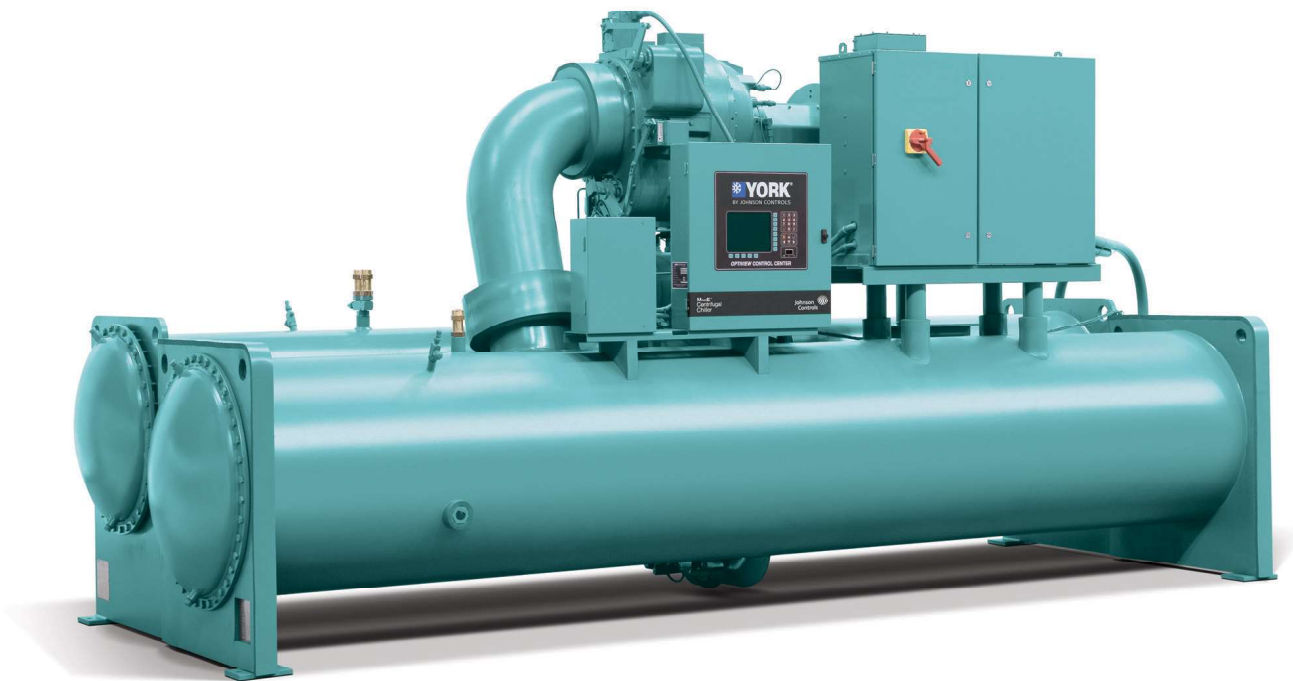


MODEL YK CENTRIFUGAL LIQUID CHILLERS STYLE G

250 THROUGH 3000 TONS
(879 through 10,500 kW)
Utilizing HFC-134a

Model #: YKFQFQQ7-CRGS
Serial #: SGTM-018780

Size: 597 Tons
Year: 2008



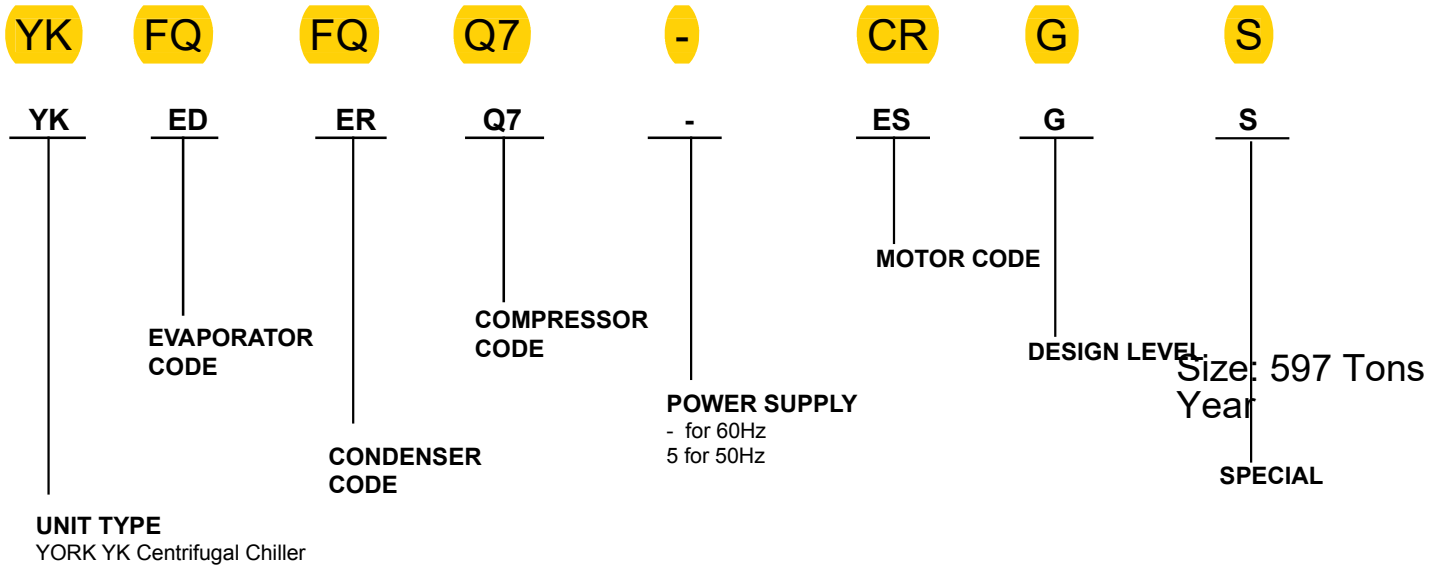
Shipping Weight: 18,720 lbs
Operating Weight: 23,880 lbs

L: 19' 0"
W: 7' 7"
H: 10' 6"



BY JOHNSON CONTROLS

Nomenclature



Approvals

See *CODES AND STANDARDS* on page 21 for Approvals.

Dimensions in this guide are English (SI)

Application Data (Cont'd)

TABLE 6 - MOTOR VOLTAGE VARIATIONS

| FREQ. | RATED VOLTAGE | NAMEPLATE VOLTAGE* | OPERATING VOLTAGE | |
|-------|---------------|--------------------|-------------------|---------|
| | | | MIN. | MAXIMUM |
| 60 HZ | 200 | 200/208 | 180 | 220 |
| | 230 | 220/240 | 208 | 254 |
| | 380 | 380 | 342 | 415 |
| | 416 | 416 | 375 | 457 |
| | 460 | 440/460/480 | 414 | 508 |
| | 575 | 575/600 | 520 | 635 |
| | 2300 | 2300 | 2070 | 2530 |
| | 3300 | 3300 | 2970 | 3630 |
| | 4000 | 4000/4160 | 3600 | 4576 |
| 50 HZ | 346 | 346 | 311 | 381 |
| | 380 | 380/400 | 342 | 423 |
| | 415 | 415 | 374 | 440 |
| | 3300 | 3300 | 2970 | 3630 |

*For motor voltage above 4160V/60Hz and 3300V/50HZ contact your JCI Sales Office for a specific selection.

MOTOR ELECTRICAL DATA

The smallest motor available which equals or exceeds the Input power (kW) from the chiller rating program is selected from Tables 10. The full load amperes (FLA) listed in the tables is maximum values and corresponds to the maximum motor kW listed. When the input power (kW) is less than maximum motor kW, the FLA should be reduced per the following equation:

$$FLA = \frac{\text{Motor kW} \times \text{Maximum Motor FLA}}{\text{Maximum Motor kW}}$$

The benefit from the FLA correction is the possible use of smaller power wiring and/or starter size. The locked rotor amperes (LRA) are read directly from Table 10 for specific Motor Code and voltage.

This is because the LRA is dependent only on motor size and voltage and is independent of input power (kW). Inrush amperes (IRA) depend on LRA and the type of starter applied. The inrush can be calculated using a percentage of LRA shown in Tables 13 to 17.

Application Data (Cont'd)

TABLE 7 - FLOODED EVAPORATOR WATER FLOW RATE LIMITS GPM (L/S) – BASED UPON STANDARD TUBES @ DESIGN FULL LOAD CONDITIONS

| FLOODED EVAPORATORS | | | | | | | CONDENSER | | | | | | |
|---------------------|---------------------|----------------------|--------------------|----------------------|--------------------|---------------------|-----------|---------------------|----------------------|--------------------|----------------------|--------------------|---------------------|
| MODEL | 1 PASS | | 2 PASS | | 3 PASS | | MODEL | 1 PASS | | 2 PASS | | 3 PASS | |
| | MIN | MAX | MIN | MAX | MIN | MAX | | MIN | MAX | MIN | MAX | MIN | MAX |
| AP | 329 (21) | 1316 (83) | 164 (10) | 587 (37) | 110 (7) | 380 (24) | AP | 479 (30) | 1727 (109) | 240 (15) | 856 (54) | 160 (10) | 576 (36) |
| AQ | 403 (25) | 1613 (102) | 202 (13) | 713 (45) | 134 (8) | 460 (29) | AQ | 612 (39) | 2205 (139) | 306 (19) | 1068 (67) | 204 (13) | 732 (46) |
| AR | 493 (31) | 1973 (125) | 247 (16) | 861 (54) | 164 (10) | 552 (35) | AR | 681 (43) | 2455 (155) | 341 (21) | 1173 (74) | 227 (14) | 812 (51) |
| AS | 602 (38) | 2408 (152) | 301 (19) | 1032 (65) | 201 (13) | 655 (41) | AS | 770 (49) | 2773 (175) | 385 (24) | 1300 (82) | – | – |
| CP | 648 (41) | 2594 (164) | 324 (20) | 1151 (73) | 216 (14) | 755 (48) | CP | 779 (49) | 2807 (177) | 389 (25) | 1397 (88) | 260 (16) | 922 (58) |
| CQ | 729 (46) | 2917 (184) | 365 (23) | 1286 (81) | 243 (15) | 844 (53) | CQ | 896 (57) | 3228 (204) | 448 (28) | 1590 (100) | 299 (19) | 1050 (66) |
| CR | 866 (55) | 3463 (218) | 433 (27) | 1509 (95) | 289 (18) | 992 (63) | CR | 1120 (71) | 4035 (255) | 560 (35) | 1941 (122) | 373 (24) | 1285 (81) |
| CS | 1043 (66) | 4170 (263) | 521 (33) | 1787 (113) | 348 (22) | 1176 (74) | CS | 1397 (88) | 5035 (318) | 699 (44) | 2340 (148) | – | – |
| DP | 648 (41) | 2594 (164) | 324 (20) | 988 (62) | 216 (14) | 648 (41) | DP | 779 (49) | 2807 (177) | 389 (25) | 1203 (76) | 260 (16) | 793 (50) |
| DQ | 729 (46) | 2917 (184) | 365 (23) | 1106 (70) | 243 (15) | 725 (46) | DQ | 896 (57) | 3228 (204) | 448 (28) | 1372 (87) | 299 (19) | 906 (57) |
| DR | 866 (55) | 3463 (218) | 433 (27) | 1301 (82) | 289 (18) | 854 (54) | DR | 1120 (71) | 4035 (255) | 560 (35) | 1685 (106) | 373 (24) | 1114 (70) |
| DS | 1043 (66) | 4170 (263) | 521 (33) | 1547 (98) | 348 (22) | 1017 (64) | DS | 1397 (88) | 5035 (318) | 699 (44) | 2048 (129) | – | – |
| EP | 859 (54) | 3438 (217) | 430 (27) | 1535 (97) | 286 (18) | 1009 (64) | EP | 1120 (71) | 4035 (255) | 560 (35) | 2017 (127) | 373 (24) | 1337 (84) |
| EQ | 1046 (66) | 4183 (264) | 523 (33) | 1853 (117) | 349 (22) | 1220 (77) | EQ | 1344 (85) | 4842 (305) | 672 (42) | 2394 (151) | 448 (28) | 1590 (100) |
| ER | 1232 (78) | 4927 (311) | 616 (39) | 2164 (136) | 411 (26) | 1428 (90) | ER | 1583 (100) | 5705 (360) | 792 (50) | 2779 (175) | 528 (33) | 1853 (117) |
| ES | 1452 (92) | 5809 (366) | 726 (46) | 2519 (159) | 484 (31) | 1667 (105) | ES | 1750 (110) | 6308 (398) | 875 (55) | 3037 (192) | 583 (37) | 2031 (128) |
| ET | 1676 (106) | 6702 (423) | 838 (53) | 2865 (181) | 559 (35) | 1903 (120) | ET | 1946 (123) | 7012 (442) | 973 (61) | 3328 (210) | – | – |
| FQ | 1046 (66) | 4183 (264) | 523 (33) | 1591 (100) | 349 (22) | 1046 (66) | FQ | 1344 (85) | 4842 (305) | 672 (42) | 2064 (130) | 448 (28) | 1368 (86) |
| FR | 1232 (78) | 4927 (311) | 616 (39) | 1862 (117) | 411 (26) | 1226 (77) | FR | 1583 (100) | 5705 (360) | 792 (50) | 2405 (152) | 528 (33) | 1599 (101) |
| FS | 1452 (92) | 5809 (366) | 726 (46) | 2175 (137) | 484 (31) | 1436 (91) | FS | 1750 (110) | 6308 (398) | 875 (55) | 2636 (166) | 583 (37) | 1756 (111) |
| FT | 1676 (106) | 6702 (423) | 838 (53) | 2482 (157) | 559 (35) | 1643 (104) | FT | 1946 (123) | 7012 (442) | 973 (61) | 2898 (183) | – | – |
| GQ | 1443 (91) | 5771 (364) | 721 (46) | 2504 (158) | 481 (30) | 1657 (105) | EV | 1583 (100) | 5705 (360) | 792 (50) | 2779 (175) | 528 (33) | 1853 (117) |
| GR | 1629 (103) | 6516 (411) | 814 (51) | 2794 (176) | 543 (34) | 1855 (117) | EW | 1750 (110) | 6308 (398) | 875 (55) | 3037 (192) | 583 (37) | 2031 (128) |

Application Data (Cont'd)

TABLE 10 - 60 HZ ELECTRICAL DATA

| MOTOR CODE | CF | CG | CH | CJ | CK | CL | CM | CN | CP | CR | CS | CT | CU | CV | CW | |
|--------------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SHAFT HP (MAX) | 154 | 177 | 201 | 237 | 270 | 302 | 327 | 351 | 385 | 424 | 468 | 503 | 554 | 608 | 655 | |
| INPUT KW (MAX) | 123 | 140 | 161 | 190 | 214 | 240 | 257 | 276 | 302 | 333 | 367 | 395 | 435 | 477 | 514 | |
| F.L. EFF. - % ¹ | 93.6 | 94.5 | 93.3 | 93 | 94 | 94 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | |
| F.L. POWER FACTOR ¹ | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| VOLTS | AMPERES (MAXIMUM) | | | | | | | | | | | | | | | |
| 200 | FLA | 405 | 465 | 527 | 618 | 707 | 787 | 831 | 921 | 1014 | 1085 | 1208 | - | - | - | - |
| | LRA | 2598 | 3111 | 3111 | 3810 | 4550 | 4900 | 5470 | 5780 | 5780 | 7350 | 7794 | - | - | - | - |
| 208 | FLA | 389 | 447 | 507 | 594 | 680 | 757 | 799 | 886 | 975 | 1043 | 1162 | - | - | - | - |
| | LRA | 2702 | 3235 | 3235 | 3962 | 4732 | 5096 | 5689 | 6011 | 6011 | 7644 | 8106 | - | - | - | - |
| 230 | FLA | 352 | 404 | 464 | 540 | 610 | 685 | 749 | 804 | 882 | 944 | 1050 | 1130 | - | - | - |
| | LRA | 2598 | 2598 | 2865 | 3460 | 3788 | 4260 | 4755 | 5162 | 5780 | 5780 | 6900 | 7400 | - | - | - |
| 240 | FLA | 337 | 387 | 445 | 518 | 585 | 656 | 718 | 771 | 845 | 905 | 1006 | 1083 | - | - | - |
| | LRA | 2711 | 2711 | 3120 | 3610 | 3953 | 4445 | 4962 | 5386 | 6031 | 6031 | 7200 | 7722 | - | - | - |
| 380 | FLA | 217 | 249 | 285 | 336 | 378 | 421 | 453 | 487 | 534 | 571 | 636 | 684 | 756 | 817 | 879 |
| | LRA | 1385 | 1385 | 1730 | 2153 | 2500 | 2577 | 2955 | 3254 | 3637 | 3810 | 4179 | 4480 | 4671 | 5326 | 5780 |
| 416 | FLA | 199 | 228 | 260 | 307 | 346 | 385 | 412 | 445 | 488 | 522 | 581 | 625 | 691 | 747 | 810 |
| | LRA | 1385 | 1385 | 1638 | 1967 | 2190 | 2356 | 2700 | 2976 | 3536 | 3637 | 3810 | 3810 | 4270 | 4869 | 5640 |
| 440 | FLA | 184 | 211 | 238 | 281 | 319 | 358 | 392 | 397 | 461 | 493 | 549 | 591 | 646 | 706 | 759 |
| | LRA | 1177 | 1301 | 1320 | 1655 | 1865 | 2037 | 2485 | 2485 | 2976 | 2976 | 3300 | 3644 | 3644 | 4209 | 4783 |
| 460 | FLA | 176 | 202 | 228 | 269 | 305 | 342 | 375 | 380 | 441 | 472 | 525 | 565 | 618 | 675 | 726 |
| | LRA | 1230 | 1360 | 1380 | 1730 | 1950 | 2130 | 2598 | 2598 | 3111 | 3111 | 3450 | 3500 | 3810 | 4400 | 4880 |
| 480 | FLA | 169 | 194 | 219 | 258 | 292 | 328 | 359 | 364 | 423 | 452 | 503 | 541 | 592 | 647 | 696 |
| | LRA | 1283 | 1419 | 1440 | 1805 | 2035 | 2223 | 2711 | 2711 | 3246 | 3246 | 3600 | 3976 | 3976 | 4591 | 5217 |
| 575 | FLA | 141 | 162 | 185 | 216 | 250 | 274 | 300 | 318 | 353 | 377 | 420 | 452 | 500 | 540 | 581 |
| | LRA | 909 | 909 | 1100 | 1384 | 1556 | 1700 | 1900 | 2066 | 2078 | 2413 | 2760 | 2960 | 3089 | 3550 | 4039 |
| 600 | FLA | 135 | 155 | 177 | 207 | 240 | 263 | 288 | 305 | 338 | 361 | 403 | 433 | 479 | 518 | 557 |
| | LRA | 949 | 949 | 1148 | 1444 | 1624 | 1774 | 1983 | 2156 | 2168 | 2518 | 2880 | 3089 | 3223 | 3704 | 4215 |
| 2300 | FLA | 36 | 41.1 | 46 | 55 | 63 | 70 | 73.9 | 80 | 87 | 95 | 106 | 113 | 124 | 135 | 146 |
| | LRA | 240 | 267 | 298 | 340 | 397 | 435 | 480 | 520 | 543 | 590 | 669 | 719 | 791 | 867 | 935 |
| 3300 | FLA | 25.5 | 29 | 33 | 39 | 44 | 49 | 52 | 55.3 | 61 | 67 | 72.8 | 79 | 86.1 | 94.4 | 102 |
| | LRA | 160 | 175 | 210 | 240 | 280 | 310 | 310 | 343 | 382 | 415 | 466 | 501 | 551 | 576 | 652 |
| 4000 | FLA | 21 | 24 | 26.7 | 32 | 36 | 40 | 42.5 | 46 | 50.1 | 55 | 60.1 | 65.2 | 71 | 77.9 | 84 |
| | LRA | 135 | 154 | 166 | 195 | 230 | 240 | 270 | 283 | 315 | 340 | 384 | 413 | 455 | 499 | 538 |
| 4160 | FLA | 20.2 | 23 | 25.7 | 30.8 | 34.6 | 38.5 | 40.9 | 44.2 | 48.2 | 52.9 | 57.8 | 62.7 | 68.3 | 74.9 | 80.8 |
| | LRA | 140 | 160 | 173 | 203 | 239 | 250 | 270 | 294 | 328 | 328 | 399 | 430 | 473 | 519 | 560 |

TABLE 11 - 50 HZ ELECTRICAL DATA

| MOTOR CODE | 5CC | 5CD | 5CE | 5CF | 5CG | 5CH | 5CI | 5CJ | 5CK | 5CL | 5CM | 5CN | 5CO | 5CP | 5CQ | 5CR | 5CS | |
|--------------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SHAFT HP (MAX) | 148 | 168 | 198 | 225 | 252 | 272 | 292 | 321 | 353 | 390 | 419 | 462 | 507 | 546 | 575 | 617 | 658 | |
| INPUT KW (MAX) | 119 | 135 | 158 | 179 | 201 | 215 | 231 | 254 | 279 | 309 | 332 | 363 | 398 | 429 | 451 | 484 | 516 | |
| F.L. EFF. - % ¹ | 93 | 93 | 93.4 | 93.7 | 93.7 | 94.2 | 94.2 | 94.2 | 94.2 | 94.2 | 94.2 | 95 | 95 | 95 | 95 | 95 | 95 | |
| F.L. POWER FACTOR ¹ | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.88 | |
| VOLTS | AMPERES (MAXIMUM) | | | | | | | | | | | | | | | | | |
| 346 | FLA | 230 | 261 | 306 | 347 | 389 | 418 | 448 | 493 | 536 | 592 | 636 | 696 | 763 | 822 | 866 | 929 | 979 |
| | LRA | 1385 | 1721 | 1790 | 2208 | 2467 | 2598 | 2840 | 3081 | 3350 | 3706 | 3810 | 4177 | 4830 | 4944 | 5373 | 5780 | 5780 |
| 380 | FLA | 210 | 238 | 278 | 316 | 354 | 380 | 408 | 449 | 488 | 539 | 579 | 633 | 695 | 748 | 788 | 846 | 892 |
| | LRA | 1385 | 1385 | 1640 | 1890 | 2144 | 2464 | 2590 | 2806 | 3050 | 3375 | 3700 | 3810 | 4400 | 4500 | 4892 | 5600 | 5491 |
| 400 | FLA | 200 | 226 | 264 | 300 | 336 | 361 | 388 | 427 | 464 | 512 | 550 | 601 | 660 | 711 | 749 | 804 | 847 |
| | LRA | 1458 | 1458 | 1726 | 1990 | 2257 | 2594 | 2726 | 2954 | 3211 | 3533 | 3895 | 4011 | 4632 | 4737 | 5149 | 5895 | 5780 |
| 415 | FLA | 192 | 218 | 255 | 290 | 324 | 348 | 374 | 411 | 447 | 494 | 530 | 580 | 636 | 685 | 722 | 774 | 817 |
| | LRA | 1283 | 1385 | 1490 | 1700 | 2031 | 2175 | 2366 | 2569 | 2794 | 3088 | 3402 | 3478 | 3810 | 4117 | 4480 | 5130 | 5108 |
| 3300 | FLA | 24.1 | 27.4 | 32.2 | 36.4 | 40.8 | 43.8 | 47 | 51.7 | 56.2 | 62.1 | 66.7 | 72.9 | 80 | 86.2 | 90.8 | 97.4 | 103 |
| | LRA | 159 | 162 | 209 | 236 | 241 | 274 | 294 | 318 | 317 | 388 | 423 | 455 | 499 | 516 | 572 | 614 | 644 |

NOTES:

- High voltage and special motor designs may not meet efficiency, power factor or amperes values shown for standard motors.
- Min. reduced voltage tap 80%.

Application Data (Cont'd)

TABLE 14 - MOTOR STARTERS

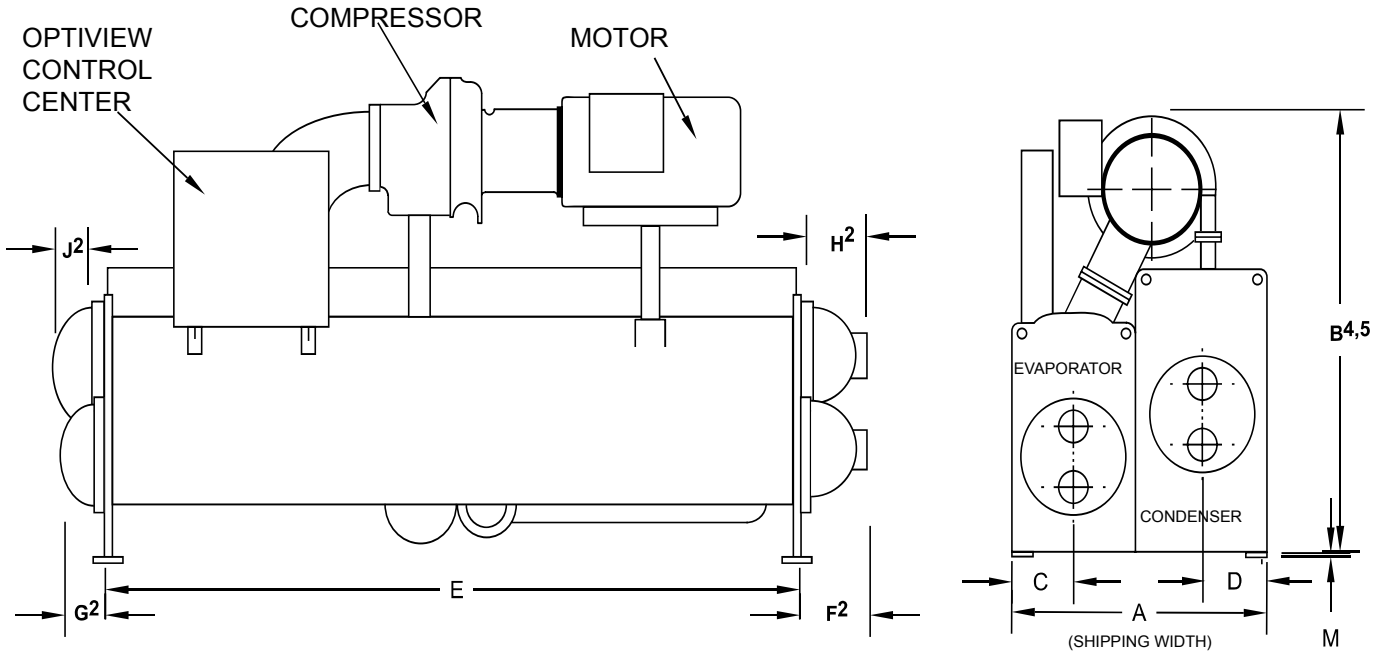
| TYPE STARTER | SOLID- STATE STARTER | STAR DELTA | AUTO TRANSFORMER | | | ACROSS- THE-LINE | PRIMARY REACTOR | |
|----------------------------|----------------------------|---------------|------------------|------------|----------|---------------------|-----------------|------------|
| | | | VOLTAGE | LOW/MEDIUM | LOW | | LOW/MEDIUM | LOW/MEDIUM |
| 60 HZ | 200-4160 | 200-600 | 200-600 | 200-4160 | 200-4160 | 200-4160 | 2300-4160 | 2300-4160 |
| 50 HZ | 380-3300 | 346-415 | 346-415 | 346-3300 | 346-3300 | 346-3300 | 2300-3300 | 2300-3300 |
| TRANSITION | — | CLOSED | CLOSED | CLOSED | CLOSED | — | CLOSED | CLOSED |
| % TAP | — | — | 57.7 | 65 | 80 | — | 65 | 80 |
| INRUSH AS A % OF LRA | 45 | 33 | 33 | 42.3 | 64 | 100 | 65 | 80 |

NOTES:

1. For motor starters above 4160V/60Hz and 3300/50Hz contact the Johnson Controls Sales Office for a specific selection.
2. Minimum tap for 5DJ motor is 80%.

Dimensions

H, P, & Q COMPRESSOR UNITS



LD07134

| ADDITIONAL OPERATING HEIGHT CLEARANCE TO FLOOR | |
|--|----------------|
| TYPE OF CHILLER MOUNTING | M |
| NEOPRENE PAD ISOLATORS | 1-3/4" (45) |
| SPRING ISOLATORS 1" DEFLECTION | 1" (25) |
| DIRECT MOUNT | 3/4" (19) |

| P7, Q7 COMPRESSOR | | | |
|----------------------------------|---------------------|---------------------|---------------------|
| EVAPORATOR-CONDENSER SHELL CODES | | | |
| | E-E | E-I | F-F |
| A | 6'-2" (1880) | 7'-1 3/4" (2178) | 6'-2" (1880) |
| B | 8'-0 5/8" (2454) | 8'-8" (2642) | 8'-0 5/8" (2454) |
| C | 1'-7 1/2" (495) | 1'-7 1/2" (495) | 1'-7 1/2" (495) |
| D | 1'-5 1/2" (445) | 1'-11 3/8" (594) | 1'-5 1/2" (445) |
| E | 12'-0" (3658) | 12'-0" (3658) | 16'-0" (4877) |

| P8 COMPRESSOR | | | | |
|----------------------------------|--------------------|--------------------|---------------------|---------------------|
| EVAPORATOR-CONDENSER SHELL CODES | | | | |
| | G-E | H-F | J-J | L-L |
| A | 6'-11" (2108) | 6'-11" (2108) | 7'-6 1/2" (2299) | 7'-6 1/2" (2299) |
| B | 10'-6" (3200) | 10'-6" (3200) | 10'-11" (3327) | 10'-11" (3327) |
| C | 2'-0" (610) | 2'-0" (610) | 2'-1 1/4" (641) | 2'-1 1/4" (641) |
| D | 1'-5 1/2" (445) | 1'-5 1/2" (445) | 1'-8" (508) | 1'-8" (508) |
| E | 12'-0" (3658) | 16'-0" (4877) | 12'-0" (3658) | 16'-0" (4877) |

| P9 COMPRESSOR | | | |
|----------------------------------|--------------------|----------------------|----------------------|
| EVAPORATOR-CONDENSER SHELL CODES | | | |
| | H-F | J-J | L-L |
| A | 6'-11" (2108) | 7'-6 1/2" (2299) | 7'-6 1/2" (2299) |
| B | 10'-3" (3124) | 10'-8 1/2" (3264) | 10'-8 1/2" (3264) |
| C | 2'-0" (610) | 2'-1 1/4" (641) | 2'-1 1/4" (641) |
| D | 1'-5 1/2" (445) | 1'-8" (508) | 1'-8" (508) |
| E | 16'-0" (4877) | 12'-0" (3658) | 16'-0" (4877) |

Weights

TABLE 21 - APPROXIMATE UNIT WEIGHT INCLUDING MOTOR FOR FLOODED EVAPORATOR UNITS

| SHELLS | COMPRESSOR | SHIPPING WEIGHT LBS. (KGS.) | OPERATING WEIGHT LBS. (KGS.) | EST. REFRIGERANT CHARGE LBS. (KGS.) ¹ |
|--------|----------------|--------------------------------|---------------------------------|---|
| A-A | Q3 | 13100 (5942) | 15000 (6804) | 828 (376) |
| C-B | Q4 | 18023 (8175) | 22323 (10126) | 1525 (692) |
| C-C | Q3, Q4 | 14920 (6768) | 17940 (8138) | 1221 (554) |
| C-C | Q5 | 15330 (6954) | 18350 (8324) | 1221 (554) |
| D-D | Q3, Q4 | 17215 (7809) | 21100 (9571) | 1628 (738) |
| D-D | Q5 | 17625 (7995) | 21510 (9757) | 1628 (738) |
| E-E | Q3, Q4 | 17950 (8142) | 22160 (10052) | 1710 (776) |
| E-E | Q5, Q6, Q7, P7 | 18360 (8328) | 22570 (10238) | 1710 (776) |
| E-I | Q7 | 23567 (10690) | 29384 (13328) | 1805 (819) |
| F-F | Q5, Q6, Q7, P7 | 18720 (8491) | 23880 (10832) | 2175 (987) |
| G-E | P8 | 20300 (9208) | 24200 (10977) | 1990 (903) |
| H-F | P8, P9 | 23100 (10478) | 28000 (12701) | 2610 (1184) |
| J-J | P8, P9 | 24000 (10886) | 29100 (13200) | 2550 (1157) |
| L-L | P8, P9 | 27400 (12429) | 33900 (15377) | 3165 (1436) |
| K-K | H9 | 28530 (12941) | 36000 (16329) | 2925 (1327) |
| K-K | K1 | 31100 (14107) | 36200 (16420) | 3248 (1473) |
| K-O | H9 | 34483 (15641) | 44776 (20310) | 3260 (1479) |
| M-M | H9 | 34200 (15513) | 43600 (19777) | 3665 (1662) |
| M-M | K1, K2 | 38300 (17373) | 47100 (21364) | 3665 (1662) |
| M-U | K2 | 45178 (20493) | 58017 (26316) | 3540 (1606) |
| N-N | K1, K2 | 40893 (18549) | 50800 (23043) | 4225 (1916) |
| N-N | K3 | 48000 (21773) | 54100 (24540) | 4225 (1916) |
| P-P | K1, K2 | 41500 (18824) | 51900 (23542) | 3855 (1749) |
| Q-Q | K1, K2 | 45300 (20548) | 56800 (25764) | 4255 (1930) |
| Q-Q | K3 | 46000 (20865) | 60200 (27307) | 4255 (1930) |
| R-R | K3 | 52800 (23950) | 70300 (31888) | 4600 (2087) |
| R-R | K4 | 53000 (24041) | 70600 (32024) | 4600 (2087) |
| S-S | K4 | 59000 (26762) | 76300 (34609) | 4815 (2184) |
| S-V | K4 | 60100 (27261) | 81300 (36877) | 5467 (2480) |
| X-T | K4 | 59200 (26853) | 80000 (36288) | 5338 (2421) |
| X-X | K4 | 66000 (29937) | 87000 (39463) | 5875 (2665) |
| W-W | K7 | 79500 (36061) | 104000 (47174) | 8002 (3630) |
| Z-Y | K7 | 95230 (43196) | 123015 (55799) | 7175 (3255) |
| Z-Z | K7 | 80500 (36515) | 105000 (47628) | 6984 (3168) |

¹ Refrigerant charge quantity and weights will vary based on tube count.

TABLE 22 - APPROXIMATE UNIT WEIGHT INCLUDING MOTOR FOR HYBRID FALLING FILM EVAPORATOR UNITS

| SHELLS | COMPRESSOR | SHIPPING WEIGHT LBS. (KGS.) | OPERATING WEIGHT LBS. (KGS.) | EST. REFRIGERANT CHARGE LBS. (KGS.) ¹ |
|--------|----------------|--------------------------------|---------------------------------|---|
| A-A | Q3 | 12850 (5829) | 14419 (6540) | 695 (315) |
| C-C | Q3, Q4 | 14570 (6609) | 16848 (7642) | 875 (397) |
| C-C | Q5 | 15000 (6804) | 17278 (7837) | 875 (397) |
| D-D | Q4 | 17000 (7711) | 20051 (9095) | 1180 (535) |
| D-D | Q5 | 17410 (7897) | 20461 (9281) | 1180 (535) |
| E-E | Q5, Q6, Q7, P7 | 18700 (8482) | 21700 (9843) | 1120 (508) |
| F-F | Q5, Q6, Q7, P7 | 19220 (8718) | 23142 (10497) | 1415 (642) |
| G-E | P8, P9 | 20640 (9362) | 24036 (10903) | 1320 (599) |
| H-F | P8, P9 | 23540 (10678) | 28083 (12738) | 1775 (805) |
| I-K | H9 | 28849 (13086) | 34078 (15458) | 1820 (826) |
| K-K | H9 | 28850 (13086) | 34079 (15458) | 1820 (826) |
| I-K | K1 | 31350 (14220) | 35145 (15942) | 1820 (826) |
| M-M | K1, K2 | 34520 (15658) | 46055 (20890) | 2300 (1043) |
| N-N | K1, K2 | 41273 (18721) | 49605 (22501) | 2650 (1202) |
| N-N | K3 | 48380 (21945) | 52905 (23998) | 2650 (1202) |
| P-P | K1, K2 | 41950 (19028) | 51595 (23403) | 3100 (1406) |
| Q-Q | K1, K2 | 45800 (20775) | 56545 (25649) | 3500 (1588) |
| Q-Q | K3 | 46500 (21092) | 59945 (27191) | 3500 (1588) |

¹ Refrigerant charge quantity and weights will vary based on tube count and configuration. Use for reference only.