



Reliability in Heat Transfer Products

Air-Cooled Fluid Coolers

Catalog 121-1

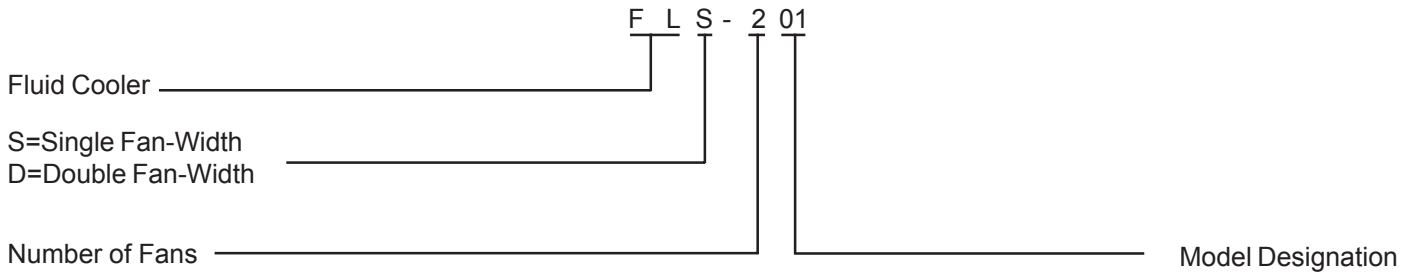


1 Through 12 Fans



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FLUID COOLER NOMENCLATURE



STANDARD FEATURES

Coils

- 1/2" OD copper tubes, .017" wall thickness
- Aluminum fins - .006" thick
- Galvanized steel casing with aluminum tube sheets

Fan Section

- Aluminum fan blades with painted steel hubs
- Motors - open type 6 pole energy efficient - 1140 RPM
- Each module fully baffled
- Motors mounted on 12 ga. motor rails

Control Panel

- Weatherproof enclosure with all motor leads terminated at panel

General Construction

- Galvanized steel frame and cabinet - 18 ga. cabinet, 10 ga. rails and legs, 12 ga. motor rails
- Factory-mounted legs on models FLS-204 and larger for convenient field installation

OPTIONAL FEATURES

Coils

- Upgrade fin thickness to .010" thick aluminum
- Substitute .006" thick copper fins in lieu of aluminum
- Epoxy coat or phenolic coat coils
- Polyester-coated fins or dip coil coatings for maximum corrosion protection

Fan Section

- Hinged venturi panels for ease of coil cleaning and maintenance

Control Panel

- Fan cycling controls including aquastat
- Control circuit toggle switches
- Mounted disconnect switch
- Motor fusing
- Custom fan cycling wiring and logic

General Construction

- Model numbers 101 thru 203 are shipped with legs that can be used for either horizontal or vertical air discharge. All other units are shipped with factory-mounted legs for vertical air discharge and convenient stallation, and are provided with lifting eyes for rigging.

Table 1

| SINGLE FAN-WIDTH UNITS | | | | | |
|------------------------|--------------|---------|-----------------------|---------------------|--------------------------|
| Model # FLS | Total Volume | | Water Wgt. Lbs. | Unit Wgt. Net | Unit Wgt. Shipping |
| | Cu. Ft. | Gallons | | | |
| 101 | 0.06 | 0.44 | 3.7 | 109 | 156 |
| 102 | 0.12 | 0.88 | 7.3 | 121 | 170 |
| 103 | 0.17 | 1.25 | 10.4 | 144 | 193 |
| 104 | 0.25 | 1.88 | 15.7 | 160 | 211 |
| 201 | 0.32 | 2.43 | 20.3 | 234 | 313 |
| 202 | 0.49 | 3.64 | 30.4 | 259 | 343 |
| 203 | 0.65 | 4.86 | 40.5 | 283 | 372 |
| 204 | 0.78 | 5.80 | 48.4 | 510 | 670 |
| 205 | 0.78 | 5.80 | 48.4 | 518 | 682 |
| 206 | 1.16 | 8.70 | 72.5 | 536 | 763 |
| 207 | 1.16 | 8.70 | 72.5 | 566 | 775 |
| 208 | 0.78 | 5.80 | 48.4 | 580 | 693 |
| 209 | 1.16 | 8.70 | 72.5 | 630 | 770 |
| 210 | 1.16 | 8.70 | 72.5 | 650 | 780 |
| 211 | 1.55 | 11.60 | 96.7 | 730 | 847 |
| 301 | 1.73 | 12.93 | 107.9 | 900 | 1073 |
| 302 | 1.73 | 12.93 | 107.9 | 930 | 1090 |
| 303 | 2.30 | 17.24 | 143.8 | 1010 | 1170 |
| 401 | 2.29 | 17.15 | 143.1 | 1135 | 1296 |
| 402 | 2.29 | 17.15 | 143.1 | 1201 | 1321 |
| 403 | 3.06 | 22.87 | 190.8 | 1327 | 1454 |
| 404 | 3.06 | 22.87 | 190.8 | 1360 | 1479 |
| 501 | 2.86 | 21.40 | 178.5 | 1582 | 1682 |
| 502 | 3.81 | 28.53 | 238.0 | 1654 | 1822 |
| 503 | 3.81 | 28.53 | 238.0 | 1676 | 1842 |
| 504 | 3.81 | 28.53 | 238.0 | 1698 | 1862 |
| 601 | 4.57 | 34.19 | 285.2 | 2002 | 2115 |
| 602 | 4.57 | 34.19 | 285.2 | 2030 | 2145 |
| 603 | 4.57 | 34.19 | 285.2 | 2052 | 2175 |

| DOUBLE FAN-WIDTH UNITS | | | | | |
|------------------------|--------------|---------|-----------------------|---------------------|--------------------------|
| Model # FLD | Total Volume | | Water Wgt. Lbs. | Unit Wgt. Net | Unit Wgt. Shipping |
| | Cu. Ft. | Gallons | | | |
| 411 | 1.54 | 11.55 | 96.3 | 1080 | 1190 |
| 412 | 2.32 | 17.32 | 144.5 | 1130 | 1371 |
| 413 | 2.32 | 17.32 | 144.5 | 1190 | 1400 |
| 414 | 3.09 | 23.09 | 192.6 | 1300 | 1534 |
| 415 | 3.09 | 23.09 | 192.6 | 1330 | 1560 |
| 611 | 2.30 | 17.20 | 143.5 | 1580 | 1720 |
| 612 | 3.45 | 25.81 | 215.3 | 1650 | 1961 |
| 613 | 3.45 | 25.81 | 215.3 | 1710 | 1991 |
| 614 | 3.45 | 25.81 | 215.3 | 1740 | 2021 |
| 615 | 4.60 | 34.41 | 287.1 | 1870 | 2141 |
| 616 | 4.60 | 34.41 | 287.1 | 1910 | 2180 |
| 811 | 4.60 | 34.30 | 286.2 | 2180 | 2532 |
| 812 | 4.60 | 34.30 | 286.2 | 2300 | 2538 |
| 813 | 6.11 | 45.74 | 381.5 | 2530 | 2848 |
| 814 | 6.11 | 45.74 | 381.5 | 2590 | 2911 |
| 1011 | 5.72 | 42.79 | 357.0 | 2980 | 3164 |
| 1012 | 7.63 | 57.06 | 476.0 | 3110 | 3410 |
| 1013 | 7.63 | 57.06 | 476.0 | 3140 | 3471 |
| 1014 | 7.63 | 57.06 | 476.0 | 3080 | 3530 |
| 1211 | 9.14 | 68.38 | 570.5 | 3730 | 4025 |
| 1212 | 9.14 | 68.38 | 570.5 | 3770 | 4090 |
| 1213 | 9.14 | 68.38 | 570.5 | 3820 | 4155 |

Table 2

| SINGLE FAN-WIDTH UNITS | | | | | | | | | |
|------------------------|----------|---------------|--------------|--------------|-----------------------|------------------|--------------|--------------|---------------------|
| MODEL # FLS | FAN DATA | | | MOTOR DATA | | | | | Noise Data (dba) |
| | Qty. | Dia. (in.) | Total CFM | Nom. H.P. | MIN. CIRCUIT AMPACITY | | | | |
| | | | | | 208-230 1 ph. | 208-230 3 ph. | 460 3 ph. | 575 3 ph. | |
| 101 | 1 | 18 | 3100 | 1/2 | 15 | 15 | 15 | 15 | 70 |
| 102 | 1 | 18 | 2550 | 1/2 | 15 | 15 | 15 | 15 | 70 |
| 103 | 1 | 22 | 4350 | 1/2 | 15 | 15 | 15 | 15 | 71 |
| 104 | 1 | 22 | 3900 | 1/2 | 15 | 15 | 15 | 15 | 71 |
| 201 | 2 | 22 | 8900 | 1/2 | 15 | 15 | 15 | 15 | 72 |
| 202 | 2 | 22 | 7800 | 1/2 | 15 | 15 | 15 | 15 | 72 |
| 203 | 2 | 22 | 7100 | 1/2 | 15 | 15 | 15 | 15 | 73 |
| 204 | 2 | 26 | 15200 | 1 | 15 | 15 | 15 | 15 | 73 |
| 205 | 2 | 26 | 15000 | 1 | 15 | 15 | 15 | 15 | 76 |
| 206 | 2 | 26 | 14850 | 1 | 15 | 15 | 15 | 15 | 76 |
| 207 | 2 | 26 | 14600 | 1 | 15 | 15 | 15 | 15 | 76 |
| 208 | 2 | 30 | 22400 | 1 1/2 | N/A | 15 | 15 | 15 | 76 |
| 209 | 2 | 30 | 22000 | 1 1/2 | N/A | 15 | 15 | 15 | 76 |
| 210 | 2 | 30 | 21200 | 1 1/2 | N/A | 15 | 15 | 15 | 76 |
| 211 | 2 | 30 | 20000 | 1 1/2 | N/A | 15 | 15 | 15 | 76 |
| 301 | 3 | 30 | 33000 | 1 1/2 | N/A | 21.1 | 15 | 15 | 78 |
| 302 | 3 | 30 | 31800 | 1 1/2 | N/A | 21.1 | 15 | 15 | 78 |
| 303 | 3 | 30 | 30900 | 1 1/2 | N/A | 21.1 | 15 | 15 | 78 |
| 401 | 4 | 30 | 44000 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 402 | 4 | 30 | 42400 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 403 | 4 | 30 | 41200 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 404 | 4 | 30 | 40000 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 501 | 5 | 30 | 53000 | 1 1/2 | N/A | 34.1 | 17.3 | 15 | 81 |
| 502 | 5 | 30 | 52630 | 1 1/2 | N/A | 34.1 | 17.3 | 15 | 81 |
| 503 | 5 | 30 | 51500 | 1 1/2 | N/A | 34.1 | 17.3 | 15 | 81 |
| 504 | 5 | 30 | 50000 | 1 1/2 | N/A | 34.1 | 17.3 | 15 | 81 |
| 601 | 6 | 30 | 63150 | 1 1/2 | N/A | 40.6 | 20.6 | 15 | 82 |
| 602 | 6 | 30 | 61800 | 1 1/2 | N/A | 40.6 | 20.6 | 15 | 82 |
| 603 | 6 | 30 | 60000 | 1 1/2 | N/A | 40.6 | 20.6 | 15 | 82 |

Table 3

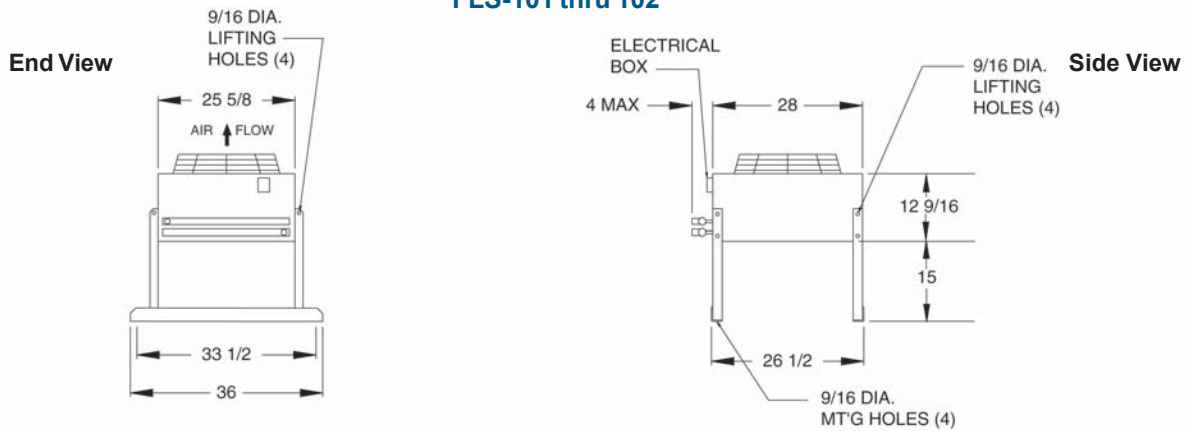
| DOUBLE FAN-WIDTH UNITS | | | | | | | | | |
|------------------------|----------|---------------|--------------|--------------|-----------------------|------------------|--------------|--------------|------------------------|
| MODEL # FLD | FAN DATA | | | MOTOR DATA | | | | | Noise Data (dba) |
| | Qty. | Dia. (in.) | Total CFM | Nom. H.P. | MIN. CIRCUIT AMPACITY | | | | |
| | | | | | 208-230 1 ph. | 208-230 3 ph. | 460 3 ph. | 575 3 ph. | |
| 411 | 4 | 30 | 44800 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 412 | 4 | 30 | 44000 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 413 | 4 | 30 | 42400 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 414 | 4 | 30 | 41200 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 415 | 4 | 30 | 40000 | 1 1/2 | N/A | 27.6 | 15 | 15 | 80 |
| 611 | 6 | 30 | 67200 | 1 1/2 | N/A | 40.6 | 15 | 20.6 | 82 |
| 612 | 6 | 30 | 66000 | 1 1/2 | N/A | 40.6 | 15 | 20.6 | 82 |
| 613 | 6 | 30 | 64800 | 1 1/2 | N/A | 40.6 | 15 | 20.6 | 82 |
| 614 | 6 | 30 | 63600 | 1 1/2 | N/A | 40.6 | 15 | 20.6 | 82 |
| 615 | 6 | 30 | 61800 | 1 1/2 | N/A | 40.6 | 15 | 20.6 | 82 |
| 616 | 6 | 30 | 60000 | 1 1/2 | N/A | 40.6 | 15 | 20.6 | 82 |
| 811 | 8 | 30 | 88000 | 1 1/2 | N/A | 53.6 | 15 | 27.2 | 83 |
| 812 | 8 | 30 | 84800 | 1 1/2 | N/A | 53.6 | 15 | 27.2 | 83 |
| 813 | 8 | 30 | 82400 | 1 1/2 | N/A | 53.6 | 15 | 27.2 | 83 |
| 814 | 8 | 30 | 80000 | 1 1/2 | N/A | 53.6 | 15 | 27.2 | 83 |
| 1011 | 10 | 30 | 106000 | 1 1/2 | N/A | 66.6 | 15 | 33.8 | 84 |
| 1012 | 10 | 30 | 105250 | 1 1/2 | N/A | 66.6 | 15 | 33.8 | 84 |
| 1013 | 10 | 30 | 103000 | 1 1/2 | N/A | 66.6 | 15 | 33.8 | 84 |
| 1014 | 10 | 30 | 100000 | 1 1/2 | N/A | 66.6 | 15 | 33.8 | 84 |
| 1211 | 12 | 30 | 126300 | 1 1/2 | N/A | 79.6 | 15 | 40.4 | 84 |
| 1212 | 12 | 30 | 123600 | 1 1/2 | N/A | 79.6 | 15 | 40.4 | 84 |
| 1213 | 12 | 30 | 120000 | 1 1/2 | N/A | 79.6 | 15 | 40.4 | 84 |

Table 4: Motor Amps

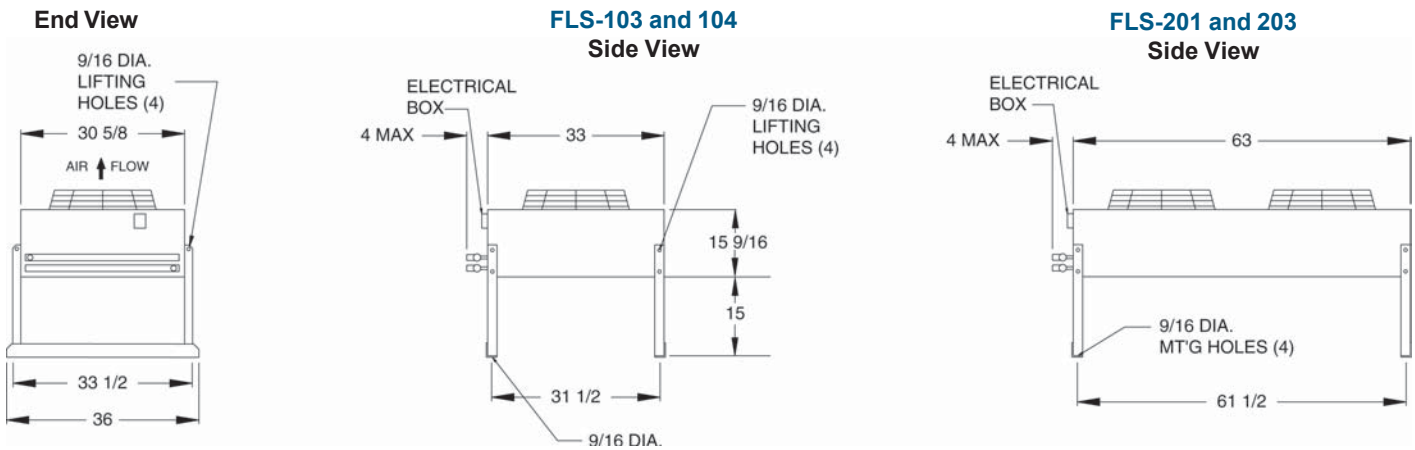
| ELECTRICAL CHARACTERISTICS | MOTOR HORSEPOWER | | |
|-------------------------------|------------------|-------|-------|
| | 1/2 | 1 | 1 1/2 |
| 208-230/1/60 | 2.5 a | 4.9 a | N/A |
| 208-230/3/60 | 2.0 a | 4.0 a | 6.5 a |
| 460/3/60 | 1.0 a | 2.0 a | 3.3 a |
| 575/3/60 | 1.0 a | 1.8 a | 2.4 a |

208-230V motors are usable on 190-220V, 50 HZ power.
460V motors are usable on 380-415V, 50HZ power.

FLS-101 thru 102



FLS-103 thru 203



**LEG DETAILS
 MODELS FLS-204 THRU FLD-1213**

Standard 18 inch leg

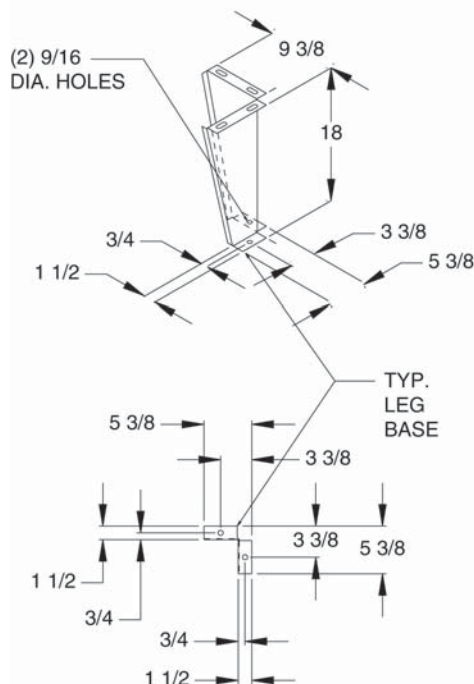


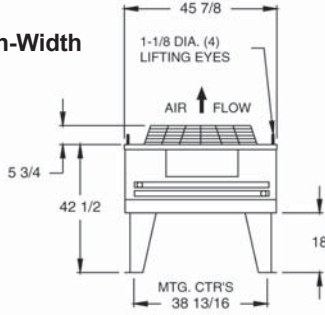
Table 5: Connection Sizes*

| GPM RANGE | INLET & OUTLET | |
|-----------|----------------|-------|
| | QTY. | SIZE |
| 10-20 | 1 | 1 1/4 |
| 21-40 | 1 | 1 1/2 |
| 41-70 | 1 | 2 |
| 71-100 | 1 | 2 1/2 |
| 101-150 | 1 | 3 |
| 151-200 | 2 | 2 1/2 |
| 201-300 | 2 | 3 |
| 301-450 | 3 | 3 |
| 451-550 | 4 | 3 |

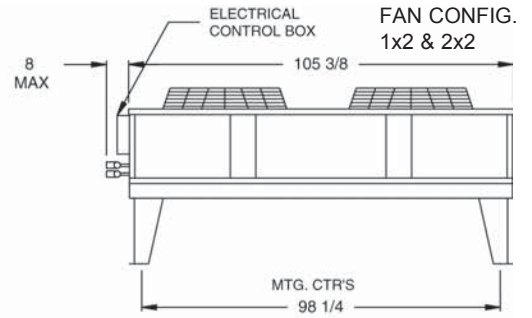
* All connections are copper MPT

FLS-204 THRU FLD-1213

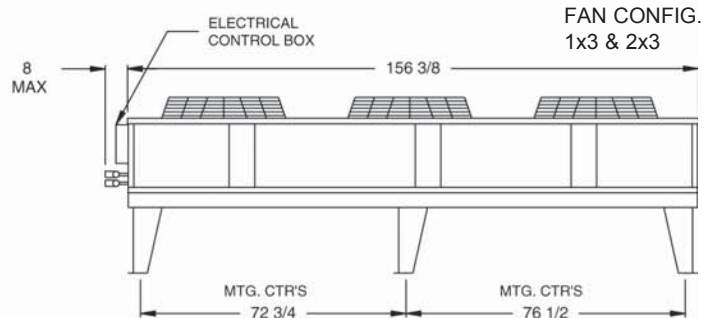
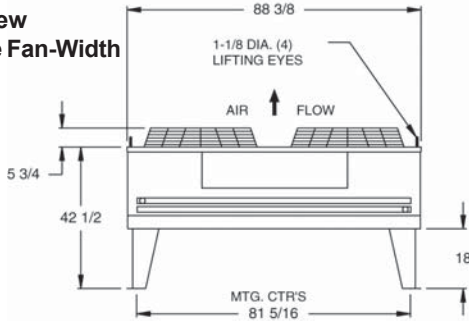
End View
Single Fan-Width Units



Side View

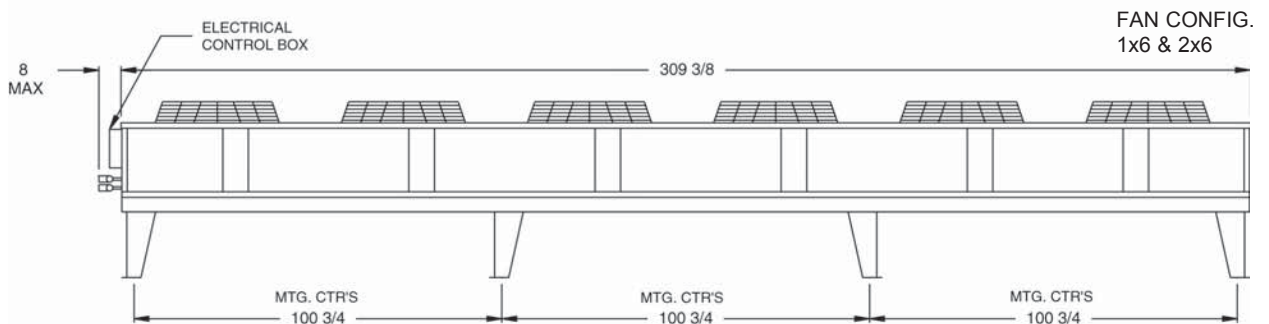
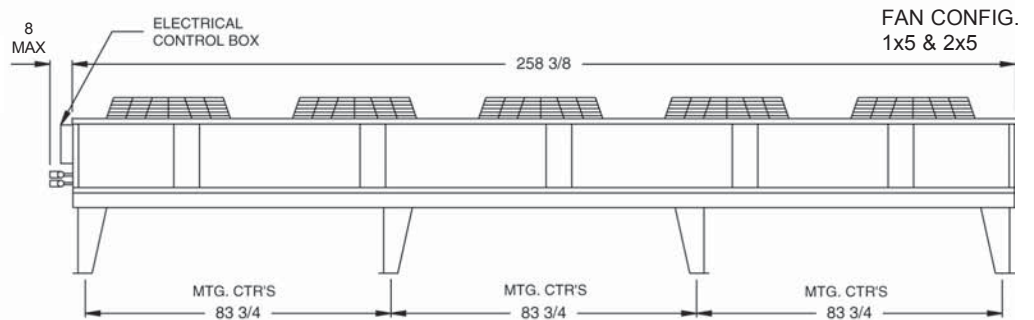
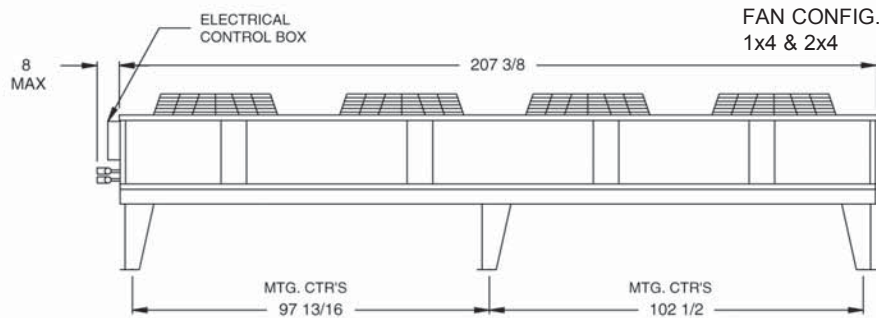


End View
Double Fan-Width Units



| UNIT WEIGHTS SINGLE FAN-WIDTH | | |
|-------------------------------------|--------------------|----------------|
| FLS | NET WT. LBS. | FAN CONFIG. |
| 101 | 109 | 1 |
| 102 | 121 | 1 |
| 103 | 144 | 1 |
| 104 | 160 | 1 |
| 201 | 234 | 1 x 2 |
| 202 | 259 | 1 x 2 |
| 203 | 283 | 1 x 2 |
| 204 | 510 | 1 x 2 |
| 205 | 518 | 1 x 2 |
| 206 | 536 | 1 x 2 |
| 207 | 566 | 1 x 2 |
| 208 | 580 | 1 x 2 |
| 209 | 630 | 1 x 2 |
| 210 | 650 | 1 x 2 |
| 211 | 730 | 1 x 2 |
| 301 | 900 | 1 x 3 |
| 302 | 930 | 1 x 3 |
| 303 | 1010 | 1 x 3 |
| 401 | 1135 | 1 x 4 |
| 402 | 1201 | 1 x 4 |
| 403 | 1327 | 1 x 4 |
| 404 | 1360 | 1 x 4 |
| 501 | 1582 | 1 x 5 |
| 502 | 1654 | 1 x 5 |
| 503 | 1676 | 1 x 5 |
| 504 | 1698 | 1 x 5 |
| 601 | 2002 | 1 x 6 |
| 602 | 2030 | 1 x 6 |
| 603 | 2052 | 1 x 6 |

| UNIT WEIGHTS DOUBLE FAN-WIDTH | | |
|-------------------------------------|--------------------|----------------|
| FLD | NET WT. LBS. | FAN CONFIG. |
| 411 | 1080 | 2 x 2 |
| 412 | 1130 | 2 x 2 |
| 413 | 1190 | 2 x 2 |
| 414 | 1300 | 2 x 2 |
| 415 | 1330 | 2 x 2 |
| 611 | 1580 | 2 x 3 |
| 612 | 1650 | 2 x 3 |
| 613 | 1710 | 2 x 3 |
| 614 | 1740 | 2 x 3 |
| 615 | 1870 | 2 x 3 |
| 616 | 1910 | 2 x 3 |
| 811 | 2180 | 2 x 4 |
| 812 | 2300 | 2 x 4 |
| 813 | 2530 | 2 x 4 |
| 814 | 2590 | 2 x 4 |
| 1011 | 2980 | 2 x 5 |
| 1012 | 3110 | 2 x 5 |
| 1013 | 3140 | 2 x 5 |
| 1014 | 3080 | 2 x 5 |
| 1211 | 3730 | 2 x 6 |
| 1212 | 3770 | 2 x 6 |
| 1213 | 3820 | 2 x 6 |



General

Units shall be furnished as per the following specifications - Coilmaster Model FLS, FLD air-cooled fluid coolers. Units shall be ETL listed (US and Canada).

Unit Cabinets

- Housing shall be constructed of heavy-gauge galvanized steel for maximum rigidity and corrosion protection. Optional heavy-gauge aluminum cabinet shall be provided upon request.
- All multiple fan units shall have individual fan sections, separated by full width baffles to prevent air bypass and provide additional casing rigidity.
- All end panels and tube supports shall be constructed from heavy-gauge aluminum to eliminate tube leaks at the tube sheets.
- Unit sizes FLS-204 and larger shall be provided with lifting eyes for rigging.
- Unit sizes FLS-101 through FLS-203 shall be provided with legs for field assembly for either horizontal or vertical airflow.
- Unit sizes FLS-204 and larger shall be provided with 10 gauge galvanized steel legs factory-mounted for convenient unit installation.

Fluid Coil

- Coils shall be constructed of seamless 1/2-inch O.D. copper tubing on a staggered pattern.
- All tubes shall be mechanically expanded into full-collared plate-type aluminum (or optional copper) fins for permanent contact and maximum heat transfer efficiency.
- All coils shall be leak tested at 500 psig with dry nitrogen.

Fans

- Fans shall be propeller type with aluminum blades and painted steel hubs. Fans shall be dynamically balanced and factory run tested before shipping.
- Fans shall have set screw that seats onto the keyway on the shafts.

Fan Guards

- Fan guards shall be heavy gauge steel wire with painted finish for maximum protection and attractive appearance.

Fan Motors

- Fan motors shall be heavy duty PSC or three phase open drip-proof with built-in overload protection and permanently lubricated ball bearings.
- All motors shall have a rigid base mounted to 12 gauge galvanized steel rails. Motors shall be factory wired with leads terminating in a weather-tight enclosure.

Coilmaster reserves the right to make design changes and modifications to its products without notice.

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