




DAS HERZ DER FRISCHE

DRY-EXPANSION EVAPORATORS

DP-276-1 EN



SQU SERIES

 HEAT EXCHANGERS

 HFO READY

 AIR CONDITIONING

 PROCESS COOLING

SQD

Application

The new SQD is a single pass dry-expansion evaporator designed for air conditioning and process cooling applications at positive temperature operation. SQD can be used for both medium and high efficiency chiller applications, ensuring the highest possible performance reachable with a dry-expansion evaporator.

Technology

SQD evaporator is optimized for R134a and R1234ze refrigerants and it is compatible with most HFC/HFO refrigerants.

The unique design is including:

- // a new square shell with a patented tube bundle design
- // a new patented multi chamber distribution system

Benefits

SQD evaporator...

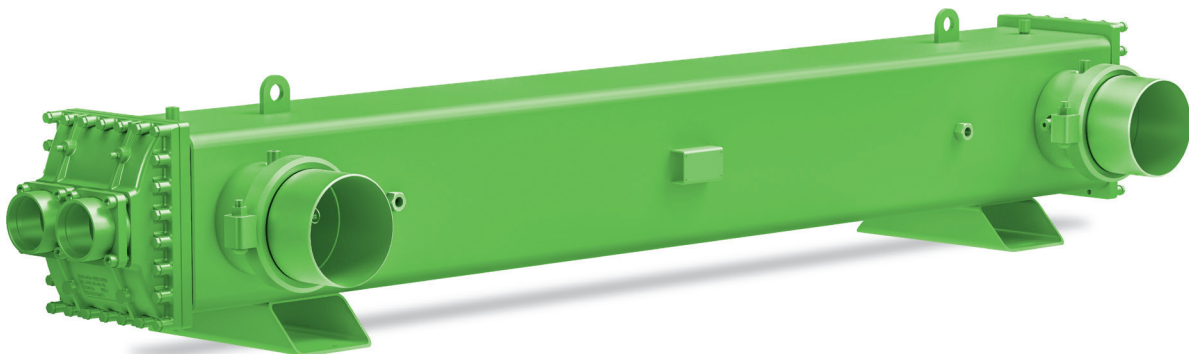
- // ensures a more consistent and stable performance with lower water pressure drop compared with other traditional dry expansion evaporators due to the innovative square shell design
- // includes a resistant internal structure to ensure long life reliability at high flow rates
- // features a modular refrigerant distribution system, to be optimized for different operating conditions
- // it is easy to be positioned inside a chiller frame.

Basic features

- // Water connections available with a left or right orientation
- // Available with 1, 2 or 3 independent refrigerant circuits
- // Available with 8 shell sizes from 150 to 500 mm
- // Overall length (L) from 2000 to 4200 mm
- // Cooling capacity up to 2 MW

Standard component materials

- // Shell, tube sheets: carbon steel
- // Refrigerant headers: cast iron; carbon steel
- // Tubes: copper
- // Baffles: plastic polymer



Working principle – evaporator mode

- // The refrigerant runs inside the tubes with one pass configuration
- // The brine flows within the shell side, on the outside of the tubes, in a counter cross flow pattern



Design data

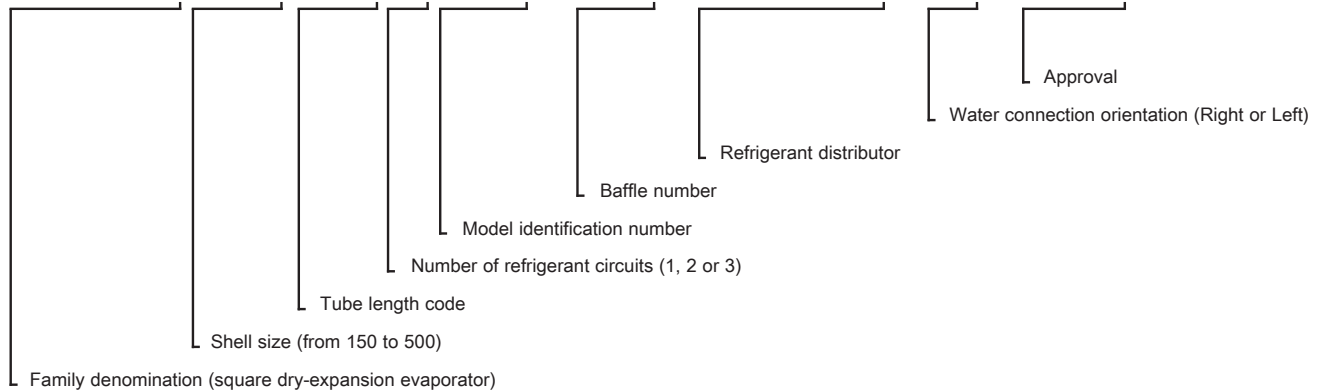
PED (CE) approval

| Version | Tube side | | | | Shell side | | | |
|---------|-----------|-------------|-------------|----------|------------|-------------|-------------|----------|
| | PS (bar) | TS max (°C) | TS min (°C) | TP (bar) | PS (bar) | TS max (°C) | TS min (°C) | TP (bar) |
| STD | 24,5 | 90 | -10 | 35 | 10 | 50 | -10 | 14,3 |

STD Standard version // PS Maximum allowable pressure // TS max Maximum allowable temperature // TS min Minimum allowable temperature // TP Test Pressure

Denomination

SQD3510208-13-6035-R-CE



Available on request

- // Support feet
- // Welded flanges and Victaulic flanges
- // 19 mm thermal insulation
- // Antifreeze electrical heater
- // SELO, EAC approvals



SQD model data table

150 size

| Model | Total length | Shell diameter | Header height | Header width | Water connections | Welded supports | Refrigerant inlet | Refrigerant outlet | Water connections | Refrigerant-side volume | Water-side volume | Weight |
|------------|--------------|----------------|---------------|--------------|-------------------|-----------------|-------------------|--------------------|---------------------|-------------------------|-------------------|--------|
| | A mm | B mm | C mm | E mm | G mm | H mm | R1/R2 | R3/R4 | W1/W2 | dm ³ | dm ³ | kg |
| SQD1506202 | 1943 | 150 | 195 | 195 | 1562 | 1100 | FL37-OD28 | FL55-OD54 | 3" (flexible joint) | 9 | 32 | 109 |
| SQD1506203 | 1943 | 150 | 195 | 195 | 1562 | 1100 | | | | 11 | 30 | 112 |
| SQD1506204 | 1943 | 150 | 195 | 195 | 1562 | 1100 | | | | 13 | 28 | 114 |
| SQD1507202 | 2343 | 150 | 195 | 195 | 1962 | 1500 | | | | 10 | 39 | 120 |
| SQD1507203 | 2343 | 150 | 195 | 195 | 1962 | 1500 | | | | 12 | 36 | 124 |
| SQD1507204 | 2343 | 150 | 195 | 195 | 1962 | 1500 | | | | 15 | 34 | 127 |
| SQD1508202 | 2643 | 150 | 195 | 195 | 2262 | 1800 | | | | 10 | 44 | 128 |
| SQD1508203 | 2643 | 150 | 195 | 195 | 2262 | 1800 | | | | 13 | 41 | 132 |
| SQD1508204 | 2643 | 150 | 195 | 195 | 2262 | 1800 | | | | 16 | 38 | 136 |
| SQD1509202 | 2893 | 150 | 195 | 195 | 2512 | 2100 | | | | 11 | 48 | 135 |
| SQD1509203 | 2893 | 150 | 195 | 195 | 2512 | 2100 | | | | 14 | 45 | 140 |
| SQD1509204 | 2893 | 150 | 195 | 195 | 2512 | 2100 | | | | 17 | 42 | 144 |
| SQD1510202 | 3148 | 150 | 195 | 195 | 2767 | 2300 | | | | 12 | 53 | 142 |
| SQD1510203 | 3148 | 150 | 195 | 195 | 2767 | 2300 | | | | 15 | 49 | 147 |
| SQD1510204 | 3148 | 150 | 195 | 195 | 2767 | 2300 | | | | 18 | 45 | 152 |
| SQD1511202 | 3443 | 150 | 195 | 195 | 3062 | 2500 | | | | 12 | 58 | 150 |
| SQD1511203 | 3443 | 150 | 195 | 195 | 3062 | 2500 | | | | 16 | 54 | 156 |
| SQD1511204 | 3443 | 150 | 195 | 195 | 3062 | 2500 | | | | 19 | 50 | 161 |
| SQD1512202 | 3743 | 150 | 195 | 195 | 3362 | 2700 | | | | 13 | 63 | 159 |
| SQD1512203 | 3743 | 150 | 195 | 195 | 3362 | 2700 | | | | 17 | 58 | 165 |
| SQD1512204 | 3743 | 150 | 195 | 195 | 3362 | 2700 | | | | 21 | 54 | 171 |
| SQD1513202 | 4043 | 150 | 195 | 195 | 3662 | 3000 | | | | 13 | 68 | 167 |
| SQD1513203 | 4043 | 150 | 195 | 195 | 3662 | 3000 | | | | 18 | 63 | 174 |
| SQD1513204 | 4043 | 150 | 195 | 195 | 3662 | 3000 | | | | 22 | 58 | 180 |

200 size

| | | | | | | | | | | | | |
|------------|------|-----|-----|-----|------|------|-----------|-----------|---------------------|----|-----|-----|
| SQD2006204 | 1959 | 200 | 250 | 230 | 1537 | 1100 | FL37-OD28 | FL70-OD67 | 4" (flexible joint) | 17 | 54 | 172 |
| SQD2006205 | 1959 | 200 | 250 | 230 | 1537 | 1100 | | | | 20 | 51 | 176 |
| SQD2006206 | 1959 | 200 | 250 | 230 | 1537 | 1100 | | | | 22 | 48 | 178 |
| SQD2007204 | 2359 | 200 | 250 | 230 | 1937 | 1500 | | | | 19 | 65 | 191 |
| SQD2007205 | 2359 | 200 | 250 | 230 | 1937 | 1500 | | | | 23 | 61 | 196 |
| SQD2007206 | 2359 | 200 | 250 | 230 | 1937 | 1500 | | | | 26 | 58 | 200 |
| SQD2008204 | 2659 | 200 | 250 | 230 | 2237 | 1800 | | | | 21 | 74 | 206 |
| SQD2008205 | 2659 | 200 | 250 | 230 | 2237 | 1800 | | | | 25 | 69 | 211 |
| SQD2008206 | 2659 | 200 | 250 | 230 | 2237 | 1800 | | | | 28 | 66 | 216 |
| SQD2009204 | 2909 | 200 | 250 | 230 | 2487 | 2100 | | | | 22 | 81 | 218 |
| SQD2009205 | 2909 | 200 | 250 | 230 | 2487 | 2100 | | | | 27 | 76 | 224 |
| SQD2009206 | 2909 | 200 | 250 | 230 | 2487 | 2100 | | | | 30 | 72 | 229 |
| SQD2010204 | 3164 | 200 | 250 | 230 | 2742 | 2300 | | | | 24 | 88 | 230 |
| SQD2010205 | 3164 | 200 | 250 | 230 | 2742 | 2300 | | | | 28 | 83 | 237 |
| SQD2010206 | 3164 | 200 | 250 | 230 | 2742 | 2300 | | | | 33 | 78 | 242 |
| SQD2011204 | 3459 | 200 | 250 | 230 | 3037 | 2500 | | | | 26 | 97 | 244 |
| SQD2011205 | 3459 | 200 | 250 | 230 | 3037 | 2500 | | | | 30 | 91 | 252 |
| SQD2011206 | 3459 | 200 | 250 | 230 | 3037 | 2500 | | | | 35 | 86 | 258 |
| SQD2012204 | 3759 | 200 | 250 | 230 | 3337 | 2700 | | | | 27 | 105 | 259 |
| SQD2012205 | 3759 | 200 | 250 | 230 | 3337 | 2700 | | | | 33 | 99 | 268 |
| SQD2012206 | 3759 | 200 | 250 | 230 | 3337 | 2700 | | | | 38 | 93 | 275 |
| SQD2013204 | 4059 | 200 | 250 | 230 | 3637 | 3000 | | | | 29 | 114 | 274 |
| SQD2013205 | 4059 | 200 | 250 | 230 | 3637 | 3000 | | | | 35 | 107 | 284 |
| SQD2013206 | 4059 | 200 | 250 | 230 | 3637 | 3000 | | | | 40 | 101 | 291 |

Dimensional data referring to double refrigerant circuit models – please see technical drawing on page 11.

250 size

| Model | Total length | Shell diameter | Header height | Header width | Water connections | Welded supports | Refrigerant inlet | Refrigerant outlet | Water connections | Refrigerant-side volume | Water-side volume | Weight |
|------------|--------------|----------------|---------------|--------------|-------------------|-----------------|-------------------|--------------------|---------------------|-------------------------|-------------------|--------|
| | A mm | B mm | C mm | E mm | G mm | H mm | R1/R2 | R3/R4 | W1/W2 | dm ³ | dm ³ | kg |
| SQD2506205 | 1974 | 250 | 305 | 280 | 1511 | 1100 | FL55-OD35 | FL70-OD76 | 5" (flexible joint) | 25 | 83 | 263 |
| SQD2506206 | 1974 | 250 | 305 | 280 | 1511 | 1100 | | | | 28 | 80 | 267 |
| SQD2506207 | 1974 | 250 | 305 | 280 | 1511 | 1100 | | | | 31 | 76 | 272 |
| SQD2506208 | 1974 | 250 | 305 | 280 | 1511 | 1100 | | | | 34 | 73 | 277 |
| SQD2507205 | 2374 | 250 | 305 | 280 | 1911 | 1500 | | | | 28 | 101 | 294 |
| SQD2507206 | 2374 | 250 | 305 | 280 | 1911 | 1500 | | | | 32 | 97 | 299 |
| SQD2507207 | 2374 | 250 | 305 | 280 | 1911 | 1500 | | | | 36 | 92 | 305 |
| SQD2507208 | 2374 | 250 | 305 | 280 | 1911 | 1500 | | | | 40 | 88 | 311 |
| SQD2508205 | 2674 | 250 | 305 | 280 | 2211 | 1800 | | | | 31 | 115 | 317 |
| SQD2508206 | 2674 | 250 | 305 | 280 | 2211 | 1800 | | | | 35 | 110 | 323 |
| SQD2508207 | 2674 | 250 | 305 | 280 | 2211 | 1800 | | | | 40 | 105 | 330 |
| SQD2508208 | 2674 | 250 | 305 | 280 | 2211 | 1800 | | | | 44 | 100 | 337 |
| SQD2509205 | 2924 | 250 | 305 | 280 | 2461 | 2100 | | | | 33 | 126 | 336 |
| SQD2509206 | 2924 | 250 | 305 | 280 | 2461 | 2100 | | | | 38 | 120 | 343 |
| SQD2509207 | 2924 | 250 | 305 | 280 | 2461 | 2100 | | | | 43 | 115 | 351 |
| SQD2509208 | 2924 | 250 | 305 | 280 | 2461 | 2100 | | | | 38 | 109 | 358 |
| SQD2510205 | 3179 | 250 | 305 | 280 | 2716 | 2300 | | | | 35 | 137 | 355 |
| SQD2510206 | 3179 | 250 | 305 | 280 | 2716 | 2300 | | | | 40 | 131 | 363 |
| SQD2510207 | 3179 | 250 | 305 | 280 | 2716 | 2300 | | | | 46 | 125 | 372 |
| SQD2510208 | 3179 | 250 | 305 | 280 | 2716 | 2300 | | | | 51 | 119 | 380 |
| SQD2511205 | 3474 | 250 | 305 | 280 | 3011 | 2500 | | | | 38 | 150 | 377 |
| SQD2511206 | 3474 | 250 | 305 | 280 | 3011 | 2500 | | | | 43 | 144 | 386 |
| SQD2511207 | 3474 | 250 | 305 | 280 | 3011 | 2500 | | | | 50 | 137 | 396 |
| SQD2511208 | 3474 | 250 | 305 | 280 | 3011 | 2500 | | | | 55 | 130 | 405 |
| SQD2512205 | 3774 | 250 | 305 | 280 | 3311 | 2700 | | | | 41 | 164 | 400 |
| SQD2512206 | 3774 | 250 | 305 | 280 | 3311 | 2700 | | | | 47 | 157 | 410 |
| SQD2512207 | 3774 | 250 | 305 | 280 | 3311 | 2700 | | | | 53 | 149 | 420 |
| SQD2512208 | 3774 | 250 | 305 | 280 | 3311 | 2700 | | | | 60 | 142 | 430 |
| SQD2513205 | 4074 | 250 | 305 | 280 | 3611 | 3000 | | | | 43 | 177 | 424 |
| SQD2513206 | 4074 | 250 | 305 | 280 | 3611 | 3000 | | | | 50 | 170 | 434 |
| SQD2513207 | 4074 | 250 | 305 | 280 | 3611 | 3000 | | | | 57 | 161 | 446 |
| SQD2513208 | 4074 | 250 | 305 | 280 | 3611 | 3000 | | | | 64 | 154 | 456 |

Dimensional data referring to double refrigerant circuit models – please see technical drawing on page 11.



SQD model data table

300 size

| Model | Total length | Shell diameter | Header height | Header width | Water connections | Welded supports | Refrigerant inlet | Refrigerant outlet | Water connections | Refrigerant-side volume | Water-side volume | Weight |
|------------|--------------|----------------|---------------|--------------|-------------------|-----------------|-------------------|--------------------|---------------------|-------------------------|-------------------|--------|
| | A mm | B mm | C mm | E mm | G mm | H mm | R1/R2 | R3/R4 | W1/W2 | dm ³ | dm ³ | kg |
| SQD3006207 | 1990 | 300 | 350 | 300 | 1500 | 1100 | FL55-OD42 | FL90-OD89 | 6" (flexible joint) | 38 | 112 | 327 |
| SQD3006208 | 1990 | 300 | 350 | 300 | 1500 | 1100 | | | | 42 | 107 | 331 |
| SQD3006209 | 1990 | 300 | 350 | 300 | 1500 | 1100 | | | | 46 | 103 | 337 |
| SQD3006210 | 1990 | 300 | 350 | 300 | 1500 | 1100 | | | | 50 | 98 | 342 |
| SQD3007207 | 2390 | 300 | 350 | 300 | 1900 | 1500 | | | | 44 | 138 | 377 |
| SQD3007208 | 2390 | 300 | 350 | 300 | 1900 | 1500 | | | | 49 | 132 | 383 |
| SQD3007209 | 2390 | 300 | 350 | 300 | 1900 | 1500 | | | | 54 | 127 | 390 |
| SQD3007210 | 2390 | 300 | 350 | 300 | 1900 | 1500 | | | | 59 | 121 | 397 |
| SQD3008207 | 2690 | 300 | 350 | 300 | 2200 | 1800 | | | | 49 | 156 | 412 |
| SQD3008208 | 2690 | 300 | 350 | 300 | 2200 | 1800 | | | | 54 | 150 | 419 |
| SQD3008209 | 2690 | 300 | 350 | 300 | 2200 | 1800 | | | | 60 | 143 | 428 |
| SQD3008210 | 2690 | 300 | 350 | 300 | 2200 | 1800 | | | | 66 | 137 | 436 |
| SQD3009207 | 2940 | 300 | 350 | 300 | 2450 | 2100 | | | | 53 | 171 | 441 |
| SQD3009208 | 2940 | 300 | 350 | 300 | 2450 | 2100 | | | | 59 | 164 | 449 |
| SQD3009209 | 2940 | 300 | 350 | 300 | 2450 | 2100 | | | | 65 | 157 | 459 |
| SQD3009210 | 2940 | 300 | 350 | 300 | 2450 | 2100 | | | | 71 | 150 | 468 |
| SQD3010207 | 3195 | 300 | 350 | 300 | 2705 | 2300 | | | | 57 | 186 | 471 |
| SQD3010208 | 3195 | 300 | 350 | 300 | 2705 | 2300 | | | | 63 | 179 | 480 |
| SQD3010209 | 3195 | 300 | 350 | 300 | 2705 | 2300 | | | | 70 | 171 | 490 |
| SQD3010210 | 3195 | 300 | 350 | 300 | 2705 | 2300 | | | | 77 | 164 | 500 |
| SQD3011207 | 3490 | 300 | 350 | 300 | 3000 | 2500 | | | | 61 | 204 | 506 |
| SQD3011208 | 3490 | 300 | 350 | 300 | 3000 | 2500 | | | | 68 | 196 | 516 |
| SQD3011209 | 3490 | 300 | 350 | 300 | 3000 | 2500 | | | | 76 | 188 | 527 |
| SQD3011210 | 3490 | 300 | 350 | 300 | 3000 | 2500 | | | | 83 | 180 | 538 |
| SQD3012207 | 3790 | 300 | 350 | 300 | 3300 | 2700 | | | | 66 | 223 | 541 |
| SQD3012208 | 3790 | 300 | 350 | 300 | 3300 | 2700 | | | | 74 | 214 | 552 |
| SQD3012209 | 3790 | 300 | 350 | 300 | 3300 | 2700 | | | | 82 | 205 | 565 |
| SQD3012210 | 3790 | 300 | 350 | 300 | 3300 | 2700 | | | | 90 | 196 | 577 |
| SQD3013207 | 4090 | 300 | 350 | 300 | 3600 | 3000 | | | | 70 | 241 | 579 |
| SQD3013208 | 4090 | 300 | 350 | 300 | 3600 | 3000 | | | | 79 | 231 | 591 |
| SQD3013209 | 4090 | 300 | 350 | 300 | 3600 | 3000 | | | | 88 | 221 | 605 |
| SQD3013210 | 4090 | 300 | 350 | 300 | 3600 | 3000 | | | | 96 | 212 | 618 |

Dimensional data referring to double refrigerant circuit models – please see technical drawing on page 11.

350 size

| Model | Total length | Shell diameter | Header height | Header width | Water connections | Welded supports | Refrigerant inlet | Refrigerant outlet | Water connections | Refrigerant-side volume | Water-side volume | Weight |
|------------|--------------|----------------|---------------|--------------|-------------------|-----------------|-------------------|--------------------|---------------------|-------------------------|-------------------|--------|
| | A mm | B mm | C mm | E mm | G mm | H mm | R1/R2 | R3/R4 | W1/W2 | dm ³ | dm ³ | kg |
| SQD3506208 | 2003 | 350 | 400 | 350 | 1462 | 1100 | FL55-OD42 | FL112-OD108 | 6" (flexible joint) | 49 | 158 | 419 |
| SQD3506209 | 2003 | 350 | 400 | 350 | 1462 | 1100 | | | | 54 | 152 | 426 |
| SQD3506210 | 2003 | 350 | 400 | 350 | 1462 | 1100 | | | | 58 | 147 | 431 |
| SQD3506211 | 2003 | 350 | 400 | 350 | 1462 | 1100 | | | | 63 | 142 | 438 |
| SQD3506212 | 2003 | 350 | 400 | 350 | 1462 | 1100 | | | | 68 | 137 | 443 |
| SQD3507208 | 2403 | 350 | 400 | 350 | 1862 | 1500 | | | | 57 | 192 | 477 |
| SQD3507209 | 2403 | 350 | 400 | 350 | 1862 | 1500 | | | | 63 | 185 | 485 |
| SQD3507210 | 2403 | 350 | 400 | 350 | 1862 | 1500 | | | | 68 | 179 | 492 |
| SQD3507211 | 2403 | 350 | 400 | 350 | 1862 | 1500 | | | | 74 | 173 | 501 |
| SQD3507212 | 2403 | 350 | 400 | 350 | 1862 | 1500 | | | | 80 | 166 | 508 |
| SQD3508208 | 2703 | 350 | 400 | 350 | 2162 | 1800 | | | | 63 | 221 | 528 |
| SQD3508209 | 2703 | 350 | 400 | 350 | 2162 | 1800 | | | | 70 | 214 | 538 |
| SQD3508210 | 2703 | 350 | 400 | 350 | 2162 | 1800 | | | 76 | 207 | 546 | |
| SQD3508211 | 2703 | 350 | 400 | 350 | 2162 | 1800 | | | 82 | 199 | 556 | |
| SQD3508212 | 2703 | 350 | 400 | 350 | 2162 | 1800 | | | 89 | 192 | 564 | |
| SQD3509208 | 2953 | 350 | 400 | 350 | 2412 | 2100 | | | 68 | 243 | 564 | |
| SQD3509209 | 2953 | 350 | 400 | 350 | 2412 | 2100 | | | 75 | 235 | 575 | |
| SQD3509210 | 2953 | 350 | 400 | 350 | 2412 | 2100 | | | 82 | 227 | 584 | |
| SQD3509211 | 2953 | 350 | 400 | 350 | 2412 | 2100 | | | 89 | 219 | 595 | |
| SQD3509212 | 2953 | 350 | 400 | 350 | 2412 | 2100 | | | 96 | 211 | 604 | |
| SQD3510208 | 3208 | 350 | 400 | 350 | 2667 | 2300 | | | 73 | 264 | 601 | |
| SQD3510209 | 3208 | 350 | 400 | 350 | 2667 | 2300 | | | 81 | 256 | 613 | |
| SQD3510210 | 3208 | 350 | 400 | 350 | 2667 | 2300 | | | 89 | 247 | 623 | |
| SQD3510211 | 3208 | 350 | 400 | 350 | 2667 | 2300 | | | 97 | 238 | 635 | |
| SQD3510212 | 3208 | 350 | 400 | 350 | 2667 | 2300 | | | 104 | 230 | 645 | |
| SQD3511208 | 3503 | 350 | 400 | 350 | 2962 | 2500 | | | 79 | 290 | 643 | |
| SQD3511209 | 3503 | 350 | 400 | 350 | 2962 | 2500 | | | 88 | 280 | 656 | |
| SQD3511210 | 3503 | 350 | 400 | 350 | 2962 | 2500 | | | 96 | 271 | 668 | |
| SQD3511211 | 3503 | 350 | 400 | 350 | 2962 | 2500 | | | 105 | 261 | 681 | |
| SQD3511212 | 3503 | 350 | 400 | 350 | 2962 | 2500 | | | 113 | 251 | 693 | |
| SQD3512208 | 3803 | 350 | 400 | 350 | 3262 | 2700 | | | 85 | 315 | 686 | |
| SQD3512209 | 3803 | 350 | 400 | 350 | 3262 | 2700 | | | 95 | 305 | 701 | |
| SQD3512210 | 3803 | 350 | 400 | 350 | 3262 | 2700 | | | 104 | 294 | 714 | |
| SQD3512211 | 3803 | 350 | 400 | 350 | 3262 | 2700 | | | 113 | 284 | 728 | |
| SQD3512212 | 3803 | 350 | 400 | 350 | 3262 | 2700 | | | 122 | 274 | 741 | |
| SQD3513208 | 4103 | 350 | 400 | 350 | 3562 | 3000 | | | 91 | 341 | 734 | |
| SQD3513209 | 4103 | 350 | 400 | 350 | 3562 | 3000 | | | 101 | 330 | 749 | |
| SQD3513210 | 4103 | 350 | 400 | 350 | 3562 | 3000 | | | 111 | 318 | 764 | |
| SQD3513211 | 4103 | 350 | 400 | 350 | 3562 | 3000 | | | 121 | 307 | 780 | |
| SQD3513212 | 4103 | 350 | 400 | 350 | 3562 | 3000 | | | 131 | 296 | 794 | |

Dimensional data referring to double refrigerant circuit models – please see technical drawing on page 11.



SQD model data table

400 size

| Model | Total length | Shell diameter | Header height | Header width | Water connections | Welded supports | Refrigerant inlet | Refrigerant outlet | Water connections | Refrigerant-side volume | Water-side volume | Weight |
|------------|--------------|----------------|---------------|--------------|-------------------|-----------------|-------------------|--------------------|---------------------|-------------------------|-------------------|--------|
| | A mm | B mm | C mm | E mm | G mm | H mm | R1/R2 | R3/R4 | W1/W2 | dm ³ | dm ³ | kg |
| SQD4006209 | 2018 | 400 | 470 | 430 | 1410 | 1100 | FL55-OD42 | FL140-OD133 | 8" (flexible joint) | 61 | 205 | 593 |
| SQD4006210 | 2018 | 400 | 470 | 430 | 1410 | 1100 | | | | 66 | 199 | 599 |
| SQD4006211 | 2018 | 400 | 470 | 430 | 1410 | 1100 | | | | 72 | 193 | 606 |
| SQD4006212 | 2018 | 400 | 470 | 430 | 1410 | 1100 | | | | 77 | 188 | 612 |
| SQD4006213 | 2018 | 400 | 470 | 430 | 1410 | 1100 | | | | 82 | 182 | 619 |
| SQD4006214 | 2018 | 400 | 470 | 430 | 1410 | 1100 | | | | 87 | 176 | 625 |
| SQD4007209 | 2418 | 400 | 470 | 430 | 1810 | 1500 | | | | 71 | 249 | 671 |
| SQD4007210 | 2418 | 400 | 470 | 430 | 1810 | 1500 | | | | 78 | 242 | 679 |
| SQD4007211 | 2418 | 400 | 470 | 430 | 1810 | 1500 | | | | 84 | 235 | 688 |
| SQD4007212 | 2418 | 400 | 470 | 430 | 1810 | 1500 | | | | 91 | 228 | 696 |
| SQD4007213 | 2418 | 400 | 470 | 430 | 1810 | 1500 | | | | 97 | 221 | 705 |
| SQD4007214 | 2418 | 400 | 470 | 430 | 1810 | 1500 | | | | 103 | 214 | 713 |
| SQD4008209 | 2718 | 400 | 470 | 430 | 2110 | 1800 | | | | 79 | 283 | 730 |
| SQD4008210 | 2718 | 400 | 470 | 430 | 2110 | 1800 | | | | 86 | 275 | 740 |
| SQD4008211 | 2718 | 400 | 470 | 430 | 2110 | 1800 | | | | 94 | 266 | 750 |
| SQD4008212 | 2718 | 400 | 470 | 430 | 2110 | 1800 | | | | 101 | 258 | 759 |
| SQD4008213 | 2718 | 400 | 470 | 430 | 2110 | 1800 | | | | 108 | 250 | 770 |
| SQD4008214 | 2718 | 400 | 470 | 430 | 2110 | 1800 | | | | 115 | 242 | 779 |
| SQD4009209 | 2968 | 400 | 470 | 430 | 2360 | 2100 | | | | 86 | 310 | 779 |
| SQD4009210 | 2968 | 400 | 470 | 430 | 2360 | 2100 | | | | 93 | 301 | 790 |
| SQD4009211 | 2968 | 400 | 470 | 430 | 2360 | 2100 | | | | 102 | 292 | 802 |
| SQD4009212 | 2968 | 400 | 470 | 430 | 2360 | 2100 | | | | 109 | 283 | 812 |
| SQD4009213 | 2968 | 400 | 470 | 430 | 2360 | 2100 | | | | 118 | 274 | 824 |
| SQD4009214 | 2968 | 400 | 470 | 430 | 2360 | 2100 | | | | 126 | 265 | 834 |
| SQD4010209 | 3223 | 400 | 470 | 430 | 2615 | 2300 | | | | 92 | 338 | 829 |
| SQD4010210 | 3223 | 400 | 470 | 430 | 2615 | 2300 | | | | 101 | 329 | 841 |
| SQD4010211 | 3223 | 400 | 470 | 430 | 2615 | 2300 | | | | 110 | 319 | 854 |
| SQD4010212 | 3223 | 400 | 470 | 430 | 2615 | 2300 | | | | 118 | 309 | 866 |
| SQD4010213 | 3223 | 400 | 470 | 430 | 2615 | 2300 | | | | 127 | 299 | 879 |
| SQD4010214 | 3223 | 400 | 470 | 430 | 2615 | 2300 | | | | 136 | 289 | 891 |
| SQD4011209 | 3518 | 400 | 470 | 430 | 2910 | 2500 | | | | 100 | 371 | 887 |
| SQD4011210 | 3518 | 400 | 470 | 430 | 2910 | 2500 | | | | 109 | 360 | 900 |
| SQD4011211 | 3518 | 400 | 470 | 430 | 2910 | 2500 | | | | 119 | 349 | 915 |
| SQD4011212 | 3518 | 400 | 470 | 430 | 2910 | 2500 | | | | 128 | 339 | 928 |
| SQD4011213 | 3518 | 400 | 470 | 430 | 2910 | 2500 | | | | 138 | 328 | 943 |
| SQD4011214 | 3518 | 400 | 470 | 430 | 2910 | 2500 | | | | 148 | 317 | 956 |
| SQD4012209 | 3818 | 400 | 470 | 430 | 3210 | 2700 | | | | 108 | 404 | 950 |
| SQD4012210 | 3818 | 400 | 470 | 430 | 3210 | 2700 | | | | 118 | 393 | 965 |
| SQD4012211 | 3818 | 400 | 470 | 430 | 3210 | 2700 | | | | 128 | 381 | 981 |
| SQD4012212 | 3818 | 400 | 470 | 430 | 3210 | 2700 | | | | 139 | 369 | 996 |
| SQD4012213 | 3818 | 400 | 470 | 430 | 3210 | 2700 | | | | 149 | 357 | 1012 |
| SQD4012214 | 3818 | 400 | 470 | 430 | 3210 | 2700 | | | | 160 | 345 | 1027 |
| SQD4013209 | 4118 | 400 | 470 | 430 | 3510 | 3000 | 115 | 438 | 1009 | | | |
| SQD4013210 | 4118 | 400 | 470 | 430 | 3510 | 3000 | 126 | 425 | 1025 | | | |
| SQD4013211 | 4118 | 400 | 470 | 430 | 3510 | 3000 | 138 | 412 | 1043 | | | |
| SQD4013212 | 4118 | 400 | 470 | 430 | 3510 | 3000 | 149 | 399 | 1059 | | | |
| SQD4013213 | 4118 | 400 | 470 | 430 | 3510 | 3000 | 161 | 386 | 1077 | | | |
| SQD4013214 | 4118 | 400 | 470 | 430 | 3510 | 3000 | 172 | 374 | 1093 | | | |

Dimensional data referring to double refrigerant circuit models – please see technical drawing on page 11.

450 size

| Model | Total length | Shell diameter | Header height | Header width | Water connections | Welded supports | Refrigerant inlet | Refrigerant outlet | Water connections | Refrigerant-side volume | Water-side volume | Weight |
|------------|--------------|----------------|---------------|--------------|-------------------|-----------------|-------------------|--------------------|---------------------|-------------------------|-------------------|--------|
| | A mm | B mm | C mm | E mm | G mm | H mm | R1/R2 | R3/R4 | W1/W2 | dm ³ | dm ³ | kg |
| SQD4506211 | 2028 | 450 | 520 | 450 | 1410 | 1100 | FL70-OD54 | FL140-OD133 | 8" (flexible joint) | 82 | 250 | 745 |
| SQD4506212 | 2028 | 450 | 520 | 450 | 1410 | 1100 | | | | 87 | 243 | 753 |
| SQD4506213 | 2028 | 450 | 520 | 450 | 1410 | 1100 | | | | 94 | 236 | 760 |
| SQD4506214 | 2028 | 450 | 520 | 450 | 1410 | 1100 | | | | 100 | 229 | 768 |
| SQD4506215 | 2028 | 450 | 520 | 450 | 1410 | 1100 | | | | 106 | 223 | 775 |
| SQD4506216 | 2028 | 450 | 520 | 450 | 1410 | 1100 | | | | 112 | 216 | 783 |
| SQD4507211 | 2428 | 450 | 520 | 450 | 1810 | 1500 | | | | 96 | 304 | 848 |
| SQD4507212 | 2428 | 450 | 520 | 450 | 1810 | 1500 | | | | 103 | 296 | 858 |
| SQD4507213 | 2428 | 450 | 520 | 450 | 1810 | 1500 | | | | 111 | 287 | 867 |
| SQD4507214 | 2428 | 450 | 520 | 450 | 1810 | 1500 | | | | 118 | 279 | 878 |
| SQD4507215 | 2428 | 450 | 520 | 450 | 1810 | 1500 | | | 125 | 271 | 887 | |
| SQD4507216 | 2428 | 450 | 520 | 450 | 1810 | 1500 | | | 133 | 263 | 897 | |
| SQD4508211 | 2728 | 450 | 520 | 450 | 2030 | 1800 | | | 107 | 350 | 942 | |
| SQD4508212 | 2728 | 450 | 520 | 450 | 2030 | 1800 | | | 115 | 341 | 954 | |
| SQD4508213 | 2728 | 450 | 520 | 450 | 2030 | 1800 | | | 123 | 331 | 965 | |
| SQD4508214 | 2728 | 450 | 520 | 450 | 2030 | 1800 | | | 132 | 322 | 977 | |
| SQD4508215 | 2728 | 450 | 520 | 450 | 2030 | 1800 | | | 140 | 312 | 988 | |
| SQD4508216 | 2728 | 450 | 520 | 450 | 2030 | 1800 | | | 148 | 303 | 1000 | |
| SQD4509211 | 2978 | 450 | 520 | 450 | 2280 | 2100 | | | 116 | 384 | 1006 | |
| SQD4509212 | 2978 | 450 | 520 | 450 | 2280 | 2100 | | | 125 | 374 | 1019 | |
| SQD4509213 | 2978 | 450 | 520 | 450 | 2280 | 2100 | | | 134 | 363 | 1032 | |
| SQD4509214 | 2978 | 450 | 520 | 450 | 2280 | 2100 | | | 143 | 353 | 1045 | |
| SQD4509215 | 2978 | 450 | 520 | 450 | 2280 | 2100 | | | 153 | 343 | 1058 | |
| SQD4509216 | 2978 | 450 | 520 | 450 | 2280 | 2100 | | | 162 | 332 | 1071 | |
| SQD4510211 | 3233 | 450 | 520 | 450 | 2535 | 2300 | | | 125 | 419 | 1071 | |
| SQD4510212 | 3233 | 450 | 520 | 450 | 2535 | 2300 | | | 135 | 408 | 1086 | |
| SQD4510213 | 3233 | 450 | 520 | 450 | 2535 | 2300 | | | 145 | 396 | 1100 | |
| SQD4510214 | 3233 | 450 | 520 | 450 | 2535 | 2300 | | | 155 | 385 | 1115 | |
| SQD4510215 | 3233 | 450 | 520 | 450 | 2535 | 2300 | | | 165 | 373 | 1129 | |
| SQD4510216 | 3233 | 450 | 520 | 450 | 2535 | 2300 | | | 175 | 362 | 1143 | |
| SQD4511211 | 3528 | 450 | 520 | 450 | 2830 | 2500 | | | 136 | 459 | 1150 | |
| SQD4511212 | 3528 | 450 | 520 | 450 | 2830 | 2500 | | | 146 | 447 | 1167 | |
| SQD4511213 | 3528 | 450 | 520 | 450 | 2830 | 2500 | | | 158 | 434 | 1183 | |
| SQD4511214 | 3528 | 450 | 520 | 450 | 2830 | 2500 | | | 169 | 422 | 1190 | |
| SQD4511215 | 3528 | 450 | 520 | 450 | 2830 | 2500 | | | 180 | 409 | 1215 | |
| SQD4511216 | 3528 | 450 | 520 | 450 | 2830 | 2500 | | | 190 | 397 | 1232 | |
| SQD4512211 | 3828 | 450 | 520 | 450 | 3130 | 2700 | | | 146 | 500 | 1227 | |
| SQD4512212 | 3828 | 450 | 520 | 450 | 3130 | 2700 | | | 158 | 486 | 1246 | |
| SQD4512213 | 3828 | 450 | 520 | 450 | 3130 | 2700 | | | 170 | 472 | 1263 | |
| SQD4512214 | 3828 | 450 | 520 | 450 | 3130 | 2700 | | | 182 | 459 | 1281 | |
| SQD4512215 | 3828 | 450 | 520 | 450 | 3130 | 2700 | 194 | 445 | 1299 | | | |
| SQD4512216 | 3828 | 450 | 520 | 450 | 3130 | 2700 | 206 | 432 | 1317 | | | |
| SQD4513211 | 4128 | 450 | 520 | 450 | 3430 | 3000 | 157 | 540 | 1304 | | | |
| SQD4513212 | 4128 | 450 | 520 | 450 | 3430 | 3000 | 170 | 526 | 1324 | | | |
| SQD4513213 | 4128 | 450 | 520 | 450 | 3430 | 3000 | 183 | 511 | 1343 | | | |
| SQD4513214 | 4128 | 450 | 520 | 450 | 3430 | 3000 | 196 | 496 | 1363 | | | |
| SQD4513215 | 4128 | 450 | 520 | 450 | 3430 | 3000 | 209 | 482 | 1383 | | | |
| SQD4513216 | 4128 | 450 | 520 | 450 | 3430 | 3000 | 222 | 467 | 1402 | | | |

Dimensional data referring to double refrigerant circuit models – please see technical drawing on page 11.

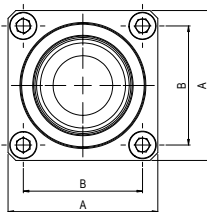
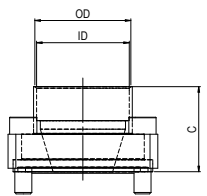
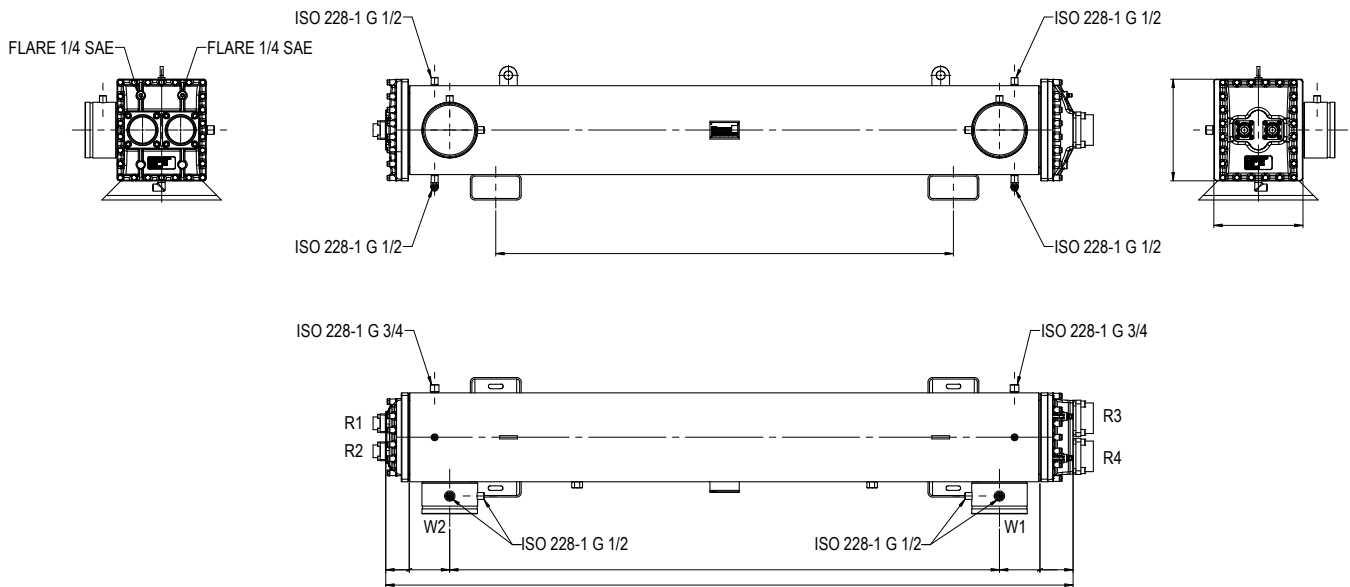


SQD model data table

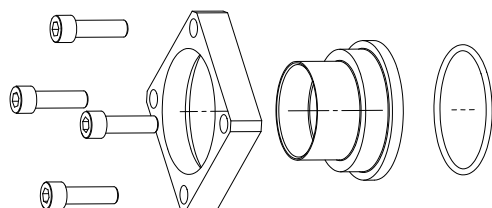
500 size

| Model | Total length | Shell diameter | Header height | Header width | Water connections | Welded supports | Refrigerant inlet | Refrigerant outlet | Water connections | Refrigerant-side volume | Water-side volume | Weight |
|------------|--------------|----------------|---------------|--------------|-------------------|-----------------|-------------------|--------------------|----------------------|-------------------------|-------------------|--------|
| | A mm | B mm | C mm | E mm | G mm | H mm | R1/R2 | R3/R4 | W1/W2 | dm ³ | dm ³ | kg |
| SQD5006212 | 2041 | 500 | 570 | 530 | 1330 | 1100 | FL70-OD67 | FL160-OD168 | 10" (flexible joint) | 96 | 312 | 948 |
| SQD5006213 | 2041 | 500 | 570 | 530 | 1330 | 1100 | | | | 103 | 305 | 956 |
| SQD5006214 | 2041 | 500 | 570 | 530 | 1330 | 1100 | | | | 109 | 297 | 964 |
| SQD5006215 | 2041 | 500 | 570 | 530 | 1330 | 1100 | | | | 116 | 290 | 973 |
| SQD5006216 | 2041 | 500 | 570 | 530 | 1330 | 1100 | | | | 123 | 283 | 980 |
| SQD5006217 | 2041 | 500 | 570 | 530 | 1330 | 1100 | | | | 129 | 275 | 989 |
| SQD5006218 | 2041 | 500 | 570 | 530 | 1330 | 1100 | | | | 136 | 268 | 996 |
| SQD5007212 | 2441 | 500 | 570 | 530 | 1730 | 1500 | | | | 113 | 380 | 1076 |
| SQD5007213 | 2441 | 500 | 570 | 530 | 1730 | 1500 | | | | 121 | 371 | 1087 |
| SQD5007214 | 2441 | 500 | 570 | 530 | 1730 | 1500 | | | | 129 | 362 | 1097 |
| SQD5007215 | 2441 | 500 | 570 | 530 | 1730 | 1500 | | | | 138 | 353 | 1108 |
| SQD5007216 | 2441 | 500 | 570 | 530 | 1730 | 1500 | | | | 146 | 344 | 1118 |
| SQD5007217 | 2441 | 500 | 570 | 530 | 1730 | 1500 | | | | 154 | 334 | 1130 |
| SQD5007218 | 2441 | 500 | 570 | 530 | 1730 | 1500 | | | | 162 | 325 | 1140 |
| SQD5008212 | 2741 | 500 | 570 | 530 | 2030 | 1800 | | | | 126 | 431 | 1170 |
| SQD5008213 | 2741 | 500 | 570 | 530 | 2030 | 1800 | | | | 135 | 420 | 1183 |
| SQD5008214 | 2741 | 500 | 570 | 530 | 2030 | 1800 | | | | 144 | 410 | 1195 |
| SQD5008215 | 2741 | 500 | 570 | 530 | 2030 | 1800 | | | | 154 | 400 | 1208 |
| SQD5008216 | 2741 | 500 | 570 | 530 | 2030 | 1800 | | | | 163 | 389 | 1220 |
| SQD5008217 | 2741 | 500 | 570 | 530 | 2030 | 1800 | | | | 172 | 379 | 1233 |
| SQD5008218 | 2741 | 500 | 570 | 530 | 2030 | 1800 | | | | 181 | 369 | 1245 |
| SQD5009212 | 2991 | 500 | 570 | 530 | 2280 | 2100 | | | | 137 | 473 | 1249 |
| SQD5009213 | 2991 | 500 | 570 | 530 | 2280 | 2100 | | | | 147 | 462 | 1264 |
| SQD5009214 | 2991 | 500 | 570 | 530 | 2280 | 2100 | | | | 157 | 450 | 1277 |
| SQD5009215 | 2991 | 500 | 570 | 530 | 2280 | 2100 | | | | 167 | 439 | 1292 |
| SQD5009216 | 2991 | 500 | 570 | 530 | 2280 | 2100 | | | | 177 | 428 | 1305 |
| SQD5009217 | 2991 | 500 | 570 | 530 | 2280 | 2100 | | | | 187 | 416 | 1320 |
| SQD5009218 | 2991 | 500 | 570 | 530 | 2280 | 2100 | | | | 197 | 405 | 1333 |
| SQD5010212 | 3246 | 500 | 570 | 530 | 2535 | 2300 | | | | 147 | 516 | 1329 |
| SQD5010213 | 3246 | 500 | 570 | 530 | 2535 | 2300 | | | | 159 | 504 | 1345 |
| SQD5010214 | 3246 | 500 | 570 | 530 | 2535 | 2300 | | | | 170 | 491 | 1360 |
| SQD5010215 | 3246 | 500 | 570 | 530 | 2535 | 2300 | | | | 181 | 479 | 1377 |
| SQD5010216 | 3246 | 500 | 570 | 530 | 2535 | 2300 | | | | 192 | 466 | 1392 |
| SQD5010217 | 3246 | 500 | 570 | 530 | 2535 | 2300 | | | | 203 | 454 | 1408 |
| SQD5010218 | 3246 | 500 | 570 | 530 | 2535 | 2300 | | | | 214 | 441 | 1423 |
| SQD5011212 | 3541 | 500 | 570 | 530 | 2830 | 2500 | | | | 160 | 566 | 1422 |
| SQD5011213 | 3541 | 500 | 570 | 530 | 2830 | 2500 | | | | 172 | 552 | 1440 |
| SQD5011214 | 3541 | 500 | 570 | 530 | 2830 | 2500 | | | | 184 | 539 | 1457 |
| SQD5011215 | 3541 | 500 | 570 | 530 | 2830 | 2500 | | | | 197 | 525 | 1475 |
| SQD5011216 | 3541 | 500 | 570 | 530 | 2830 | 2500 | | | | 209 | 511 | 1492 |
| SQD5011217 | 3541 | 500 | 570 | 530 | 2830 | 2500 | 221 | 498 | 1510 | | | |
| SQD5011218 | 3541 | 500 | 570 | 530 | 2830 | 2500 | 233 | 484 | 1527 | | | |
| SQD5012212 | 3841 | 500 | 570 | 530 | 3130 | 2700 | 173 | 617 | 1521 | | | |
| SQD5012213 | 3841 | 500 | 570 | 530 | 3130 | 2700 | 186 | 602 | 1541 | | | |
| SQD5012214 | 3841 | 500 | 570 | 530 | 3130 | 2700 | 199 | 587 | 1560 | | | |
| SQD5012215 | 3841 | 500 | 570 | 530 | 3130 | 2700 | 213 | 572 | 1580 | | | |
| SQD5012216 | 3841 | 500 | 570 | 530 | 3130 | 2700 | 226 | 557 | 1598 | | | |
| SQD5012217 | 3841 | 500 | 570 | 530 | 3130 | 2700 | 239 | 542 | 1619 | | | |
| SQD5012218 | 3841 | 500 | 570 | 530 | 3130 | 2700 | 252 | 527 | 1637 | | | |
| SQD5013212 | 4141 | 500 | 570 | 530 | 3430 | 3000 | 186 | 668 | 1615 | | | |
| SQD5013213 | 4141 | 500 | 570 | 530 | 3430 | 3000 | 200 | 651 | 1637 | | | |
| SQD5013214 | 4141 | 500 | 570 | 530 | 3430 | 3000 | 214 | 635 | 1658 | | | |
| SQD5013215 | 4141 | 500 | 570 | 530 | 3430 | 3000 | 229 | 610 | 1680 | | | |
| SQD5013216 | 4141 | 500 | 570 | 530 | 3430 | 3000 | 243 | 603 | 1700 | | | |
| SQD5013217 | 4141 | 500 | 570 | 530 | 3430 | 3000 | 258 | 587 | 1722 | | | |
| SQD5013218 | 4141 | 500 | 570 | 530 | 3430 | 3000 | 272 | 571 | 1743 | | | |

Dimensional data referring to double refrigerant circuit models – please see technical drawing on page 11.



| Flange refrigerant connection | | | | | | | |
|-------------------------------|------|------|------|-------|-------|-------------|------------|
| Type | A mm | B mm | C mm | OD mm | ID mm | Copper tube | |
| | | | | | | ODS (mm) | ODS (inch) |
| FL37-OD28 | 54 | 37 | 40 | 33 | 28,2 | 28 | 1 1/8" |
| FL55-OD35 | 74 | 55 | 50 | 42 | 35,3 | 35 | 1 3/8" |
| FL55-OD42 | 74 | 55 | 50 | 50 | 42,4 | 42 | 1 5/8" |
| FL55-OD54 | 74 | 55 | 50 | 58 | 54,4 | 54 | 2 1/8" |
| FL70-OD54 | 88 | 70 | 50 | 58 | 54,4 | 54 | 2 1/8" |
| FL70-OD67 | 88 | 70 | 50 | 72 | 67,2 | 66,7 | 2 5/8" |
| FL70-OD76 | 97 | 70 | 50 | 81 | 76,4 | 76 | 3 1/8" |
| FL90-OD89 | 110 | 90 | 50 | 94 | 89,5 | 89 | 3 1/2" |
| FL112-OD108 | 142 | 112 | 80 | 120 | 108,4 | 108 | 4 1/4" |
| FL140-OD133 | 178 | 140 | 80 | 142 | 133,5 | 133 | 5 1/4" |
| FL160-OD168 | 208 | 160 | 80 | 178 | 169 | 168 | 6 5/8" |





BITZER Kühlmaschinenbau GmbH
Eschenbrunnlestraße 15 // 71065 Sindelfingen // Germany
Tel +49 (0)70 31 932-0 // Fax +49 (0)70 31 932-147
bitzer@bitzer.de // www.bitzer.de

Subject to change // 80193201 // 02.2019