

LIQUID COLD PLATES FOR HIGH-PERFORMANCE COMPONENTS AND SYSTEMS



180-10 & 180-11 SERIES

Liquid Cold Plates for Rectifiers and Power Diodes

GENERAL PURPOSE

| Standard P/N | Cold Plate Body Nominal Dimensions | | | | Overall Length in. (mm) | Overall Thermal Resistance (Plate to Inlet Water) | Weight lbs (grams) |
|--------------|------------------------------------|----------------|--------------------|------------------------|-------------------------|---|--------------------|
| | Length "A" in. (mm) | Width in. (mm) | Thickness in. (mm) | Channel Width in. (mm) | | | |
| 180-10-6C | 6.000 (152.4) | 3.000 (76.2) | 0.625 (15.9) | 1.250 (31.8) | 13.406 (340.5) | 0.084°C/W @ 1.5 GPM | 0.850 (385.56) |
| 180-10-12C | 12.000 (304.8) | 3.000 (76.2) | 0.625 (15.9) | 1.250 (31.8) | 19.406 (429.9) | 0.041°C/W @ 1.5 GPM | 1.700 (771.12) |
| 180-10-24C | 24.000 (609.6) | 3.000 (76.2) | 0.625 (15.9) | 1.250 (31.8) | 31.406 (797.7) | 0.020°C/W @ 1.5 GPM | 2.900 (1315.4) |
| 180-11-6C | 6.000 (152.4) | 5.000 (127.2) | 0.688 (17.5) | 1.813 (46.1) | 13.688 (347.7) | 0.084°C/W @ 1.5 GPM | 1.500 (680.40) |
| 180-11-12C | 12.000 (304.8) | 5.000 (127.2) | 0.688 (17.5) | 1.813 (46.1) | 19.688 (500.1) | 0.041°C/W @ 1.5 GPM | 2.867 (1300.47) |
| 180-11-24C | 24.000 (609.6) | 5.000 (127.2) | 0.688 (17.5) | 1.813 (46.1) | 31.688 (804.9) | 0.020°C/W @ 1.5 GPM | 5.730 (2599.13) |

Material: aluminum, no finish. Tubing: copper (stainless steel tubing available on special order).

LOCAL THERMAL RESISTANCE PER DEVICE PLATE TO INLET WATER (°C/WATT)

| Q to Q Device Spacing Inches | Flow - GPM | | | | |
|------------------------------|------------|------|------|------|------|
| | 1/2 | 1 | 2 | 3 | 4 |
| 1.0 (25.4) | 0.59 | 0.52 | 0.48 | 0.47 | 0.46 |
| 2.0 (50.8) | 0.40 | 0.36 | 0.33 | 0.32 | 0.31 |
| 3.0 (76.2) | 0.29 | 0.26 | 0.24 | 0.23 | 0.22 |

PERFORMANCE CHARACTERISTICS

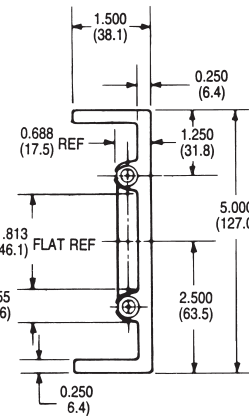
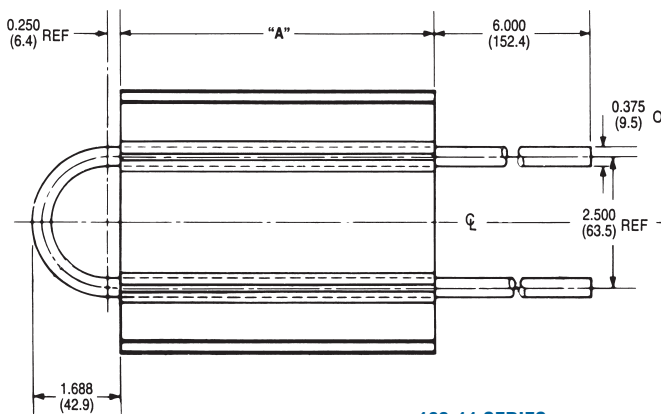


MECHANICAL DIMENSIONS



| Standard P/N | Length "A" in. (mm) |
|--------------|---------------------|
| 180-10-6C | 6.000 in. (152.4) |
| 180-10-12C | 12.000 in. (304.8) |
| 180-10-24C | 24.000 in. (609.6) |
| 180-11-6C | 6.000 in. (152.4) |
| 180-11-12C | 12.000 in. (304.8) |
| 180-11-24C | 24.000 in. (609.6) |

180-10 SERIES

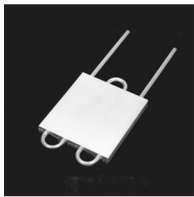


180-11 SERIES

Dimensions: in. (mm)



LIQUID COLD PLATES FOR HIGH-PERFORMANCE COMPONENTS AND SYSTEMS



180-12 & 180-20 SERIES

Liquid Cold Plates for Rectifiers, Diodes, and Power Modules

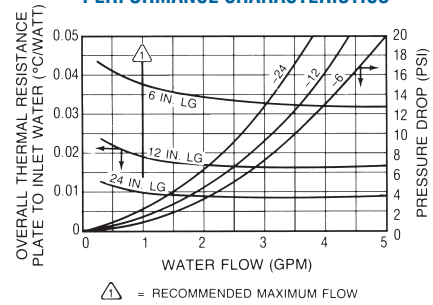
GENERAL PURPOSE

| Standard P/N | Cold PLate Body Nominal Dimensions | | | Mounting Surfaces | Overall Thermal Resistance (Plate to Inlet Water) | | Weight lbs (grams) |
|--------------|------------------------------------|----------------|--------------------|-------------------|---|---|--------------------|
| | Length "A" in. (mm) | Width in. (mm) | Thickness in. (mm) | | Overall Length in. (mm) | Overall Thermal Resistance (Plate to Inlet Water) | |
| 180-12-6C | 6.000 (152.4) | 7.750 (196.9) | 0.658 (16.7) | Single | 13.406 (340.5) | 0.038°C/W @ 1.0 GPM | 2.270 (1029.67) |
| 180-12-12C | 12.000 (304.8) | 7.750 (196.9) | 0.658 (16.7) | Single | 19.406 (492.9) | 0.018°C/W @ 1.0 GPM | 4.300 (1950.48) |
| 180-12-24C | 24.000 (609.6) | 7.750 (196.9) | 0.658 (16.7) | Single | 31.406 (797.7) | 0.009°C/W @ 1.0 GPM | 8.600 (3900.96) |
| 180-20-6C | 6.000 (152.4) | 5.500 (139.7) | 0.690 (17.5) | Double | 13.125 (333.4) | 0.038°C/W @ 1.0 GPM | 1.090 (494.42) |

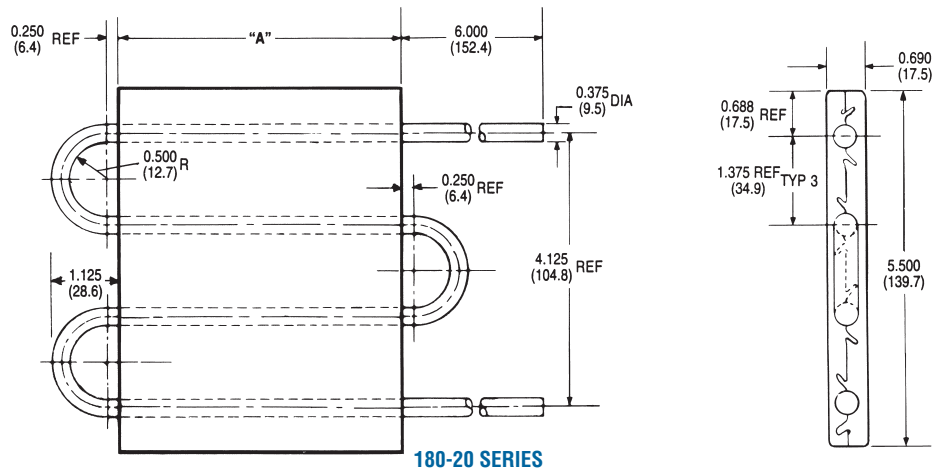
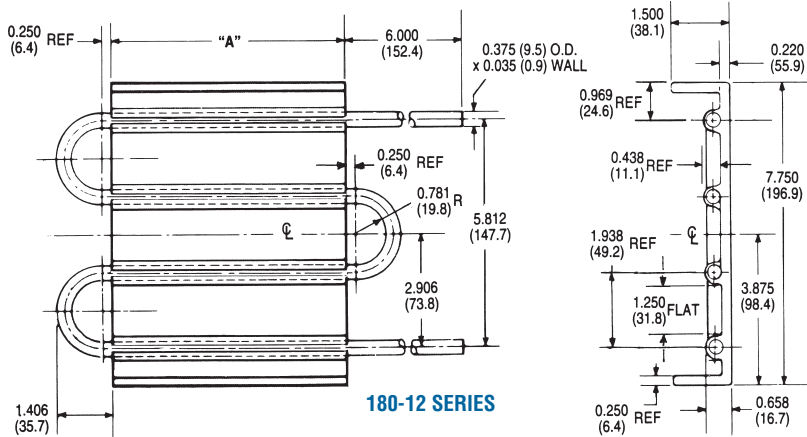
LOCAL THERMAL RESISTANCE PER DEVICE PLATE TO INLET WATER (°C/WATT)

| Q to Q Device Spacing Inches | Flow - GPM | | | | |
|------------------------------|------------|------|------|------|------|
| | 1/2 | 1 | 2 | 3 | 4 |
| 1.0 (25.4) | 0.76 | 0.67 | 0.62 | 0.59 | 0.57 |
| 2.0 (50.8) | 0.58 | 0.49 | 0.43 | 0.40 | 0.39 |
| 3.0 (76.2) | 0.42 | 0.34 | 0.30 | 0.28 | 0.27 |

PERFORMANCE CHARACTERISTICS



MECHANICAL DIMENSIONS



Dimensions: in. (mm)