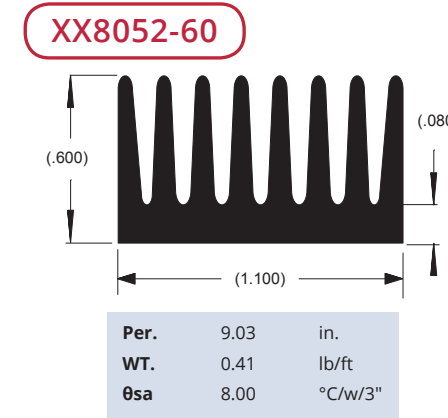
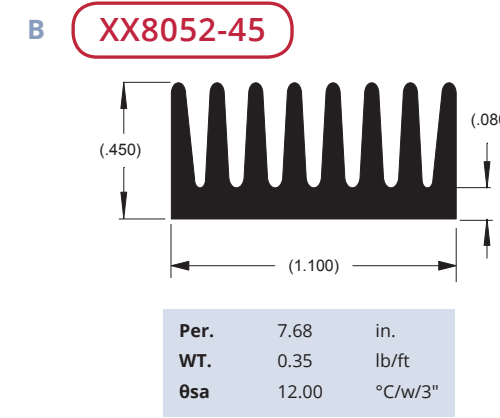
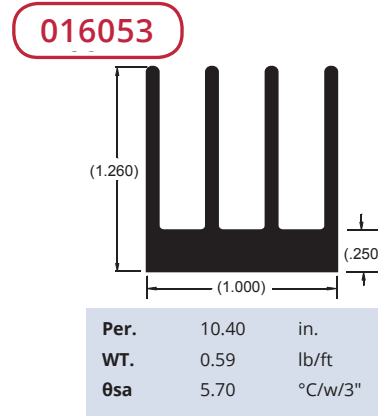
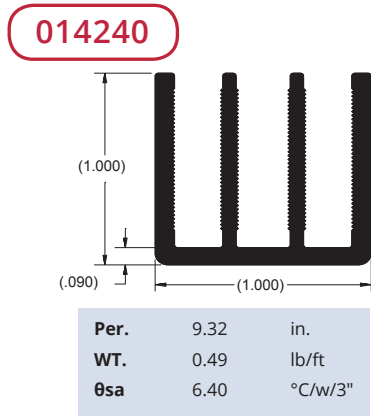
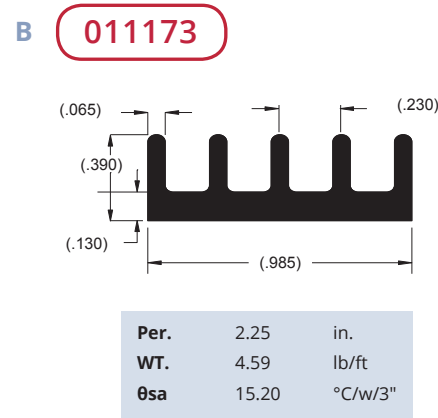
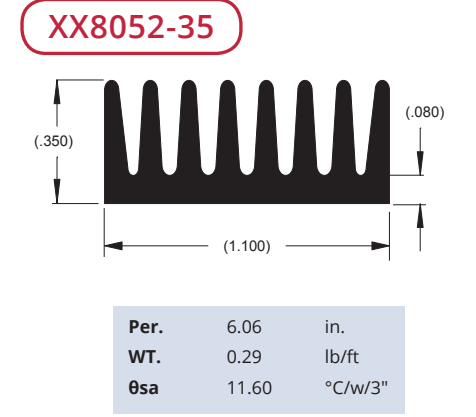
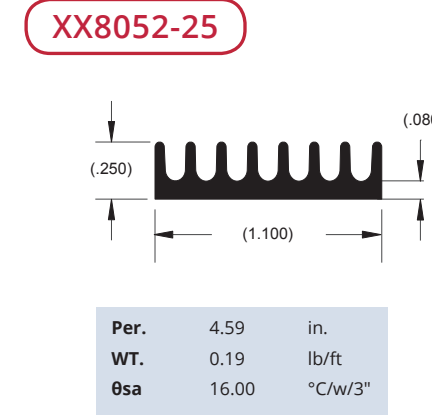
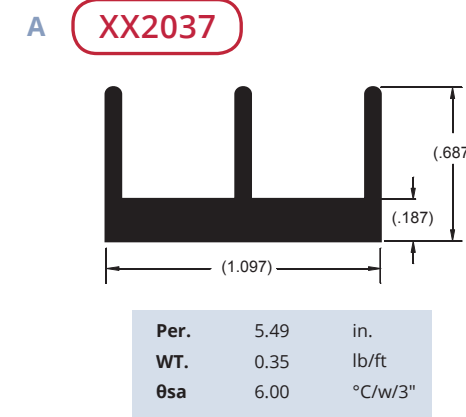
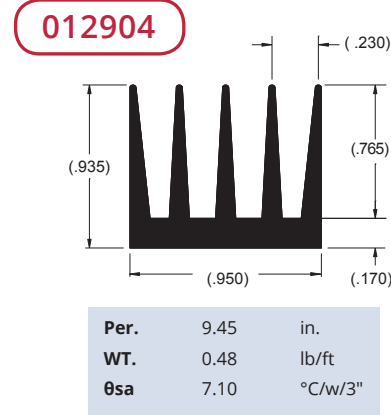
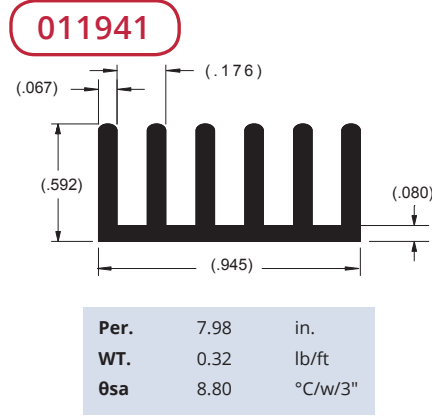
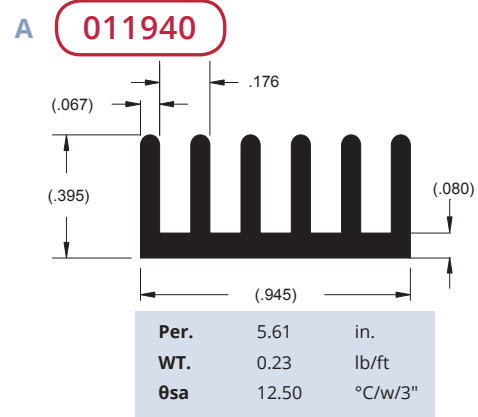
Per.	5.94	in.
WT.	0.18	lb/ft
θsa	12.30	°C/w/3"

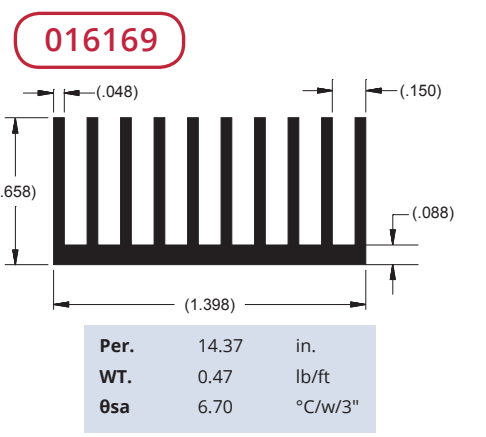
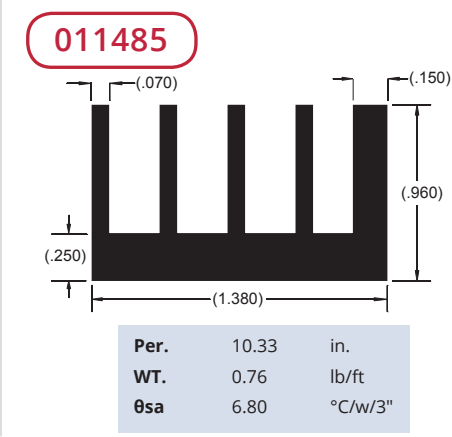
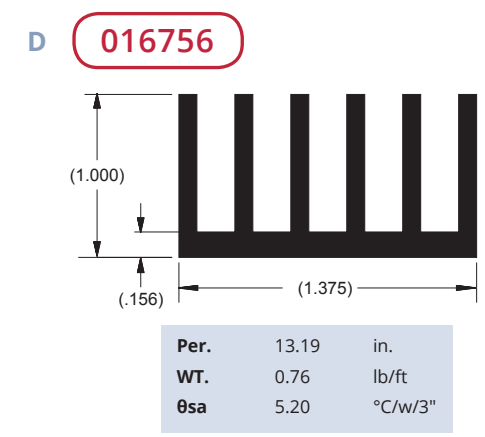
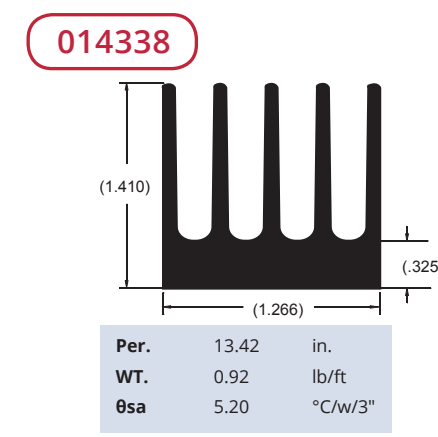
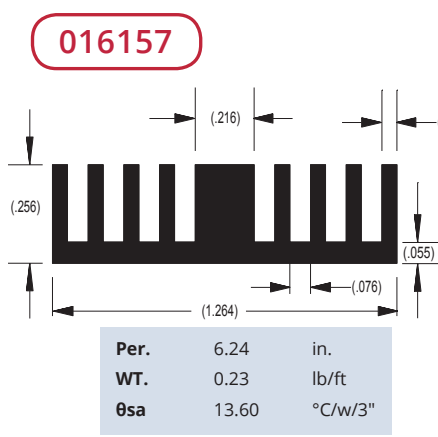
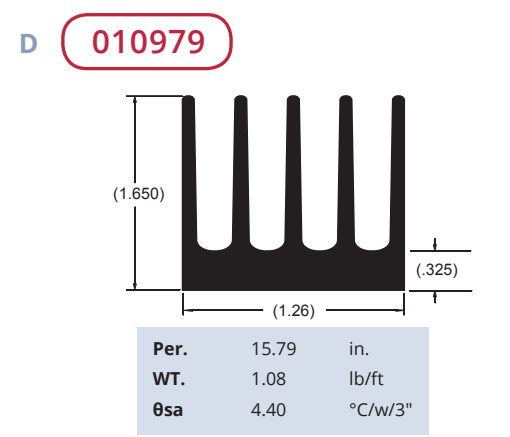
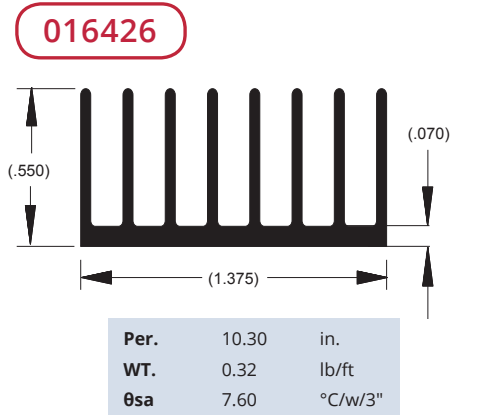
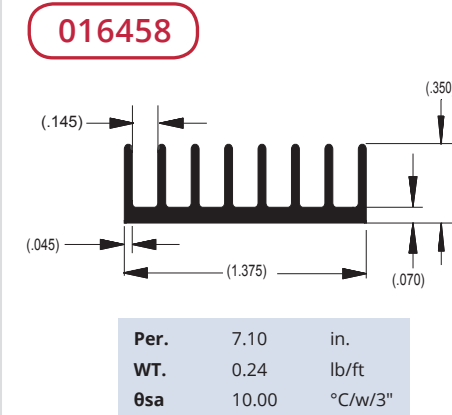
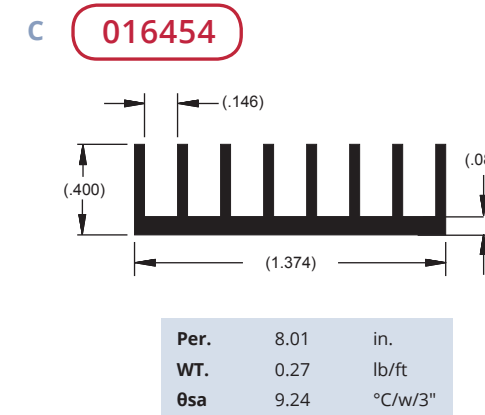
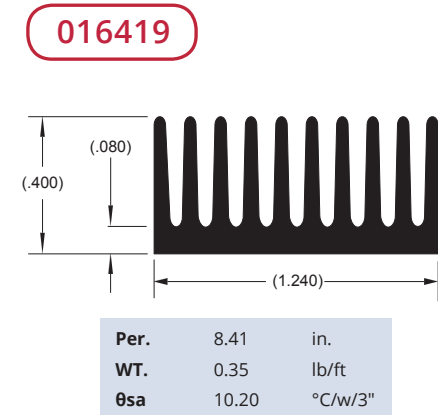
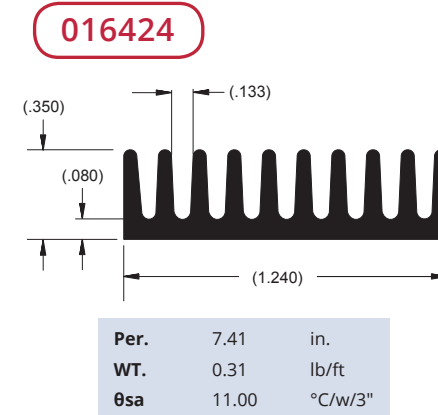
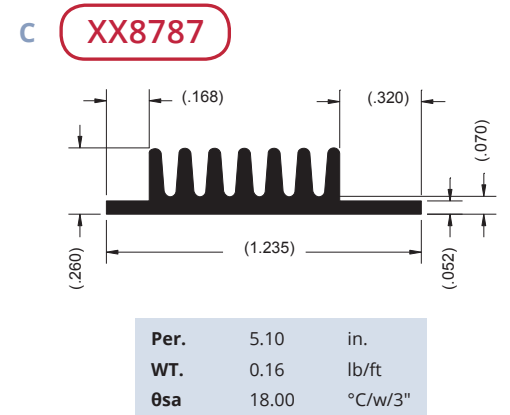
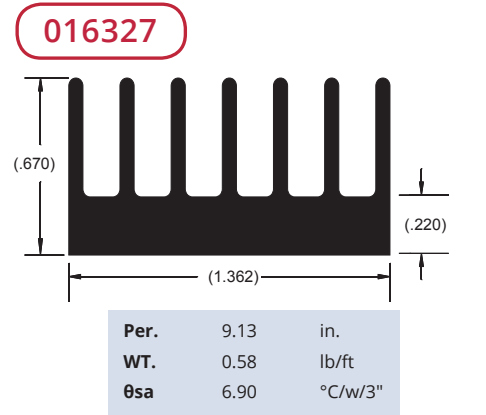
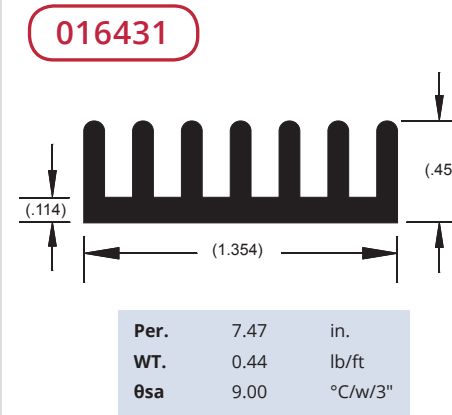
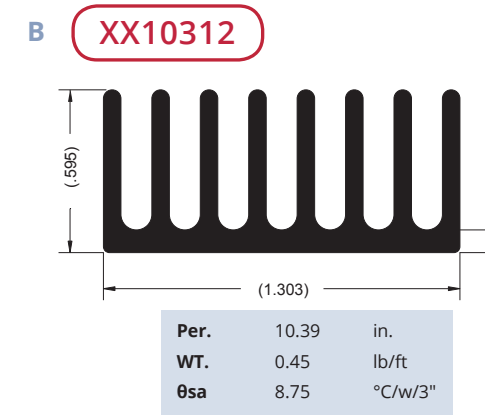
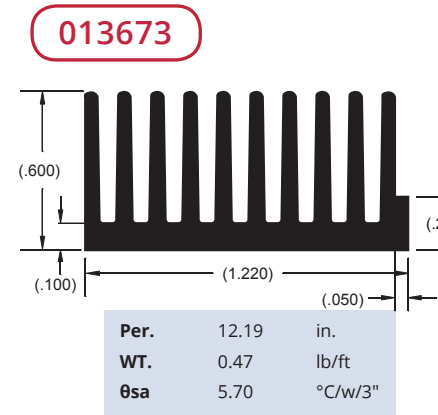
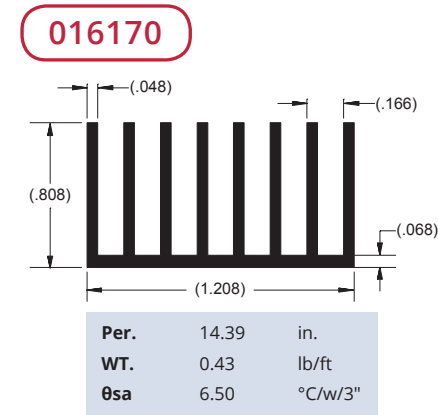
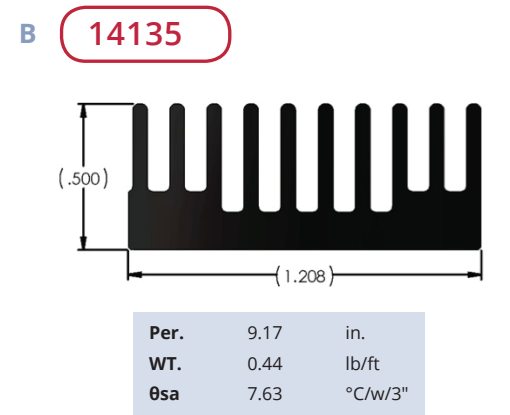
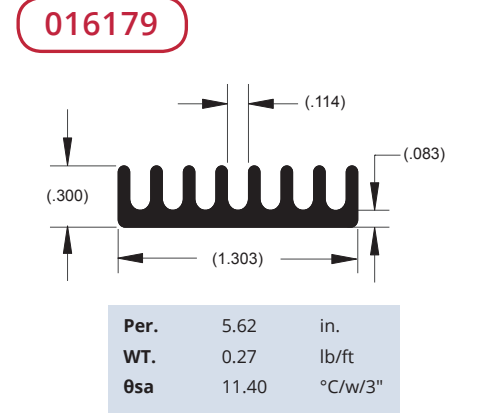
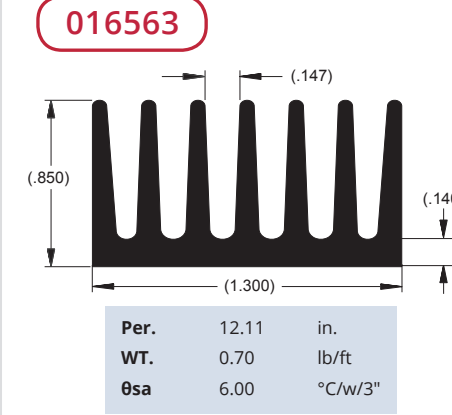
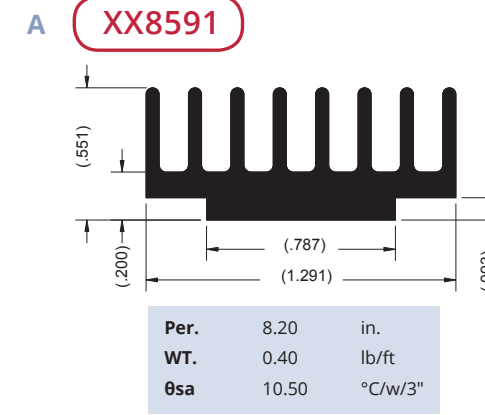
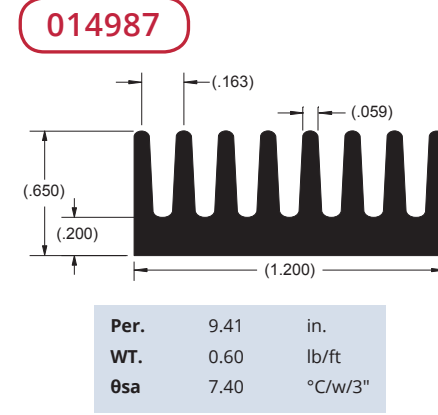
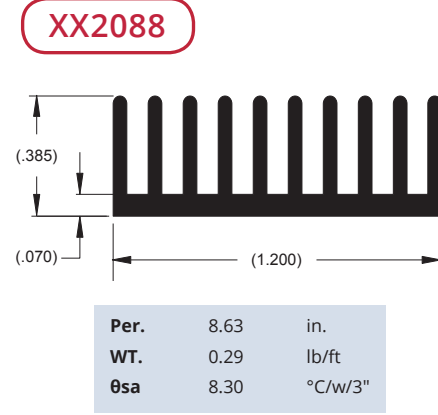
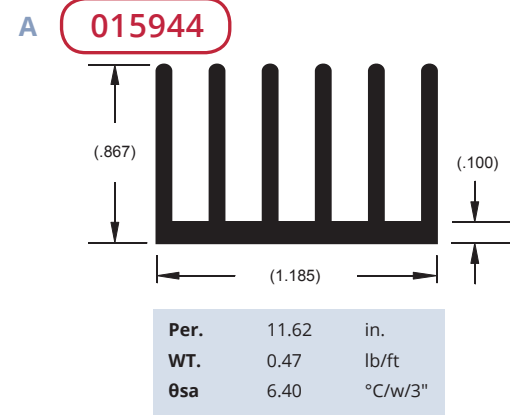


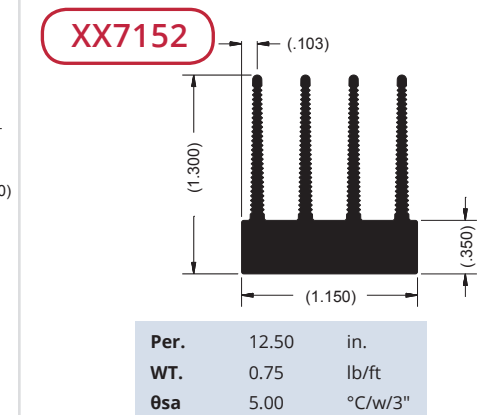
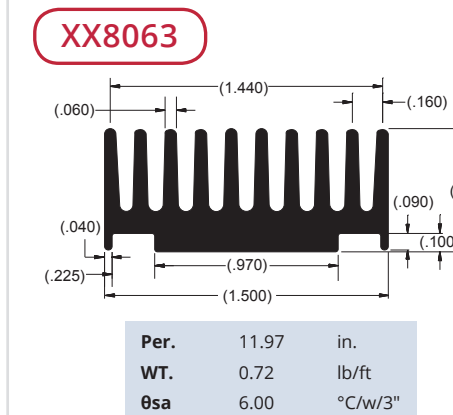
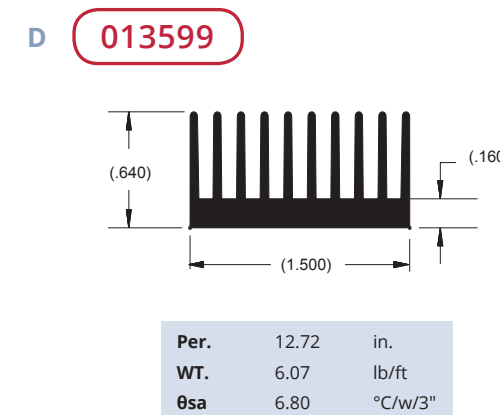
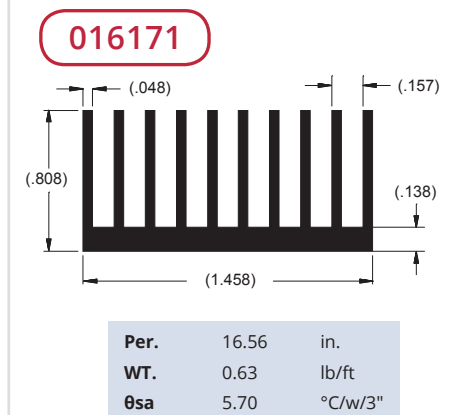
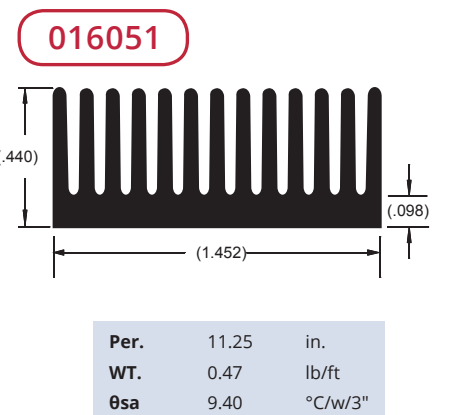
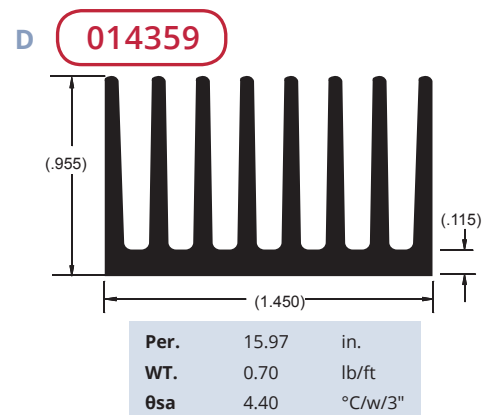
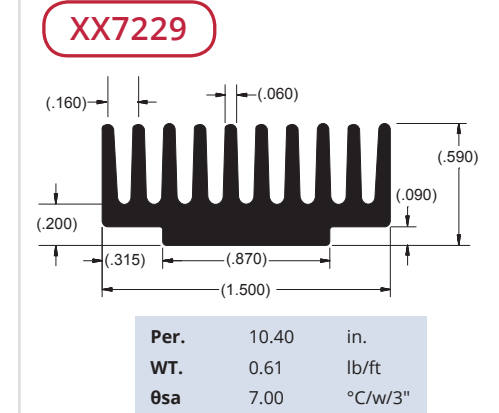
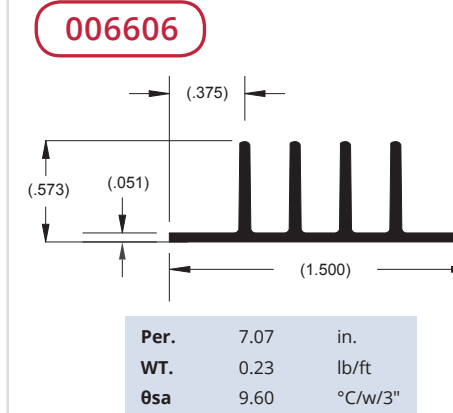
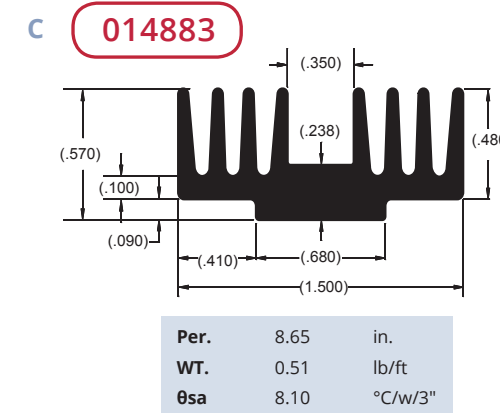
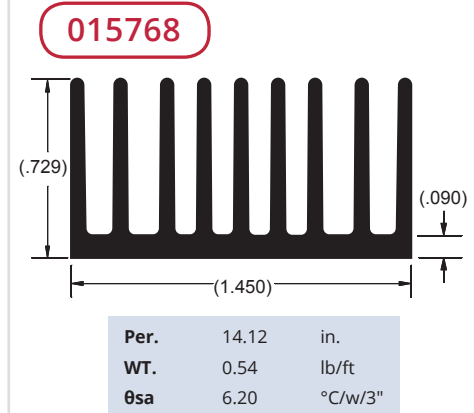
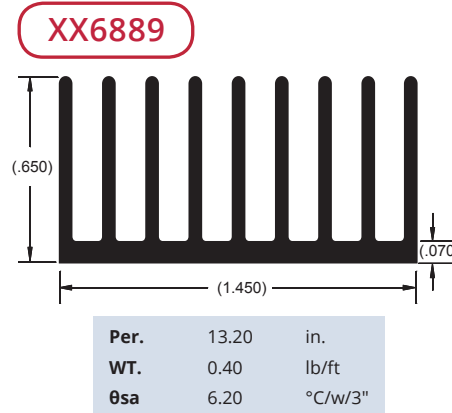
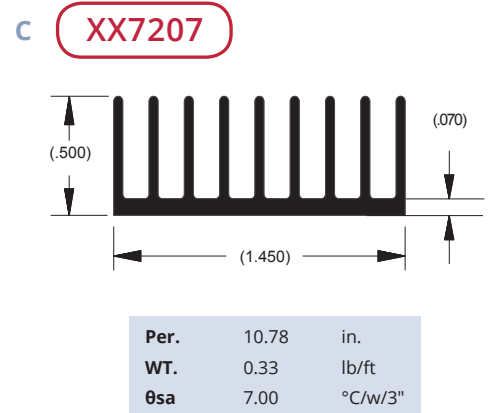
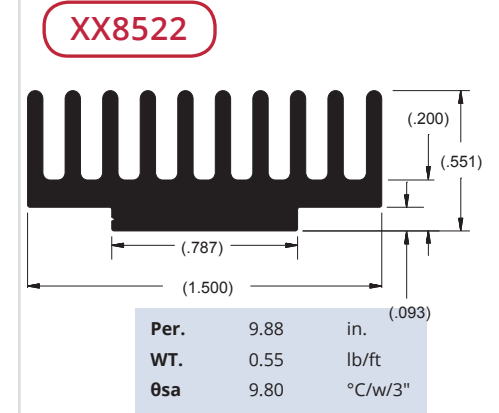
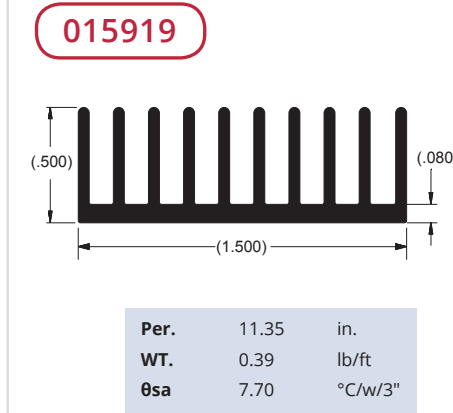
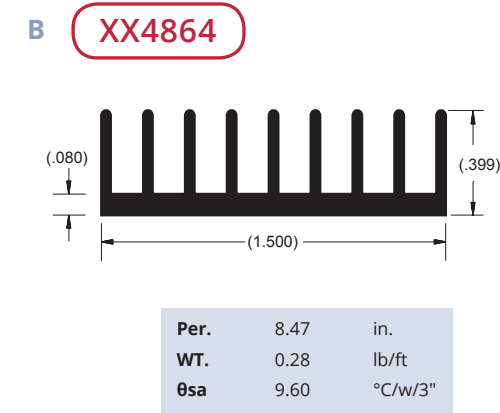
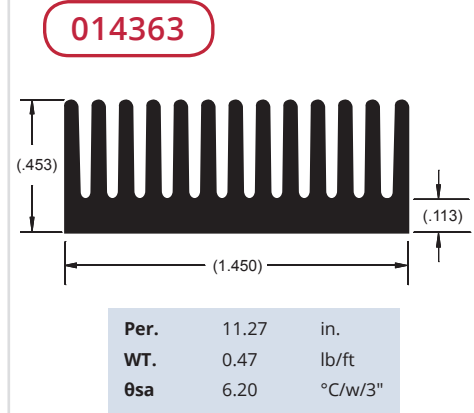
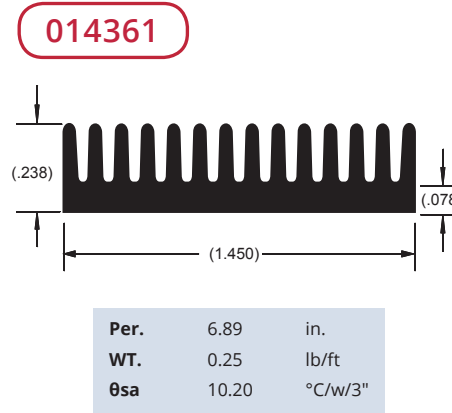
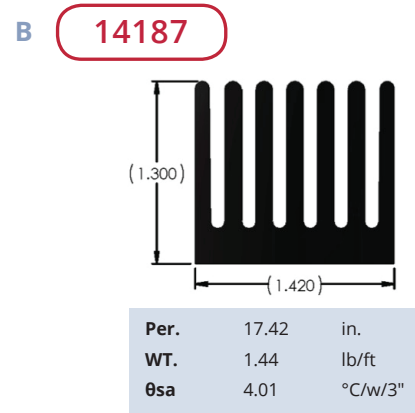
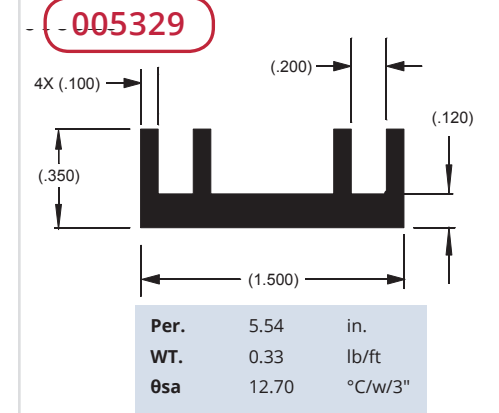
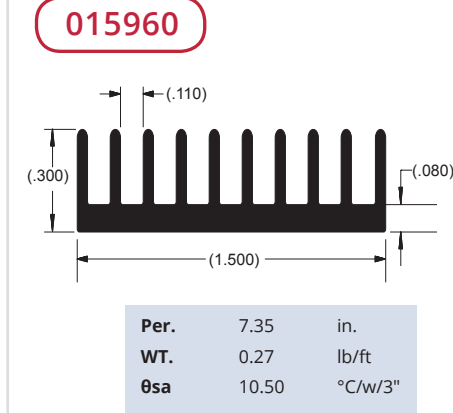
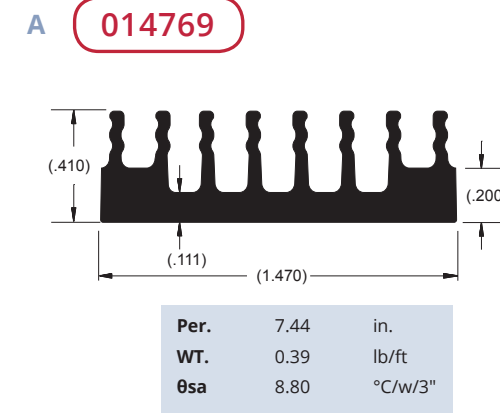
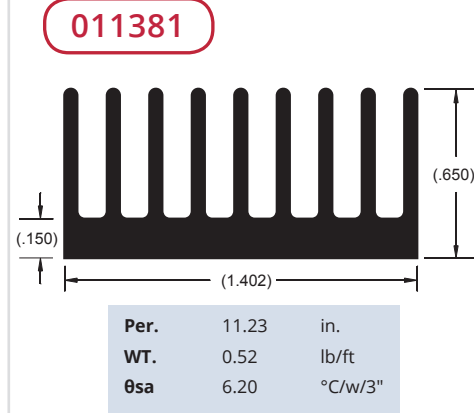
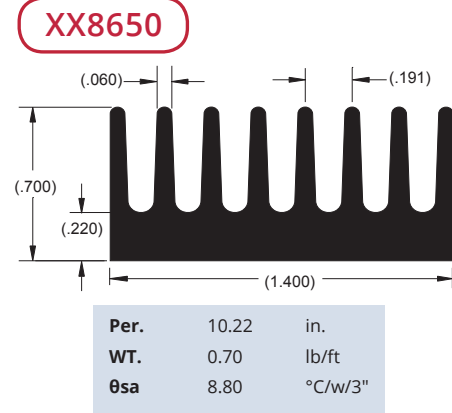
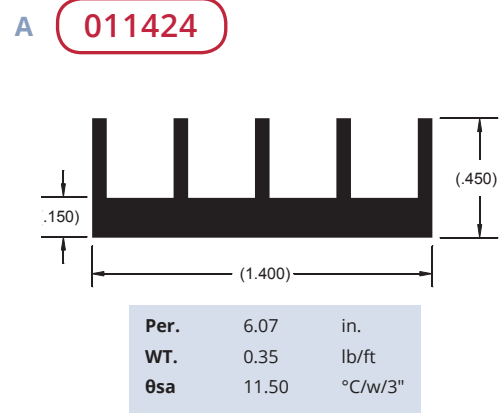
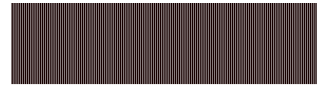
Per.	5.13	in.
WT.	0.16	lb/ft
θsa	13.64	°C/w/3"

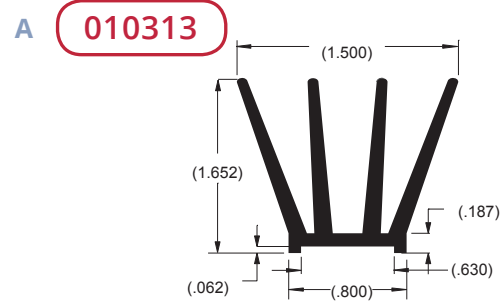


Per.	4.44	in.
WT.	0.19	lb/ft
θsa	15.60	°C/w/3"

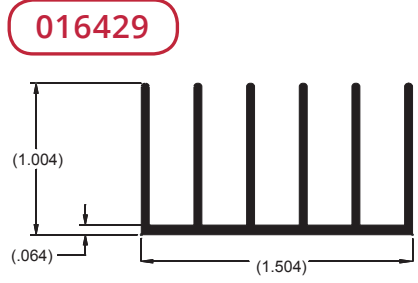




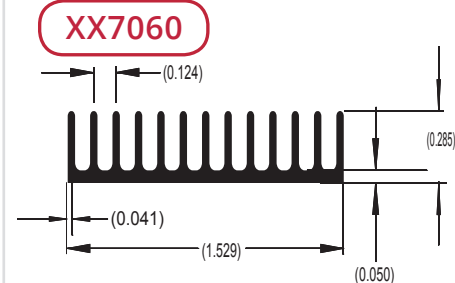




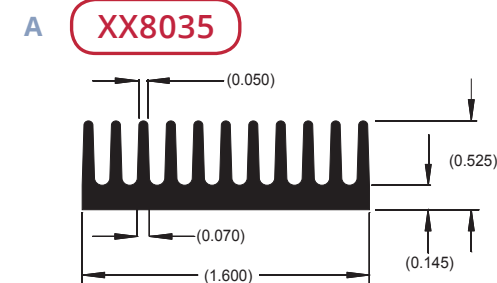
Per.	14.75	in.
WT.	0.84	lb/ft
θsa	4.70	°C/w/3"



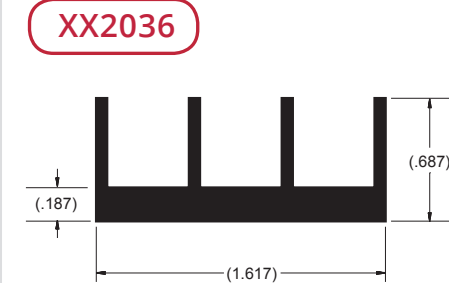
Per.	14.303	in.
WT.	0.412	lb/ft
θsa	4.90	°C/w/3"



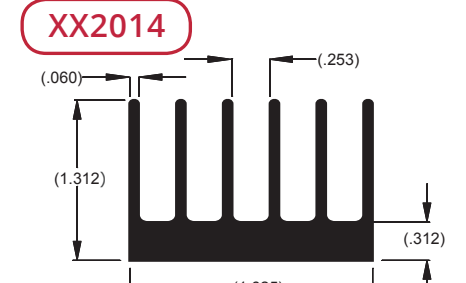
Per.	12.72	in.
WT.	0.61	lb/ft
θsa	14.00	°C/w/3"



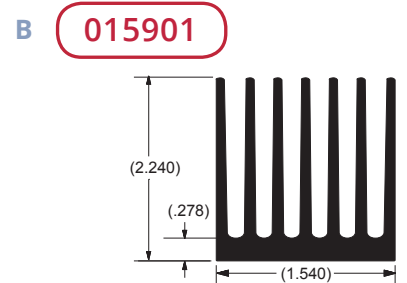
Per.	11.05	in.
WT.	0.58	lb/ft
θsa	7.00	°C/w/3"



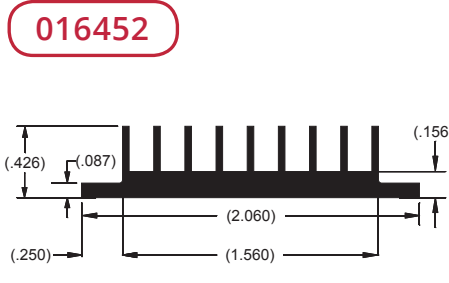
Per.	7.58	in.
WT.	0.51	lb/ft
θsa	4.90	°C/w/3"



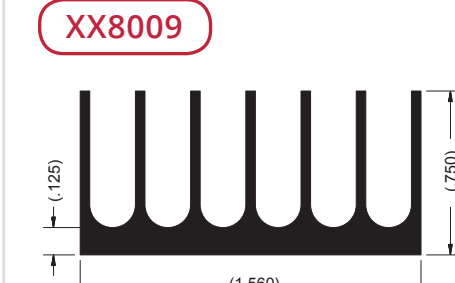
Per.	15.45	in.
WT.	1.05	lb/ft
θsa	3.20	°C/w/3"



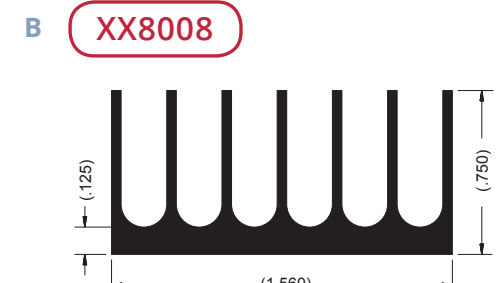
Per.	30.32	in.
WT.	1.93	lb/ft
θsa	3.30	°C/w/3"



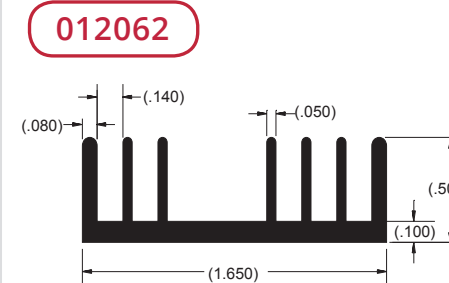
Per.	9.29	in.
WT.	0.46	lb/ft
θsa	8.10	°C/w/3"



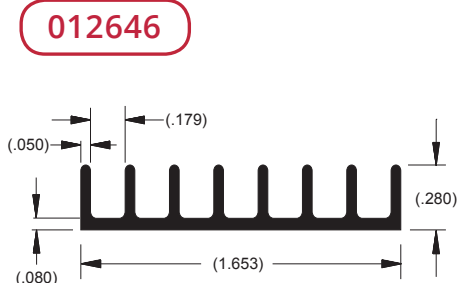
Per.	9.00	in.
WT.	0.53	lb/ft
θsa	5.50	°C/w/3"



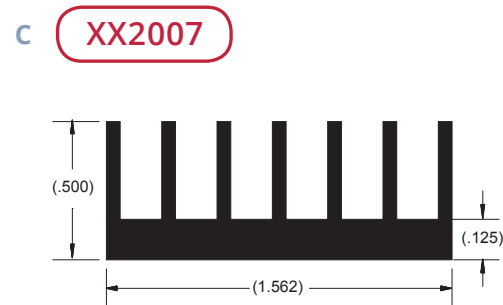
Per.	9.00	in.
WT.	0.53	lb/ft
θsa	5.50	°C/w/3"



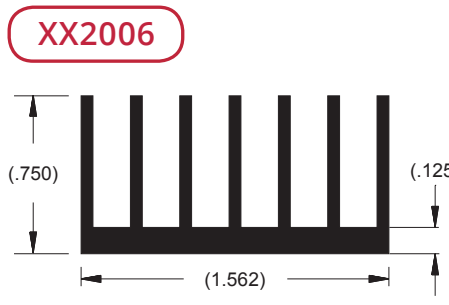
Per.	8.92	in.
WT.	0.39	lb/ft
θsa	7.80	°C/w/3"



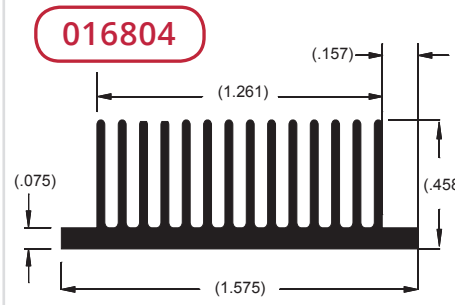
Per.	6.73	in.
WT.	0.20	lb/ft
θsa	10.40	°C/w/3"



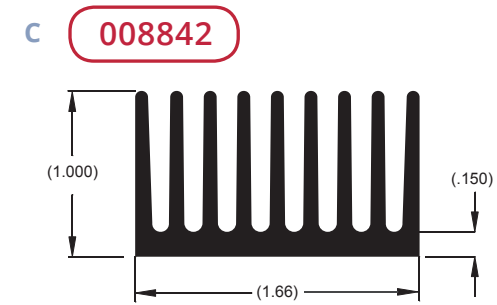
Per.	8.62	in.
WT.	0.43	lb/ft
θsa	8.00	°C/w/3"



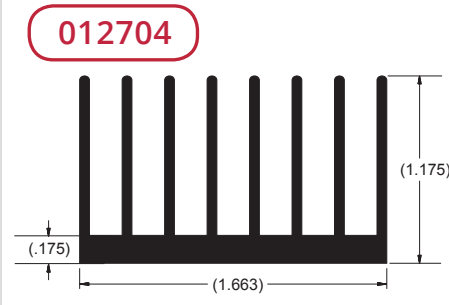
Per.	12.12	in.
WT.	0.57	lb/ft
θsa	5.40	°C/w/3"



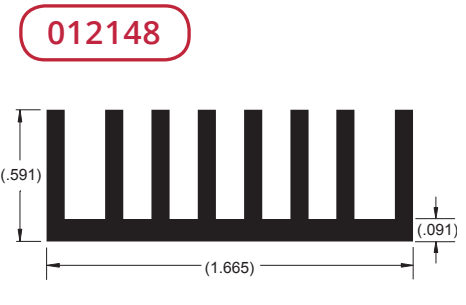
Per.	13.59	in.
WT.	0.36	lb/ft
θsa	9.80	°C/w/3"



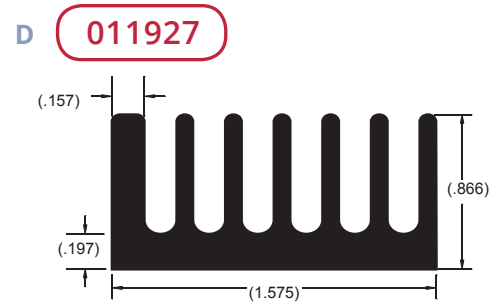
Per.	18.15	in.
WT.	1.03	lb/ft
θsa	4.90	°C/w/3"



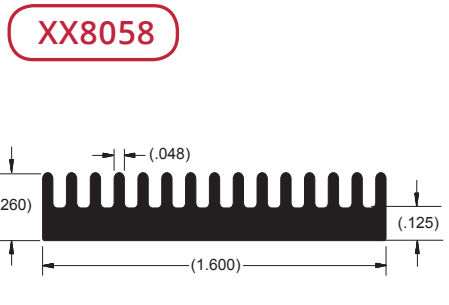
Per.	19.43	in.
WT.	0.83	lb/ft
θsa	3.60	°C/w/3"



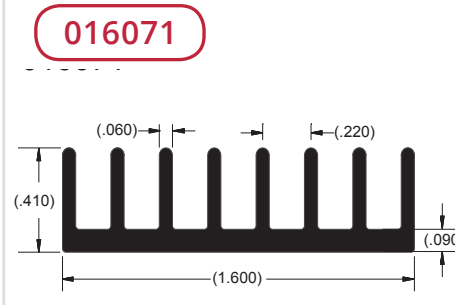
Per.	11.45	in.
WT.	0.51	lb/ft
θsa	6.10	°C/w/3"



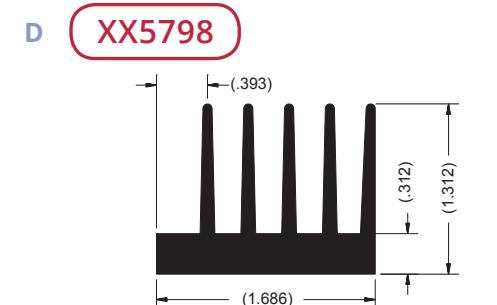
Per.	12.27	in.
WT.	0.87	lb/ft
θsa	5.70	°C/w/3"



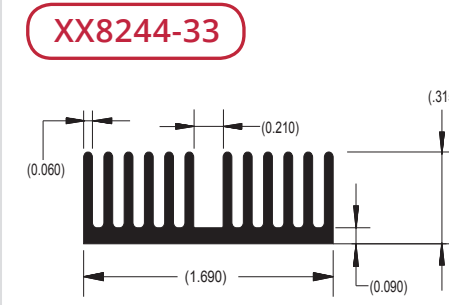
Per.	7.00	in.
WT.	0.34	lb/ft
θsa	14.00	°C/w/3"



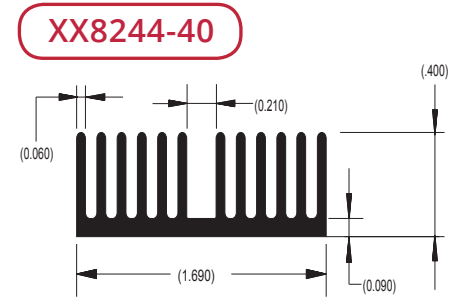
Per.	8.20	in.
WT.	0.36	lb/ft
θsa	8.30	°C/w/3"



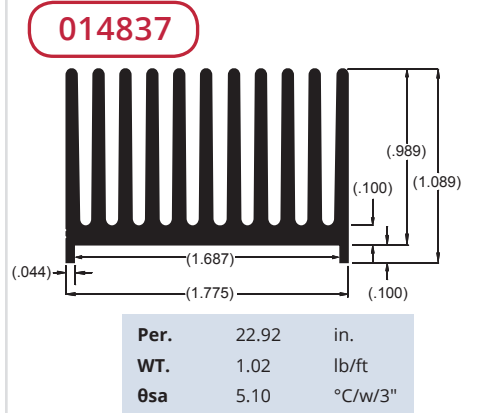
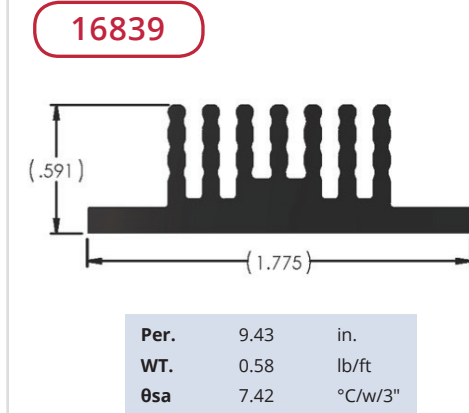
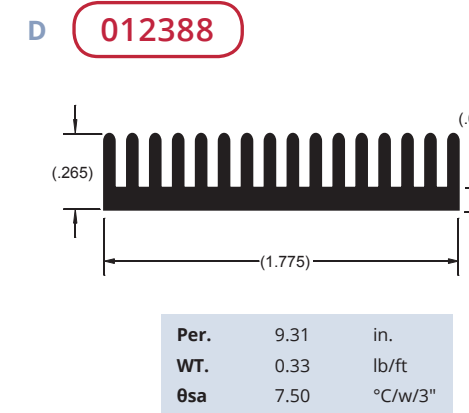
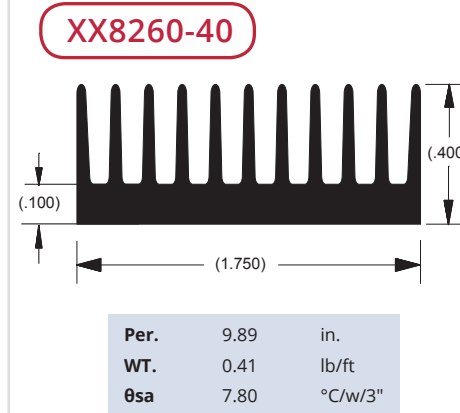
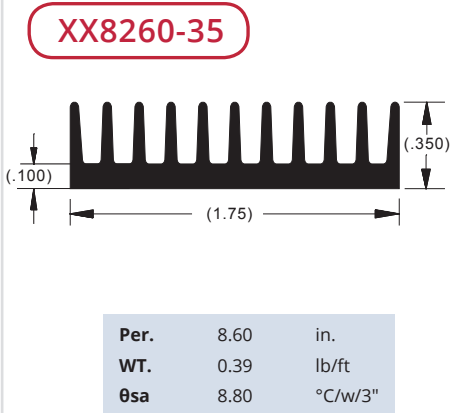
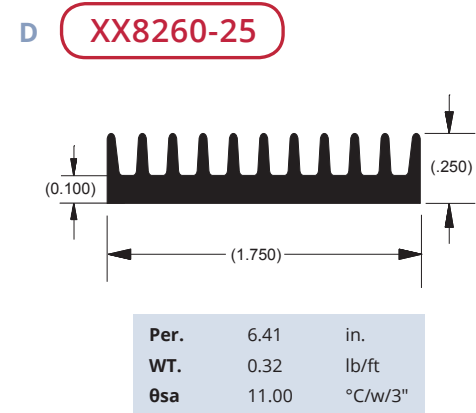
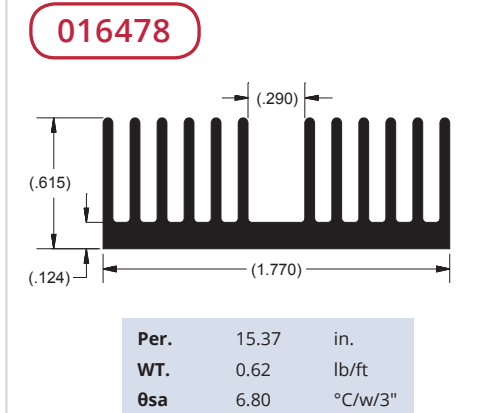
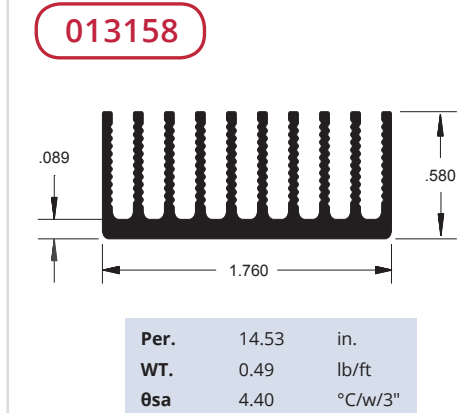
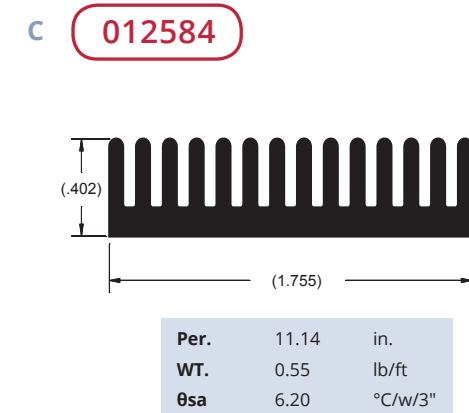
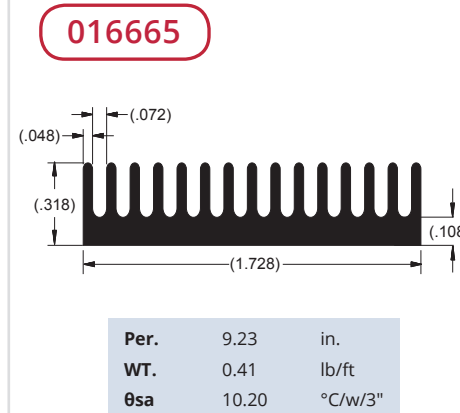
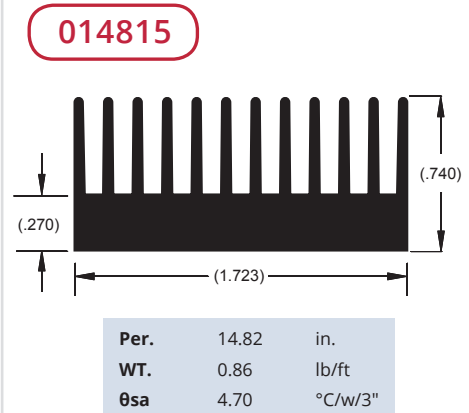
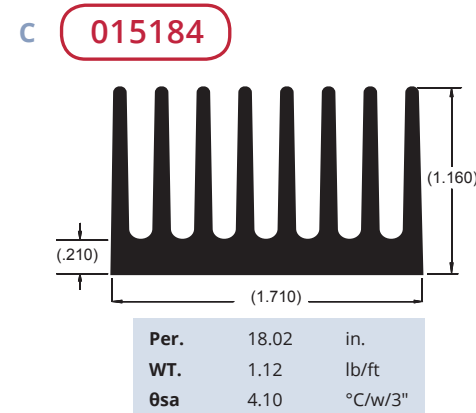
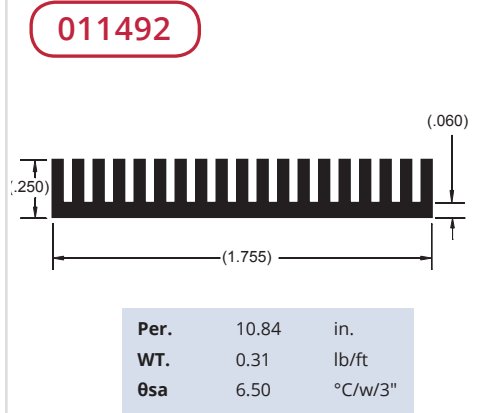
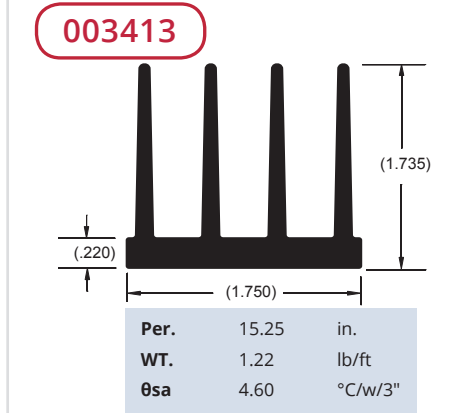
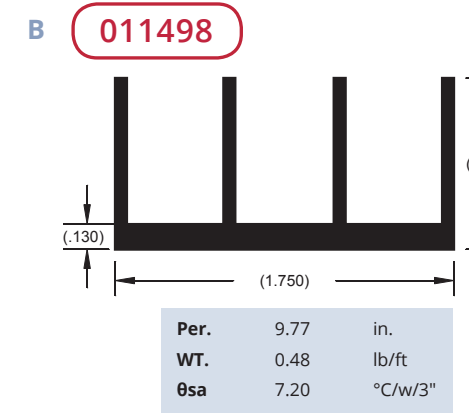
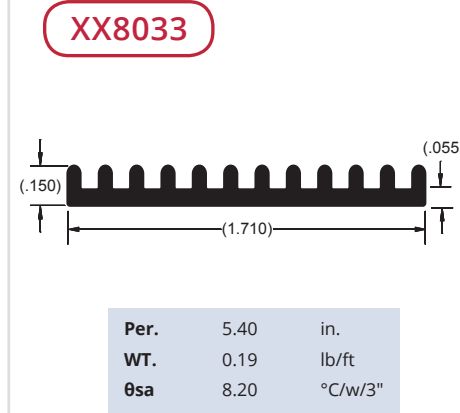
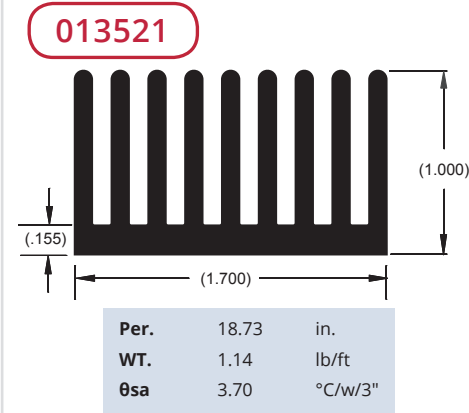
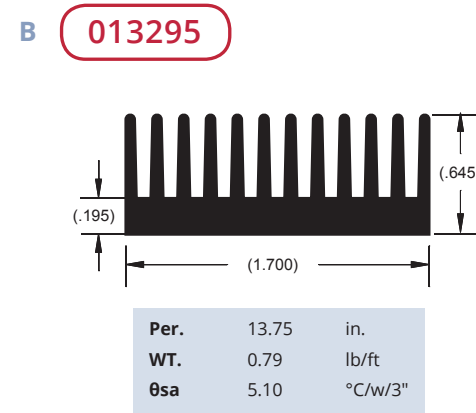
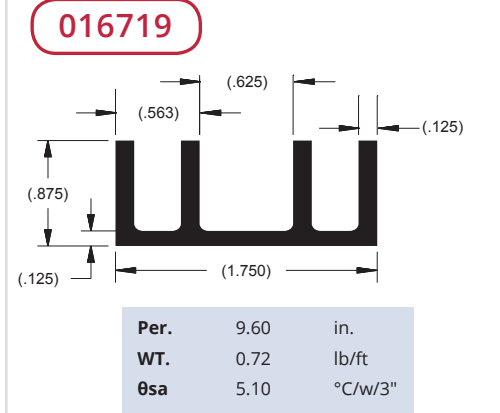
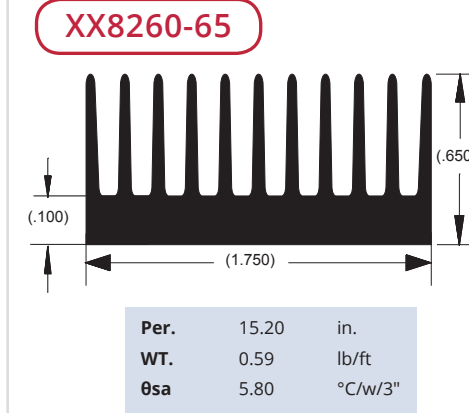
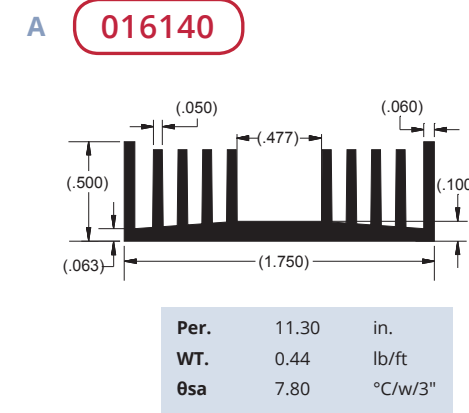
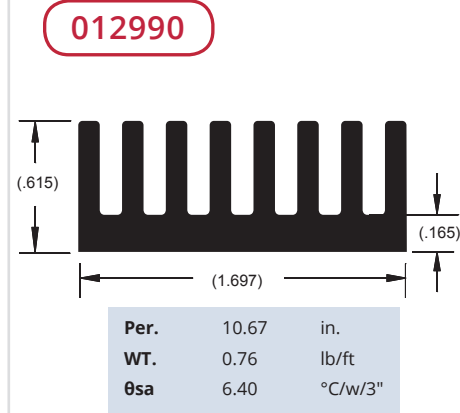
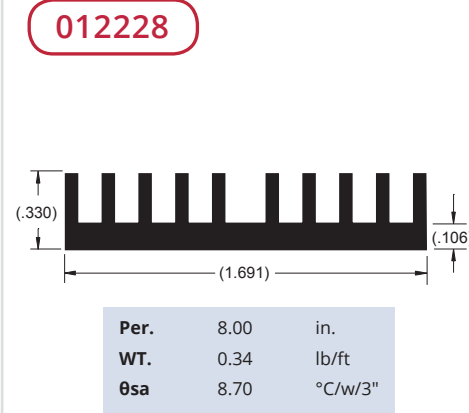
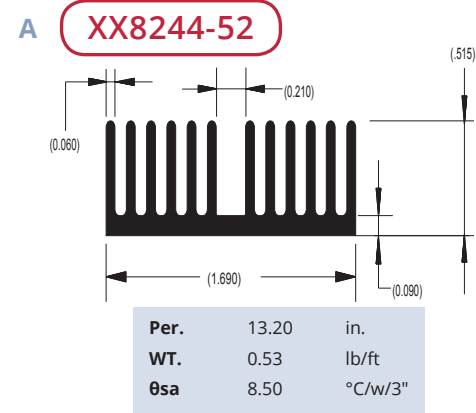
Per.	13.66	in.
WT.	1.04	lb/ft
θsa	5.30	°C/w/3"

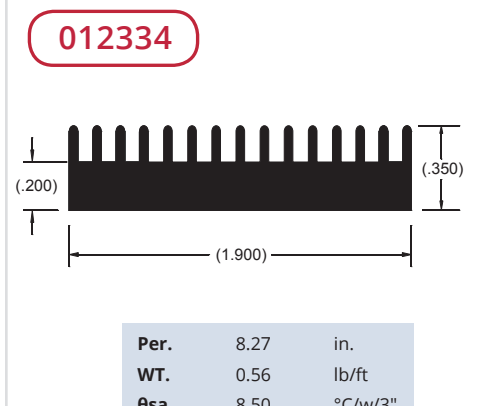
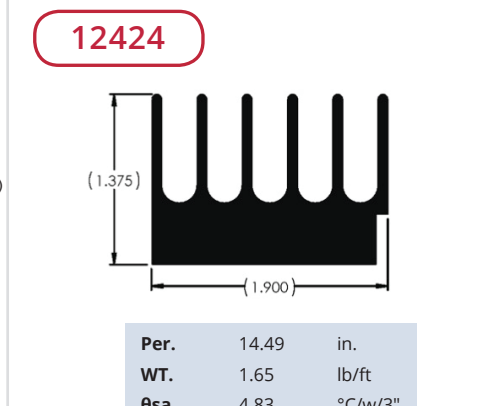
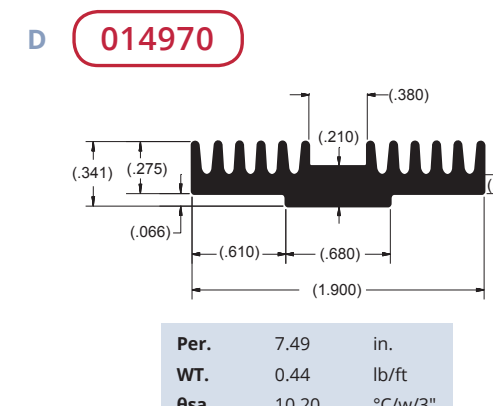
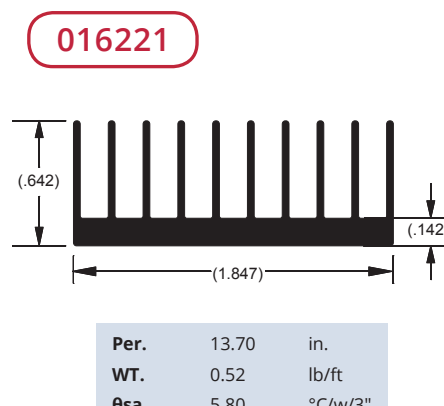
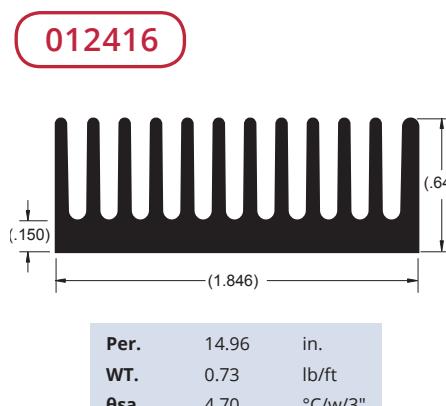
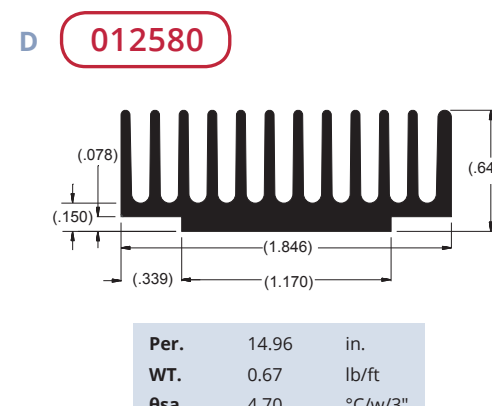
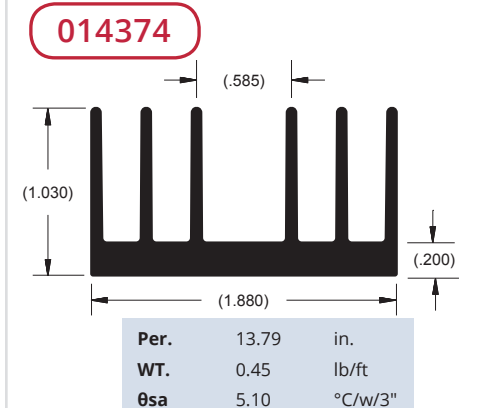
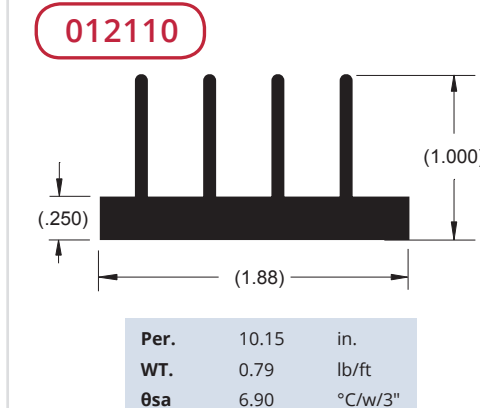
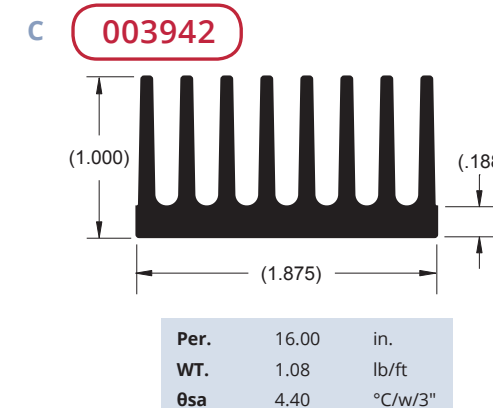
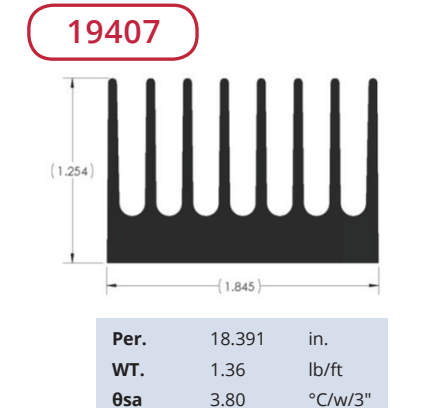
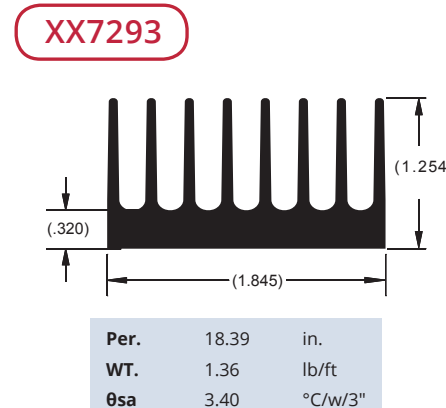
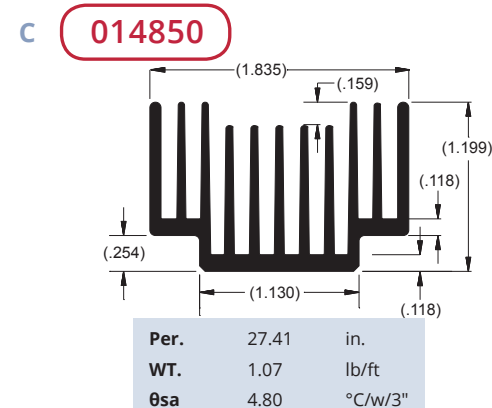
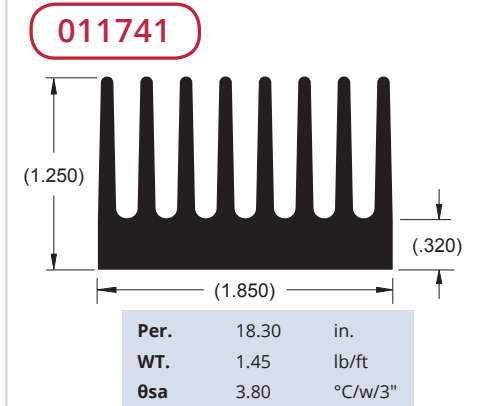
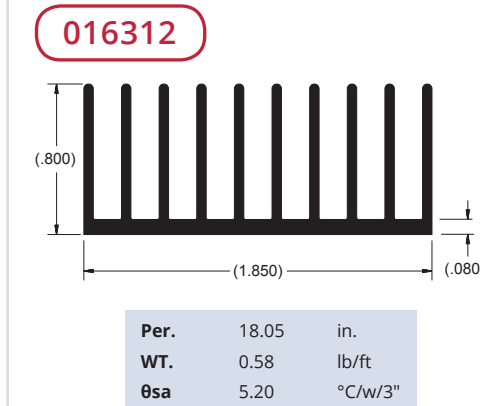
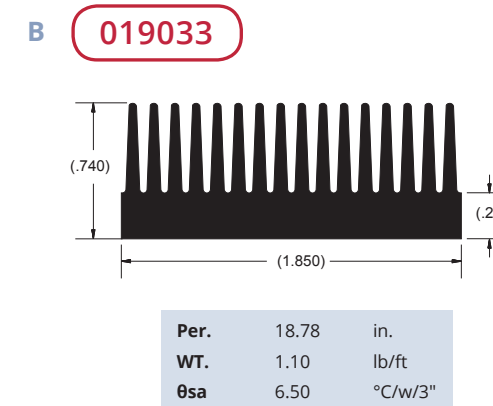
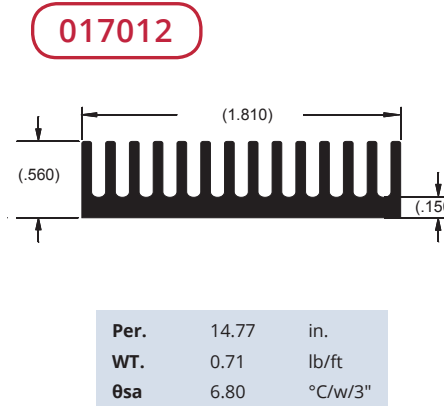
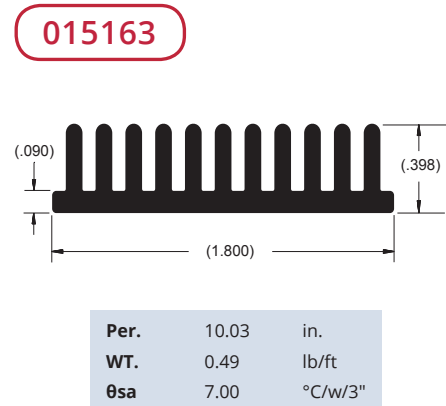
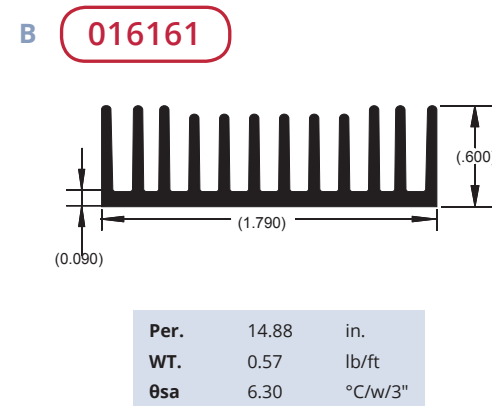
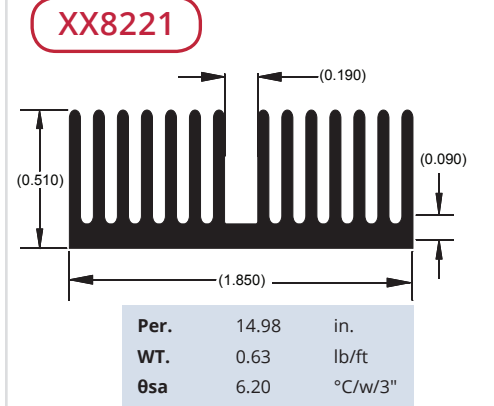
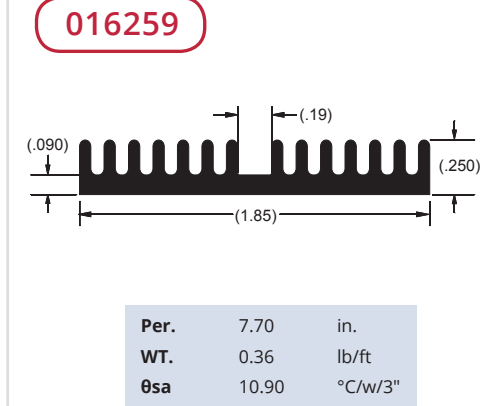
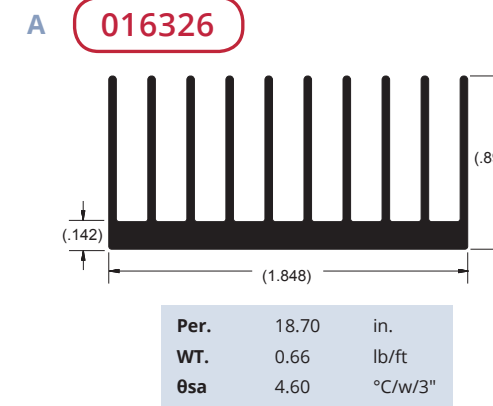
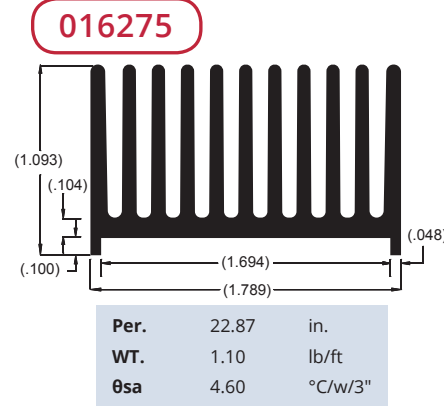
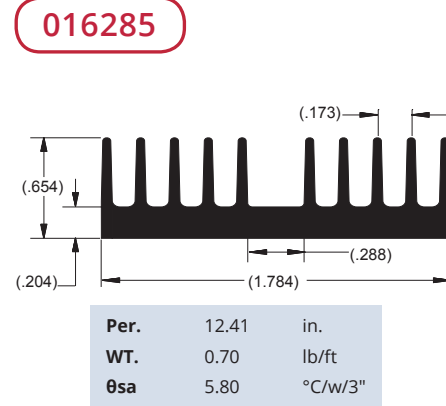
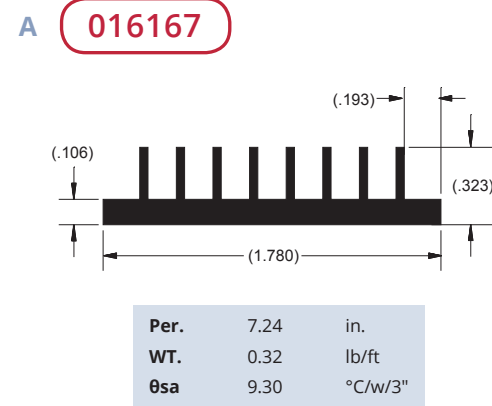


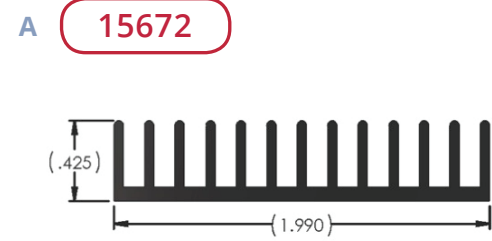
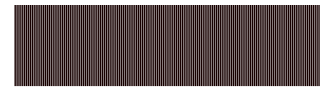
Per.	8.40	in.
WT.	0.37	lb/ft
θsa	10.00	°C/w/3"



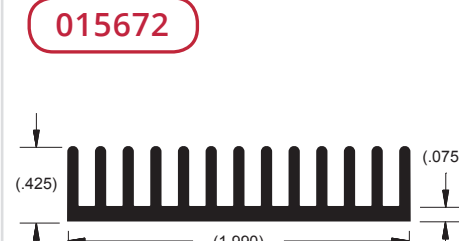
Per.	10.40	in.
WT.	0.45	lb/ft
θsa	9.30	°C/w/3"







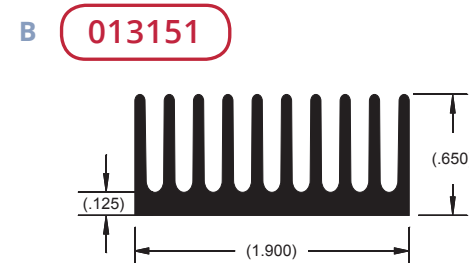
Per. 12.95 in.  
WT. 0.45 lb/ft  
θsa 5.40 °C/w/3"



Per. 17.78 in.  
WT. 0.45 lb/ft  
θsa 7.00 °C/w/3"



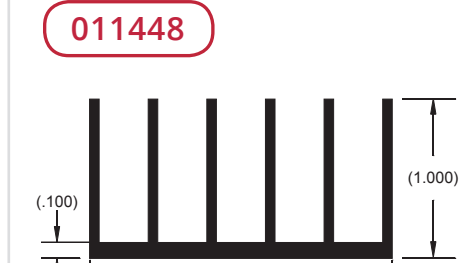
Per. 15.39 in.  
WT. 0.56 lb/ft  
θsa 4.50 °C/w/3"



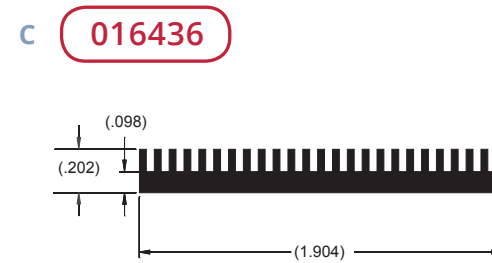
Per. 13.69 in.  
WT. 0.77 lb/ft  
θsa 5.10 °C/w/3"



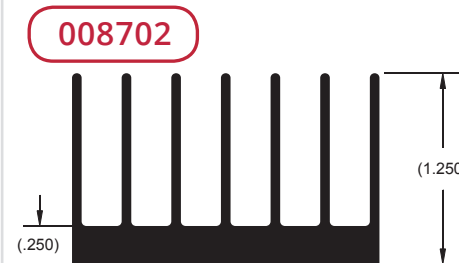
Per. 13.56 in.  
WT. 0.78 lb/ft  
θsa 5.70 °C/w/3"



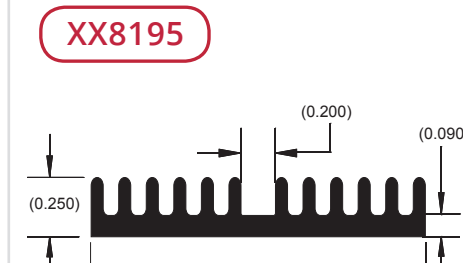
Per. 14.76 in.  
WT. 0.60 lb/ft  
θsa 4.70 °C/w/3"



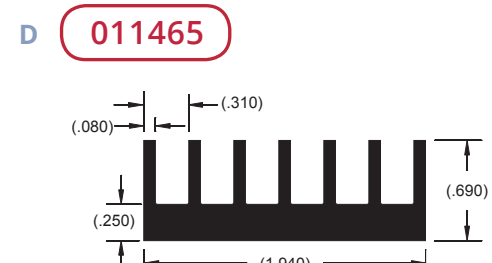
Per. 9.20 in.  
WT. 0.34 lb/ft  
θsa 12.00 °C/w/3"



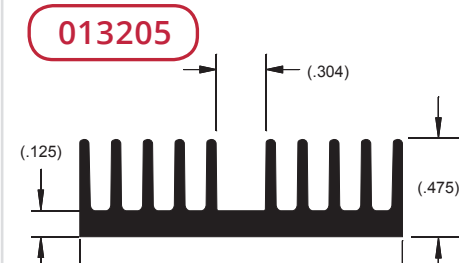
Per. 18.34 in.  
WT. 1.08 lb/ft  
θsa 3.80 °C/w/3"



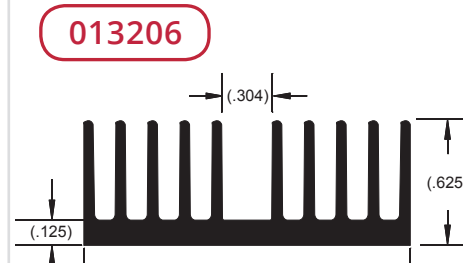
Per. 77.43 in.  
WT. 0.37 lb/ft  
θsa 10.00 °C/w/3"



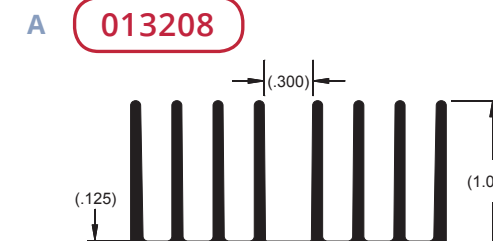
Per. 10.46 in.  
WT. 0.85 lb/ft  
θsa 6.70 °C/w/3"



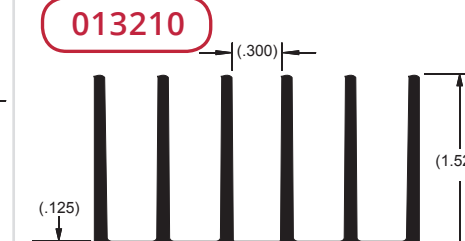
Per. 10.63 in.  
WT. 0.53 lb/ft  
θsa 6.60 °C/w/3"



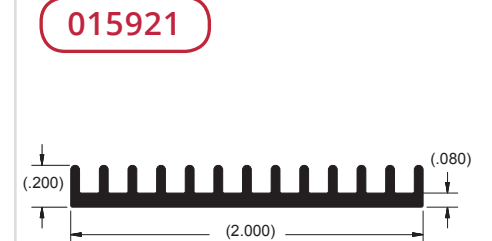
Per. 13.63 in.  
WT. 0.63 lb/ft  
θsa 5.10 °C/w/3"



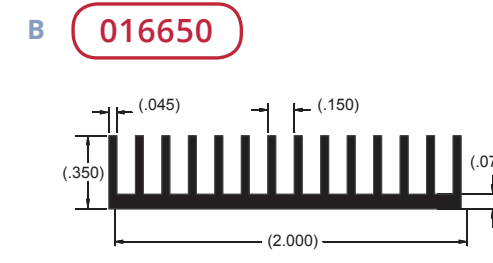
Per. 18.07 in.  
WT. 0.87 lb/ft  
θsa 3.90 °C/w/3"



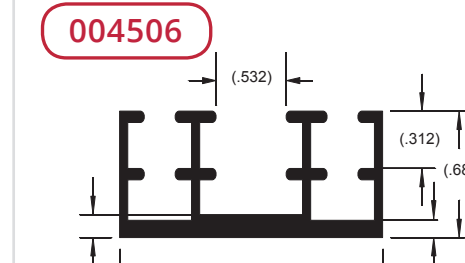
Per. 20.61 in.  
WT. 0.97 lb/ft  
θsa 3.40 °C/w/3"



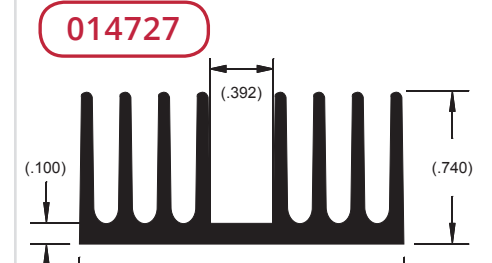
Per. 7.86 in.  
WT. 0.31 lb/ft  
θsa 11.50 °C/w/3"



Per. 11.98 in.  
WT. 0.38 lb/ft  
θsa 8.00 °C/w/3"



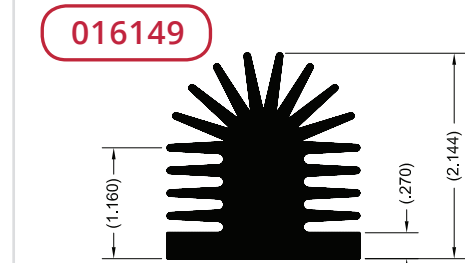
Per. 11.50 in.  
WT. 0.55 lb/ft  
θsa 6.10 °C/w/3"



Per. 13.66 in.  
WT. 0.76 lb/ft  
θsa 5.10 °C/w/3"



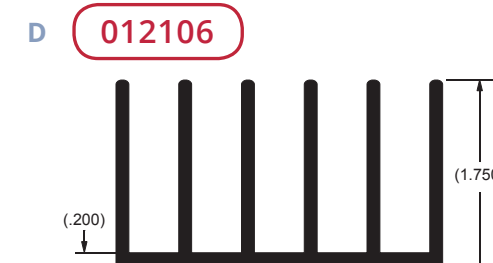
Per. 25.12 in.  
WT. 2.35 lb/ft  
θsa 2.80 °C/w/3"



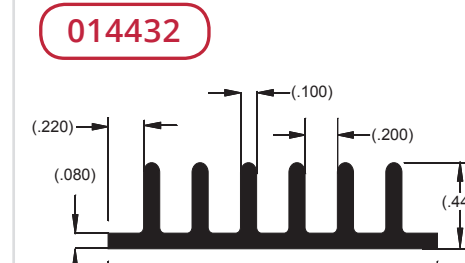
Per. 24.02 in.  
WT. 2.75 lb/ft  
θsa 3.10 °C/w/3"



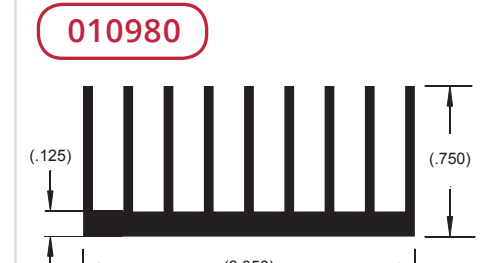
Per. 21.98 in.  
WT. 0.83 lb/ft  
θsa 4.20 °C/w/3"



Per. 22.81 in.  
WT. 1.33 lb/ft  
θsa 3.10 °C/w/3"

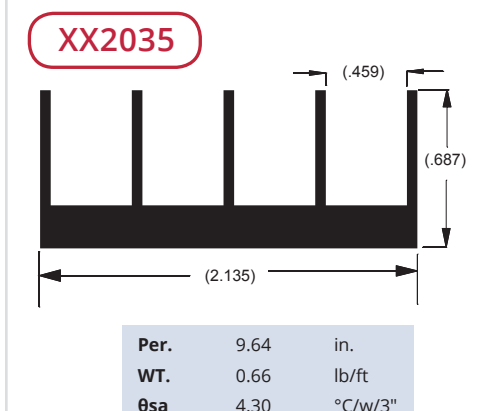
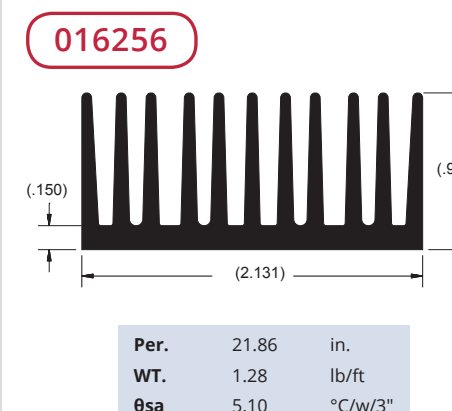
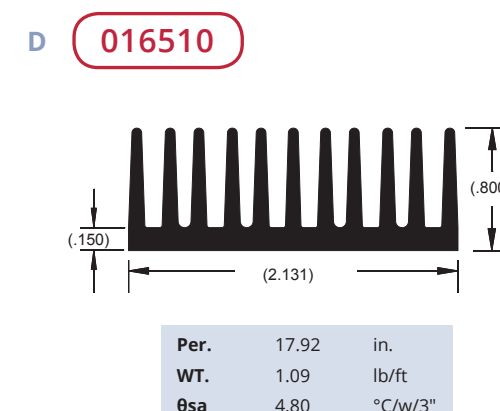
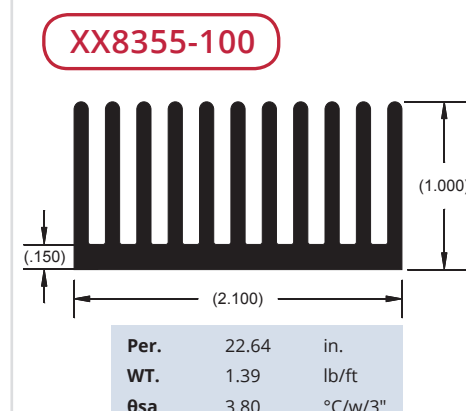
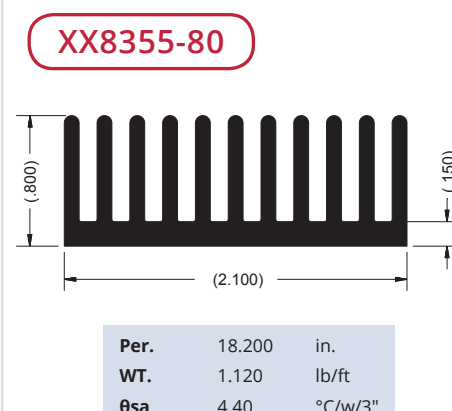
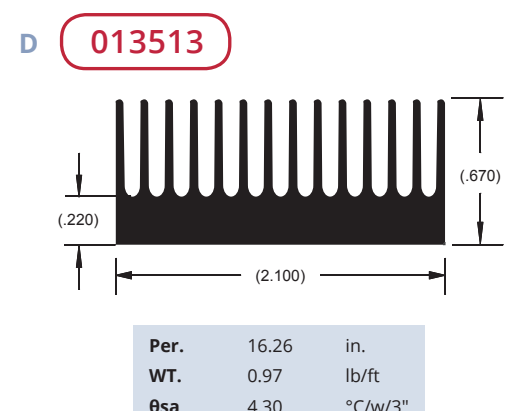
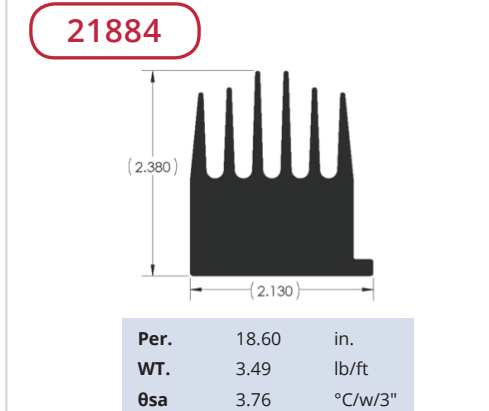
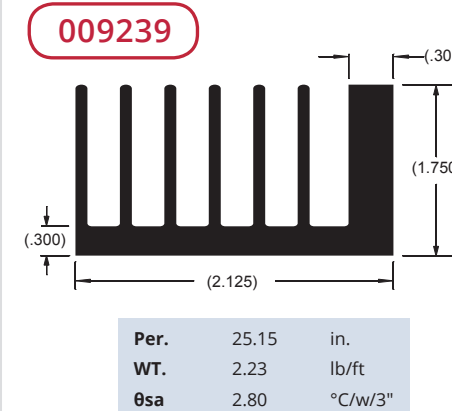
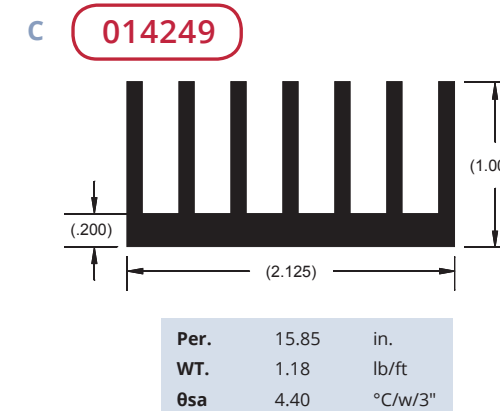
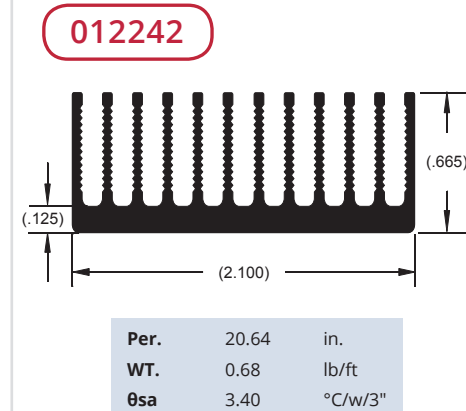
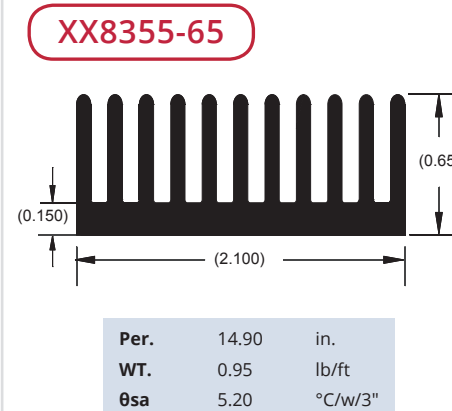
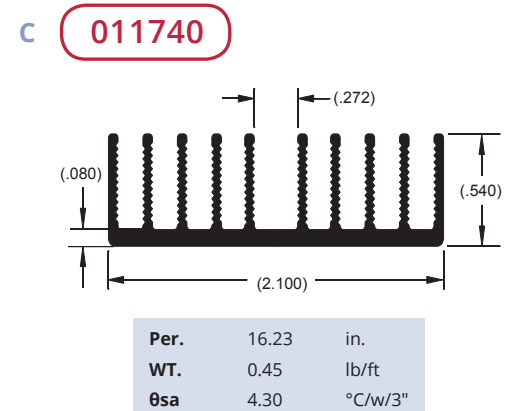
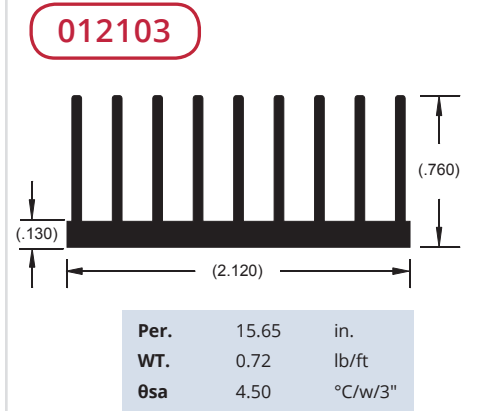
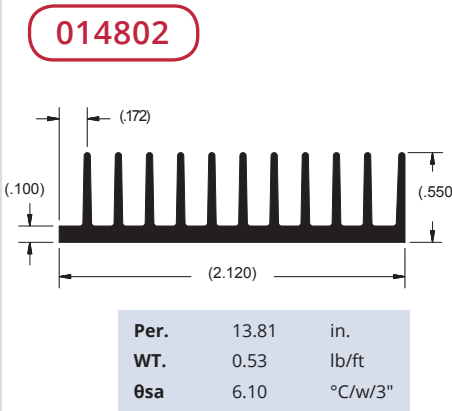
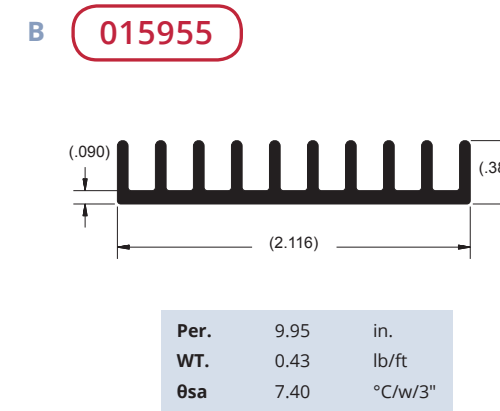
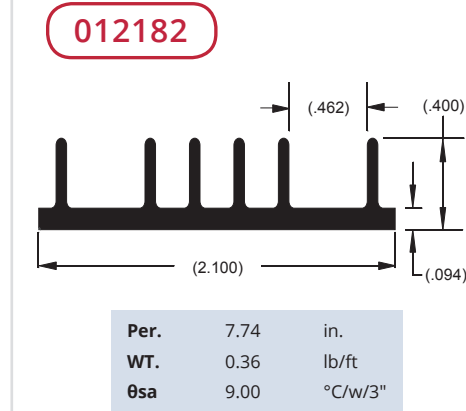
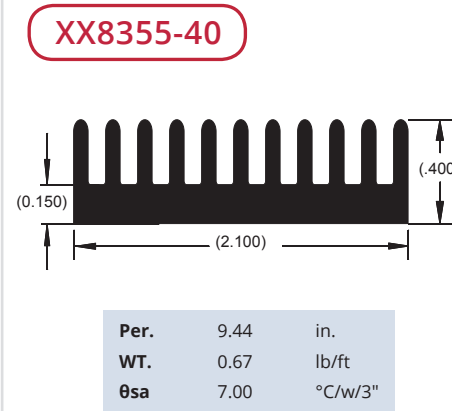
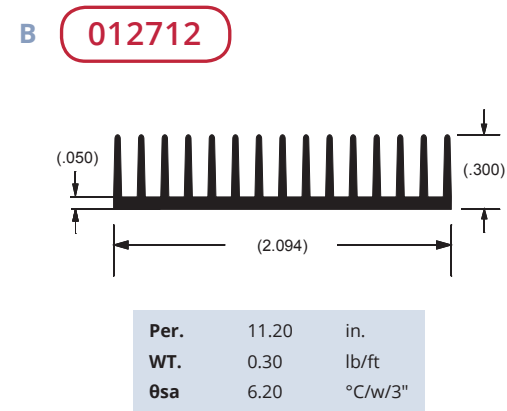
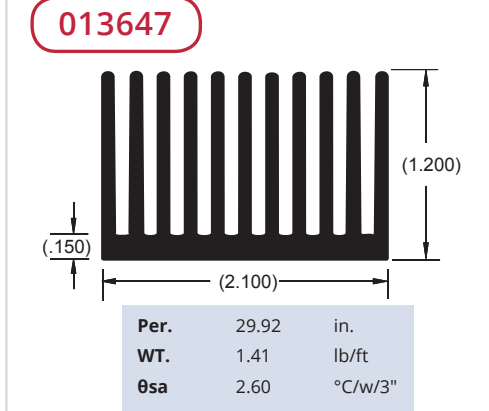
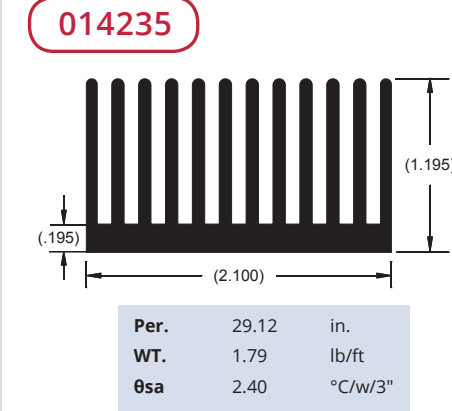
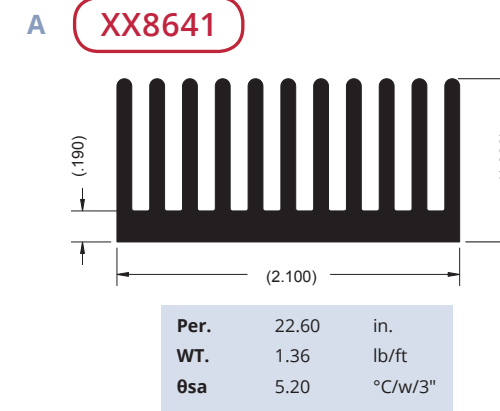
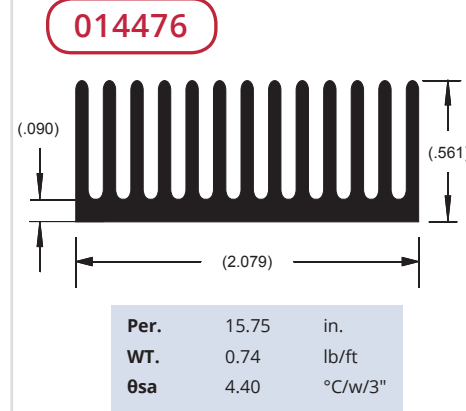
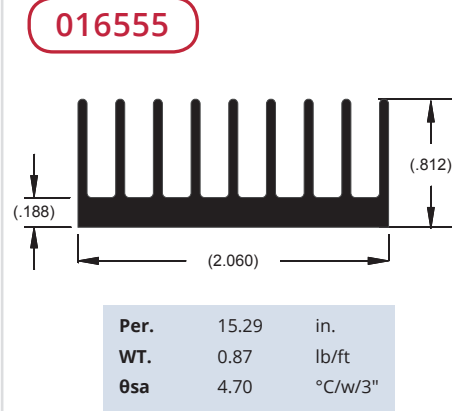
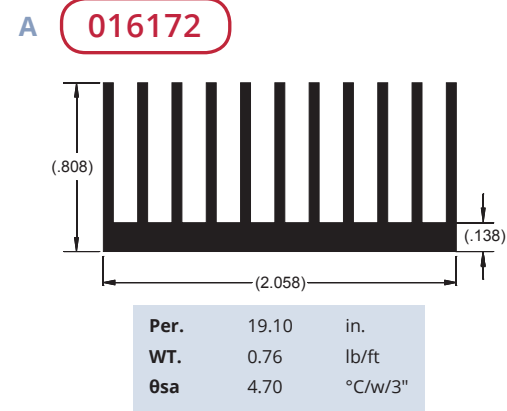


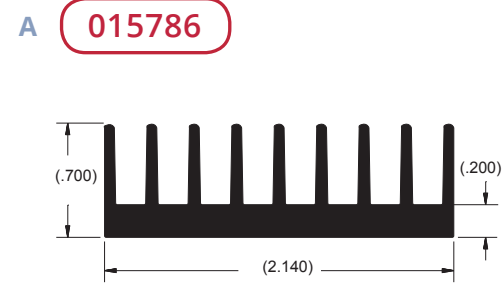
Per. 8.15 in.  
WT. 0.36 lb/ft  
θsa 8.60 °C/w/3"



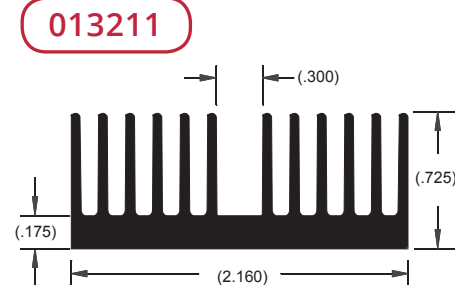
Per. 15.60 in.  
WT. 0.65 lb/ft  
θsa 4.50 °C/w/3"



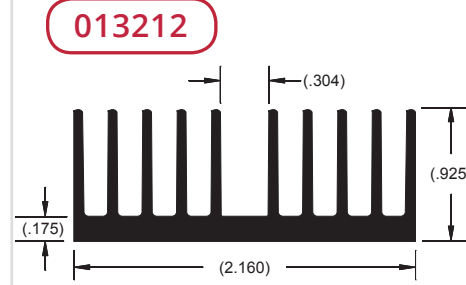




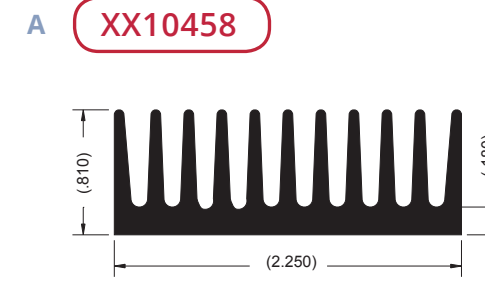
**Per.** 13.24 in.  
**WT.** 0.87 lb/ft  
**θsa** 5.10 °C/w/3"



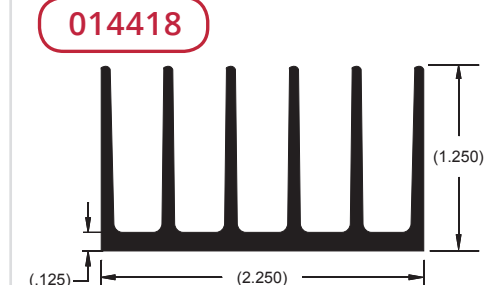
**Per.** 17.21 in.  
**WT.** 0.90 lb/ft  
**θsa** 4.10 °C/w/3"



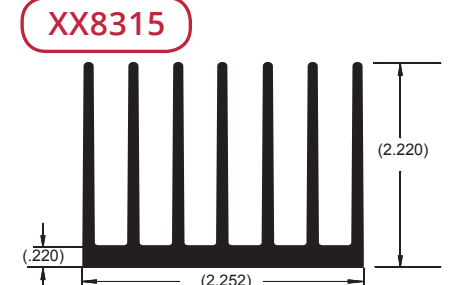
**Per.** 19.13 in.  
**WT.** 0.96 lb/ft  
**θsa** 3.70 °C/w/3"



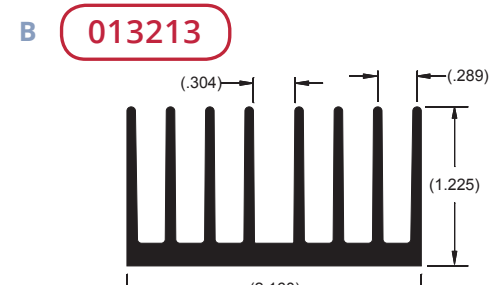
**Per.** 17.49 in.  
**WT.** 1.21 lb/ft  
**θsa** 4.80 °C/w/3"



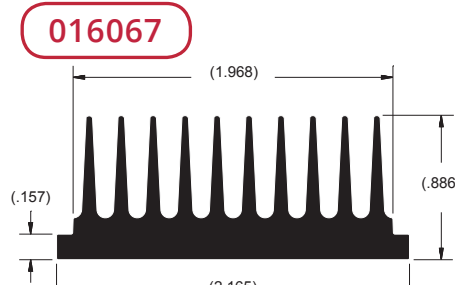
**Per.** 18.25 in.  
**WT.** 0.84 lb/ft  
**θsa** 3.80 °C/w/3"



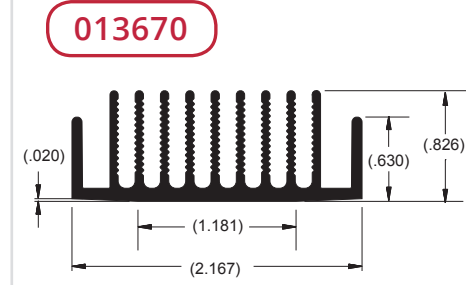
**Per.** 32.42 in.  
**WT.** 1.79 lb/ft  
**θsa** 2.40 °C/w/3"



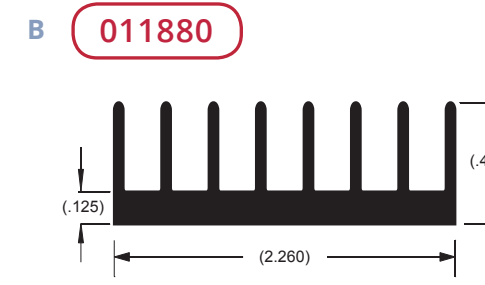
**Per.** 20.97 in.  
**WT.** 1.12 lb/ft  
**θsa** 3.30 °C/w/3"



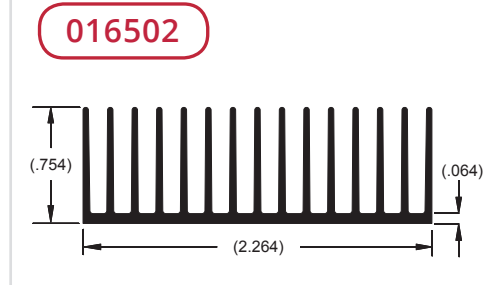
**Per.** 16.25 in.  
**WT.** 1.17 lb/ft  
**θsa** 5.20 °C/w/3"



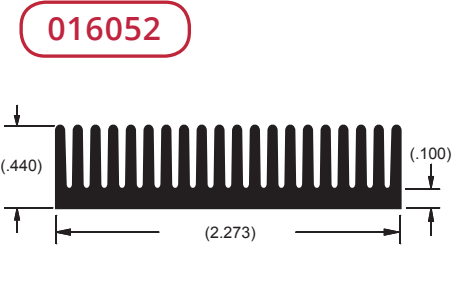
**Per.** 21.91 in.  
**WT.** 0.81 lb/ft  
**θsa** 3.20 °C/w/3"



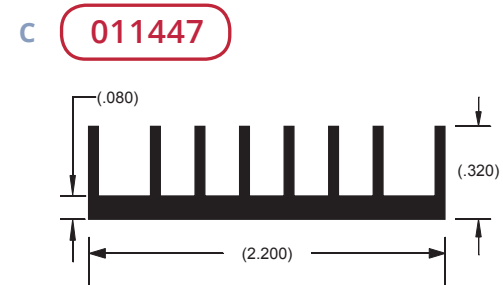
**Per.** 10.24 in.  
**WT.** 0.54 lb/ft  
**θsa** 6.80 °C/w/3"



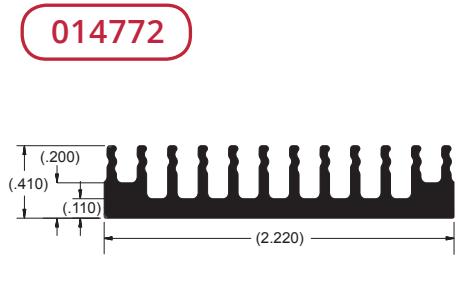
**Per.** 24.75 in.  
**WT.** 0.67 lb/ft  
**θsa** 4.80 °C/w/3"



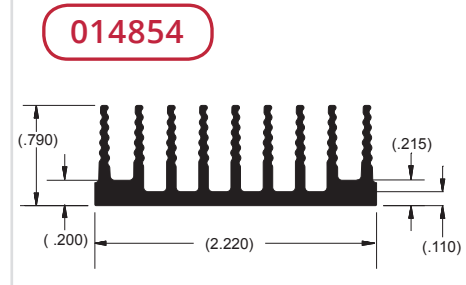
**Per.** 17.71 in.  
**WT.** 0.72 lb/ft  
**θsa** 7.60 °C/w/3"



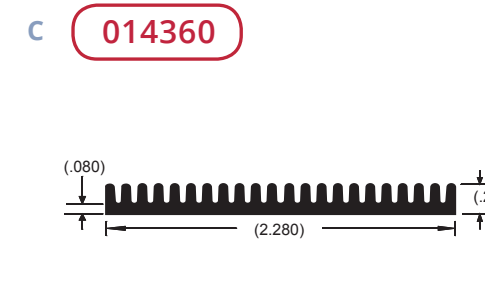
**Per.** 8.34 in.  
**WT.** 0.34 lb/ft  
**θsa** 8.40 °C/w/3"



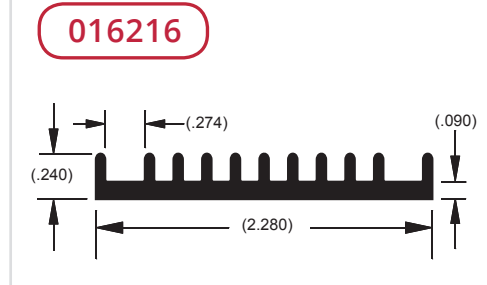
**Per.** 11.28 in.  
**WT.** 0.56 lb/ft  
**θsa** 7.00 °C/w/3"



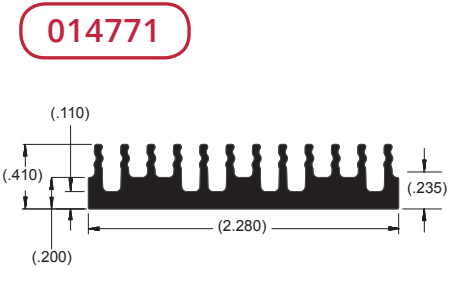
**Per.** 17.46 in.  
**WT.** 0.80 lb/ft  
**θsa** 4.60 °C/w/3"



**Per.** 10.93 in.  
**WT.** 0.39 lb/ft  
**θsa** 10.40 °C/w/3"



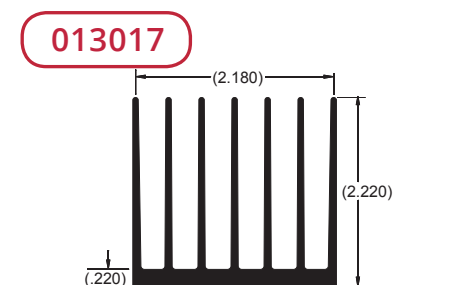
**Per.** 7.58 in.  
**WT.** 0.36 lb/ft  
**θsa** 9.20 °C/w/3"



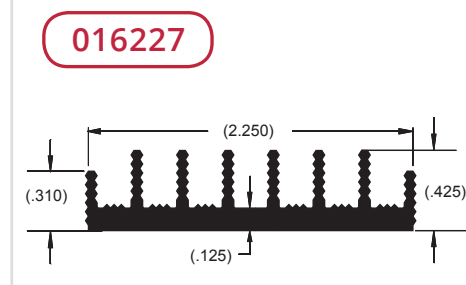
**Per.** 10.79 in.  
**WT.** 0.63 lb/ft  
**θsa** 7.80 °C/w/3"



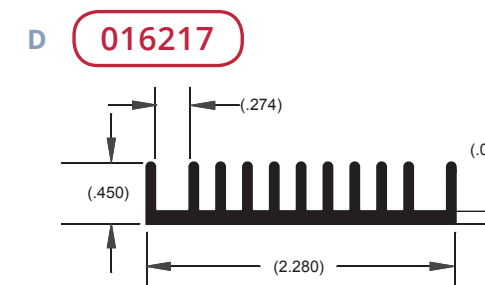
**Per.** 27.09 in.  
**WT.** 1.48 lb/ft  
**θsa** 3.50 °C/w/3"



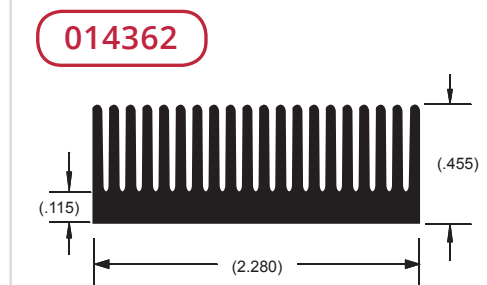
**Per.** 32.38 in.  
**WT.** 1.79 lb/ft  
**θsa** 2.40 °C/w/3"



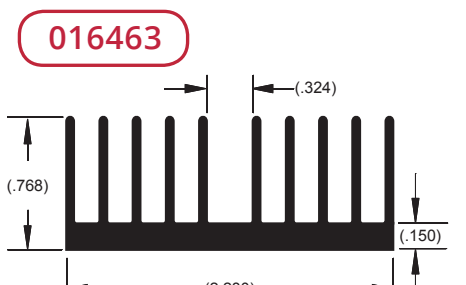
**Per.** 10.50 in.  
**WT.** 0.53 lb/ft  
**θsa** 6.60 °C/w/3"



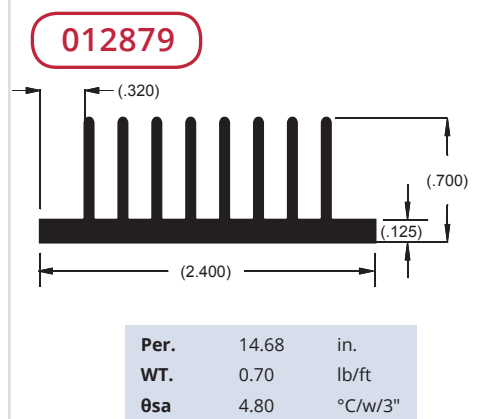
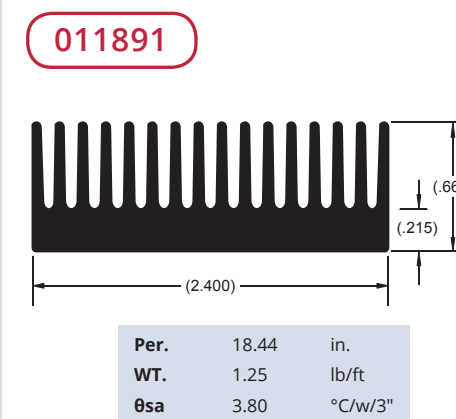
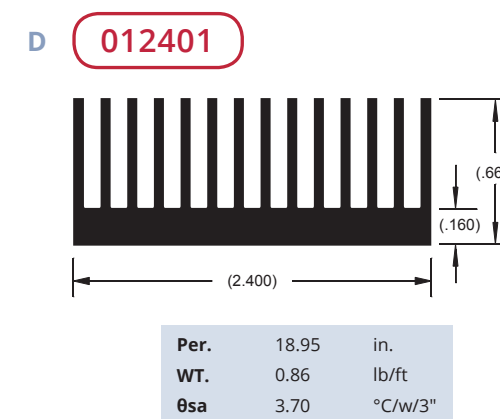
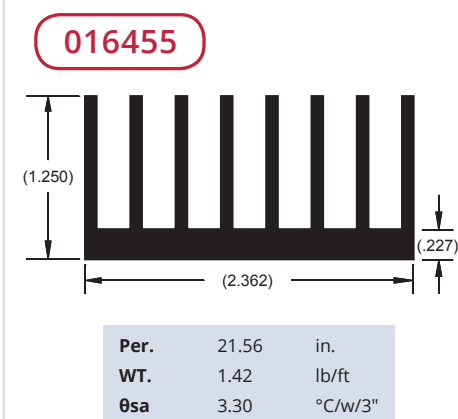
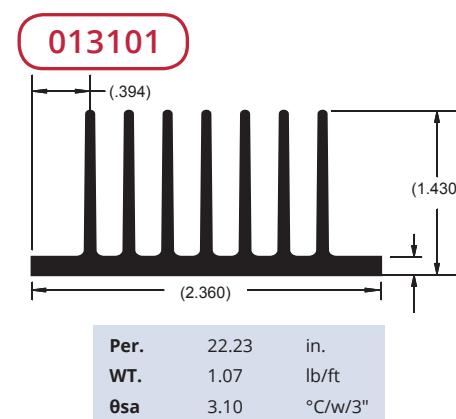
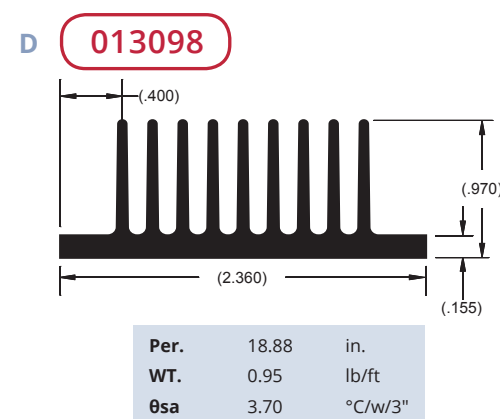
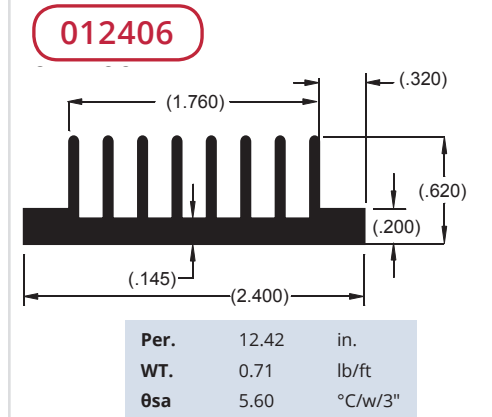
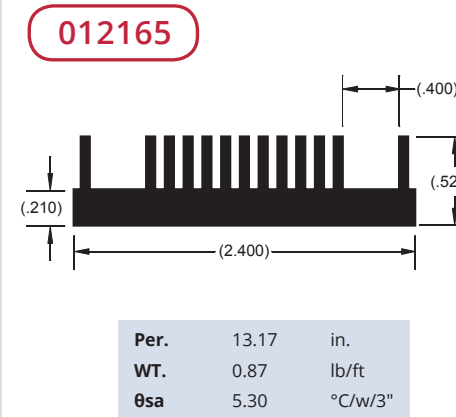
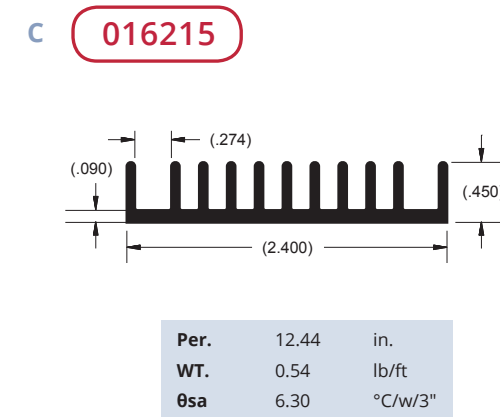
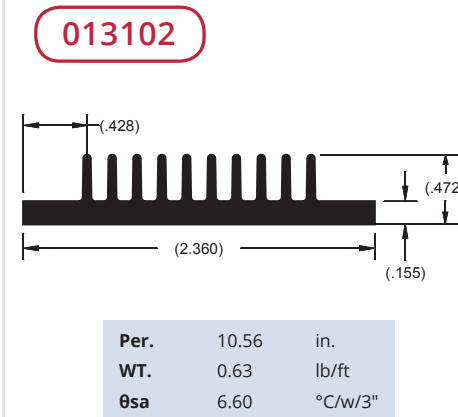
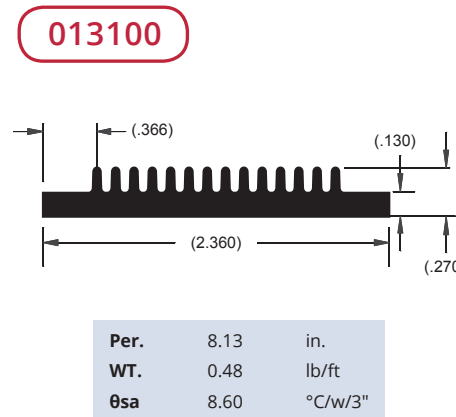
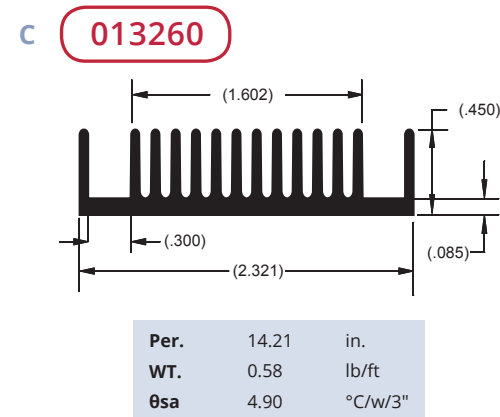
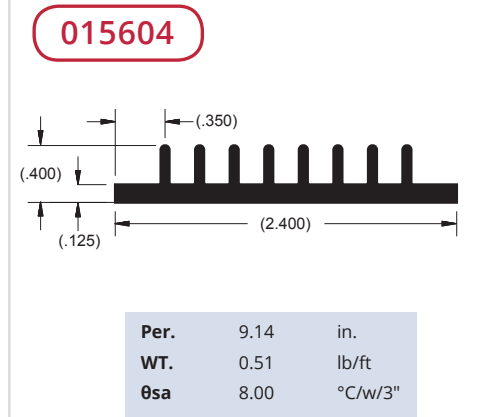
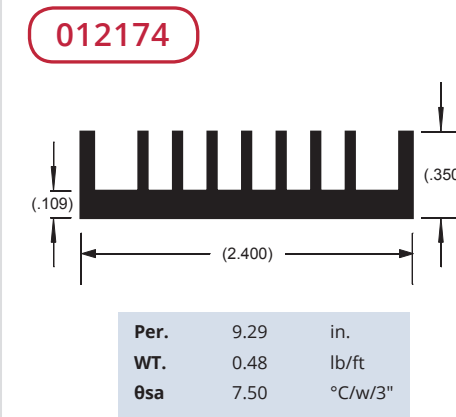
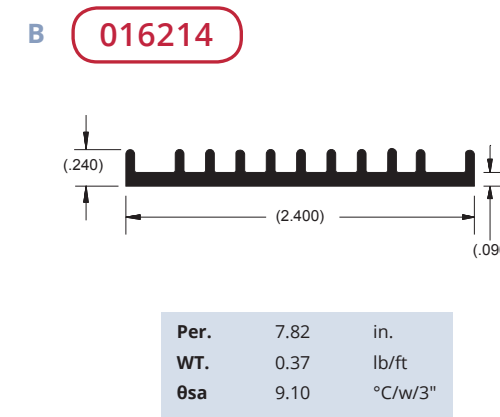
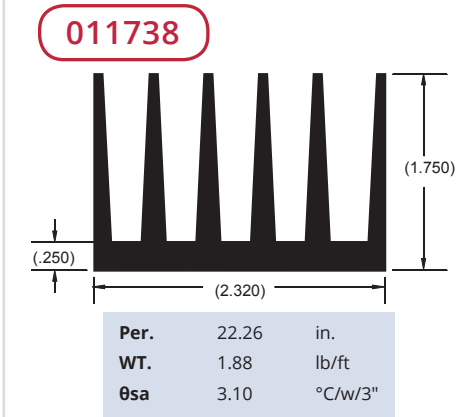
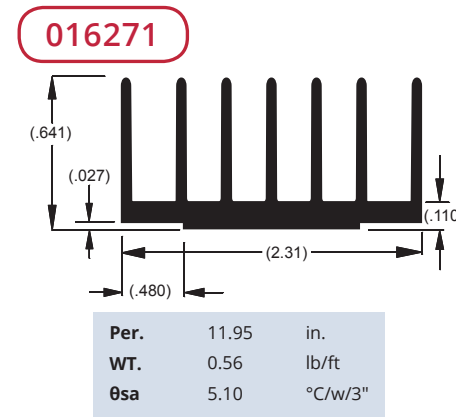
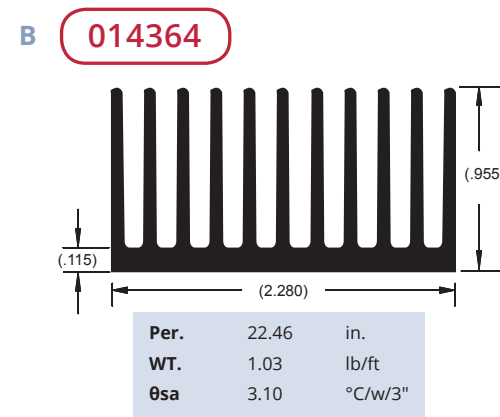
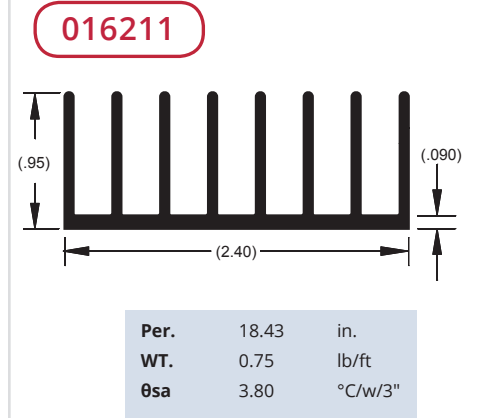
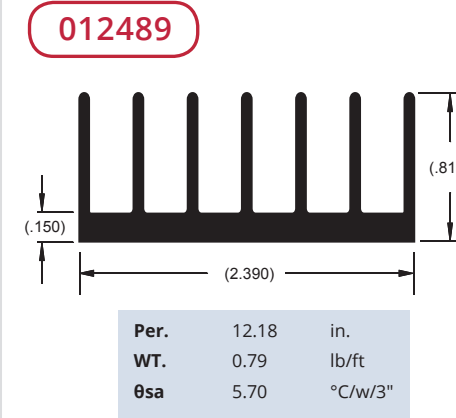
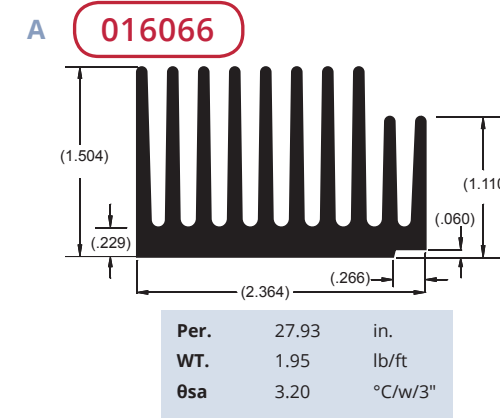
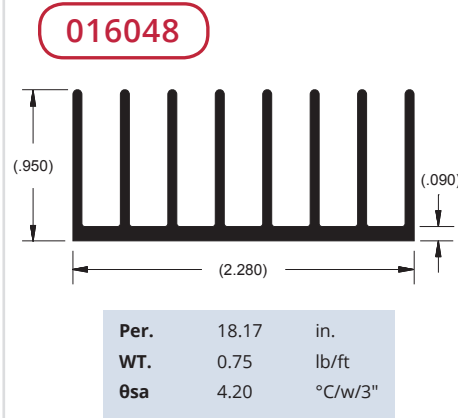
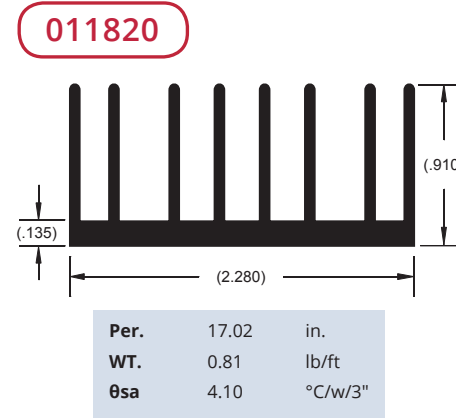
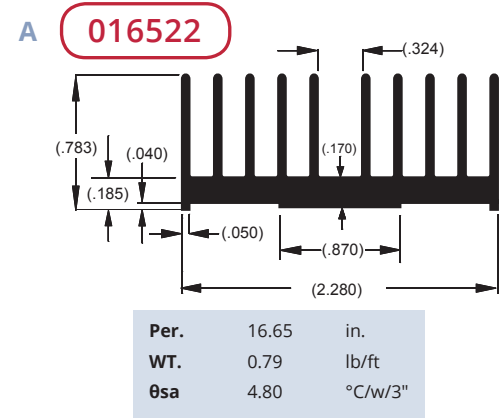
**Per.** 12.21 in.  
**WT.** 0.52 lb/ft  
**θsa** 6.40 °C/w/3"

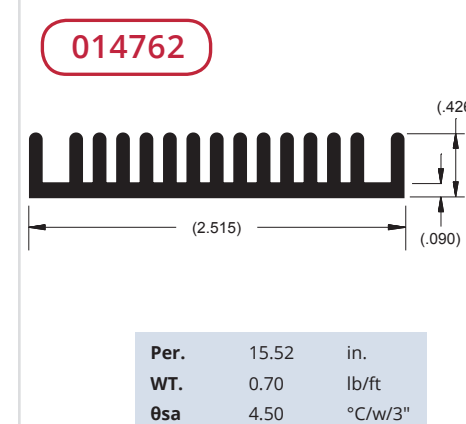
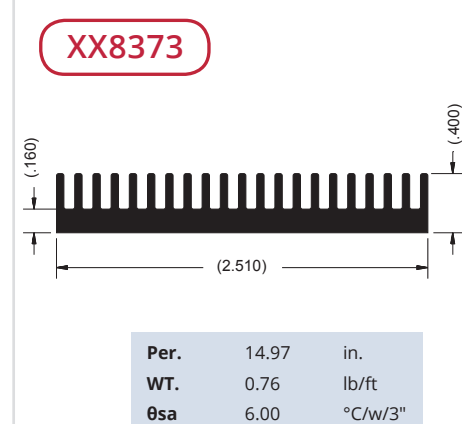
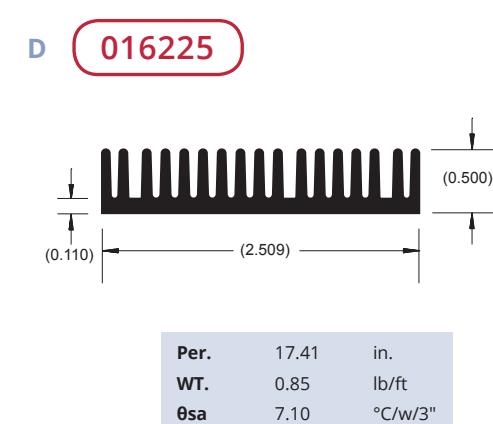
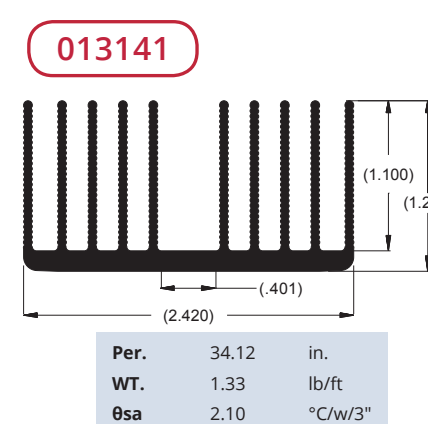
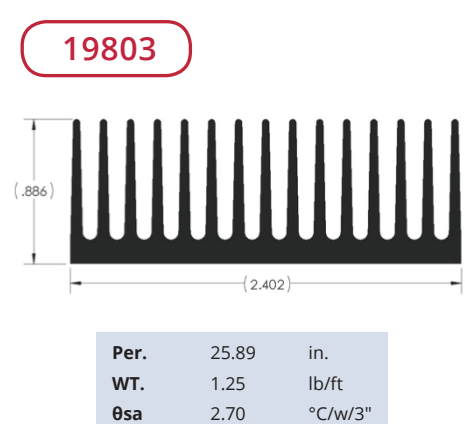
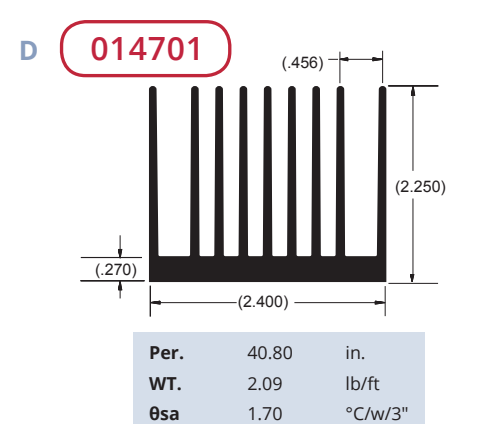
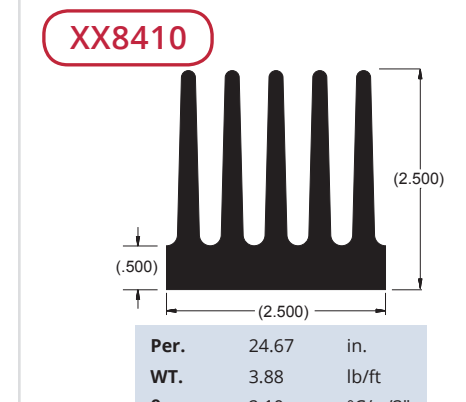
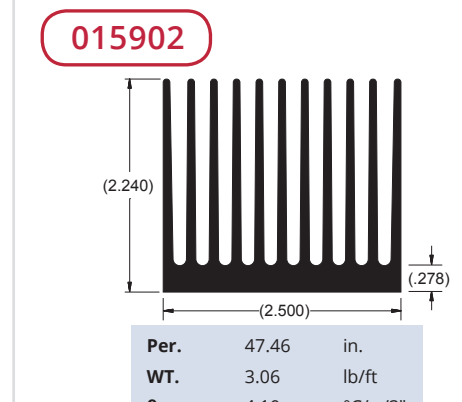
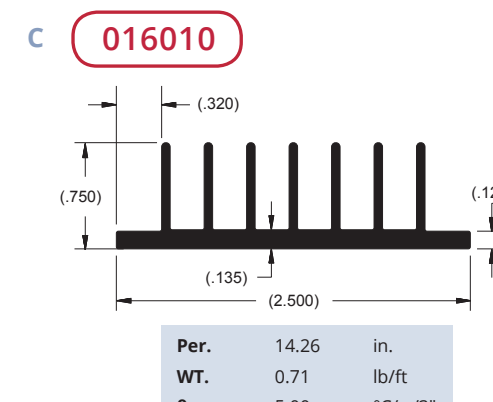
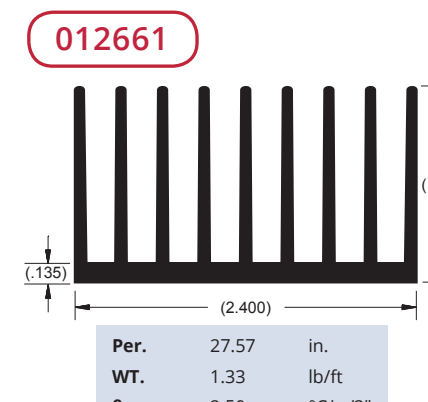
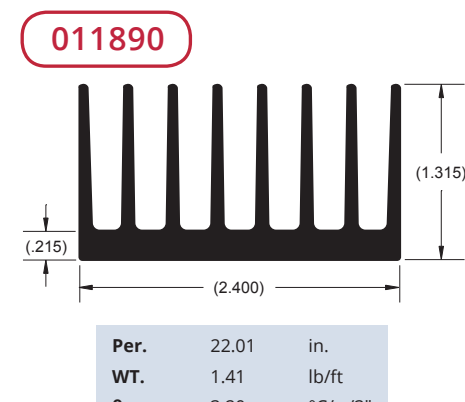
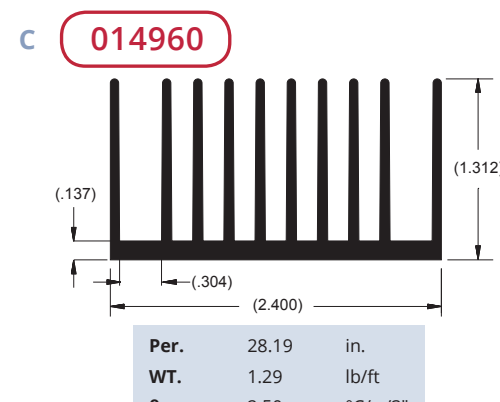
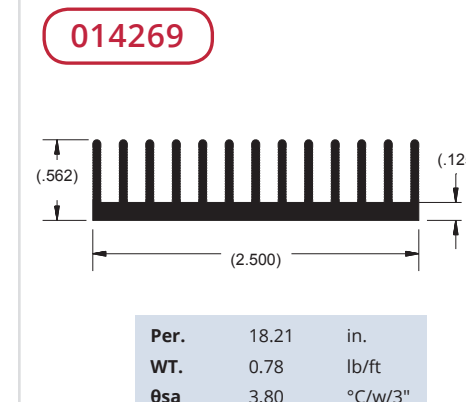
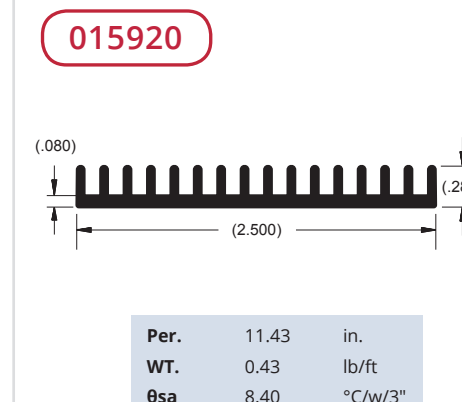
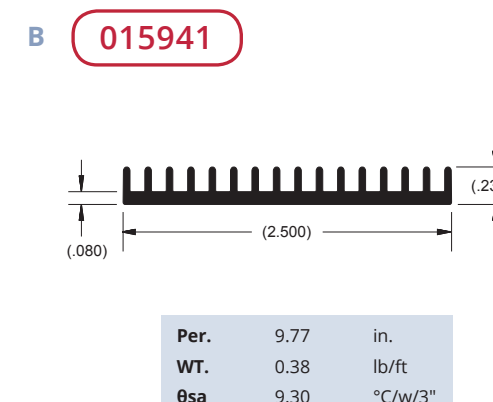
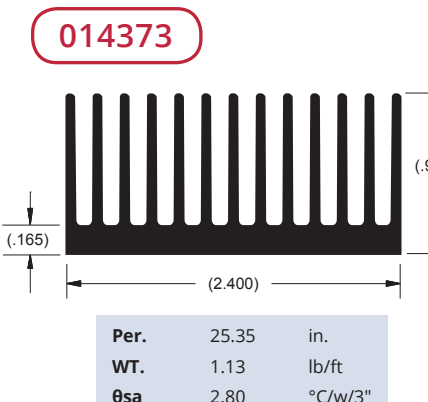
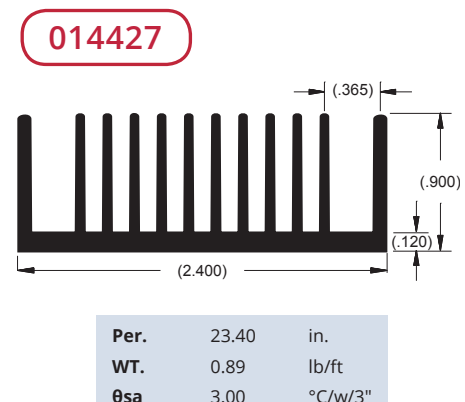
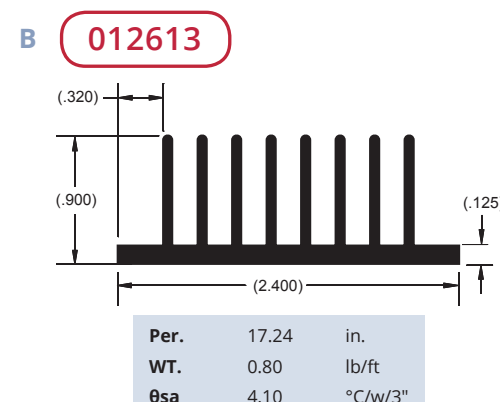
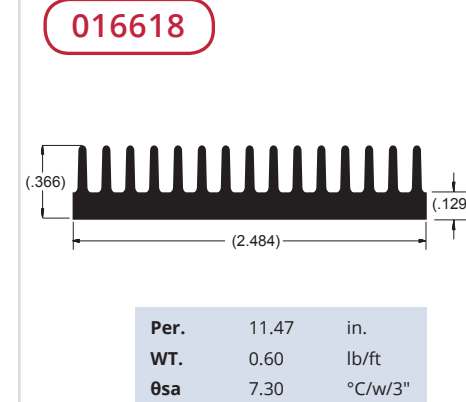
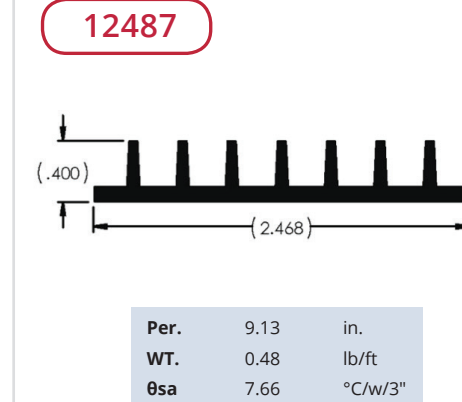
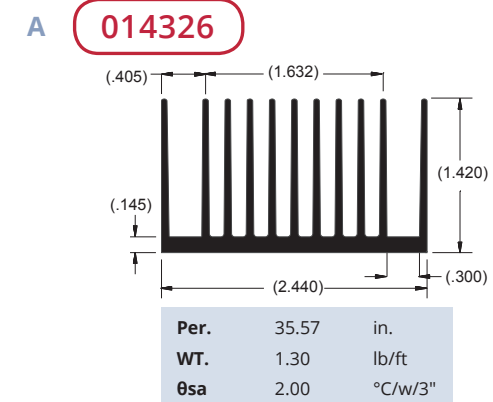
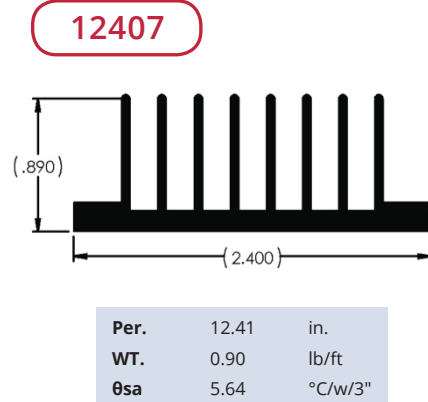
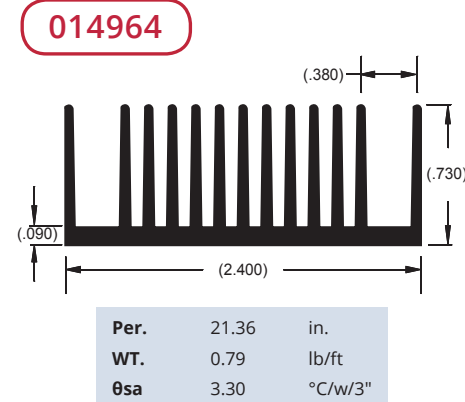
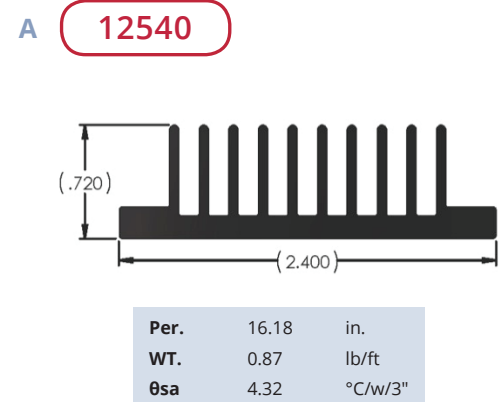


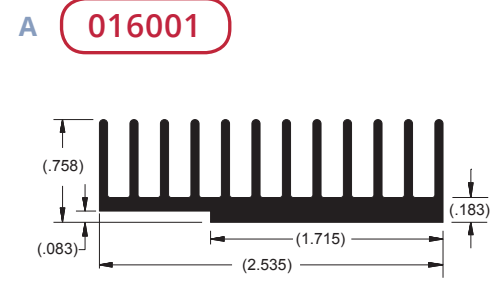
**Per.** 17.31 in.  
**WT.** 0.73 lb/ft  
**θsa** 4.00 °C/w/3"



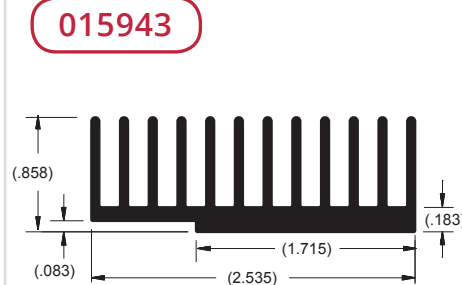
**Per.** 18.17 in.  
**WT.** 0.75 lb/ft  
**θsa** 4.20 °C/w/3"



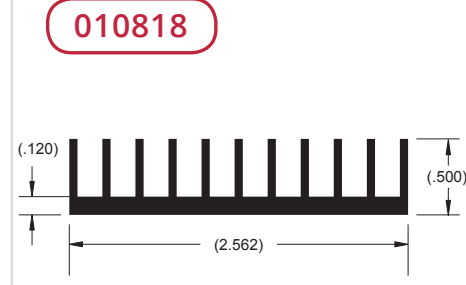




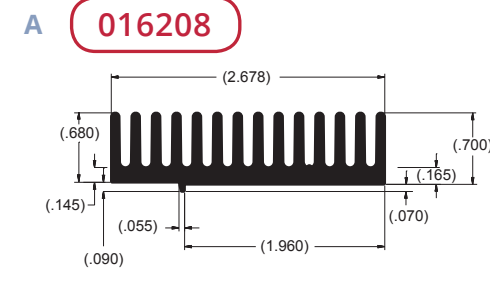
Per. 18.74 in.  
WT. 0.97 lb/ft  
θsa 4.60 °C/w/3"



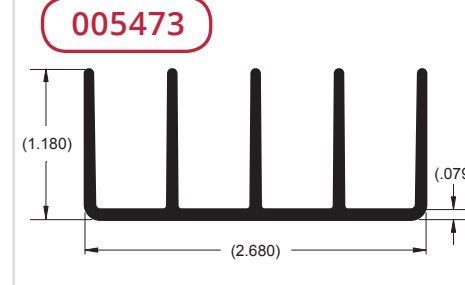
Per. 21.14 in.  
WT. 1.14 lb/ft  
θsa 4.20 °C/w/3"



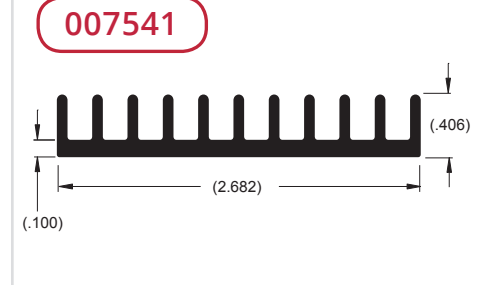
Per. 13.48 in.  
WT. 0.68 lb/ft  
θsa 5.20 °C/w/3"



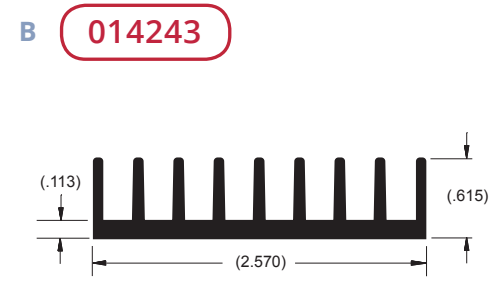
Per. 5.54 in.  
WT. 0.03 lb/ft  
θsa 5.90 °C/w/3"



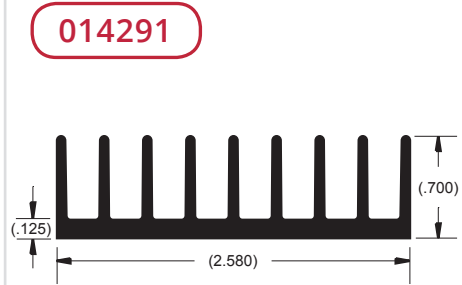
Per. 16.52 in.  
WT. 0.70 lb/ft  
θsa 4.20 °C/w/3"



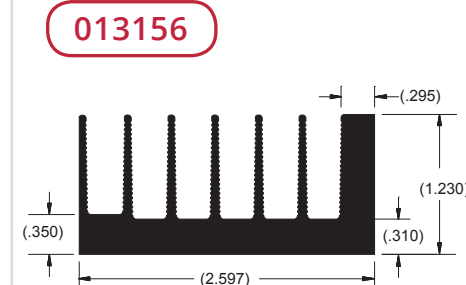
Per. 10.58 in.  
WT. 0.50 lb/ft  
θsa 6.60 °C/w/3"



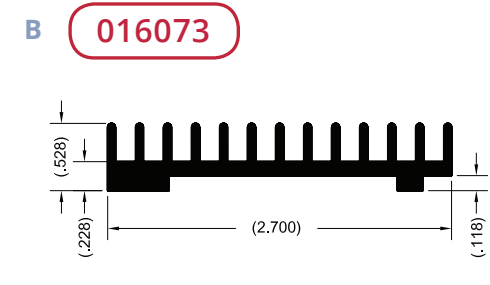
Per. 13.84 in.  
WT. 0.76 lb/ft  
θsa 5.10 °C/w/3"



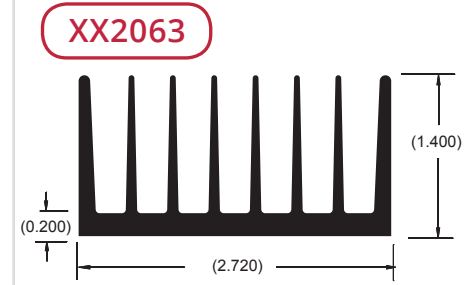
Per. 15.25 in.  
WT. 0.79 lb/ft  
θsa 4.60 °C/w/3"



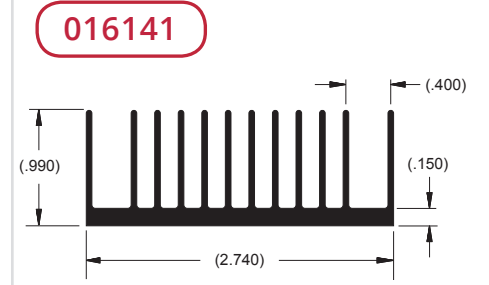
Per. 18.12 in.  
WT. 1.74 lb/ft  
θsa 3.90 °C/w/3"



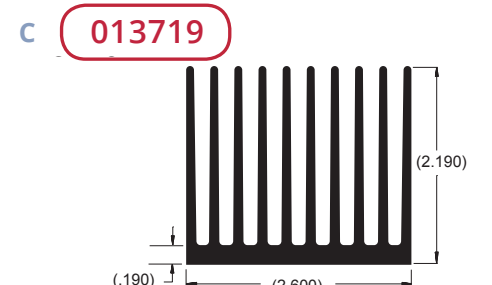
Per. 13.80 in.  
WT. 0.71 lb/ft  
θsa 5.30 °C/w/3"



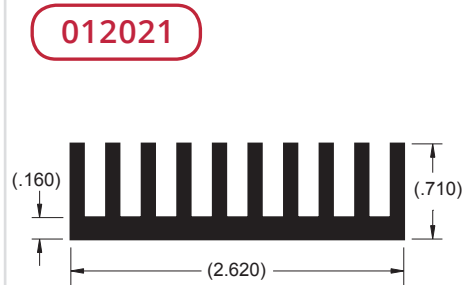
Per. 24.24 in.  
WT. 1.65 lb/ft  
θsa 1.90 °C/w/3"



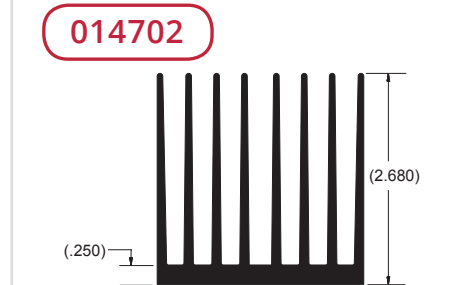
Per. 25.40 in.  
WT. 1.10 lb/ft  
θsa 3.60 °C/w/3"



Per. 44.29 in.  
WT. 2.58 lb/ft  
θsa 1.60 °C/w/3"



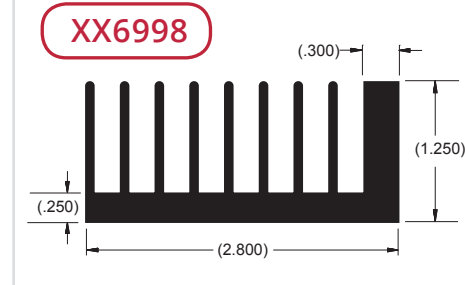
Per. 16.56 in.  
WT. 1.16 lb/ft  
θsa 4.20 °C/w/3"



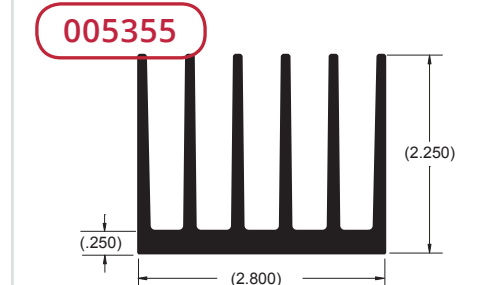
Per. 44.19 in.  
WT. 2.91 lb/ft  
θsa 1.60 °C/w/3"



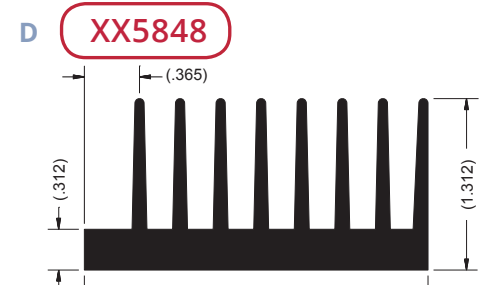
Per. 22.07 in.  
WT. 1.07 lb/ft  
θsa 6.10 °C/w/3"



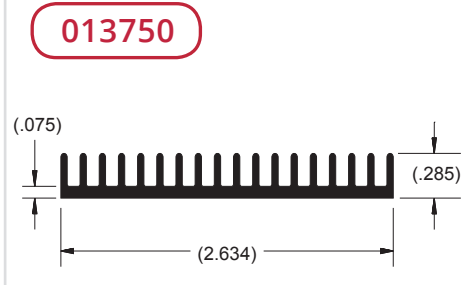
Per. 24.10 in.  
WT. 1.80 lb/ft  
θsa 2.90 °C/w/3"



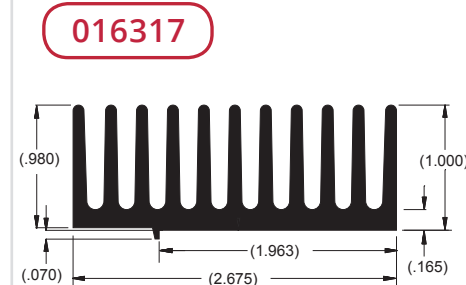
Per. 30.00 in.  
WT. 2.33 lb/ft  
θsa 2.30 °C/w/3"



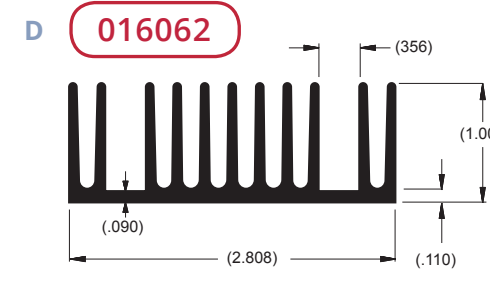
Per. 21.37 in.  
WT. 1.63 lb/ft  
θsa 3.50 °C/w/3"



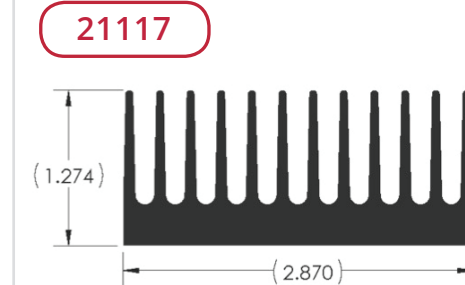
Per. 12.37 in.  
WT. 0.47 lb/ft  
θsa 5.70 °C/w/3"



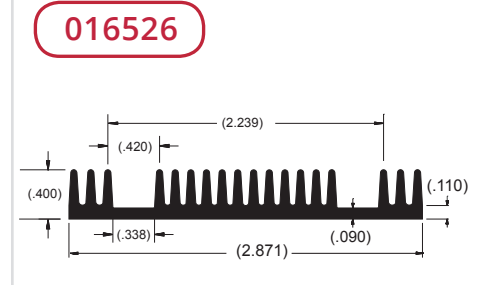
Per. 22.91 in.  
WT. 1.67 lb/ft  
θsa 3.90 °C/w/3"



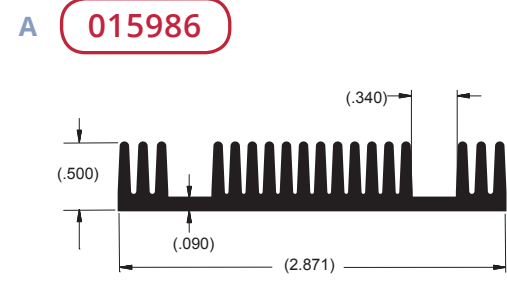
Per. 24.47 in.  
WT. 1.20 lb/ft  
θsa 3.40 °C/w/3"



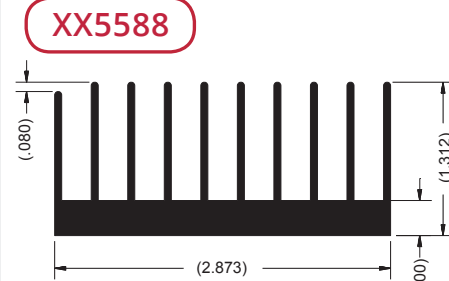
Per. 27.36 in.  
WT. 2.32 lb/ft  
θsa 2.56 °C/w/3"



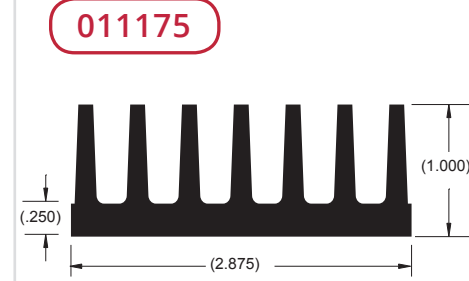
Per. 15.24 in.  
WT. 0.77 lb/ft  
θsa 7.00 °C/w/3"



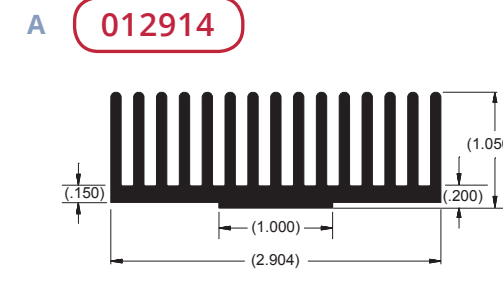
**Per.** 18.85 in.  
**WT.** 0.88 lb/ft  
**θsa** 6.30 °C/w/3"



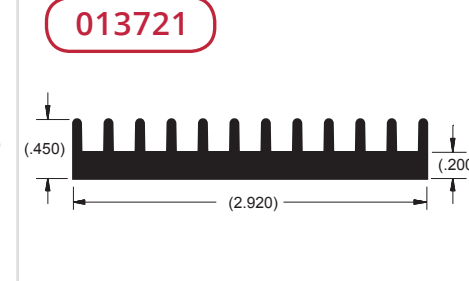
**Per.** 25.86 in.  
**WT.** 1.81 lb/ft  
**θsa** 2.80 °C/w/3"



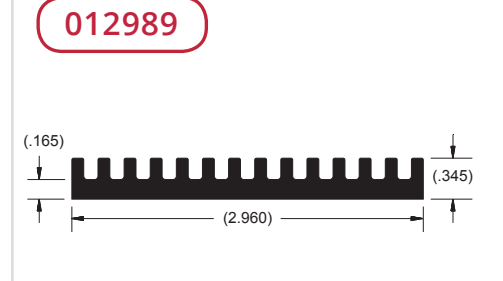
**Per.** 16.33 in.  
**WT.** 1.86 lb/ft  
**θsa** 4.30 °C/w/3"



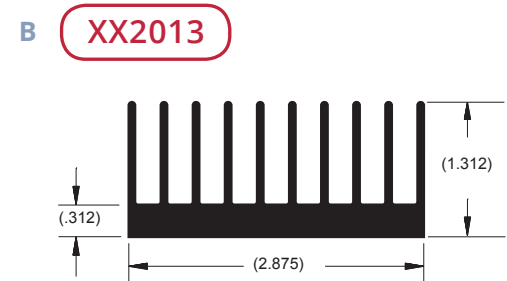
**Per.** 30.94 in.  
**WT.** 1.86 lb/ft  
**θsa** 2.30 °C/w/3"



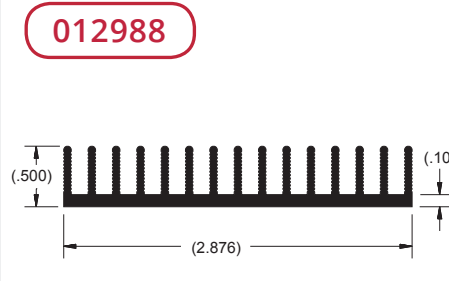
**Per.** 11.76 in.  
**WT.** 0.91 lb/ft  
**θsa** 6.00 °C/w/3"



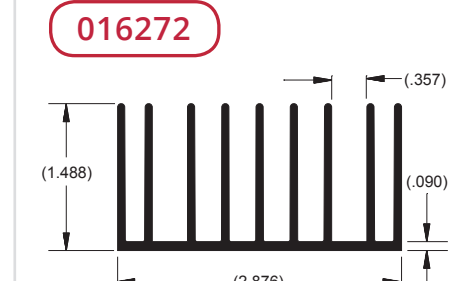
**Per.** 10.74 in.  
**WT.** 0.89 lb/ft  
**θsa** 6.50 °C/w/3"



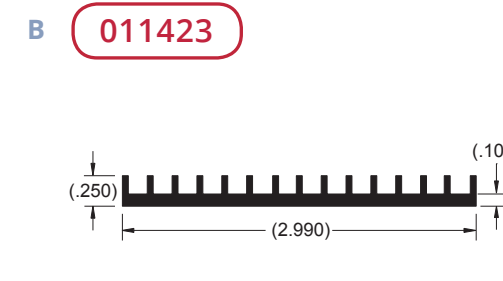
**Per.** 25.66 in.  
**WT.** 1.76 lb/ft  
**θsa** 2.30 °C/w/3"



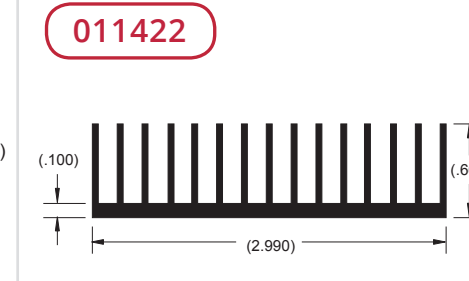
**Per.** 20.13 in.  
**WT.** 0.72 lb/ft  
**θsa** 3.50 °C/w/3"



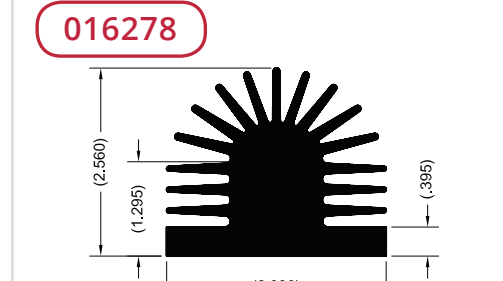
**Per.** 30.65 in.  
**WT.** 1.44 lb/ft  
**θsa** 2.60 °C/w/3"



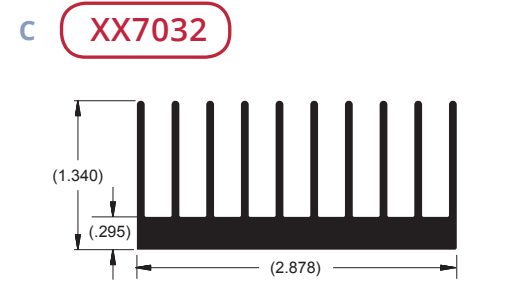
**Per.** 10.56 in.  
**WT.** 0.48 lb/ft  
**θsa** 6.60 °C/w/3"



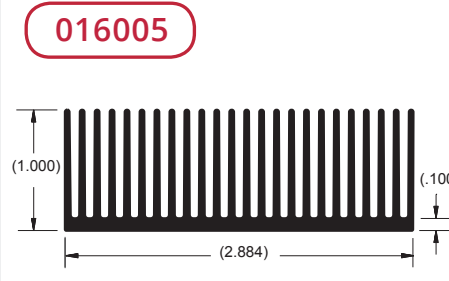
**Per.** 22.86 in.  
**WT.** 0.84 lb/ft  
**θsa** 3.10 °C/w/3"



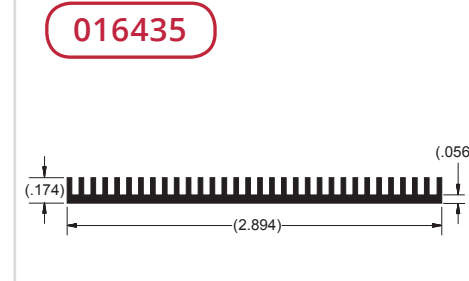
**Per.** 31.34 in.  
**WT.** 4.84 lb/ft  
**θsa** 2.30 °C/w/3"



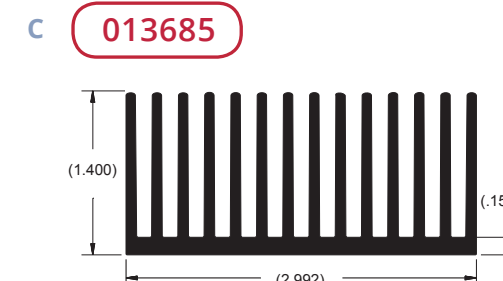
**Per.** 28.41 in.  
**WT.** 1.91 lb/ft  
**θsa** 2.80 °C/w/3"



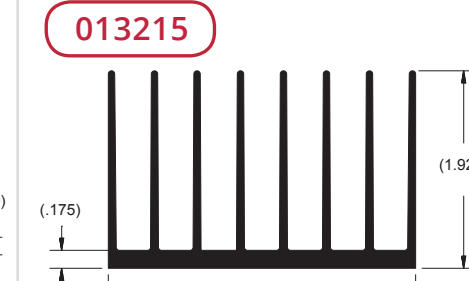
**Per.** 48.21 in.  
**WT.** 1.23 lb/ft  
**θsa** 5.80 °C/w/3"



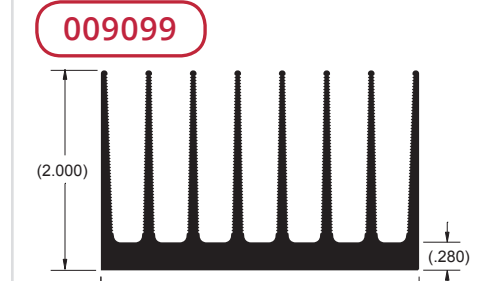
**Per.** 13.45 in.  
**WT.** 0.36 lb/ft  
**θsa** 12.10 °C/w/3"



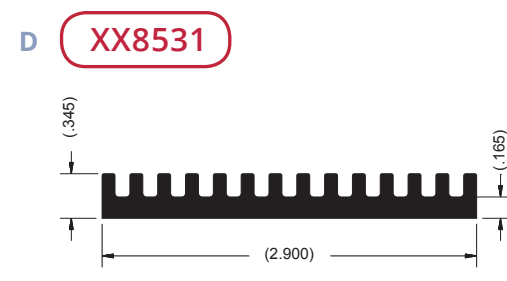
**Per.** 40.47 in.  
**WT.** 2.32 lb/ft  
**θsa** 1.70 °C/w/3"



**Per.** 33.84 in.  
**WT.** 1.80 lb/ft  
**θsa** 2.10 °C/w/3"



**Per.** 45.93 in.  
**WT.** 2.56 lb/ft  
**θsa** 1.50 °C/w/3"



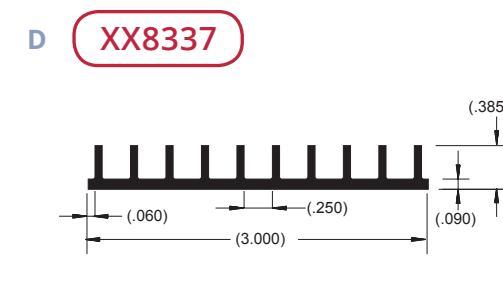
**Per.** 10.70 in.  
**WT.** 0.83 lb/ft  
**θsa** 8.50 °C/w/3"



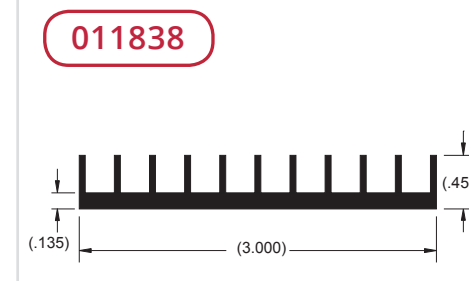
**Per.** 19.78 in.  
**WT.** 0.63 lb/ft  
**θsa** 5.60 °C/w/3"



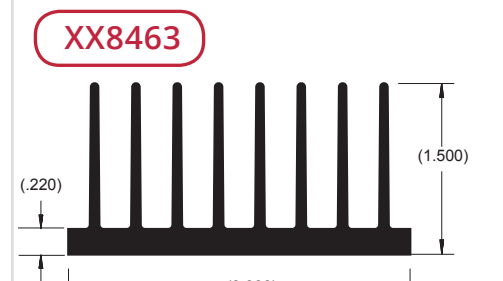
**Per.** 26.14 in.  
**WT.** 1.82 lb/ft  
**θsa** 3.10 °C/w/3"



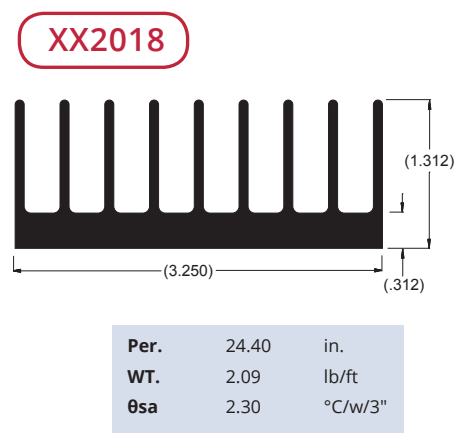
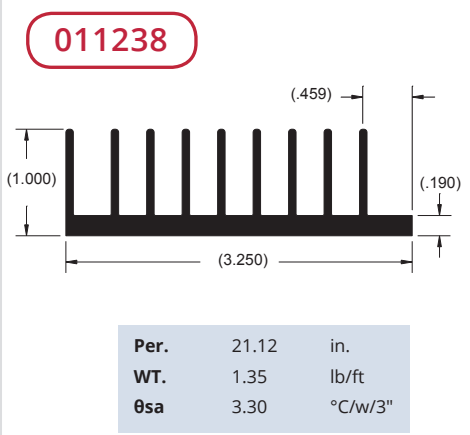
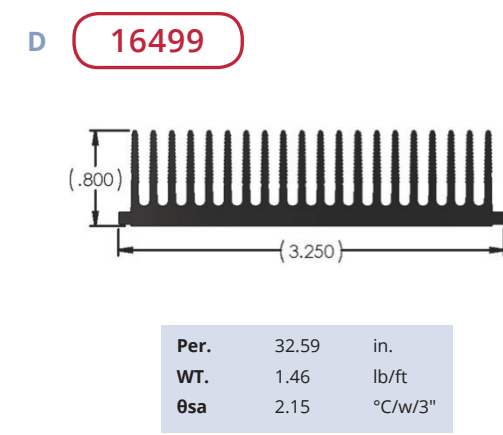
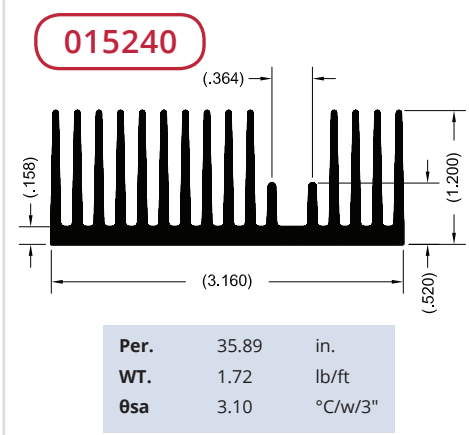
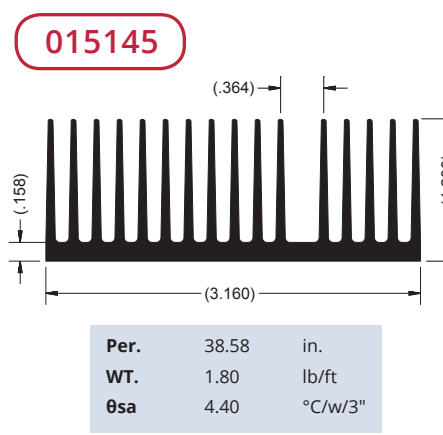
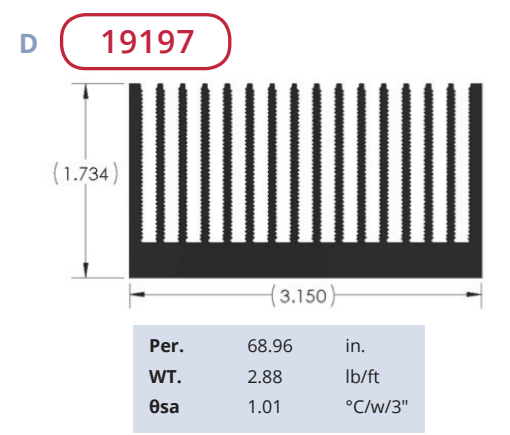
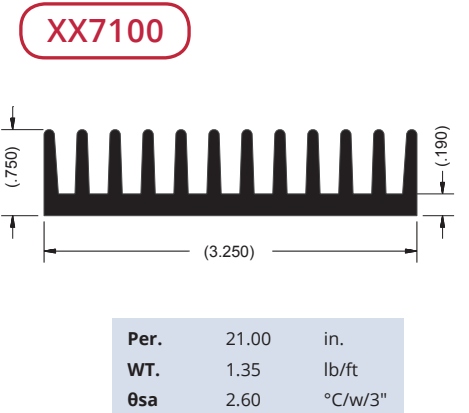
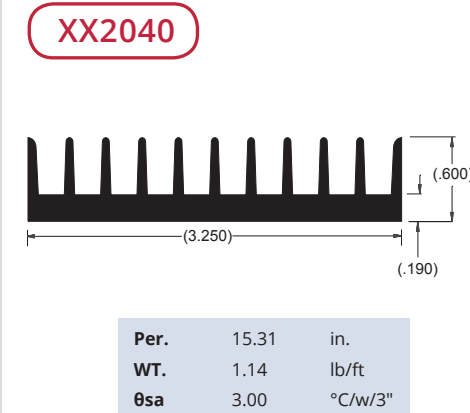
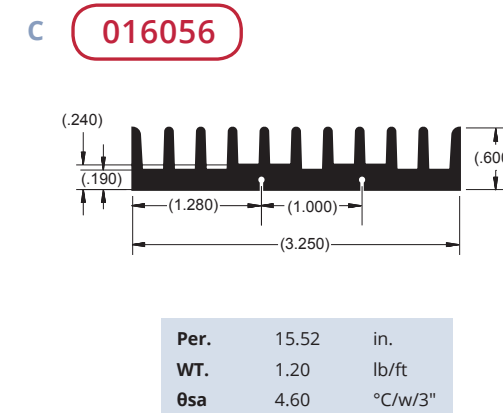
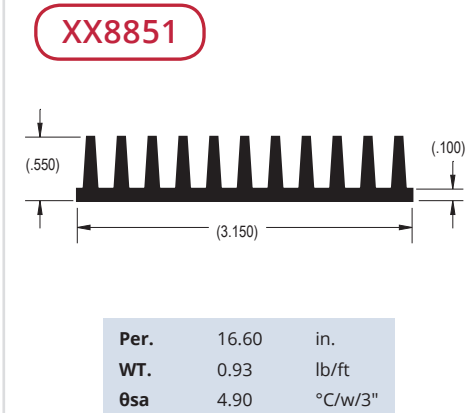
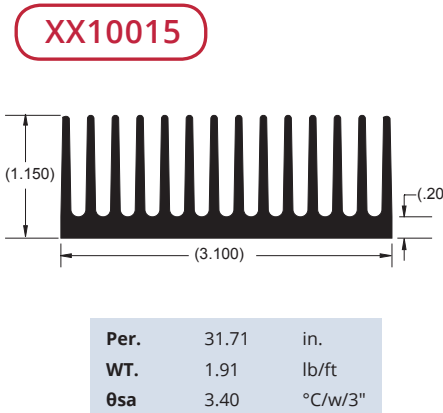
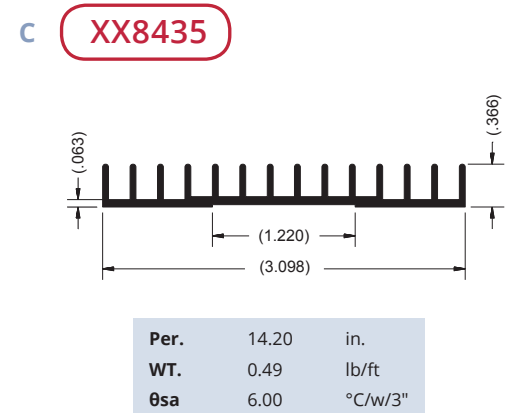
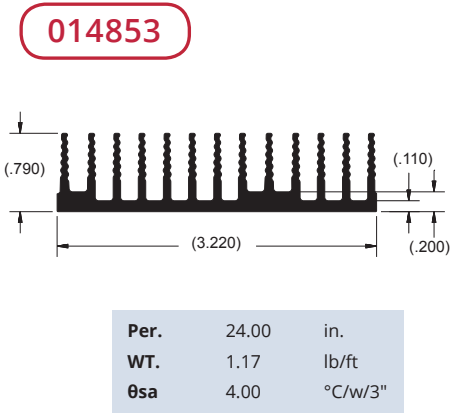
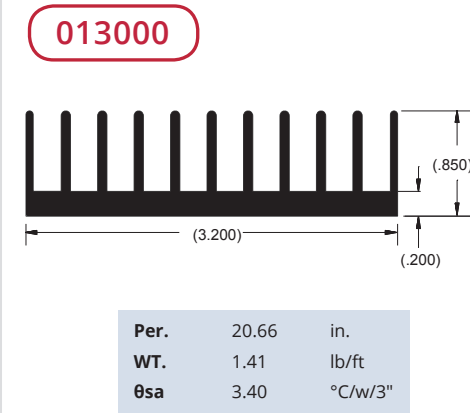
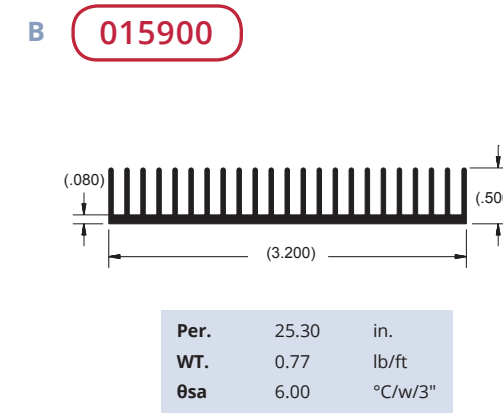
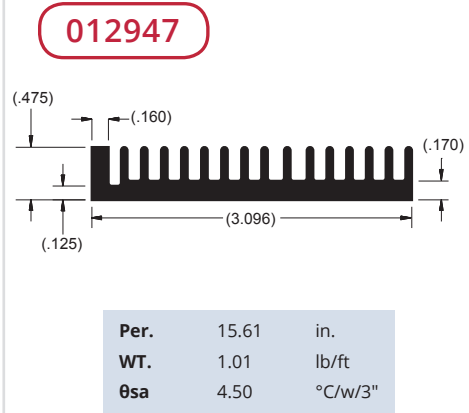
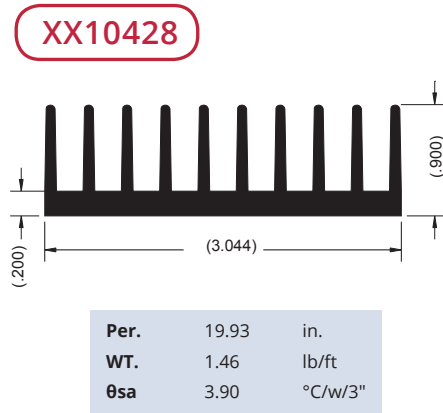
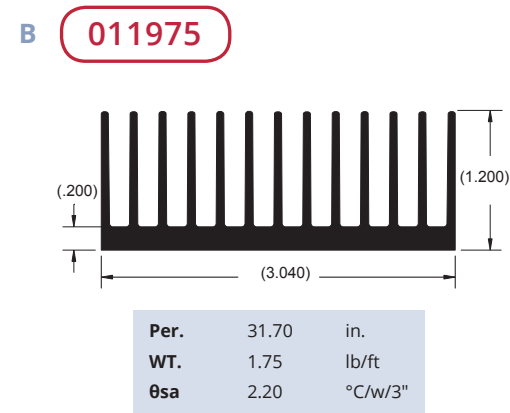
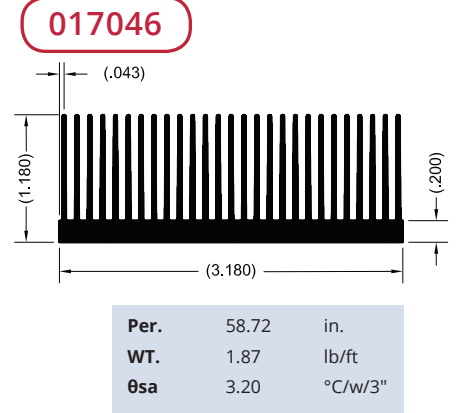
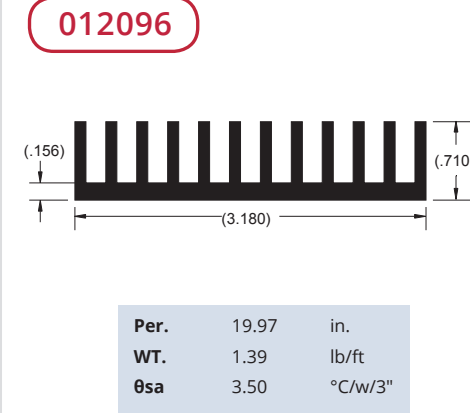
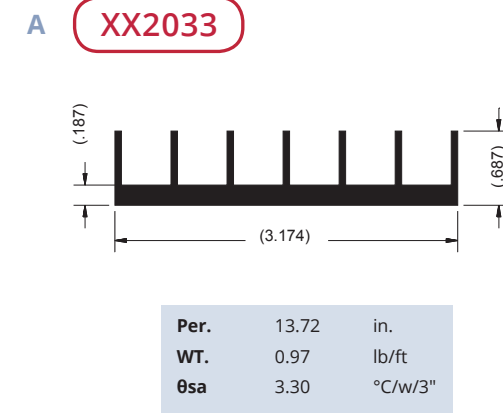
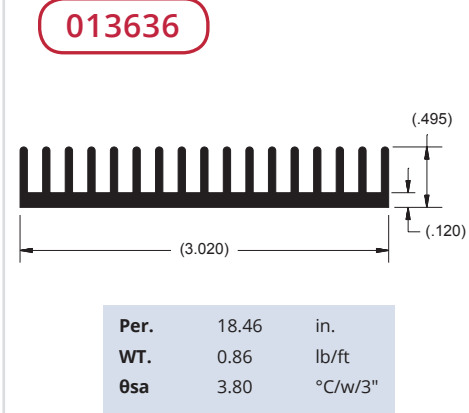
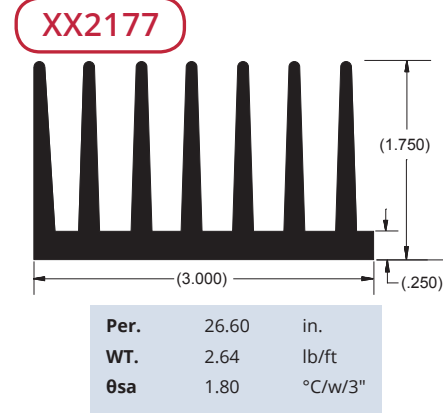
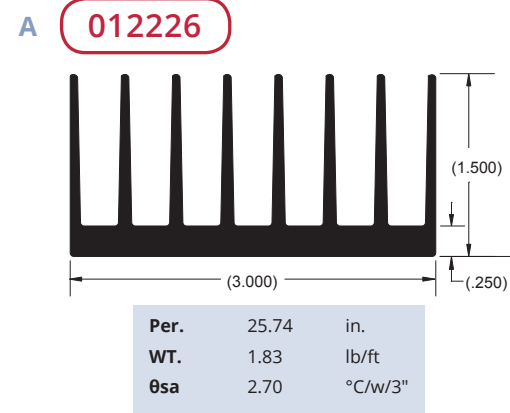
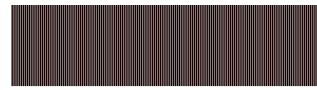
**Per.** 11.70 in.  
**WT.** 0.51 lb/ft  
**θsa** 5.50 °C/w/3"

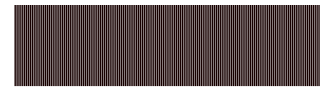


**Per.** 13.11 in.  
**WT.** 0.67 lb/ft  
**θsa** 5.30 °C/w/3"

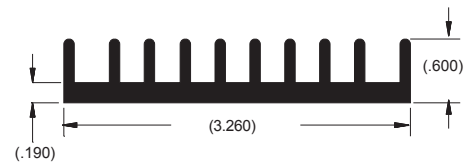


**Per.** 26.30 in.  
**WT.** 1.54 lb/ft  
**θsa** 2.80 °C/w/3"



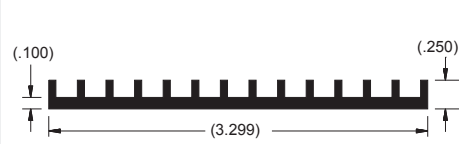


**A** **XX0387**



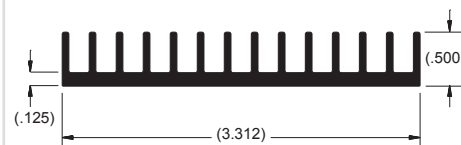
**Per.** 15.10 in.  
**WT.** 1.23 lb/ft  
**θsa** 4.40 °C/w/3"

**012518**



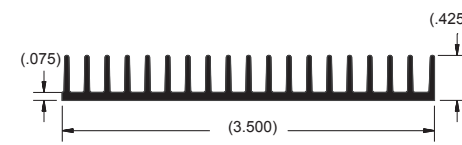
**Per.** 10.89 in.  
**WT.** 0.54 lb/ft  
**θsa** 6.40 °C/w/3"

**014262**



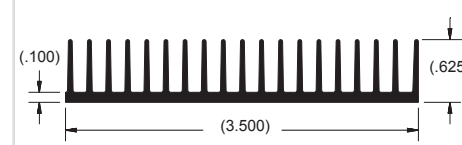
**Per.** 16.94 in.  
**WT.** 0.88 lb/ft  
**θsa** 4.10 °C/w/3"

**A** **014801**



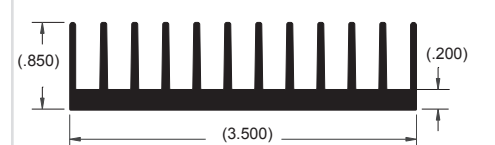
**Per.** 19.65 in.  
**WT.** 0.67 lb/ft  
**θsa** 5.30 °C/w/3"

**014803**



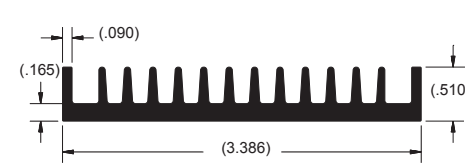
**Per.** 26.23 in.  
**WT.** 0.98 lb/ft  
**θsa** 4.50 °C/w/3"

**011457**



**Per.** 22.48 in.  
**WT.** 1.48 lb/ft  
**θsa** 3.00 °C/w/3"

**B** **016064**



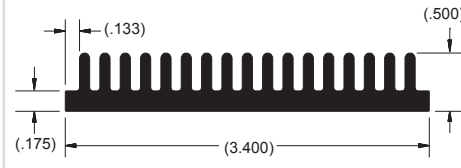
**Per.** 15.71 in.  
**WT.** 1.13 lb/ft  
**θsa** 5.20 °C/w/3"

**012680**



**Per.** 27.96 in.  
**WT.** 1.74 lb/ft  
**θsa** 2.50 °C/w/3"

**013293**



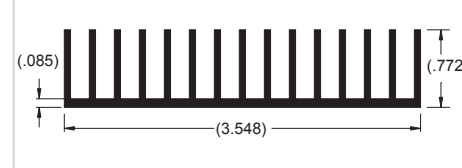
**Per.** 17.07 in.  
**WT.** 1.29 lb/ft  
**θsa** 4.10 °C/w/3"

**B** **XX7116**



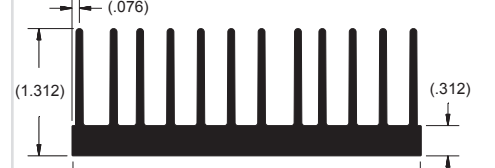
**Per.** 31.33 in.  
**WT.** 2.32 lb/ft  
**θsa** 2.40 °C/w/3"

**012443**



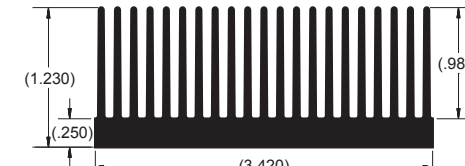
**Per.** 27.76 in.  
**WT.** 1.10 lb/ft  
**θsa** 2.50 °C/w/3"

**014367**



**Per.** 31.04 in.  
**WT.** 2.42 lb/ft  
**θsa** 2.30 °C/w/3"

**C** **016655**



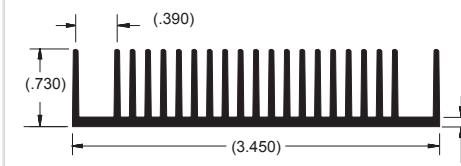
**Per.** 47.29 in.  
**WT.** 2.33 lb/ft  
**θsa** 4.90 °C/w/3"

**017026**



**Per.** 75.51 in.  
**WT.** 2.47 lb/ft  
**θsa** 5.40 °C/w/3"

**014966**



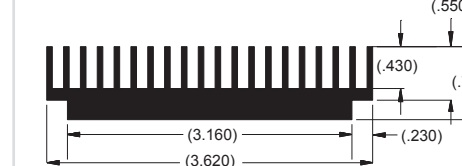
**Per.** 33.25 in.  
**WT.** 1.22 lb/ft  
**θsa** 4.80 °C/w/3"

**C** **19492**



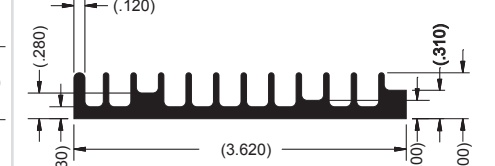
**Per.** 51.76 in.  
**WT.** 3.39 lb/ft  
**θsa** 1.35 °C/w/3"

**016438**



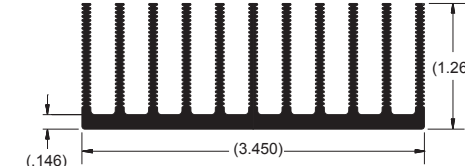
**Per.** 25.08 in.  
**WT.** 1.92 lb/ft  
**θsa** 4.20 °C/w/3"

**015045**



**Per.** 15.01 in.  
**WT.** 1.04 lb/ft  
**θsa** 4.90 °C/w/3"

**D** **014844**



**Per.** 44.42 in.  
**WT.** 1.62 lb/ft  
**θsa** 1.60 °C/w/3"

**13457**



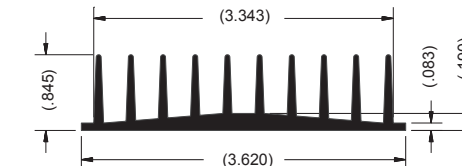
**Per.** 28.99 in.  
**WT.** 2.07 lb/ft  
**θsa** 2.41 °C/w/3"

**016531**



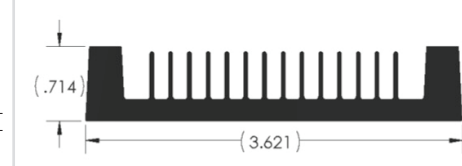
**Per.** 64.12 in.  
**WT.** 3.67 lb/ft  
**θsa** 2.60 °C/w/3"

**D** **XX5582**



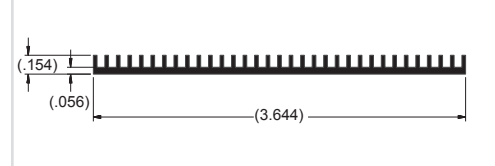
**Per.** 20.71 in.  
**WT.** 1.26 lb/ft  
**θsa** 2.80 °C/w/3"

**19843**



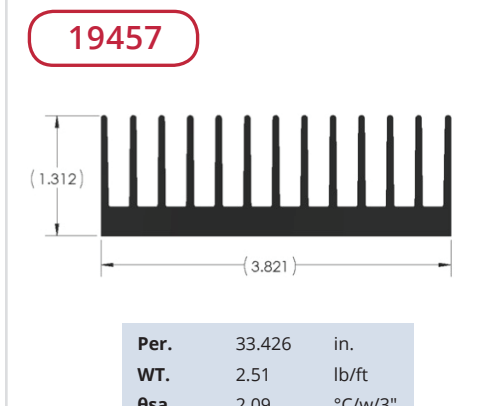
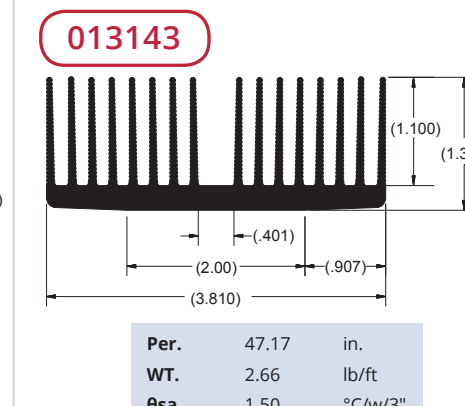
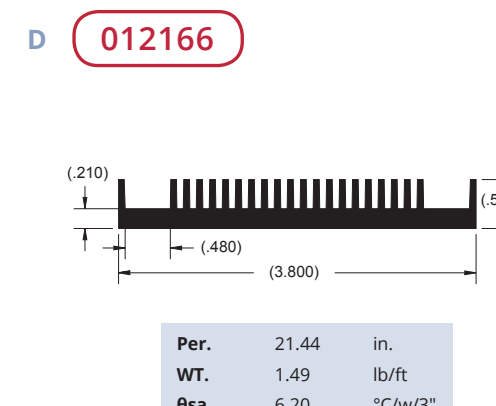
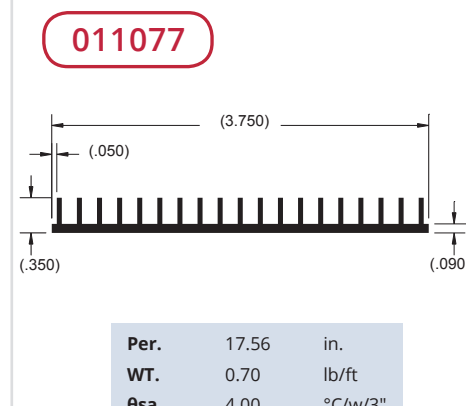
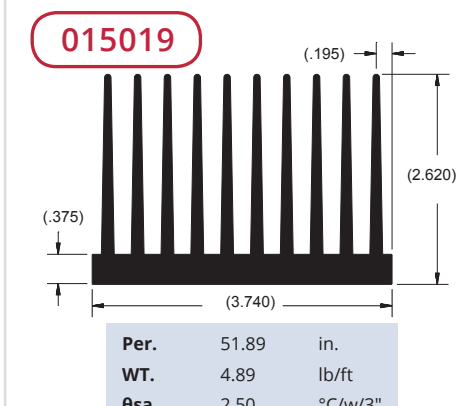
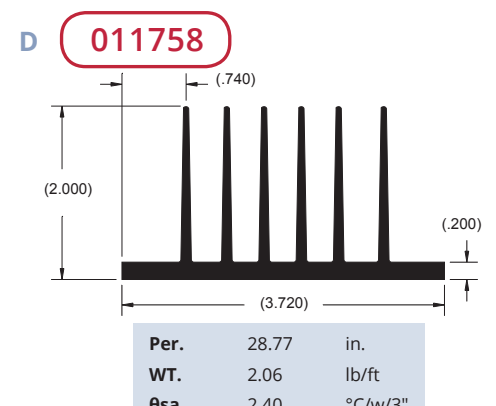
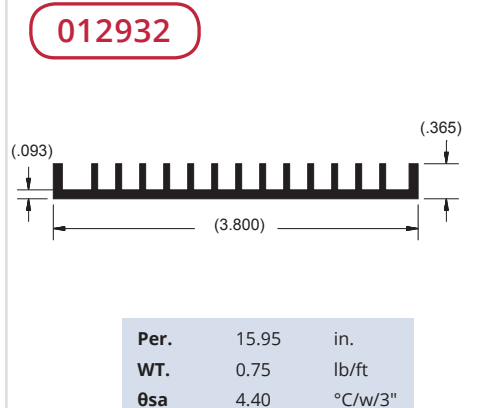
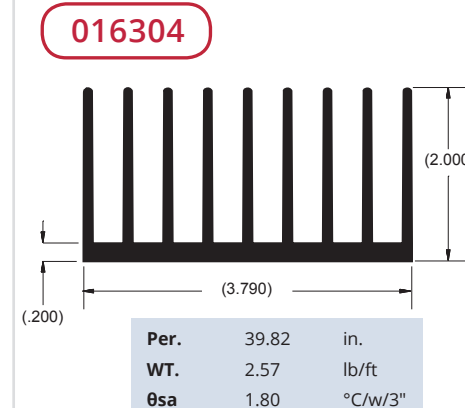
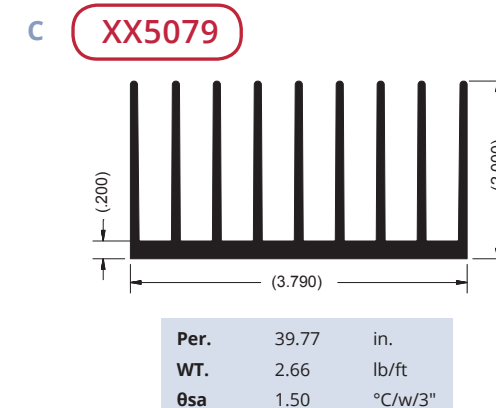
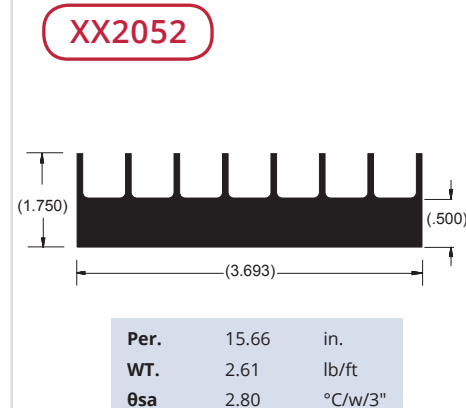
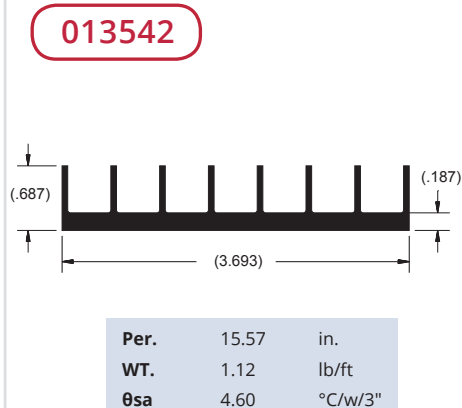
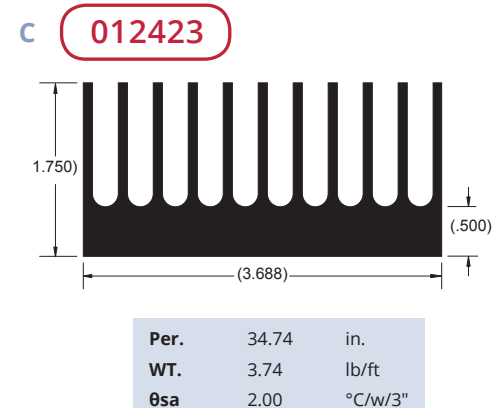
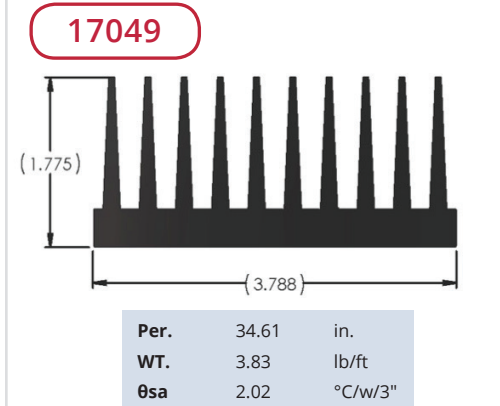
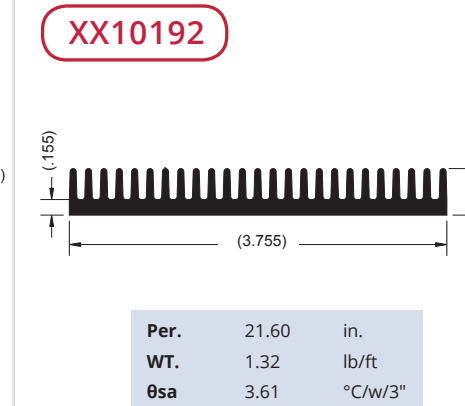
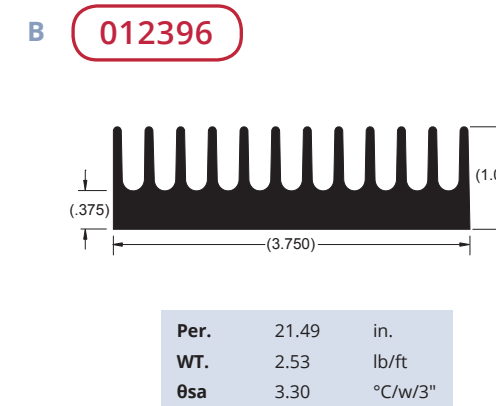
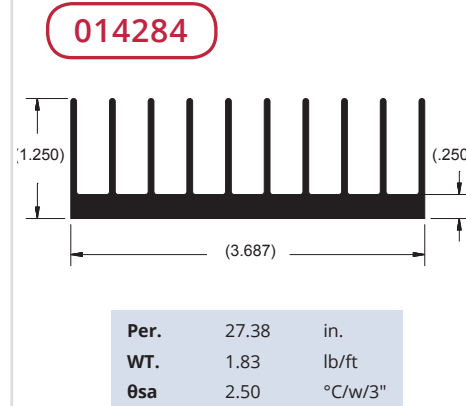
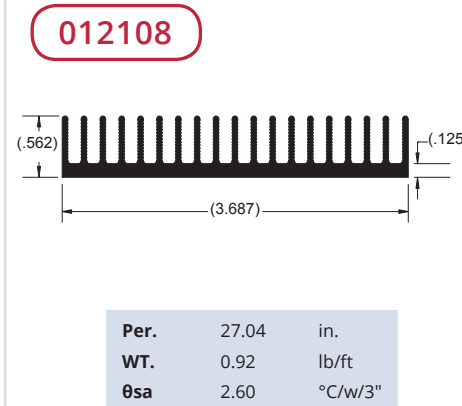
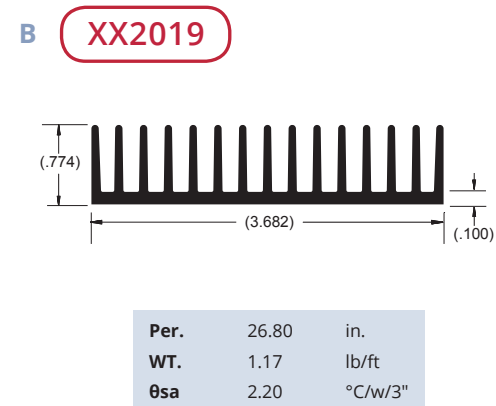
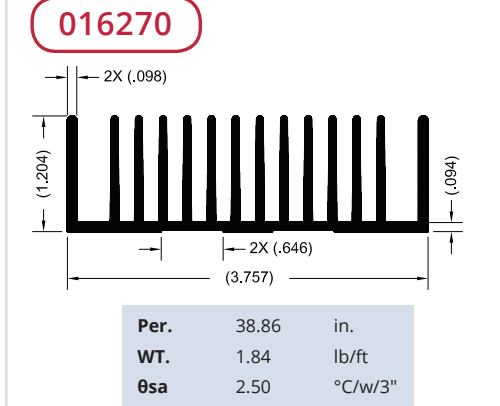
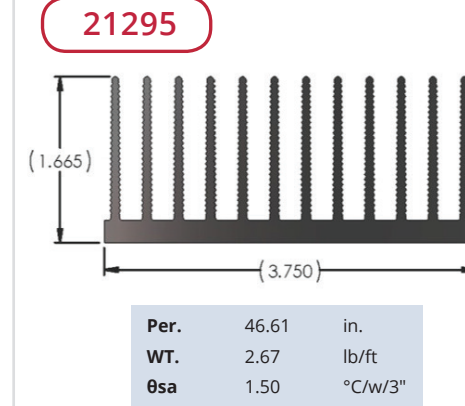
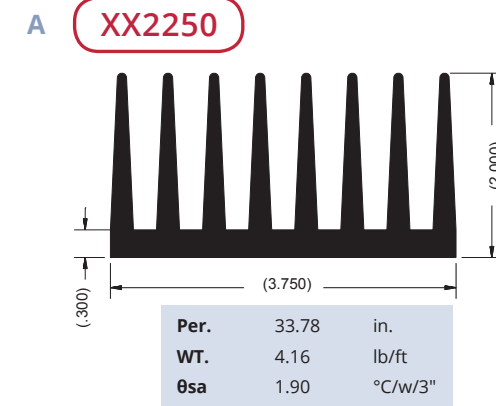
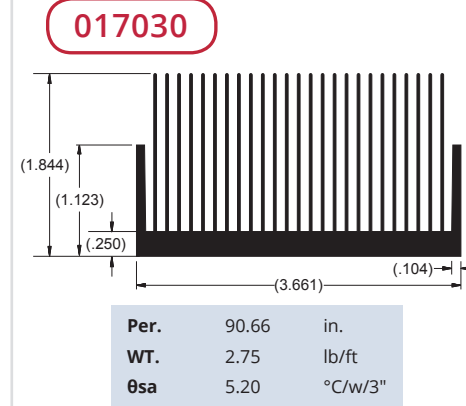
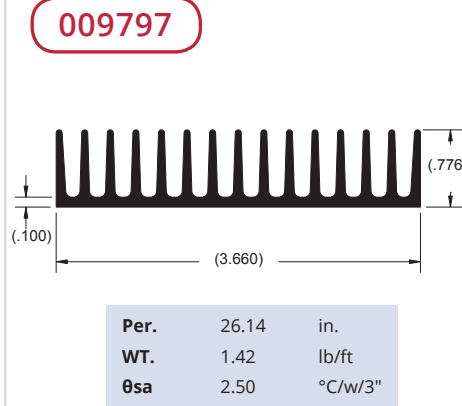
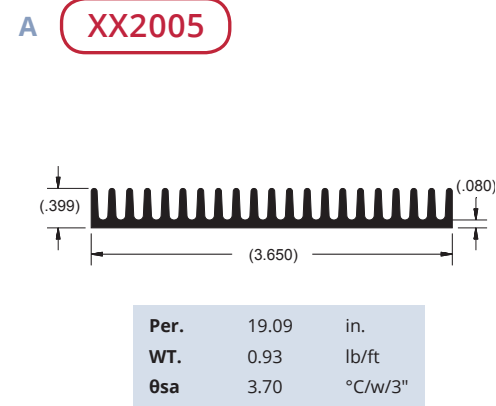
**Per.** 21.58 in.  
**WT.** 1.67 lb/ft  
**θsa** 3.24 °C/w/3"

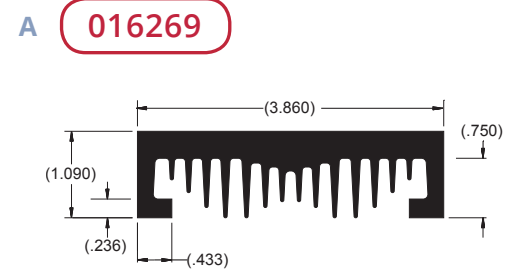
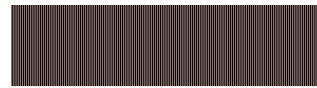
**016437**



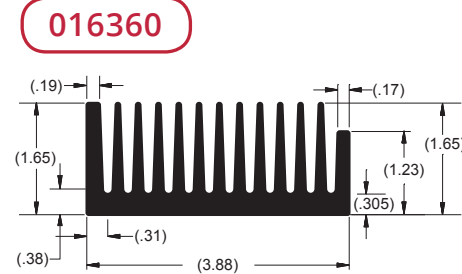
**Per.** 13.87 in.  
**WT.** 0.38 lb/ft  
**θsa** 12.00 °C/w/3"



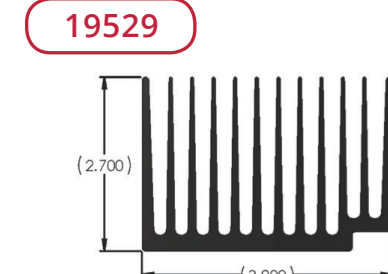




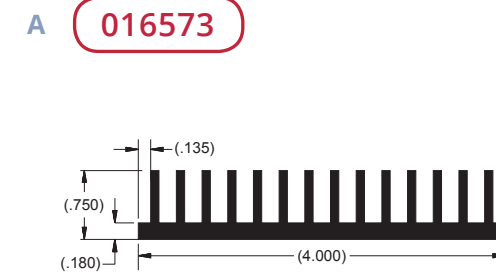
**Per.** 25.82 in.  
**WT.** 2.93 lb/ft  
**θsa** 3.30 °C/w/3"



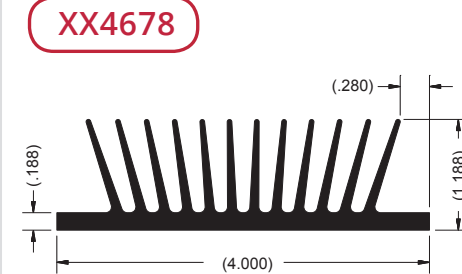
**Per.** 40.33 in.  
**WT.** 3.89 lb/ft  
**θsa** 2.90 °C/w/3"



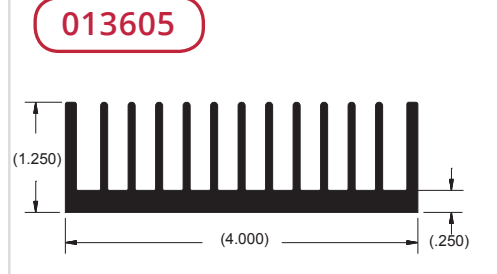
**Per.** 63.88 in.  
**WT.** 4.66 lb/ft  
**θsa** 1.09 °C/w/3"



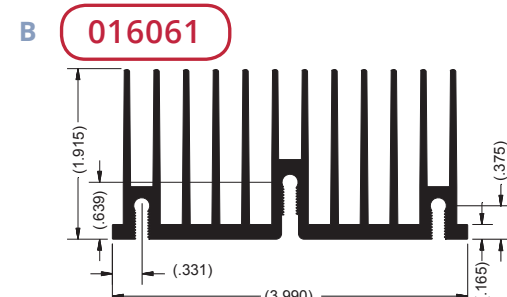
**Per.** 24.32 in.  
**WT.** 1.73 lb/ft  
**θsa** 3.70 °C/w/3"



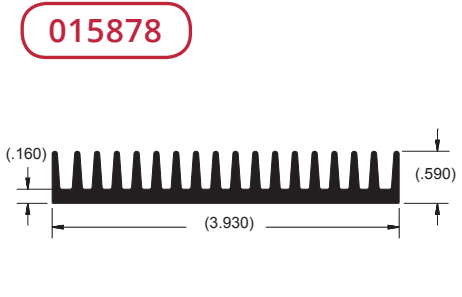
**Per.** 32.90 in.  
**WT.** 1.93 lb/ft  
**θsa** 2.30 °C/w/3"



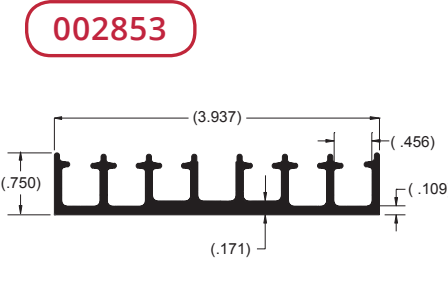
**Per.** 33.87 in.  
**WT.** 2.55 lb/ft  
**θsa** 2.10 °C/w/3"



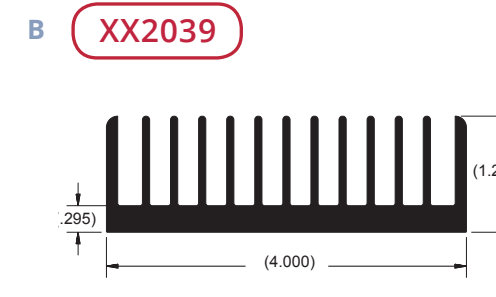
**Per.** 51.63 in.  
**WT.** 2.81 lb/ft  
**θsa** 2.30 °C/w/3"



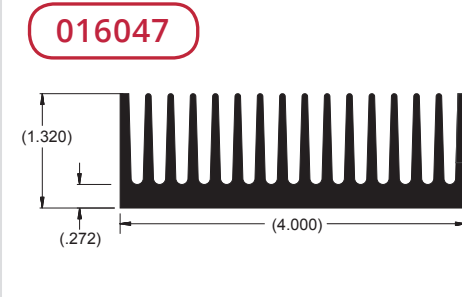
**Per.** 21.95 in.  
**WT.** 1.54 lb/ft  
**θsa** 9.70 °C/w/3"



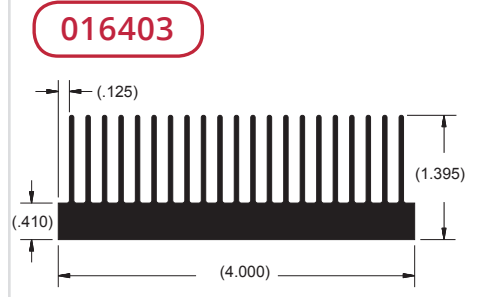
**Per.** 22.00 in.  
**WT.** 1.20 lb/ft  
**θsa** 3.20 °C/w/3"



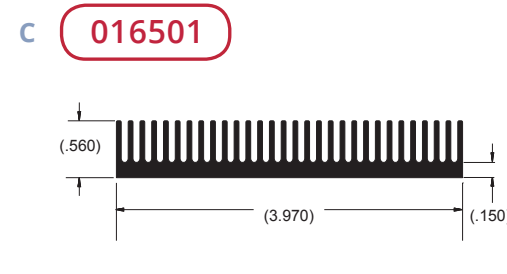
**Per.** 33.66 in.  
**WT.** 2.75 lb/ft  
**θsa** 1.90 °C/w/3"



**Per.** 40.03 in.  
**WT.** 3.15 lb/ft  
**θsa** 2.70 °C/w/3"



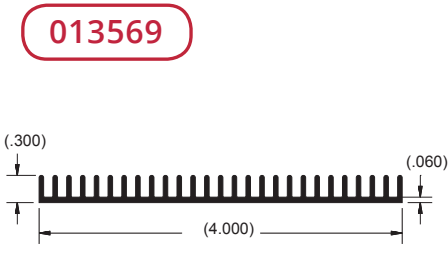
**Per.** 49.20 in.  
**WT.** 3.21 lb/ft  
**θsa** 3.40 °C/w/3"



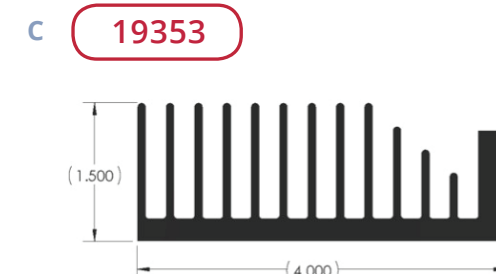
**Per.** 31.46 in.  
**WT.** 1.55 lb/ft  
**θsa** 6.10 °C/w/3"



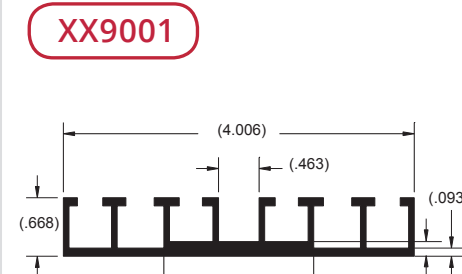
**Per.** 102.27 in.  
**WT.** 4.33 lb/ft  
**θsa** 0.68 °C/w/3"



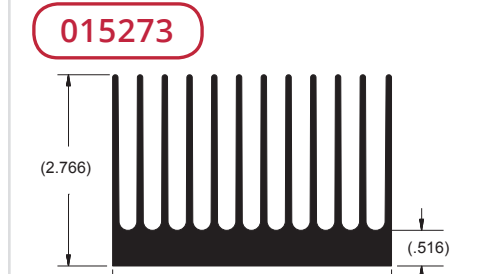
**Per.** 20.17 in.  
**WT.** 0.67 lb/ft  
**θsa** 7.20 °C/w/3"



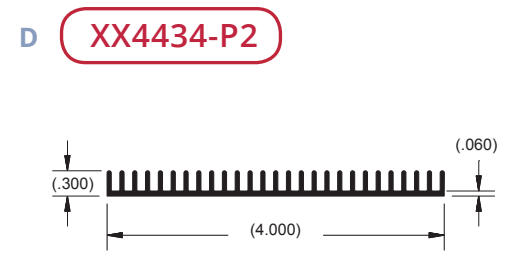
**Per.** 36.60 in.  
**WT.** 2.99 lb/ft  
**θsa** 1.91 °C/w/3"



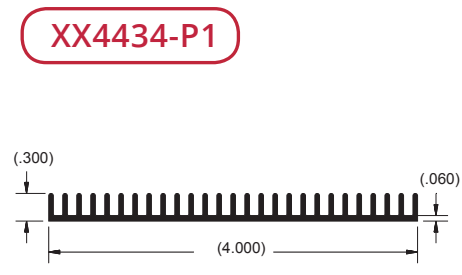
**Per.** 19.51 in.  
**WT.** 1.08 lb/ft  
**θsa** 2.40 °C/w/3"



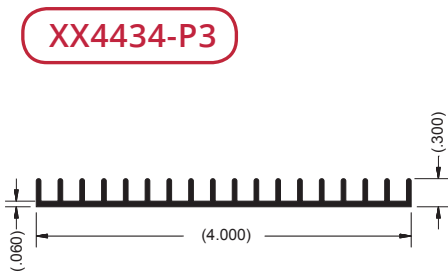
**Per.** 61.28 in.  
**WT.** 5.37 lb/ft  
**θsa** 1.80 °C/w/3"



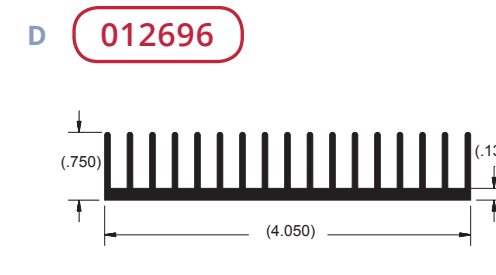
**Per.** 20.16 in.  
**WT.** 0.67 lb/ft  
**θsa** 2.70 °C/w/3"



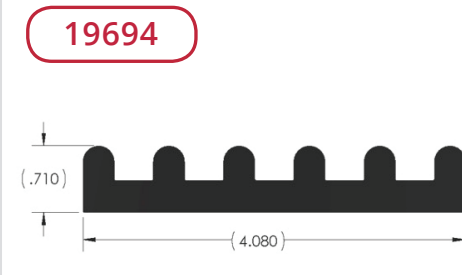
**Per.** 16.22 in.  
**WT.** 0.55 lb/ft  
**θsa** 3.00 °C/w/3"



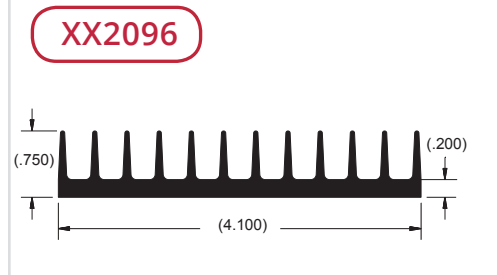
**Per.** 23.96 in.  
**WT.** 0.76 lb/ft  
**θsa** 7.00 °C/w/3"



**Per.** 28.99 in.  
**WT.** 1.41 lb/ft  
**θsa** 2.40 °C/w/3"



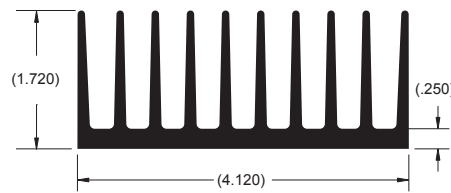
**Per.** 12.34 in.  
**WT.** 2.50 lb/ft  
**θsa** 5.66 °C/w/3"



**Per.** 20.48 in.  
**WT.** 1.56 lb/ft  
**θsa** 2.50 °C/w/3"

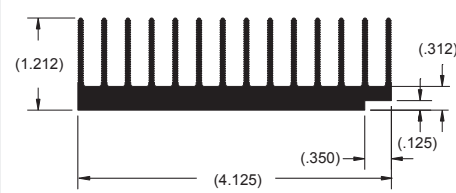


**A** 011299



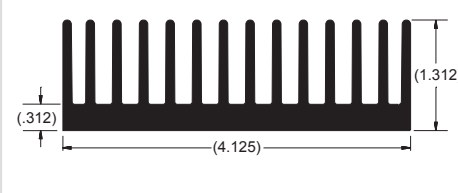
**Per.** 36.66 in.  
**WT.** 3.41 lb/ft  
**θsa** 1.90 °C/w/3"

008658



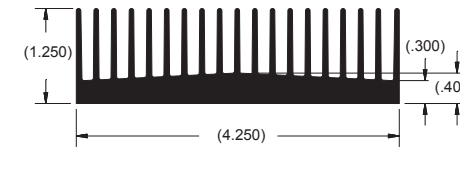
**Per.** 42.61 in.  
**WT.** 2.41 lb/ft  
**θsa** 2.20 °C/w/3"

XX2012



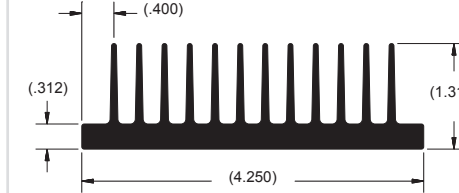
**Per.** 35.79 in.  
**WT.** 3.30 lb/ft  
**θsa** 2.00 °C/w/3"

**A** 012677



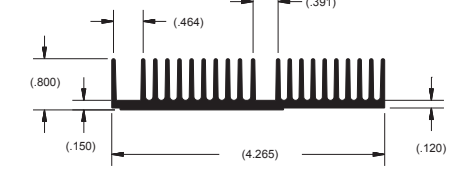
**Per.** 42.21 in.  
**WT.** 3.16 lb/ft  
**θsa** 1.70 °C/w/3"

XX2004



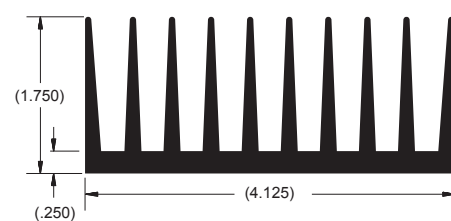
**Per.** 31.70 in.  
**WT.** 2.75 lb/ft  
**θsa** 2.20 °C/w/3"

014793



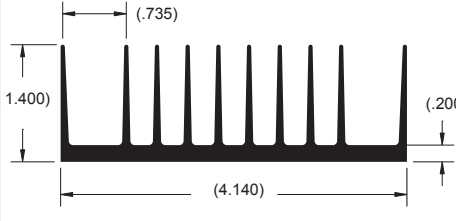
**Per.** 34.36 in.  
**WT.** 1.78 lb/ft  
**θsa** 4.30 °C/w/3"

**B** XX5138



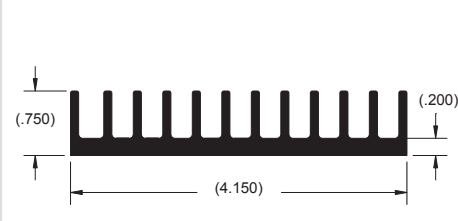
**Per.** 37.30 in.  
**WT.** 3.53 lb/ft  
**θsa** 1.90 °C/w/3"

009396



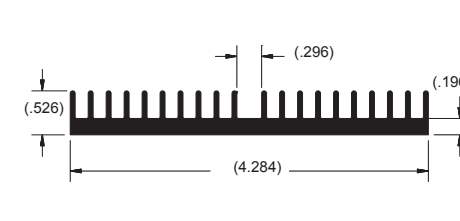
**Per.** 31.61 in.  
**WT.** 2.07 lb/ft  
**θsa** 2.10 °C/w/3"

010785



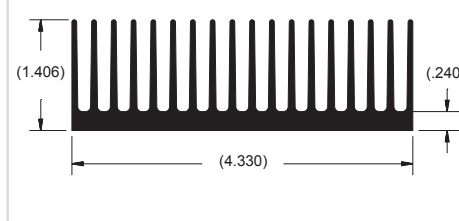
**Per.** 21.17 in.  
**WT.** 1.80 lb/ft  
**θsa** 3.20 °C/w/3"

**B** 015936



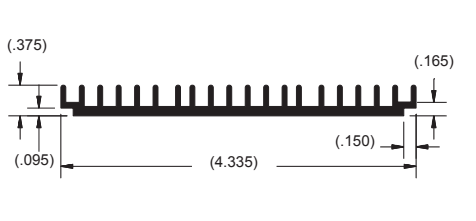
**Per.** 21.39 in.  
**WT.** 1.47 lb/ft  
**θsa** 4.50 °C/w/3"

013729



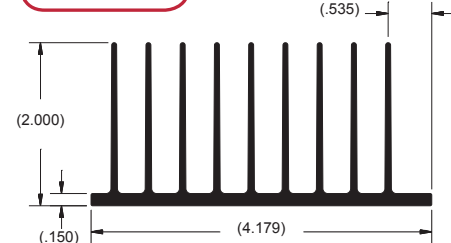
**Per.** 49.27 in.  
**WT.** 3.13 lb/ft  
**θsa** 1.40 °C/w/3"

016003



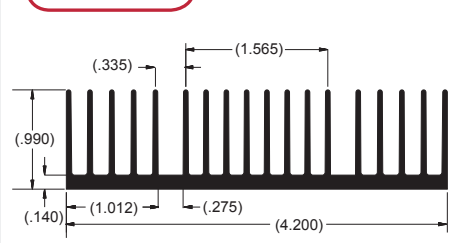
**Per.** 18.90 in.  
**WT.** 0.95 lb/ft  
**θsa** 6.10 °C/w/3"

**C** 013733



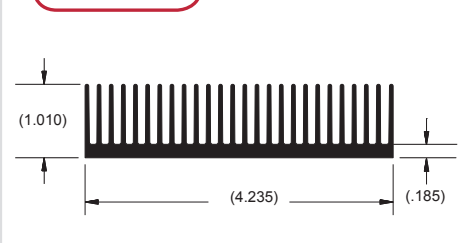
**Per.** 41.06 in.  
**WT.** 2.16 lb/ft  
**θsa** 1.70 °C/w/3"

016423



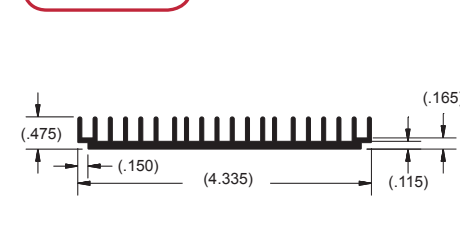
**Per.** 38.35 in.  
**WT.** 1.72 lb/ft  
**θsa** 2.90 °C/w/3"

014813



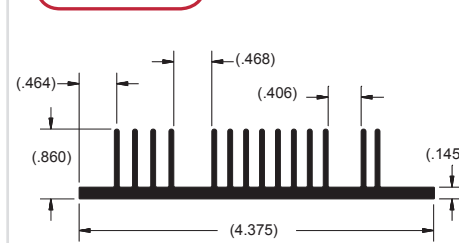
**Per.** 50.61 in.  
**WT.** 2.46 lb/ft  
**θsa** 1.40 °C/w/3"

**C** 015945



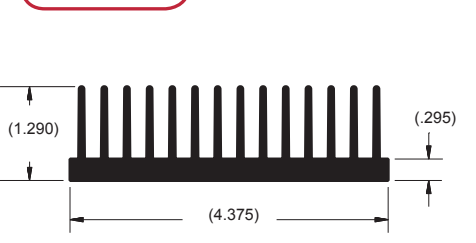
**Per.** 22.40 in.  
**WT.** 1.09 lb/ft  
**θsa** 5.80 °C/w/3"

015172



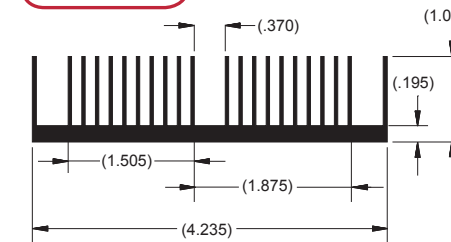
**Per.** 28.44 in.  
**WT.** 1.48 lb/ft  
**θsa** 4.20 °C/w/3"

XX1527



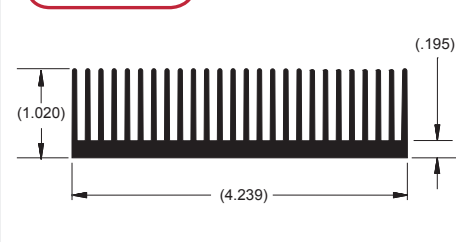
**Per.** 36.45 in.  
**WT.** 2.58 lb/ft  
**θsa** 1.40 °C/w/3"

**D** 016192



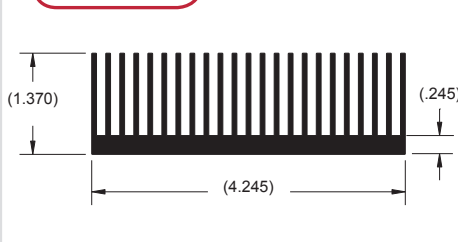
**Per.** 45.16 in.  
**WT.** 1.88 lb/ft  
**θsa** 3.60 °C/w/3"

016232



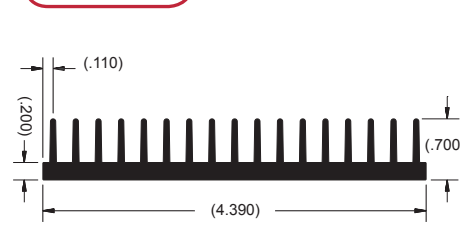
**Per.** 50.70 in.  
**WT.** 2.49 lb/ft  
**θsa** 3.70 °C/w/3"

009168



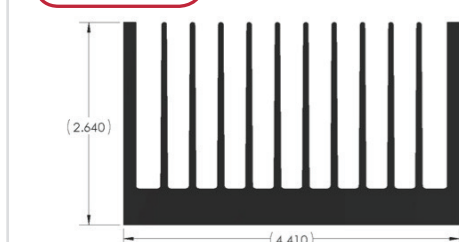
**Per.** 59.90 in.  
**WT.** 3.30 lb/ft  
**θsa** 3.50 °C/w/3"

**D** 013564



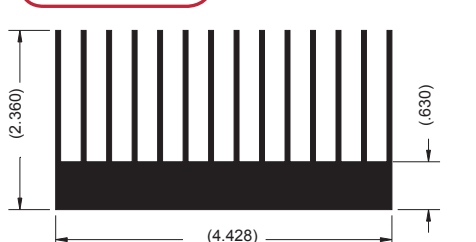
**Per.** 25.37 in.  
**WT.** 1.74 lb/ft  
**θsa** 2.80 °C/w/3"

19249

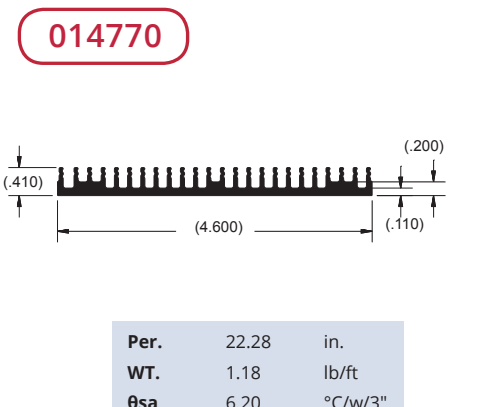
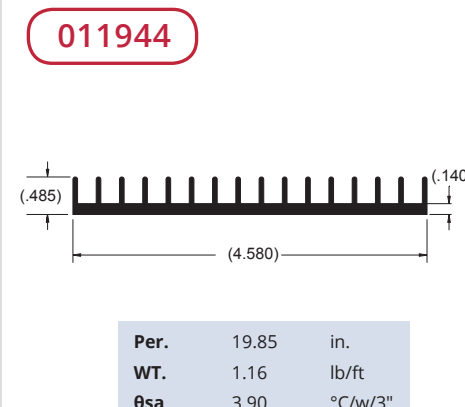
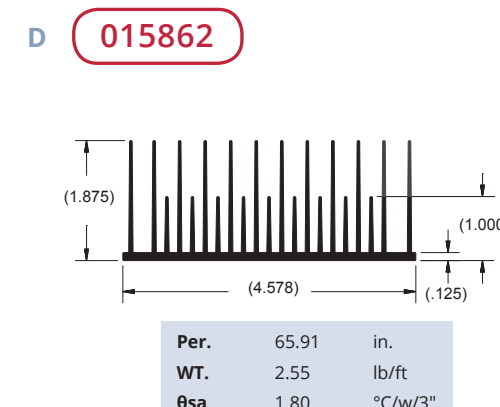
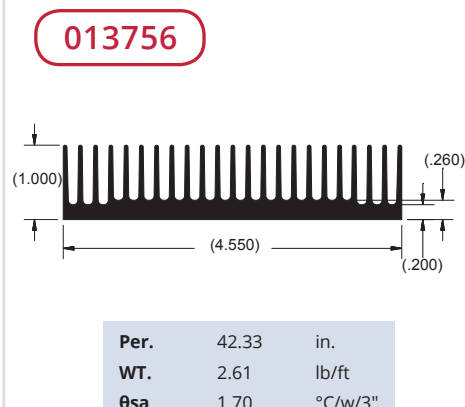
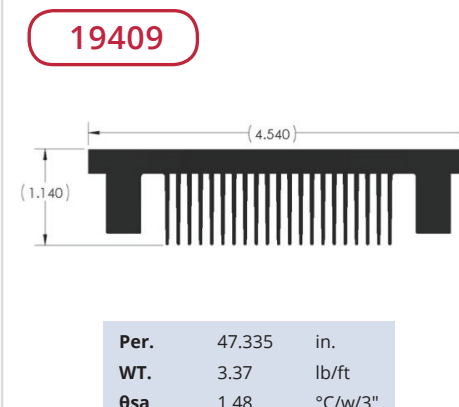
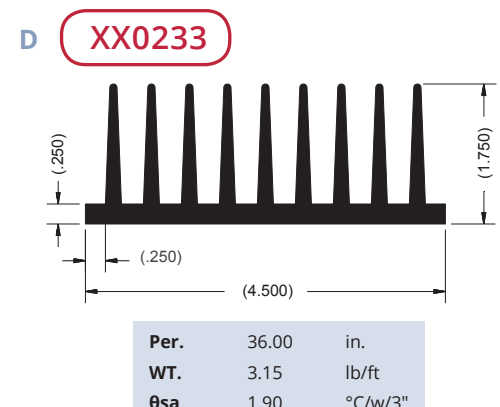
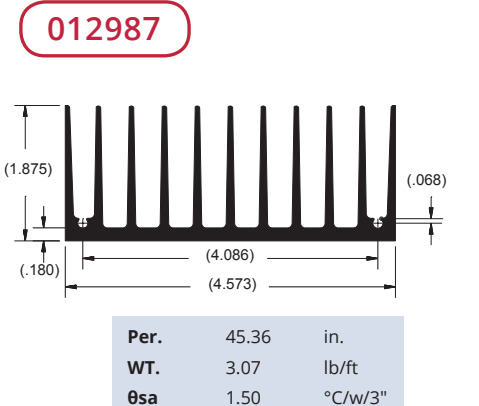
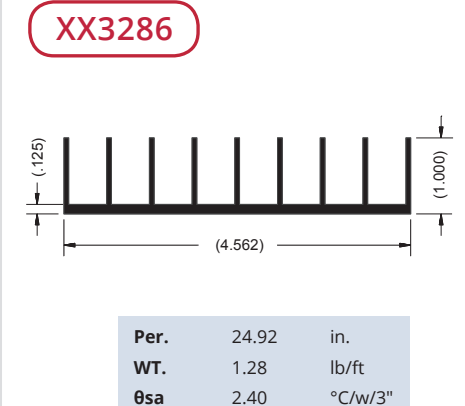
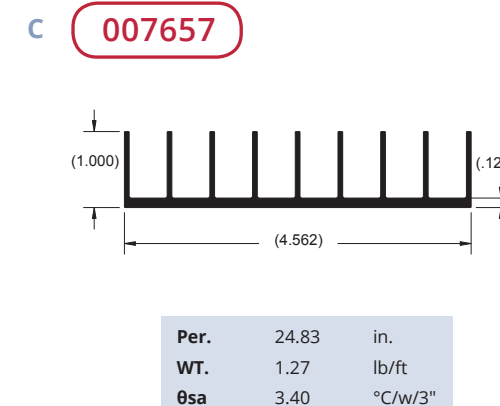
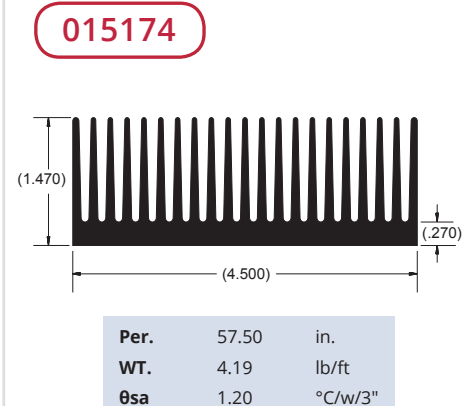
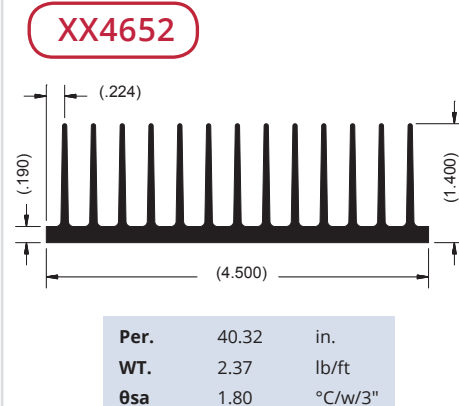
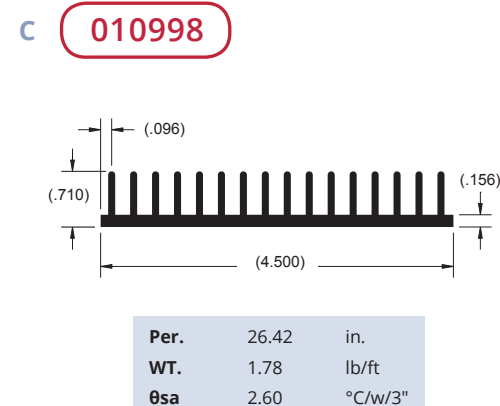
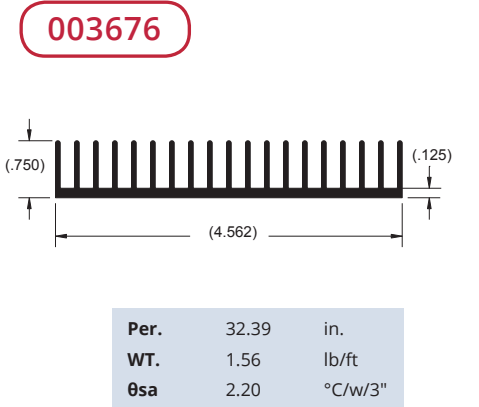
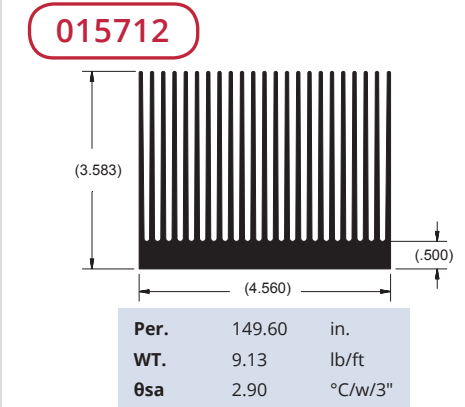
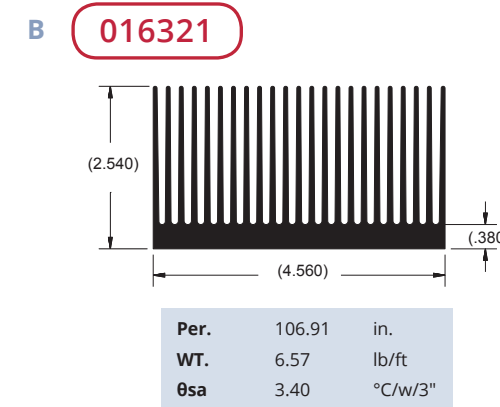
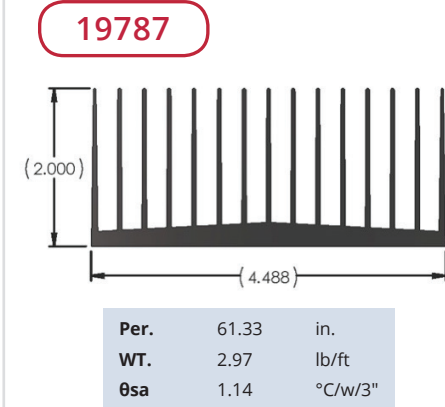
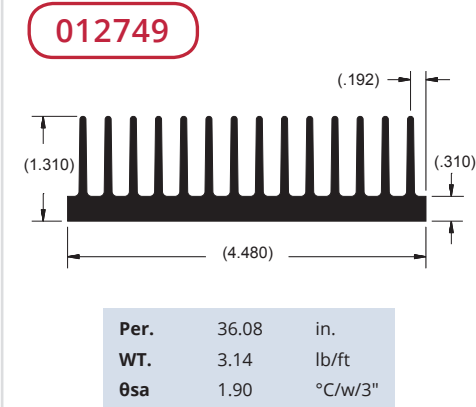
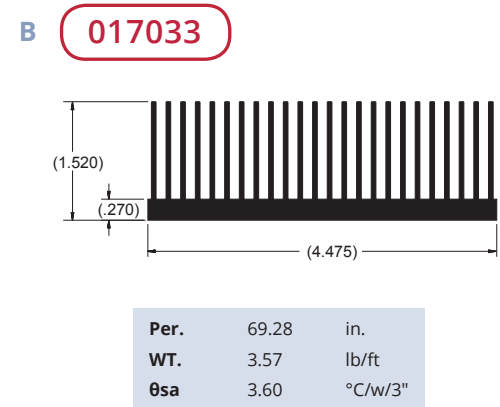
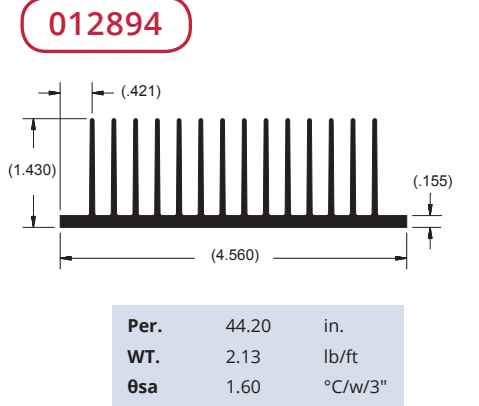
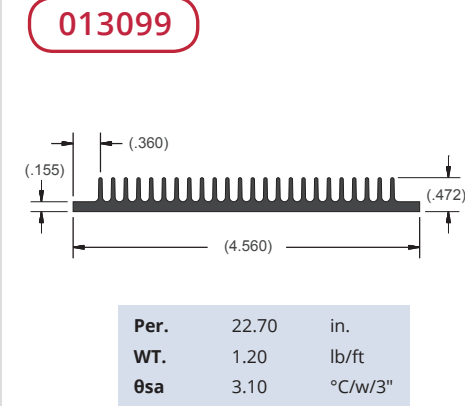
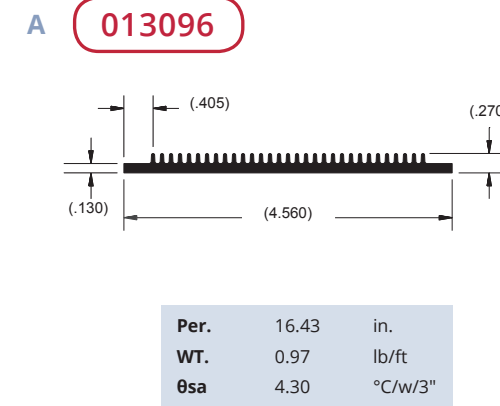
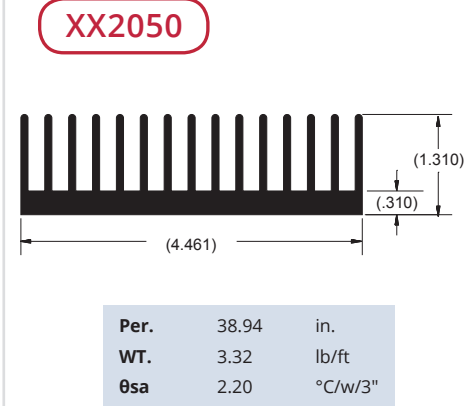
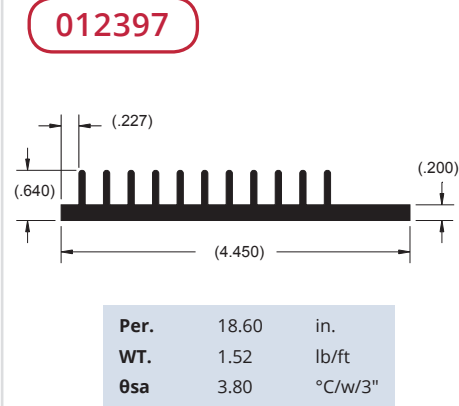
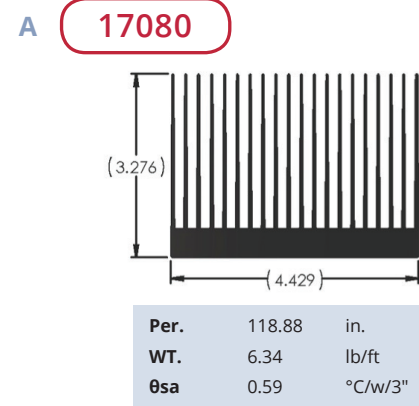


**Per.** 60.91 in.  
**WT.** 5.27 lb/ft  
**θsa** 1.15 °C/w/3"

XX10253

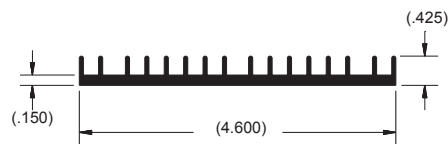


**Per.** 58.56 in.  
**WT.** 5.24 lb/ft  
**θsa** 1.36 °C/w/3"





**A** 013618



**Per.** 17.69 in.  
**WT.** 1.14 lb/ft  
**θsa** 4.00 °C/w/3"

013716



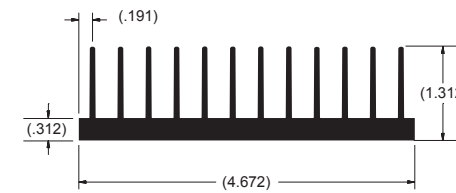
**Per.** 31.72 in.  
**WT.** 1.54 lb/ft  
**θsa** 2.20 °C/w/3"

012823



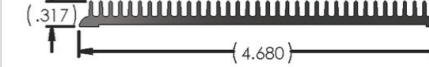
**Per.** 27.45 in.  
**WT.** 1.40 lb/ft  
**θsa** 2.50 °C/w/3"

**A** 014320



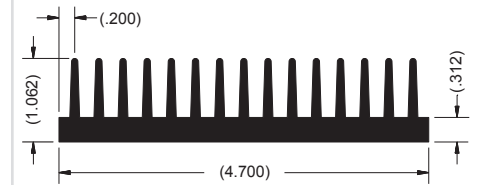
**Per.** 33.46 in.  
**WT.** 2.81 lb/ft  
**θsa** 2.10 °C/w/3"

21153



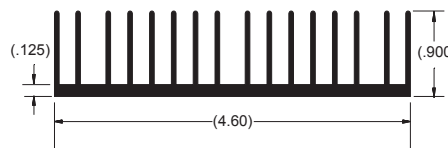
**Per.** 21.43 in.  
**WT.** 0.89 lb/ft  
**θsa** 3.26 °C/w/3"

XX7150



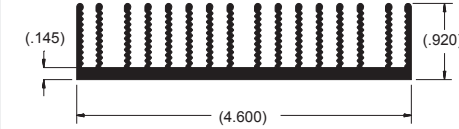
**Per.** 32.42 in.  
**WT.** 2.85 lb/ft  
**θsa** 2.40 °C/w/3"

**B** 012614



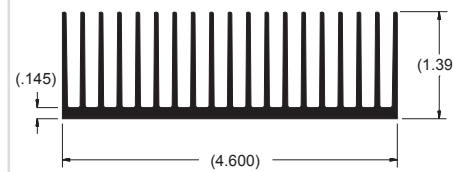
**Per.** 33.85 in.  
**WT.** 1.63 lb/ft  
**θsa** 2.10 °C/w/3"

012777



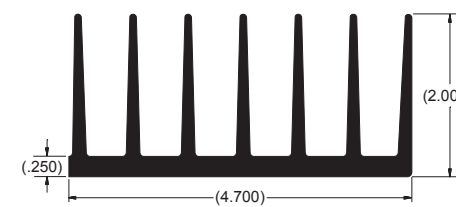
**Per.** 39.24 in.  
**WT.** 1.77 lb/ft  
**θsa** 1.80 °C/w/3"

013717



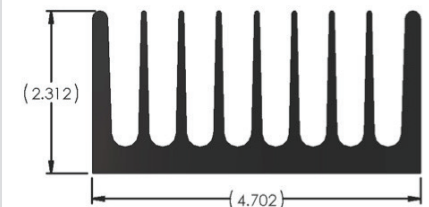
**Per.** 55.74 in.  
**WT.** 2.44 lb/ft  
**θsa** 1.30 °C/w/3"

**B** 013664



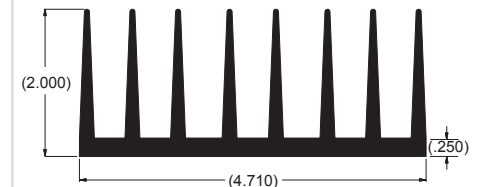
**Per.** 33.16 in.  
**WT.** 3.45 lb/ft  
**θsa** 2.10 °C/w/3"

12447



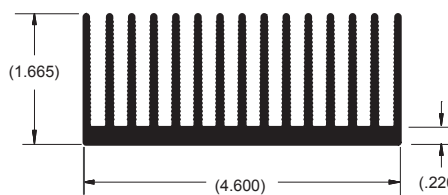
**Per.** 42.64 in.  
**WT.** 5.23 lb/ft  
**θsa** 1.64 °C/w/3"

016652



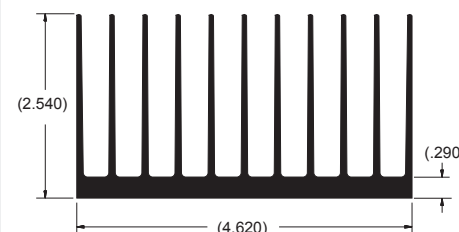
**Per.** 36.63 in.  
**WT.** 3.66 lb/ft  
**θsa** 1.70 °C/w/3"

**C** 016374



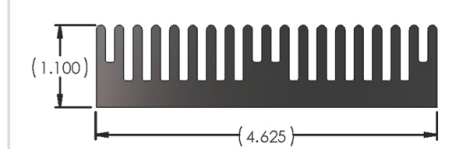
**Per.** 57.59 in.  
**WT.** 3.29 lb/ft  
**θsa** 2.30 °C/w/3"

012918



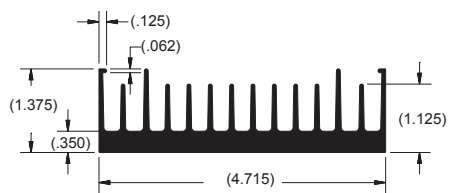
**Per.** 58.19 in.  
**WT.** 3.74 lb/ft  
**θsa** 1.20 °C/w/3"

21105



**Per.** 34.97 in.  
**WT.** 4.20 lb/ft  
**θsa** 2.00 °C/w/3"

**C** 016242



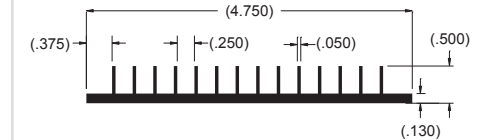
**Per.** 32.67 in.  
**WT.** 3.07 lb/ft  
**θsa** 2.30 °C/w/3"

XX2030



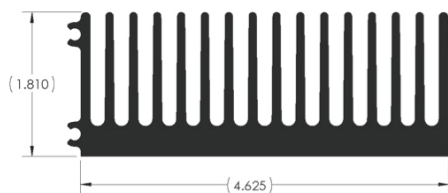
**Per.** 19.68 in.  
**WT.** 1.40 lb/ft  
**θsa** 2.40 °C/w/3"

011005



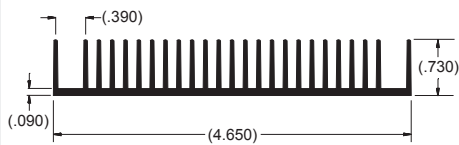
**Per.** 20.12 in.  
**WT.** 1.05 lb/ft  
**θsa** 3.50 °C/w/3"

**D** 21139



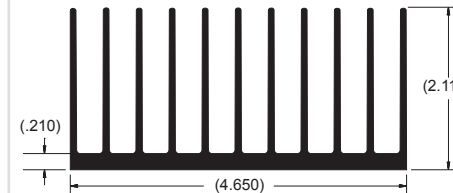
**Per.** 55.67 in.  
**WT.** 5.45 lb/ft  
**θsa** 1.26 °C/w/3"

014965



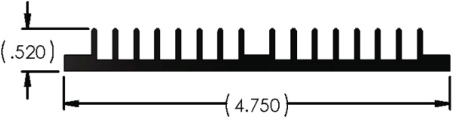
**Per.** 40.63 in.  
**WT.** 1.52 lb/ft  
**θsa** 1.70 °C/w/3"

013203



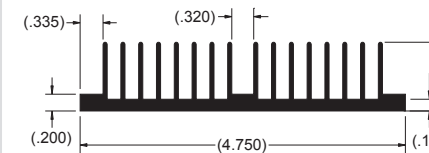
**Per.** 50.60 in.  
**WT.** 3.17 lb/ft  
**θsa** 1.40 °C/w/3"

**D** 12405



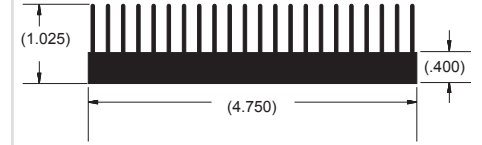
**Per.** 21.41 in.  
**WT.** 1.30 lb/ft  
**θsa** 3.27 °C/w/3"

011942

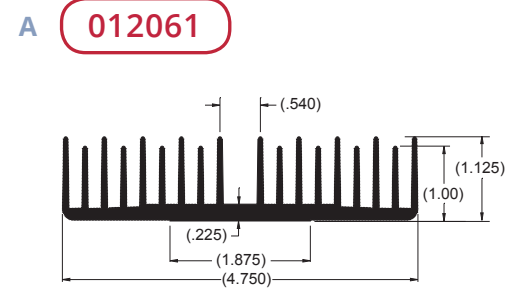


**Per.** 30.87 in.  
**WT.** 1.60 lb/ft  
**θsa** 2.30 °C/w/3"

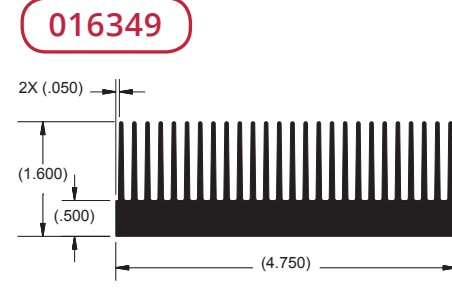
016123



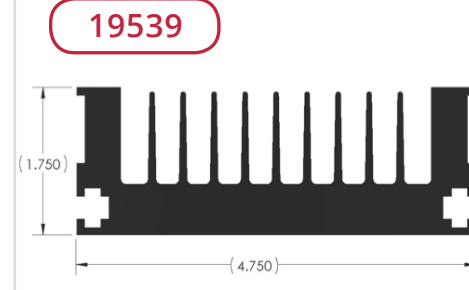
**Per.** 37.14 in.  
**WT.** 3.09 lb/ft  
**θsa** 3.60 °C/w/3"



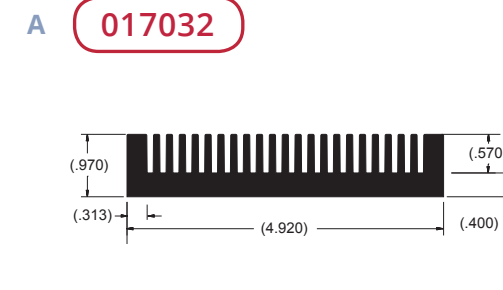
**Per.** 47.09 in.  
**WT.** 2.40 lb/ft  
**θsa** 1.50 °C/w/3"



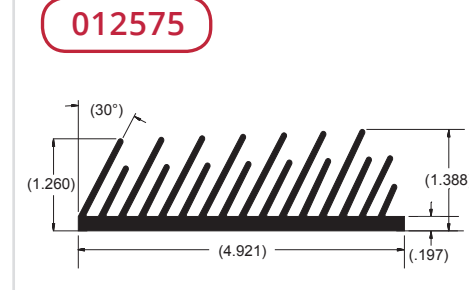
**Per.** 65.77 in.  
**WT.** 5.04 lb/ft  
**θsa** 3.80 °C/w/3"



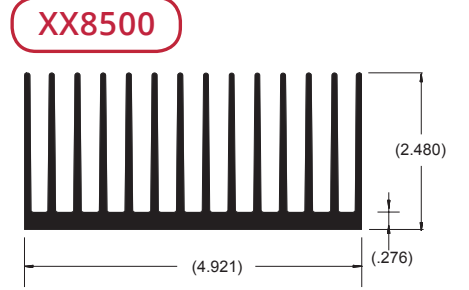
**Per.** 36.72 in.  
**WT.** 5.37 lb/ft  
**θsa** 1.90 °C/w/3"



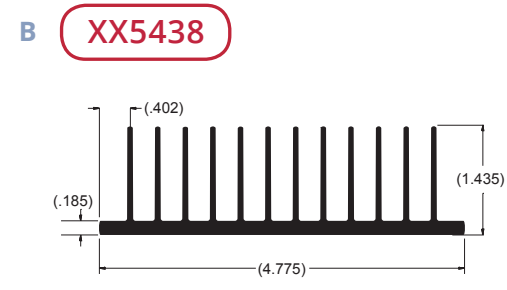
**Per.** 2.70 in.  
**WT.** 4.11 lb/ft  
**θsa** 4.80 °C/w/3"



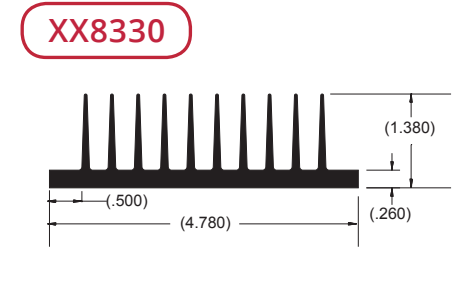
**Per.** 45.17 in.  
**WT.** 2.92 lb/ft  
**θsa** 1.50 °C/w/3"



**Per.** 60.50 in.  
**WT.** 6.47 lb/ft  
**θsa** 1.30 °C/w/3"



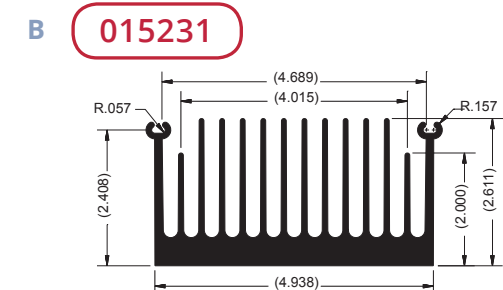
**Per.** 39.26 in.  
**WT.** 2.41 lb/ft  
**θsa** 1.80 °C/w/3"



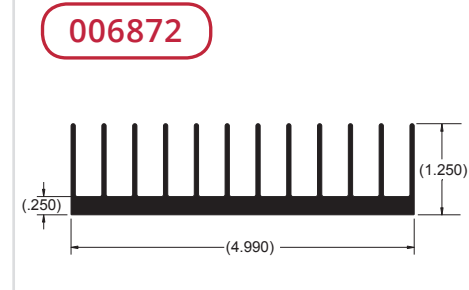
**Per.** 31.15 in.  
**WT.** 2.50 lb/ft  
**θsa** 1.90 °C/w/3"



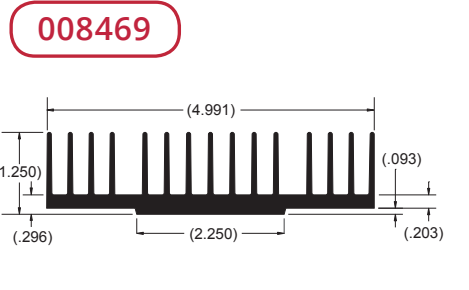
**Per.** 63.47 in.  
**WT.** 3.88 lb/ft  
**θsa** 1.10 °C/w/3"



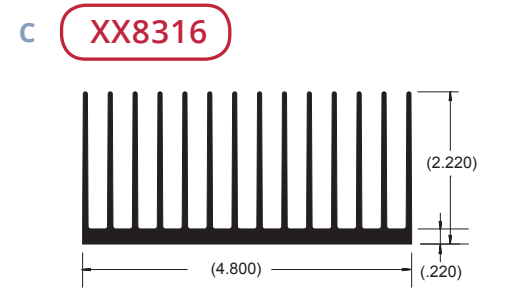
**Per.** 66.74 in.  
**WT.** 6.52 lb/ft  
**θsa** 1.60 °C/w/3"



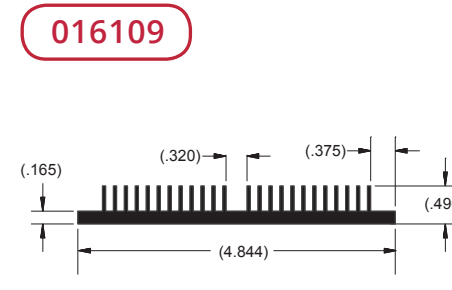
**Per.** 34.48 in.  
**WT.** 2.39 lb/ft  
**θsa** 2.00 °C/w/3"



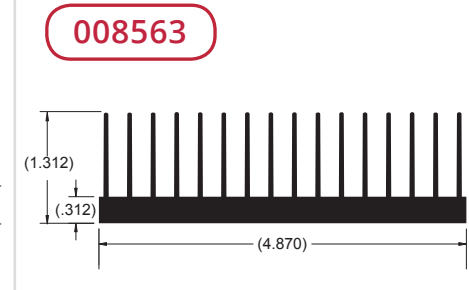
**Per.** 38.65 in.  
**WT.** 2.74 lb/ft  
**θsa** 2.40 °C/w/3"



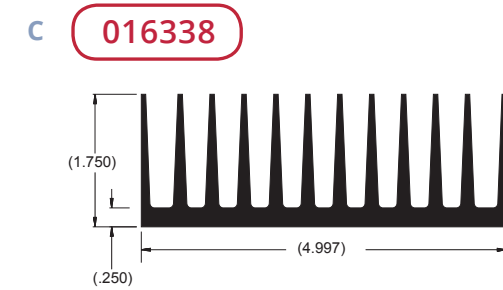
**Per.** 64.95 in.  
**WT.** 3.52 lb/ft  
**θsa** 1.40 °C/w/3"



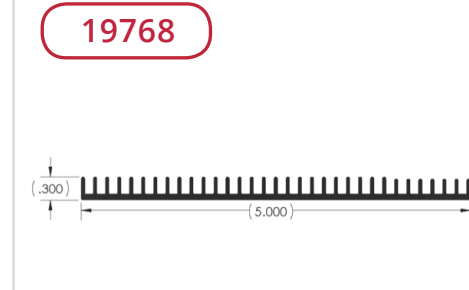
**Per.** 25.62 in.  
**WT.** 1.43 lb/ft  
**θsa** 4.84 °C/w/3"



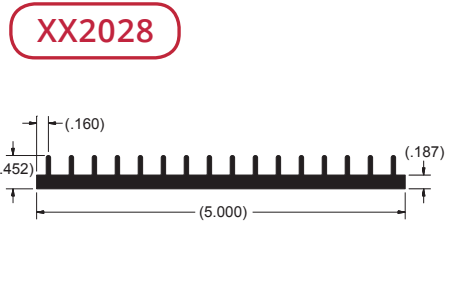
**Per.** 42.36 in.  
**WT.** 3.07 lb/ft  
**θsa** 1.70 °C/w/3"



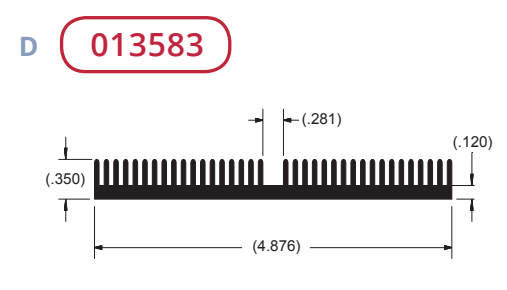
**Per.** 44.54 in.  
**WT.** 4.08 lb/ft  
**θsa** 1.70 °C/w/3"



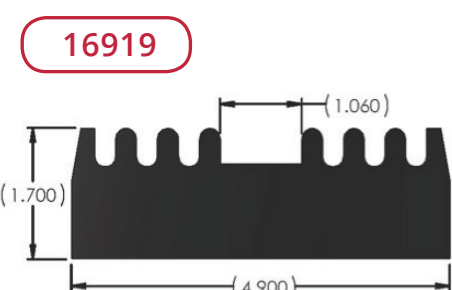
**Per.** 23.34 in.  
**WT.** 0.89 lb/ft  
**θsa** 3.00 °C/w/3"



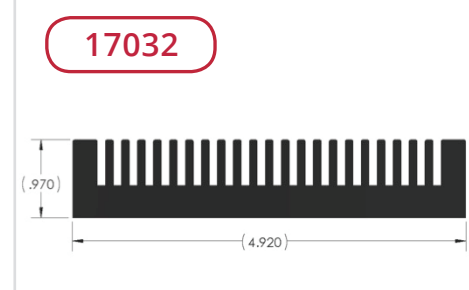
**Per.** 18.44 in.  
**WT.** 1.42 lb/ft  
**θsa** 3.00 °C/w/3"



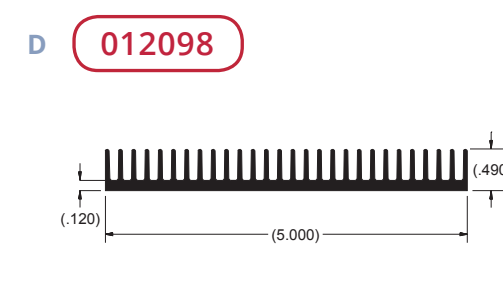
**Per.** 25.59 in.  
**WT.** 1.30 lb/ft  
**θsa** 2.70 °C/w/3"



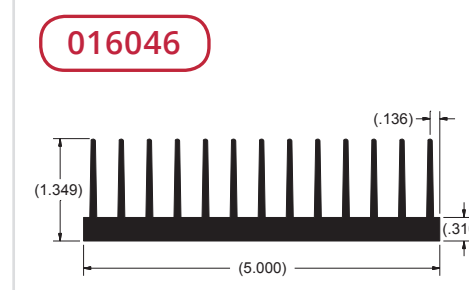
**Per.** 18.51 in.  
**WT.** 8.34 lb/ft  
**θsa** 3.78 °C/w/3"



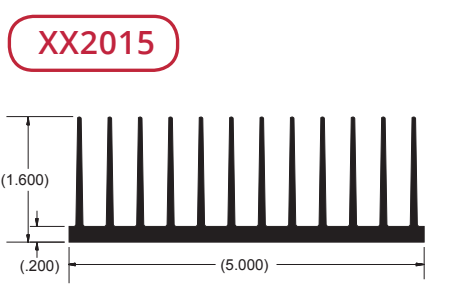
**Per.** 36.47 in.  
**WT.** 4.31 lb/ft  
**θsa** 1.92 °C/w/3"



**Per.** 29.33 in.  
**WT.** 1.38 lb/ft  
**θsa** 2.40 °C/w/3"



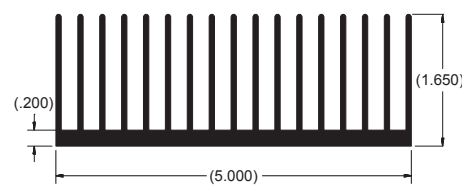
**Per.** 18.44 in.  
**WT.** 1.42 lb/ft  
**θsa** 2.10 °C/w/3"



**Per.** 42.85 in.  
**WT.** 2.75 lb/ft  
**θsa** 1.60 °C/w/3"

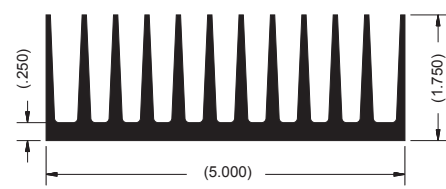


**A** **XX6957**



**Per.** 58.68 in.  
**WT.** 3.32 lb/ft  
**θsa** 1.50 °C/w/3"

**XX2065**



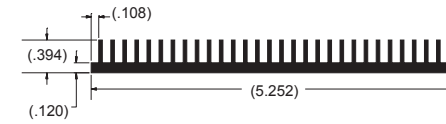
**Per.** 44.59 in.  
**WT.** 4.08 lb/ft  
**θsa** 1.60 °C/w/3"

**19260**



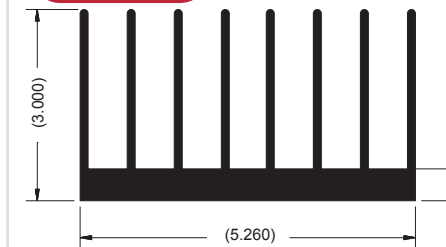
**Per.** 87.86 in.  
**WT.** 5.49 lb/ft  
**θsa** 0.80 °C/w/3"

**A** **017016**



**Per.** 27.19 in.  
**WT.** 1.26 lb/ft  
**θsa** 4.90 °C/w/3"

**XX7113**



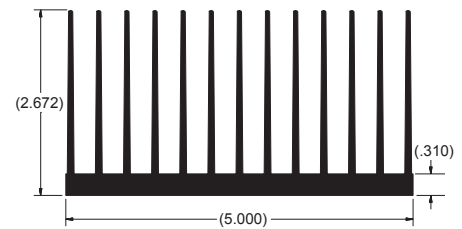
**Per.** 51.00 in.  
**WT.** 6.73 lb/ft  
**θsa** 1.10 °C/w/3"

**XX8026**



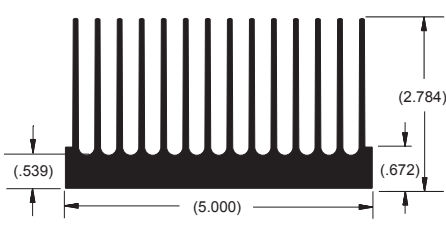
**Per.** 55.37 in.  
**WT.** 4.40 lb/ft  
**θsa** 1.30 °C/w/3"

**B** **016049**



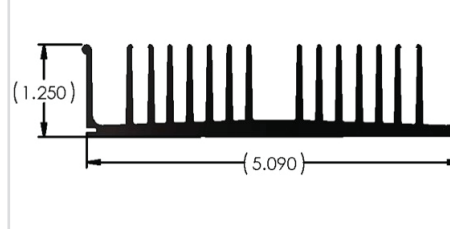
**Per.** 71.21 in.  
**WT.** 4.76 lb/ft  
**θsa** 1.40 °C/w/3"

**016069**



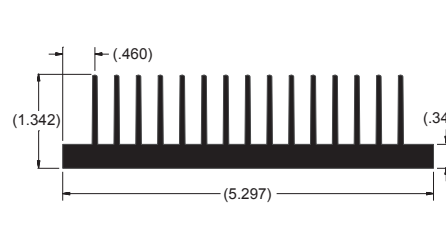
**Per.** 71.73 in.  
**WT.** 6.65 lb/ft  
**θsa** 1.50 °C/w/3"

**13505**



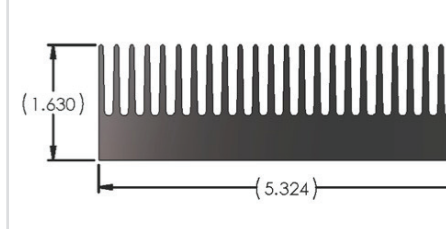
**Per.** 43.60 in.  
**WT.** 2.61 lb/ft  
**θsa** 1.60 °C/w/3"

**B** **015887**



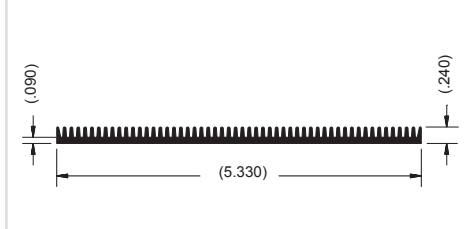
**Per.** 40.63 in.  
**WT.** 3.46 lb/ft  
**θsa** 2.40 °C/w/3"

**19671**



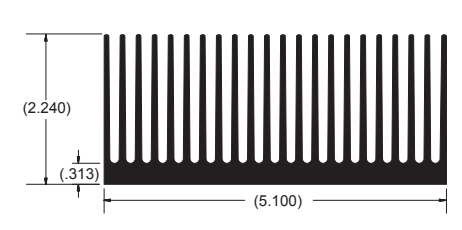
**Per.** 59.37 in.  
**WT.** 6.37 lb/ft  
**θsa** 1.18 °C/w/3"

**XX6843**



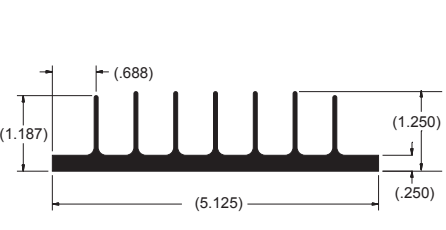
**Per.** 23.00 in.  
**WT.** 1.02 lb/ft  
**θsa** 1.02 °C/w/3"

**C** **014984**



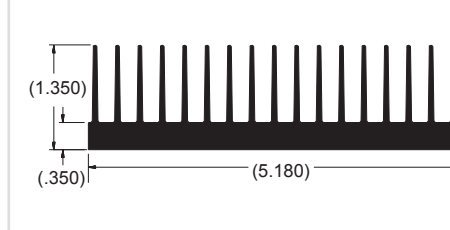
**Per.** 93.10 in.  
**WT.** 5.28 lb/ft  
**θsa** 1.80 °C/w/3"

**012331**



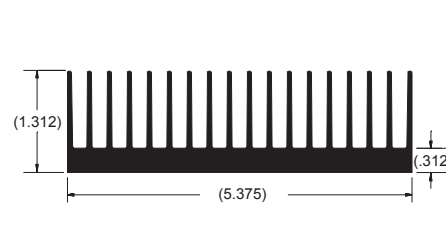
**Per.** 23.69 in.  
**WT.** 2.04 lb/ft  
**θsa** 3.00 °C/w/3"

**007264**



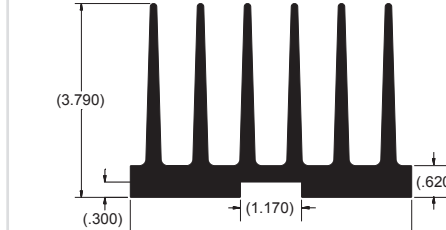
**Per.** 45.06 in.  
**WT.** 3.50 lb/ft  
**θsa** 1.60 °C/w/3"

**C** **XX5045**



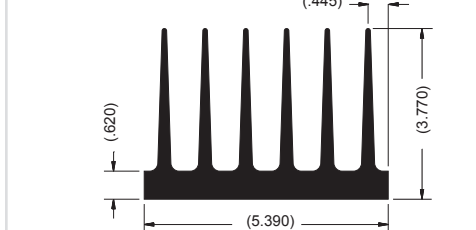
**Per.** 47.33 in.  
**WT.** 3.55 lb/ft  
**θsa** 1.80 °C/w/3"

**015840**



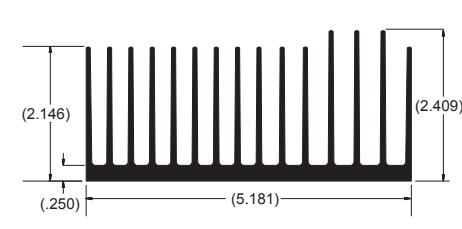
**Per.** 49.36 in.  
**WT.** 8.43 lb/ft  
**θsa** 1.10 °C/w/3"

**XX6209**



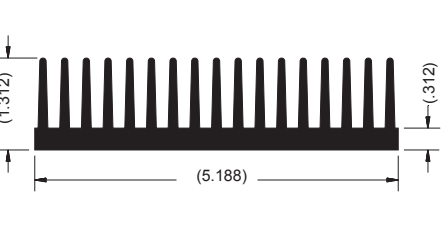
**Per.** 47.52 in.  
**WT.** 8.60 lb/ft  
**θsa** 1.40 °C/w/3"

**D** **013570**



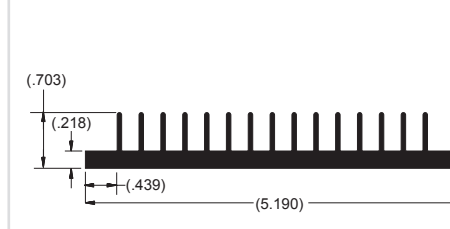
**Per.** 67.82 in.  
**WT.** 4.28 lb/ft  
**θsa** 1.60 °C/w/3"

**XX7034**



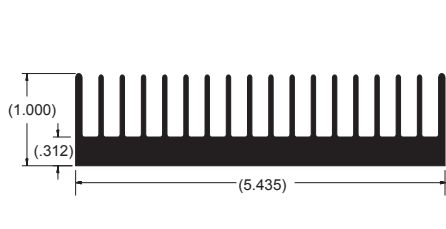
**Per.** 43.85 in.  
**WT.** 3.52 lb/ft  
**θsa** 1.70 °C/w/3"

**XX2187**



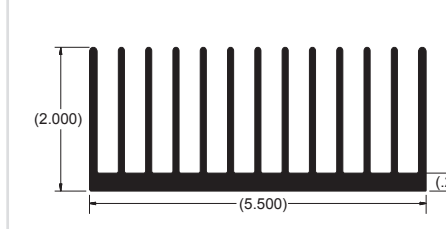
**Per.** 24.79 in.  
**WT.** 1.90 lb/ft  
**θsa** 2.90 °C/w/3"

**D** **XX2246**



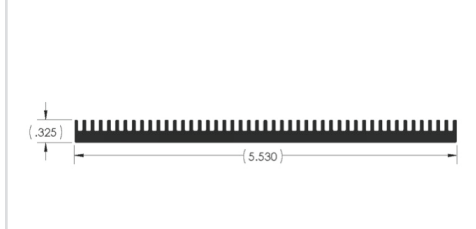
**Per.** 35.25 in.  
**WT.** 3.02 lb/ft  
**θsa** 1.90 °C/w/3"

**XX2199**

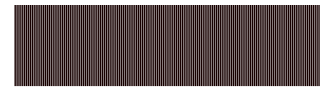


**Per.** 57.00 in.  
**WT.** 4.48 lb/ft  
**θsa** 1.20 °C/w/3"

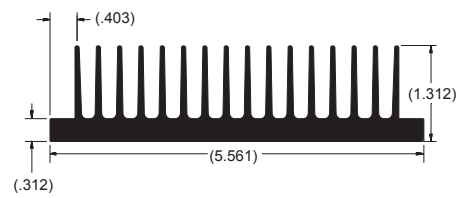
**19810**



**Per.** 24.76 in.  
**WT.** 1.60 lb/ft  
**θsa** 2.82 °C/w/3"

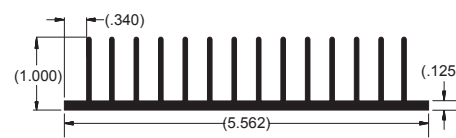


**A** XX2002



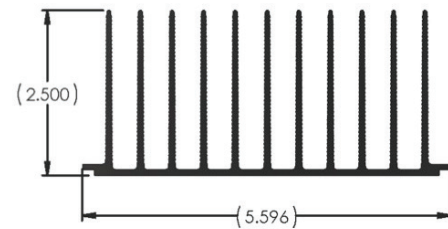
Per. 41.90 in.  
WT. 3.67 lb/ft  
θsa 1.50 °C/w/3"

XX6933



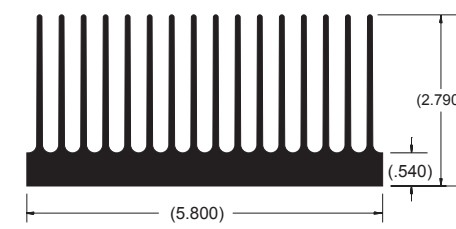
Per. 35.45 in.  
WT. 1.85 lb/ft  
θsa 1.80 °C/w/3"

19036



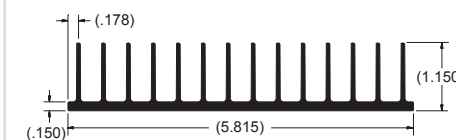
Per. 65.83 in.  
WT. 3.26 lb/ft  
θsa 1.06 °C/w/3"

**A** XX8415



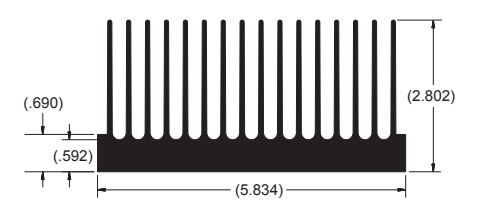
Per. 81.69 in.  
WT. 7.37 lb/ft  
θsa 1.30 °C/w/3"

013237



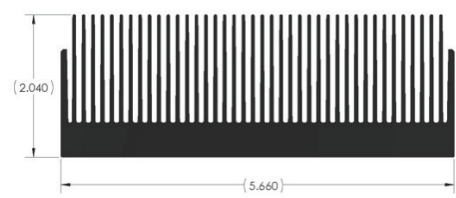
Per. 38.67 in.  
WT. 2.10 lb/ft  
θsa 1.80 °C/w/3"

016060



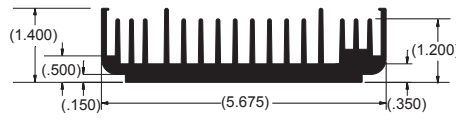
Per. 81.06 in.  
WT. 7.97 lb/ft  
θsa 1.30 °C/w/3"

**B** 19350



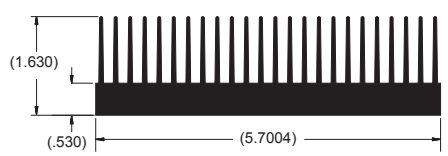
Per. 138.05 in.  
WT. 7.10 lb/ft  
θsa 0.51 °C/w/3"

016253



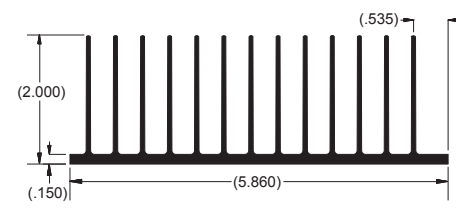
Per. 41.36 in.  
WT. 4.06 lb/ft  
θsa 2.00 °C/w/3"

016138



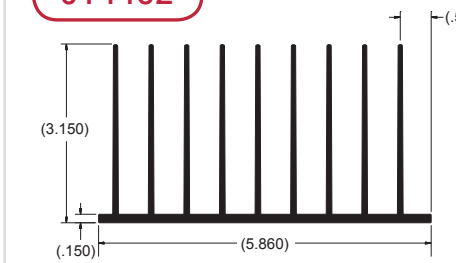
Per. 64.08 in.  
WT. 5.62 lb/ft  
θsa 2.20 °C/w/3"

**B** 013601



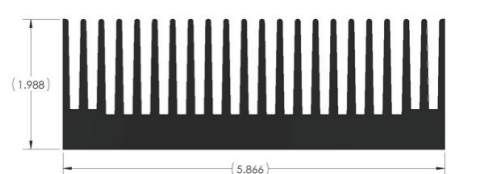
Per. 59.01 in.  
WT. 2.86 lb/ft  
θsa 1.20 °C/w/3"

014462



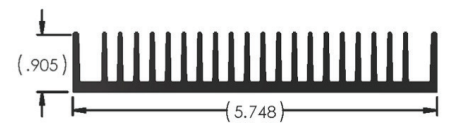
Per. 65.25 in.  
WT. 3.89 lb/ft  
θsa 1.10 °C/w/3"

19343



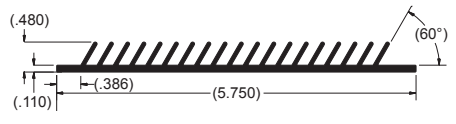
Per. 74.30 in.  
WT. 7.79 lb/ft  
θsa 0.94 °C/w/3"

**C** 19155



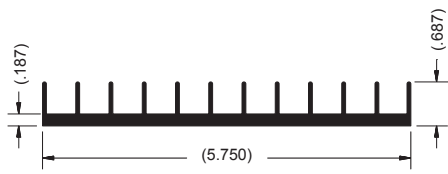
Per. 44.62 in.  
WT. 2.73 lb/ft  
θsa 1.57 °C/w/3"

012671



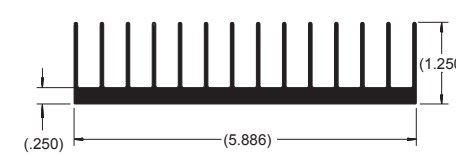
Per. 26.67 in.  
WT. 1.29 lb/ft  
θsa 2.60 °C/w/3"

XX2903



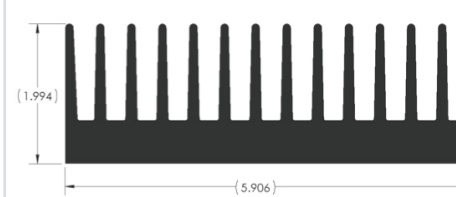
Per. 23.87 in.  
WT. 1.72 lb/ft  
θsa 2.80 °C/w/3"

**C** 002981



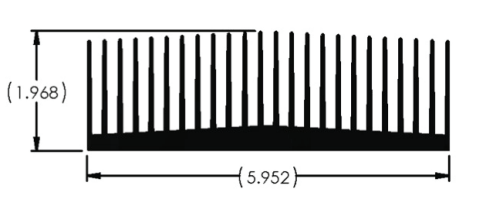
Per. 40.00 in.  
WT. 2.90 lb/ft  
θsa 1.70 °C/w/3"

21257



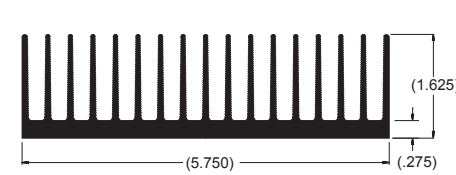
Per. 49.78 in.  
WT. 7.73 lb/ft  
θsa 1.40 °C/w/3"

14407



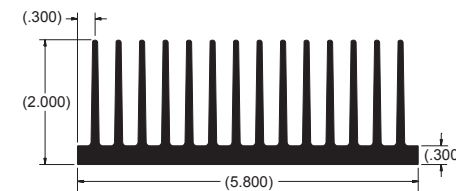
Per. 85.79 in.  
WT. 5.47 lb/ft  
θsa 0.81 °C/w/3"

**D** 013532



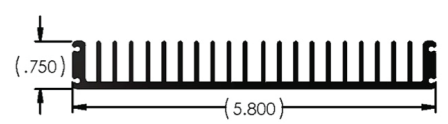
Per. 64.81 in.  
WT. 4.02 lb/ft  
θsa 1.10 °C/w/3"

010248



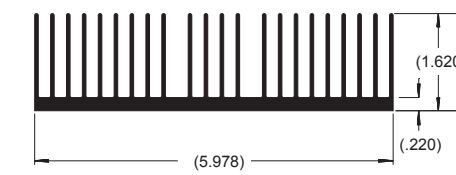
Per. 59.80 in.  
WT. 5.31 lb/ft  
θsa 1.20 °C/w/3"

15037



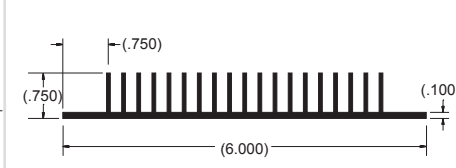
Per. 40.40 in.  
WT. 1.89 lb/ft  
θsa 1.73 °C/w/3"

**D** 016168



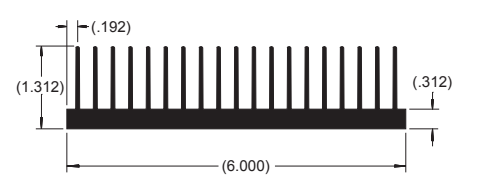
Per. 72.89 in.  
WT. 3.78 lb/ft  
θsa 1.90 °C/w/3"

011743



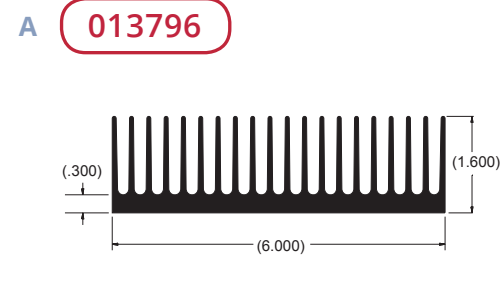
Per. 36.74 in.  
WT. 1.59 lb/ft  
θsa 1.90 °C/w/3"

012464

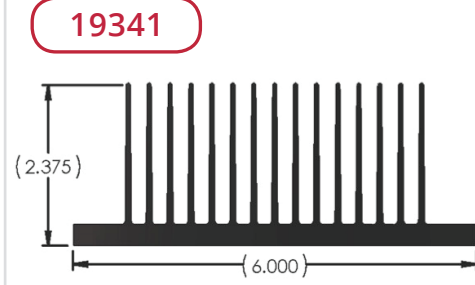


Per. 49.68 in.  
WT. 3.61 lb/ft  
θsa 1.40 °C/w/3"

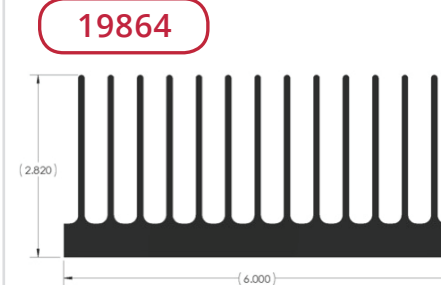




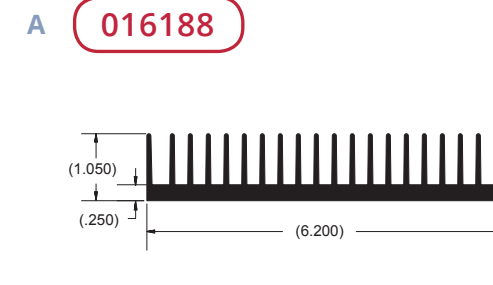
**Per.** 61.82 in.  
**WT.** 4.76 lb/ft  
**θsa** 1.10 °C/w/3"



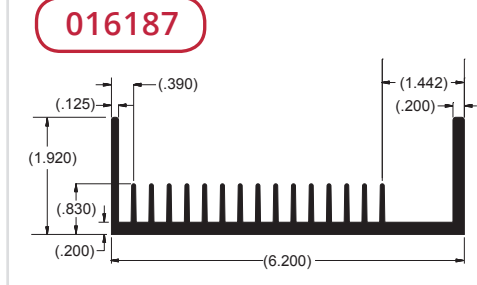
**Per.** 73.88 in.  
**WT.** 5.07 lb/ft  
**θsa** 0.95 °C/w/3"



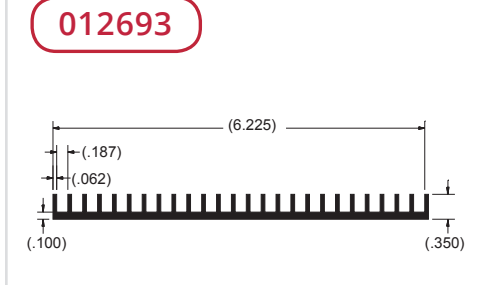
**Per.** 70.81 in.  
**WT.** 7.43 lb/ft  
**θsa** 0.99 °C/w/3"



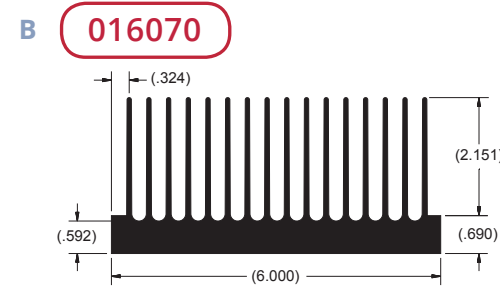
**Per.** 43.90 in.  
**WT.** 3.38 lb/ft  
**θsa** 2.50 °C/w/3"



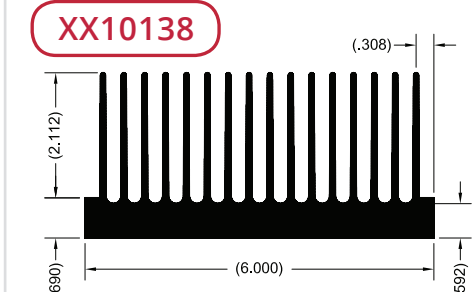
**Per.** 37.74 in.  
**WT.** 3.05 lb/ft  
**θsa** 2.70 °C/w/3"



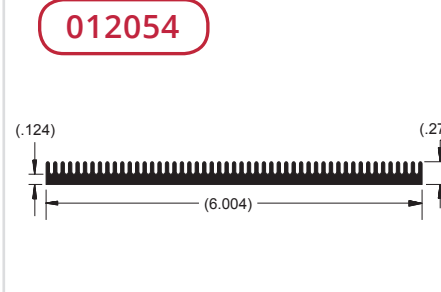
**Per.** 25.77 in.  
**WT.** 1.24 lb/ft  
**θsa** 2.70 °C/w/3"



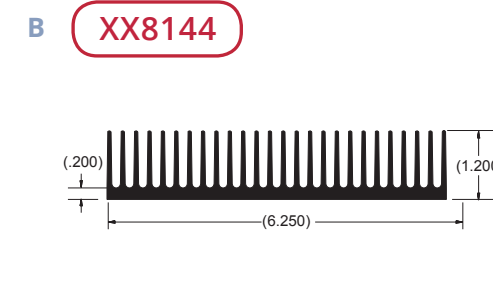
**Per.** 82.68 in.  
**WT.** 8.16 lb/ft  
**θsa** 1.60 °C/w/3"



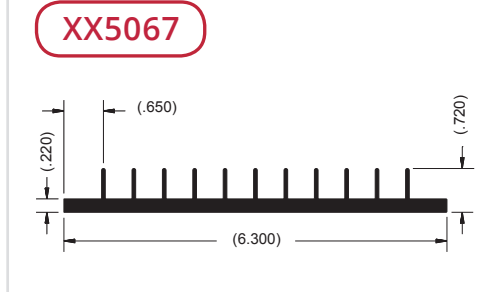
**Per.** 82.67 in.  
**WT.** 8.17 lb/ft  
**θsa** 0.97 °C/w/3"



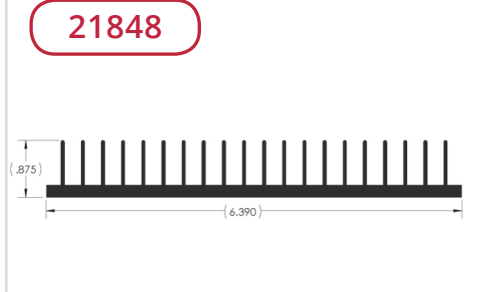
**Per.** 25.08 in.  
**WT.** 1.32 lb/ft  
**θsa** 2.80 °C/w/3"



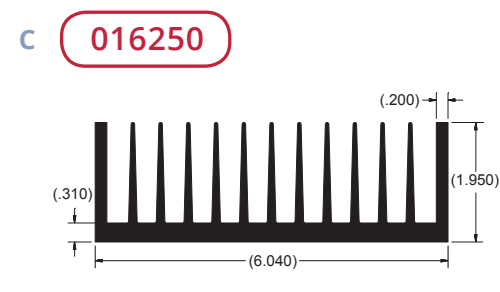
**Per.** 61.81 in.  
**WT.** 3.78 lb/ft  
**θsa** 1.70 °C/w/3"



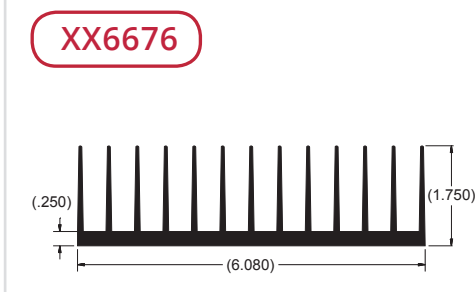
**Per.** 23.76 in.  
**WT.** 2.07 lb/ft  
**θsa** 2.70 °C/w/3"



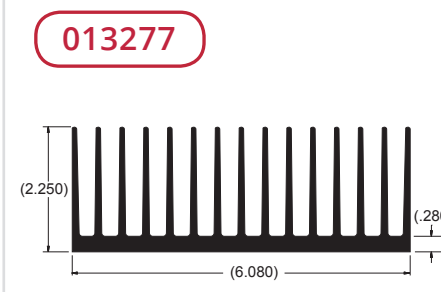
**Per.** 40.03 in.  
**WT.** 2.47 lb/ft  
**θsa** 1.75 °C/w/3"



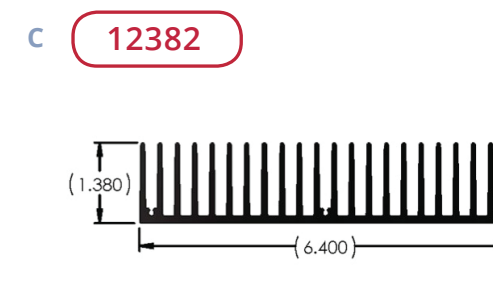
**Per.** 53.84 in.  
**WT.** 5.27 lb/ft  
**θsa** 1.40 °C/w/3"



**Per.** 50.73 in.  
**WT.** 3.56 lb/ft  
**θsa** 1.30 °C/w/3"



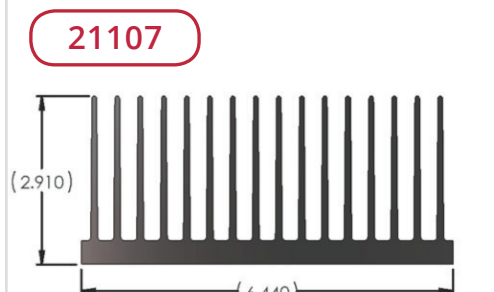
**Per.** 69.93 in.  
**WT.** 5.53 lb/ft  
**θsa** 1.40 °C/w/3"



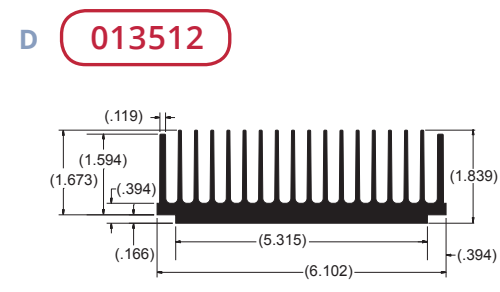
**Per.** 66.42 in.  
**WT.** 3.81 lb/ft  
**θsa** 1.05 °C/w/3"



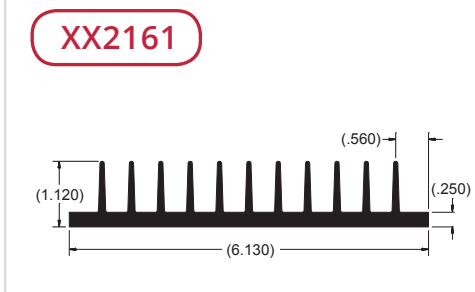
**Per.** 54.75 in.  
**WT.** 4.03 lb/ft  
**θsa** 1.30 °C/w/3"



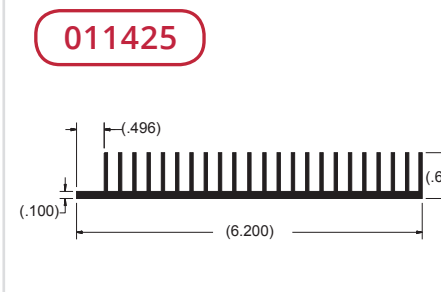
**Per.** 91.72 in.  
**WT.** 7.98 lb/ft  
**θsa** 0.76 °C/w/3"



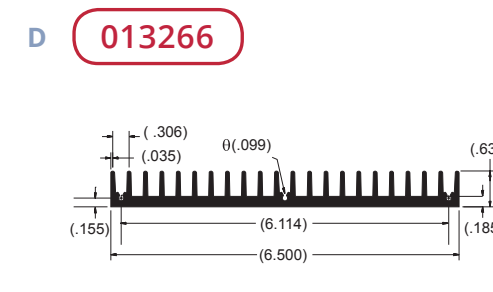
**Per.** 62.47 in.  
**WT.** 5.21 lb/ft  
**θsa** 1.10 °C/w/3"



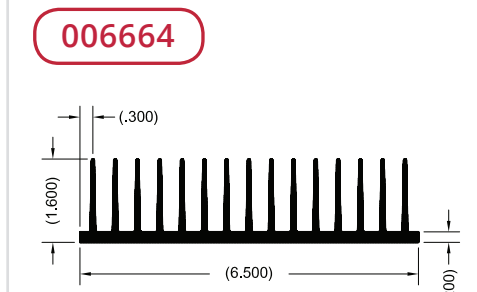
**Per.** 30.72 in.  
**WT.** 2.96 lb/ft  
**θsa** 1.80 °C/w/3"



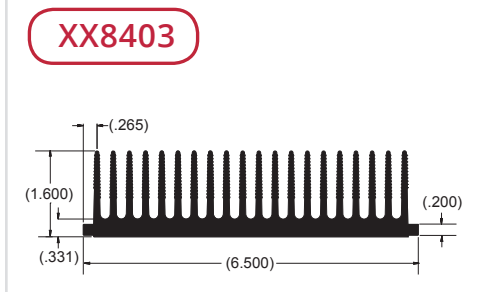
**Per.** 37.71 in.  
**WT.** 1.61 lb/ft  
**θsa** 1.90 °C/w/3"



**Per.** 32.29 in.  
**WT.** 2.38 lb/ft  
**θsa** 2.20 °C/w/3"



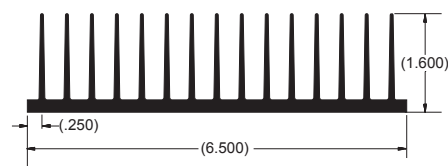
**Per.** 56.00 in.  
**WT.** 3.42 lb/ft  
**θsa** 0.0 °C/w/3"



**Per.** 61.19 in.  
**WT.** 5.49 lb/ft  
**θsa** 1.30 °C/w/3"

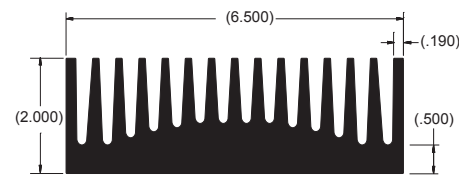


**A** XX4509



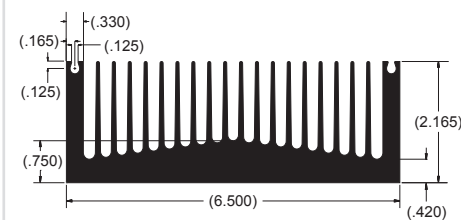
**Per.** 53.80 in.  
**WT.** 3.45 lb/ft  
**θsa** 1.30 °C/w/3"

016593



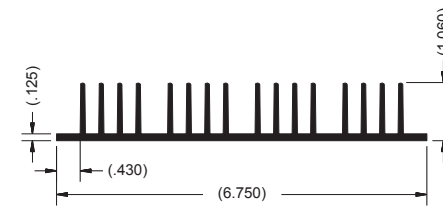
**Per.** 50.24 in.  
**WT.** 10.17 lb/ft  
**θsa** 1.60 °C/w/3"

016607



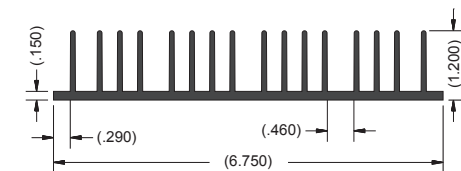
**Per.** 75.67 in.  
**WT.** 8.54 lb/ft  
**θsa** 1.40 °C/w/3"

**A** XX2494



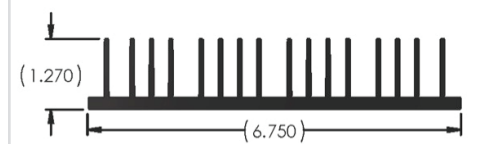
**Per.** 46.37 in.  
**WT.** 2.65 lb/ft  
**θsa** 1.70 °C/w/3"

XX2027



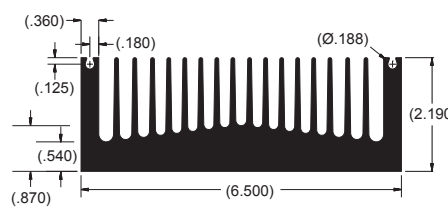
**Per.** 46.69 in.  
**WT.** 2.91 lb/ft  
**θsa** 1.40 °C/w/3"

19596



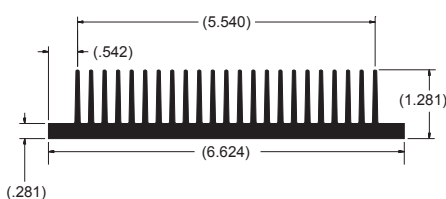
**Per.** 47.01 in.  
**WT.** 3.49 lb/ft  
**θsa** 1.49 °C/w/3"

**B** 016222



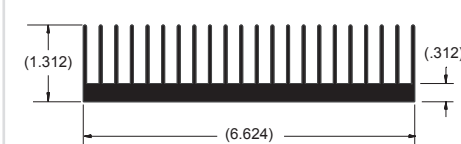
**Per.** 65.32 in.  
**WT.** 9.66 lb/ft  
**θsa** 1.40 °C/w/3"

013621



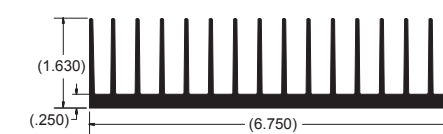
**Per.** 57.72 in.  
**WT.** 4.31 lb/ft  
**θsa** 2.70 °C/w/3"

XX7031



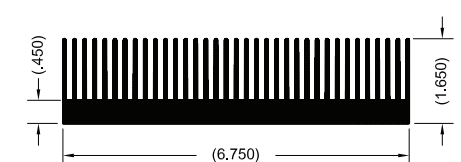
**Per.** 57.29 in.  
**WT.** 4.12 lb/ft  
**θsa** 1.30 °C/w/3"

**B** 012116



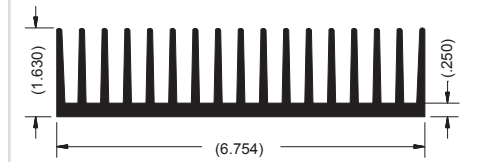
**Per.** 56.90 in.  
**WT.** 4.00 lb/ft  
**θsa** 1.60 °C/w/3"

015769



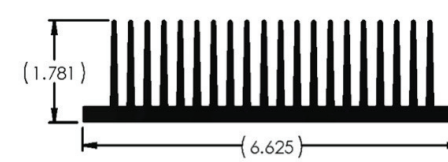
**Per.** 97.40 in.  
**WT.** 6.53 lb/ft  
**θsa** 1.70 °C/w/3"

XX7029



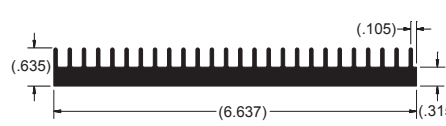
**Per.** 57.28 in.  
**WT.** 4.08 lb/ft  
**θsa** 1.30 °C/w/3"

**C** 12714



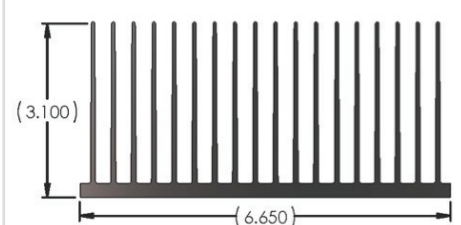
**Per.** 71.70 in.  
**WT.** 5.99 lb/ft  
**θsa** 0.98 °C/w/3"

015906



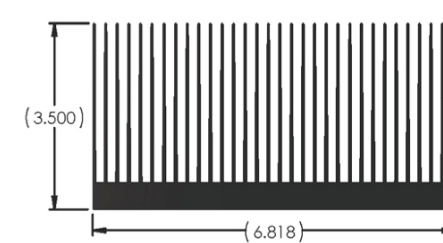
**Per.** 29.17 in.  
**WT.** 3.15 lb/ft  
**θsa** 3.30 °C/w/3"

19679



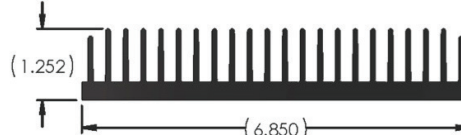
**Per.** 116.00 in.  
**WT.** 6.65 lb/ft  
**θsa** 0.60 °C/w/3"

**C** 19333



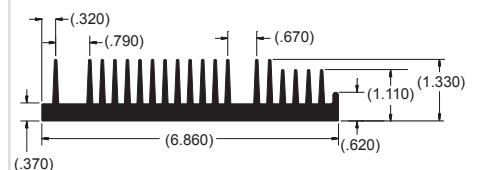
**Per.** 205.33 in.  
**WT.** 9.80 lb/ft  
**θsa** 0.34 °C/w/3"

16335



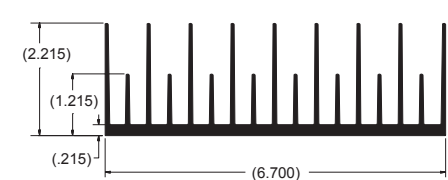
**Per.** 53.53 in.  
**WT.** 4.67 lb/ft  
**θsa** 1.31 °C/w/3"

016362



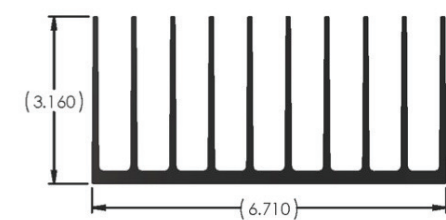
**Per.** 47.30 in.  
**WT.** 5.14 lb/ft  
**θsa** 2.50 °C/w/3"

**D** 014746



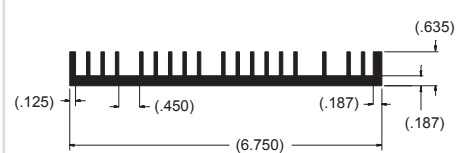
**Per.** 65.00 in.  
**WT.** 3.80 lb/ft  
**θsa** 1.20 °C/w/3"

21081



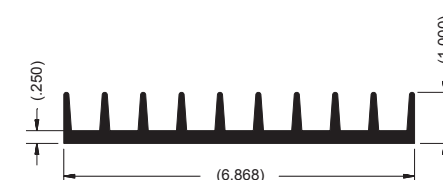
**Per.** 70.97 in.  
**WT.** 5.55 lb/ft  
**θsa** 0.99 °C/w/3"

013659



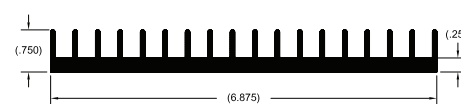
**Per.** 31.75 in.  
**WT.** 2.40 lb/ft  
**θsa** 2.20 °C/w/3"

**D** XX2071



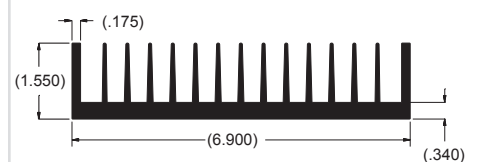
**Per.** 27.94 in.  
**WT.** 3.33 lb/ft  
**θsa** 1.90 °C/w/3"

015633



**Per.** 31.38 in.  
**WT.** 2.86 lb/ft  
**θsa** 2.30 °C/w/3"

016290



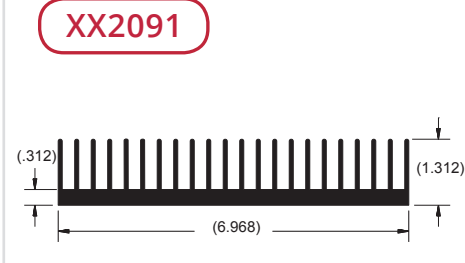
**Per.** 49.47 in.  
**WT.** 5.04 lb/ft  
**θsa** 1.50 °C/w/3"



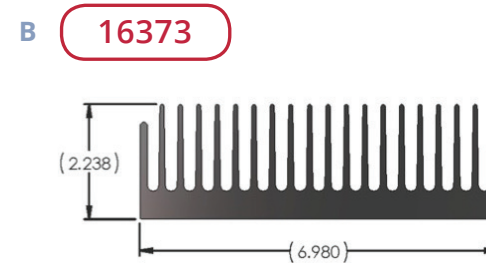
**Per.** 79.31 in.  
**WT.** 6.91 lb/ft  
**θsa** 1.40 °C/w/3"



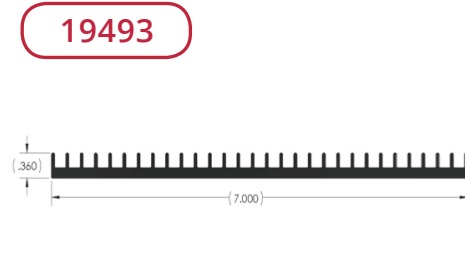
**Per.** 97.90 in.  
**WT.** 9.15 lb/ft  
**θsa** 0.80 °C/w/3"



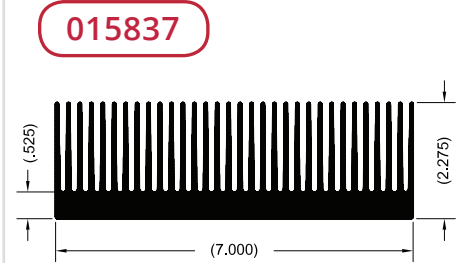
**Per.** 57.81 in.  
**WT.** 4.70 lb/ft  
**θsa** 1.20 °C/w/3"



**Per.** 78.13 in.  
**WT.** 8.87 lb/ft  
**θsa** 0.89 °C/w/3"



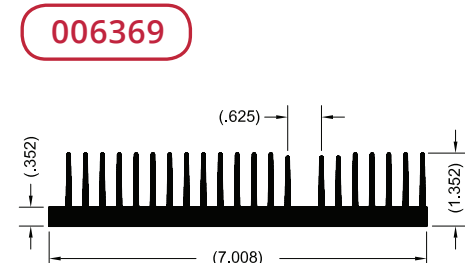
**Per.** 26.00 in.  
**WT.** 1.63 lb/ft  
**θsa** 2.69 °C/w/3"



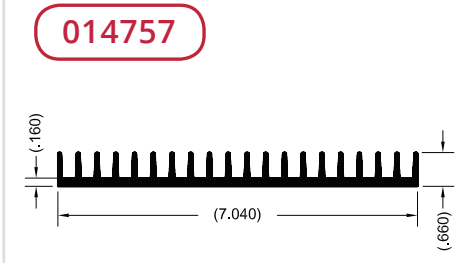
**Per.** 123.97 in.  
**WT.** 9.16 lb/ft  
**θsa** 1.30 °C/w/3"



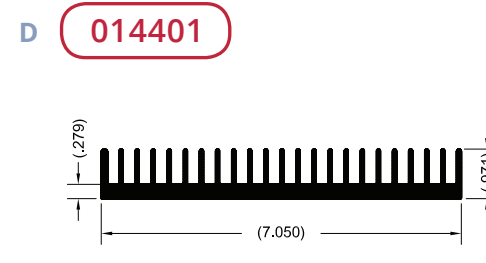
**Per.** 127.28 in.  
**WT.** 10.34 lb/ft  
**θsa** 0.90 °C/w/3"



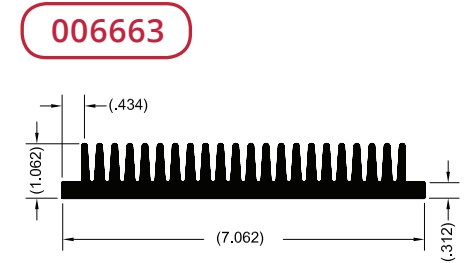
**Per.** 54.70 in.  
**WT.** 4.57 lb/ft  
**θsa** 1.70 °C/w/3"



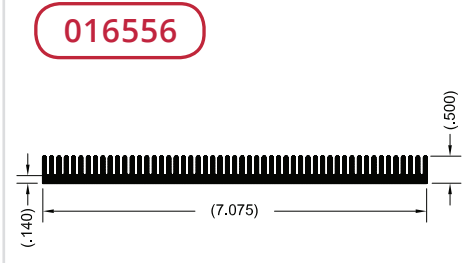
**Per.** 33.06 in.  
**WT.** 2.34 lb/ft  
**θsa** 2.10 °C/w/3"



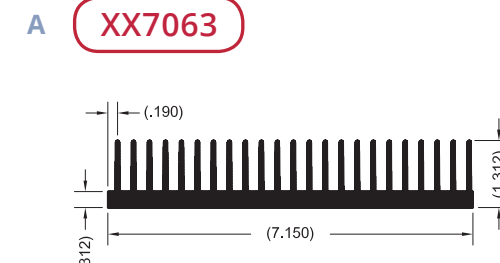
**Per.** 45.17 in.  
**WT.** 3.79 lb/ft  
**θsa** 1.60 °C/w/3"



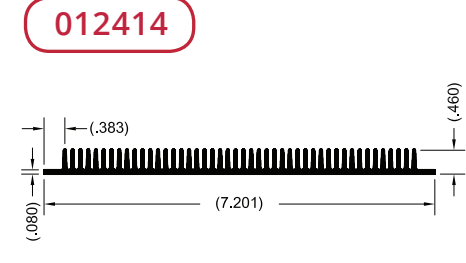
**Per.** 44.10 in.  
**WT.** 5.28 lb/ft  
**θsa** 2.50 °C/w/3"



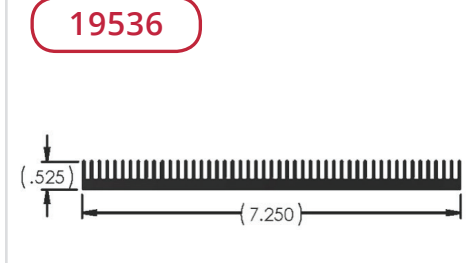
**Per.** 49.55 in.  
**WT.** 2.47 lb/ft  
**θsa** 5.30 °C/w/3"



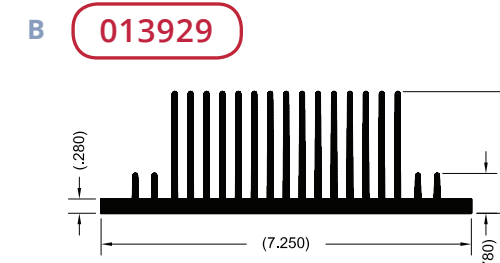
**Per.** 59.37 in.  
**WT.** 4.74 lb/ft  
**θsa** 1.20 °C/w/3"



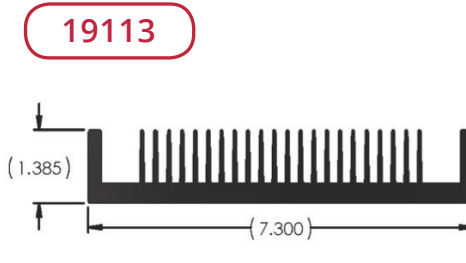
**Per.** 46.41 in.  
**WT.** 1.77 lb/ft  
**θsa** 1.50 °C/w/3"



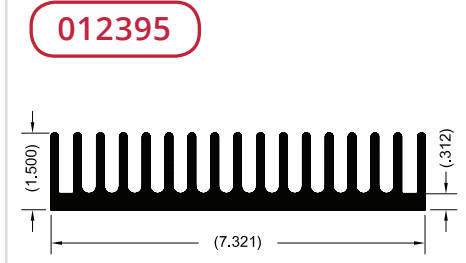
**Per.** 47.12 in.  
**WT.** 2.77 lb/ft  
**θsa** 1.48 °C/w/3"



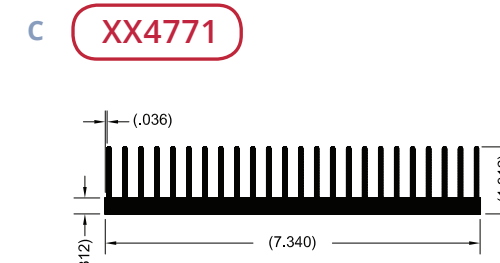
**Per.** 80.79 in.  
**WT.** 6.03 lb/ft  
**θsa** 0.90 °C/w/3"



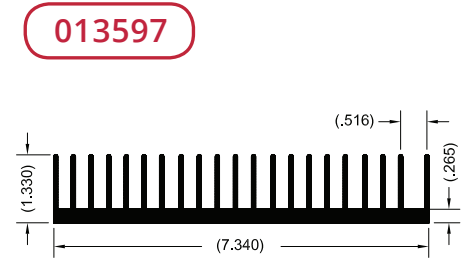
**Per.** 62.04 in.  
**WT.** 5.99 lb/ft  
**θsa** 1.13 °C/w/3"



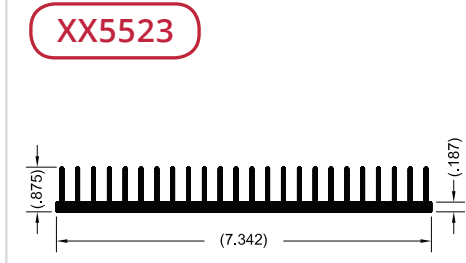
**Per.** 52.74 in.  
**WT.** 6.18 lb/ft  
**θsa** 1.30 °C/w/3"



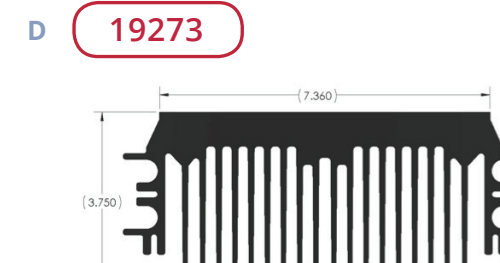
**Per.** 61.75 in.  
**WT.** 4.54 lb/ft  
**θsa** 1.10 °C/w/3"



**Per.** 59.05 in.  
**WT.** 4.20 lb/ft  
**θsa** 1.20 °C/w/3"



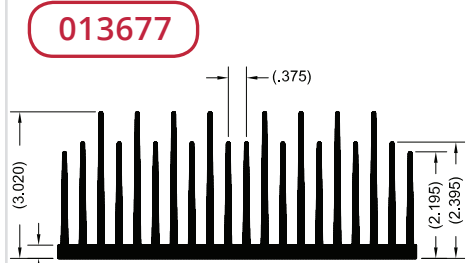
**Per.** 46.78 in.  
**WT.** 2.88 lb/ft  
**θsa** 1.80 °C/w/3"



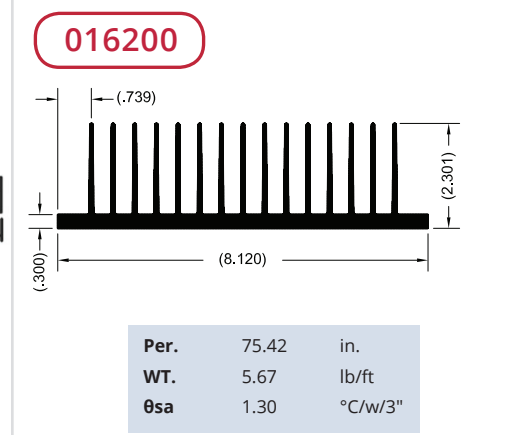
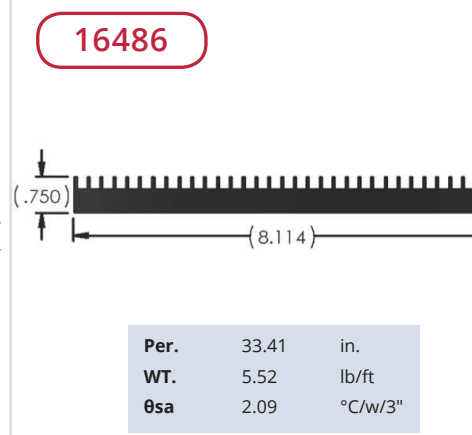
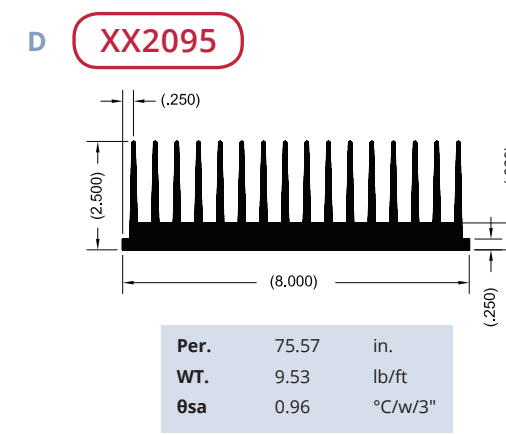
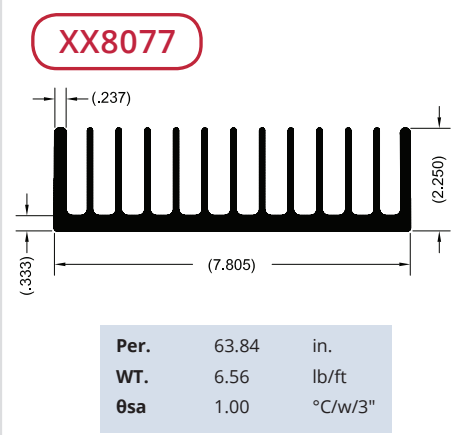
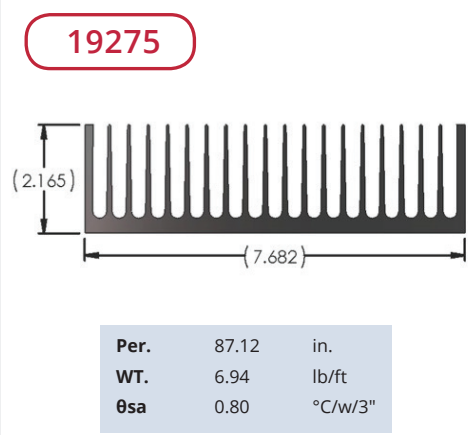
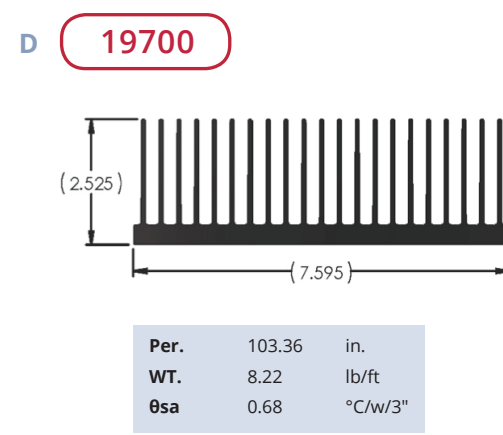
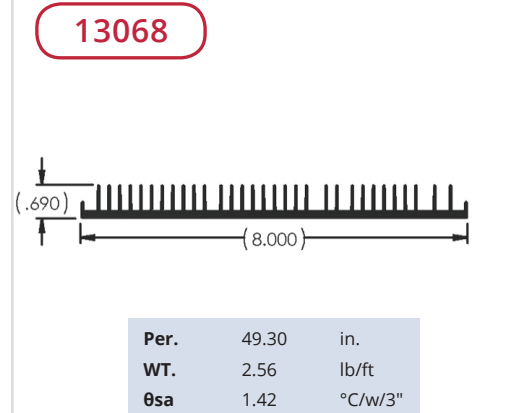
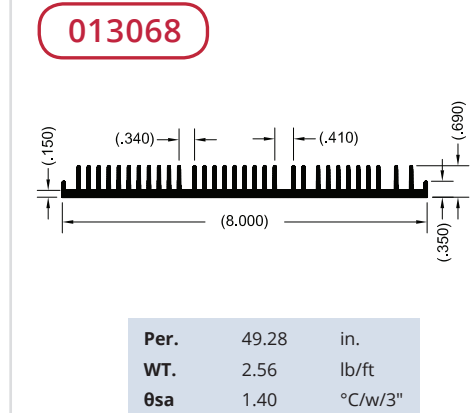
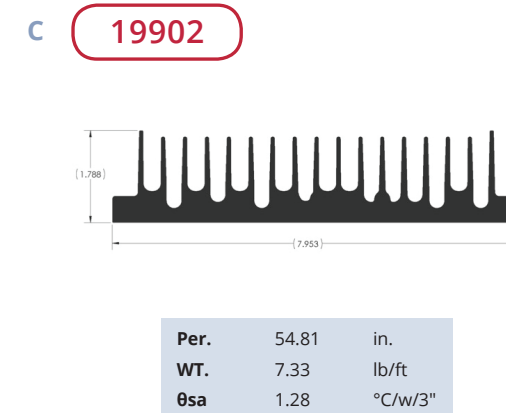
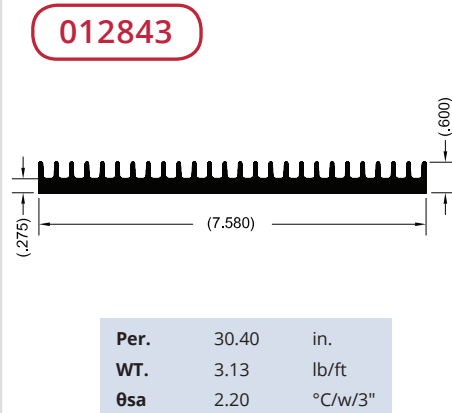
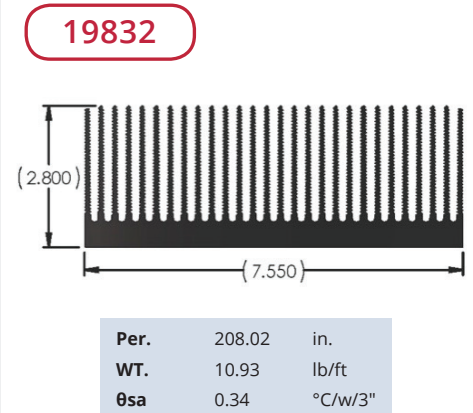
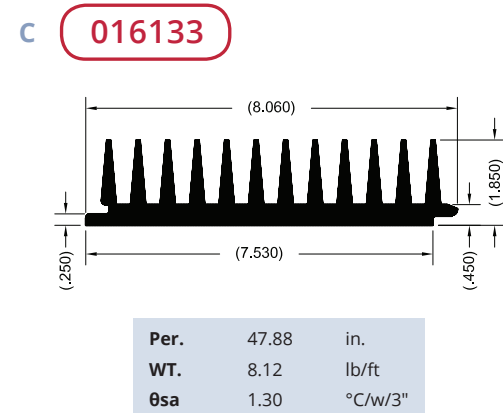
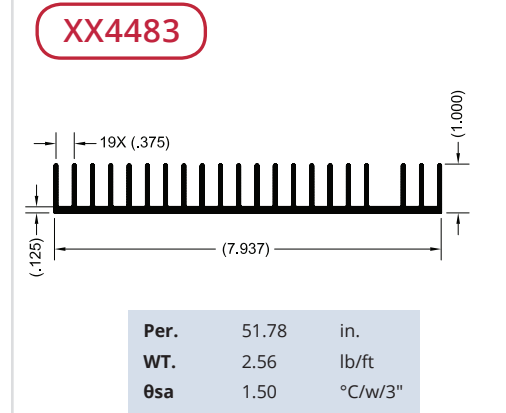
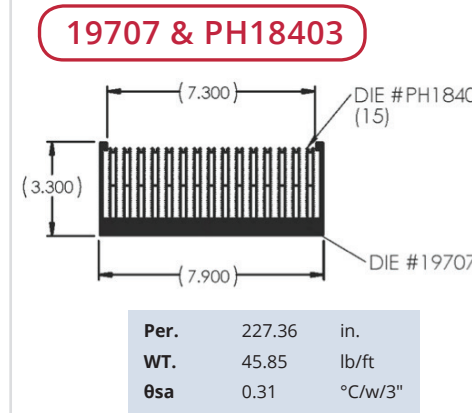
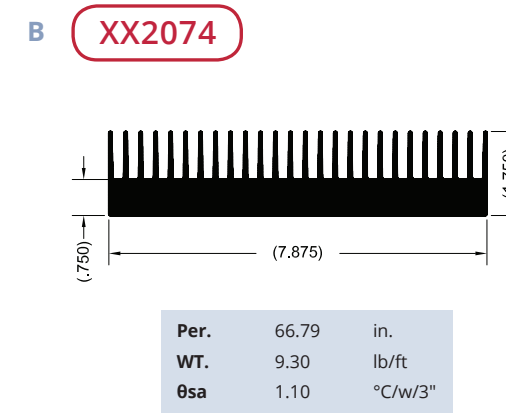
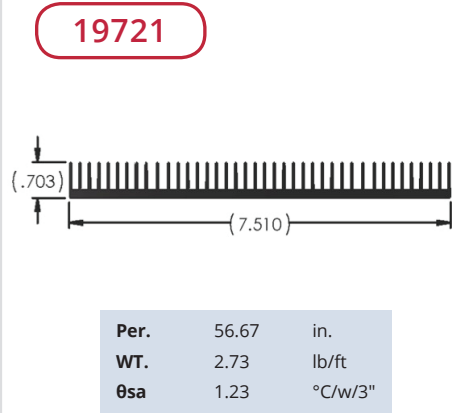
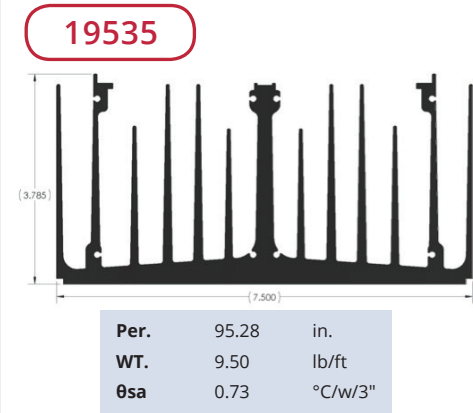
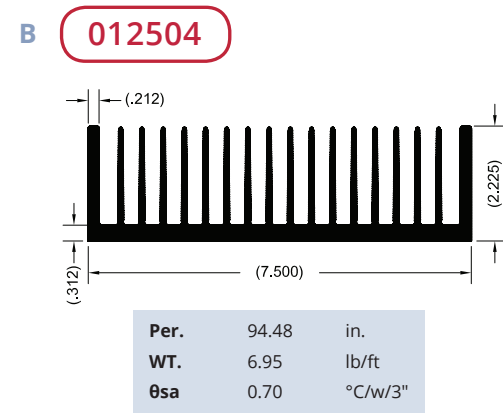
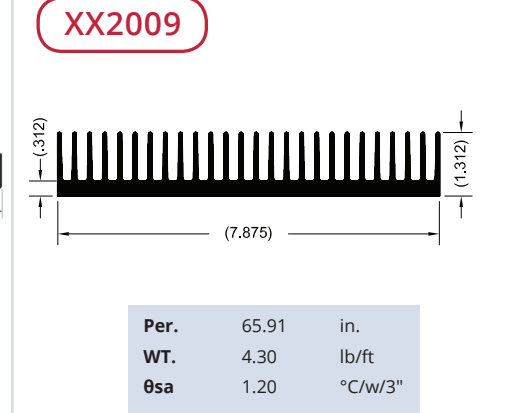
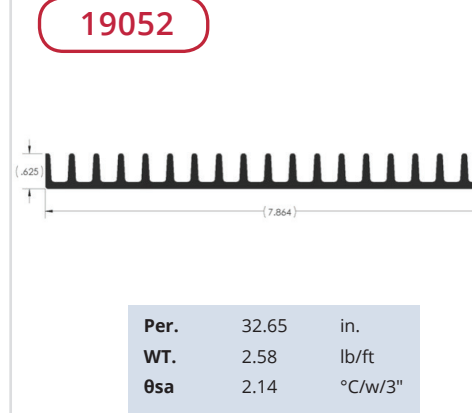
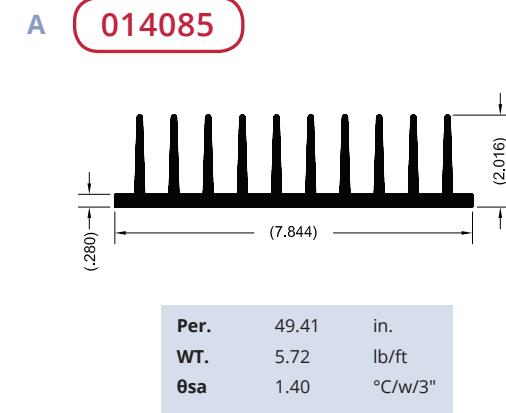
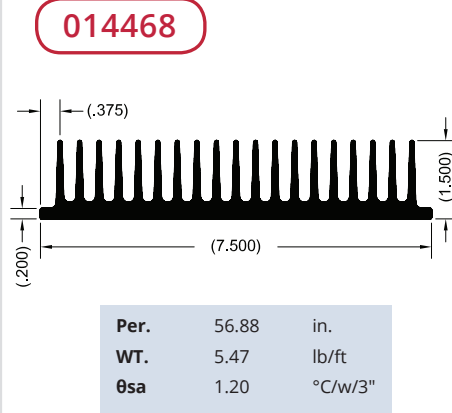
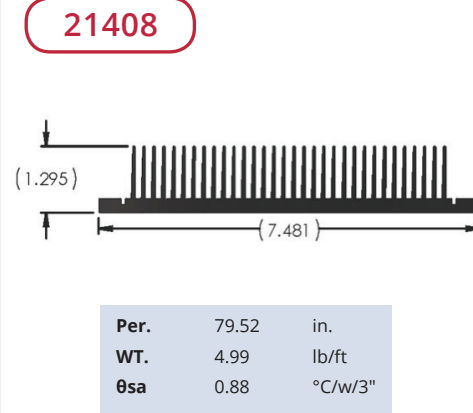
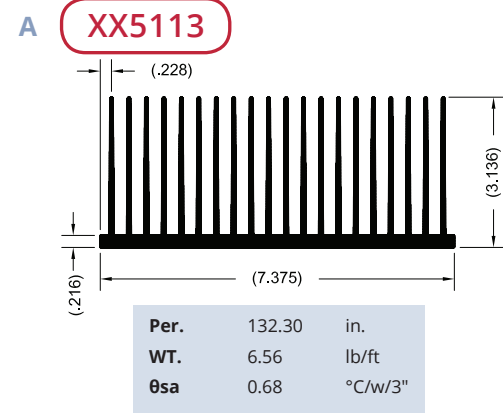
**Per.** 136.54 in.  
**WT.** 17.21 lb/ft  
**θsa** 0.51 °C/w/3"

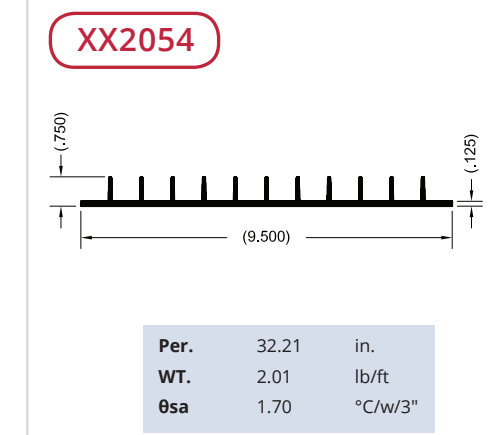
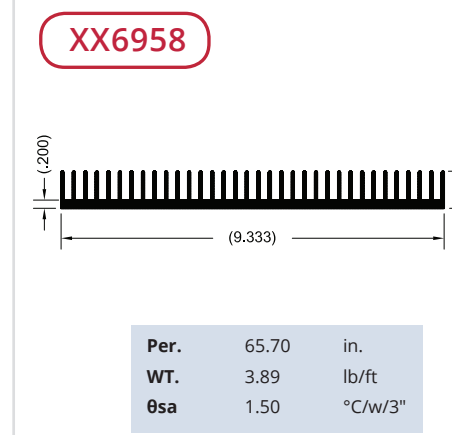
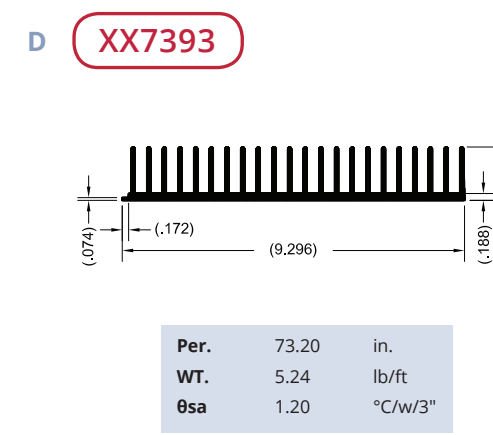
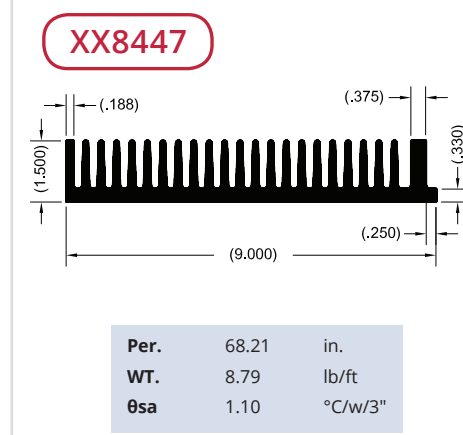
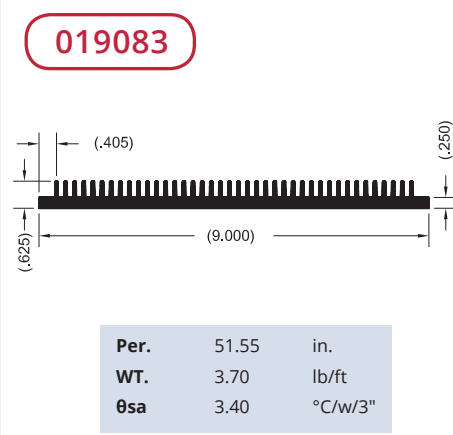
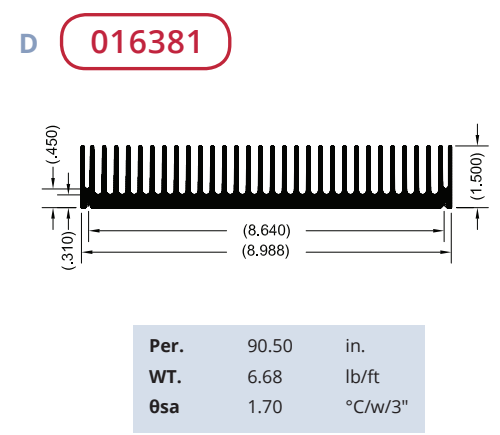
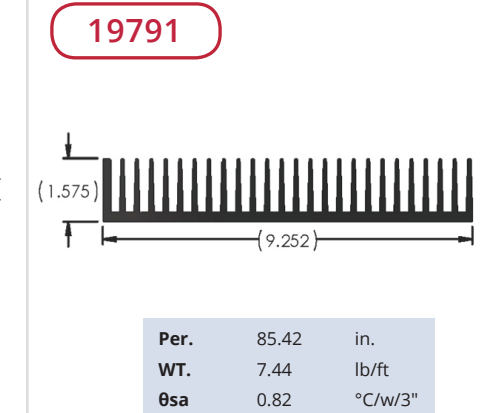
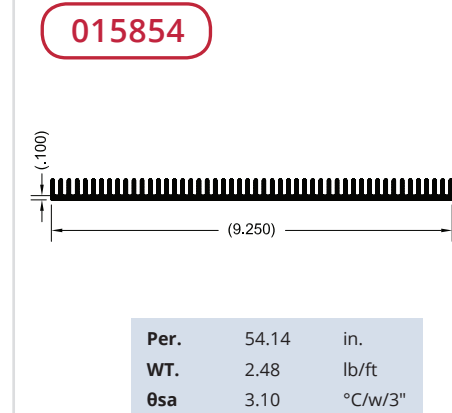
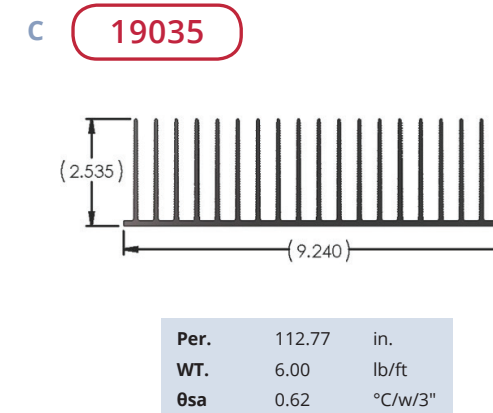
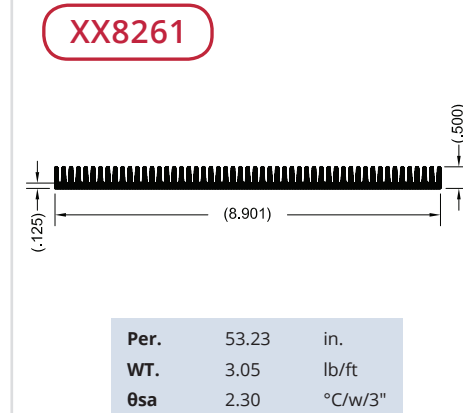
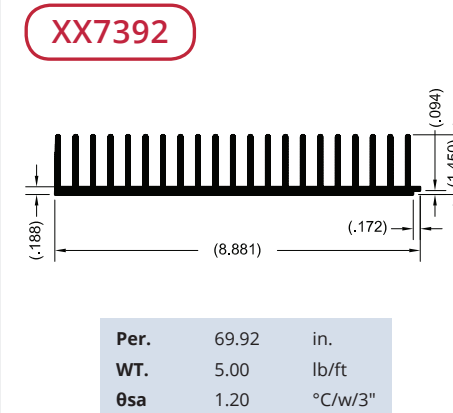
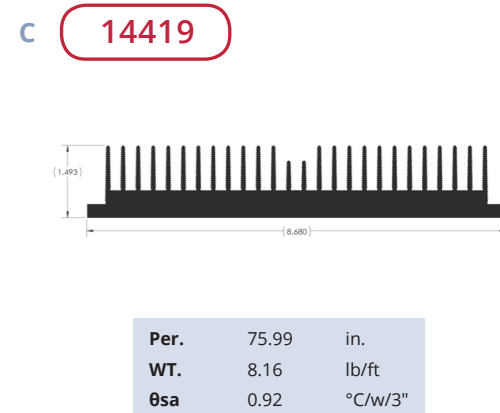
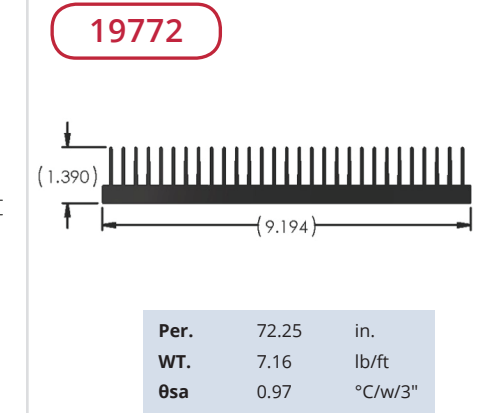
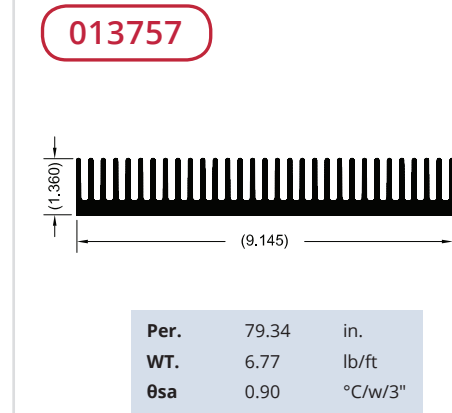
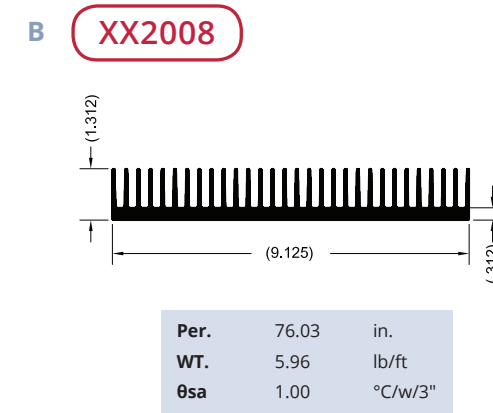
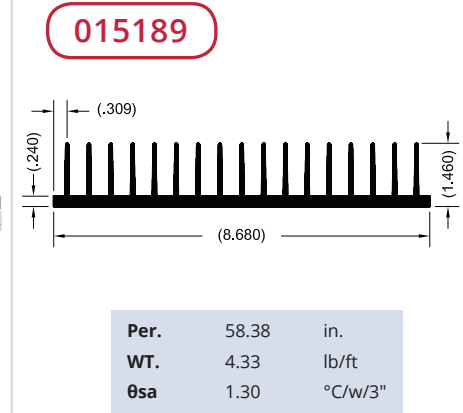
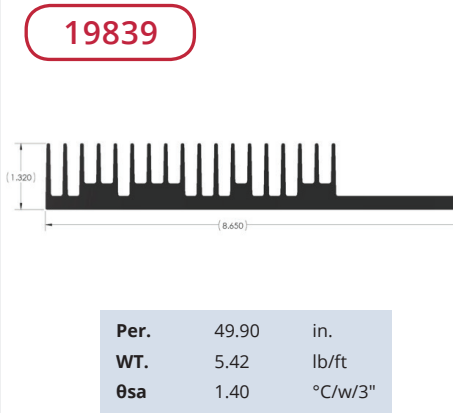
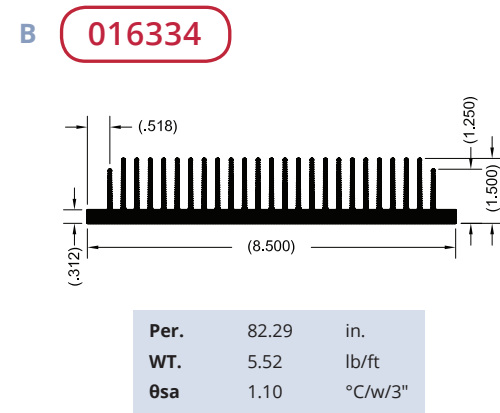
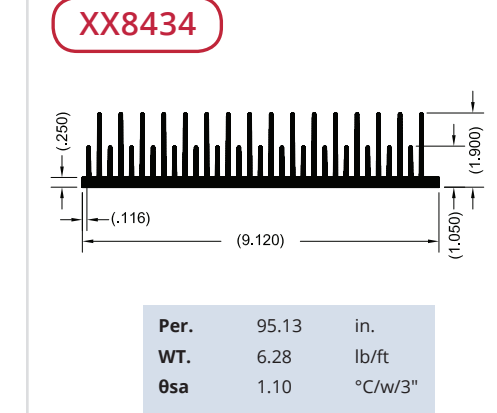
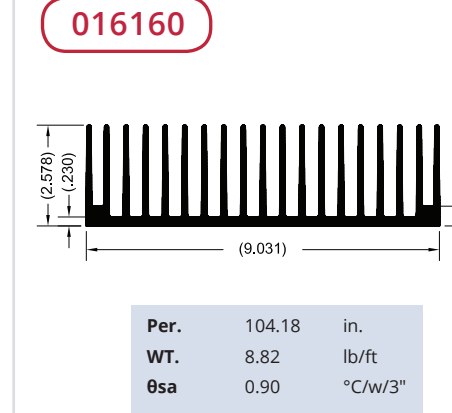
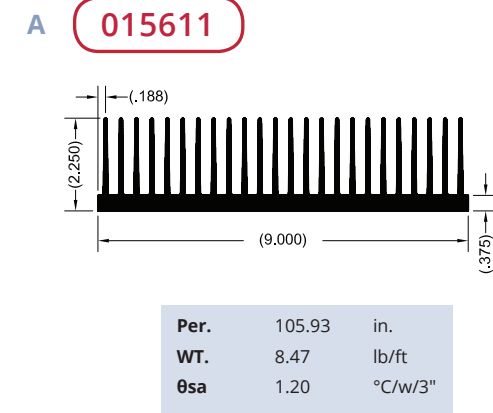
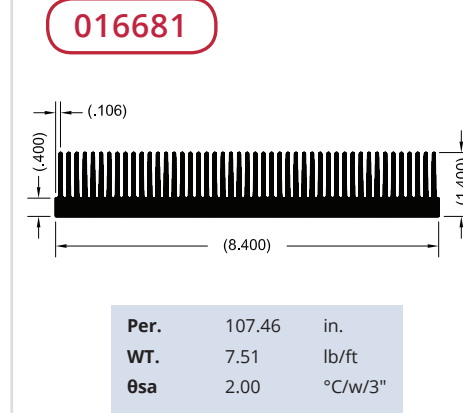
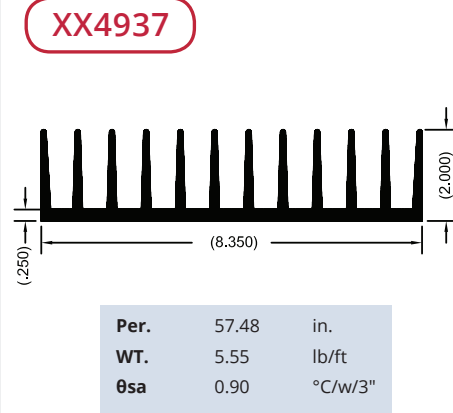
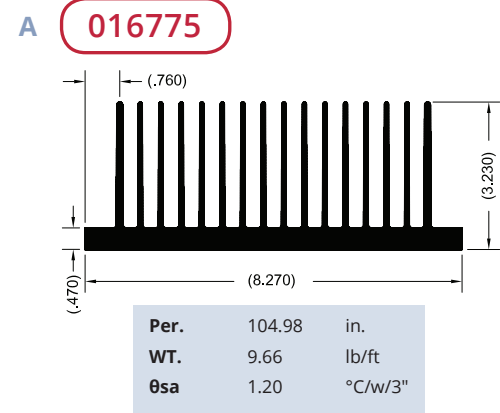


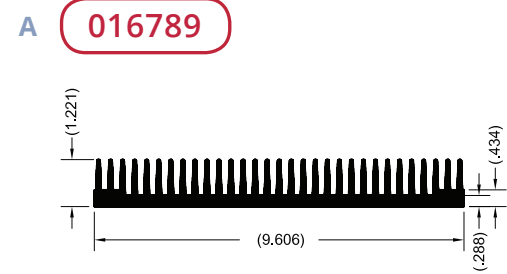
**Per.** 116.11 in.  
**WT.** 7.30 lb/ft  
**θsa** 0.60 °C/w/3"



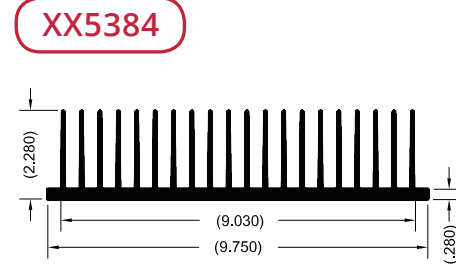
**Per.** 107.22 in.  
**WT.** 7.68 lb/ft  
**θsa** 0.60 °C/w/3"



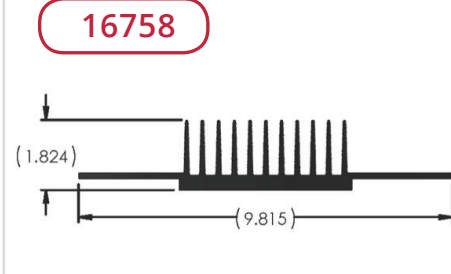




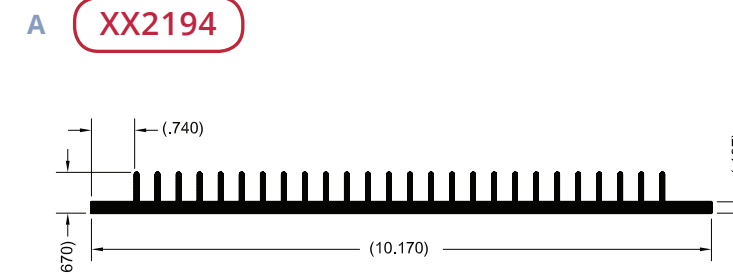
**Per.** 73.30 in.  
**WT.** 7.25 lb/ft  
**θsa** 2.10 °C/w/3"



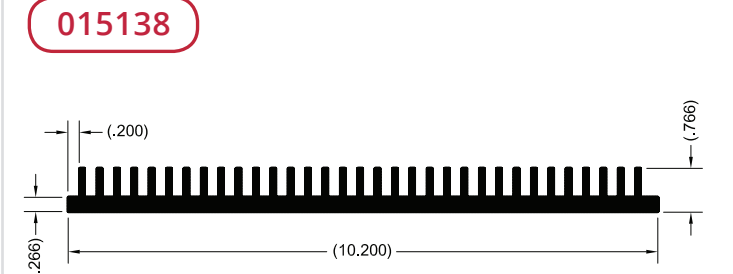
**Per.** 98.46 in.  
**WT.** 7.40 lb/ft  
**θsa** 0.75 °C/w/3"



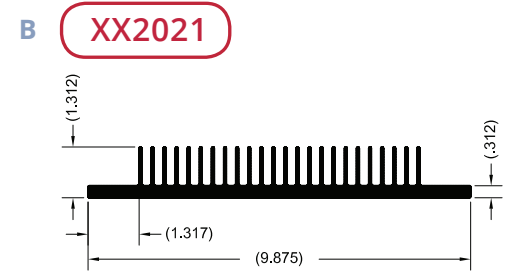
**Per.** 55.45 in.  
**WT.** 5.02 lb/ft  
**θsa** 1.26 °C/w/3"



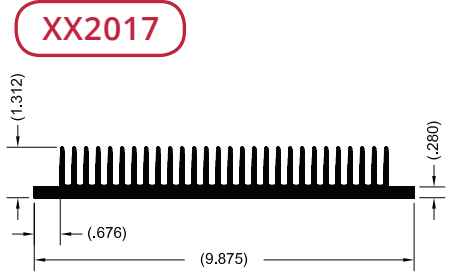
**Per.** 45.13 in.  
**WT.** 3.24 lb/ft  
**θsa** 1.50 °C/w/3"



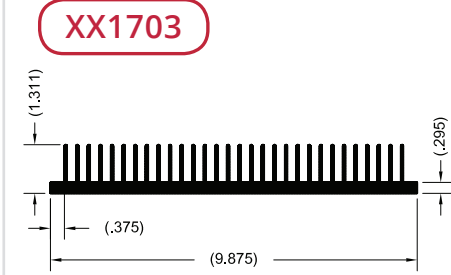
**Per.** 53.93 in.  
**WT.** 5.24 lb/ft  
**θsa** 1.30 °C/w/3"



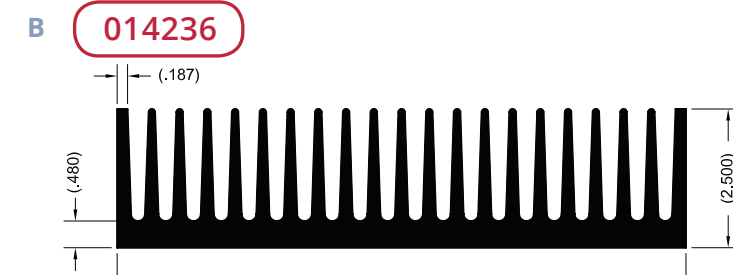
**Per.** 66.42 in.  
**WT.** 5.58 lb/ft  
**θsa** 1.20 °C/w/3"



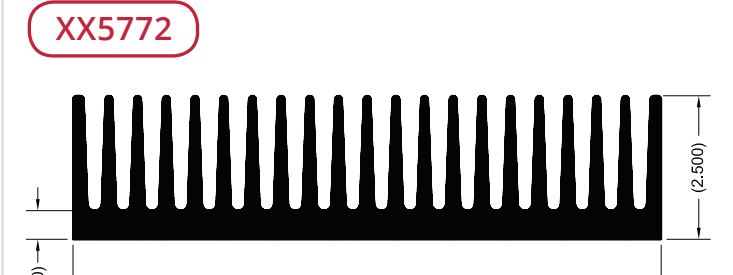
**Per.** 73.22 in.  
**WT.** 6.38 lb/ft  
**θsa** 1.10 °C/w/3"



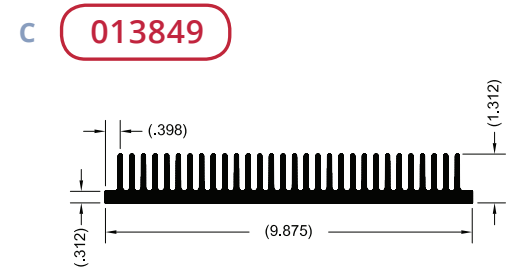
**Per.** 78.03 in.  
**WT.** 6.15 lb/ft  
**θsa** 0.91 °C/w/3"



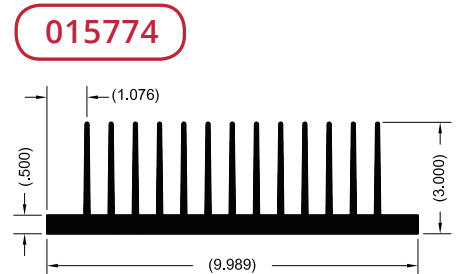
**Per.** 100.80 in.  
**WT.** 15.28 lb/ft  
**θsa** 1.10 °C/w/3"



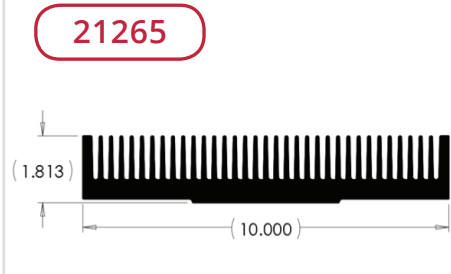
**Per.** 99.79 in.  
**WT.** 15.90 lb/ft  
**θsa** 0.71 °C/w/3"



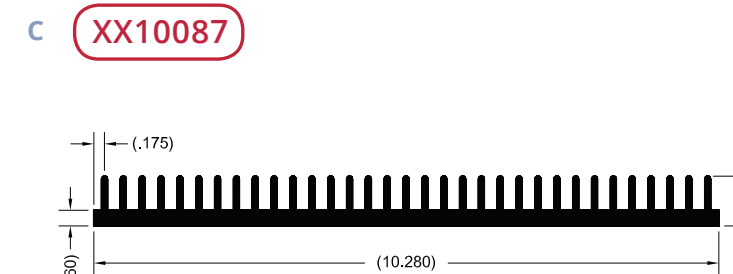
**Per.** 76.21 in.  
**WT.** 7.25 lb/ft  
**θsa** 1.00 °C/w/3"



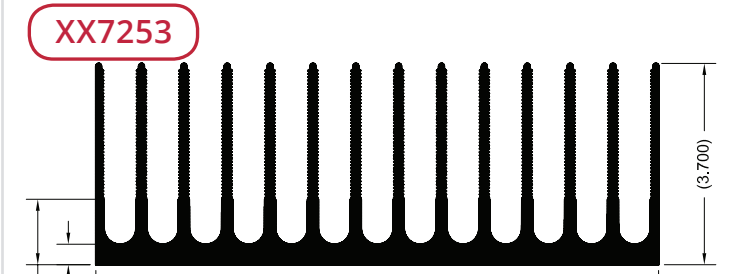
**Per.** 84.68 in.  
**WT.** 10.74 lb/ft  
**θsa** 0.90 °C/w/3"



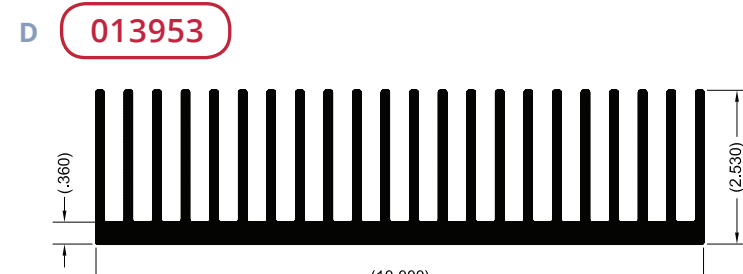
**Per.** 100.37 in.  
**WT.** 12.27 lb/ft  
**θsa** 0.70 °C/w/3"



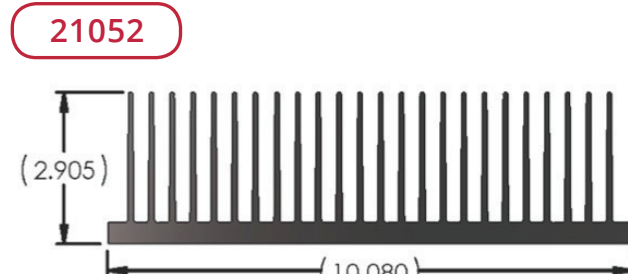
**Per.** 56.77 in.  
**WT.** 5.17 lb/ft  
**θsa** 1.40 °C/w/3"



**Per.** 151.74 in.  
**WT.** 13.89 lb/ft  
**θsa** 0.69 °C/w/3"



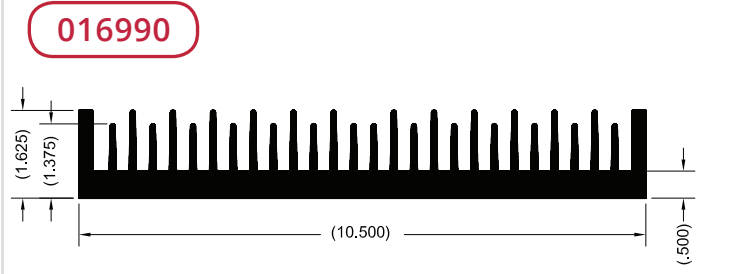
**Per.** 114.78 in.  
**WT.** 11.26 lb/ft  
**θsa** 0.60 °C/w/3"



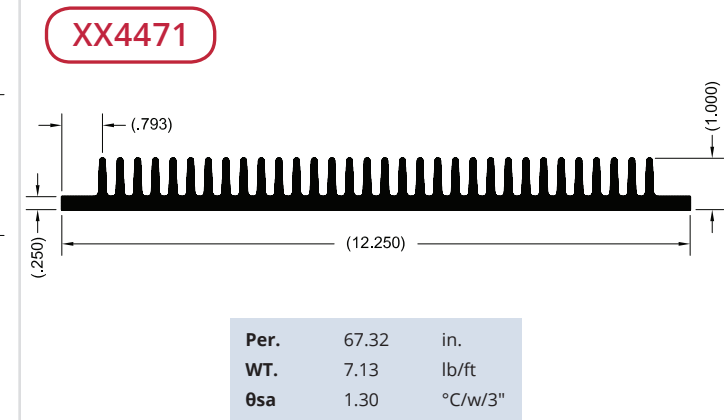
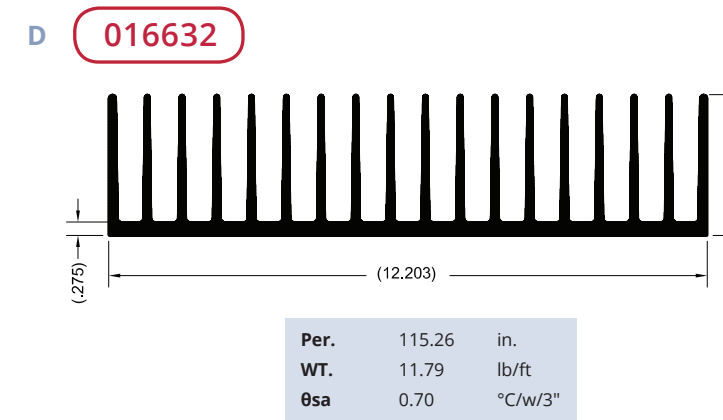
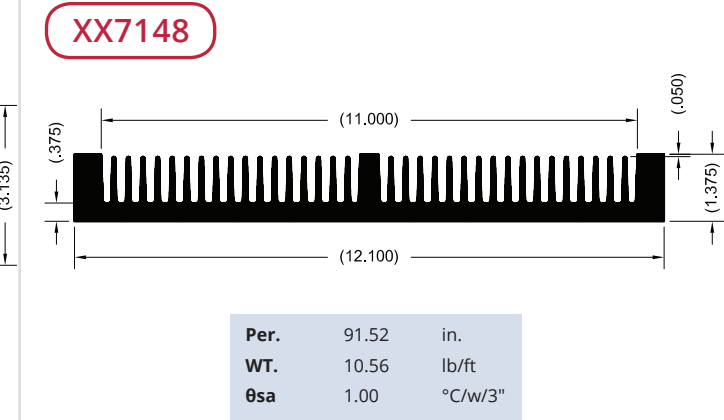
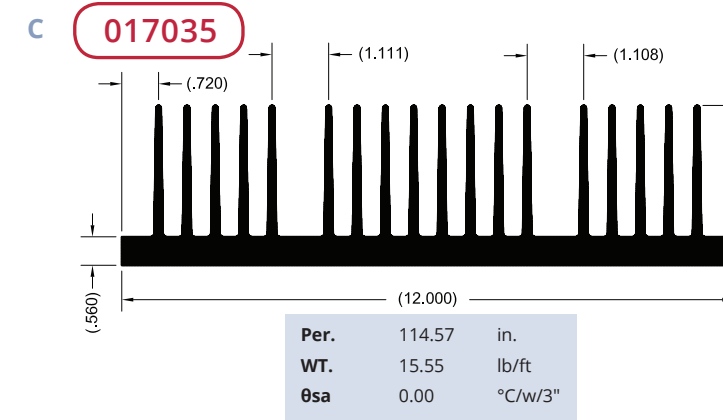
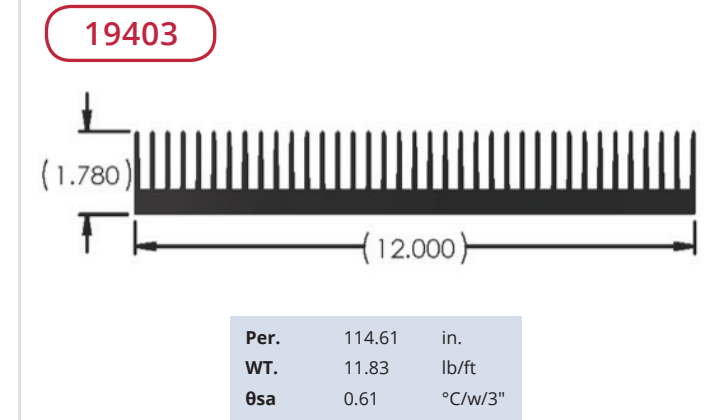
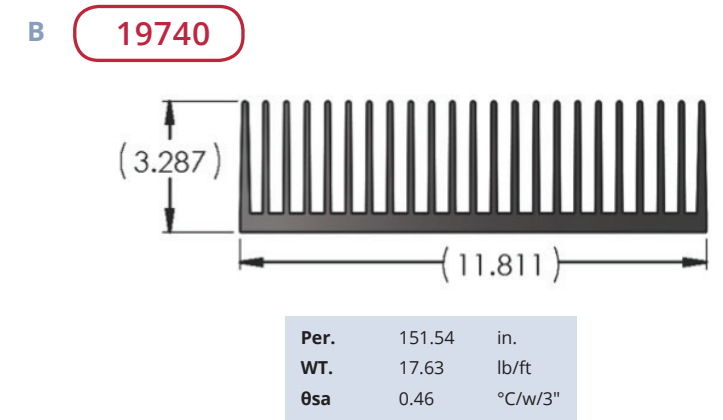
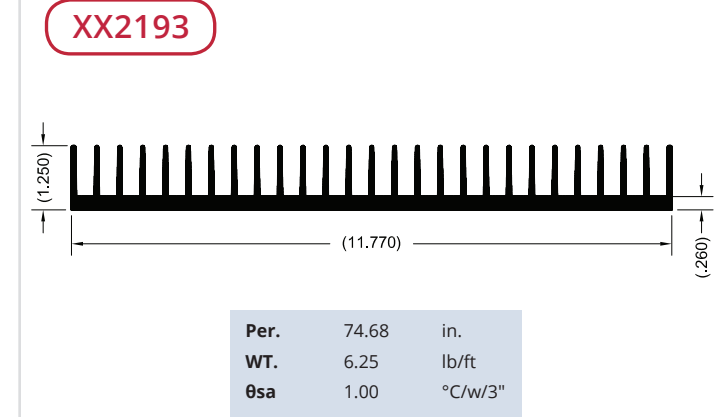
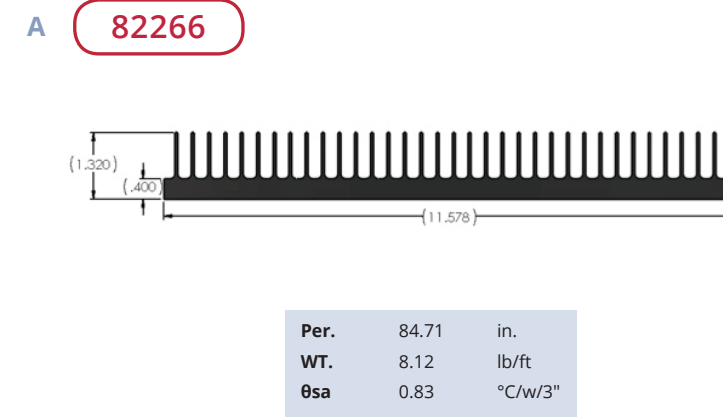
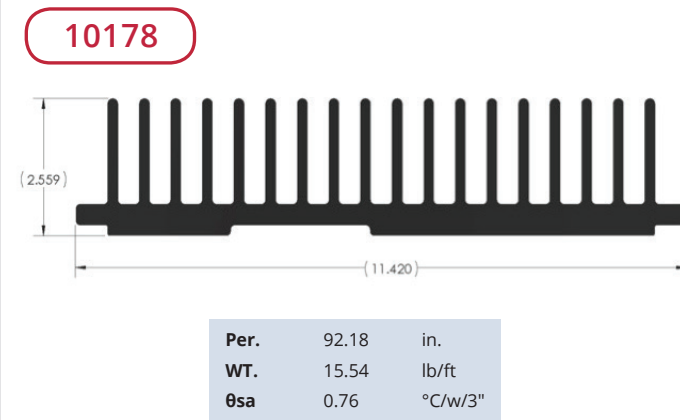
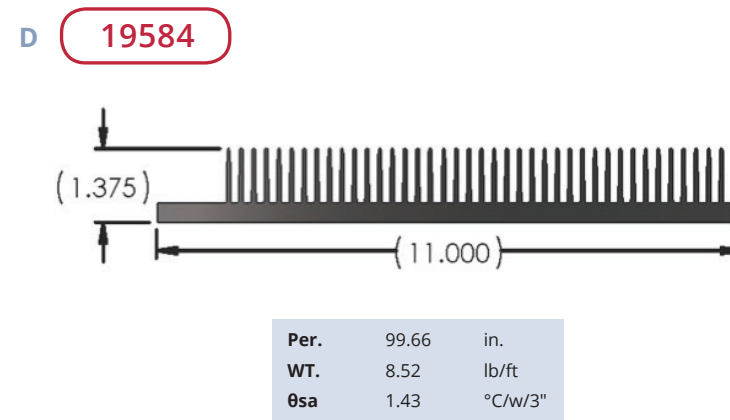
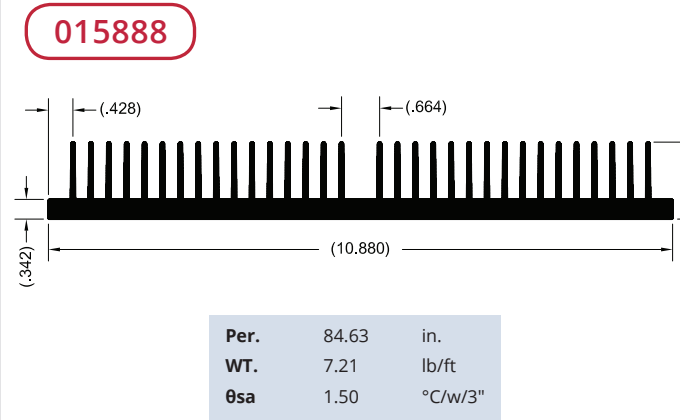
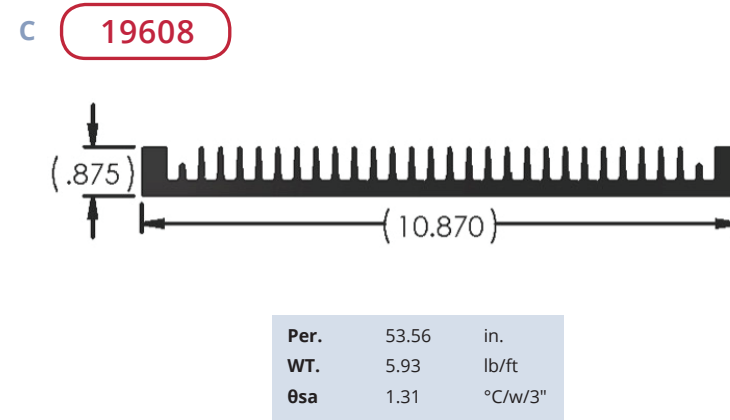
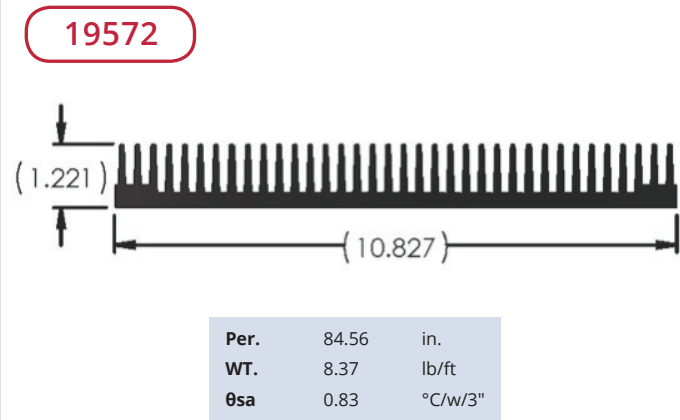
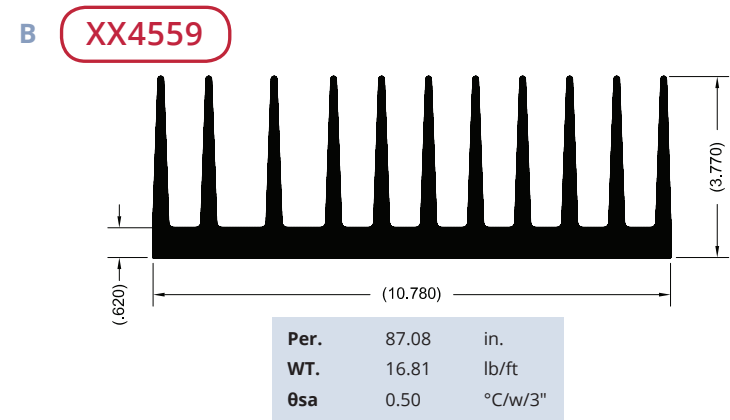
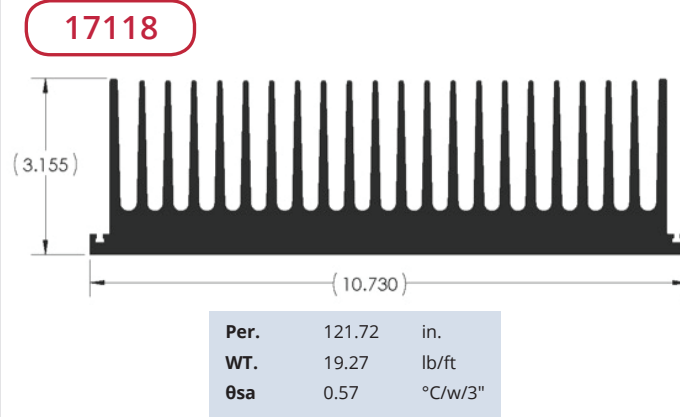
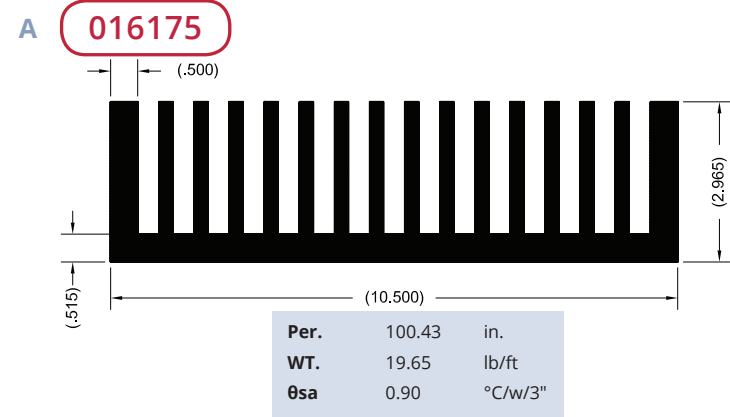
**Per.** 137.98 in.  
**WT.** 12.10 lb/ft  
**θsa** 0.51 °C/w/3"



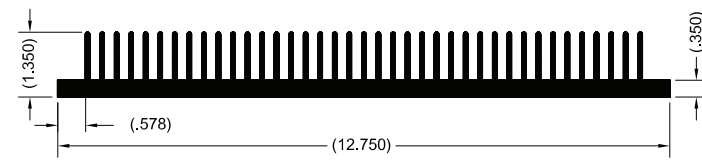
**Per.** 154.23 in.  
**WT.** 15.86 lb/ft  
**θsa** 0.45 °C/w/3"



**Per.** 75.47 in.  
**WT.** 10.06 lb/ft  
**θsa** 1.30 °C/w/3"

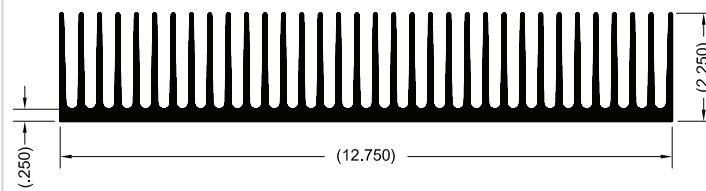


A **XX2170**



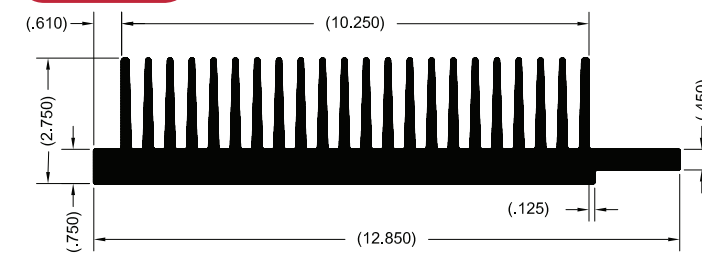
Per.	102.86	in.
WT.	9.07	lb/ft
θsa	0.60	°C/w/3"

**XX2044**



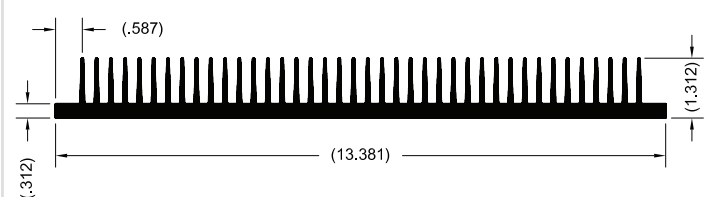
Per.	155.65	in.
WT.	11.00	lb/ft
θsa	0.56	°C/w/3"

B **XX7214**



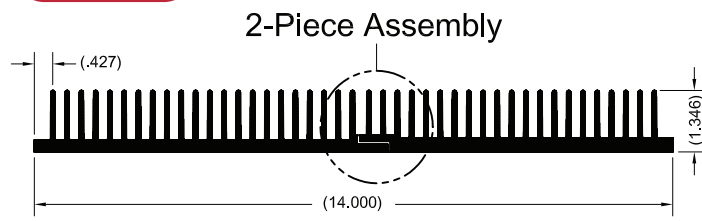
Per.	110.91	in.
WT.	18.71	lb/ft
θsa	0.65	°C/w/3"

**XX5429**



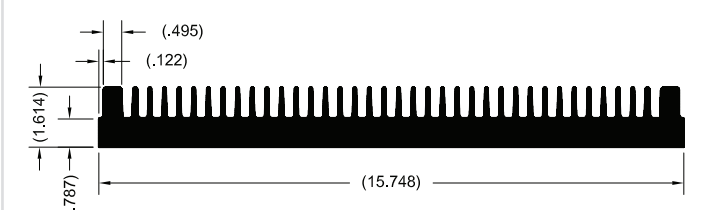
Per.	110.91	in.
WT.	18.71	lb/ft
θsa	0.65	°C/w/3"

C **013772**



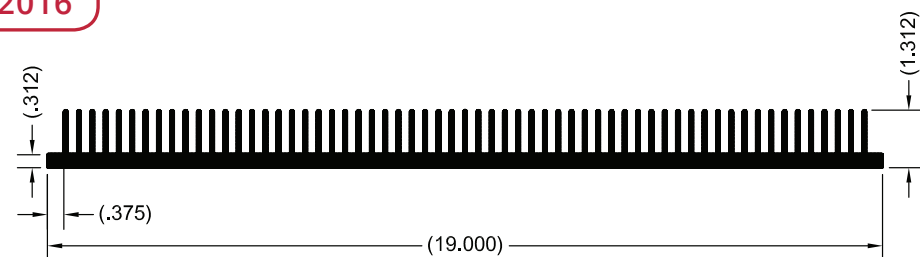
Per.	60.84	in.
WT.	5.08	lb/ft
θsa	0.60	°C/w/3"

**016543**



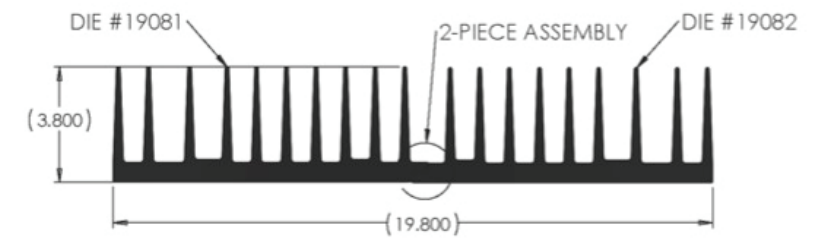
Per.	91.53	in.
WT.	19.20	lb/ft
θsa	1.10	°C/w/3"

D **XX2016**



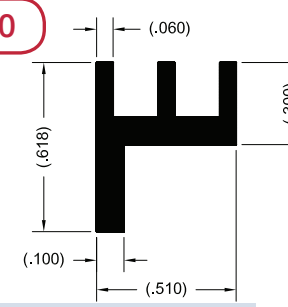
Per.	110.91	in.
WT.	18.71	lb/ft
θsa	0.65	°C/w/3"

A **19081 & 19082**



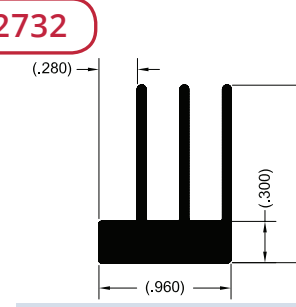
Per.	153.20	in.
WT.	30.19	lb/ft
θsa	0.46	°C/w/3"

B **009350**



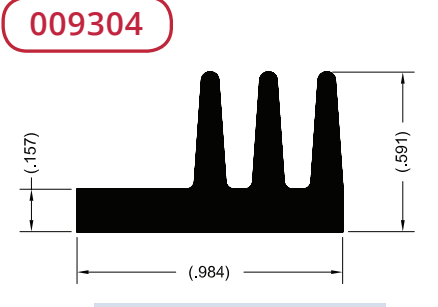
Per.	3.07	in.
WT.	0.14	lb/ft
θsa	22.80	°C/w/3"

**012732**



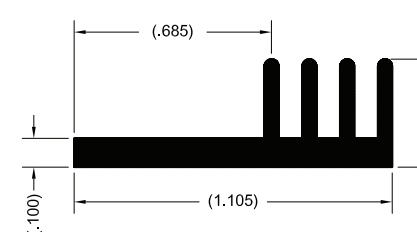
Per.	8.22	in.
WT.	0.56	lb/ft
θsa	6.50	°C/w/3"

**009304**



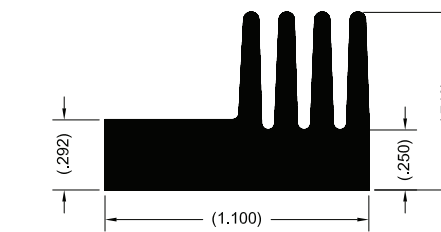
Per.	4.89	in.
WT.	0.33	lb/ft
θsa	14.30	°C/w/3"

C **009893**



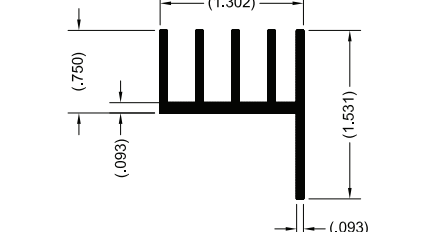
Per.	4.61	in.
WT.	0.20	lb/ft
θsa	15.20	°C/w/3"

**013691**



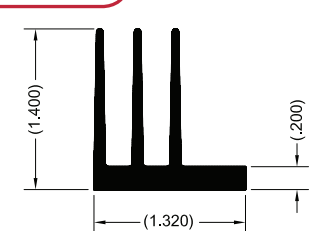
Per.	6.31	in.
WT.	0.52	lb/ft
θsa	11.10	°C/w/3"

**XX5269**



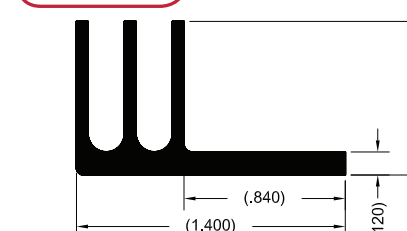
Per.	10.92	in.
WT.	0.48	lb/ft
θsa	7.30	°C/w/3"

D **014755**



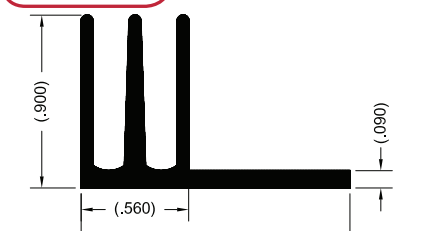
Per.	9.97	in.
WT.	0.63	lb/ft
θsa	5.70	°C/w/3"

**XX8627**



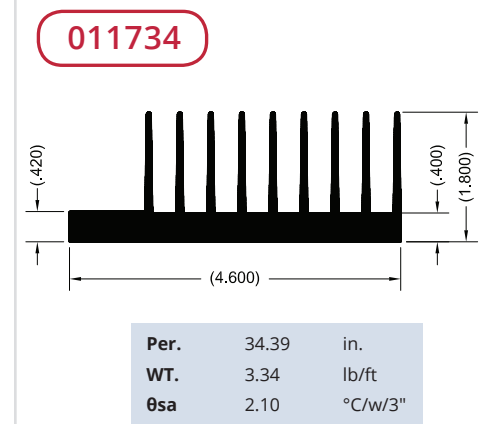
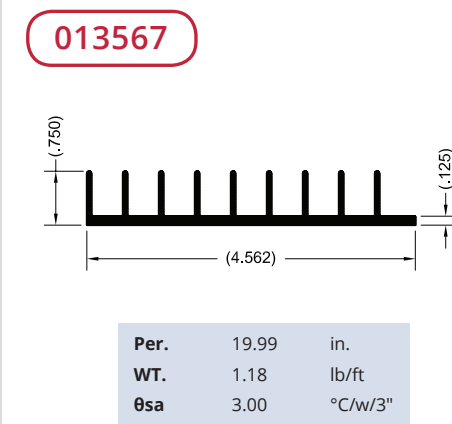
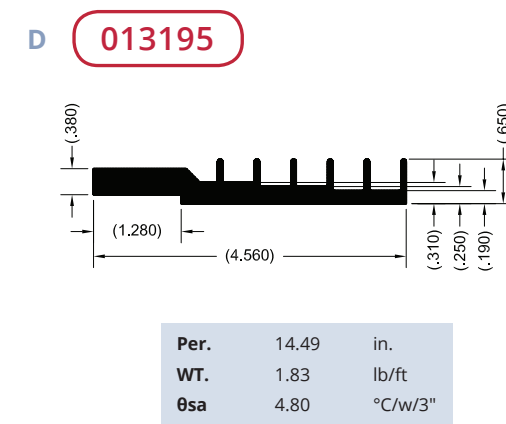
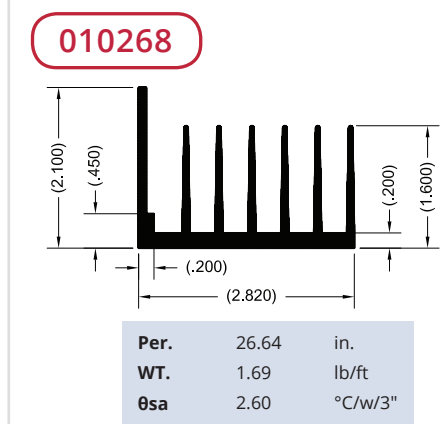
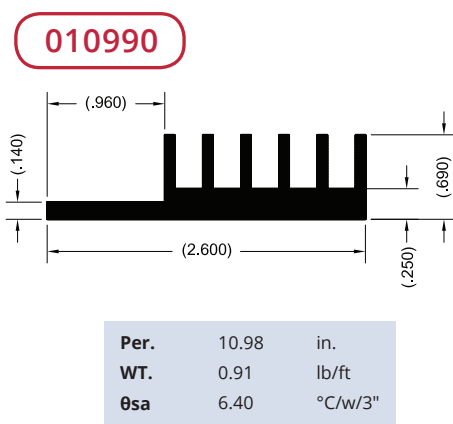
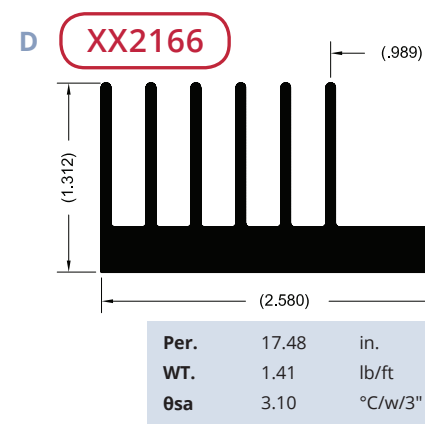
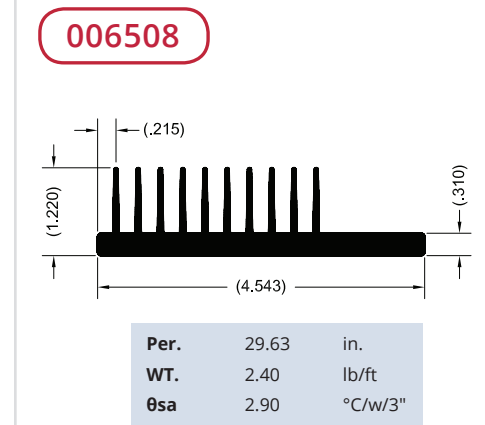
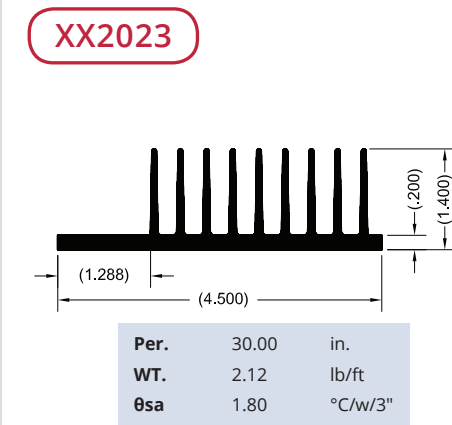
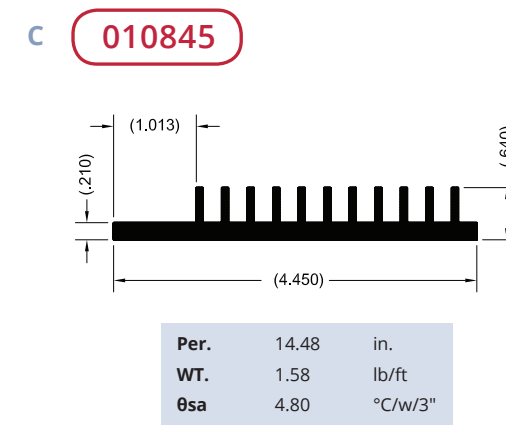
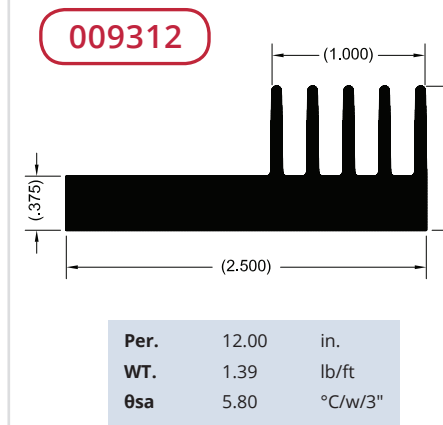
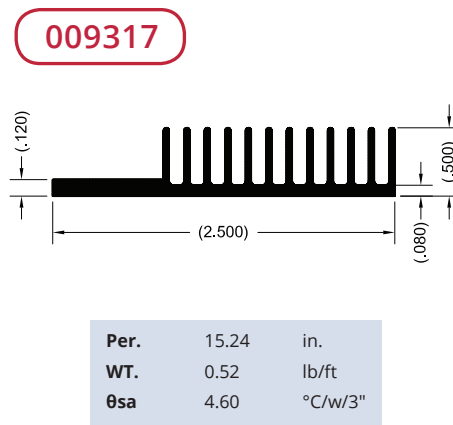
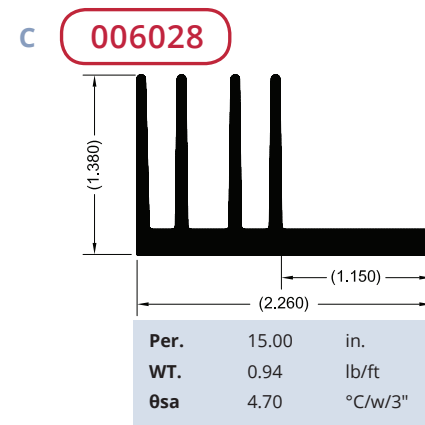
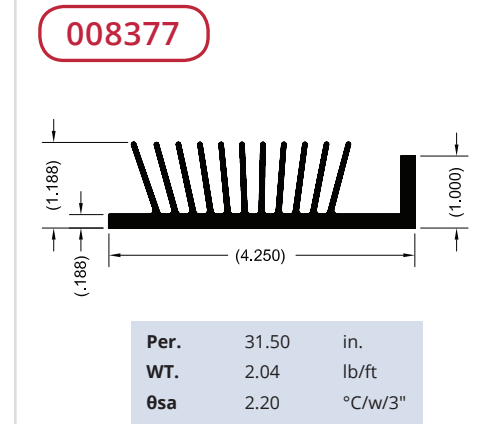
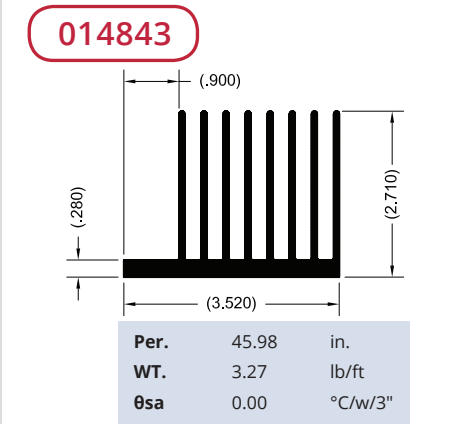
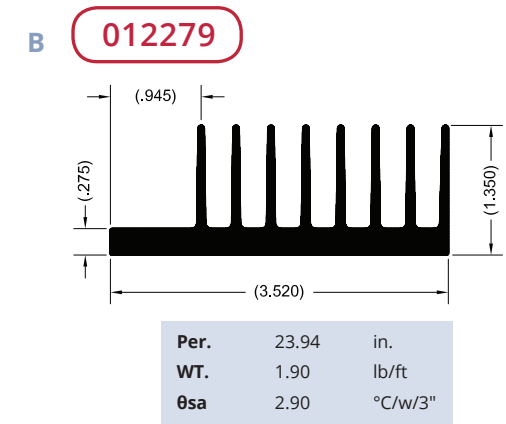
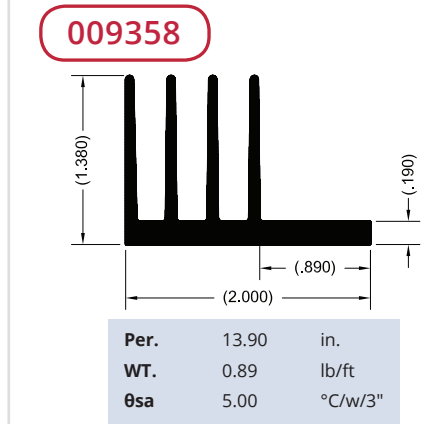
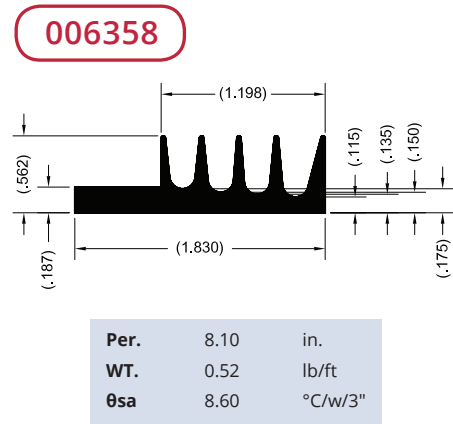
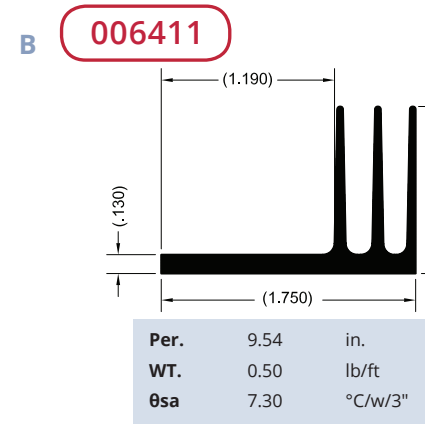
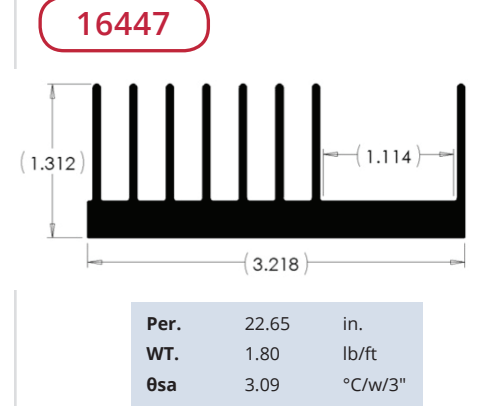
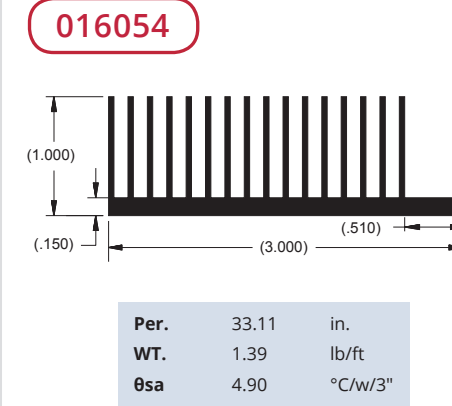
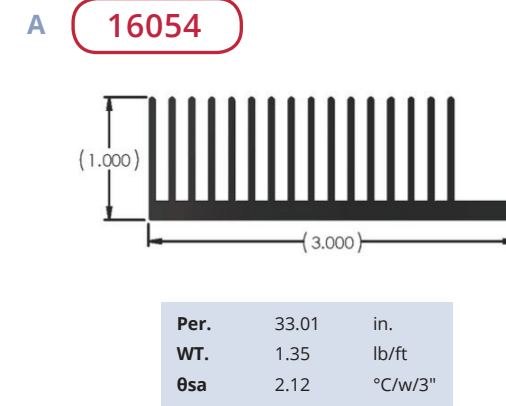
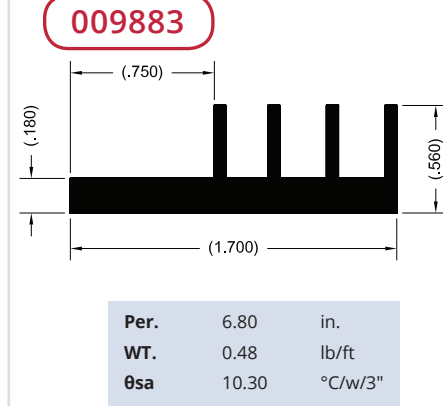
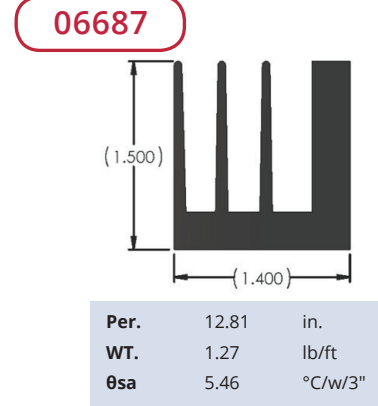
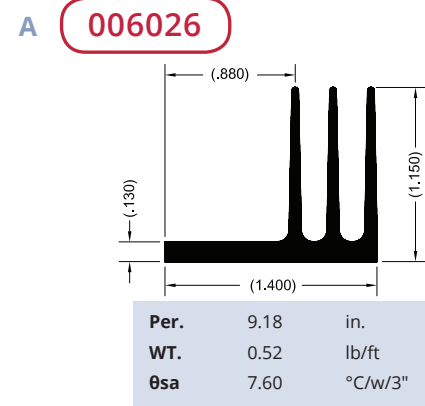
Per.	6.92	in.
WT.	0.36	lb/ft
θsa	7.00	°C/w/3"

**006248**

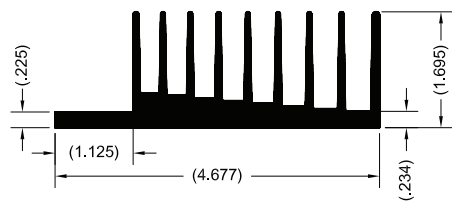


Per.	7.61	in.
WT.	0.37	lb/ft
θsa	9.20	°C/w/3"



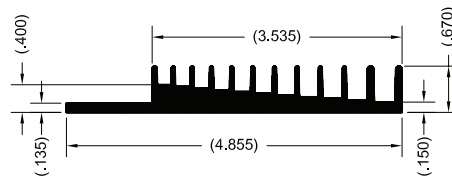


**A 008770**



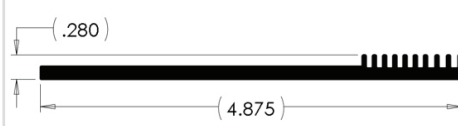
Per.	32.75	in.
WT.	3.04	lb/ft
θsa	2.10	°C/w/3"

**008769**



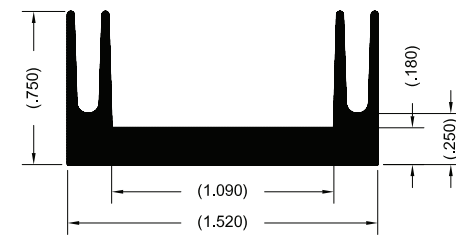
Per.	19.24	in.
WT.	1.65	lb/ft
θsa	3.60	°C/w/3"

**19496**



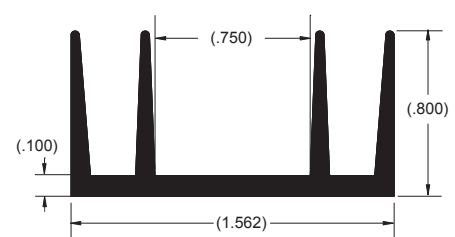
Per.	12.75	in.
WT.	0.93	lb/ft
θsa	5.48	°C/w/3"

**A XX1063**



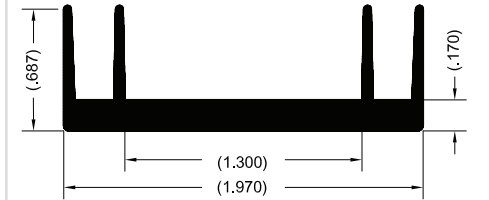
Per.	7.45	in.
WT.	0.46	lb/ft
θsa	5.10	°C/w/3"

**003542**



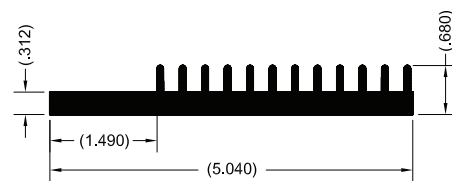
Per.	8.95	in.
WT.	0.41	lb/ft
θsa	7.80	°C/w/3"

**XX1354**



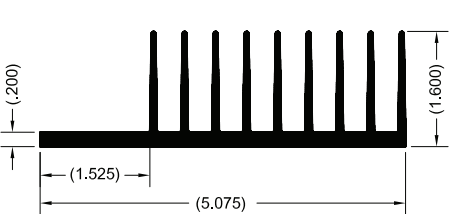
Per.	8.24	in.
WT.	0.52	lb/ft
θsa	4.30	°C/w/3"

**B 008465**



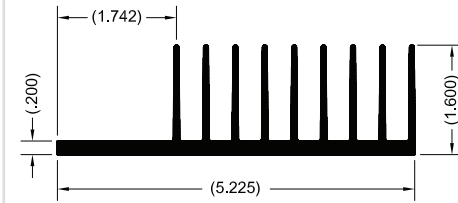
Per.	19.54	in.
WT.	2.34	lb/ft
θsa	3.60	°C/w/3"

**008507**



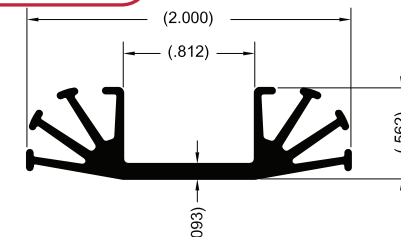
Per.	35.08	in.
WT.	2.43	lb/ft
θsa	2.60	°C/w/3"

**011304**



Per.	34.60	in.
WT.	2.37	lb/ft
θsa	2.00	°C/w/3"

**B XX1284**



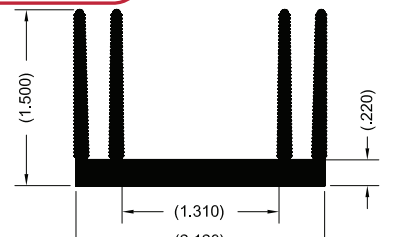
Per.	9.96	in.
WT.	0.37	lb/ft
θsa	6.50	°C/w/3"

**XX1453**



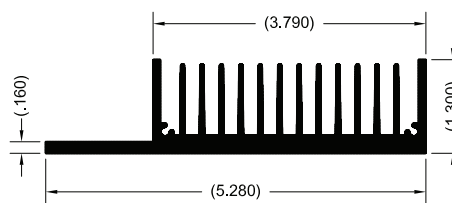
Per.	13.86	in.
WT.	1.00	lb/ft
θsa	3.50	°C/w/3"

**014270**



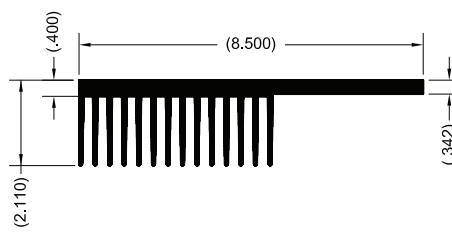
Per.	22.50	in.
WT.	1.07	lb/ft
θsa	3.10	°C/w/3"

**C 012535**



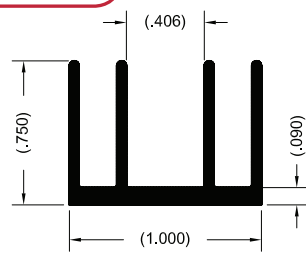
Per.	39.12	in.
WT.	2.54	lb/ft
θsa	1.80	°C/w/3"

**015771**



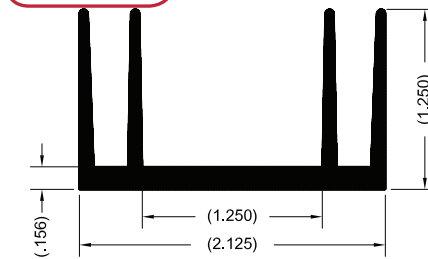
Per.	64.44	in.
WT.	6.35	lb/ft
θsa	0.00	°C/w/3"

**XX2558**



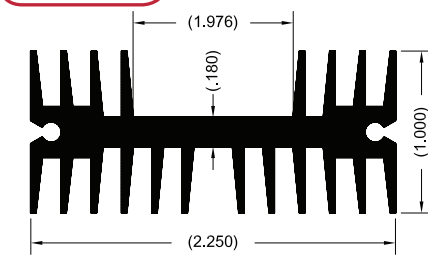
Per.	7.46	in.
WT.	0.27	lb/ft
θsa	8.00	°C/w/3"

**C XX1409**



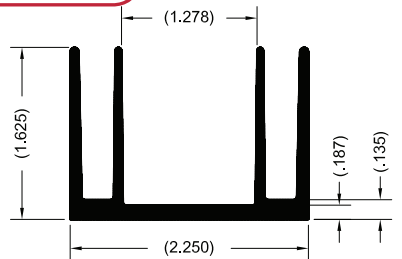
Per.	13.05	in.
WT.	0.81	lb/ft
θsa	3.80	°C/w/3"

**XX4865**



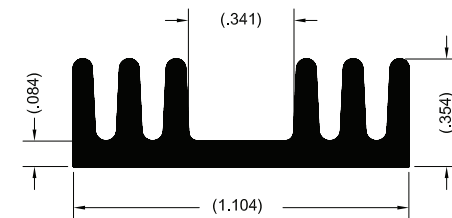
Per.	20.15	in.
WT.	1.02	lb/ft
θsa	3.50	°C/w/3"

**016145**



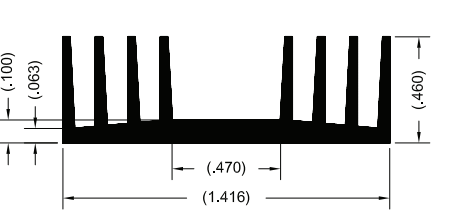
Per.	16.17	in.
WT.	1.01	lb/ft
θsa	3.70	°C/w/3"

**D XX10222**



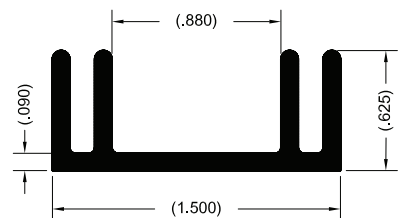
Per.	5.15	in.
WT.	0.99	lb/ft
θsa	10.00	°C/w/3"

**XX1007**



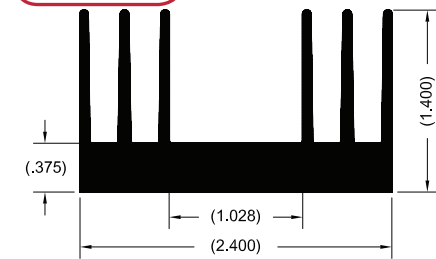
Per.	8.88	in.
WT.	0.29	lb/ft
θsa	6.40	°C/w/3"

**XX4721**



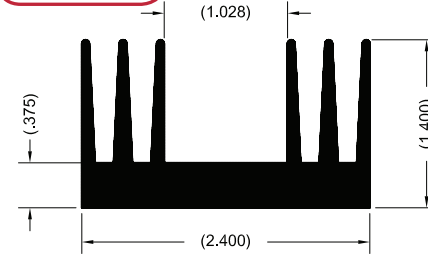
Per.	7.23	in.
WT.	0.39	lb/ft
θsa	10.30	°C/w/3"

**D XX1546**



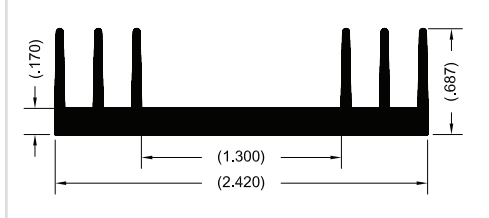
Per.	17.49	in.
WT.	1.61	lb/ft
θsa	3.70	°C/w/3"

**XX7134**

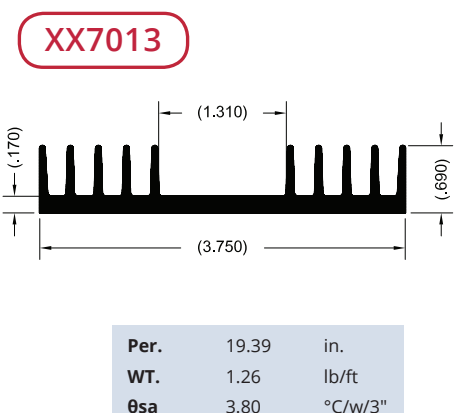
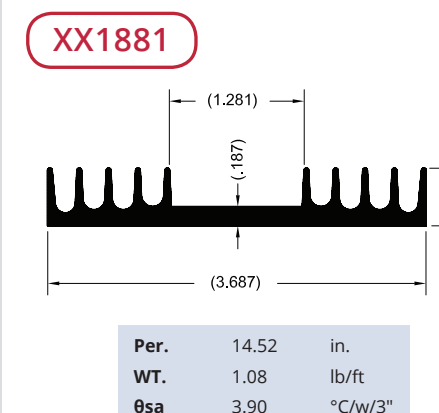
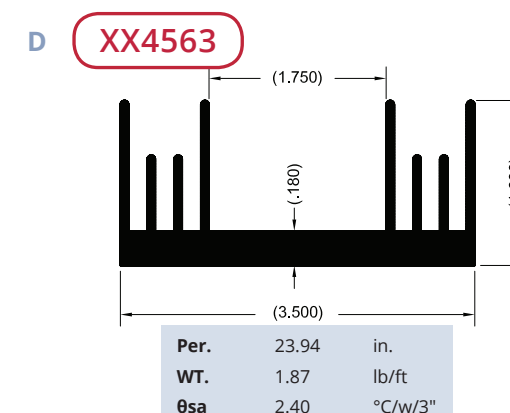
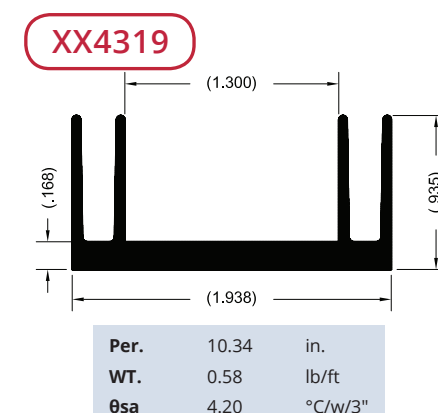
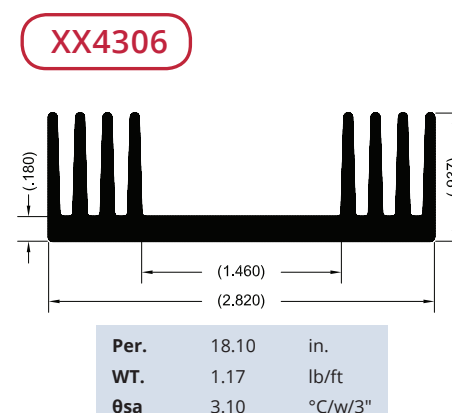
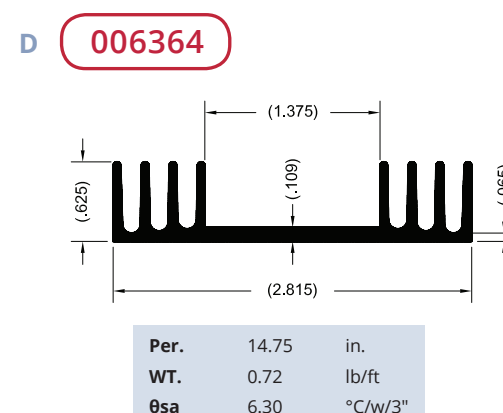
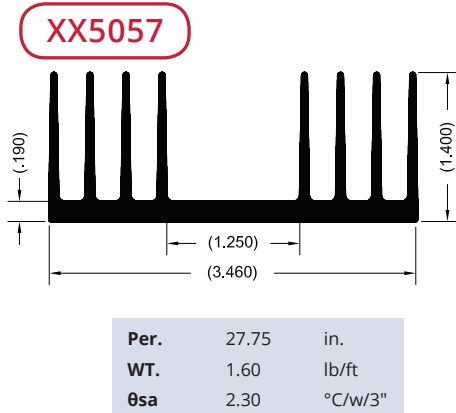
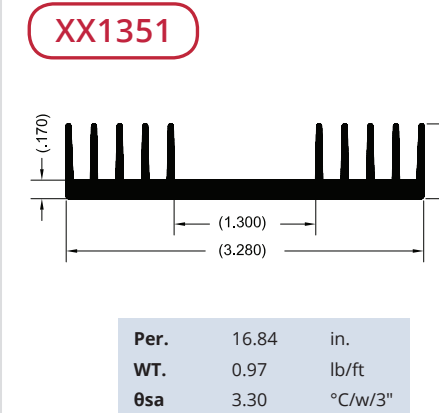
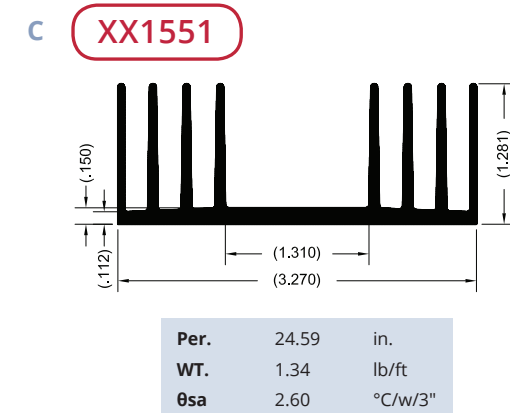
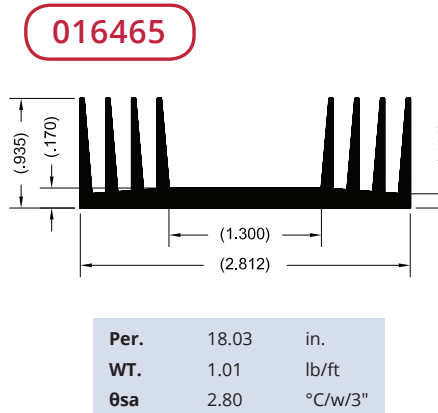
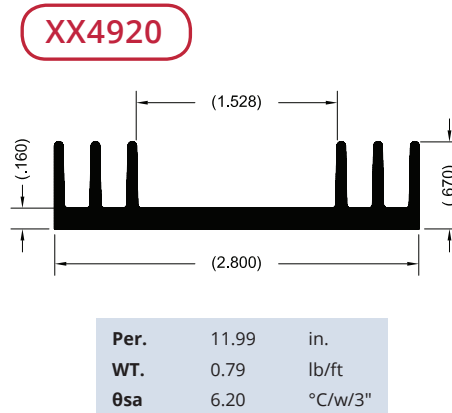
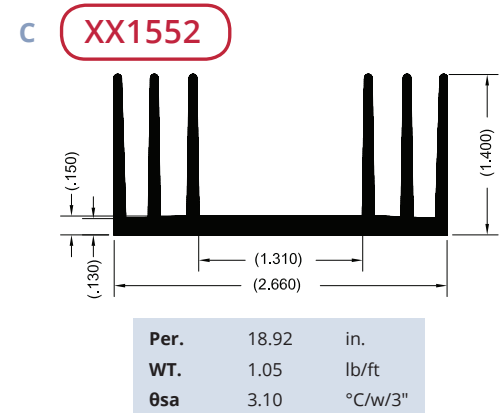
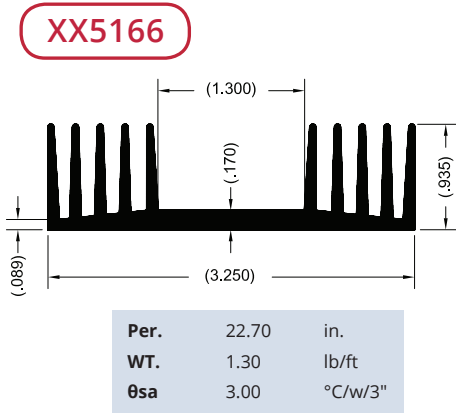
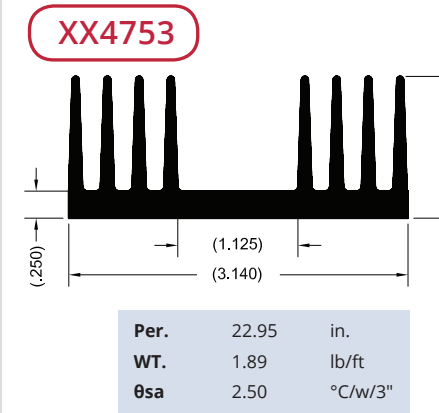
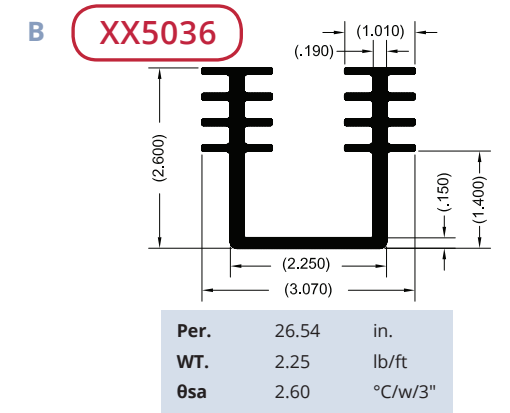
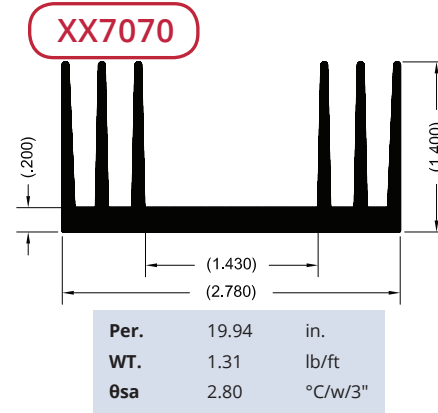
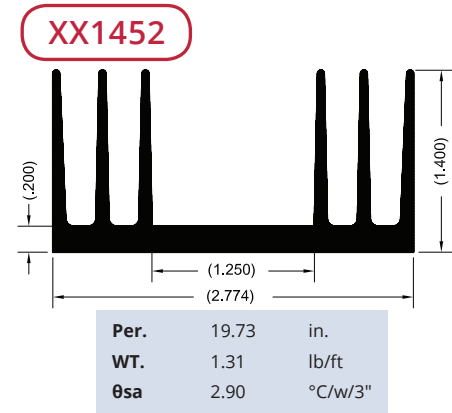
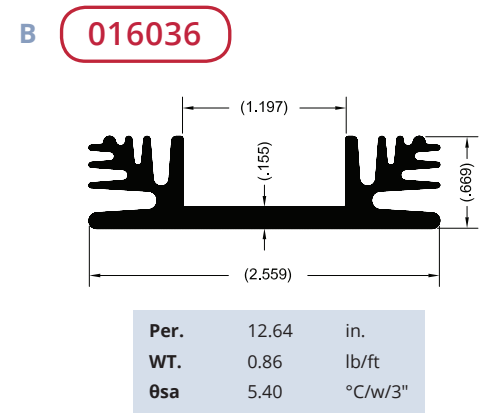
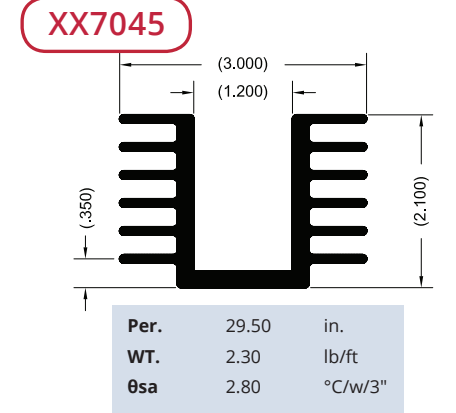
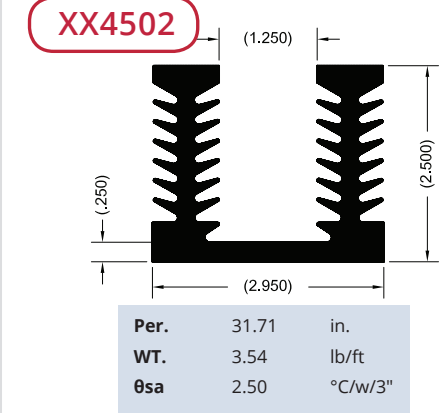
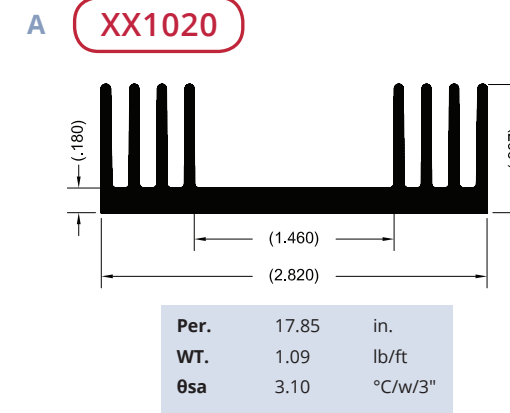
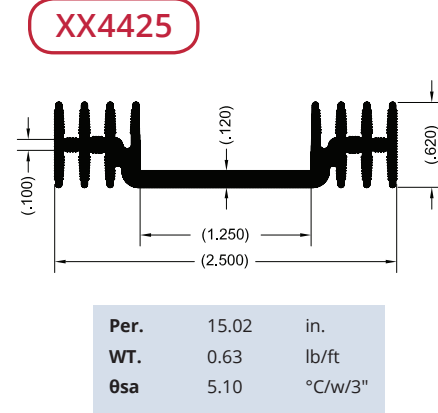
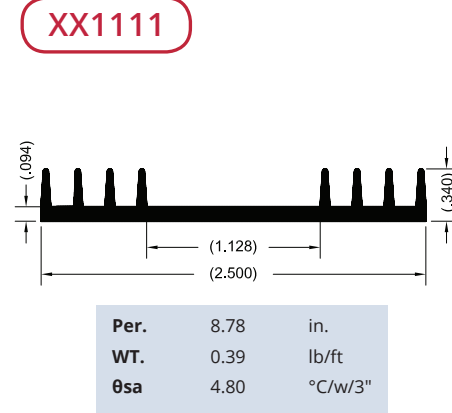
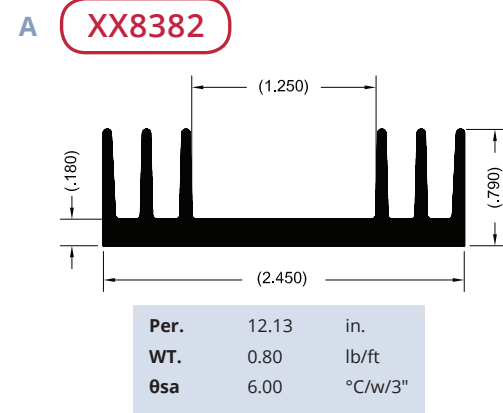


Per.	17.32	in.
WT.	1.76	lb/ft
θsa	2.00	°C/w/3"

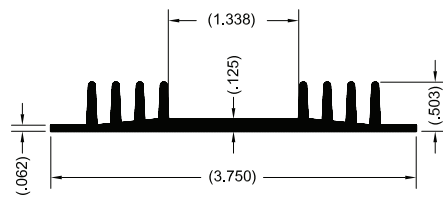
**XX1353**



Per.	11.16	in.
WT.	0.68	lb/ft
θsa	4.00	°C/w/3"

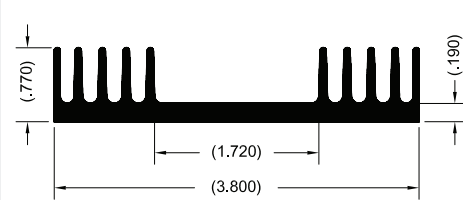


**A** **XX6520**



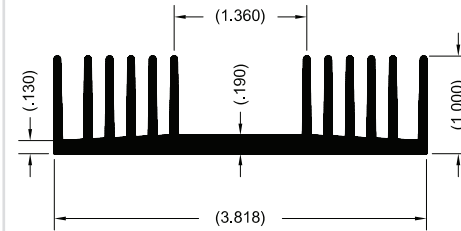
**Per.** 13.50 in.  
**WT.** 0.74 lb/ft  
**θsa** 4.00 °C/w/3"

**XX0236**



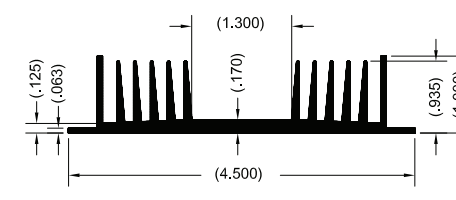
**Per.** 19.58 in.  
**WT.** 1.39 lb/ft  
**θsa** 4.50 °C/w/3"

**XX4562**



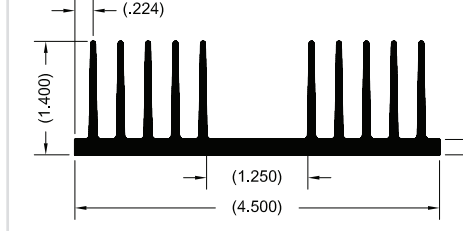
**Per.** 28.00 in.  
**WT.** 1.62 lb/ft  
**θsa** 2.50 °C/w/3"

**A** **XX7051**



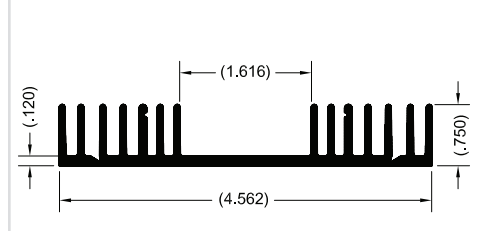
**Per.** 27.77 in.  
**WT.** 1.54 lb/ft  
**θsa** 2.80 °C/w/3"

**XX4618**



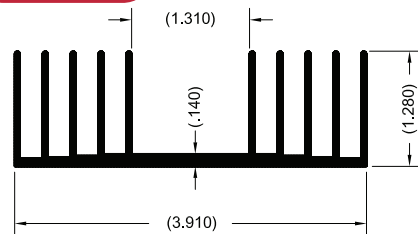
**Per.** 32.22 in.  
**WT.** 2.05 lb/ft  
**θsa** 1.80 °C/w/3"

**XX6980**



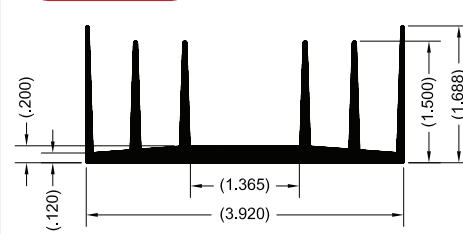
**Per.** 26.46 in.  
**WT.** 1.36 lb/ft  
**θsa** 3.50 °C/w/3"

**B** **XX5052**



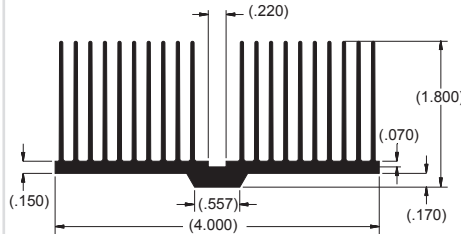
**Per.** 31.02 in.  
**WT.** 1.39 lb/ft  
**θsa** 2.30 °C/w/3"

**XX5061**



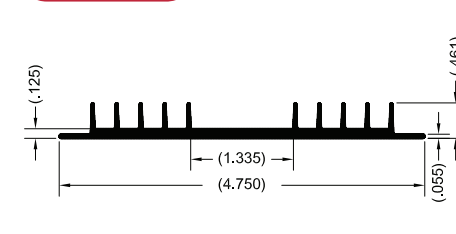
**Per.** 22.14 in.  
**WT.** 1.85 lb/ft  
**θsa** 2.00 °C/w/3"

**016582**



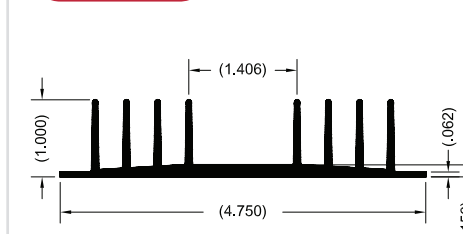
**Per.** 66.79 in.  
**WT.** 2.44 lb/ft  
**θsa** 3.50 °C/w/3"

**B** **XX1327**



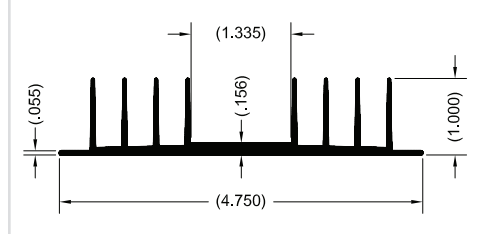
**Per.** 15.98 in.  
**WT.** 0.81 lb/ft  
**θsa** 3.30 °C/w/3"

**003979**



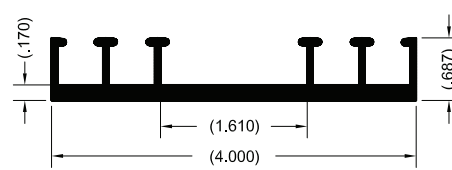
**Per.** 43.78 in.  
**WT.** 1.19 lb/ft  
**θsa** 3.10 °C/w/3"

**XX4670**



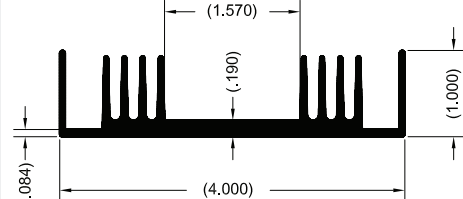
**Per.** 23.42 in.  
**WT.** 1.02 lb/ft  
**θsa** 3.20 °C/w/3"

**C** **XX9004**



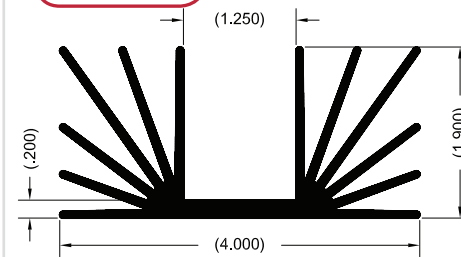
**Per.** 15.97 in.  
**WT.** 1.14 lb/ft  
**θsa** 2.90 °C/w/3"

**XX1055**



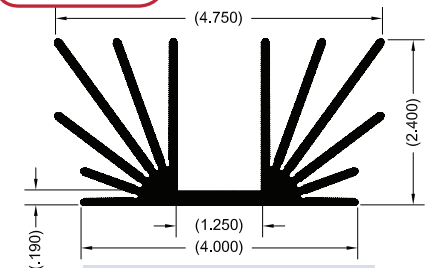
**Per.** 23.13 in.  
**WT.** 1.43 lb/ft  
**θsa** 2.80 °C/w/3"

**XX8340**



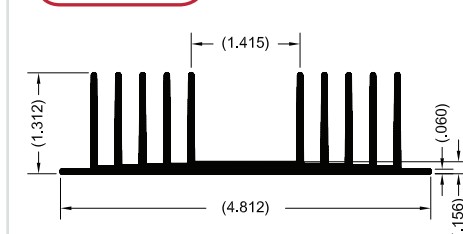
**Per.** 37.80 in.  
**WT.** 2.27 lb/ft  
**θsa** 1.60 °C/w/3"

**C** **XX1502**



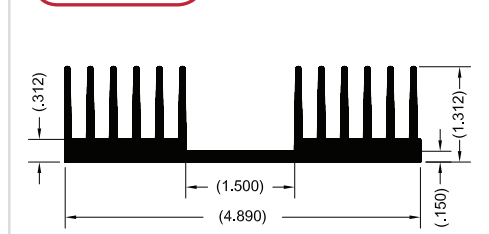
**Per.** 58.23 in.  
**WT.** 3.06 lb/ft  
**θsa** 1.80 °C/w/3"

**XX4671**



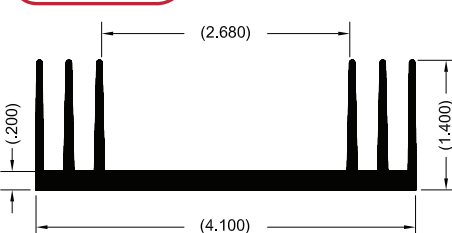
**Per.** 30.25 in.  
**WT.** 1.67 lb/ft  
**θsa** 1.80 °C/w/3"

**XX1026**



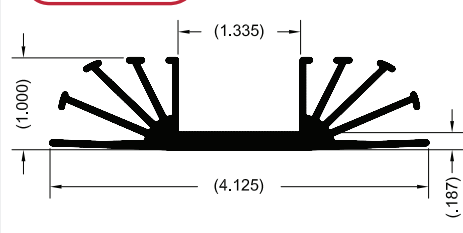
**Per.** 33.86 in.  
**WT.** 2.67 lb/ft  
**θsa** 2.10 °C/w/3"

**D** **XX1459**



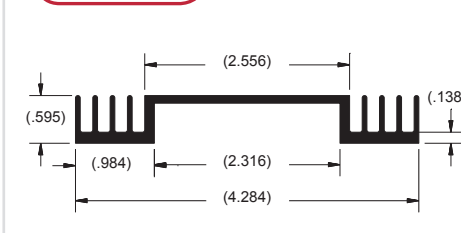
**Per.** 22.62 in.  
**WT.** 1.59 lb/ft  
**θsa** 2.70 °C/w/3"

**XX1371**



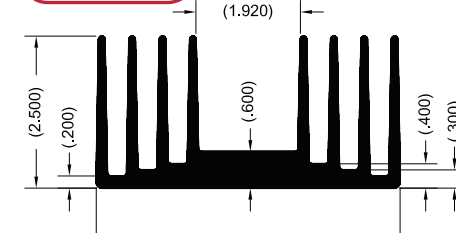
**Per.** 23.82 in.  
**WT.** 1.10 lb/ft  
**θsa** 2.20 °C/w/3"

**015935**



**Per.** 17.66 in.  
**WT.** 0.98 lb/ft  
**θsa** 5.90 °C/w/3"

**D** **016314**



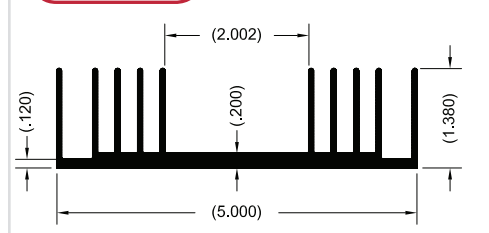
**Per.** 43.85 in.  
**WT.** 5.33 lb/ft  
**θsa** 1.60 °C/w/3"

**016372**

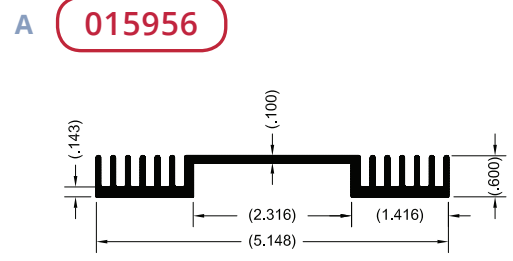


**Per.** 39.30 in.  
**WT.** 3.46 lb/ft  
**θsa** 2.50 °C/w/3"

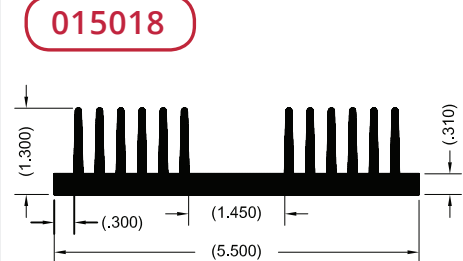
**XX7331**



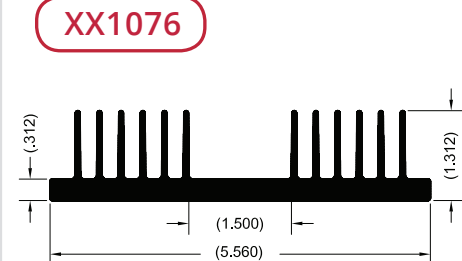
**Per.** 33.80 in.  
**WT.** 1.90 lb/ft  
**θsa** 3.00 °C/w/3"



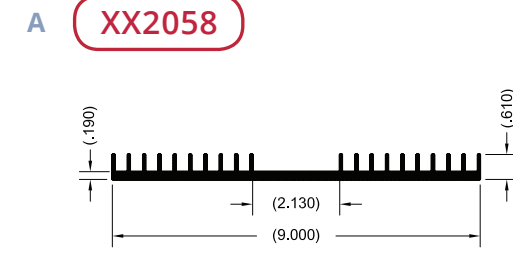
Per. 22.78 in.  
WT. 1.26 lb/ft  
θsa 4.90 °C/w/3"



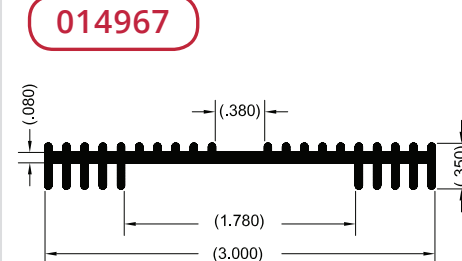
Per. 34.46 in.  
WT. 3.46 lb/ft  
θsa 2.50 °C/w/3"



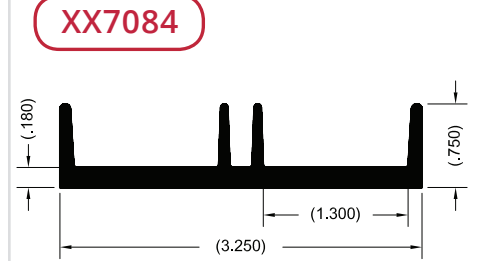
Per. 34.57 in.  
WT. 3.14 lb/ft  
θsa 1.60 °C/w/3"



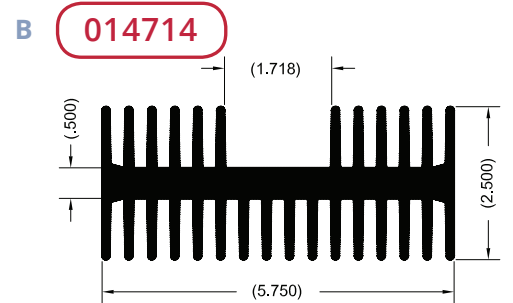
Per. 35.18 in.  
WT. 2.66 lb/ft  
θsa 1.60 °C/w/3"



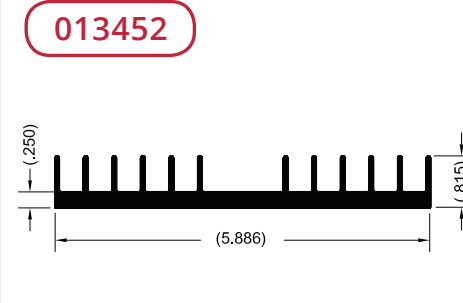
Per. 12.32 in.  
WT. 0.48 lb/ft  
θsa 5.70 °C/w/3"



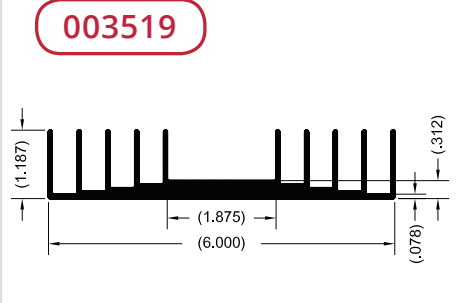
Per. 11.50 in.  
WT. 0.96 lb/ft  
θsa 4.50 °C/w/3"



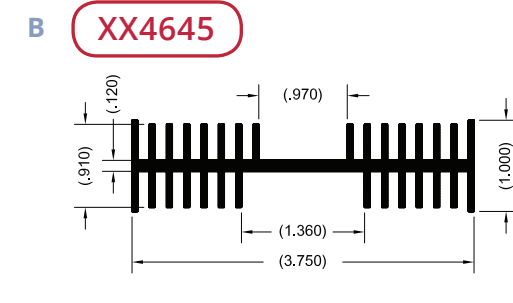
Per. 86.54 in.  
WT. 7.43 lb/ft  
θsa 0.80 °C/w/3"



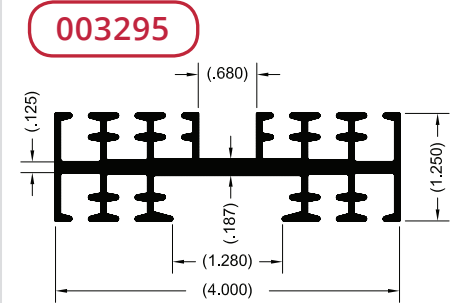
Per. 25.26 in.  
WT. 2.27 lb/ft  
θsa 2.50 °C/w/3"



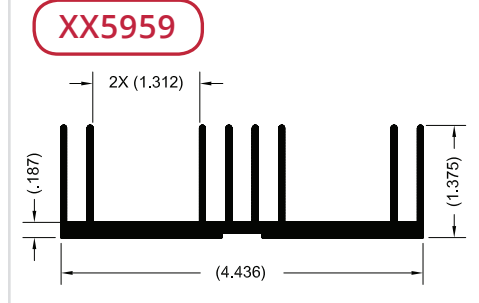
Per. 32.02 in.  
WT. 2.26 lb/ft  
θsa 2.10 °C/w/3"



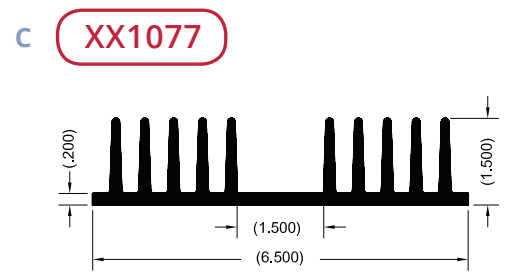
Per. 31.06 in.  
WT. 1.41 lb/ft  
θsa 2.80 °C/w/3"



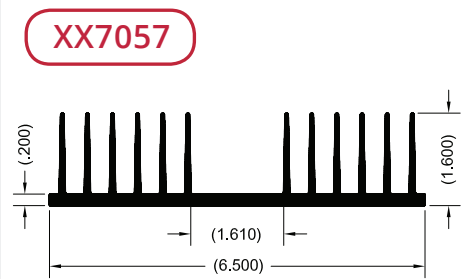
Per. 27.00 in.  
WT. 1.56 lb/ft  
θsa 2.60 °C/w/3"



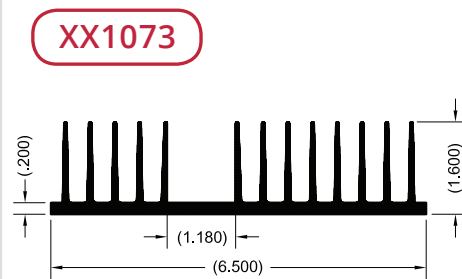
Per. 28.06 in.  
WT. 1.70 lb/ft  
θsa 2.20 °C/w/3"



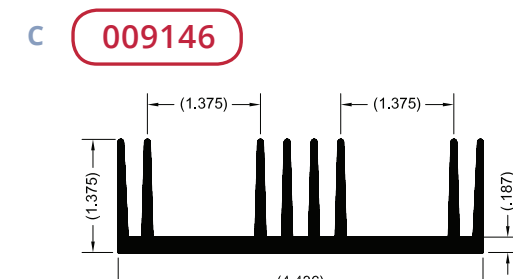
Per. 37.67 in.  
WT. 4.03 lb/ft  
θsa 1.40 °C/w/3"



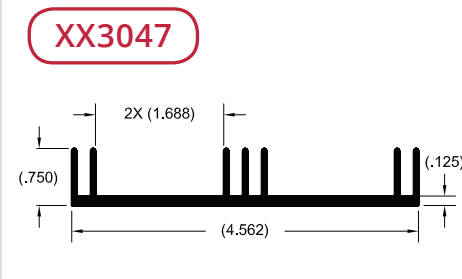
Per. 45.98 in.  
WT. 3.07 lb/ft  
θsa 1.70 °C/w/3"



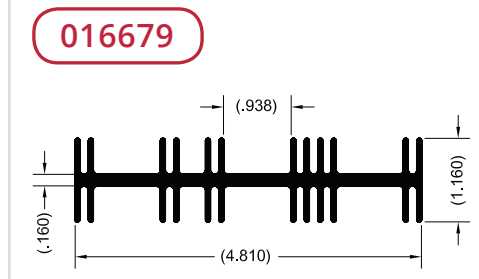
Per. 48.32 in.  
WT. 3.20 lb/ft  
θsa 1.30 °C/w/3"



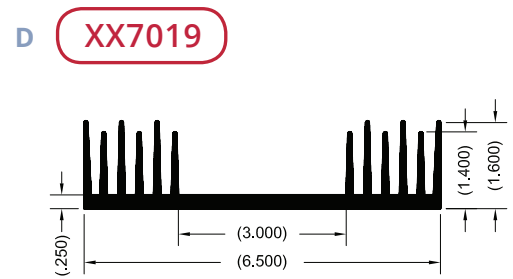
Per. 27.56 in.  
WT. 2.13 lb/ft  
θsa 3.40 °C/w/3"



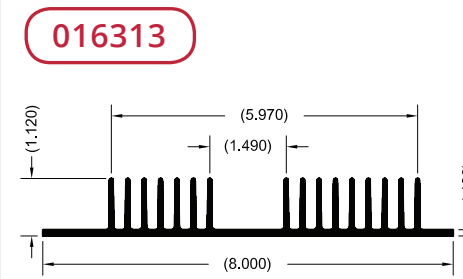
Per. 17.84 in.  
WT. 1.01 lb/ft  
θsa 2.70 °C/w/3"



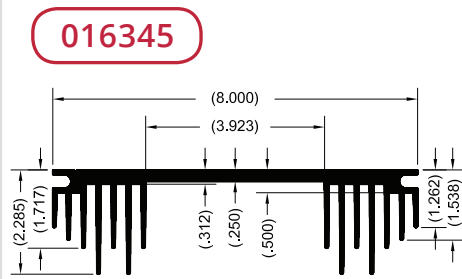
Per. 32.13 in.  
WT. 1.85 lb/ft  
θsa 2.50 °C/w/3"



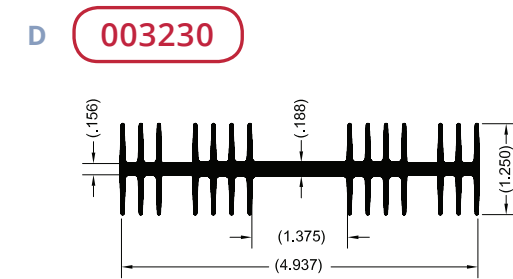
Per. 41.93 in.  
WT. 3.63 lb/ft  
θsa 1.60 °C/w/3"



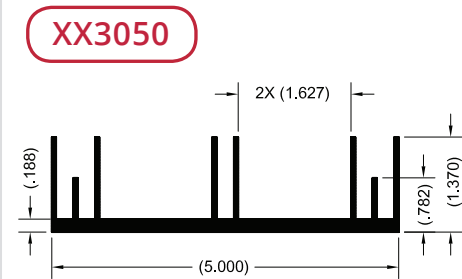
Per. 46.61 in.  
WT. 2.70 lb/ft  
θsa 2.30 °C/w/3"



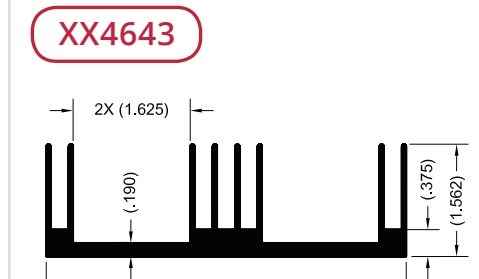
Per. 57.23 in.  
WT. 4.66 lb/ft  
θsa 1.90 °C/w/3"



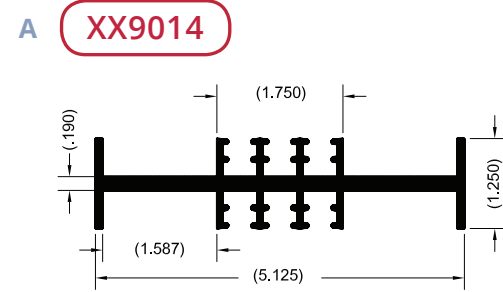
Per. 34.75 in.  
WT. 1.95 lb/ft  
θsa 2.00 °C/w/3"



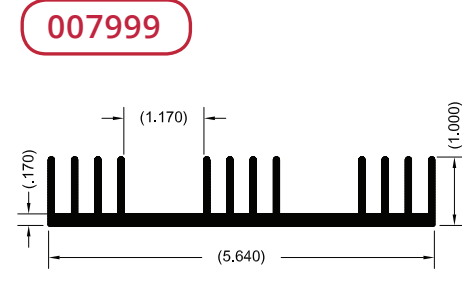
Per. 26.94 in.  
WT. 1.73 lb/ft  
θsa 2.20 °C/w/3"



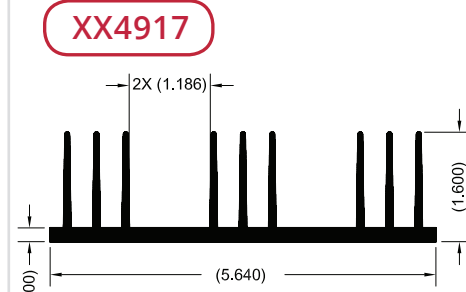
Per. 30.28 in.  
WT. 2.24 lb/ft  
θsa 2.30 °C/w/3"



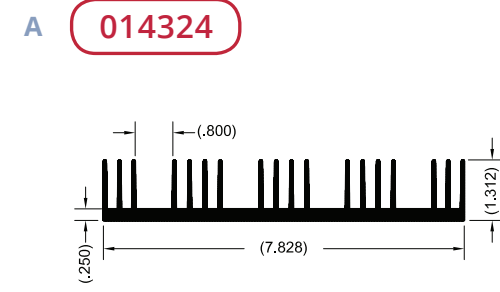
Per.	26.40	in.
WT.	1.99	lb/ft
θsa	2.20	°C/w/3"



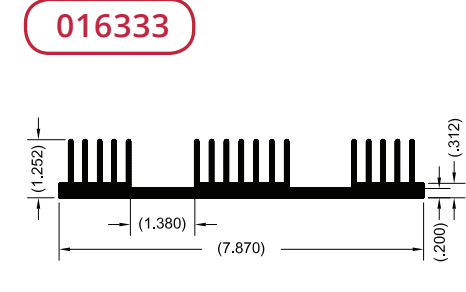
Per.	31.80	in.
WT.	2.04	lb/ft
θsa	2.26	°C/w/3"



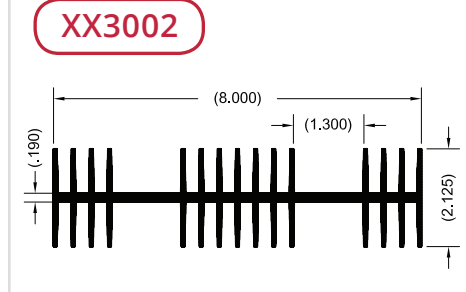
Per.	35.65	in.
WT.	2.47	lb/ft
θsa	1.25	°C/w/3"



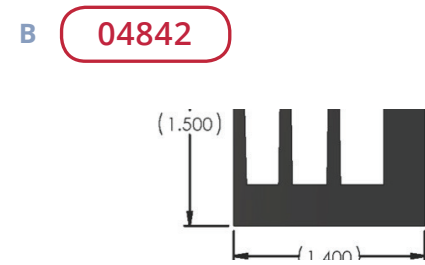
Per.	53.57	in.
WT.	3.94	lb/ft
θsa	1.30	°C/w/3"



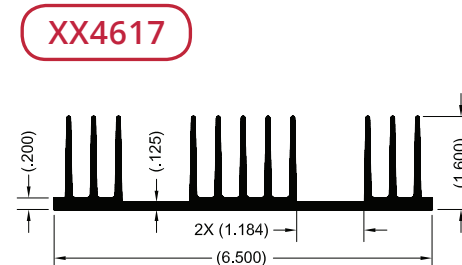
Per.	48.03	in.
WT.	4.08	lb/ft
θsa	2.20	°C/w/3"



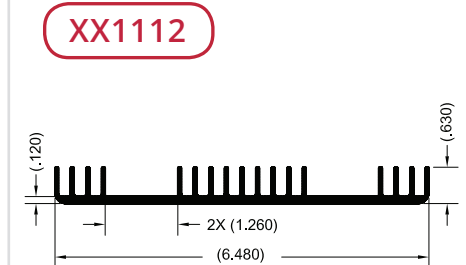
Per.	72.21	in.
WT.	4.83	lb/ft
θsa	1.10	°C/w/3"



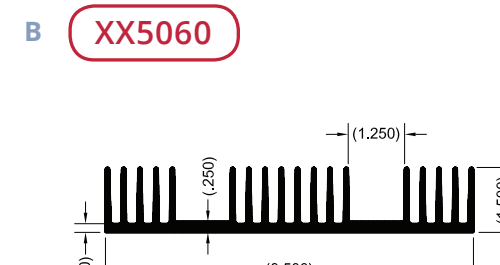
Per.	28.36	in.
WT.	1.68	lb/ft
θsa	2.47	°C/w/3"



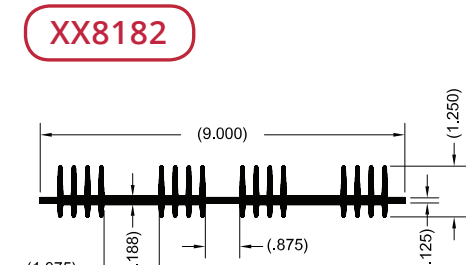
Per.	45.00	in.
WT.	2.74	lb/ft
θsa	1.40	°C/w/3"



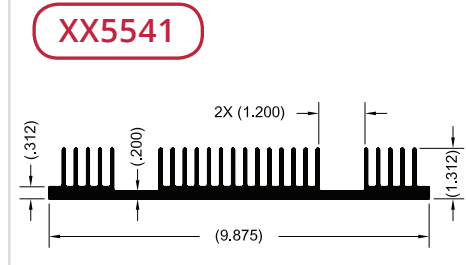
Per.	29.37	in.
WT.	1.58	lb/ft
θsa	2.40	°C/w/3"



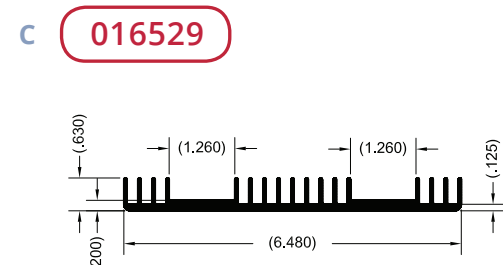
Per.	62.78	in.
WT.	5.21	lb/ft
θsa	0.87	°C/w/3"



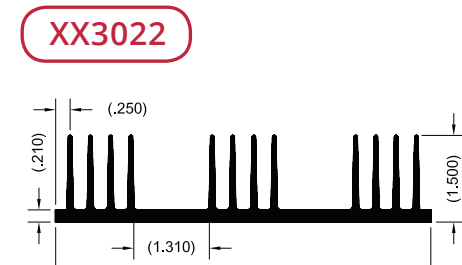
Per.	48.81	in.
WT.	3.49	lb/ft
θsa	1.30	°C/w/3"



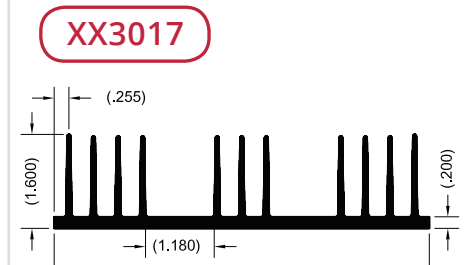
Per.	66.93	in.
WT.	5.14	lb/ft
θsa	1.10	°C/w/3"



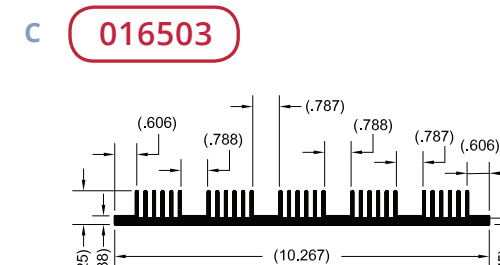
Per.	29.12	in.
WT.	1.81	lb/ft
θsa	3.50	°C/w/3"



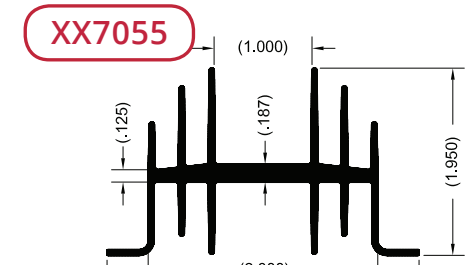
Per.	42.99	in.
WT.	3.04	lb/ft
θsa	1.50	°C/w/3"



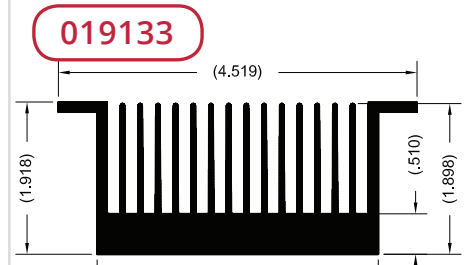
Per.	43.15	in.
WT.	3.21	lb/ft
θsa	1.60	°C/w/3"



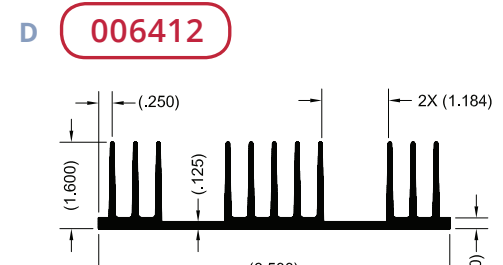
Per.	64.61	in.
WT.	4.07	lb/ft
θsa	1.90	°C/w/3"



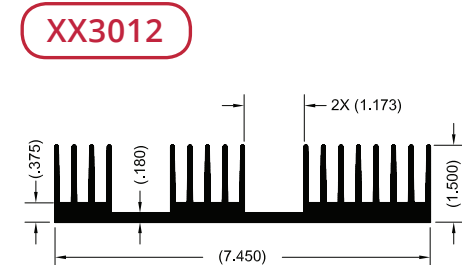
Per.	23.50	in.
WT.	1.15	lb/ft
θsa	2.40	°C/w/3"



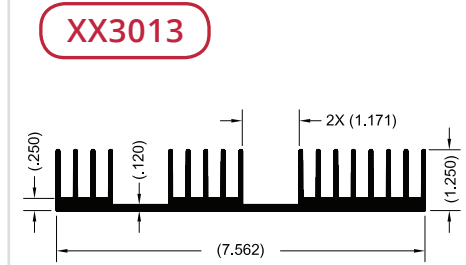
Per.	54.48	in.
WT.	4.04	lb/ft
θsa	2.40	°C/w/3"



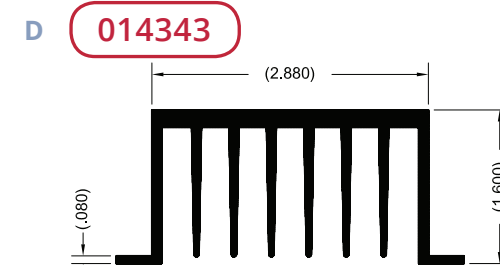
Per.	41.00	in.
WT.	2.82	lb/ft
θsa	1.70	°C/w/3"



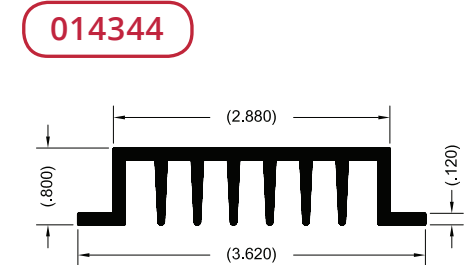
Per.	53.45	in.
WT.	4.46	lb/ft
θsa	1.50	°C/w/3"



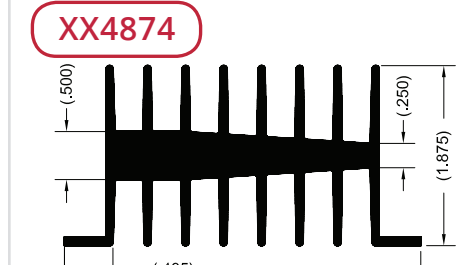
Per.	49.20	in.
WT.	3.21	lb/ft
θsa	1.60	°C/w/3"



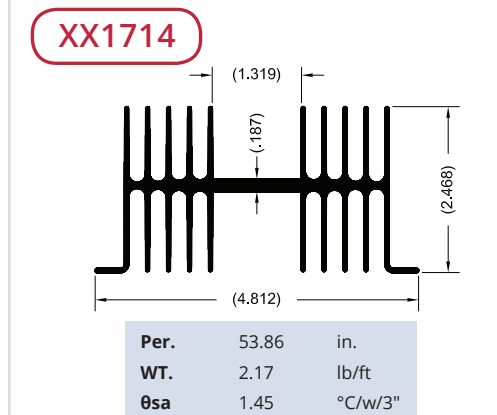
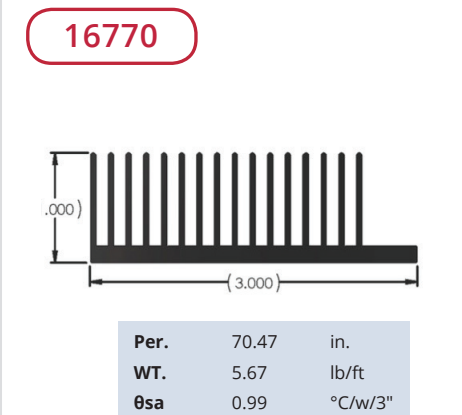
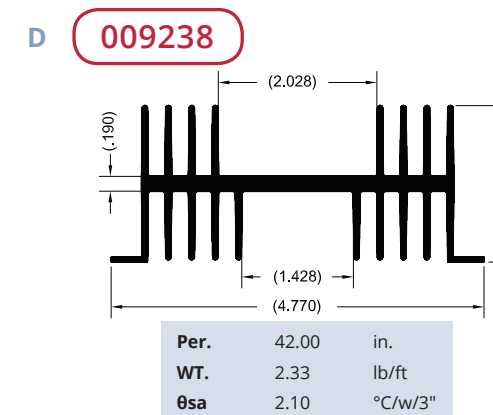
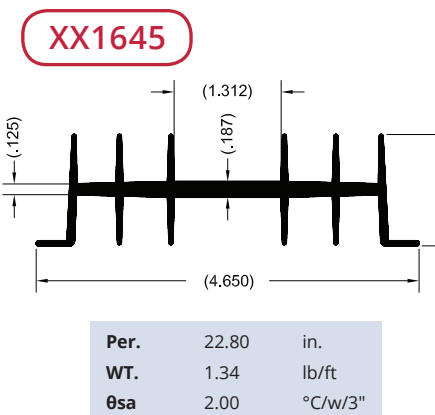
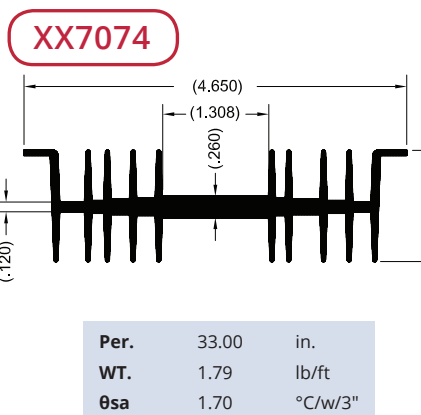
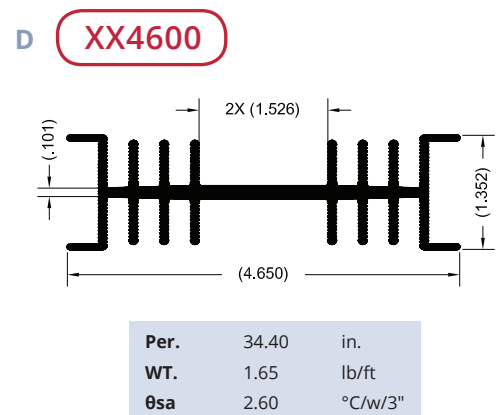
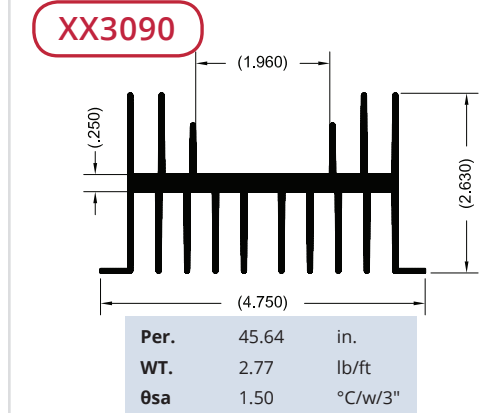
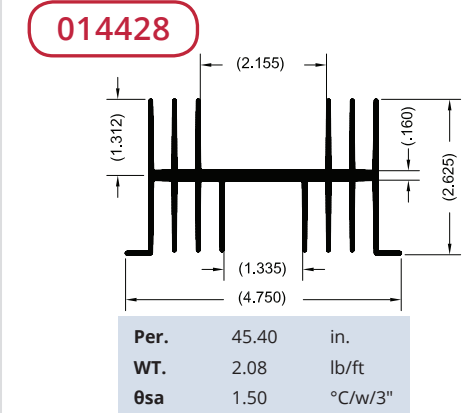
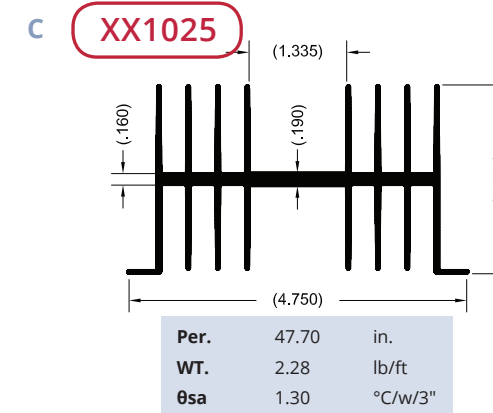
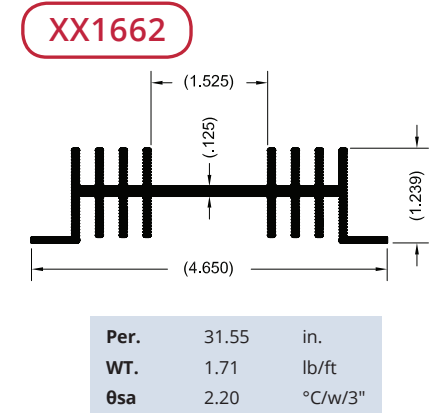
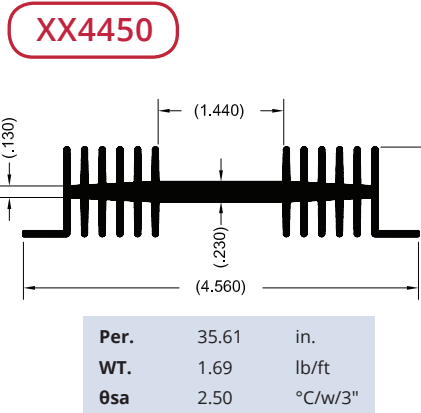
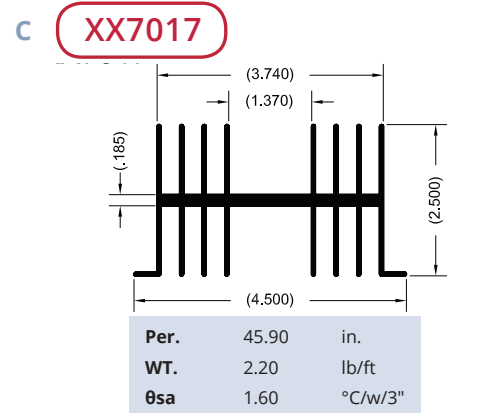
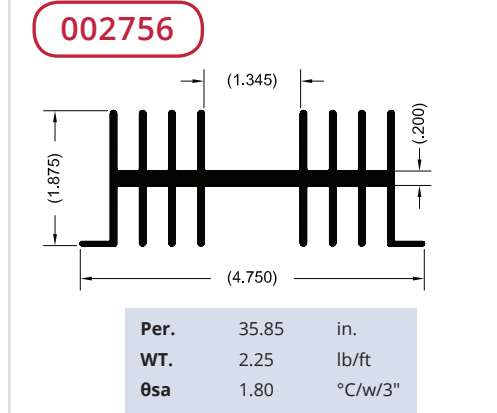
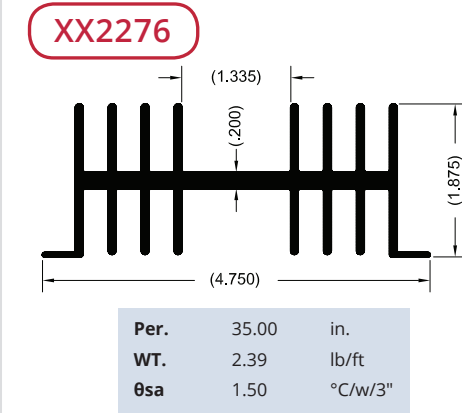
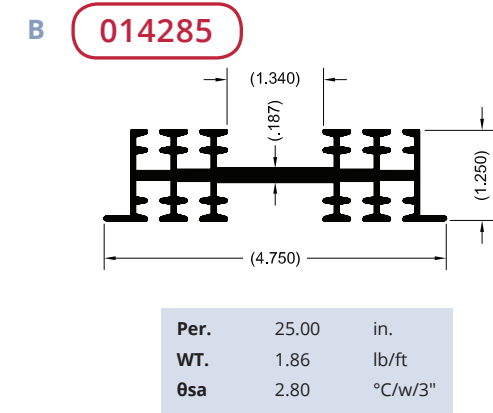
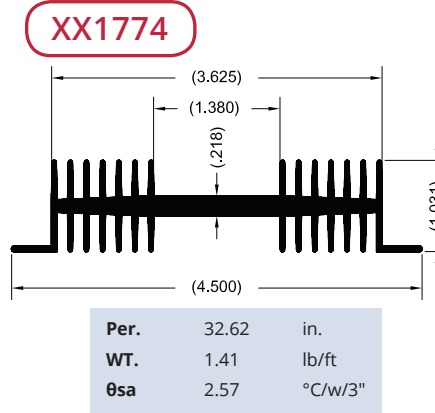
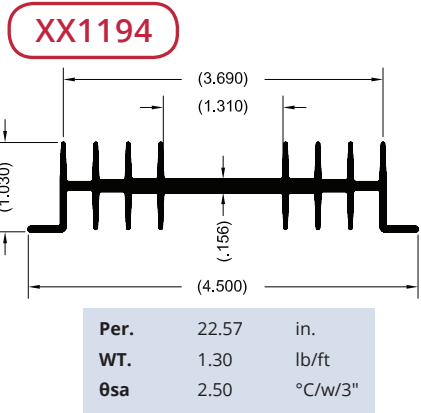
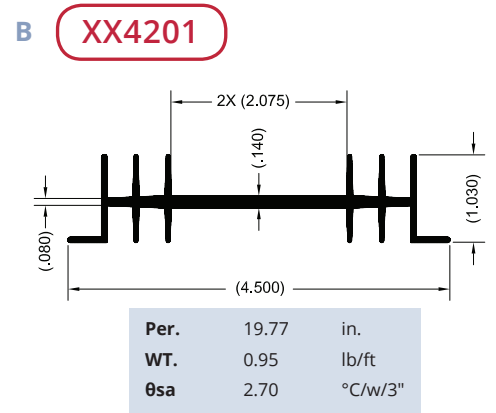
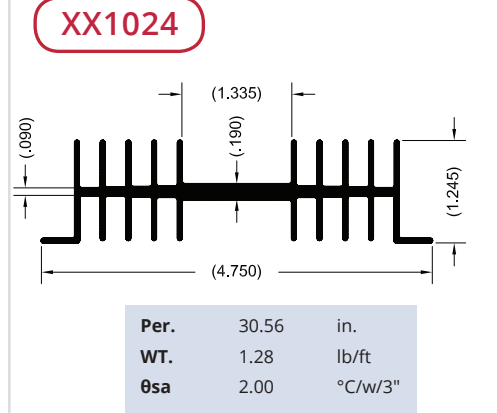
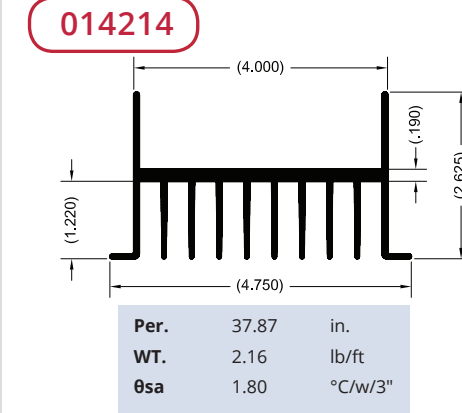
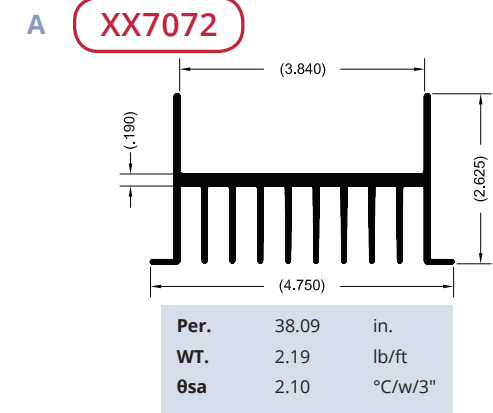
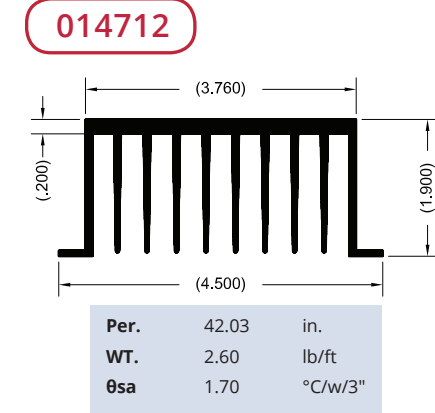
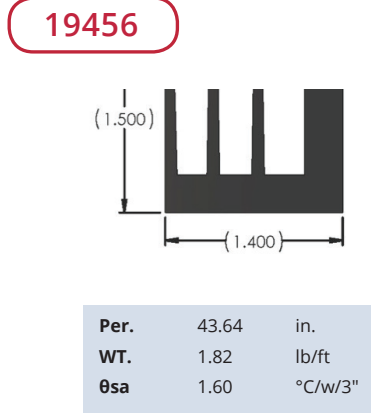
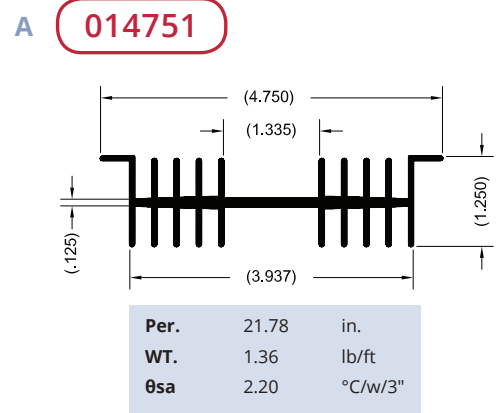
Per.	29.47	in.
WT.	1.71	lb/ft
θsa	2.40	°C/w/3"

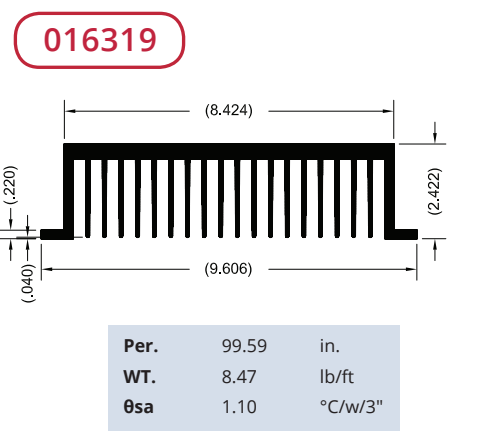
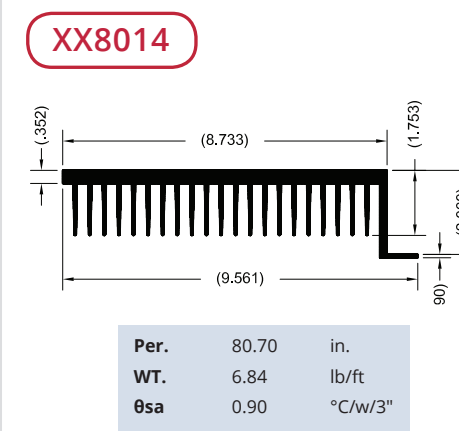
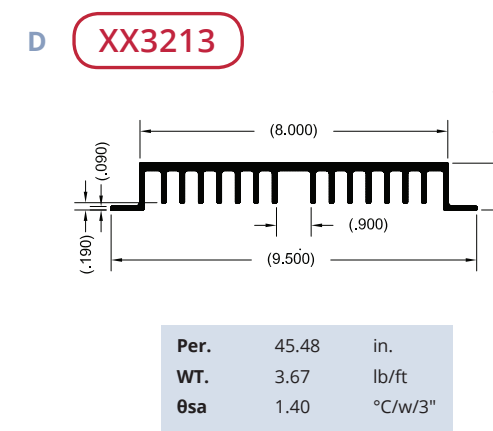
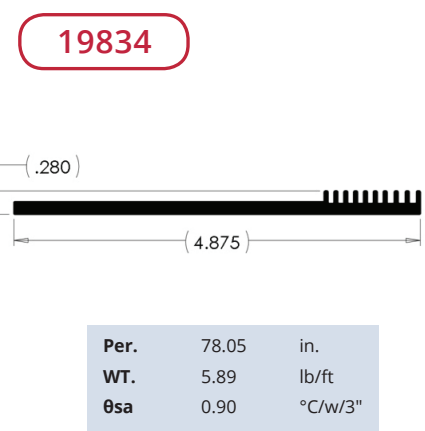
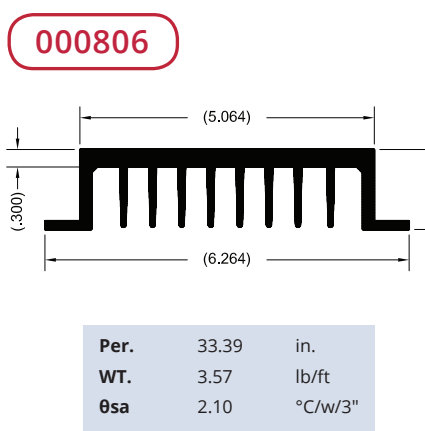
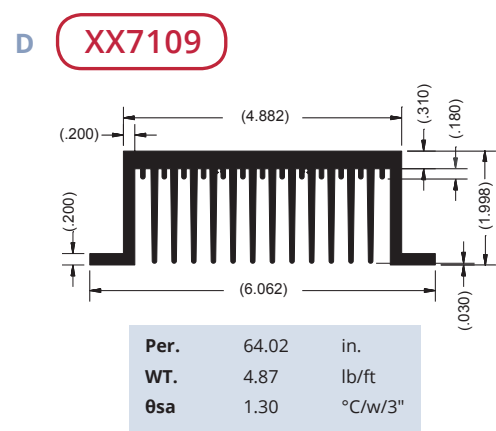
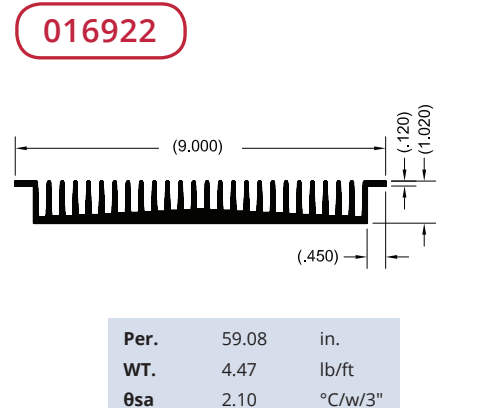
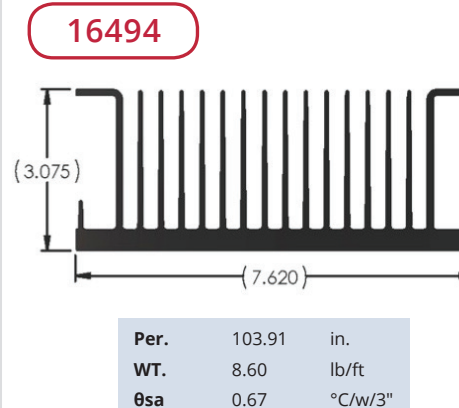
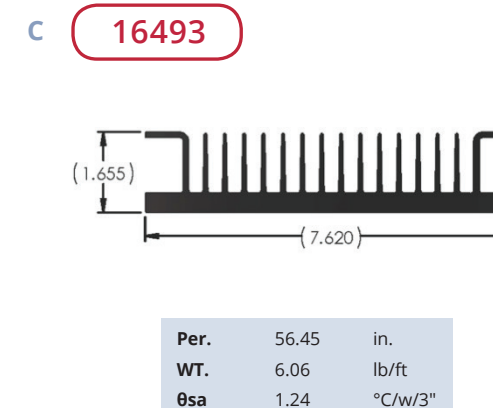
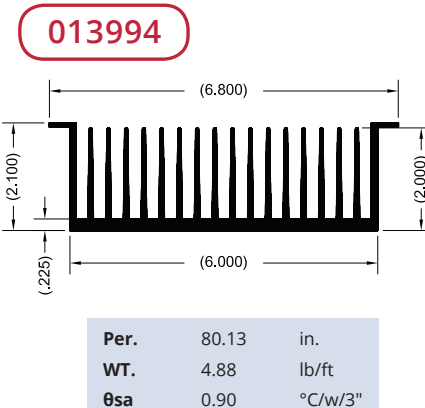
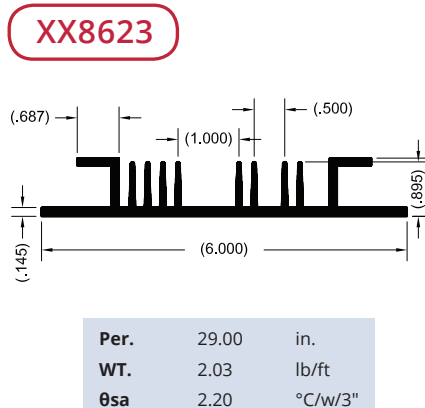
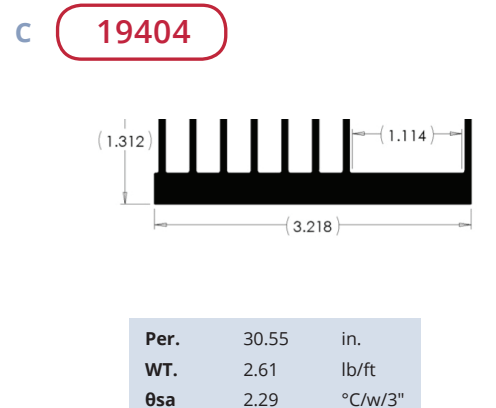
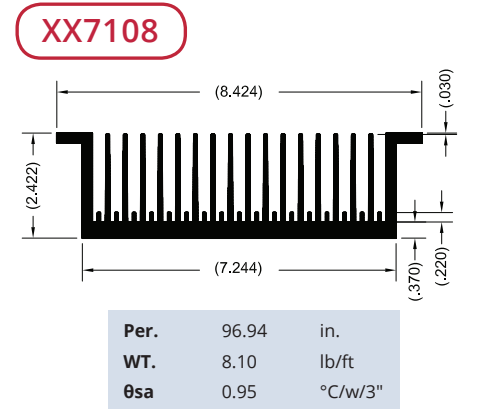
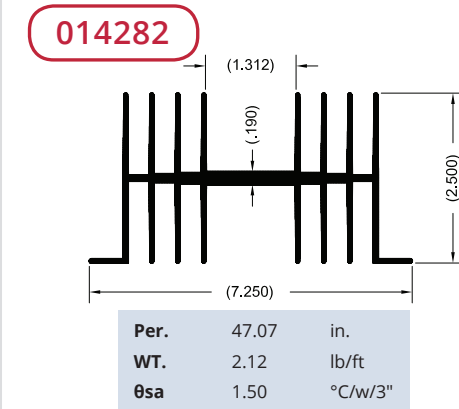
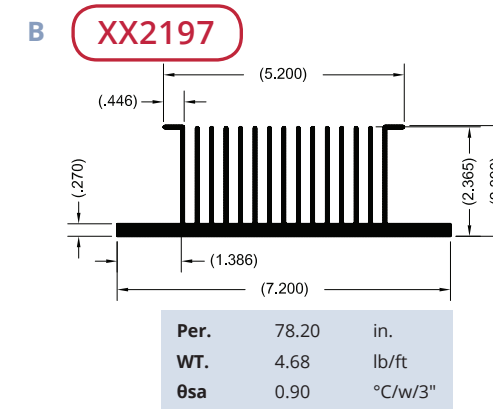
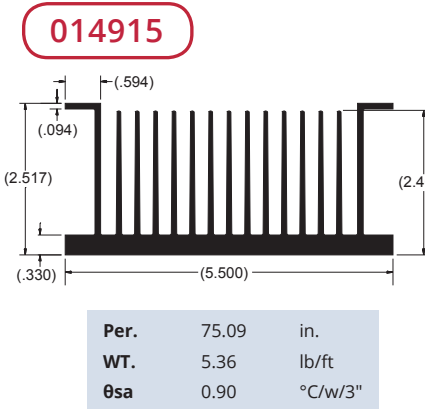
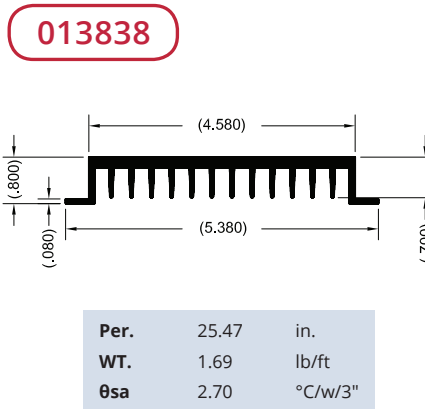
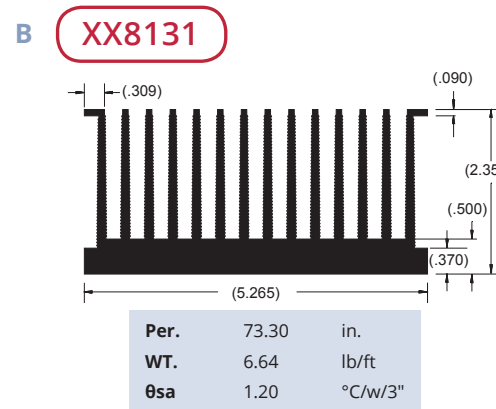
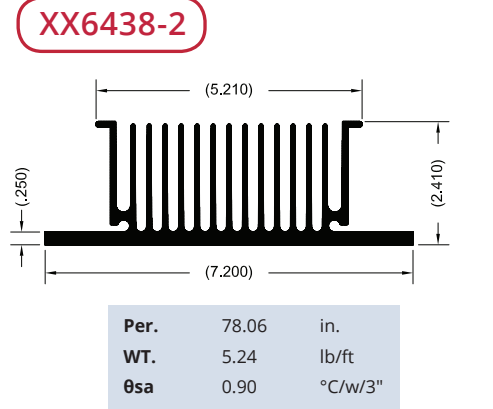
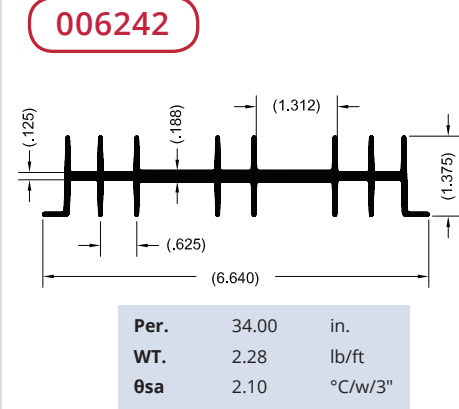
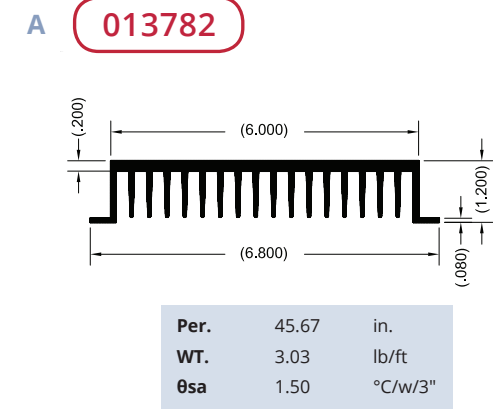
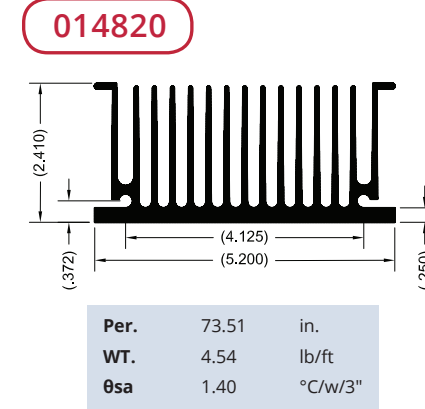
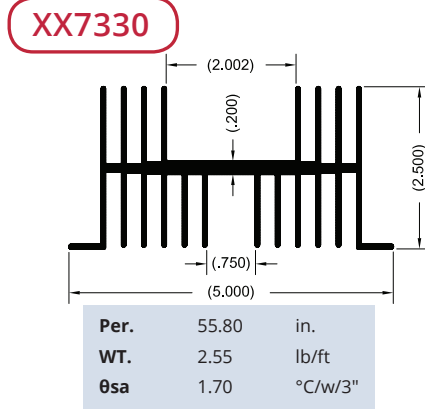
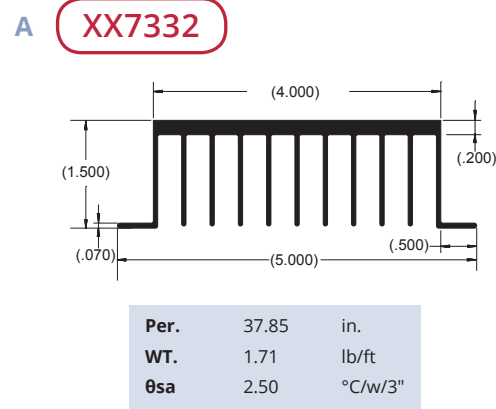


Per.	17.43	in.
WT.	0.90	lb/ft
θsa	4.00	°C/w/3"

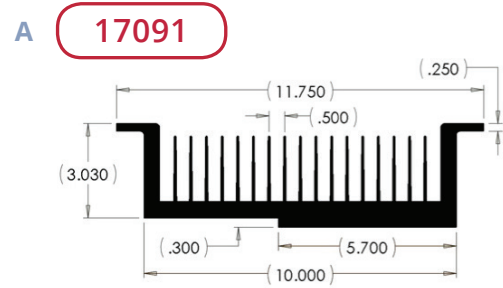


Per.	30.64	in.
WT.	2.60	lb/ft
θsa	2.10	°C/w/3"

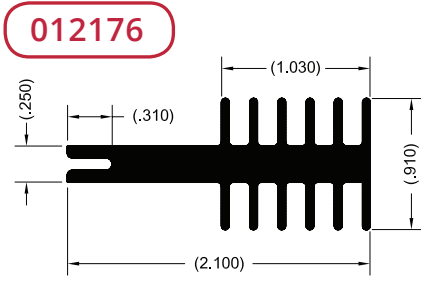




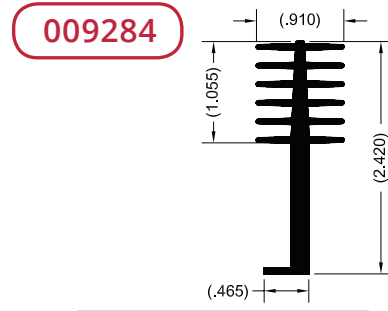




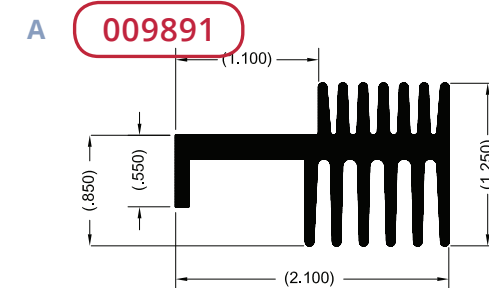
Per. 105.27 in.  
WT. 15.43 lb/ft  
θsa 0.66 °C/w/3"



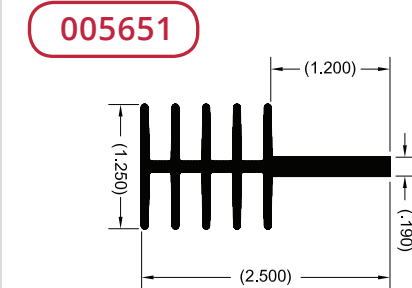
Per. 12.65 in.  
WT. 0.81 lb/ft  
θsa 5.50 °C/w/3"



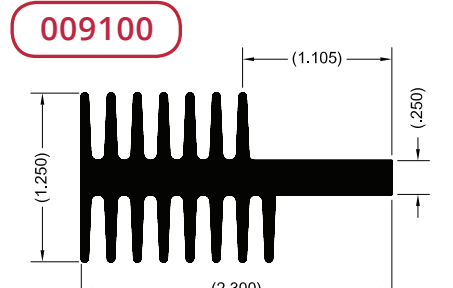
Per. 15.24 in.  
WT. 0.80 lb/ft  
θsa 4.60 °C/w/3"



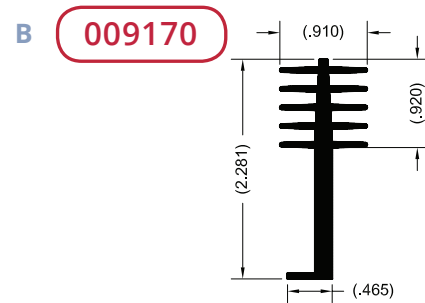
Per. 14.74 in.  
WT. 1.11 lb/ft  
θsa 4.70 °C/w/3"



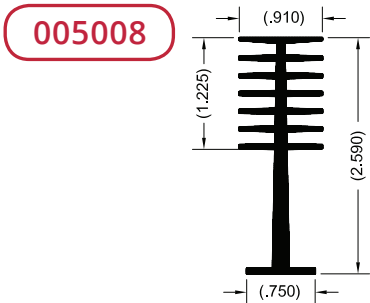
Per. 18.00 in.  
WT. 0.88 lb/ft  
θsa 3.90 °C/w/3"



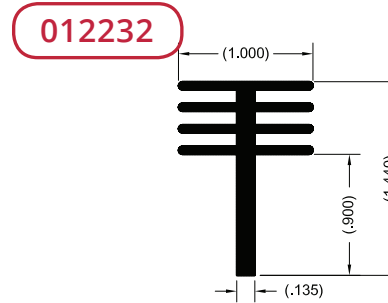
Per. 20.10 in.  
WT. 1.23 lb/ft  
θsa 3.50 °C/w/3"



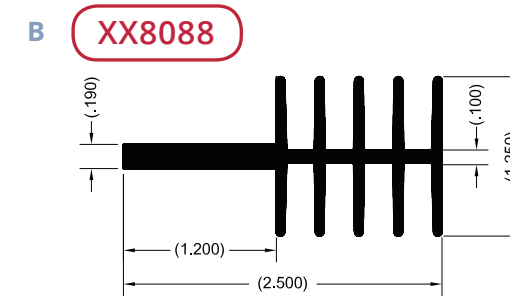
Per. 13.50 in.  
WT. 0.73 lb/ft  
θsa 5.20 °C/w/3"



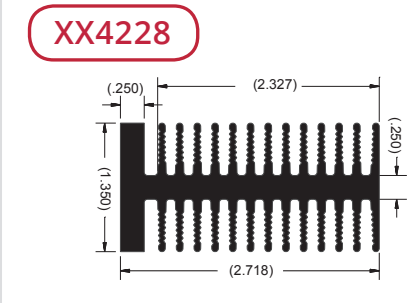
Per. 20.00 in.  
WT. 0.81 lb/ft  
θsa 3.50 °C/w/3"



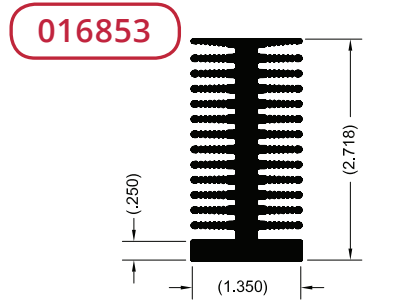
Per. 9.80 in.  
WT. 0.47 lb/ft  
θsa 7.10 °C/w/3"



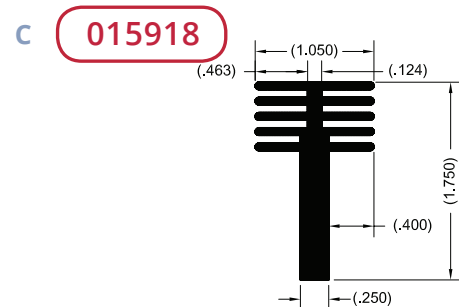
Per. 14.65 in.  
WT. 0.93 lb/ft  
θsa 4.20 °C/w/3"



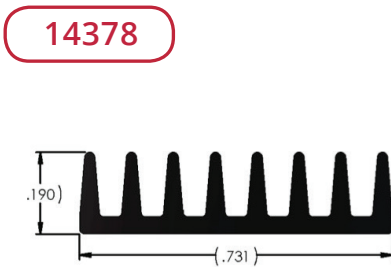
Per. 38.93 in.  
WT. 2.29 lb/ft  
θsa 1.90 °C/w/3"



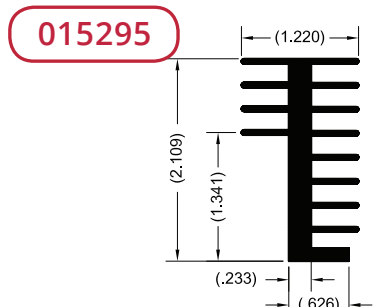
Per. 39.17 in.  
WT. 2.28 lb/ft  
θsa 3.10 °C/w/3"



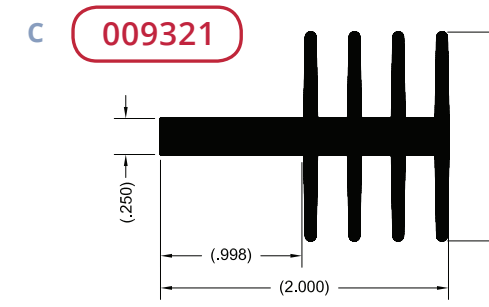
Per. 13.22 in.  
WT. 0.78 lb/ft  
θsa 0.00 °C/w/3"



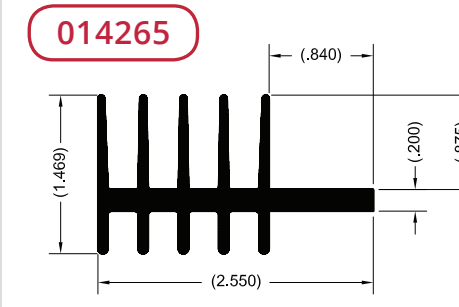
Per. 13.90 in.  
WT. 0.72 lb/ft  
θsa 5.03 °C/w/3"



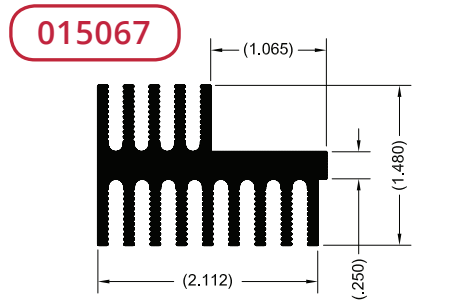
Per. 17.15 in.  
WT. 1.04 lb/ft  
θsa 0.00 °C/w/3"



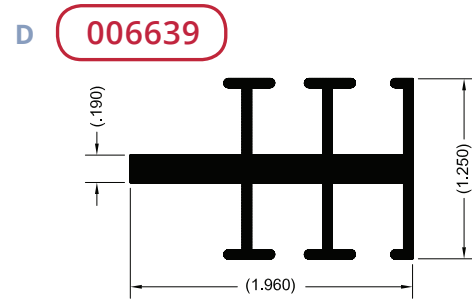
Per. 14.83 in.  
WT. 1.02 lb/ft  
θsa 4.70 °C/w/3"



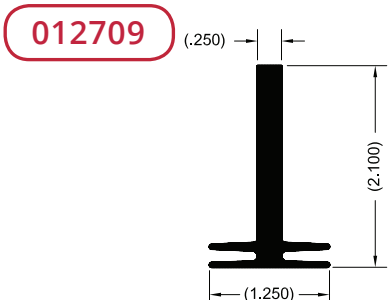
Per. 17.37 in.  
WT. 1.33 lb/ft  
θsa 4.00 °C/w/3"



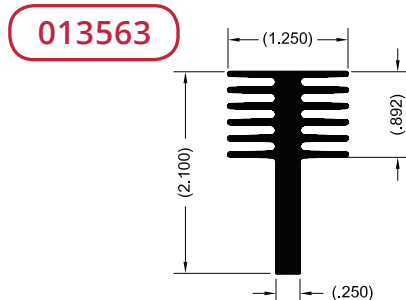
Per. 24.06 in.  
WT. 1.50 lb/ft  
θsa 2.90 °C/w/3"



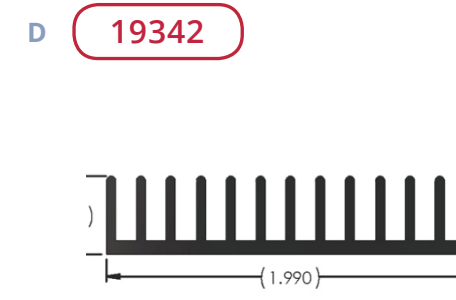
Per. 16.00 in.  
WT. 0.73 lb/ft  
θsa 4.40 °C/w/3"



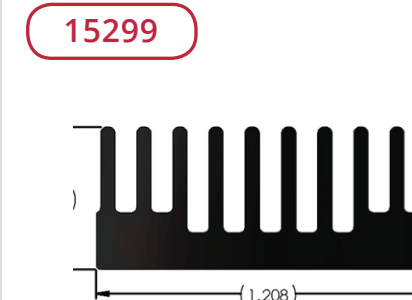
Per. 8.40 in.  
WT. 0.76 lb/ft  
θsa 8.30 °C/w/3"



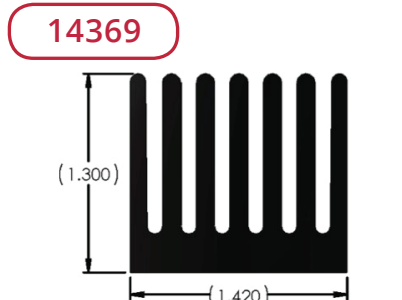
Per. 15.81 in.  
WT. 1.02 lb/ft  
θsa 4.40 °C/w/3"



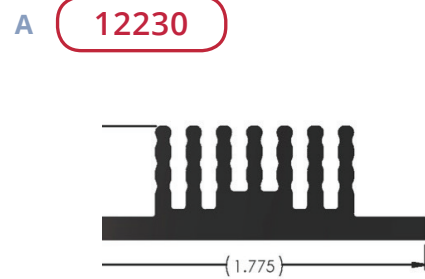
Per. 19.99 in.  
WT. 1.32 lb/ft  
θsa 3.50 °C/w/3"



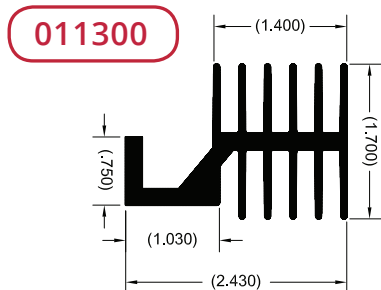
Per. 18.01 in.  
WT. 1.14 lb/ft  
θsa 3.88 °C/w/3"



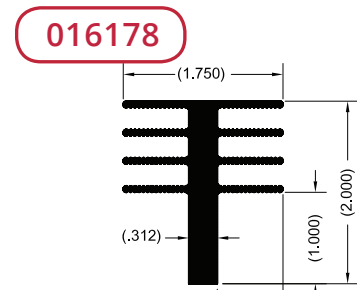
Per. 21.10 in.  
WT. 1.23 lb/ft  
θsa 3.31 °C/w/3"



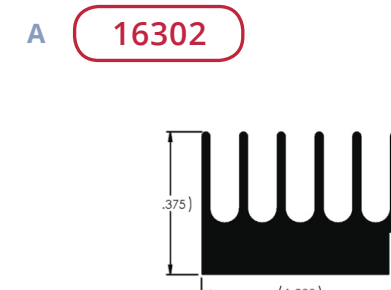
Per. 23.61 in.  
WT. 1.66 lb/ft  
θsa 2.96 °C/w/3"



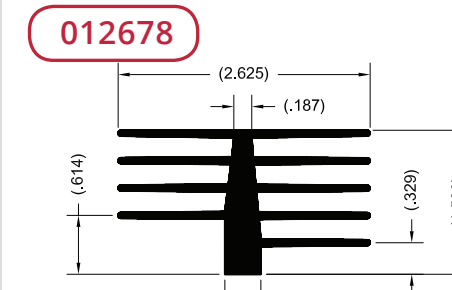
Per. 24.26 in.  
WT. 1.71 lb/ft  
θsa 2.90 °C/w/3"



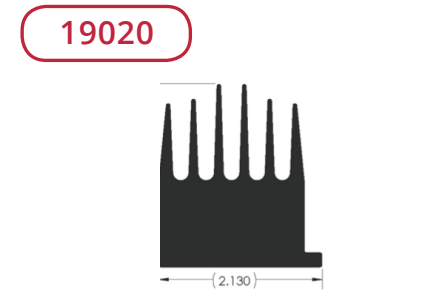
Per. 17.80 in.  
WT. 1.33 lb/ft  
θsa 4.00 °C/w/3"



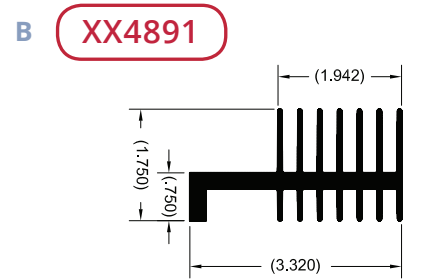
Per. 37.98 in.  
WT. 2.74 lb/ft  
θsa 1.84 °C/w/3"



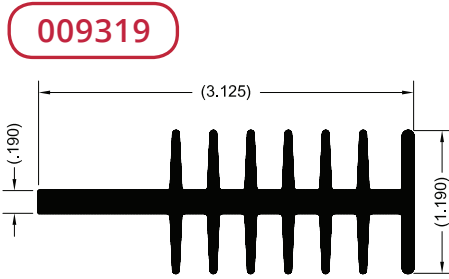
Per. 24.10 in.  
WT. 1.39 lb/ft  
θsa 2.90 °C/w/3"



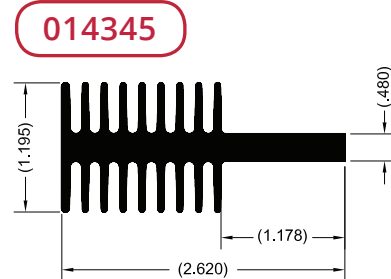
Per. 31.44 in.  
WT. 1.98 lb/ft  
θsa 2.22 °C/w/3"



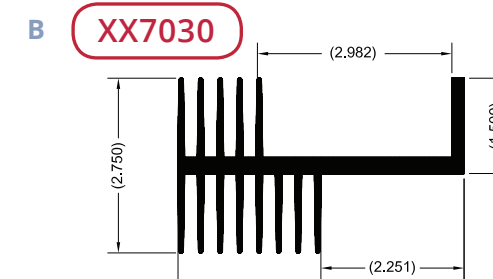
Per. 28.31 in.  
WT. 1.96 lb/ft  
θsa 2.00 °C/w/3"



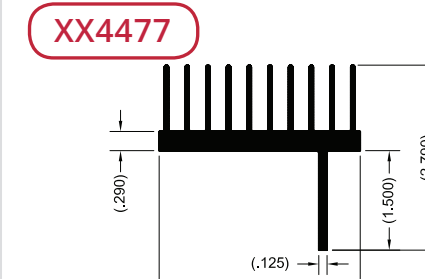
Per. 21.63 in.  
WT. 1.33 lb/ft  
θsa 3.20 °C/w/3"



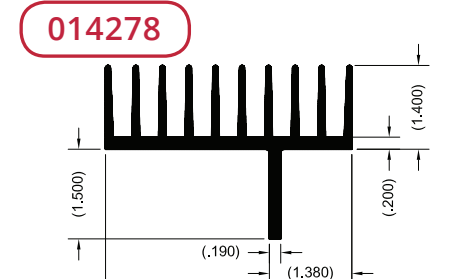
Per. 21.30 in.  
WT. 1.33 lb/ft  
θsa 3.30 °C/w/3"



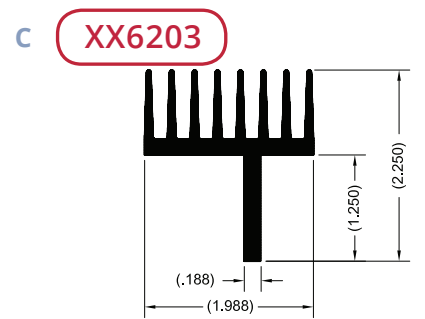
Per. 44.00 in.  
WT. 3.58 lb/ft  
θsa 1.70 °C/w/3"



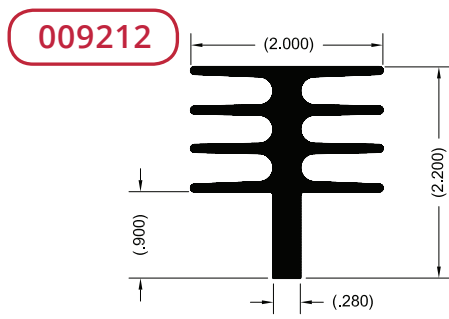
Per. 29.64 in.  
WT. 2.00 lb/ft  
θsa 3.00 °C/w/3"



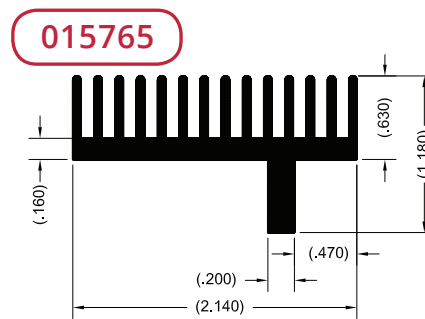
Per. 32.37 in.  
WT. 2.80 lb/ft  
θsa 2.20 °C/w/3"



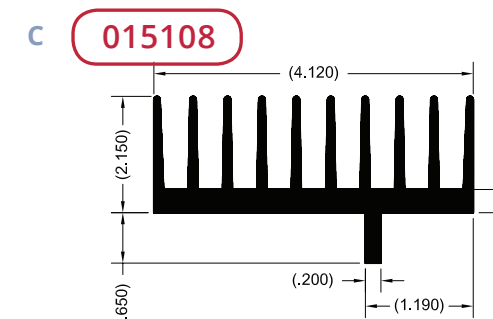
Per. 19.11 in.  
WT. 1.31 lb/ft  
θsa 2.50 °C/w/3"



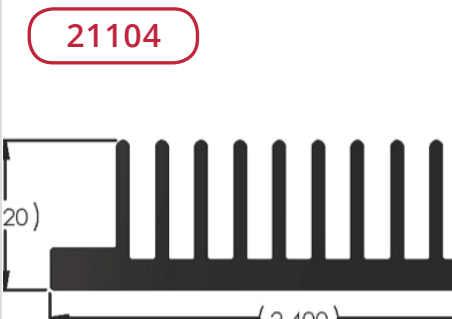
Per. 18.17 in.  
WT. 1.48 lb/ft  
θsa 3.90 °C/w/3"



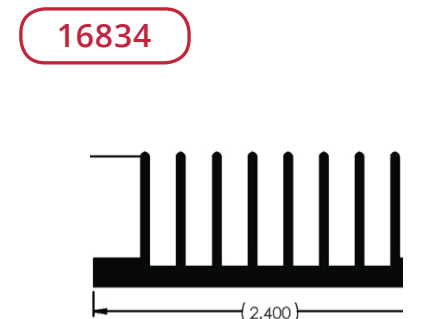
Per. 18.94 in.  
WT. 1.01 lb/ft  
θsa 0.00 °C/w/3"



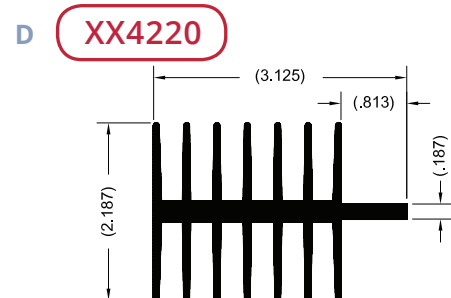
Per. 33.37 in.  
WT. 3.10 lb/ft  
θsa 2.10 °C/w/3"



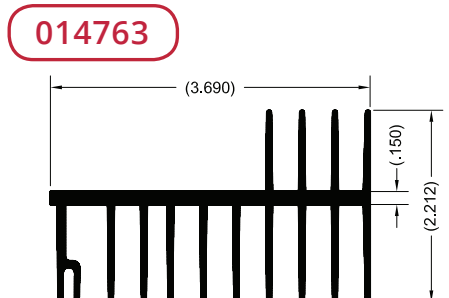
Per. 33.30 in.  
WT. 1.75 lb/ft  
θsa 2.10 °C/w/3"



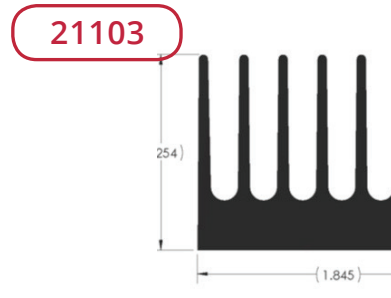
Per. 43.16 in.  
WT. 2.69 lb/ft  
θsa 1.62 °C/w/3"



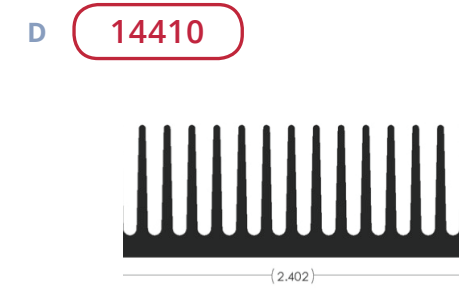
Per. 33.07 in.  
WT. 2.17 lb/ft  
θsa 2.40 °C/w/3"



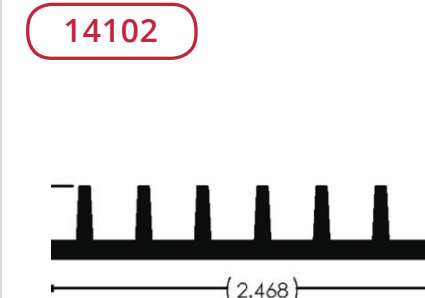
Per. 53.62 in.  
WT. 1.71 lb/ft  
θsa 1.30 °C/w/3"



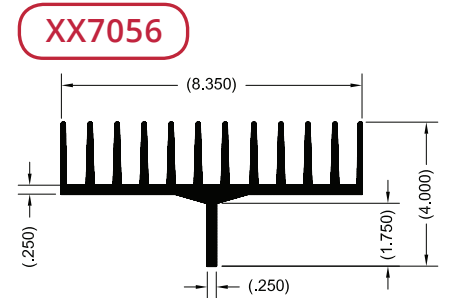
Per. 25.34 in.  
WT. 1.30 lb/ft  
θsa 2.76 °C/w/3"



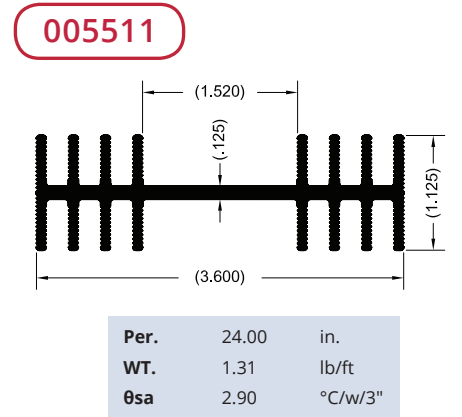
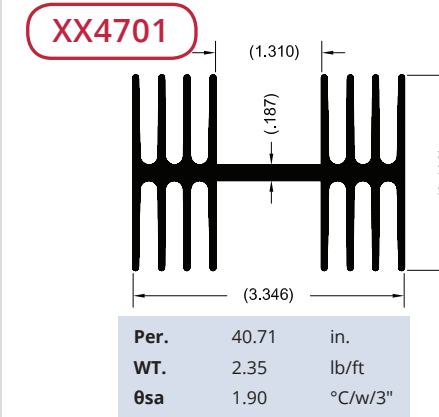
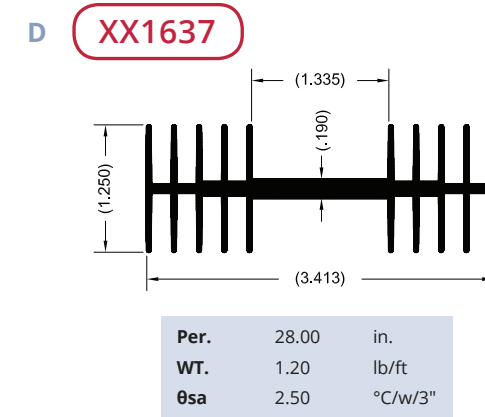
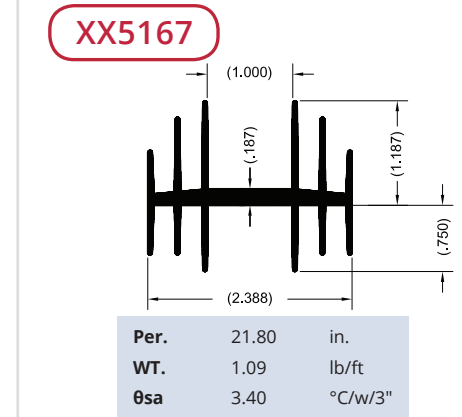
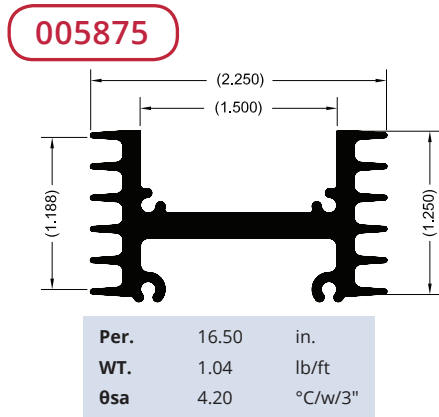
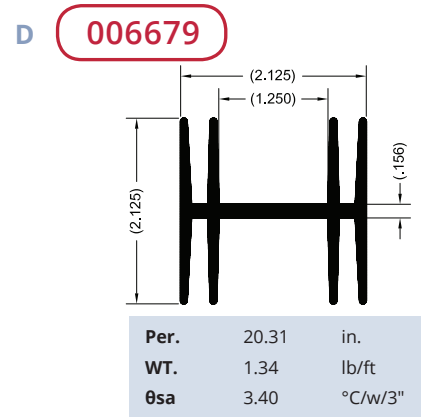
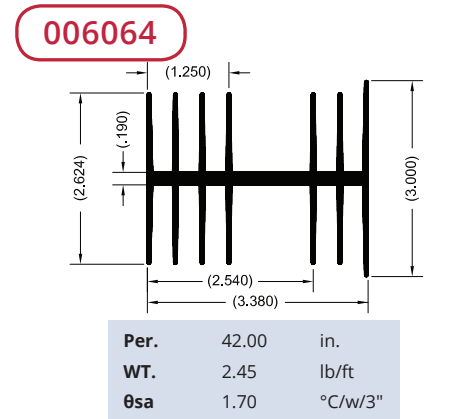
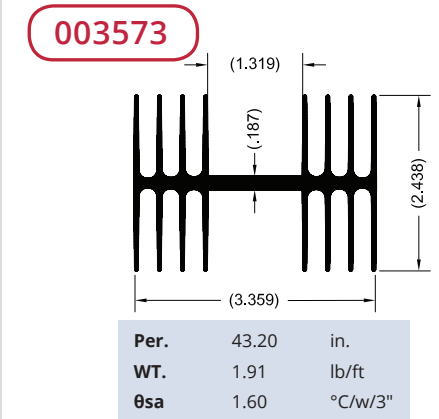
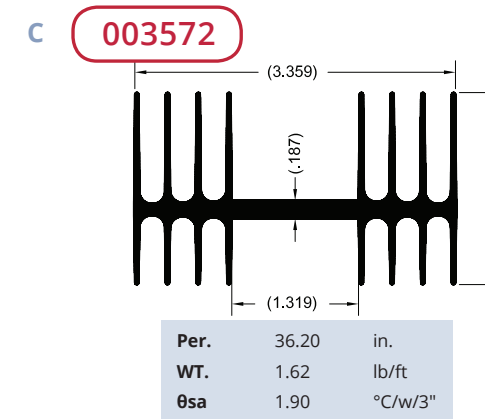
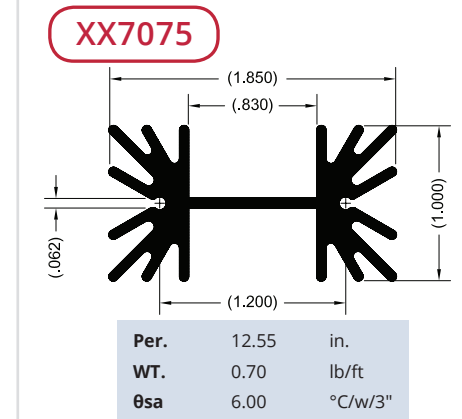
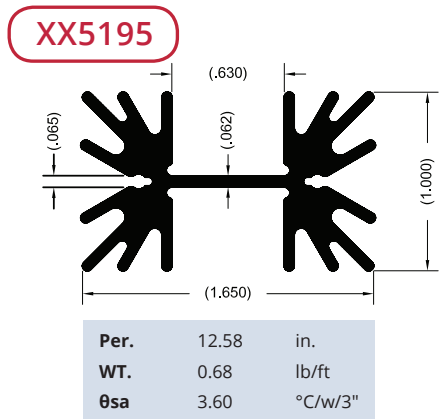
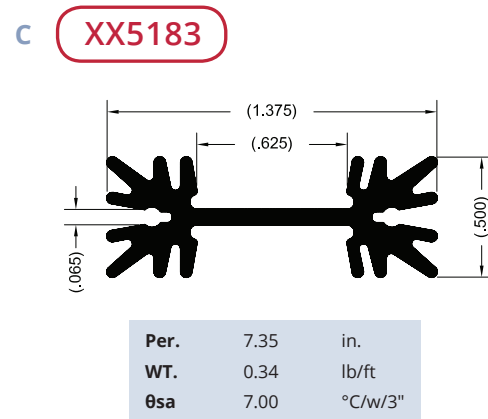
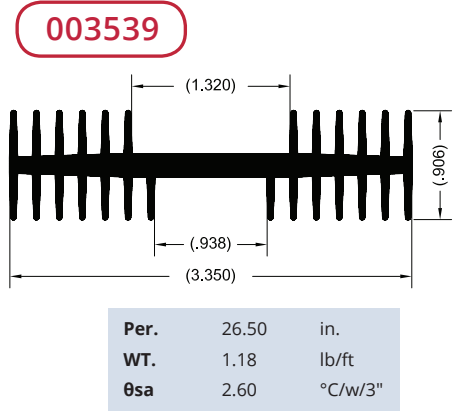
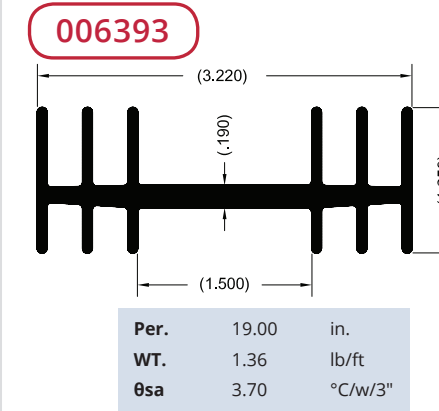
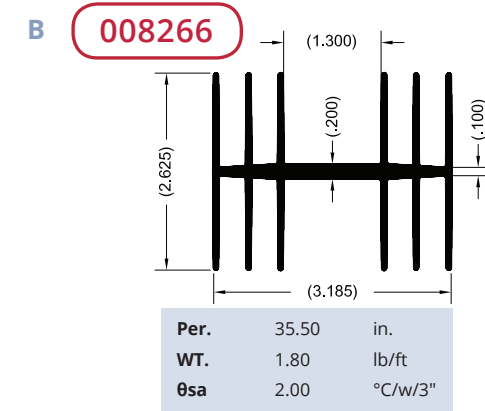
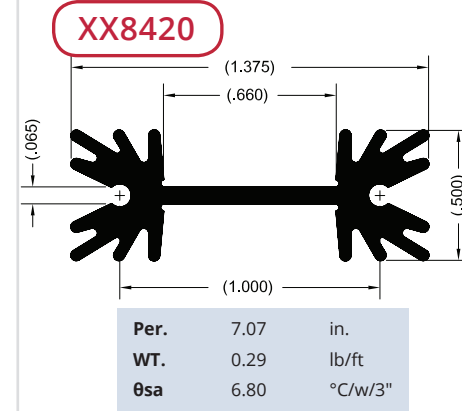
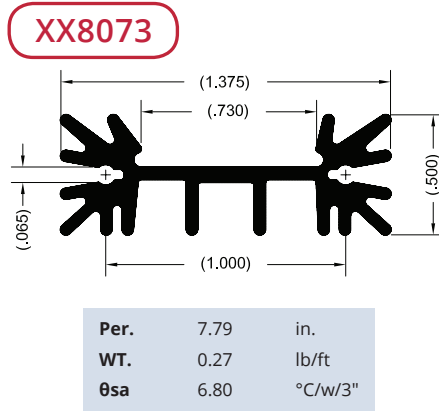
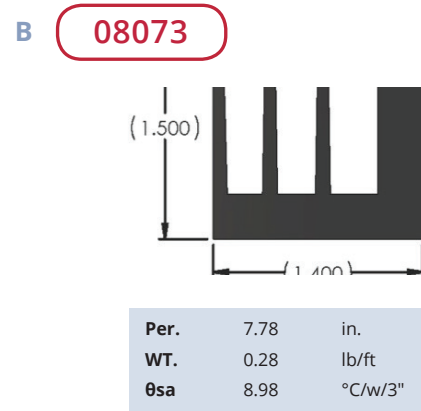
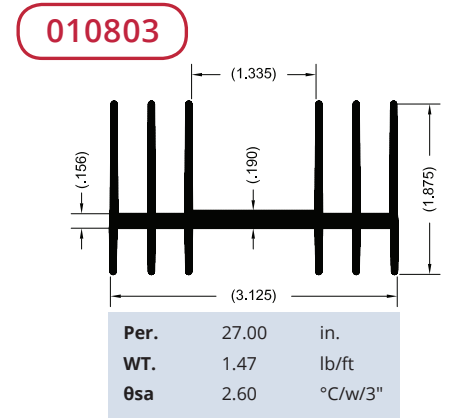
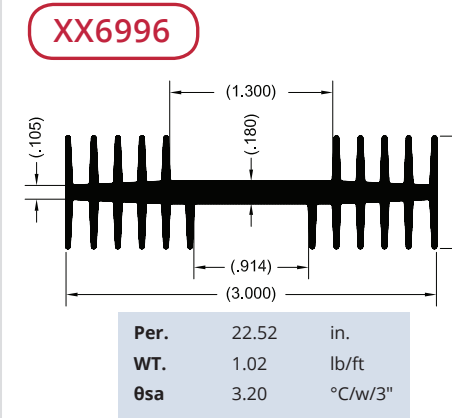
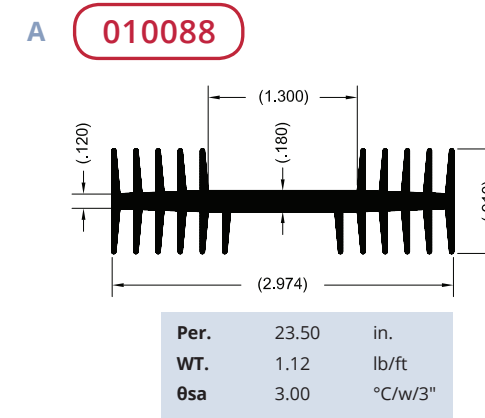
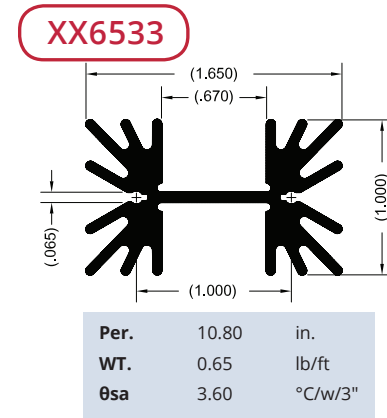
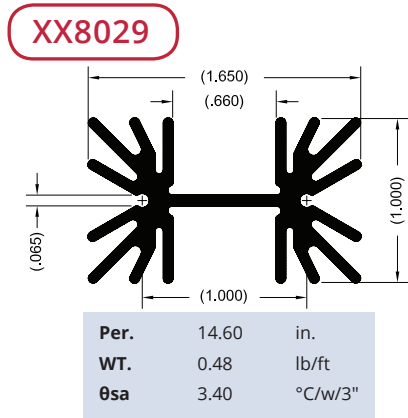
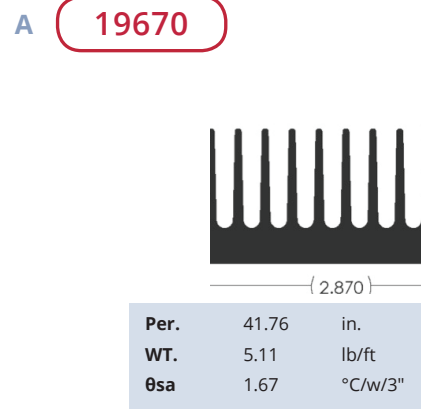
Per. 70.72 in.  
WT. 5.27 lb/ft  
θsa 0.99 °C/w/3"

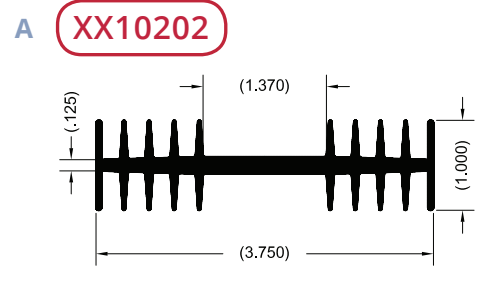


Per. 49.55 in.  
WT. 4.43 lb/ft  
θsa 1.41 °C/w/3"

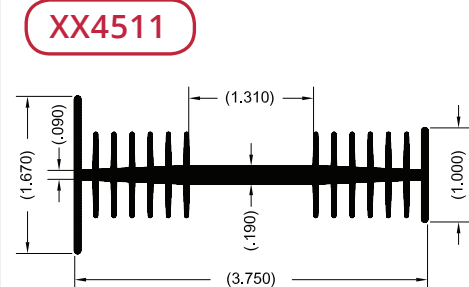


Per. 61.07 in.  
WT. 6.95 lb/ft  
θsa 1.30 °C/w/3"

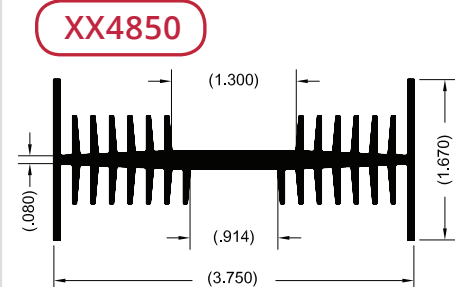




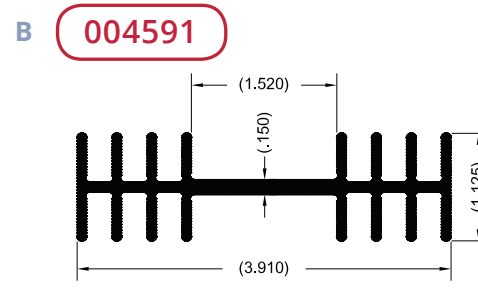
Per. 22.19 in.  
WT. 1.31 lb/ft  
θsa 2.80 °C/w/3"



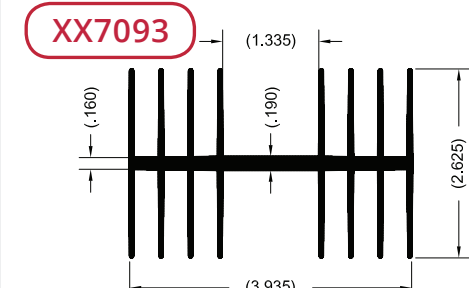
Per. 29.67 in.  
WT. 1.33 lb/ft  
θsa 2.50 °C/w/3"



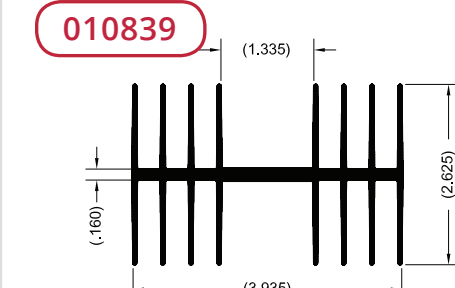
Per. 32.70 in.  
WT. 1.53 lb/ft  
θsa 2.30 °C/w/3"



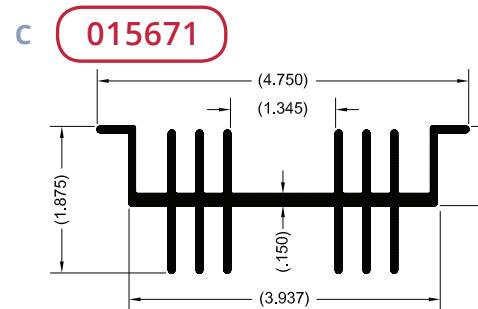
Per. 35.50 in.  
WT. 1.58 lb/ft  
θsa 2.00 °C/w/3"



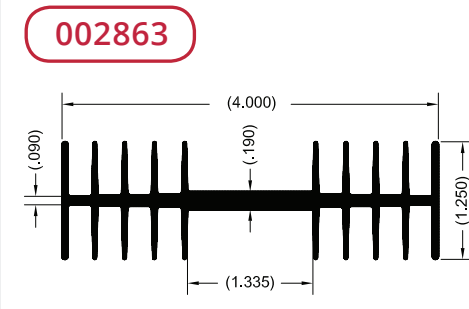
Per. 46.60 in.  
WT. 2.22 lb/ft  
θsa 1.40 °C/w/3"



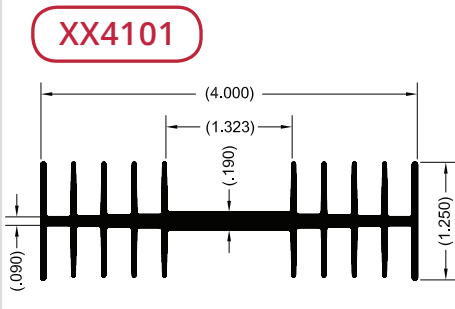
Per. 47.00 in.  
WT. 2.22 lb/ft  
θsa 1.50 °C/w/3"



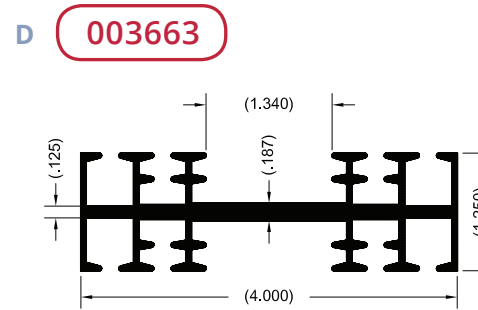
Per. 33.99 in.  
WT. 1.87 lb/ft  
θsa 1.90 °C/w/3"



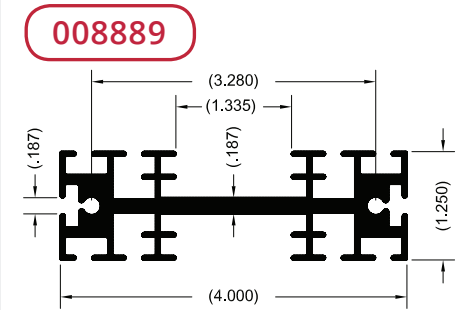
Per. 29.00 in.  
WT. 1.58 lb/ft  
θsa 2.40 °C/w/3"



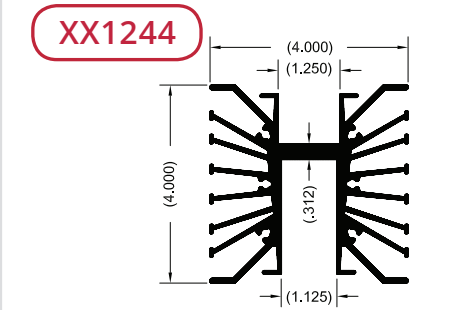
Per. 29.25 in.  
WT. 1.24 lb/ft  
θsa 2.30 °C/w/3"



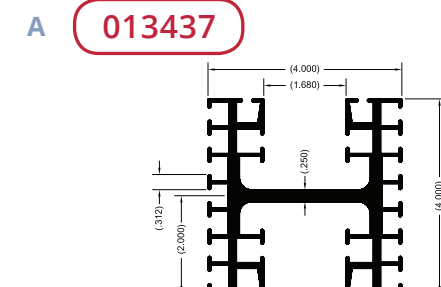
Per. 22.50 in.  
WT. 1.43 lb/ft  
θsa 3.10 °C/w/3"



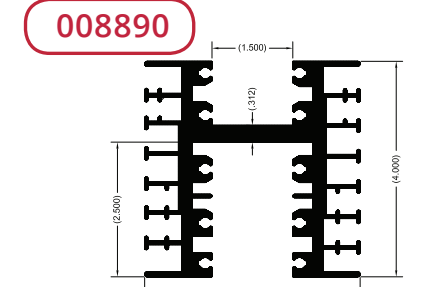
Per. 30.40 in.  
WT. 1.83 lb/ft  
θsa 2.70 °C/w/3"



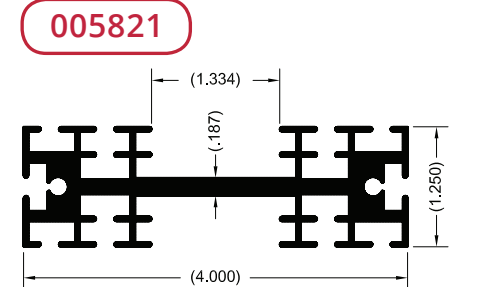
Per. 64.86 in.  
WT. 4.40 lb/ft  
θsa 0.98 °C/w/3"



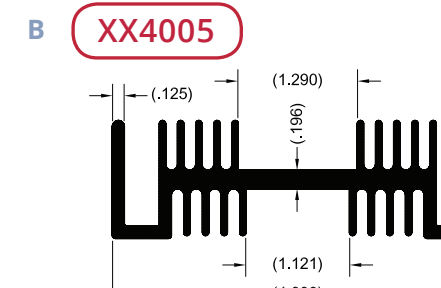
Per. 63.00 in.  
WT. 4.57 lb/ft  
θsa 1.80 °C/w/3"



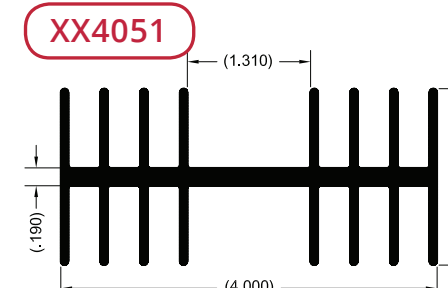
Per. 60.69 in.  
WT. 5.23 lb/ft  
θsa 1.70 °C/w/3"



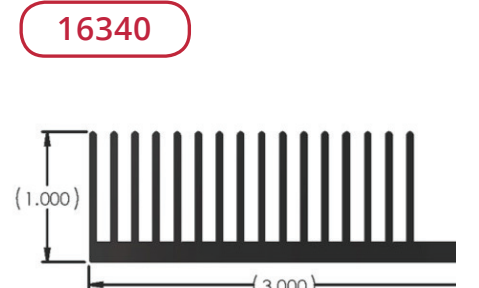
Per. 30.40 in.  
WT. 1.83 lb/ft  
θsa 2.30 °C/w/3"



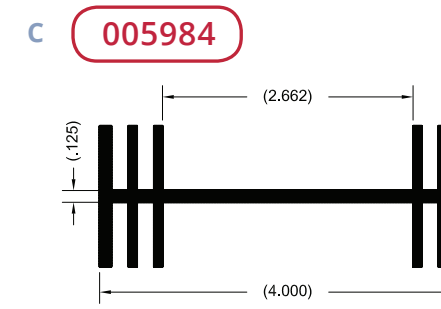
Per. 32.30 in.  
WT. 2.08 lb/ft  
θsa 2.30 °C/w/3"



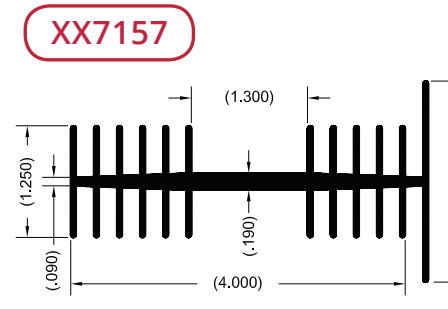
Per. 34.43 in.  
WT. 2.20 lb/ft  
θsa 1.70 °C/w/3"



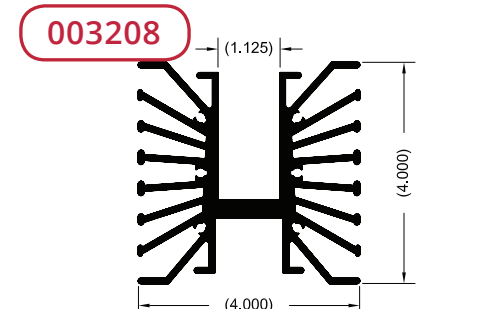
Per. 34.43 in.  
WT. 2.20 lb/ft  
θsa 2.03 °C/w/3"



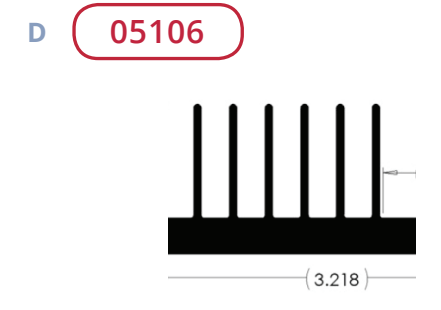
Per. 24.75 in.  
WT. 1.62 lb/ft  
θsa 2.80 °C/w/3"



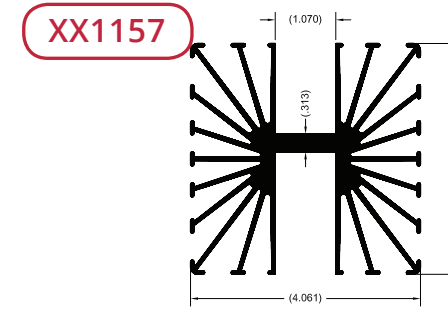
Per. 58.98 in.  
WT. 1.68 lb/ft  
θsa 1.30 °C/w/3"



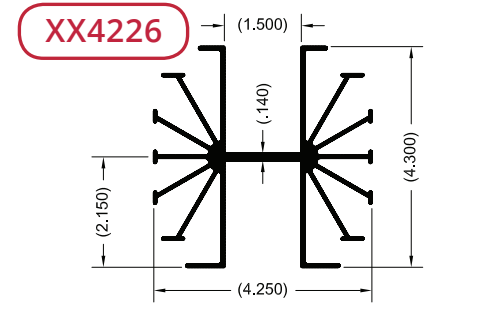
Per. 64.09 in.  
WT. 4.73 lb/ft  
θsa 0.00 °C/w/3"



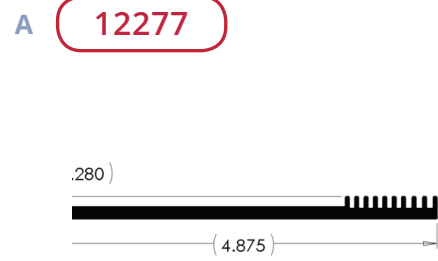
Per. 60.68 in.  
WT. 4.11 lb/ft  
θsa 1.15 °C/w/3"



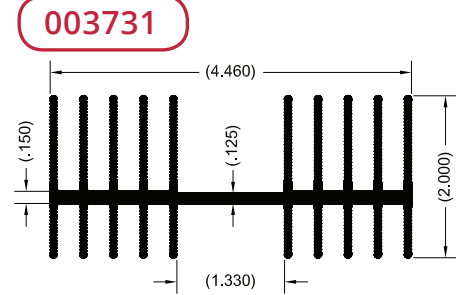
Per. 75.37 in.  
WT. 4.34 lb/ft  
θsa 0.90 °C/w/3"



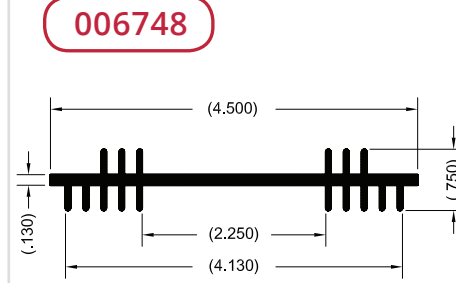
Per. 56.00 in.  
WT. 2.51 lb/ft  
θsa 0.90 °C/w/3"



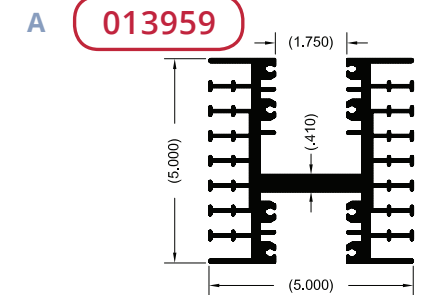
Per. 37.73 in.  
WT. 1.96 lb/ft  
θsa 1.85 °C/w/3"



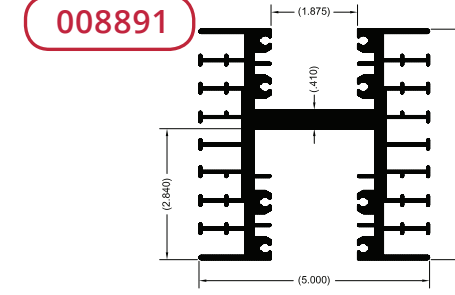
Per. 43.50 in.  
WT. 2.22 lb/ft  
θsa 1.60 °C/w/3"



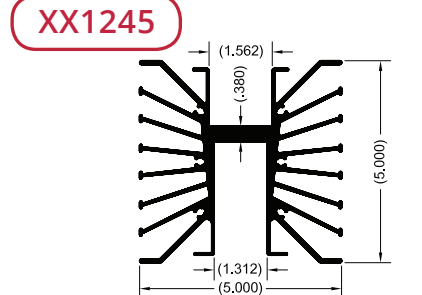
Per. 21.66 in.  
WT. 1.15 lb/ft  
θsa 3.20 °C/w/3"



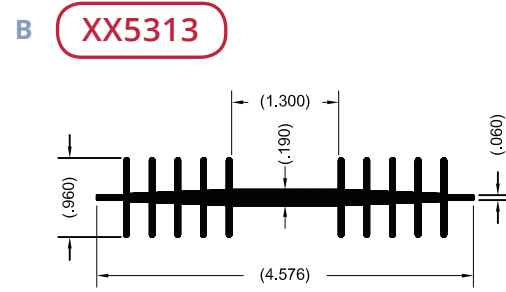
Per. 71.00 in.  
WT. 7.91 lb/ft  
θsa 1.00 °C/w/3"



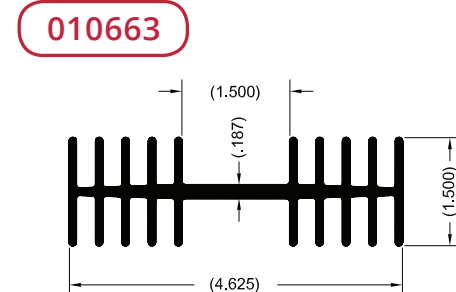
Per. 82.64 in.  
WT. 7.23 lb/ft  
θsa 1.40 °C/w/3"



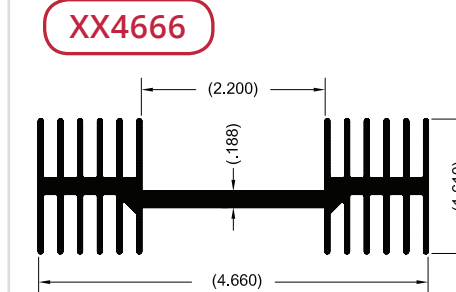
Per. 81.91 in.  
WT. 5.16 lb/ft  
θsa 0.72 °C/w/3"



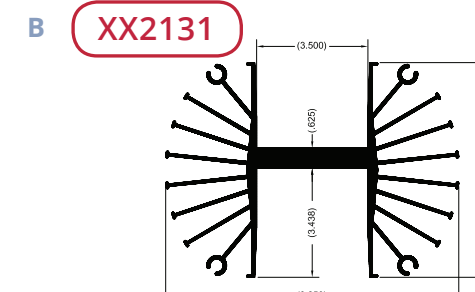
Per. 25.98 in.  
WT. 1.40 lb/ft  
θsa 3.30 °C/w/3"



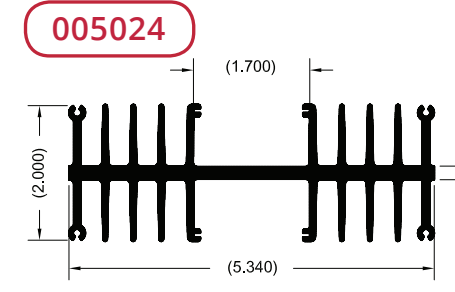
Per. 34.75 in.  
WT. 2.27 lb/ft  
θsa 2.00 °C/w/3"



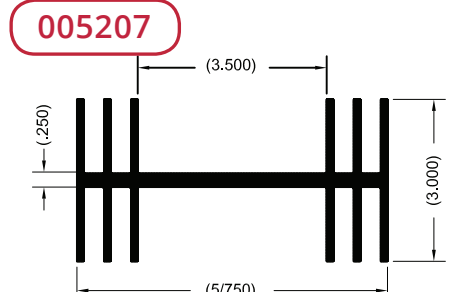
Per. 41.71 in.  
WT. 2.48 lb/ft  
θsa 2.10 °C/w/3"



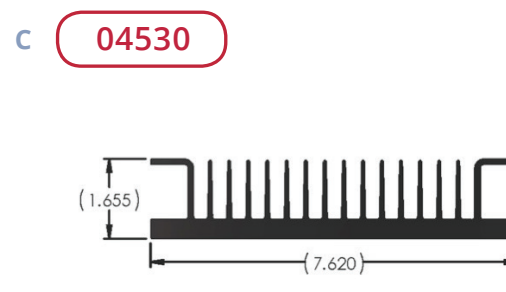
Per. 118.25 in.  
WT. 9.60 lb/ft  
θsa 0.40 °C/w/3"



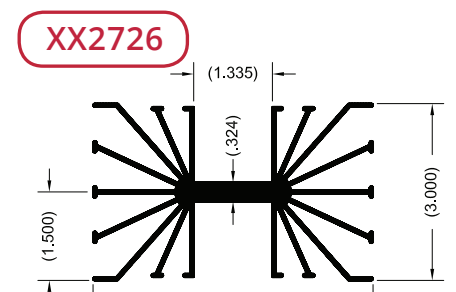
Per. 51.75 in.  
WT. 3.23 lb/ft  
θsa 1.40 °C/w/3"



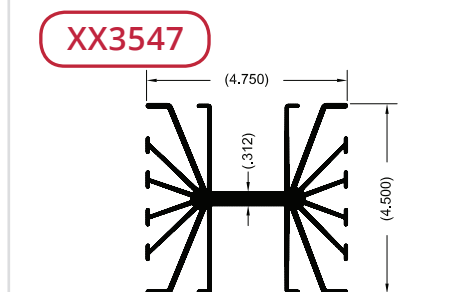
Per. 45.00 in.  
WT. 4.20 lb/ft  
θsa 1.60 °C/w/3"



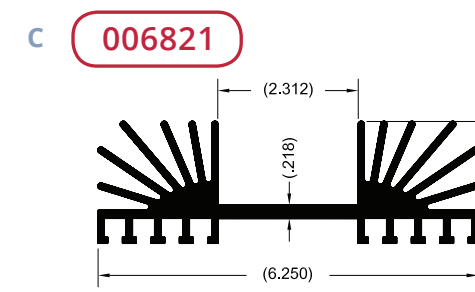
Per. 30.59 in.  
WT. 1.59 lb/ft  
θsa 2.29 °C/w/3"



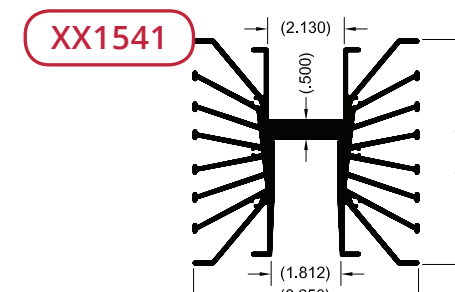
Per. 65.31 in.  
WT. 2.93 lb/ft  
θsa 1.10 °C/w/3"



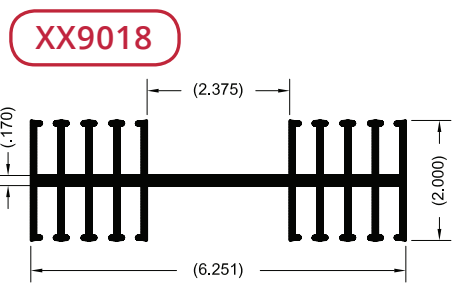
Per. 69.74 in.  
WT. 4.10 lb/ft  
θsa 0.80 °C/w/3"



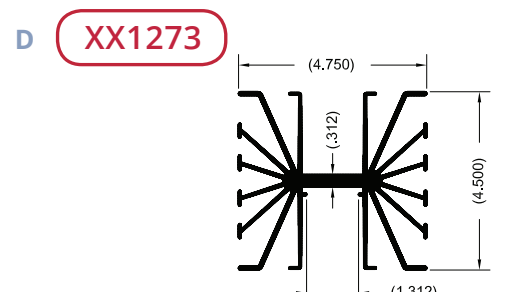
Per. 49.70 in.  
WT. 4.50 lb/ft  
θsa 1.40 °C/w/3"



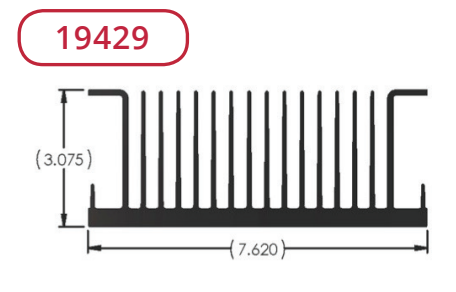
Per. 102.77 in.  
WT. 7.54 lb/ft  
θsa 0.59 °C/w/3"



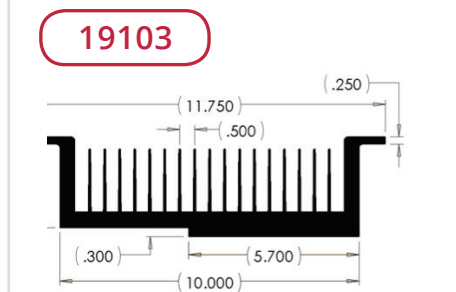
Per. 53.10 in.  
WT. 3.49 lb/ft  
θsa 1.40 °C/w/3"



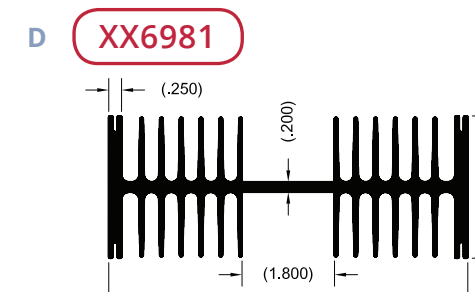
Per. 71.36 in.  
WT. 4.11 lb/ft  
θsa 0.80 °C/w/3"



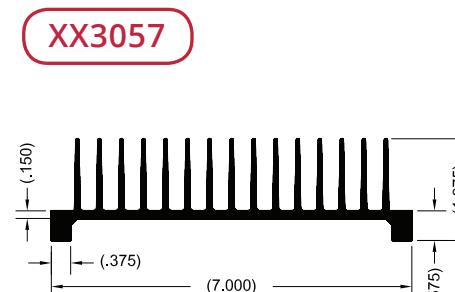
Per. 45.39 in.  
WT. 2.19 lb/ft  
θsa 1.54 °C/w/3"



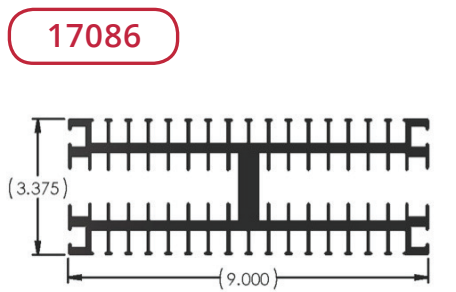
Per. 67.45 in.  
WT. 5.99 lb/ft  
θsa 1.04 °C/w/3"



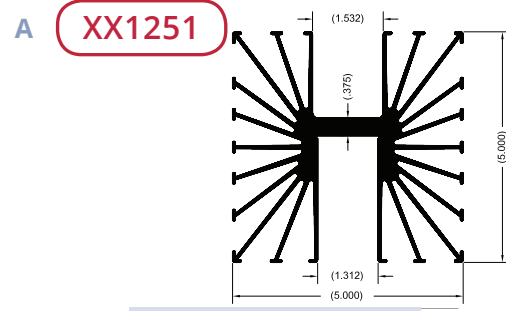
Per. 82.00 in.  
WT. 6.08 lb/ft  
θsa 1.00 °C/w/3"



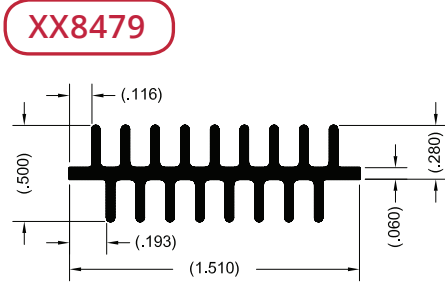
Per. 56.08 in.  
WT. 3.56 lb/ft  
θsa 1.40 °C/w/3"



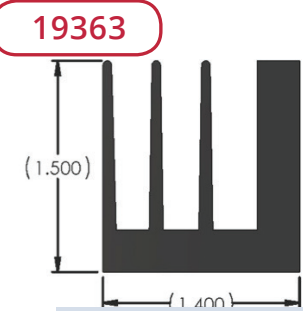
Per. 119.05 in.  
WT. 9.74 lb/ft  
θsa 0.59 °C/w/3"



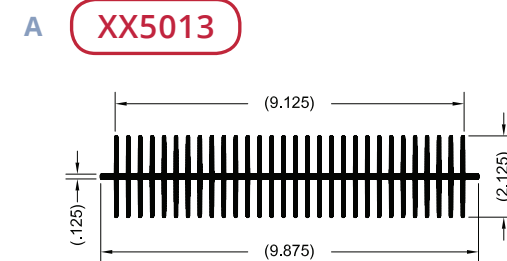
**XX1251**  
Per. 89.93 in.  
WT. 5.74 lb/ft  
θsa 0.70 °C/w/3"



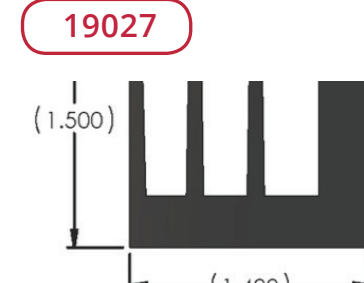
**XX8479**  
Per. 9.90 in.  
WT. 0.27 lb/ft  
θsa 7.80 °C/w/3"



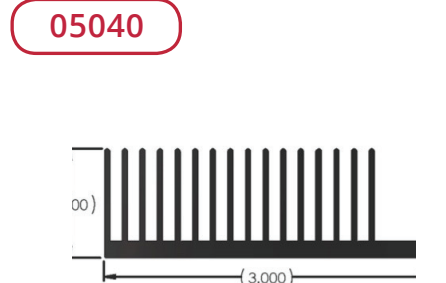
**19363**  
Per. 43.93 in.  
WT. 1.78 lb/ft  
θsa 1.59 °C/w/3"



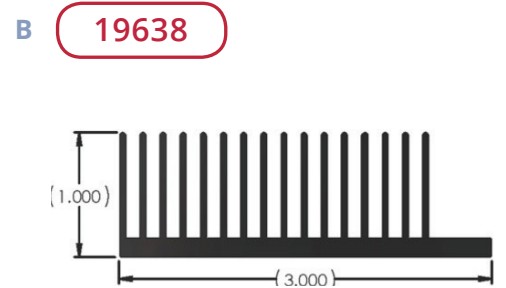
**XX5013**  
Per. 139.22 in.  
WT. 6.41 lb/ft  
θsa 0.96 °C/w/3"



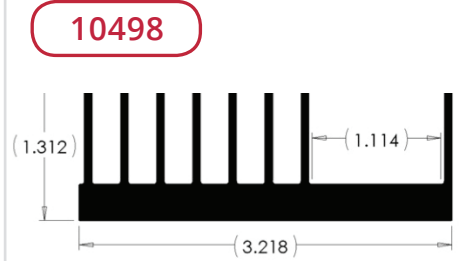
**19027**  
Per. 4.65 in.  
WT. 0.09 lb/ft  
θsa 15.05 °C/w/3"



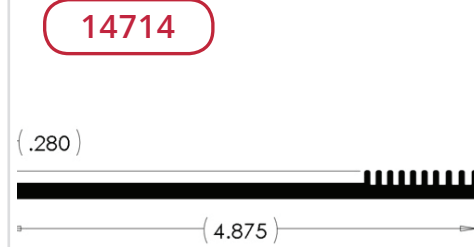
**05040**  
Per. 27.74 in.  
WT. 2.05 lb/ft  
θsa 2.52 °C/w/3"



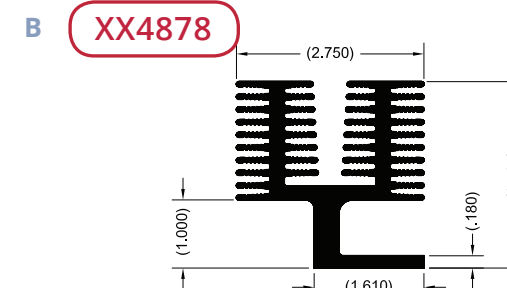
**19638**  
Per. 34.70 in.  
WT. 3.72 lb/ft  
θsa 2.02 °C/w/3"



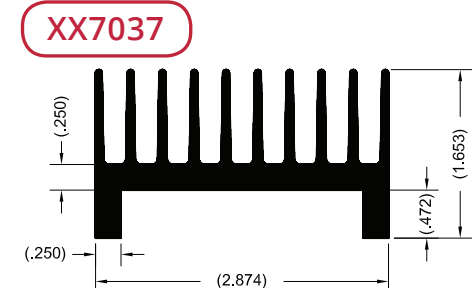
**10498**  
Per. 46.35 in.  
WT. 2.32 lb/ft  
θsa 1.51 °C/w/3"



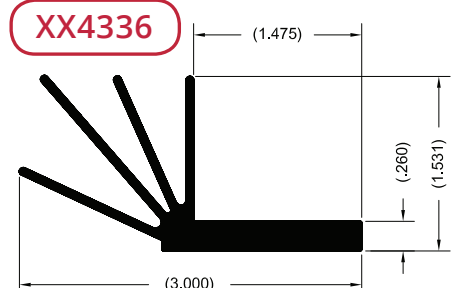
**14714**  
Per. 84.15 in.  
WT. 7.71 lb/ft  
θsa 0.83 °C/w/3"



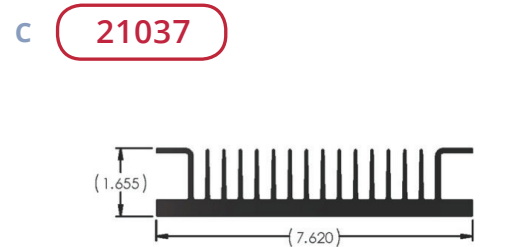
**XX4878**  
Per. 50.88 in.  
WT. 3.30 lb/ft  
θsa 1.80 °C/w/3"



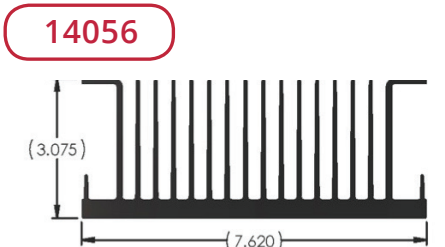
**XX7037**  
Per. 26.00 in.  
WT. 2.03 lb/ft  
θsa 2.80 °C/w/3"



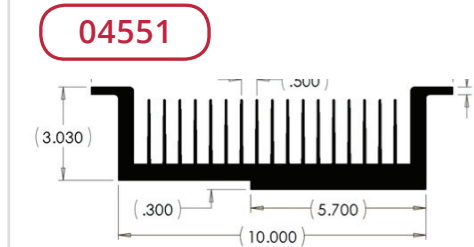
**XX4336**  
Per. 14.66 in.  
WT. 1.02 lb/ft  
θsa 5.10 °C/w/3"



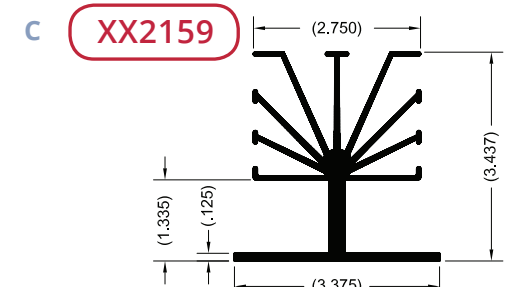
**21037**  
Per. 42.34 in.  
WT. 2.46 lb/ft  
θsa 1.65 °C/w/3"



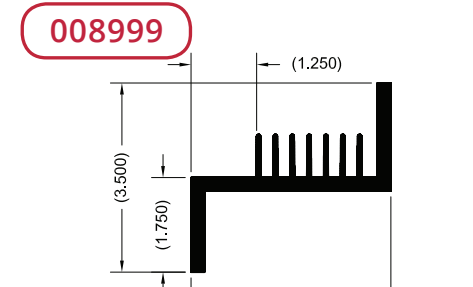
**14056**  
Per. 62.77 in.  
WT. 4.48 lb/ft  
θsa 1.11 °C/w/3"



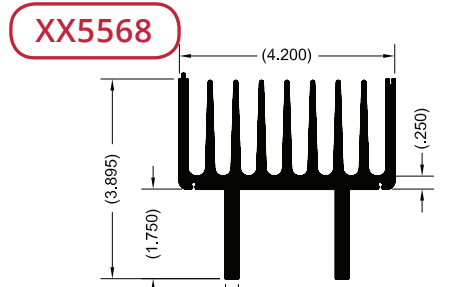
**04551**  
Per. 46.76 in.  
WT. 3.57 lb/ft  
θsa 1.50 °C/w/3"



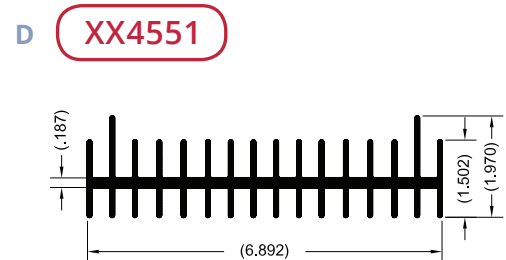
**XX2159**  
Per. 40.23 in.  
WT. 2.47 lb/ft  
θsa 1.90 °C/w/3"



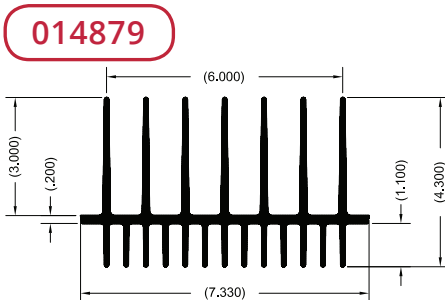
**008999**  
Per. 25.60 in.  
WT. 2.59 lb/ft  
θsa 2.70 °C/w/3"



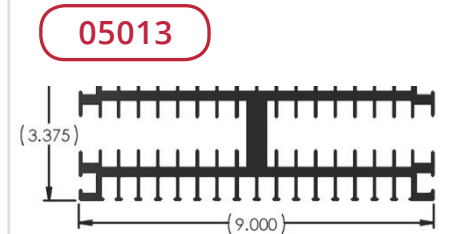
**XX5568**  
Per. 48.40 in.  
WT. 5.01 lb/ft  
θsa 1.50 °C/w/3"



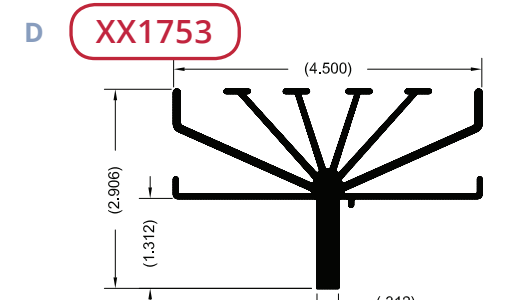
**XX4551**  
Per. 57.73 in.  
WT. 3.59 lb/ft  
θsa 1.26 °C/w/3"



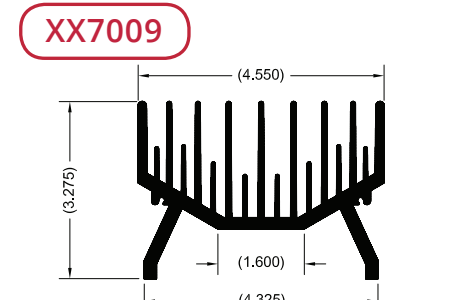
**014879**  
Per. 82.26 in.  
WT. 7.16 lb/ft  
θsa 0.85 °C/w/3"



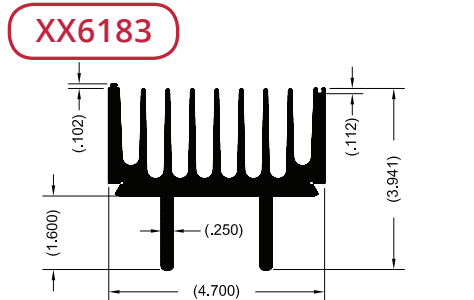
**05013**  
Per. 136.05 in.  
WT. 6.40 lb/ft  
θsa 0.51 °C/w/3"



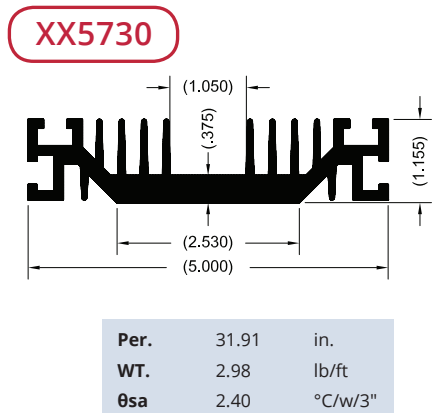
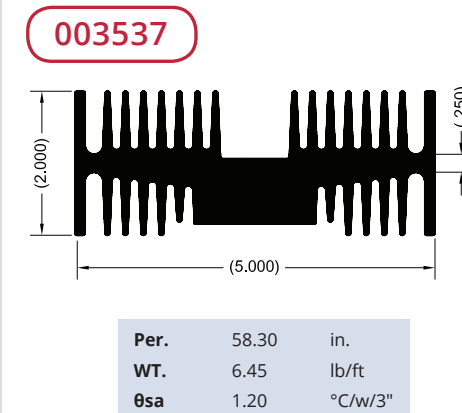
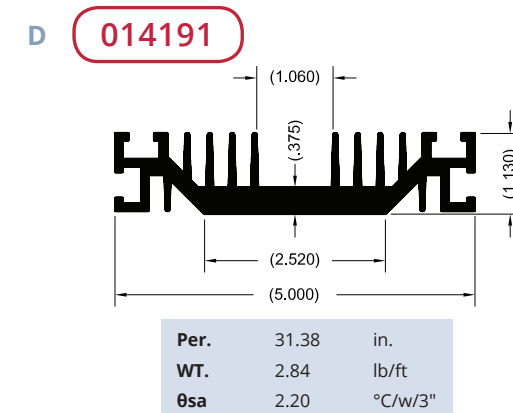
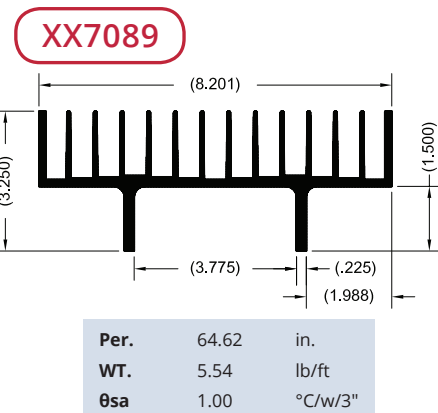
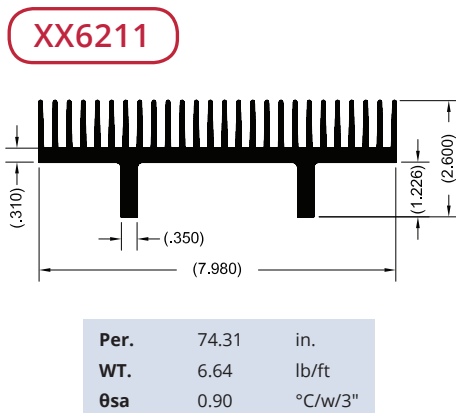
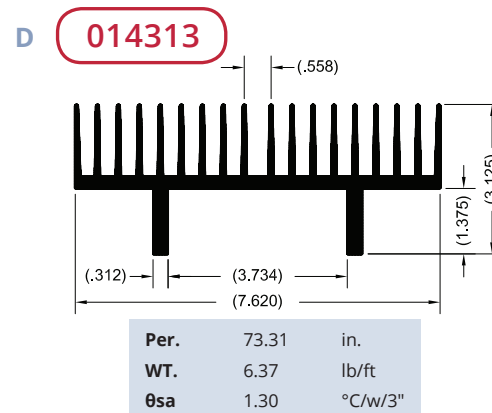
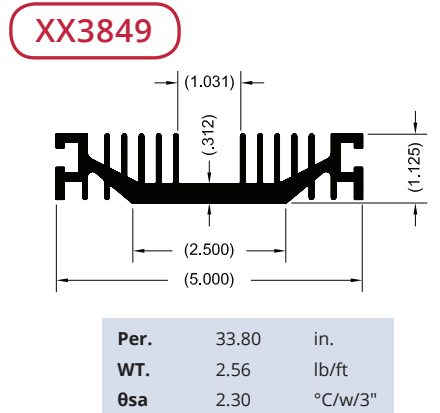
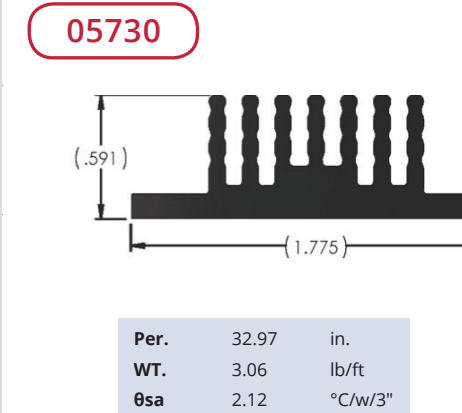
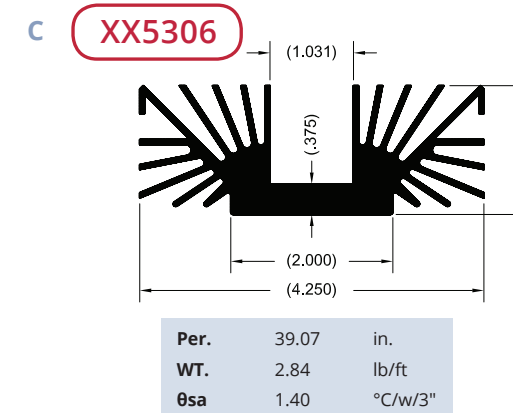
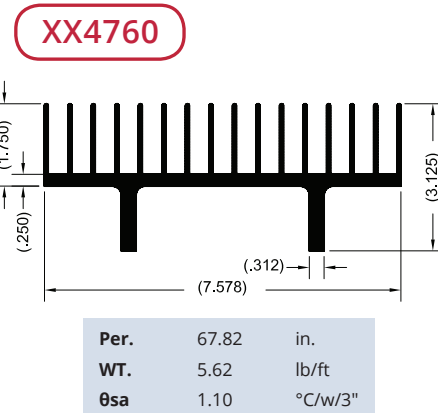
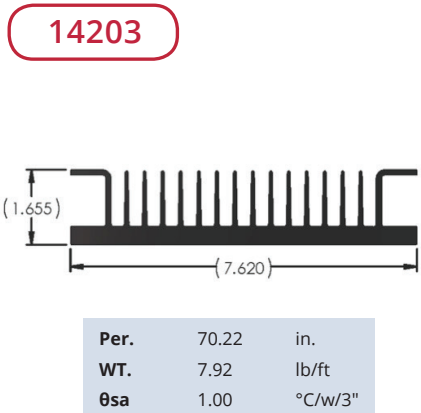
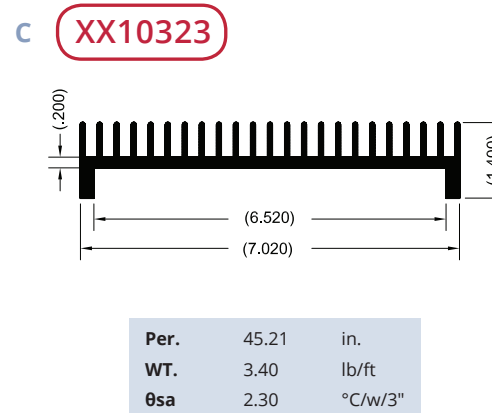
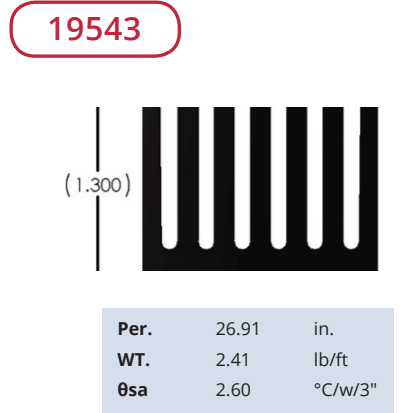
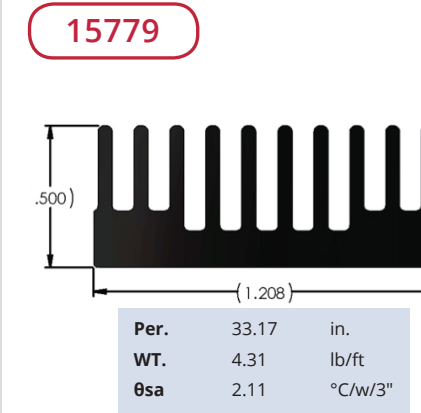
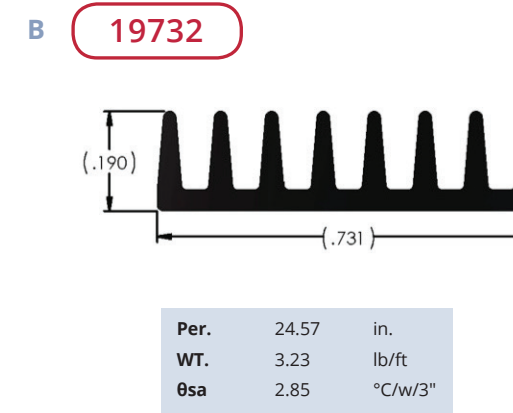
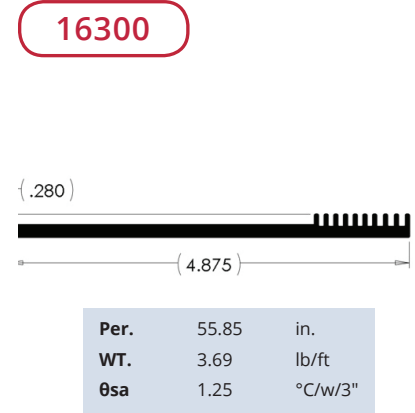
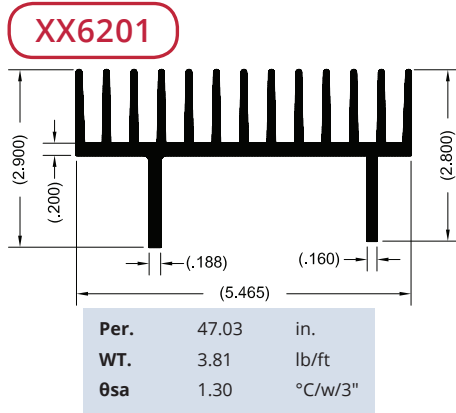
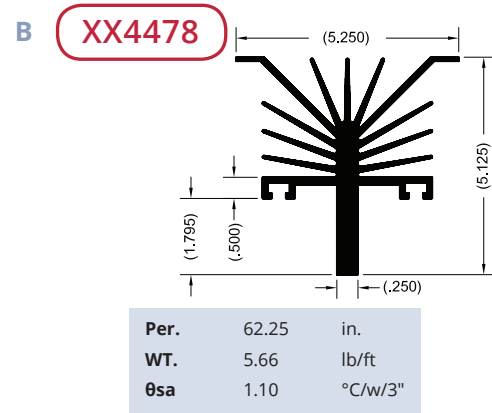
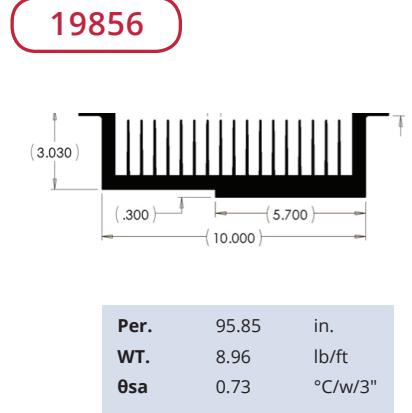
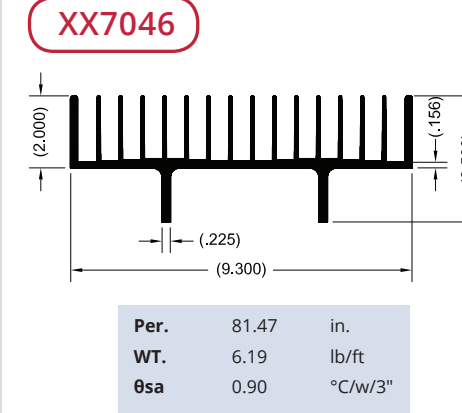
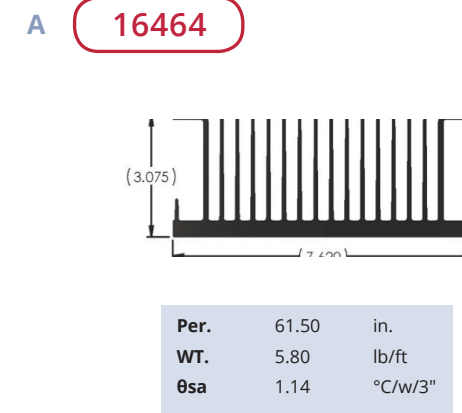
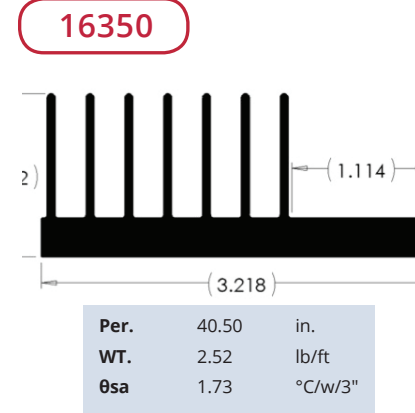
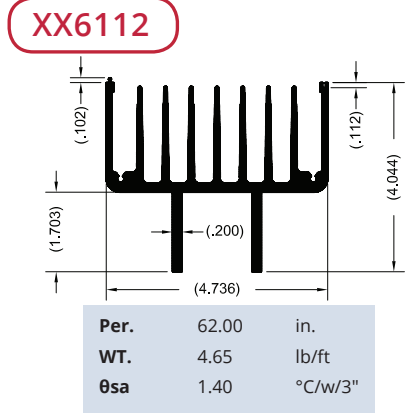
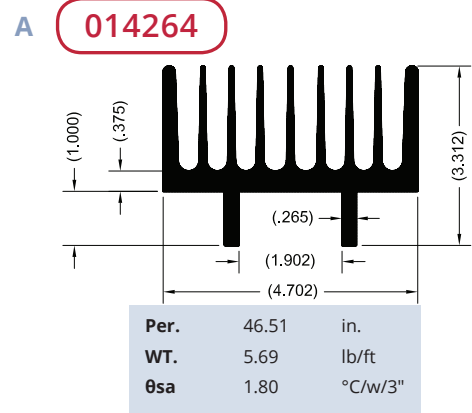
**XX1753**  
Per. 36.88 in.  
WT. 2.16 lb/ft  
θsa 1.70 °C/w/3"

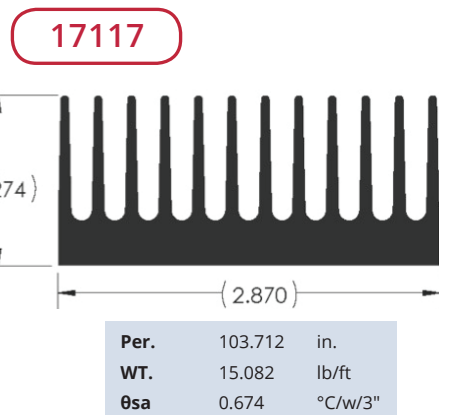
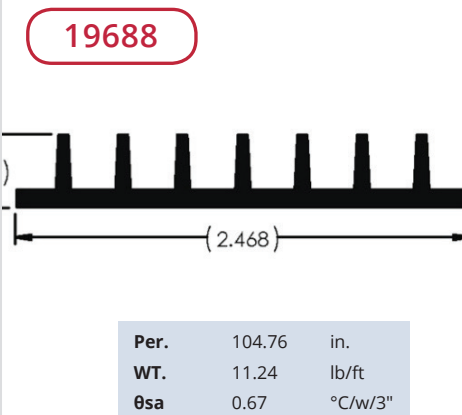
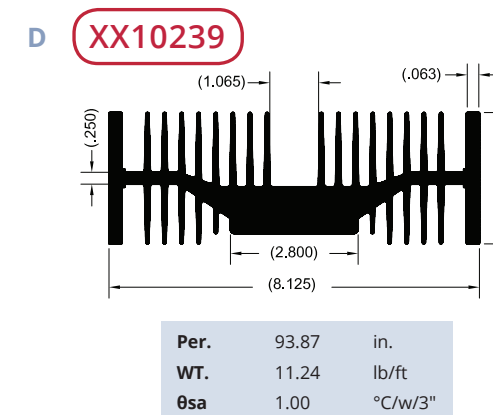
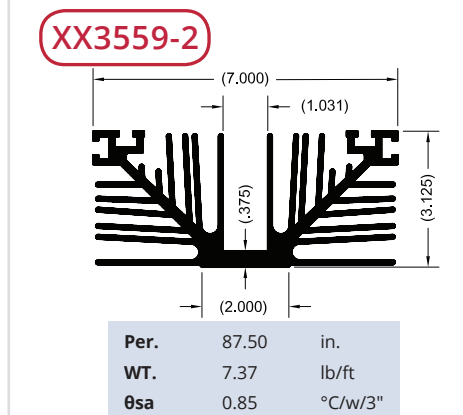
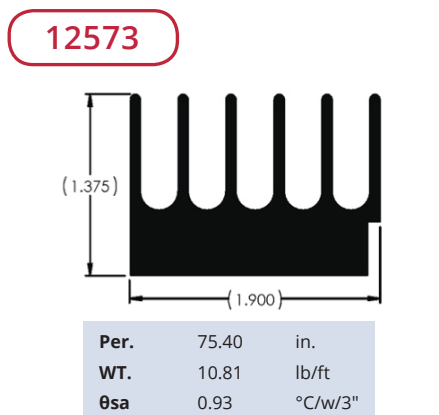
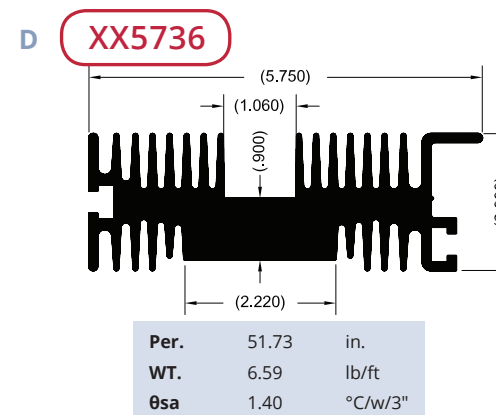
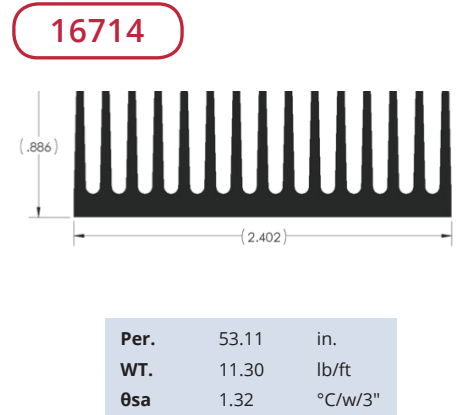
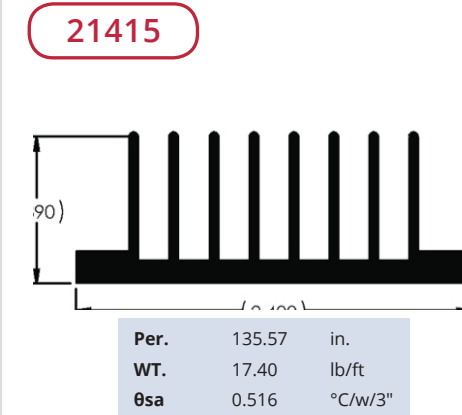
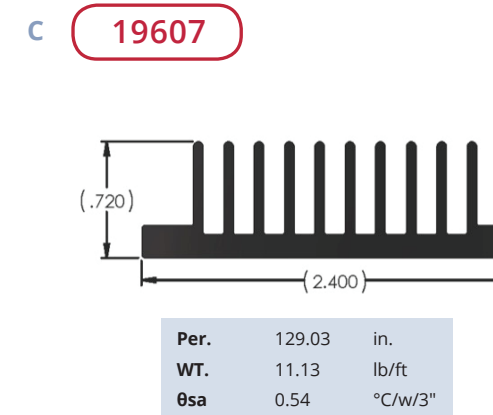
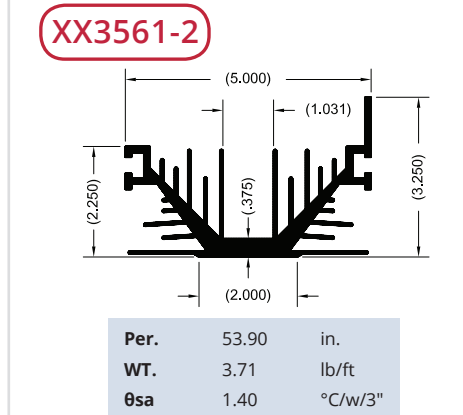
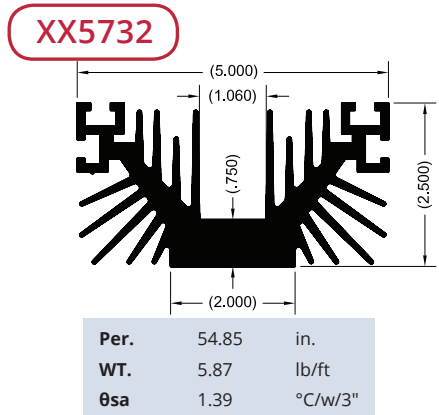
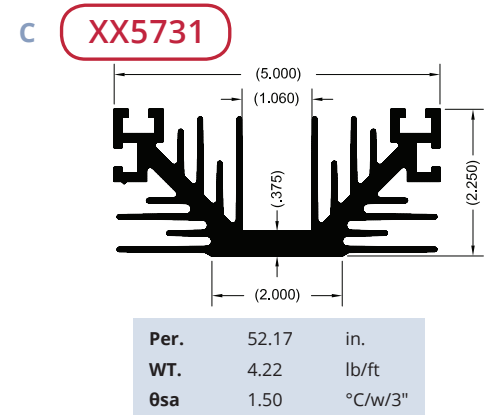
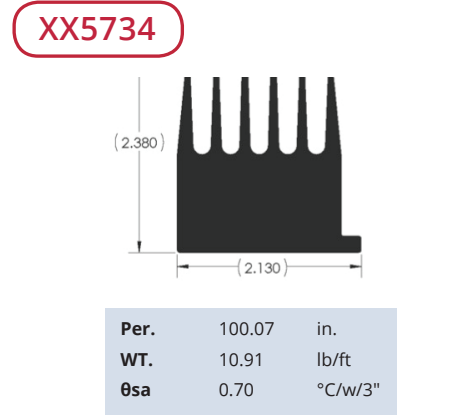
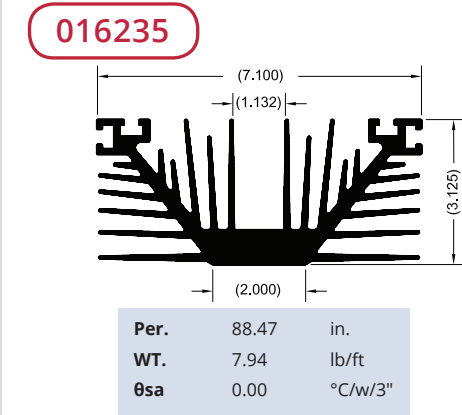
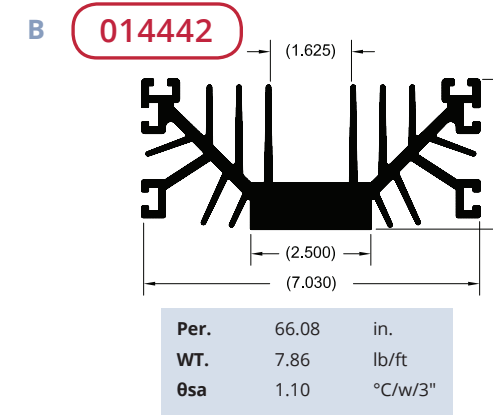
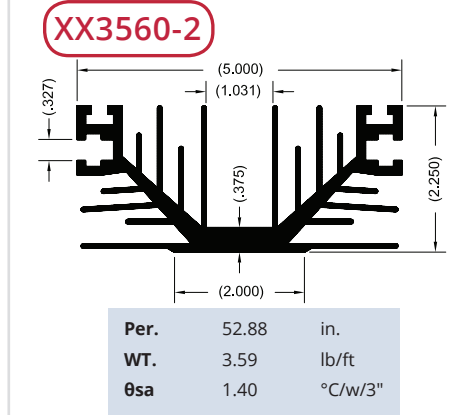
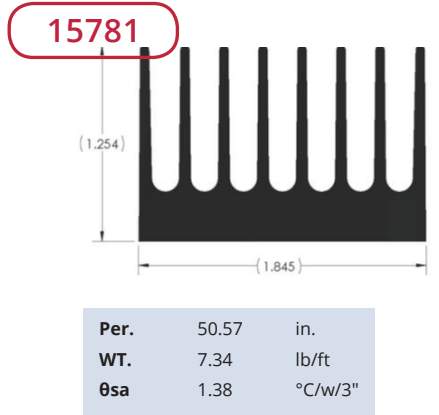
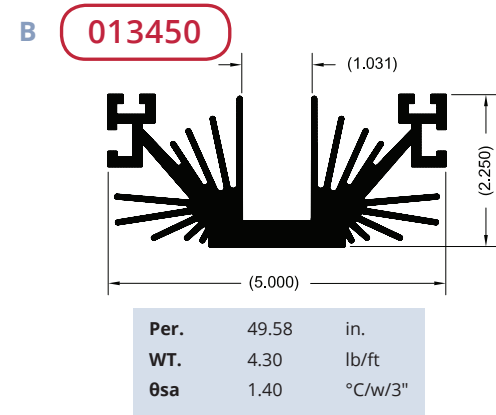
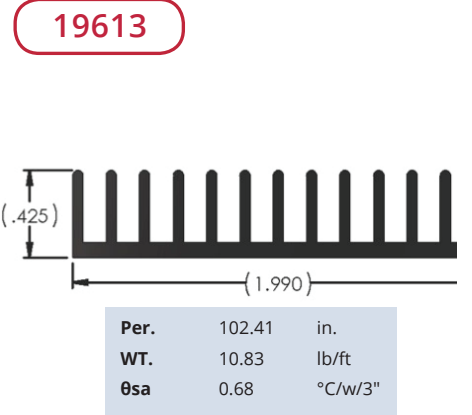
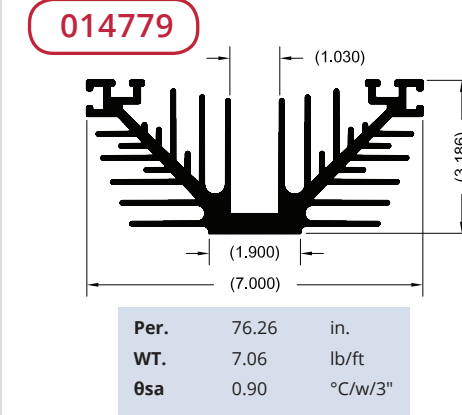
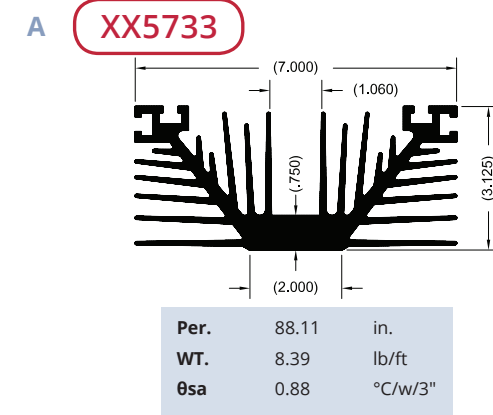
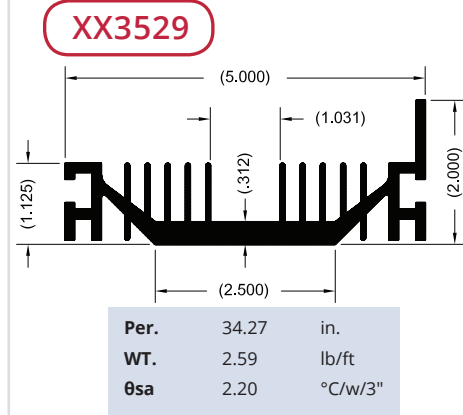
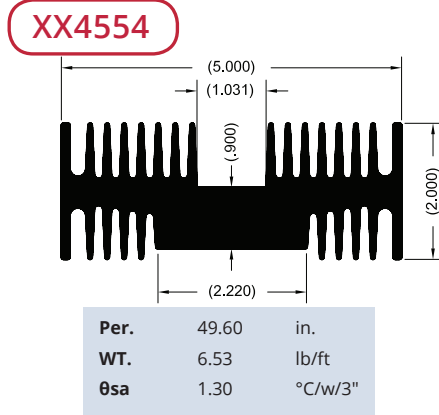
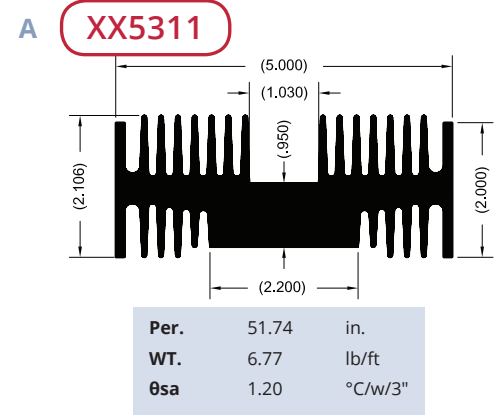


**XX7009**  
Per. 59.68 in.  
WT. 4.57 lb/ft  
θsa 1.30 °C/w/3"

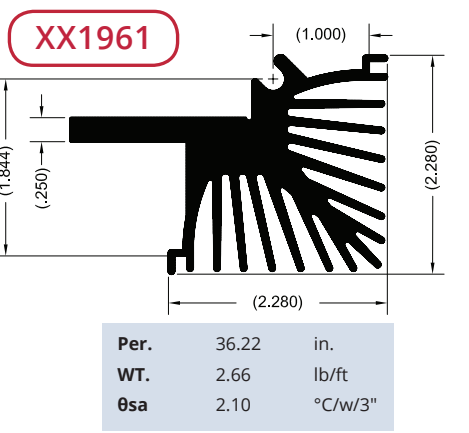
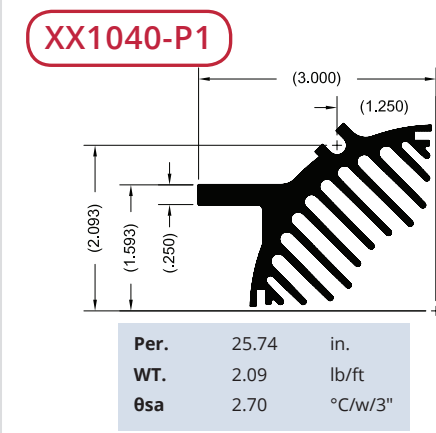
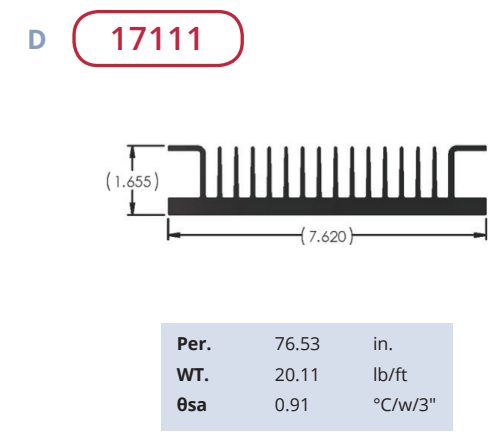
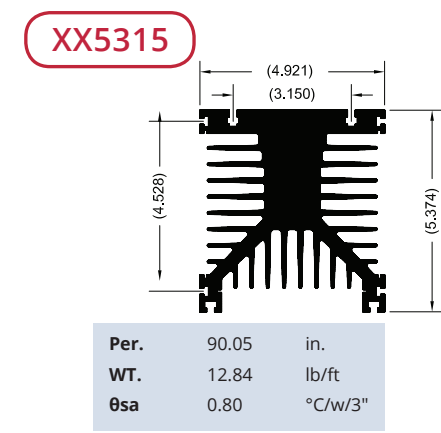
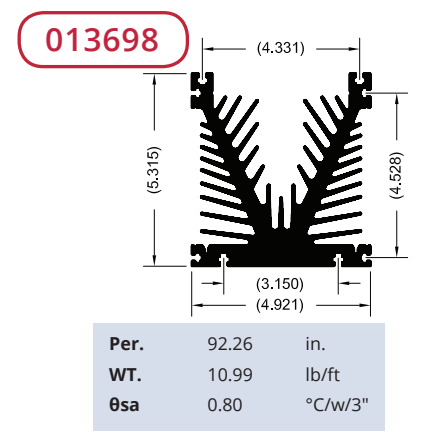
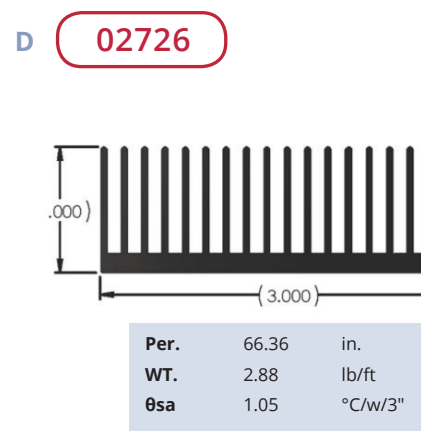
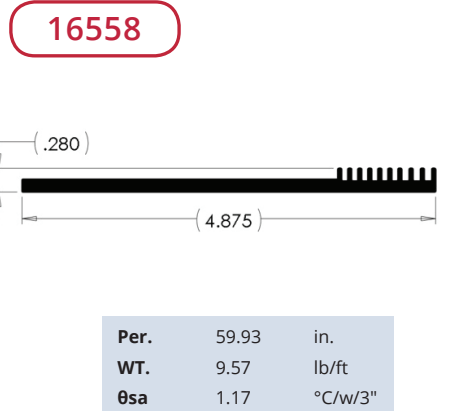
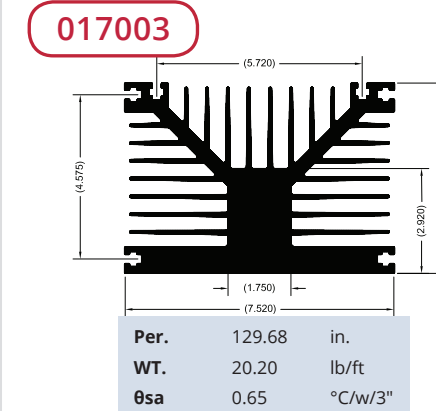
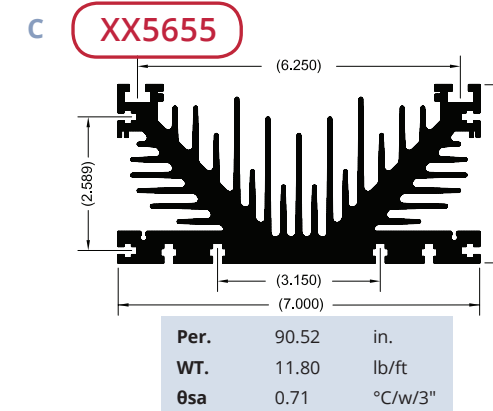
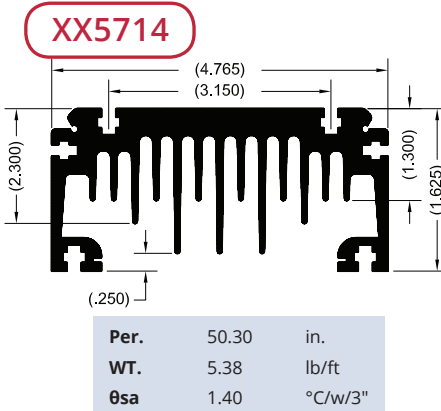
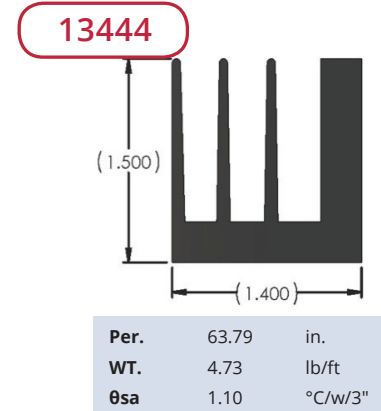
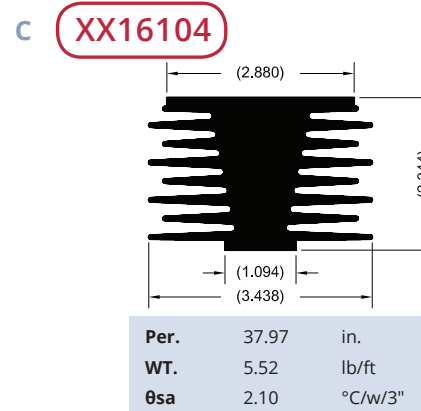
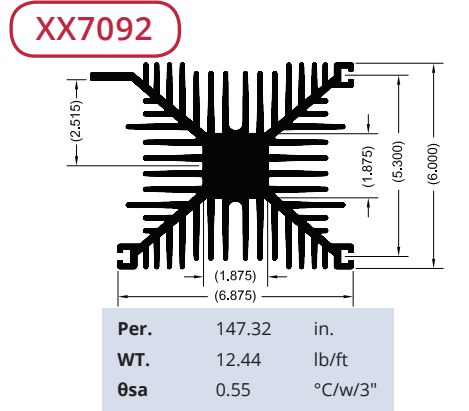
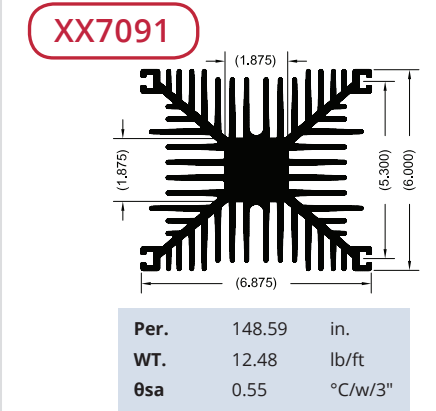
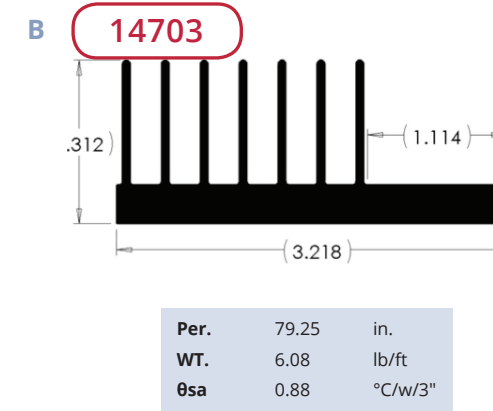
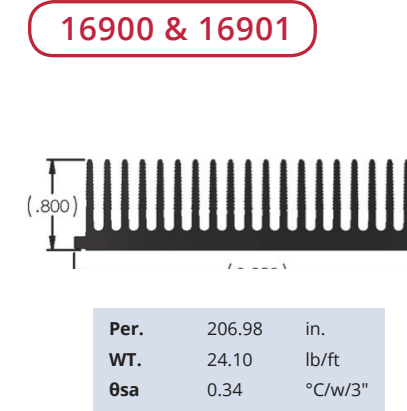
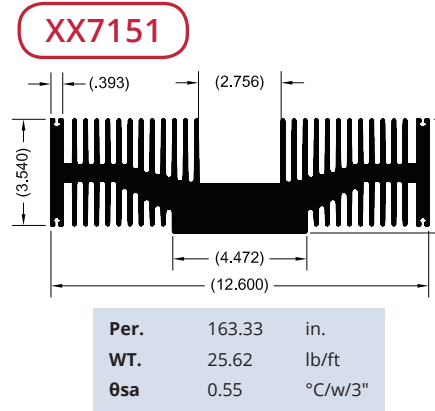
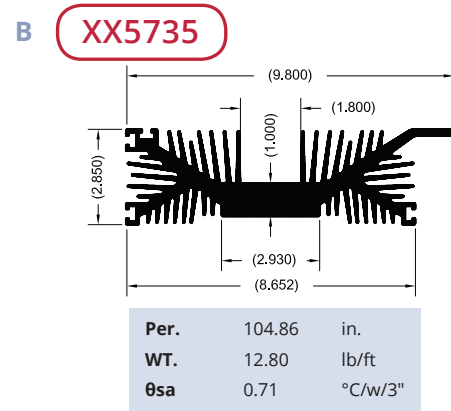
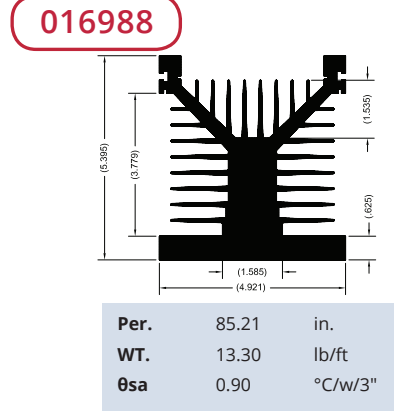
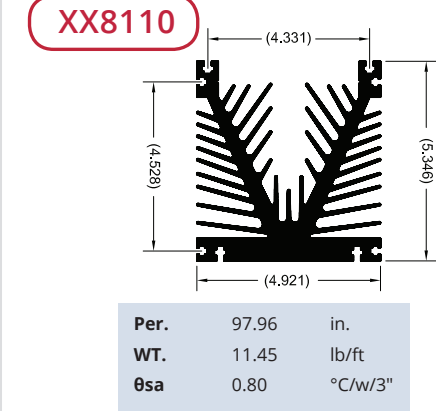
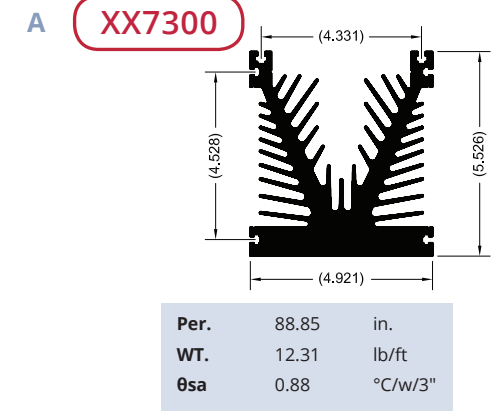
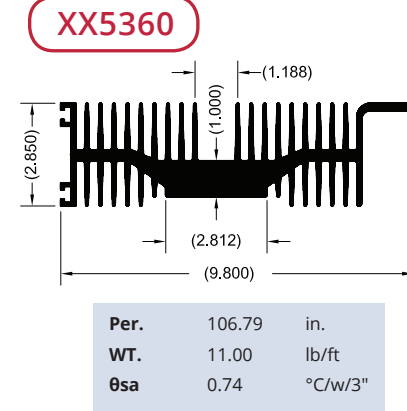
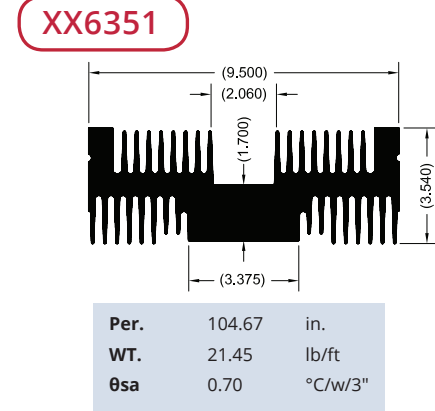
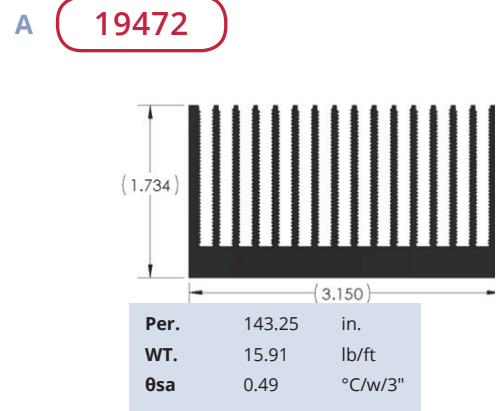


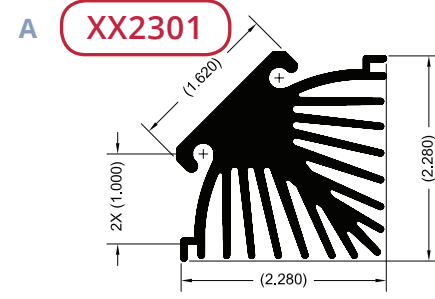
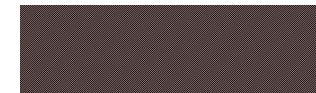
**XX6183**  
Per. 49.44 in.  
WT. 6.18 lb/ft  
θsa 1.50 °C/w/3"



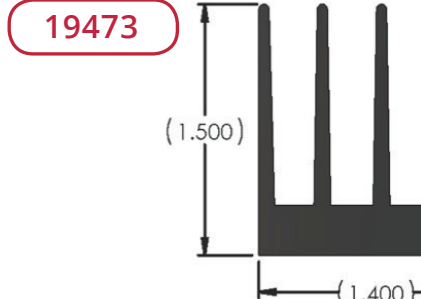




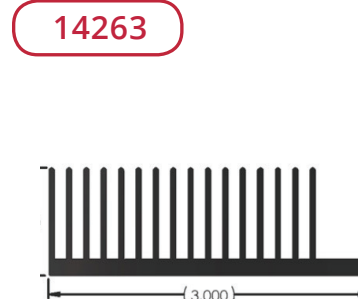




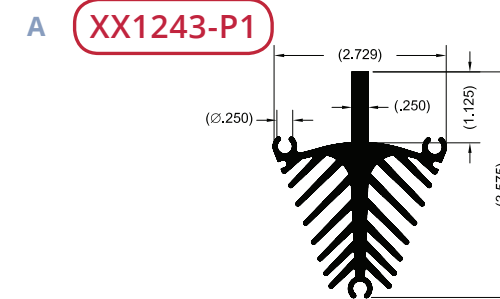
Per.	34.48	in.
WT.	2.48	lb/ft
θsa	2.10	°C/w/3"



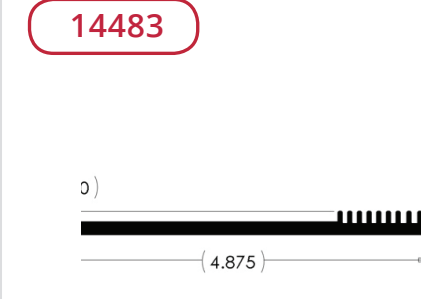
Per.	30.97	in.
WT.	2.85	lb/ft
θsa	2.26	°C/w/3"



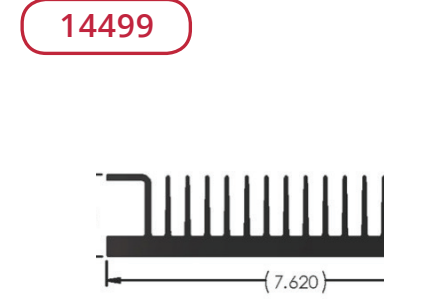
Per.	34.15	in.
WT.	2.51	lb/ft
θsa	2.05	°C/w/3"



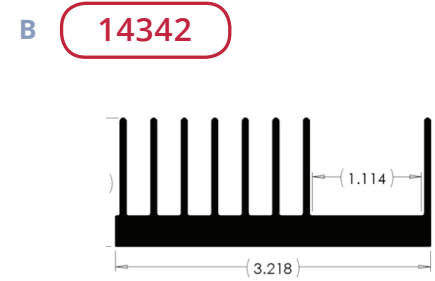
Per.	36.25	in.
WT.	2.53	lb/ft
θsa	2.10	°C/w/3"



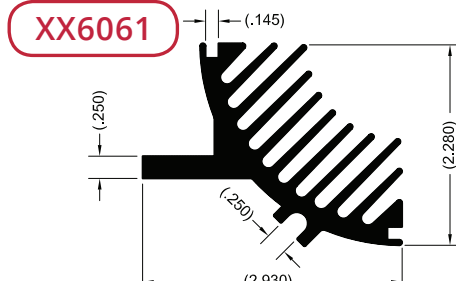
Per.	70.37	in.
WT.	4.32	lb/ft
θsa	0.99	°C/w/3"



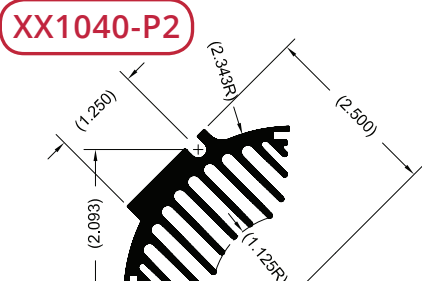
Per.	88.60	in.
WT.	11.46	lb/ft
θsa	0.79	°C/w/3"



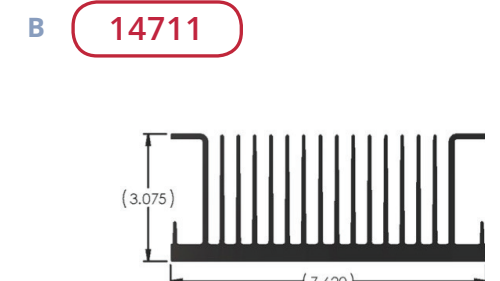
Per.	48.06	in.
WT.	2.88	lb/ft
θsa	1.45	°C/w/3"



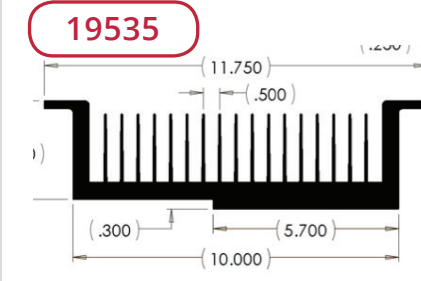
Per.	28.28	in.
WT.	2.23	lb/ft
θsa	2.00	°C/w/3"



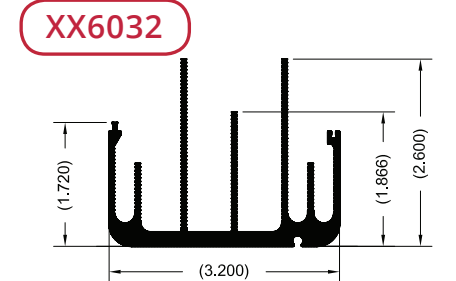
Per.	24.00	in.
WT.	1.87	lb/ft
θsa	2.90	°C/w/3"



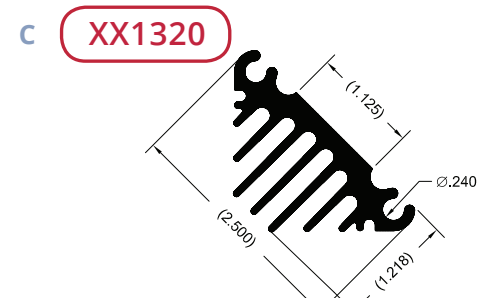
Per.	89.05	in.
WT.	5.95	lb/ft
θsa	0.79	°C/w/3"



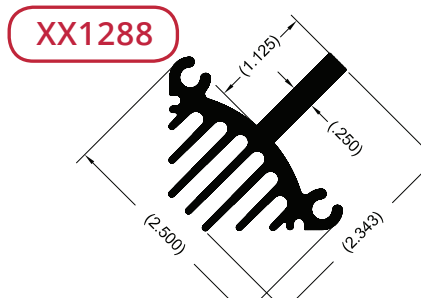
Per.	95.28	in.
WT.	9.50	lb/ft
θsa	0.73	°C/w/3"



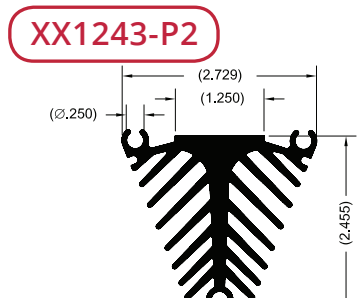
Per.	31.61	in.
WT.	1.75	lb/ft
θsa	2.02	°C/w/3"



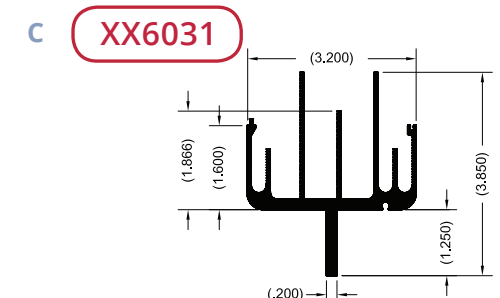
Per.	16.50	in.
WT.	1.36	lb/ft
θsa	3.90	°C/w/3"



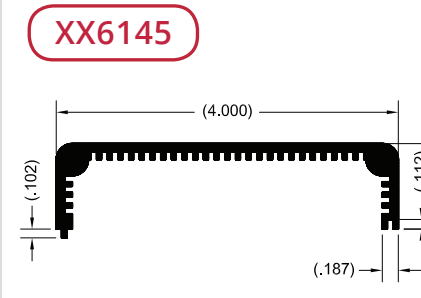
Per.	18.77	in.
WT.	1.41	lb/ft
θsa	3.90	°C/w/3"



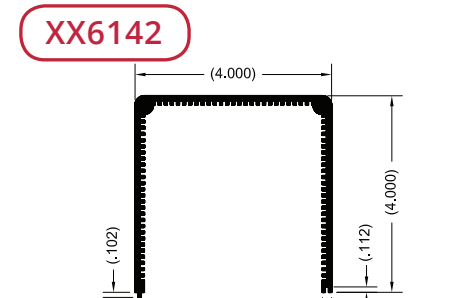
Per.	34.14	in.
WT.	2.24	lb/ft
θsa	2.20	°C/w/3"



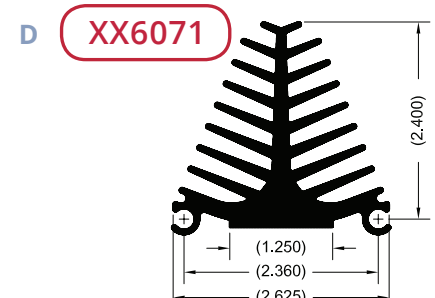
Per.	33.93	in.
WT.	2.06	lb/ft
θsa	2.20	°C/w/3"



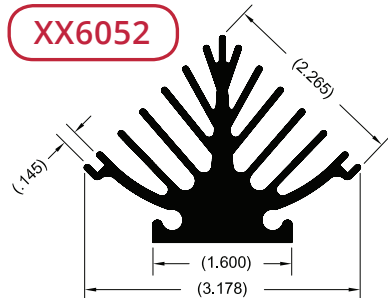
Per.	18.06	in.
WT.	1.03	lb/ft
θsa	2.10	°C/w/3"



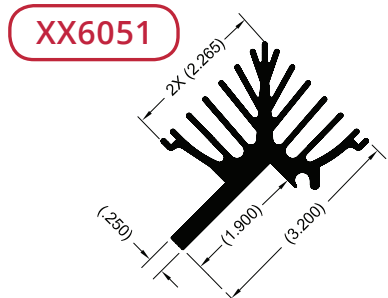
Per.	38.61	in.
WT.	2.05	lb/ft
θsa	1.80	°C/w/3"



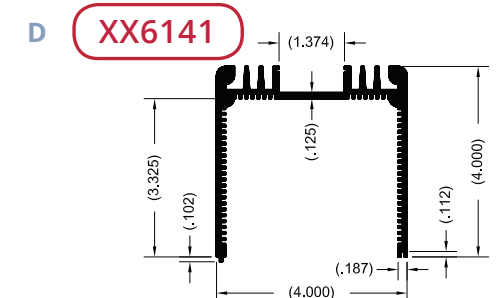
Per.	31.70	in.
WT.	2.45	lb/ft
θsa	1.80	°C/w/3"



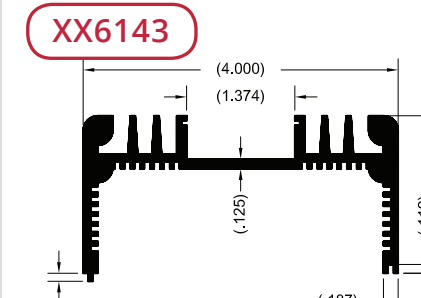
Per.	27.55	in.
WT.	2.19	lb/ft
θsa	1.90	°C/w/3"



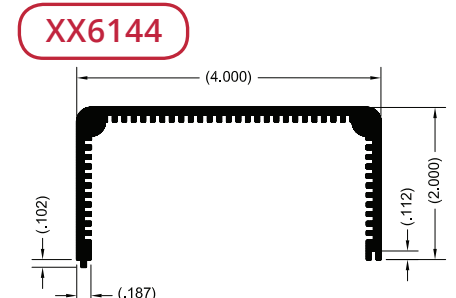
Per.	28.91	in.
WT.	2.18	lb/ft
θsa	1.90	°C/w/3"



Per.	41.54	in.
WT.	2.57	lb/ft
θsa	1.70	°C/w/3"

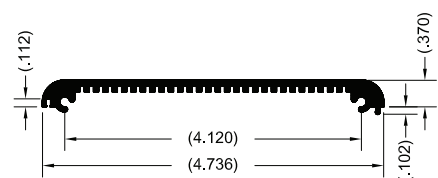


Per.	27.55	in.
WT.	1.92	lb/ft
θsa	1.90	°C/w/3"



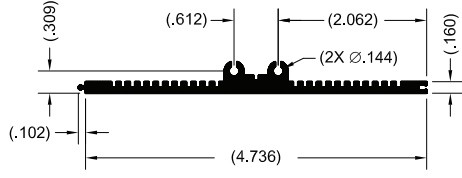
Per.	24.66	in.
WT.	1.37	lb/ft
θsa	2.00	°C/w/3"

A XX6115



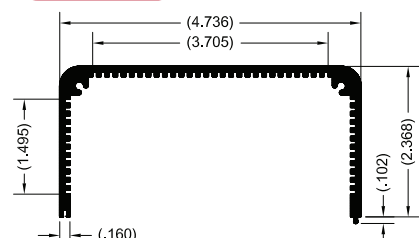
Per.	16.06	in.
WT.	0.87	lb/ft
θsa	3.10	°C/w/3"

XX6116



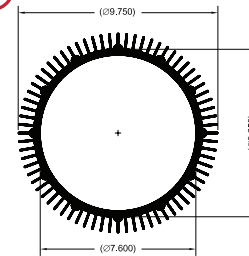
Per.	15.79	in.
WT.	0.90	lb/ft
θsa	3.10	°C/w/3"

XX6110



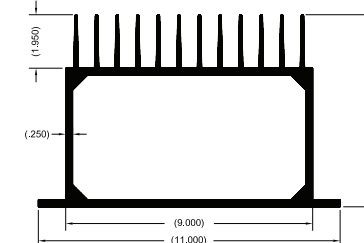
Per.	27.72	in.
WT.	1.50	lb/ft
θsa	2.00	°C/w/3"

A 015569



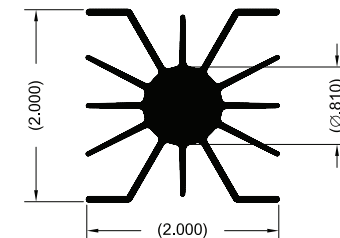
Per.	153.16	in.
WT.	15.66	lb/ft
θsa	0.90	°C/w/3"

017013



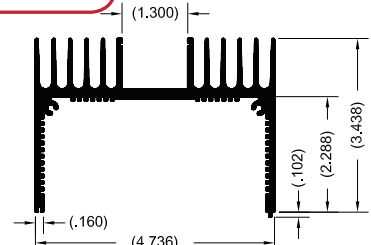
Per.	101.85	in.
WT.	12.90	lb/ft
θsa	0.95	°C/w/3"

XX1290-P1



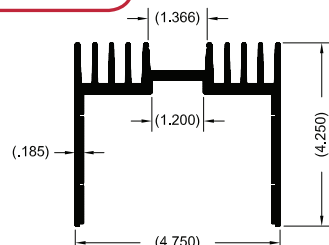
Per.	23.00	in.
WT.	0.97	lb/ft
θsa	2.50	°C/w/3"

B XX6111



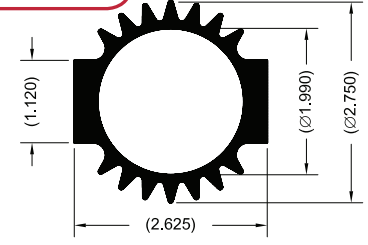
Per.	48.90	in.
WT.	2.95	lb/ft
θsa	1.60	°C/w/3"

XX6102



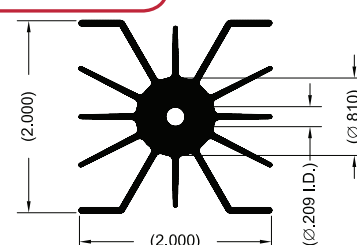
Per.	41.15	in.
WT.	3.79	lb/ft
θsa	1.90	°C/w/3"

XX5075



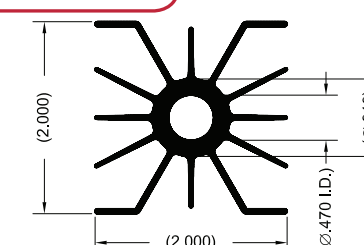
Per.	19.85	in.
WT.	2.14	lb/ft
θsa	3.90	°C/w/3"

B XX1290-P2



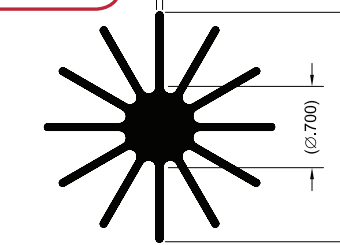
Per.	23.18	in.
WT.	0.93	lb/ft
θsa	2.50	°C/w/3"

XX1290-P3



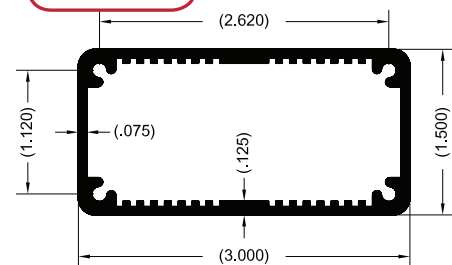
Per.	23.98	in.
WT.	0.77	lb/ft
θsa	2.50	°C/w/3"

XX5049



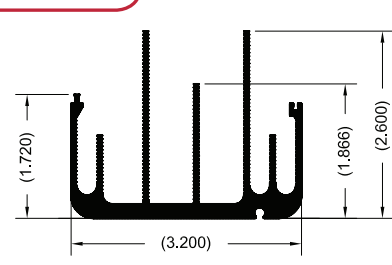
Per.	21.17	in.
WT.	1.22	lb/ft
θsa	2.10	°C/w/3"

C XX6301



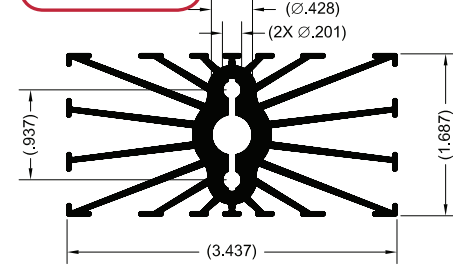
Per.	21.07	in.
WT.	0.90	lb/ft
θsa	3.50	°C/w/3"

XX6302



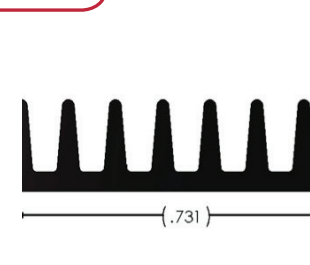
Per.	31.61	in.
WT.	1.75	lb/ft
θsa	2.02	°C/w/3"

XXB-1396



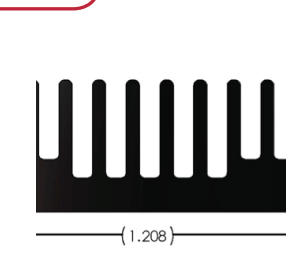
Per.	41.34	in.
WT.	1.75	lb/ft
θsa	2.20	°C/w/3"

C 21074



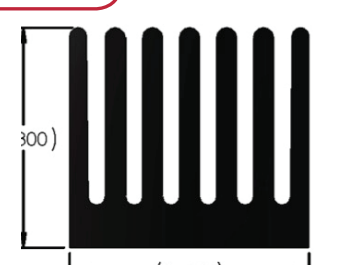
Per.	7.72	in.
WT.	1.05	lb/ft
θsa	9.06	°C/w/3"

19757



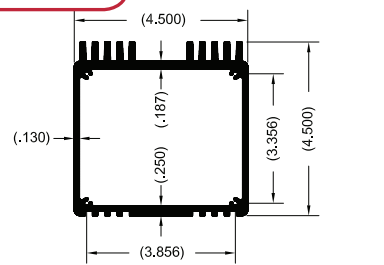
Per.	16.29	in.
WT.	0.76	lb/ft
θsa	4.29	°C/w/3"

19253



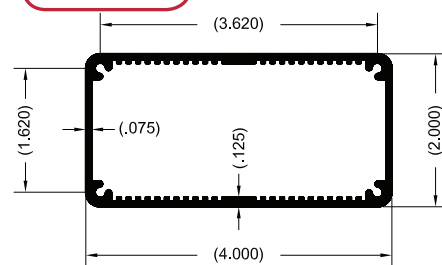
Per.	14.08	in.
WT.	0.45	lb/ft
θsa	4.97	°C/w/3"

D XX6164



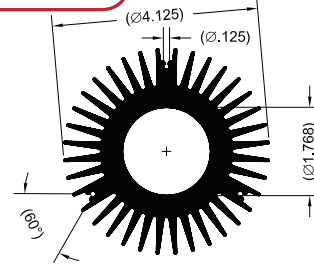
Per.	45.33	in.
WT.	4.26	lb/ft
θsa	1.60	°C/w/3"

XX6303



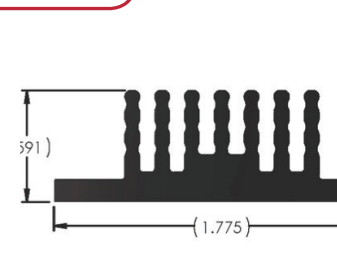
Per.	28.62	in.
WT.	1.40	lb/ft
θsa	3.90	°C/w/3"

015346



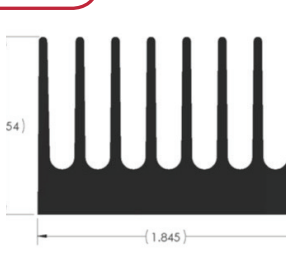
Per.	62.02	in.
WT.	6.47	lb/ft
θsa	1.60	°C/w/3"

D 19756



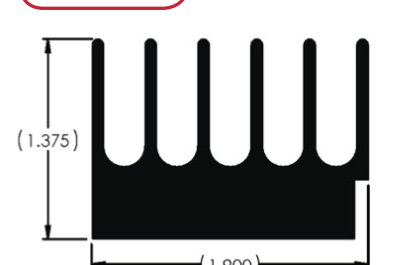
Per.	22.20	in.
WT.	1.21	lb/ft
θsa	3.15	°C/w/3"

18436

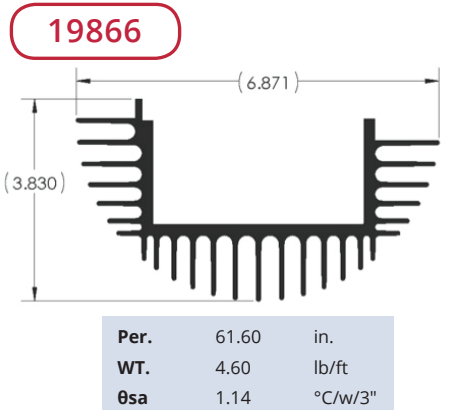
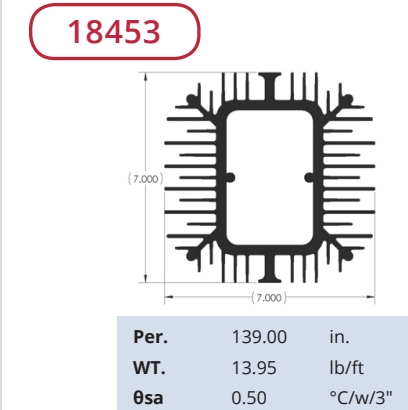
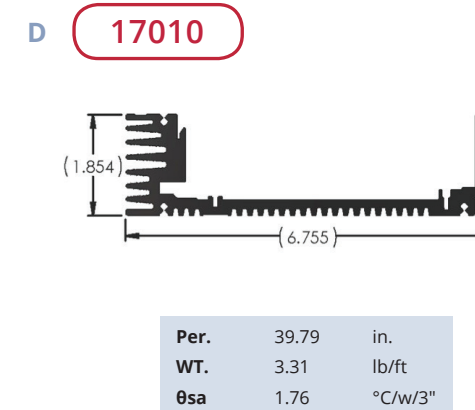
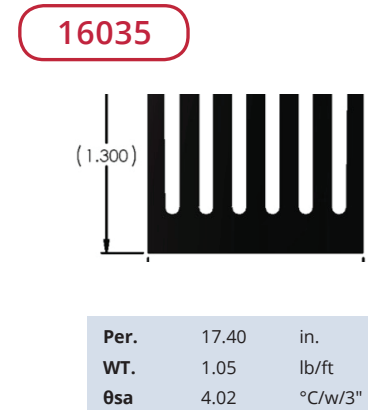
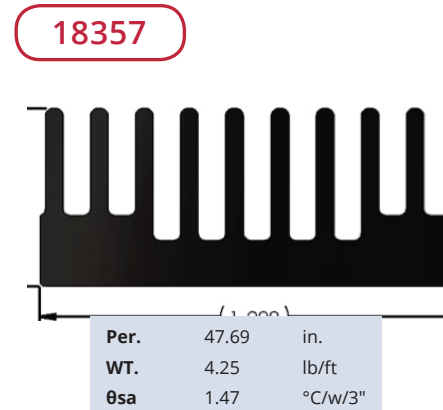
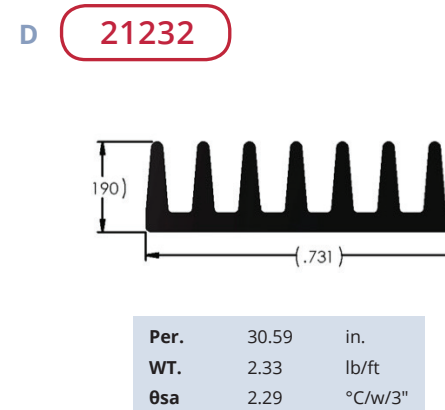
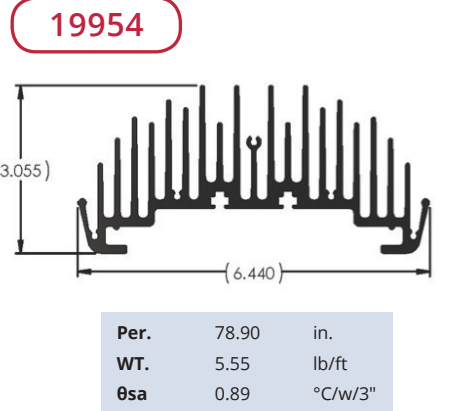
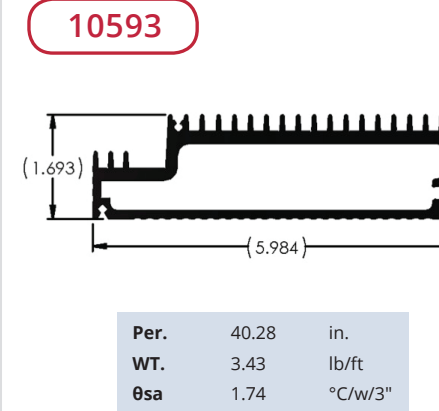
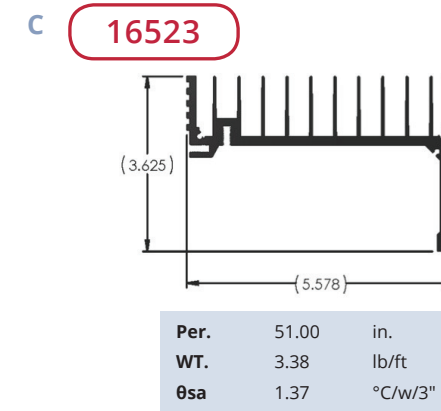
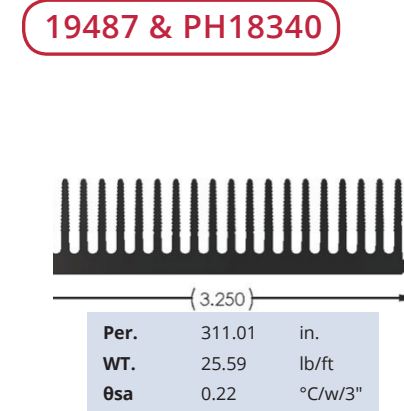
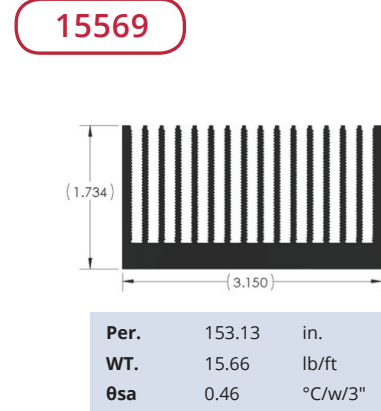
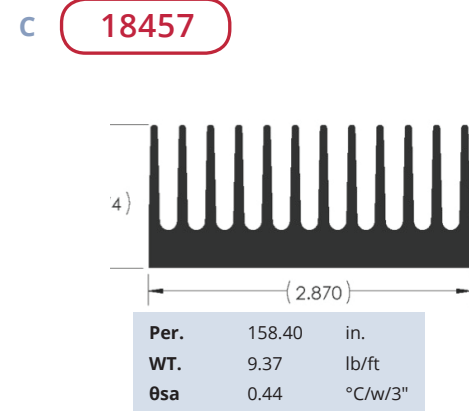
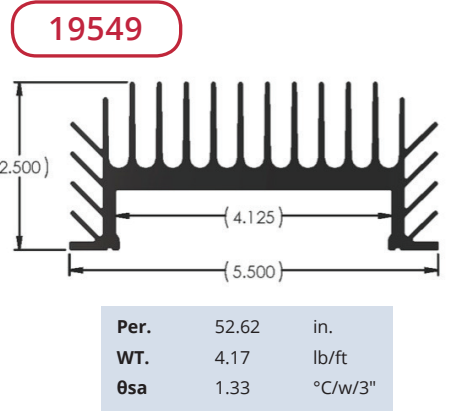
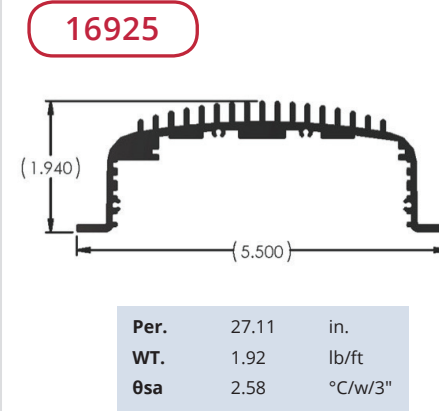
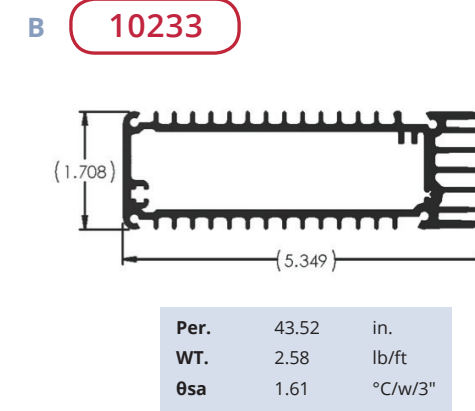
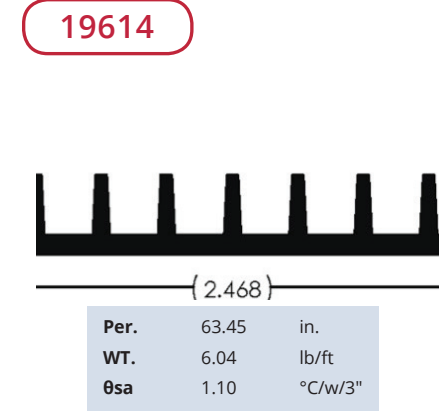
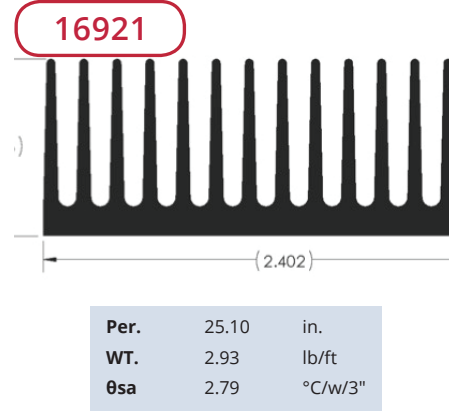
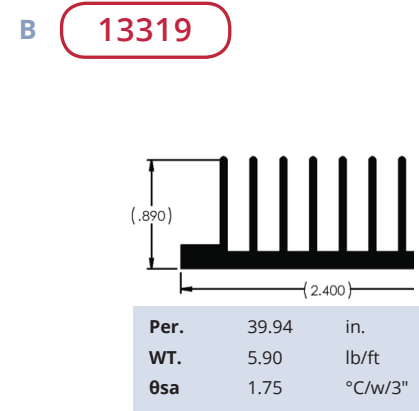
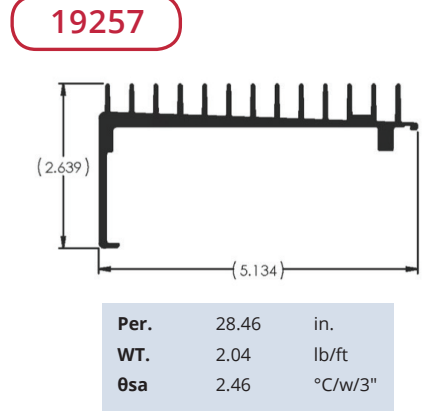
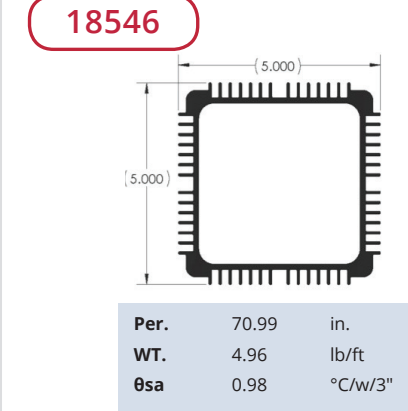
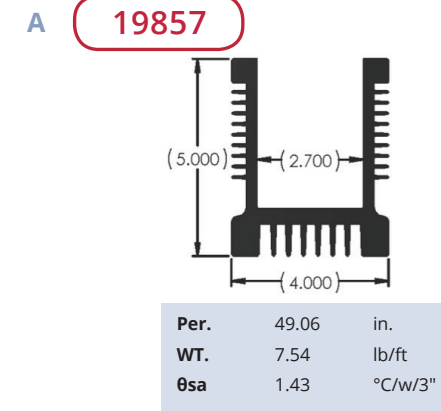
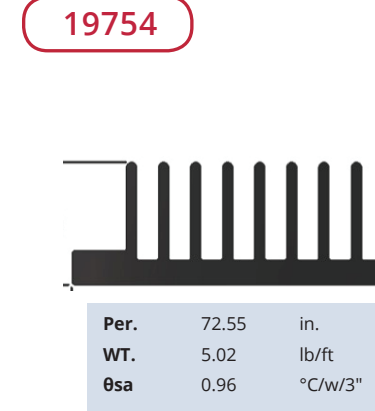
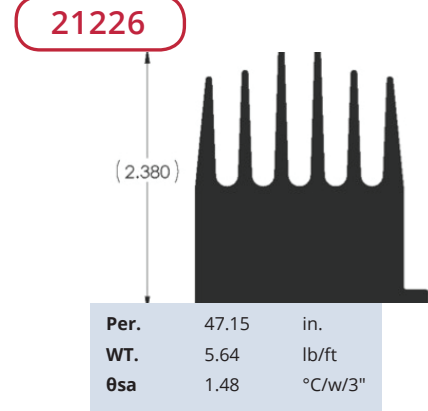
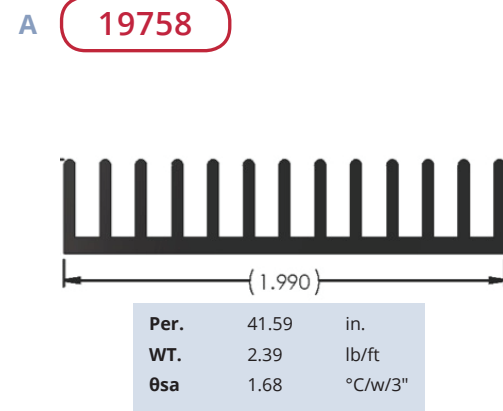


Per.	32.13	in.
WT.	1.35	lb/ft
θsa	2.18	°C/w/3"

19755



Per.	39.98	in.
WT.	1.97	lb/ft
θsa	1.75	°C/w/3"



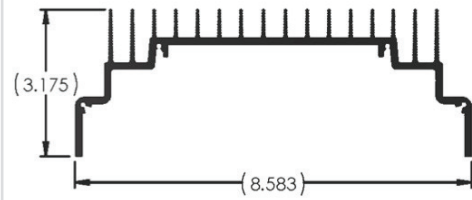


**A** 18395



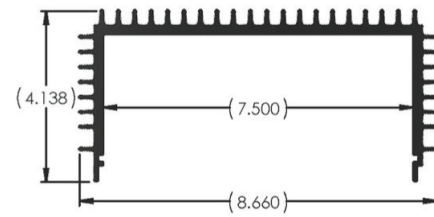
Per.	40.24	in.
WT.	2.94	lb/ft
θsa	1.74	°C/w/3"

16517



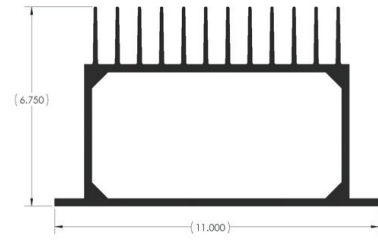
Per.	52.66	in.
WT.	3.22	lb/ft
θsa	1.33	°C/w/3"

19384



Per.	68.16	in.
WT.	5.89	lb/ft
θsa	1.03	°C/w/3"

**B** 17013



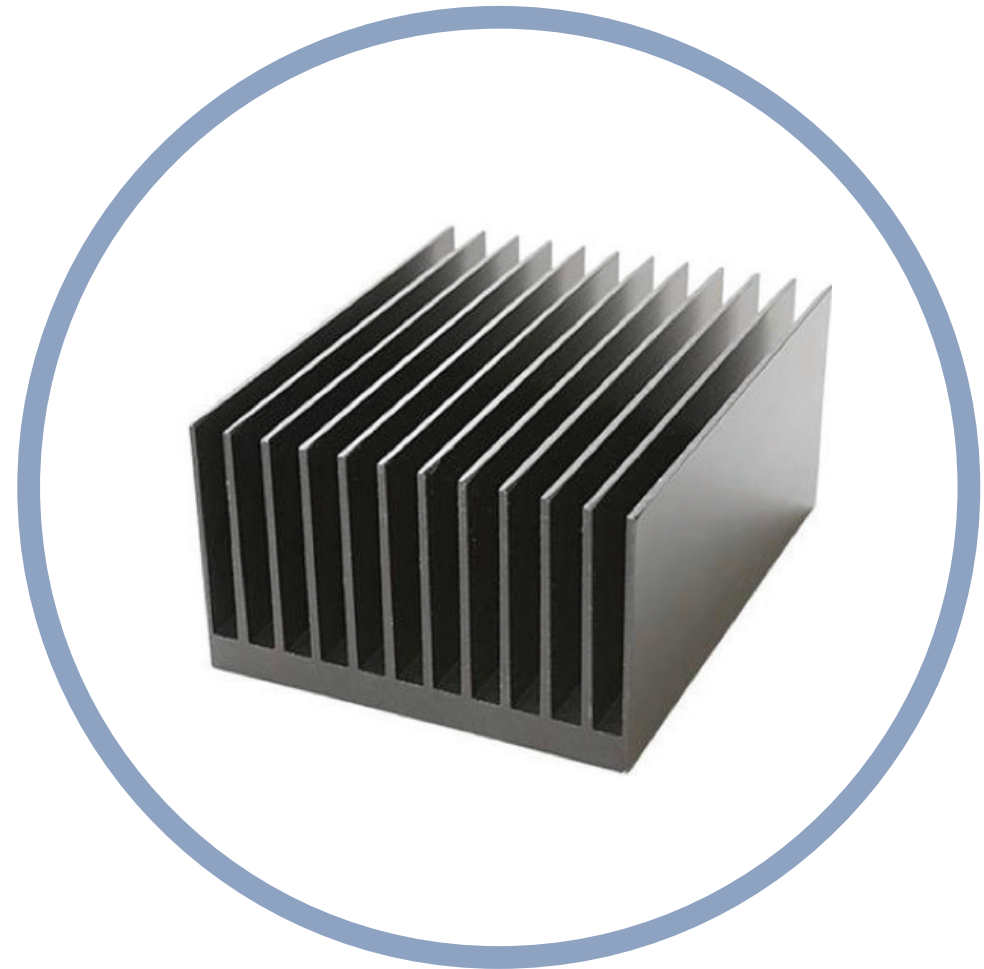
Per.	100.85	in.
WT.	12.75	lb/ft
θsa	0.69	°C/w/3"

# HIGH ASPECT RATIO THERMAL EXTRUSIONS

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*12 Inch High Aspect Ratio Thermal Extrusions* ..... 280-285

*High Aspect Ratio Thermal Extrusions* ..... 286



## 12 INCH HIGH ASPECT RATIO THERMAL EXTRUSIONS

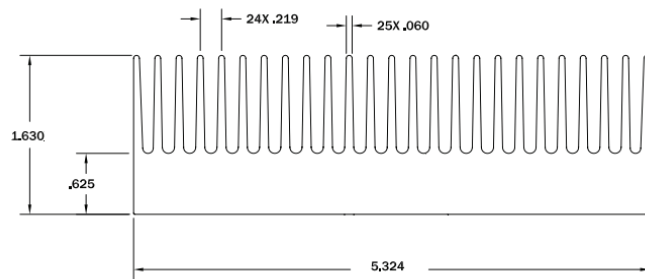


### PART NUMBER 122254

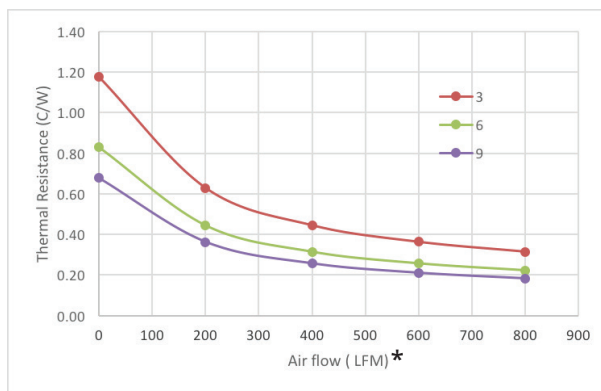
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 19671  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122254	19671 Profile Cut to 12 inches	12	5.324	1.63	0.625	0.096



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



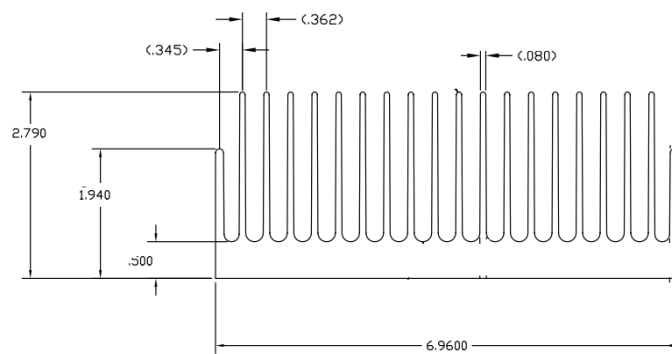
### PART NUMBER 122255



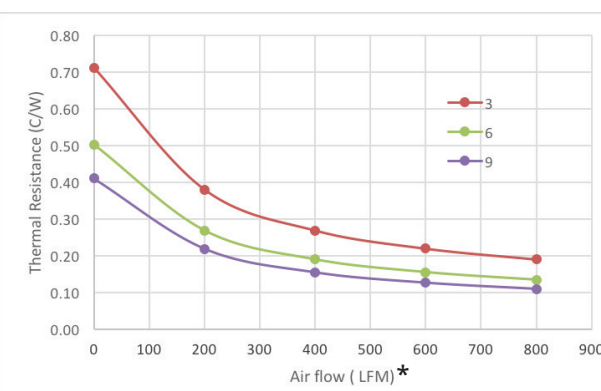
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 13694  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122255	13694 Profile Cut to 12 inches	12	6.96	2.79	.05	0.1



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



\*Thermal performance data is for reference only and may vary by application  
\*0 LFM represents a natural convection environment with a vertical heat sink  
\*All data is based on a fully distributed load on the base of the heat sink  
\*All forced convection data is based on an open duct configuration

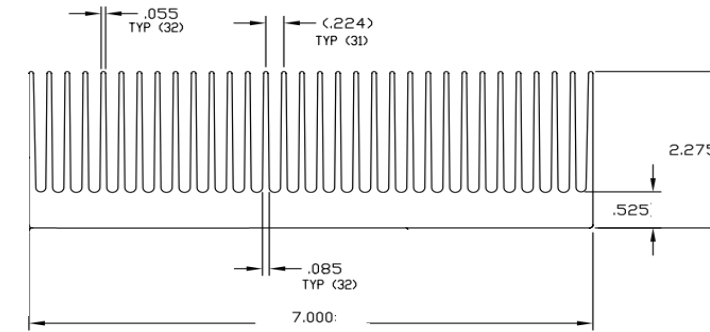
### PART NUMBER 122256



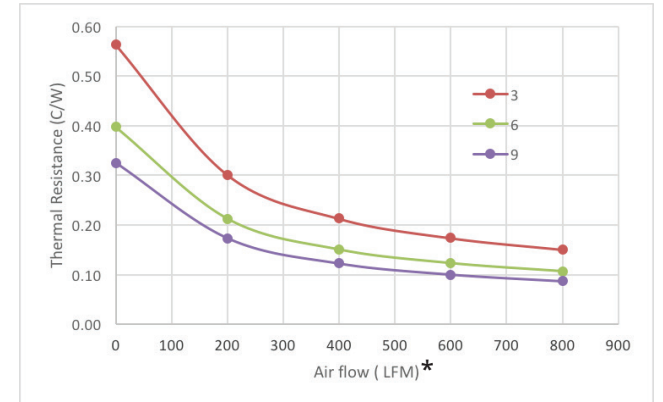
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 15837  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122256	15837 Profile Cut to 12 inches	12	7	2.275	0.525	0.085



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS

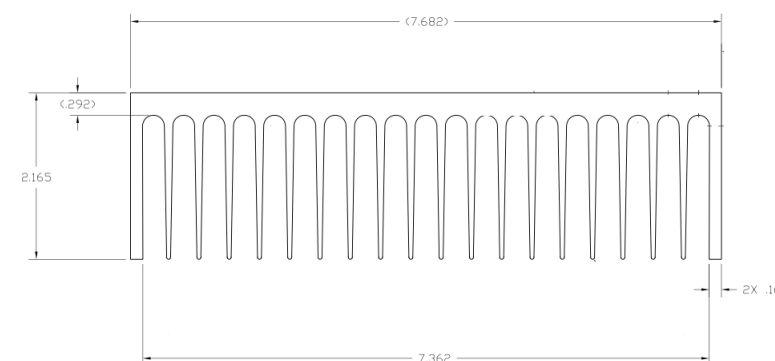


### PART NUMBER 122257

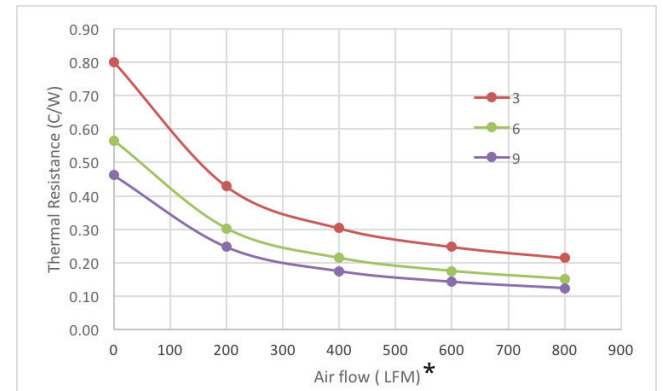
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 19275  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122257	19275 Profile Cut to 12 inches	12	7.362	2.165	0.292	0.051



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



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\*0 LFM represents a natural convection environment with a vertical heat sink  
\*All data is based on a fully distributed load on the base of the heat sink  
\*All forced convection data is based on an open duct configuration

## 12 INCH HIGH ASPECT RATIO THERMAL EXTRUSIONS

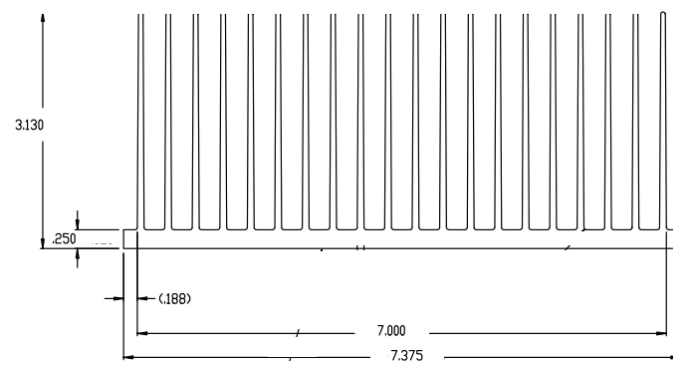


### PART NUMBER 122258

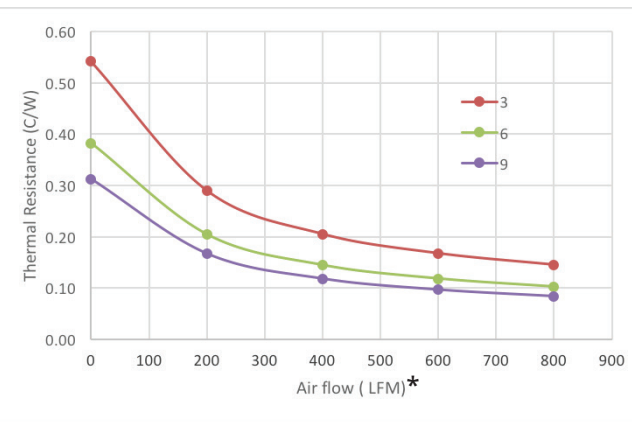
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 15817  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122258	15817 Profile Cut to 12 inches	12	7.375	3.13	0.25	0.09



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



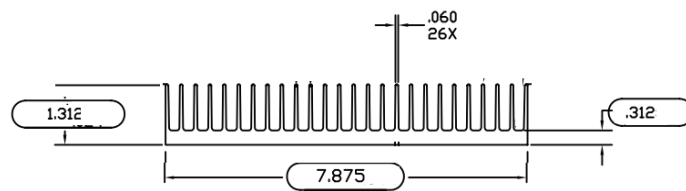
### PART NUMBER 122259



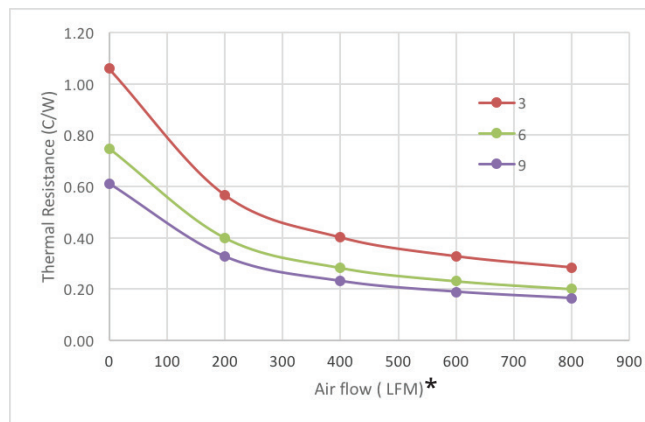
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 16639  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122259	16639 Profile Cut to 12 inches	12	7.875	1.312	0.312	0.08



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



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\*0 LFM represents a natural convection environment with a vertical heat sink  
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\*All forced convection data is based on an open duct configuration

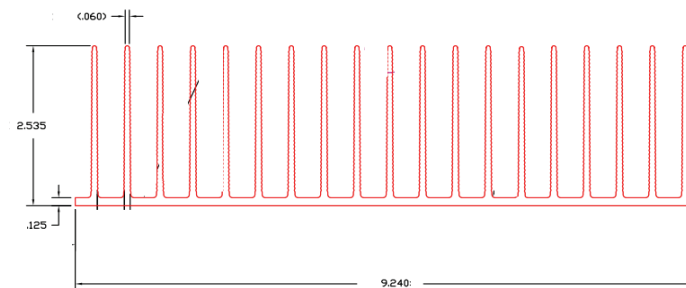
### PART NUMBER 122260



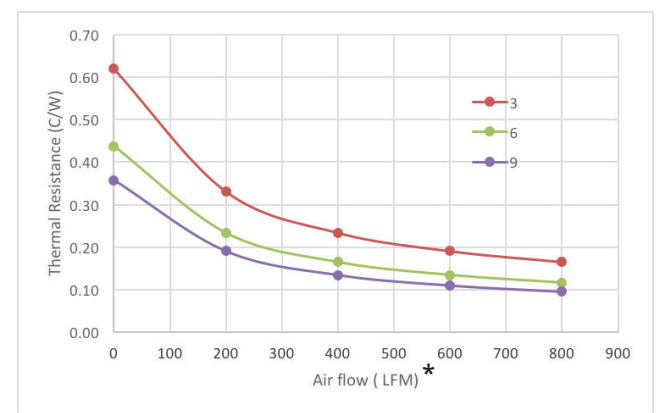
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 16639  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122260	16639 Profile Cut to 12 inches	12	9.24	2.66	0.125	0.085



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS

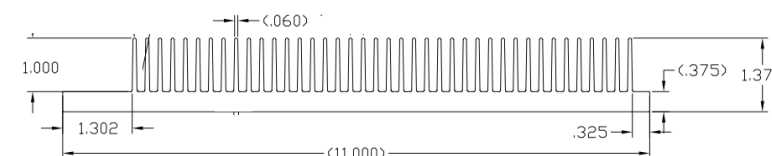


### PART NUMBER 122261

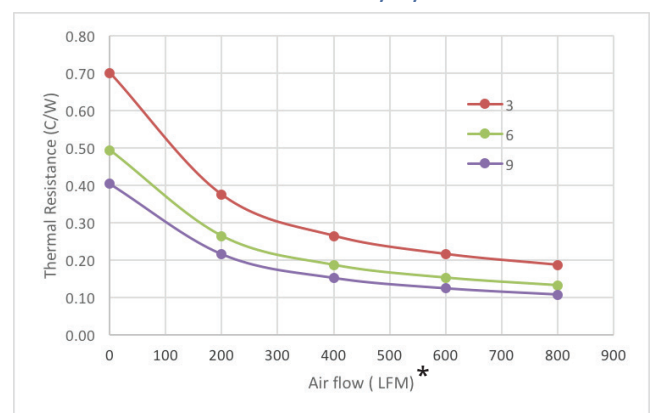
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 19584  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122261	19584 Profile Cut to 12 inches	12	11	1.375	0.375	0.09



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



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\*0 LFM represents a natural convection environment with a vertical heat sink  
\*All data is based on a fully distributed load on the base of the heat sink  
\*All forced convection data is based on an open duct configuration



## 12 INCH HIGH ASPECT RATIO THERMAL EXTRUSIONS

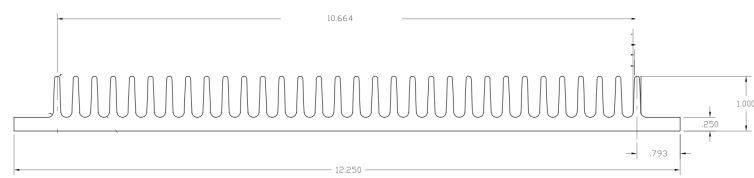


### PART NUMBER 122262

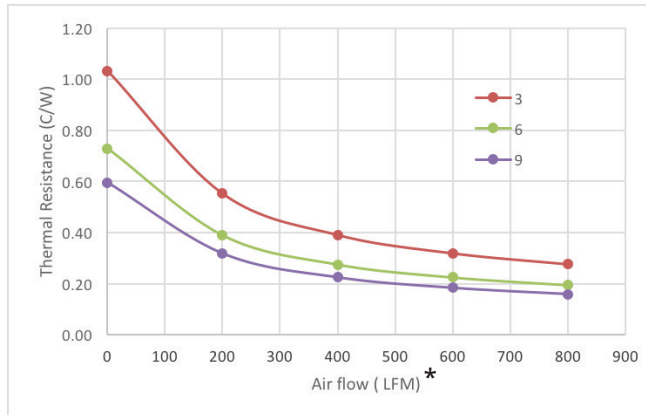
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 19152  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122262	19152 Profile Cut to 12 inches	12	12.25	1	0.25	0.146



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



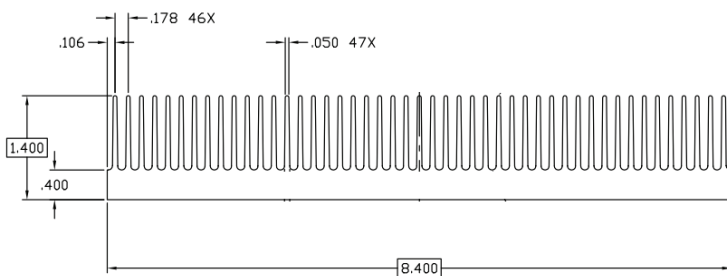
### PART NUMBER 122263



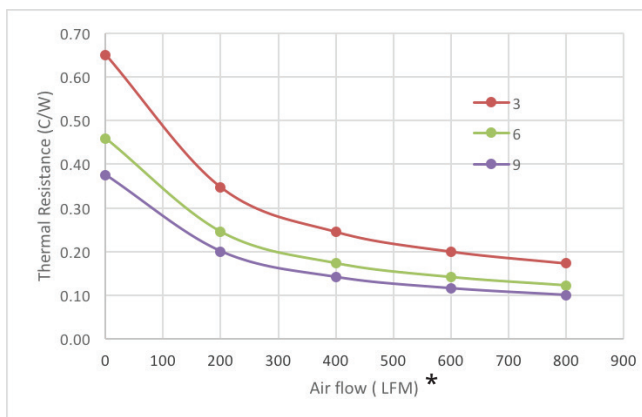
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 16681  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122263	16681 Profile Cut to 12 inches	12	8.4	1.4	0.4	0.5



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



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\*All data is based on a fully distributed load on the base of the heat sink  
\*All forced convection data is based on an open duct configuration

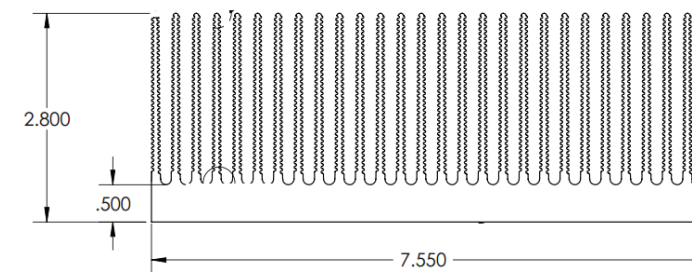
### PART NUMBER 122264



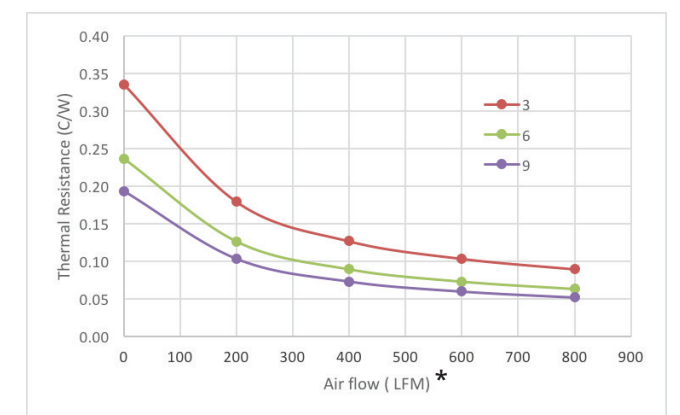
**Material:** 6063 Aluminum

**Description:** 12 Inch Cut Length of Extrusion Profile 19832  
Cut, Deburred, Washed  
No Finish

Part Number	Description	Length	Inches			
			Width	Height	Avg Base Thk	Avg Fin Thk
122264	19832 Profile Cut to 12 inches	12	7.55	2.8	0.5	0.57



THERMAL RESISTANCE FOR 3", 6", 9" CUT LENGTHS



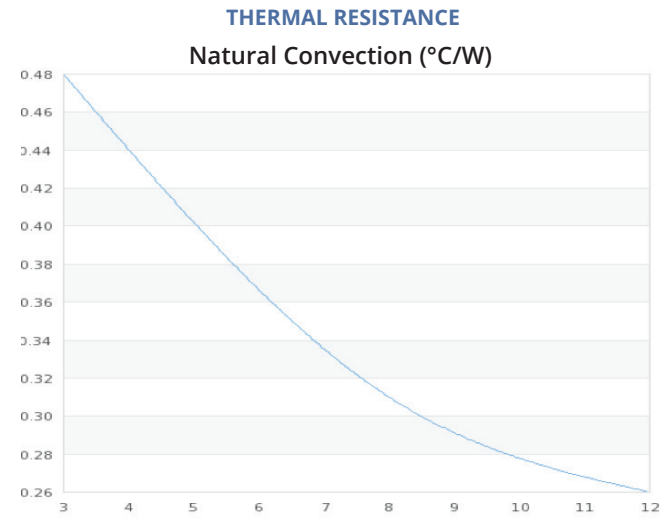
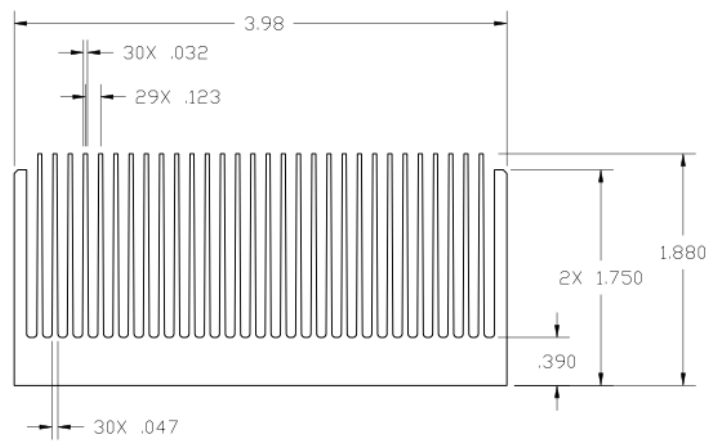
\*Thermal performance data is for reference only and may vary by application  
\*0 LFM represents a natural convection environment with a vertical heat sink  
\*All data is based on a fully distributed load on the base of the heat sink  
\*All forced convection data is based on an open duct configuration

## HIGH ASPECT RATIO THERMAL EXTRUSIONS



**PART NUMBER 122547**

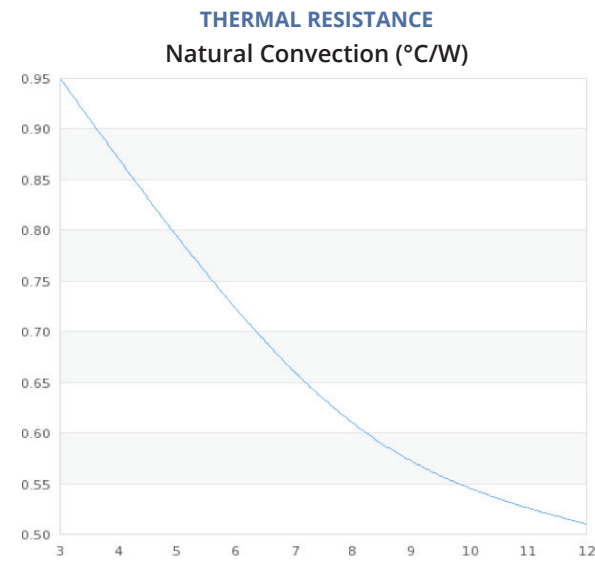
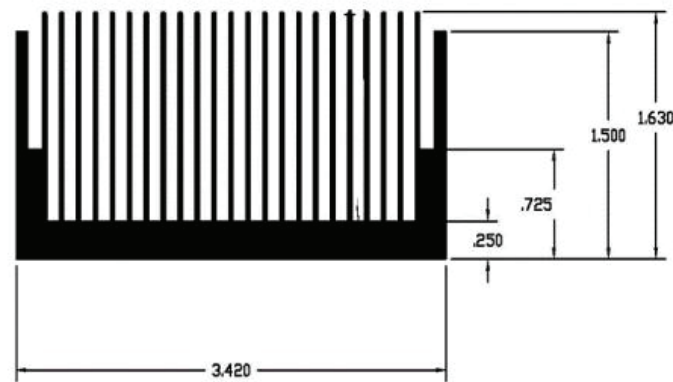
Part Number	Description	Inches						Perimeter	Weight Per Piece	Natural Convection (3 in.)
		Length	Width	Height	Avg Base Thk	Avg Fin Thk				
122547	High Aspect Heat Sink for Power Module	15.25	3.98	1.88	0.39	0.123	145	5.5	0.48	



**PART NUMBER 122551**



Part Number	Description	Inches						Perimeter	Weight Per Piece	Natural Convection (3 in.)
		Length	Width	Height	Avg Base Thk	Avg Fin Thk				
122551	High Aspect Heat Sink for Power Module	12.32	3.42	1.63	0.25	0.031	73.61	2.61	0.95	

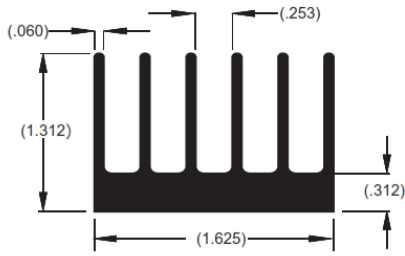


\*Thermal performance data is for reference only and may vary by application  
 \*0 LFM represents a natural convection environment with a vertical heat sink  
 \*All data is based on a fully distributed load on the base of the heat sink  
 \*All forced convection data is based on an open duct configuration

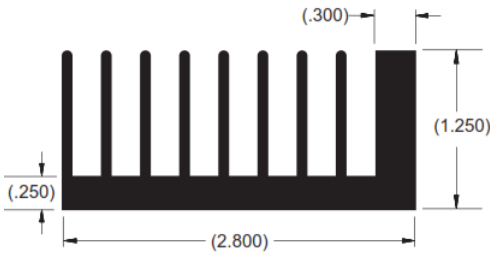
# Thermal Extrusions Cut to Length

## Aluminum Flatback

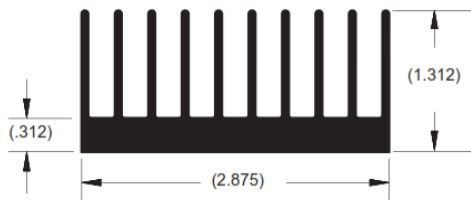
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



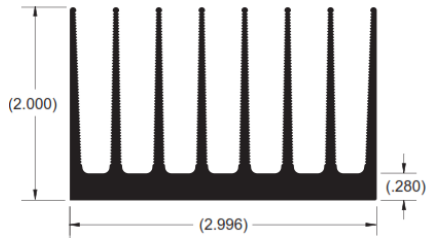
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125295	1.625" Wide x 12" Flatback heatsink 16079 xx2014	1.625	1.312	12	3.2
125296	1.625" Wide x 36" Flatback heatsink 16079 xx2014	1.625	1.312	36	3.2



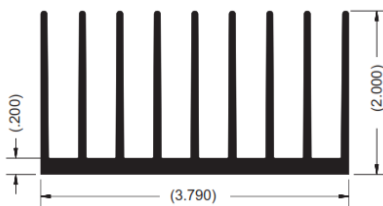
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125301	2.80" Wide x 12" Flatback Heatsink 11201 XX6998	2.8	1.25	12	2.9
125302	2.80" Wide x 36" Flatback Heatsink 11201 XX6998	2.8	1.25	36	2.9



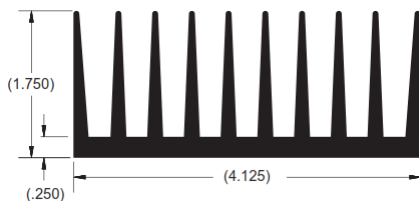
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125313	2.875" Wide x 12" Flatback heatsink 16078 xx2013	2.875	1.312	12	2.3
125314	2.875" Wide x 36" Flatback heatsink 16078 xx2013	2.875	1.312	36	2.3



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125319	3" Wide x 12" Flatback Heatsink 9099	3	2	12	1.5
125320	3" Wide x 36" Flatback Heatsink 9099	3	2	36	1.5



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125325	3.79" Wide x 12" Flatback heatsink 16304 xx5079	3.79	2	12	1.5
125326	3.79" Wide x 36" Flatback heatsink 16304 xx5079	3.79	2	36	1.5

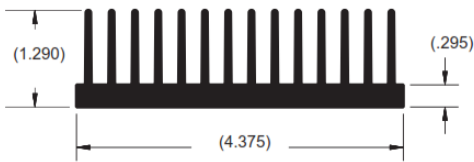


WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125367	4.125" x 12" Flatback Heatsink 2656 xx5138	4.125	1.75	12	1.9
125368	4.125" x 36" Flatback Heatsink 2656 xx5138	4.125	1.75	36	1.9

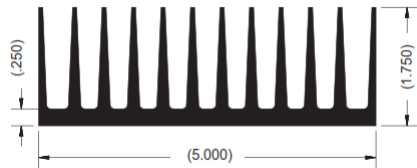
# Thermal Extrusions Cut to Length

## Aluminum Flatback

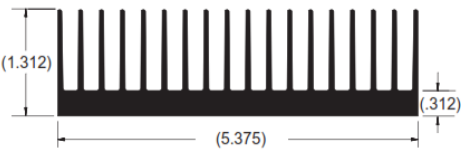
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



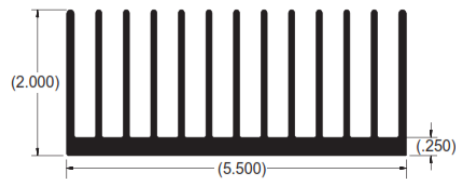
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125373	4.375" Wide x 12" Flatback heatsink 16296 xx1527	4.375	1.29	12	1.4
125374	4.375" Wide x 36" Flatback heatsink 16296 xx1527	4.375	1.29	36	1.4



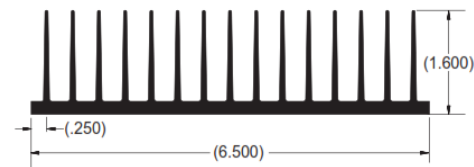
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125397	5.00" Wide x 12" Flatback Heatsink 16338 xx2065	5	1.75	12	1.6
125398	5.00" Wide x 36" Flatback Heatsink 16338 xx2065	5	1.75	36	1.6



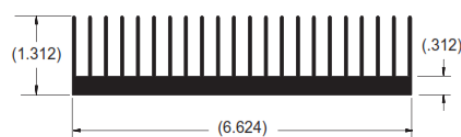
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125403	5.375" x 12" Flatback Heatsink 6037 xx5045	5.375	1.312	12	1.8
125404	5.375" x 36" Flatback Heatsink 6037 xx5045	5.375	1.312	36	1.8



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125409	5.50" x 12" Flatback Heatsink 13760 xx2199	5.5	2	12	1.2
125410	5.50" x 36" Flatback Heatsink 13760 xx2199	5.5	2	36	1.2



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125415	6.50" x 12" Flatback Heatsink 6664 xx4509	6.5	1.6	12	1.3
125416	6.50" x 36" Flatback Heatsink 6664 xx4509	6.5	1.6	36	1.3

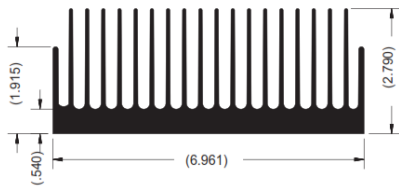


WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125421	6.624" Wide x 12" Flatback heatsink 16524 xx7031	6.624	1.312	12	1.3
125422	6.624" Wide x 36" Flatback heatsink 16524 xx7031	6.624	1.312	36	1.3

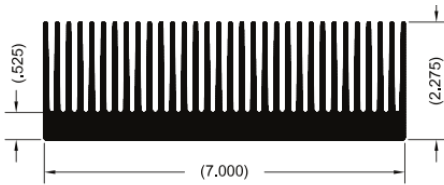
# Thermal Extrusions Cut to Length

## Aluminum Flatback

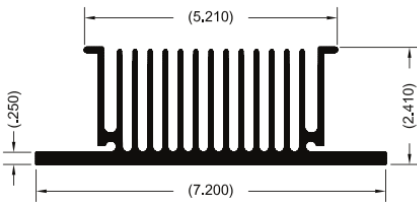
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



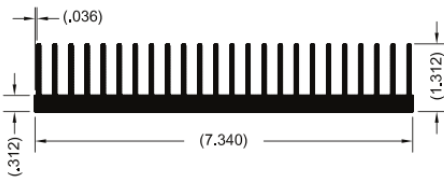
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122255	6.961" Wide x 12" Flatback Heatsink 13694 xx6274	6.961	2.79	12	0.8
125643	6.961" Wide x 36" Flatback Heatsink 13694 xx6274	6.961	2.79	36	0.8



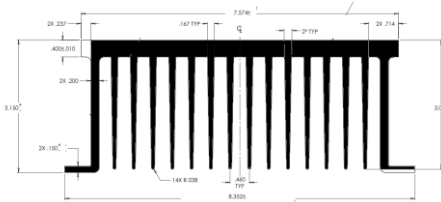
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122256	7.00" Wide x 12" Flatback heatsink 15837	7	2.275	12	0.3
125645	7.00" Wide x 36" Flatback heatsink 15837	7	2.275	36	0.3



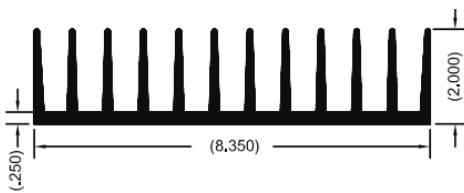
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125512	7.20" Wide x 36" Flatback heatsink 16316 xx6438-2	7.2	2.41	36	0.9



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125430	7.343" Wide x 12" Flatback Heatsink 13454 xx4771	7.343	1.312	12	1.1
125431	7.343" Wide x 36" Flatback Heatsink 13454 xx4771	7.343	1.312	36	1.1



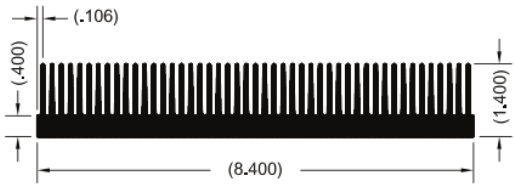
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125601	7.574" Wide x 12" Flatback Heatsink 21910	7.574	3.15	12	0.65
125602	7.574" Wide x 36" Flatback Heatsink 21910	7.574	3.15	36	0.65



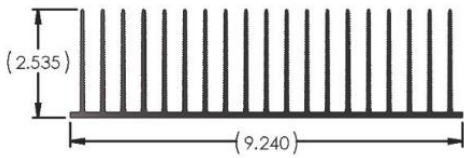
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125436	8.35" Wide x 12" Flatback Heatsink 13668 xx4937	8.35	2	12	0.9
125437	8.35" Wide x 36" Flatback Heatsink 13668 xx4937	8.35	2	36	0.9

## Aluminum Flatback

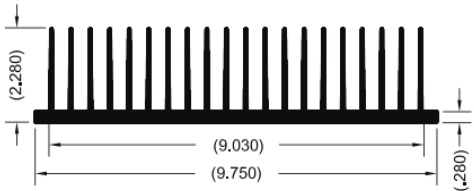
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



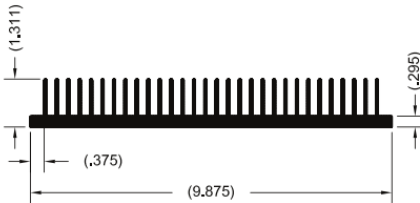
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122263	8.40" Wide x 12" Flatback heatsink 16681	8.4	1.4	12	0.65
125657	8.40" Wide x 36" Flatback heatsink 16681	8.4	1.4	36	0.65



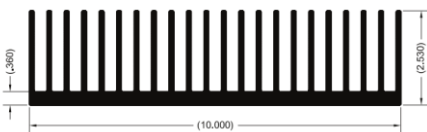
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122260	9.24" Wide x 12" Flatback Heatsink 19035	9.24	2.535	12	0.62
125651	9.24" Wide x 36" Flatback Heatsink 19035	9.24	2.535	36	0.62



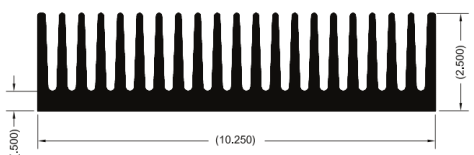
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125520	9.75" Wide x 12" Flatback heatsink 16473 xx5384	9.75	2.28	12	0.75
125521	9.75" Wide x 36" Flatback heatsink 16473 xx5384	9.75	2.28	36	0.75



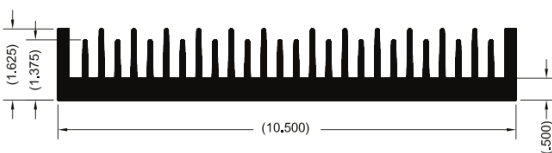
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125442	9.875" Wide x 12" Flatback heatsink 16329 xx1703	9.875	1.31	12	0.91
125443	9.875" Wide x 36" Flatback heatsink 16329 xx1703	9.875	1.31	36	0.91



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125592	10" Wide x 12" Flatback heatsink 13953 sf1002	10	2.53	12	0.6



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125448	10.25" Wide x 12" Flatback heatsink 14236 xx5772	10.25	2.5	12	0.71
125449	10.25" Wide x 36" Flatback heatsink 14236 xx5772	10.25	2.5	36	0.71

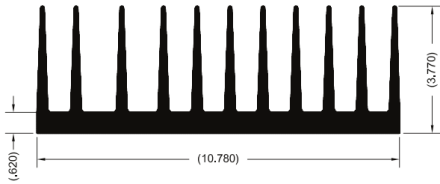


WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125454	10.50" Wide x 12" Flatback Heatsink 16990 xx2904	10.5	1.265	12	1.3
125455	10.50" Wide x 36" Flatback Heatsink 16990 xx2904	10.5	1.265	36	1.3

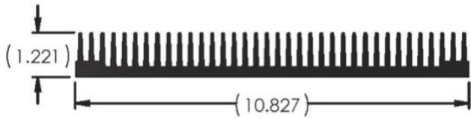
# Thermal Extrusions Cut to Length

## Aluminum Flatback

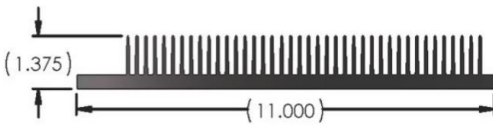
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



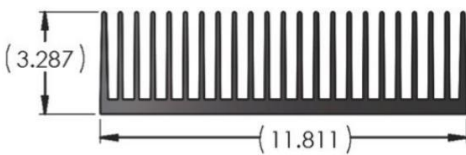
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125460	10.78" Wide x 12" Flatback Heatsink xx4559	10.78	3.77	12	0.5
125461	10.78" Wide x 36" Flatback Heatsink xx4559	10.78	3.77	36	0.5



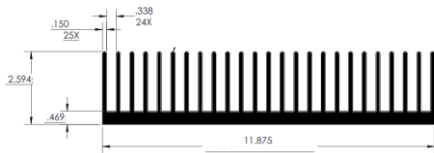
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125577	10.827" Wide x 12" Flatback Heatsink 19572	10.827	1.221	12	0.83
125578	10.827" Wide x 36" Flatback Heatsink 19572	10.827	1.221	36	0.83



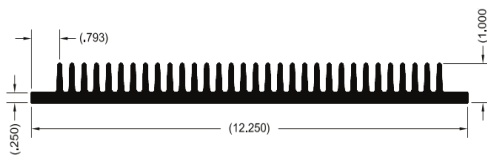
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122261	11.00" Wide x 12" Flatback Heatsink 19584	11	1.375	12	1.43
125653	11.00" Wide x 36" Flatback Heatsink 19584	11	1.375	36	1.43



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125625	11.811" Wide x 12" Flatback Heatsink 19740	11.811	3.287	12	0.46
125626	11.811" Wide x 36" Flatback Heatsink 19740	11.811	3.287	36	0.46



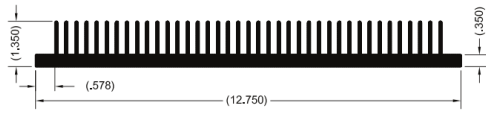
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125619	11.875" Wide x 12" Flatback Heatsink 17099	11.875	2.594	12	0.4
125620	11.875" Wide x 36" Flatback Heatsink 17099	11.875	2.594	36	0.4



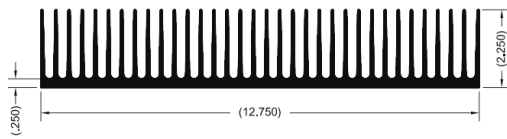
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122262	12.25" Wide x 12" Flatback Heatsink 19152 xx4471	12.25	1	12	1.3
125655	12.25" Wide x 36" Flatback Heatsink 19152 xx4471	12.25	1	36	1.3

## Aluminum Flatback

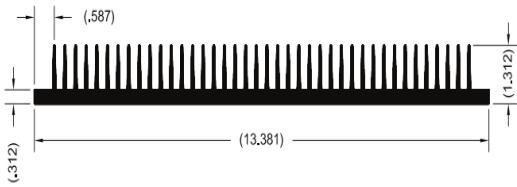
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



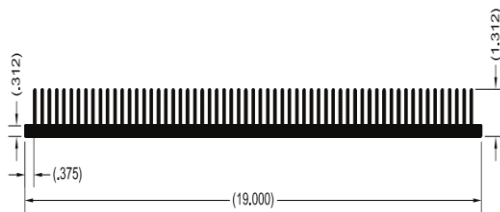
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125631	12.75" Wide x 12" Flatback Heatsink xx2170	12.75	1.35	12	0.6
125632	12.75" Wide x 36" Flatback Heatsink xx2170	12.75	1.35	36	0.6



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125469	12.75" Wide x 12" Flatback Heatsink xx2044	12.75	2.25	12	0.56
125470	12.75" Wide x 36" Flatback Heatsink xx2044	12.75	2.25	36	0.56



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125475	13.381" Wide x 12" Flatback Heatsink xx5429	13.381	1.312	12	0.65
125476	13.381" Wide x 36" Flatback Heatsink xx5429	13.381	1.312	36	0.65



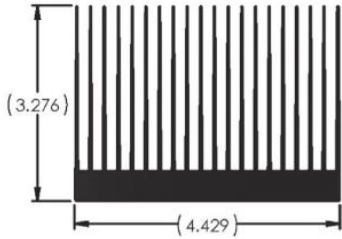
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125481	19.00" Wide x 36" Flatback Heatsink xx2016	19	1.32	12	0.65
125482	19.00" Wide x 36" Flatback Heatsink xx2016	19	1.32	36	0.65



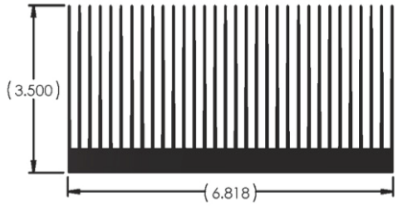
# Thermal Extrusions Cut to Length

## High Aspect

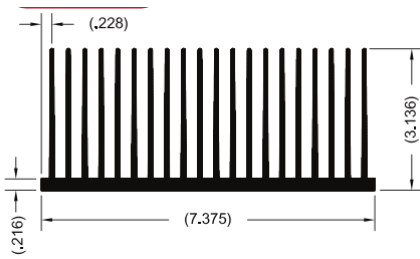
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



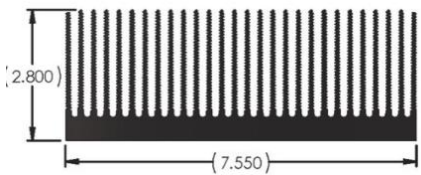
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125562	4.429" Wide x 11.81" High Aspect Heatsink 17080-11.81	4.429	3.276	11.81	0.59



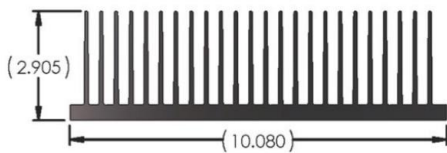
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125565	6.818" Wide x 11.81" High Aspect Heatsink 19333-12	4.429	3.5	12	0.34



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122258	7.375" Wide x 12" High Aspect Extrusion 15817 xx5113	7.375	3.136	12	0.68
125649	7.375" Wide x 36" High Aspect Extrusion 15817 xx5113	7.375	3.136	36	0.68



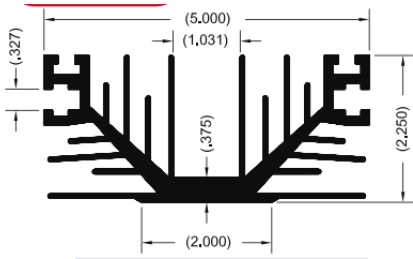
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
122264	7.55" Wide x 12" High Aspect Extrusion 19832	7.55	2.8	12	0.34
125659	7.55" Wide x 36" High Aspect Extrusion 19832	7.55	2.8	36	0.34



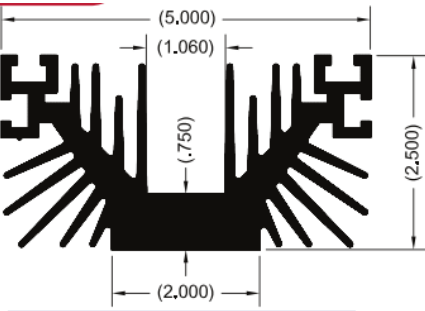
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125571	10.08" Wide x 12" High Aspect Extrusion 21052	10.08	2.905	12	0.51
125572	10.08" Wide x 36" High Aspect Extrusion 21052	10.08	2.905	36	0.51

## SCR Press Pack Extrusions

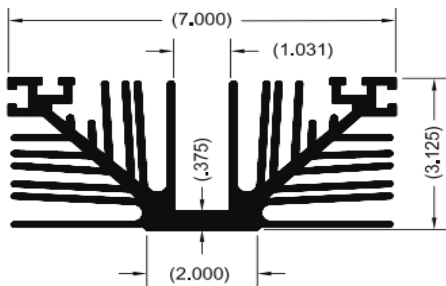
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



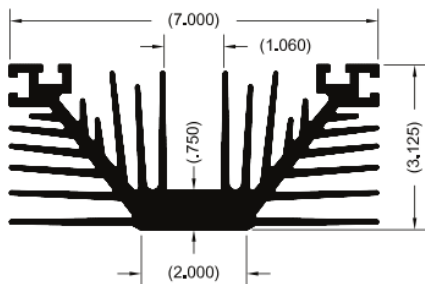
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125526	5.00" Wide x 12" Presspack SCR Extrusion 16082 xx3560-2	5	2.25	12	1.4
125527	5.00" Wide x 36" Presspack SCR Extrusion 16082 xx3560-2	5	2.25	36	1.4



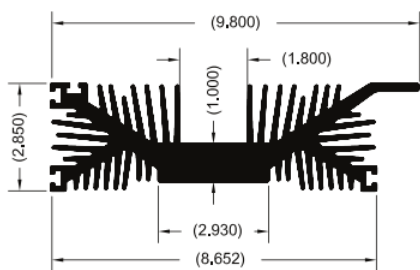
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125532	5.00" Wide x 12" Presspack SCR Extrusion 16565 xx5732	5	2.5	12	1.39
125533	5.00" Wide x 12" Presspack SCR Extrusion 16565 xx5732	5	2.5	36	1.39



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125538	7.00" Wide x 12" Presspack SCR Extrusion 16348 xx3559-2	7	3.125	12	0.85
125539	7.00" Wide x 36" Presspack SCR Extrusion 16348 xx3559-2	7	3.125	36	0.85



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125544	7.00" Wide x 12" Presspack SCR Extrusion 16235 xx5733	7	3.125	12	0.88
125545	7.00" Wide x 36" Presspack SCR Extrusion 16235 xx5733	7	3.125	36	0.88

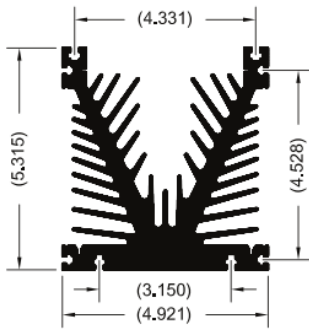


WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125550	9.80" Wide x 12" Presspack SCR Extrusion xx5735	9.8	2.85	12	0.71
125551	9.80" Wide x 36" Presspack SCR Extrusion xx5735	9.8	2.85	36	0.71

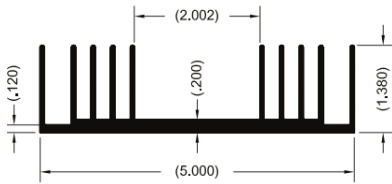
# Thermal Extrusions Cut to Length

## Power Modules

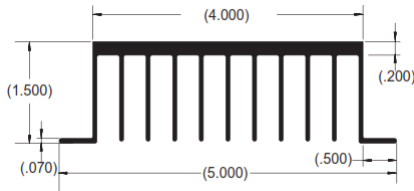
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



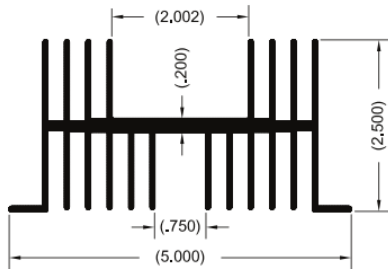
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125556	4.921" Wide x 12" Power Module Extrusion 13698 xx5658	4.921	4.528	12	0.8
125557	4.921" Wide x 36" Power Module Extrusion 13698 xx5658	4.921	4.528	36	0.8



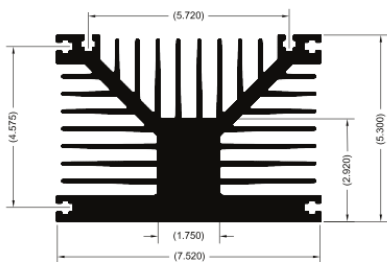
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125391	5.00" Wide x 12" Power Module Extrusion 19589 xx7331	5	1.38	12	3
125392	5.00" Wide x 36" Power Module Extrusion 19589 xx7331	5	1.38	36	3



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125379	5.00" Wide x 12" Power Module Extrusion 16414 xx7332	5	1.5	12	2.5
125380	5.00" Wide x 36" Power Module Extrusion 16414 xx7332	5	1.5	36	2.5



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125385	5.00" Wide x 12" Power Module Extrusion 16936 xx7330	5	2.5	12	1.7
125386	5.00" Wide x 36" Power Module Extrusion 16936 xx7330	5	2.5	36	1.7

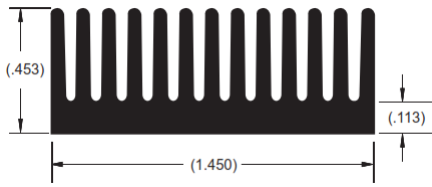


WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125613	7.52" Wide x 12" Power Module Extrusion 17003	7.52	5.3	12	0.65
125614	7.52" Wide x 36" Power Module Extrusion 17003	7.52	5.3	36	0.65

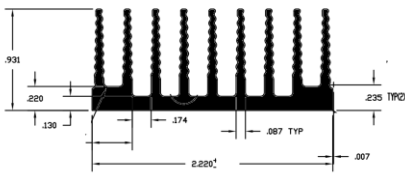
# Thermal Extrusions Cut to Length

## DC/DC Heat Sink

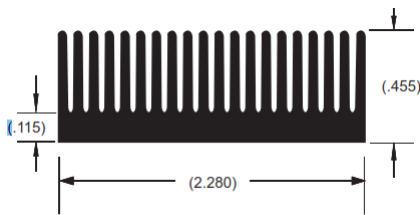
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



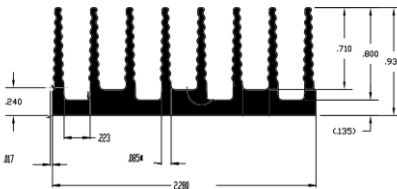
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125361	1.45" Wide x 12" DC/DC Heatsink Extrusion 14363	1.45	0.768	12	4.2
125362	1.45" Wide x 36" DC/DC Heatsink Extrusion 14363	1.45	0.768	36	4.2



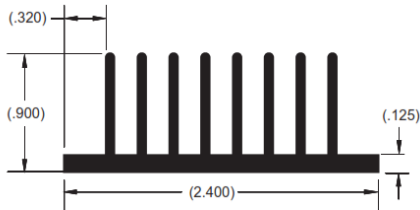
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125343	2.22" Wide x 12" DC/DC Heatsink Extrusion 14192	2.22	2.53	12	0.6
125344	2.22" Wide x 36" DC/DC Heatsink Extrusion 14192	2.22	2.53	36	0.6



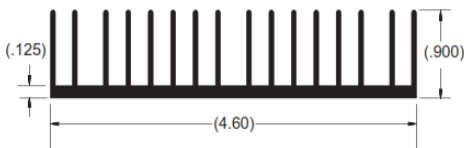
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125355	2.28" Wide x 12" DC/DC Heatsink Extrusion 14362	2.28	0.455	12	4
125356	2.28" Wide x 36" DC/DC Heatsink Extrusion 14362	2.28	0.455	36	4



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125349	2.28" Wide x 12" DC/DC Heatsink Extrusion 14228	2.28	9.35	12	0.28
125350	2.28" Wide x 36" DC/DC Heatsink Extrusion 14228	2.28	9.35	36	0.28



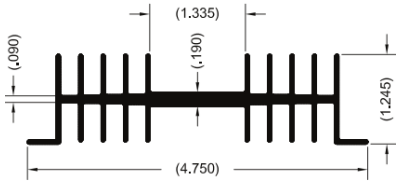
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125331	2.40" Wide x 12" DC/DC Heatsink Extrusion 12613	2.4	0.9	12	4.1
125332	2.40" Wide x 36" DC/DC Heatsink Extrusion 12613	2.4	0.9	36	4.1



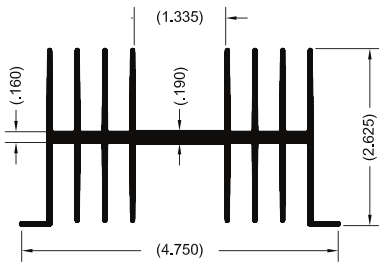
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125337	4.60" Wide x 12" DC/DC Heatsink Extrusion 12614	4.6	0.9	12	2.1
125338	4.60" Wide x 36" DC/DC Heatsink Extrusion 12614	4.6	0.9	36	2.1

## H Style/Mounting Shelf Heat Sinks

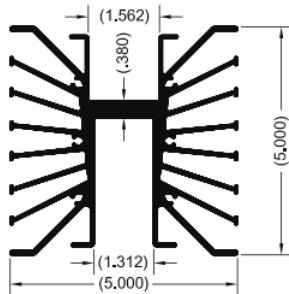
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



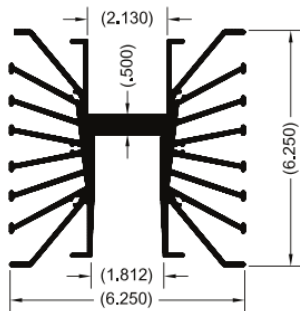
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125487	4.75" x 12" H Style Heatsink 4530 xx1024	4.75	1.245	12	2
125488	4.75" x 36" H Style Heatsink 4530 XX1024	4.75	1.245	36	2



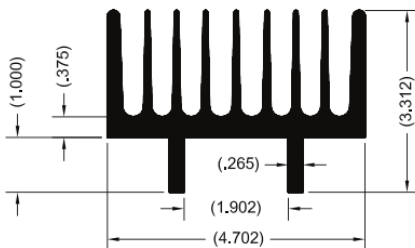
WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125493	4.75" x 12" H Style Heatsink 5410 xx1025	4.75	2.625	12	1.3
125494	4.75" x 36" H Style Heatsink 5410 xx1025	4.75	2.625	36	1.3



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125499	5.00" x 12" H Style Heatsink 6542 xx1245	5	5	12	0.72
125500	5.00" x 36" H Style Heatsink 6542 xx1245	5	5	36	0.72



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125505	6.25" Wide x 12" H Style Heatsink 16971 xx1541	6.25	6.25	12	0.59
125506	6.25" Wide x 36" H Style Heatsink 16971 xx1541	6.25	6.25	36	0.59

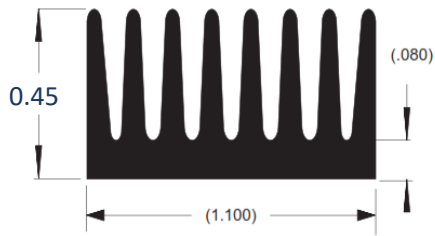


WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125637	4.702" Wide x 12" Mounting Shelf Extrusion 14264	4.702	3.312	12	1.8
125638	4.702" Wide x 12" Mounting Shelf Extrusion 14264	4.702	3.312	36	1.8

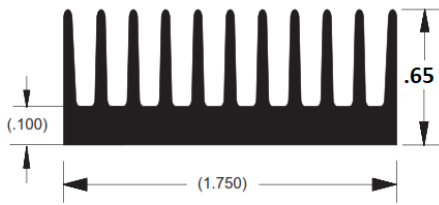
# Thermal Extrusions Cut to Length

## BGA Style Heat Sinks

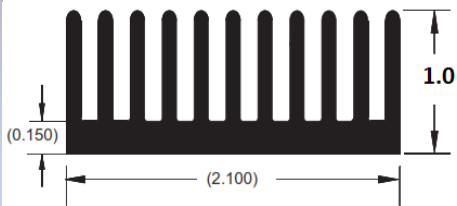
- Dimensions: Inches
- Thermal Resistance based on 3 Inch Length in Natural Convection Setting



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125283	1.10" Wide x 12" BGA Heatsink Extrusion 16240 xx8052-45	1.1	0.45	12	8
125284	1.10" Wide x 36" BGA Heatsink Extrusion 16240 xx8052-45	1.1	0.45	36	8



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125289	1.75" Wide x 12" BGA Heatsink Extrusion 16249 XX8260-65	1.75	0.65	12	7.8
125290	1.75" Wide x 36" BGA Heatsink Extrusion 16249 XX8260-65	1.75	0.65	36	7.8



WKV Part Number	Description	Width	Height	Length	Thermal Resistance °C/w/3"
125307	2.10" Wide x 12" BGA Heatsink Extrusion 12554 xx8355-100	2.1	1	12	3.8
125308	2.10" Wide x 36" BGA Heatsink Extrusion 12554 xx8355-100	2.1	1	36	3.8

# EXTRUDED SERIES HEAT SINKS

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*Extruded Heat Sinks For Power Semiconductors* ..... 88-92

*Performance, Low Profile Heat Sinks For  
Power Modules & IGBT's* ..... 93

*Extruded Heat Sinks For DC/DC Converters* ..... 94-96

*Mounting Hardware For Extruded Heat Sinks* ..... 95



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*For cooling single and multiple high power devices packaged in industry standard semiconductor case styles: TO-3 to TO-247, DO-4 to DO-30, hex-type, and stud mount; press pack devices; power modules; SCRs, IGBTs; I/O devices; and other isolated flat base devices in both natural and forced convection.*

## EXTRUDED HEAT SINKS FOR POWER SEMICONDUCTORS

### 621 & 623 SERIES

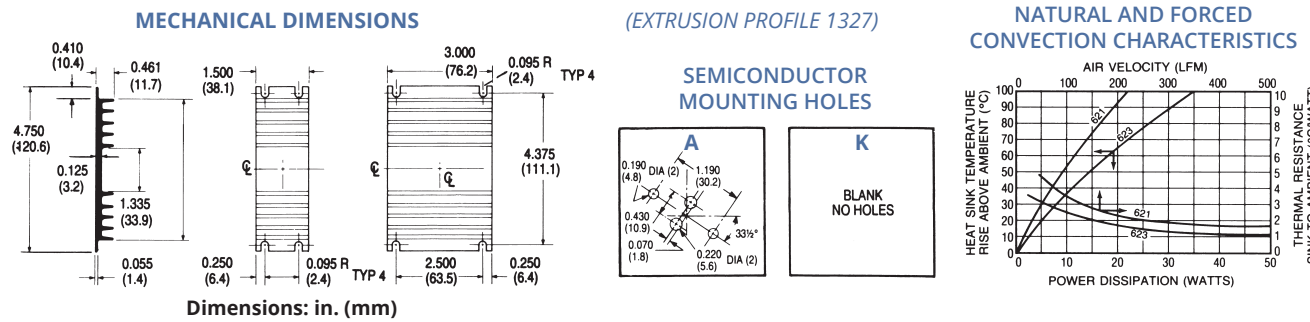
LOW-PROFILE HEAT SINKS FOR ALL METAL-CASE POWER SEMICONDUCTORS

TO-3

A general purpose yet efficient heat dissipator for TO-3 and virtually all other styles of metal case power semiconductor package types, the **621 and 623 Series** low-profile flat back heat sinks find a wide variety of applications. The central channel between fins measures 1.300 in. (33.0) (min.) in width, accommodating many types of packages. Mounting hole pattern "A" is pre-drilled for the standard TO-3 package.

Standard P/N	Footprint Dimensions in. (mm)	Height in. (mm)	Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
				Natural Convection	Forced Convection	
621A	4.750 (120.6) x 1.500 (38.1)	0.461 (11.7)	(1) TO-3	75°C @ 15W	2.0°C/W @ 250 LFM	0.1000 (45.36)
621K	4.750 (120.6) x 1.500 (38.1)	0.461 (11.7)	None	75°C @ 15W	2.0°C/W @ 250 LFM	0.1000 (45.36)
623A	4.750 (120.6) x 3.000 (76.2)	0.461 (11.7)	(1) TO-3	52°C @ 15W	1.5°C/W @ 250 LFM	0.2100 (95.26)
623K	4.750 (120.6) x 3.000 (76.2)	0.461 (11.7)	None	52°C @ 15W	1.5°C/W @ 250 LFM	0.2100 (95.26)

Material: Aluminum Alloy, Black Anodized.

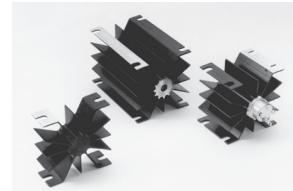


### COMPACT HEAT SINKS FOR DUAL STUD-MOUNTED SEMICONDUCTOR CASES

### 301, 302, & 303 SERIES

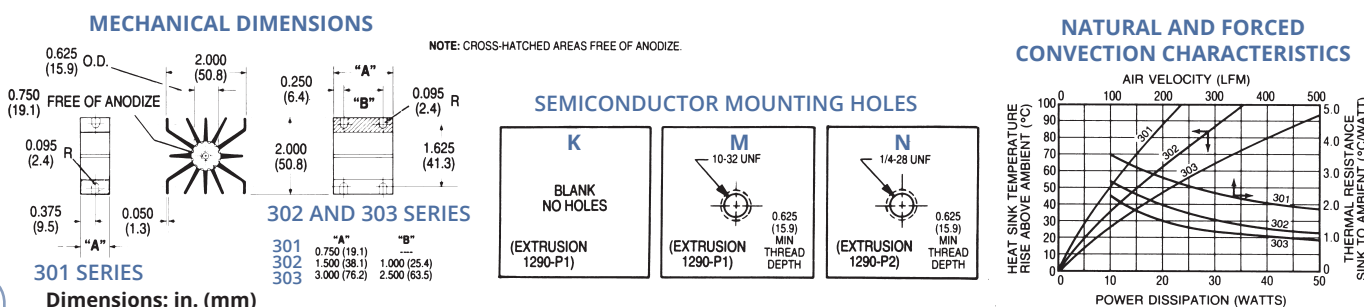
Stud-Mount

The large fin area in minimum total volume provided by the radial design of the **301/302/303 Series** offers maximum heat transfer efficiency in natural convection. All types are available with one tapped mounting hole for rectifiers and other stud-mounting semiconductors; the 302 and 303 Series offer maximum cost savings with dual mounting locations ("MM" and "NN" mounting hole patterns) for two stud-mount devices.



Standard P/N	Outline Dimensions in. (mm)	Length "A" in. (mm)	Mounting Hole(s) Pattern and Number	Thermal Performance at Typical Load		Weight lbs. (grams)
				Natural Convection	Forced Convection	
301K	2.000 (50.8) x 2.000 (50.8)	0.750 (19.1)	None	70°C @ 15W	2.5°C/W @ 250 LFM	0.0580 (26.31)
301M	2.000 (50.8) x 2.000 (50.8)	0.750 (19.1)	(1) 10-32UNF, 0.625 in. thread depth	70°C @ 15W	2.5°C/W @ 250 LFM	0.0580 (26.31)
301N	2.000 (50.8) x 2.000 (50.8)	0.750 (19.1)	(1) 1/4 -28UNF, 0.625 in. thread depth	70°C @ 15W	2.5°C/W @ 250 LFM	0.0580 (26.31)
302M	2.000 (50.8) x 2.000 (50.8)	1.500 (38.1)	(1) 10-32UNF, 0.625 in. thread depth	50°C @ 15W	1.8°C/W @ 250 LFM	0.1330 (60.33)
302MM	2.000 (50.8) x 2.000 (50.8)	1.500 (38.1)	(2) 10-32UNF, 0.625 in. thread depth	50°C @ 15W	1.8°C/W @ 250 LFM	0.1330 (60.33)
302N	2.000 (50.8) x 2.000 (50.8)	1.500 (38.1)	(1) 1/4 -28UNF, 0.625 in. thread depth	50°C @ 15W	1.8°C/W @ 250 LFM	0.1330 (60.33)
302NN	2.000 (50.8) x 2.000 (50.8)	1.500 (38.1)	(2) 1/4 -28UNF, 0.625 in. thread depth	50°C @ 15W	1.8°C/W @ 250 LFM	0.1330 (60.33)
303M	2.000 (50.8) x 2.000 (50.8)	3.000 (76.2)	(1) 10-32UNF, 0.625 in. thread depth	37°C @ 15W	1.3°C/W @ 250 LFM	0.2680 (121.56)
303MM	2.000 (50.8) x 2.000 (50.8)	3.000 (76.2)	(2) 10-32UNF, 0.625 in. thread depth	37°C @ 15W	1.3°C/W @ 250 LFM	0.2680 (121.56)
303N	2.000 (50.8) x 2.000 (50.8)	3.000 (76.2)	(1) 1/4 -28UNF, 0.625 in. thread depth	37°C @ 15W	1.3°C/W @ 250 LFM	0.2680 (121.56)
303NN	2.000 (50.8) x 2.000 (50.8)	3.000 (76.2)	(2) 1/4 -28UNF, 0.625 in. thread depth	37°C @ 15W	1.3°C/W @ 250 LFM	0.2680 (121.56)

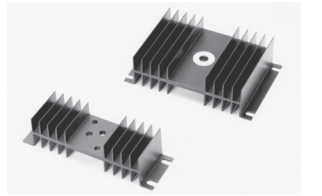
Material: Aluminum Alloy, Black Anodized.



## DOUBLE-SURFACE HEAT SINKS FOR TO-3 CASE STYLES

### 401 & 403 SERIES

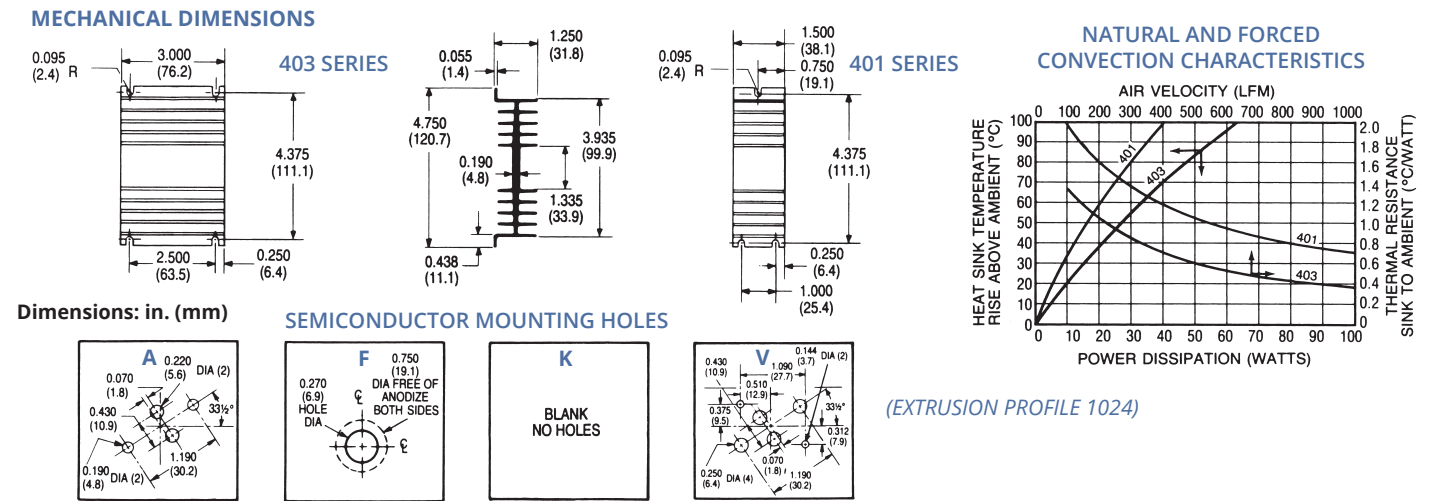
TO-3; Stud-Mount



With fins oriented vertically in cabinet sidewall applications, **401 and 403 Series** heat sinks are recommended for critical space applications where maximum heat dissipation is required for high-power TO-3 case styles. Forced convection performance is also exemplary with these double surface fin types. Semiconductor mounting hole style "F" offers a single centered 0.270 in. (6.9)-diameter mounting hole (with a 0.750 in. (19.1)-diameter area free of anodize) for mounting stud-type diodes and rectifiers. Hole pattern "V" available upon request.

Standard P/N	Width in. (mm)	Overall Dimensions in. (mm)	Height in. (mm)	Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
					Natural Convection	Forced Convection	
401A	4.750 (120.7)	1.500 (38.1)	1.250 (31.8)	(1) TO-3	80°C @ 30W	1.5°C/W @ 250 LFM	0.1500 (68.04)
401F	4.750 (120.7)	1.500 (38.1)	1.250 (31.8)	0.270 in. (6.9)-Dia Hole	80°C @ 30W	1.5°C/W @ 250 LFM	0.1500 (68.04)
401K	4.750 (120.7)	1.500 (38.1)	1.250 (31.8)	None	80°C @ 30W	1.5°C/W @ 250 LFM	0.1500 (68.04)
403A	4.750 (120.7)	3.000 (76.2)	1.250 (31.8)	(1) TO-3	55°C @ 30W	0.9°C/W @ 250 LFM	0.3500 (158.76)
403F	4.750 (120.7)	3.000 (76.2)	1.250 (31.8)	0.270 in. (6.9)-Dia Hole	55°C @ 30W	0.9°C/W @ 250 LFM	0.3500 (158.76)
403K	4.750 (120.7)	3.000 (76.2)	1.250 (31.8)	None	55°C @ 30W	0.9°C/W @ 250 LFM	0.3500 (158.76)

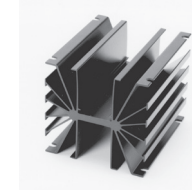
Material: Aluminum Alloy, Black Anodized.



### 441 SERIES

HIGH-PERFORMANCE NATURAL CONVECTION HEAT SINKS FOR RECTIFIERS AND DIODES

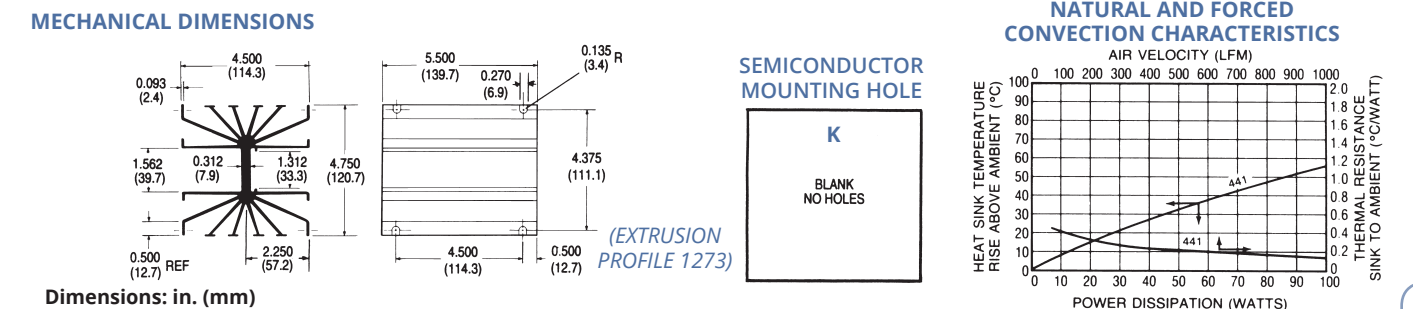
Stud-Mount



Designed for vertical mounting within a power supply enclosure or equipment cabinet without forced airflow available. This Wakefield-Vette **441 Series** heat sink will dissipate up to 100 watts efficiently in natural convection with a maximum 55°C heat sink temperature rise above ambient. When applied in a forced convection environment, the 441K Type will achieve thermal resistance of 0.18°C/W (sink to ambient) at 1000 LFM. Supplied with no pre-drilled device mounting hole pattern.

Standard P/N	Nominal Dimensions			Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
	Width in. (mm)	Length in. (mm)	Height in. (mm)		Natural Convection	Forced Convection	
441K	4.750 (120.7)	5.500 (139.7)	4.500 (114.3)	None	34°C @ SOW 47°C @ 80W	0.30°C/W @ 250 LFM 0.19°C/W @ 600 LFM	1.9700 (893.59)

Material: Aluminum Alloy, Black Anodized.





## EXTRUDED HEAT SINKS FOR POWER SEMICONDUCTORS

### 413, 421, & 423 SERIES

LOW-HEIGHT DOUBLE-SURFACE HEAT SINKS FOR TO-3 CASE STYLES AND DIODES

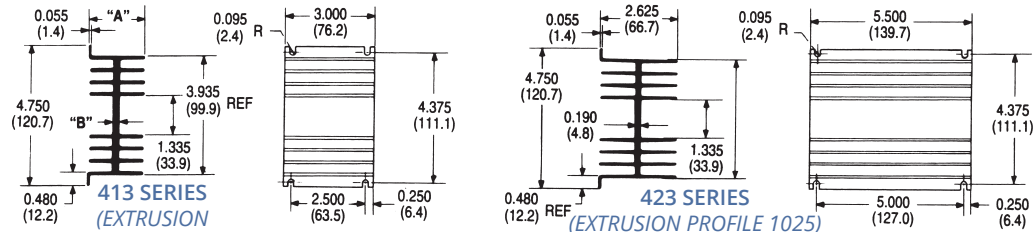
TO-3; DO-5; Stud-Mount

Space-saving double surface **413, 421, and 423 Series** utilize finned surface area on both sides of the power semiconductor mounting surface to provide maximum heat dissipation in a compact profile. Ready to install on popular power components in natural and forced convection applications. Apply Wakefield-Vette Type 126 silicone-free thermal compound or Wakefield-Vette DeltaPad™ interface materials for maximum performance.

Standard P/N	Nominal Dimensions			Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load			Weight lbs. (grams)
	Width in. (mm)	Length in. (mm)	Height "A" in. (mm)		Natural Convection	Forced Convection		
413A	4.750 (120.7)	3.000 (76.2)	1.875 (47.6)	(1) TO-3	72°C @ 50W	0.85°C/W @ 250 LFM	0.6300 (285.77)	
413F	4.750 (120.7)	3.000 (76.2)	1.875 (47.6)	0.270 in. (6.9)-Dia Hole	72°C @ 50W	0.85°C/W @ 250 LFM	0.6300 (285.77)	
413K	4.750 (120.7)	3.000 (76.2)	1.875 (47.6)	None	72°C @ 50W	0.85°C/W @ 250 LFM	0.6300 (285.77)	
421A	4.750 (120.7)	3.000 (76.2)	2.625 (66.7)	(1) TO-3	58°C @ 50W	0.7°C/W @ 250 LFM	0.6300 (285.77)	
421F	4.750 (120.7)	3.000 (76.2)	2.625 (66.7)	0.270 in. (6.9)-Dia Hole	58°C @ 50W	0.7°C/W @ 250 LFM	0.6300 (285.77)	
421K	4.750 (120.7)	3.000 (76.2)	2.625 (66.7)	None	58°C @ 50W	0.7°C/W @ 250 LFM	0.6300 (285.77)	
423A	4.750 (120.7)	5.500 (140.2)	2.625 (66.7)	(1) TO-3	47°C @ 50W	0.5°C/W @ 250 LFM	1.1700 (530.71)	
423K	4.750 (120.7)	5.500 (140.2)	2.625 (66.7)	None	47°C @ 50W	0.5°C/W @ 250 LFM	1.1700 (530.71)	

Material: Aluminum Alloy, Black Anodized.

#### MECHANICAL DIMENSIONS



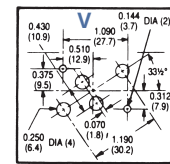
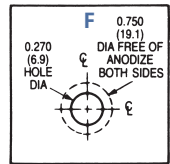
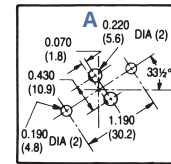
413 SERIES  
(EXTRUSION PROFILE 2276)

421 SERIES  
(EXTRUSION PROFILE 1025)

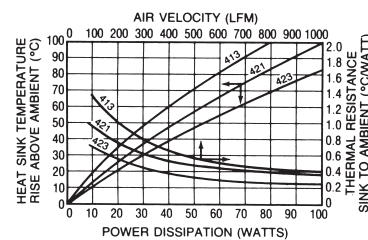
SERIES "A" "B"

413	1.875 (47.6)	0.200 (5.1)
421	2.625 (66.7)	0.190 (4.8)

Dimensions: in. (mm)



#### NATURAL AND FORCED CONVECTION CHARACTERISTICS



## HIGH-PERFORMANCE HEAT SINKS FOR 30-100W METAL POWER SEMICONDUCTORS

TO-3; Stud-Mount

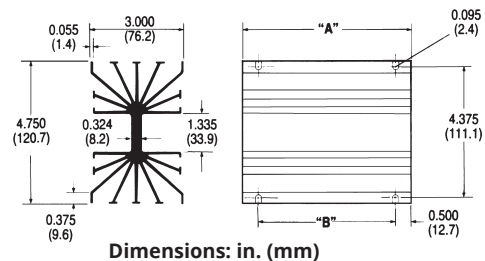
### 431 & 433 SERIES

Need maximum heat dissipation from a TO-3 rectifier heat sink in minimum space? The Wakefield-Vette **431 and 433 Series** center channel double-surface heat sinks offer the highest performance-to-weight ratio for minimum volume occupied for TO-3, diode, and stud-mount metal power semiconductors in the 30- to 100-watt operating range. Additional interface resistance reduction for maximized overall performance can be achieved with proper application of Wakefield-Vette Type 126 silicone-free thermal compound.

Standard P/N	Nominal Dimensions			Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
	Width in. (mm)	Length "A" in. (mm)	Height in. (mm)		Natural Convection	Forced Convection	
431K	4.750 (120.7)	3.000 (76.2)	3.000 (76.2)	None	55°C @ 50W	0.40°C/W @ 250 LFM	0.7800 (353.81)
433K	4.750 (120.7)	5.500 (139.7)	3.000 (76.2)	None	42°C @ 50W	0.28°C/W @ 250 LFM	1.4900 (675.86)

Material: Aluminum Alloy, Black Anodized.

#### MECHANICAL DIMENSIONS



SERIES "A" "B"

431	3.000 (76.2)	2.000 (50.8)
433	5.500 (139.7)	4.500 (114.3)

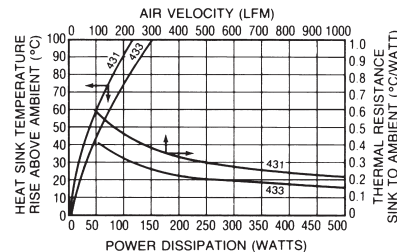
SEMICONDUCTOR MOUNTING HOLE

K

BLANK NO HOLES

(EXTRUSION PROFILE 2726)

#### NATURAL AND FORCED CONVECTION CHARACTERISTICS

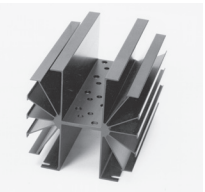


## LIGHTWEIGHT QUADRUPLE MOUNT HEAT SINK FOR TO-3 CASE STYLES

TO-3

### 435 SERIES

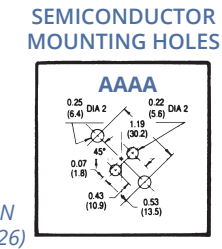
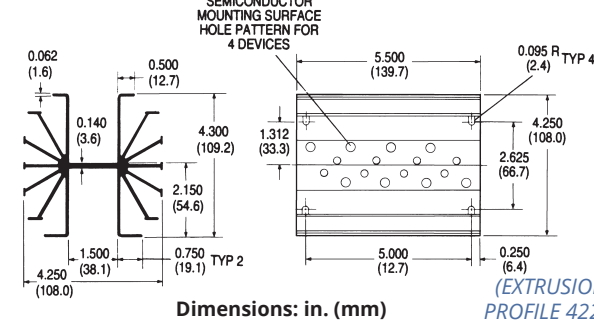
This lightweight high-performance heat sink is designed to mount and cool efficiently one to four TO-3 style metal case power semiconductors. The Type 435AAAA is the standard configuration available from stock, pre-drilled for mounting four TO-3 style devices. Increased performance can be achieved with the proper selection and installation of a Wakefield-Vette Type 175 DeltaPad Kapton™ interface material for each power semiconductor or, for maximum reduction of case-to-sink interface loss, the application of Wakefield-Vette Type 126 silicone-free thermal compound.



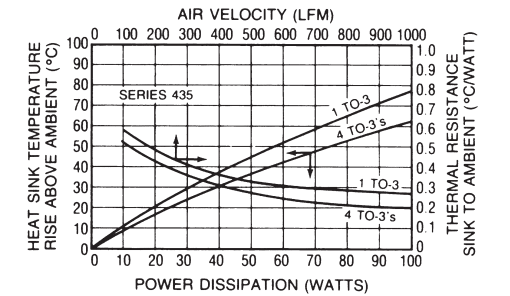
Standard P/N	Nominal Dimensions			Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
	Width in. (mm)	Length in. (mm)	Height in. (mm)		Natural Convection	Forced Convection	
435AAAA	4.250 (108.0)	5.500 (139.7)	4.300 (109.2)	(4) TO-3	37°C @ 50W 54°C @ 80W	0.38°C/W @ 250 LFM 0.24°C/W @ 600 LFM	1.1500 (521.64)

Material: Aluminum Alloy, Black Anodized.

#### MECHANICAL DIMENSIONS



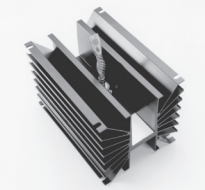
#### NATURAL AND FORCED CONVECTION CHARACTERISTICS



### 486 & 489 SERIES

HEAT SINKS FOR HIGH-POWER HEX-TYPE RECTIFIERS AND DIODES

Stud-Mount

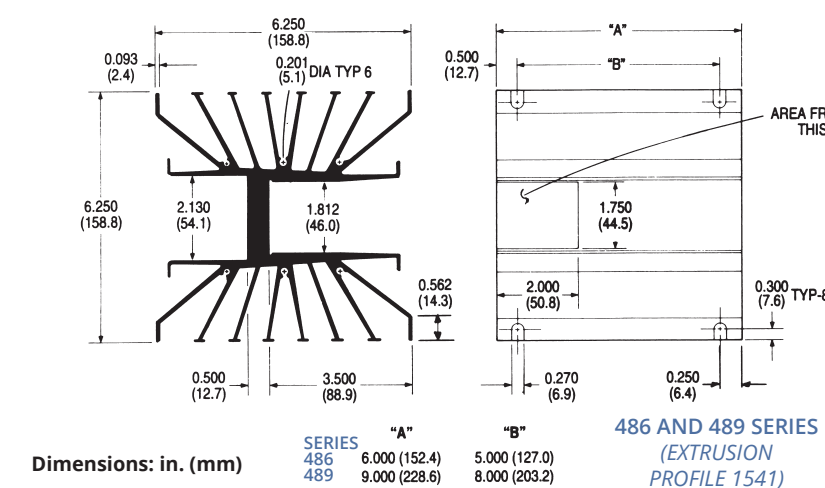


These two heat sink types accept industry standard 1.750 in. (44.5) hex-type devices for mounting and efficient heat dissipation. Each type is provided with a 1.750 in. (44.5) x 2.000 in. (50.8) area on the semiconductor base mounting surface which is free of anodize.

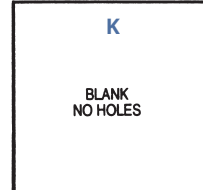
Standard P/N	Nominal Dimensions				Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
	Width in. (mm)	Length in. (mm)	Height in. (mm)	Hex Style Type		Natural Convection	Forced Convection	
486K	6.250 (158.8)	6.000 (152.4)	6.250 (158.8)	1.750 in. Hex	None	24°C @ 50W 86°C @ 250W	0.20°C/W @ 250 LFM 0.13°C/W @ 500 LFM	4.2100 (1909.66)
489K	6.250 (158.8)	9.000 (228.6)	6.250 (158.8)	1.750 in. Hex	None	19°C @ 50W 75°C @ 250W	0.15°C/W @ 250 LFM 0.10°C/W @ 500 LFM	6.1400 (2785.10)

Material: Aluminum Alloy, Black Anodized.

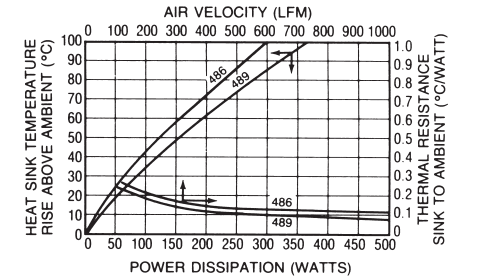
#### MECHANICAL DIMENSIONS



#### SEMICONDUCTOR MOUNTING HOLE

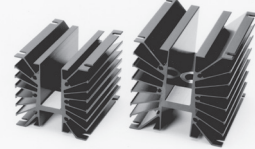


#### NATURAL AND FORCED CONVECTION CHARACTERISTICS



## EXTRUDED HEAT SINKS FOR POWER SEMICONDUCTORS

## PERFORMANCE, LOW PROFILE HEAT SINKS FOR POWER MODULES & IGBT'S



### 465 & 476 SERIES

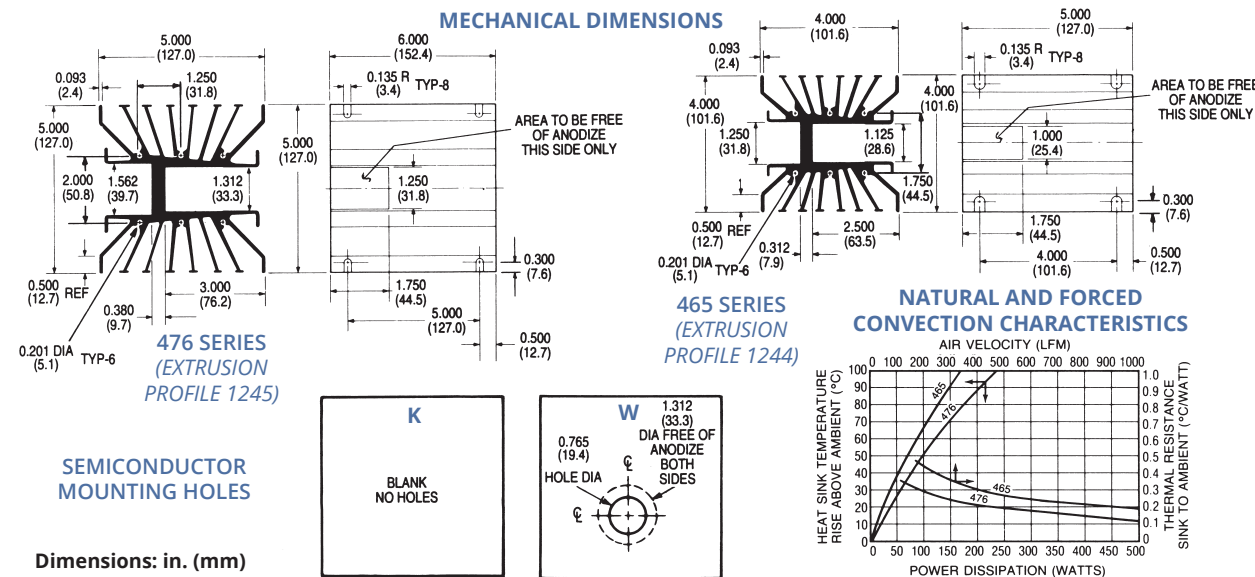
HIGH-POWER HEAT SINKS FOR MEDIUM  
HEX-TYPE RECTIFIERS AND DIODES

Stud-Mount

Wakefield-Vette Engineering has designed four standard heat sink types for ease of installation and efficient heat dissipation for industry standard hex-type rectifiers and similar stud-mount power devices: 465, 476, 486, and 489 Series. The **465 and 476 Series** shown here are designed for 1.060 in. Hex (465 Type) and 1.250 in. Hex (476 Type). The 476W Type is available pre-drilled for an 0.765 in. (19.4) dia,

Standard P/N	Nominal Dimensions			Hex Style Type	Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
	Width in. (mm)	Length in. (mm)	Height in. (mm)			Natural Convection	Forced Convection	
465K	4.000 (101.6)	5.000 (127.0)	4.000 (101.6)	1.060 in. Hex	None	38°C @ 50W	0.27°C/W @ 500 LFM	1.9300 (875.45)
476K	5.000 (127.0)	6.000 (152.4)	5.000 (127.0)	1.250 in. Hex	None	25°C @ 50W	0.19°C/W @ 500 LFM	2.8200 (1279.15)
476W	5.000 (127.0)	6.000 (152.4)	5.000 (127.0)	1.250 in. Hex	0.765 in. (19.4) Dia. Center Mount	25°C @ 50W	0.19°C/W @ 500 LFM	2.8000 (1270.08)

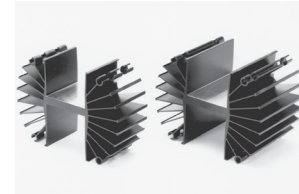
Material: Aluminum Alloy, Black Anodized.



General Purpose

### KING SIZE HEAT SINKS FOR HIGH-POWER RECTIFIERS

### 490 SERIES



The **490 Series** can be used to mount a single high-power rectifier or a grouping of smaller power devices. The semiconductor device mounting surface is free of anodize on the entire surface on one side only; finish overall is black anodize. Use Type 109 mounting brackets (see accessories section) for mounting to enclosure wall and for electrical isolation. The anodize-free mounting surface is milled for maximum contact area. The 490 Series Can also be drilled for mounting and cooling IGBTs and other isolated power modules.

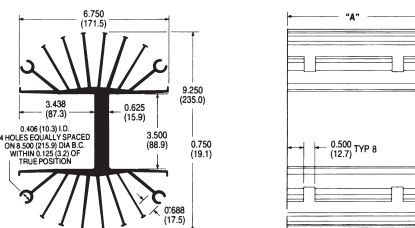
Standard P/N	Nominal Dimensions			Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load		Weight lbs. (grams)
	Width in. (mm)	Length "A" in. (mm)	Height in. (mm)		Natural Convection	Forced Convection	
490-35K	9.250 (235.0)	3.500 (88.9)	6.750 (171.5)	None	84°C @ 200W	0.18°C/W @ 600 LFM	3.2400 (1469.66)
490-6K	9.250 (235.0)	6.000 (152.4)	6.750 (171.5)	None	60°C @ 200W	0.13°C/W @ 600 LFM	5.4700 (2481.19)
490-12K	9.250 (235.0)	12.000 (304.8)	6.750 (171.5)	None	45°C @ 200W	0.09°C/W @ 600 LFM	10.6200(4817.23)

Material: Aluminum Alloy, Black Anodized.

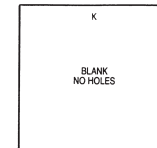
### MECHANICAL DIMENSIONS

#### 490 SERIES (EXTRUSION PROFILE 2131)

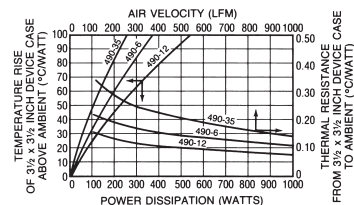
Dimensions: in. (mm)



### SEMICONDUCTOR MOUNTING HOLE

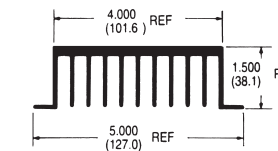
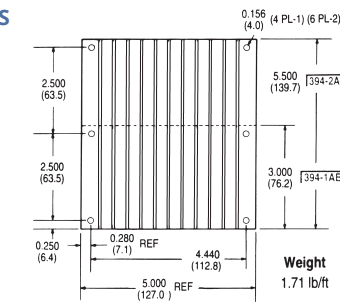


### NATURAL AND FORCED CONVECTION CHARACTERISTICS

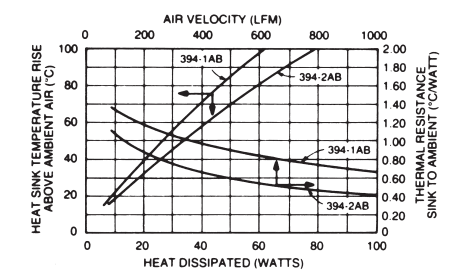


### MECHANICAL DIMENSIONS

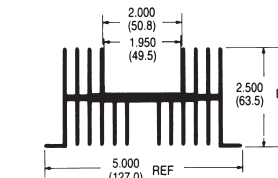
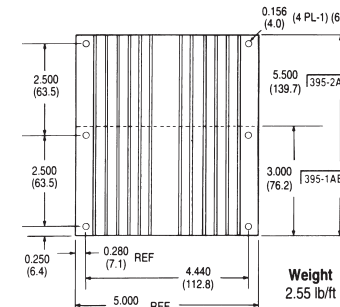
#### 394 SERIES (EXTRUSION PROFILE 7332)



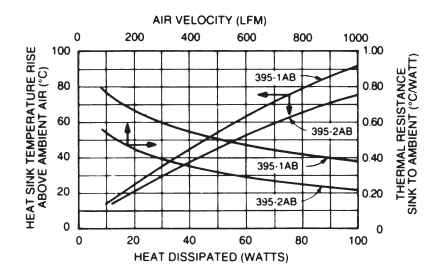
### NATURAL AND FORCED CONVECTION CHARACTERISTICS



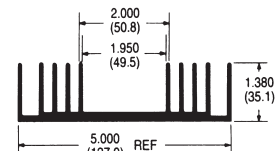
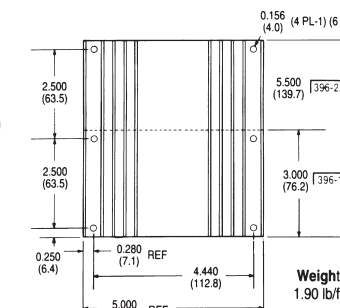
#### 395 SERIES (EXTRUSION PROFILE 7330)



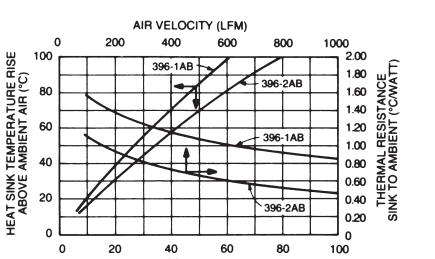
### NATURAL AND FORCED CONVECTION CHARACTERISTICS



#### 396 SERIES (EXTRUSION PROFILE 7331)

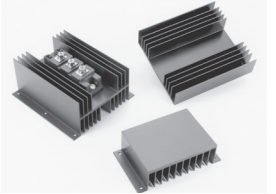


### NATURAL AND FORCED CONVECTION CHARACTERISTICS



Dimensions: in. (mm)

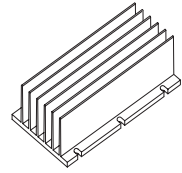
### 394, 395, & 396 SERIES



Standard P/N	Overall Dimensions: in. (mm)			Device Base Mounting Area (mm)	Base Mounting Holes	Thermal Resistance at Typical Load	
	Length in. (mm)	Height in. (mm)	Width in. (mm)			Natural Convection (Øsa) <sup>(1)</sup> (°C/W)	Forced Convection (Øsa) (°C/W @ 500 LFM)
394-1AB	3.000 (76.2)	1.500 (38.1)	5.000 (127.0)	101 x 76	4	1.85	0.90
394-2AB	5.500 (139.7)	1.500 (38.1)	5.000 (127.0)	101 x 139	6	1.51	0.60
395-1AB	3.000 (76.2)	2.500 (63.5)	5.000 (127.0)	50 x 76	4	1.10	0.50
395-2AB	5.500 (139.7)	2.500 (63.5)	5.000 (127.0)	50 x 139	6	0.90	0.32
396-1AB	3.000 (76.2)	1.380 (35.1)	5.000 (127.0)	50 x 76	4	1.85	1.07
396-2AB	5.500 (139.7)	1.380 (35.1)	5.000 (127.0)	50 x 139	6	1.51	0.64

Note: 1. Thermal resistance values shown are for black anodized finish at 50°C rise above ambient.

# EXTRUDED HEAT SINKS FOR DC/DC CONVERTERS



## 557, 558, & 559 SERIES

HEAT SINKS FOR "FULL-BRICK"  
DC/DC CONVERTERS

TO-220 and TO-218

### FEATURES AND BENEFITS

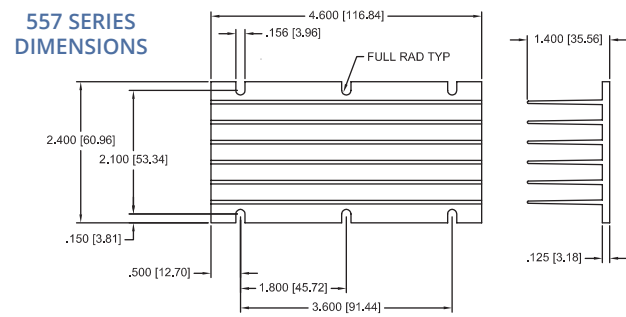
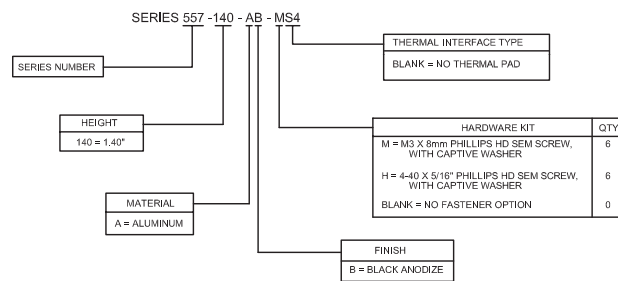
- Standard mounting hole pattern mates with Vicor DC/DC converters.
- Aluminum extruded fin construction keeps DC/DC converter modules cool in both forced and natural convection applications.
- Three fin heights, two flow direction options.
- Black anodized finish standard.
- Integral thermal interface pad option eliminates need to order and install pad separately.
- Ordering a single part number with the hardware kit option provides everything necessary to keep your converter cool.

Standard P/N	Footprint Dimensions in. (mm)	Height in. (mm)	Fin Orientation	Number of Fins	Forced Convection Thermal Resistance at 300 ft/min (C/W)	Natural Convection Power Dissipation (Watts) 40°C Rise Heat Sink to Ambient
557-140AB	4.60 (116.8) x 2.40 (61.0)	1.40 (35.6)	Horizontal	6	1.3	14
558-75AB	2.40 (61.0) x 4.60 (116.8)	0.75 (19.1)	Vertical	16	1.8	12
559-50AB	2.40 (61.0) x 4.60 (116.8)	0.50 (12.7)	Vertical	27	2.2	10

Material: Aluminum, Black Anodized

### MECHANICAL DIMENSIONS

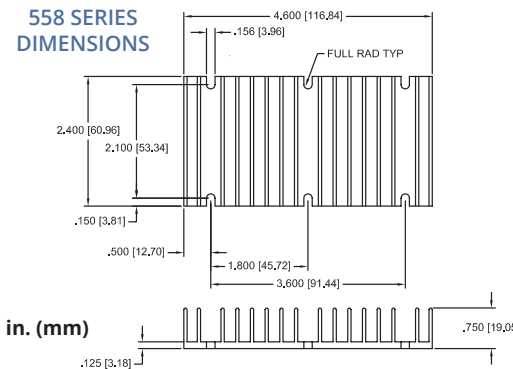
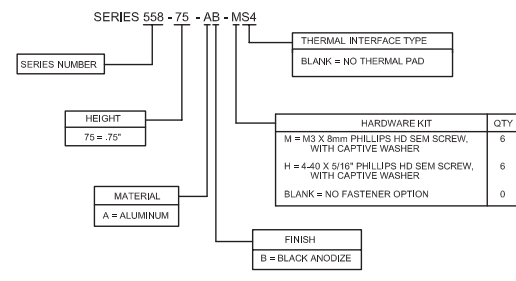
#### PRODUCT DESIGNATION



Dimensions: in. (mm)

### MECHANICAL DIMENSIONS

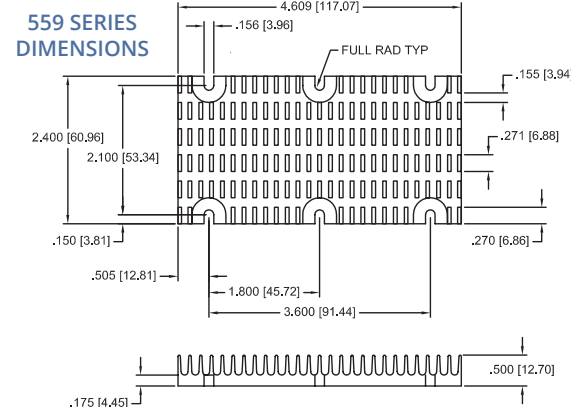
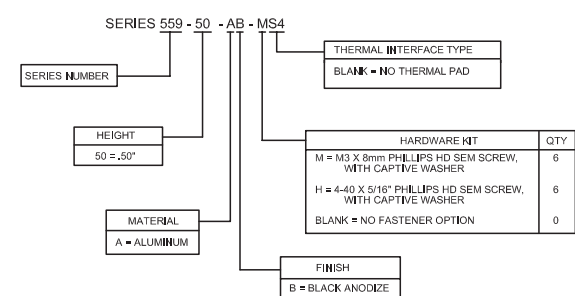
#### PRODUCT DESIGNATION



Dimensions: in. (mm)

### MECHANICAL DIMENSIONS

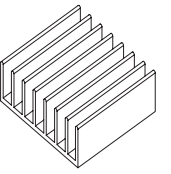
#### PRODUCT DESIGNATION



Dimensions: in. (mm)

## HEAT SINKS FOR "HALF-BRICK" DC/DC CONVERTERS

## 517, 527, 518, & 528 SERIES



### FEATURES AND BENEFITS

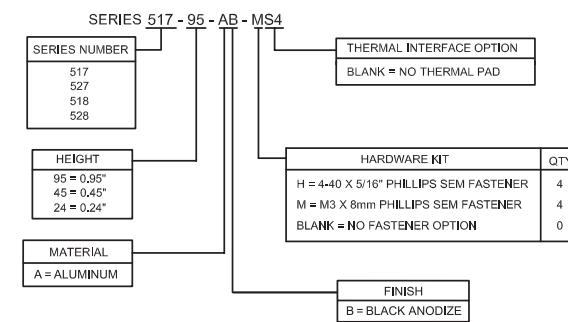
- Standard mounting hole patterns mate with the majority of "half-brick" DC/DC converters on the market.
- Aluminum extruded fin construction keeps DC/DC converter modules cool in both forced and natural convection applications.
- Vertical and horizontal fin configurations available in a variety of heights.
- Black anodized finish standard.
- Integral thermal interface pad option eliminates need to order and install pad separately.
- Ordering a single part number with the hardware kit option provides everything necessary to keep your converter cool.

Standard P/N	Footprint Dimensions in. (mm)	Height in. (mm)	Fin Orientation	Number of Fins	Thermal Performance	
					Natural Convection Power Dissipation (Watts) 60°C Rise Heat Sink to Ambient	Forced Convection Thermal Resistance at 300 ft/min (C/W)
517-95AB	2.28 (57.9) x 2.40 (61.0)	0.95 (24.1)	Horizontal	8	11W	2.0
527-45AB	2.28 (57.9) x 2.40 (61.0)	0.45 (11.4)	Horizontal	11	7W	3.2
527-24AB	2.28 (57.9) x 2.40 (61.0)	0.24 (6.1)	Horizontal	11	5W	5.8
518-95AB	2.40 (61.0) x 2.28 (57.9)	0.95 (24.1)	Vertical	8	11W	2.0
528-45AB	2.40 (61.0) x 2.28 (57.9)	0.45 (11.4)	Vertical	11	7W	3.2
528-24AB	2.40 (61.0) x 2.28 (57.9)	0.24 (6.1)	Vertical	11	5W	5.8

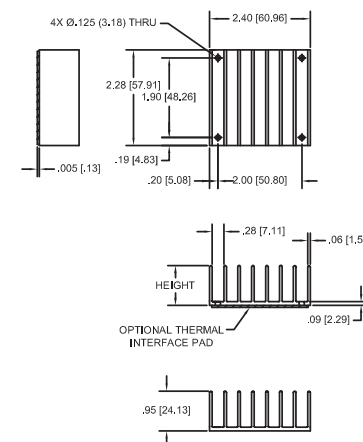
Material: Aluminum, Black Anodized

### MECHANICAL DIMENSIONS

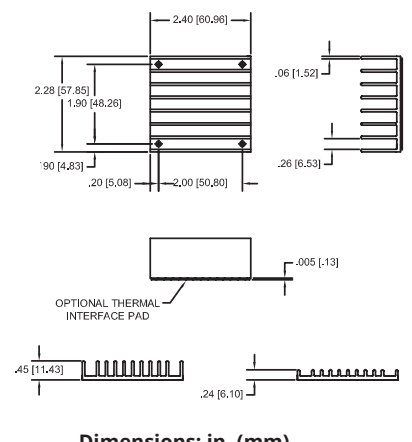
#### PRODUCT DESIGNATION



### 517/527 SERIES DIMENSIONS



### 518/528 SERIES DIMENSIONS



Dimensions: in. (mm)

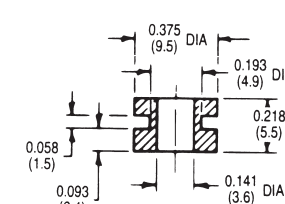
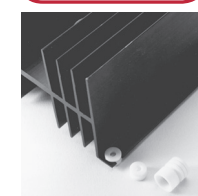
# MOUNTING HARDWARE FOR EXTRUDED HEAT SINKS

## 100 SERIES

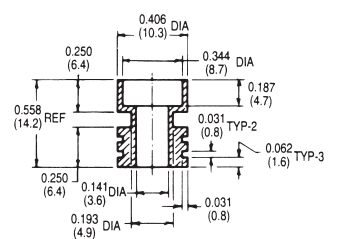
TEFLON MOUNTING INSULATORS

Standard P/N	Description	For Use with Series	Mounting Hardware	Material	Hipot Rating (VAC)	Weight lbs. (grams)
103	Spool-shaped insulator	300, 400, 600, 111, 113	#6-32 screw	Teflon	1500	0.00012 (0.05)
107	Spool-shaped insulator	300, 400, 600, 111, 113	#6-32 screw, nut	Teflon	5000	0.0034 (1.54)

### 103 SERIES

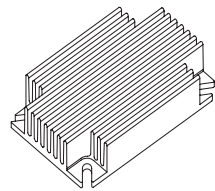


### 107 SERIES





## EXTRUDED HEAT SINKS FOR DC/DC CONVERTERS



### 537 & 547 SERIES

HEAT SINKS FOR "QUARTER-BRICK"  
DC/DC CONVERTERS

TO-220 and TO-218

#### FEATURES AND BENEFITS

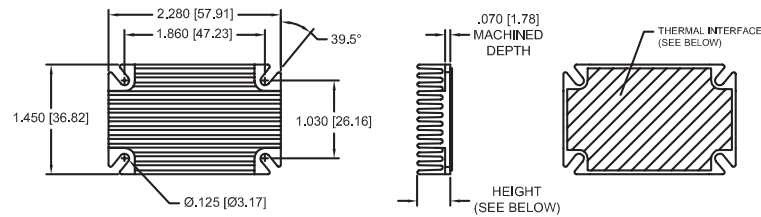
- Mounting slots accommodate two hole patterns: 1.86" x 1.03" and 2.00" x 1.20", fitting the vast majority of quarter-brick converters on the market.
- Designed for optimum use in forced convection applications.
- Vertical and horizontal fin configurations available in a variety of heights.
- Black anodized finish standard.
- Integral thermal interface pad option eliminates need to order and install pad separately.
- Ordering a single part number with the hardware kit option provides everything necessary to keep your converter cool.

Standard P/N	Footprint Dimensions in. (mm)	Height in. (mm)	Fin Orientation	Number of Fins	Forced Convection Thermal Resistance at 300 ft/min (C/W)
537-95AB	2.28 (57.9) x 1.45 (36.8)	0.95 (24.1)	Horizontal	8	2.1
537-45AB	2.28 (57.9) x 1.45 (36.8)	0.45 (11.4)	Horizontal	13	2.3
537-24AB	2.28 (57.9) x 1.45 (36.8)	0.24 (6.1)	Horizontal	14	4.2
547-95AB	1.45 (36.8) x 2.28 (57.9)	0.95 (24.1)	Vertical	11	2.2
547-45AB	1.45 (36.8) x 2.28 (57.9)	0.45 (11.4)	Vertical	20	2.1
547-24AB	1.45 (36.8) x 2.28 (57.9)	0.24 (6.1)	Vertical	22	3.5

**Material:** Aluminum, Black Anodized

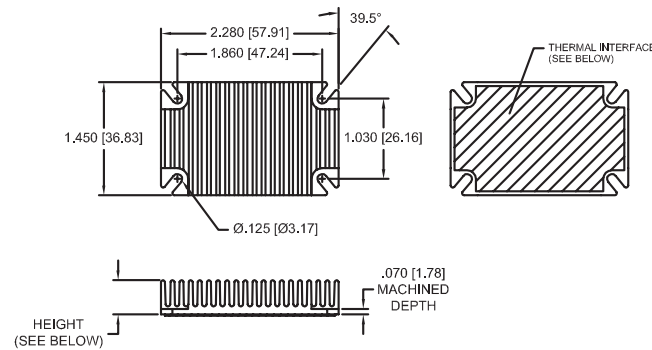
#### MECHANICAL DIMENSIONS

##### 537 SERIES DIMENSIONS



Dimensions: in. (mm)

##### 547 SERIES DIMENSIONS



#### PRODUCT DESIGNATION

SERIES 537 - 95 - AB - MS4

