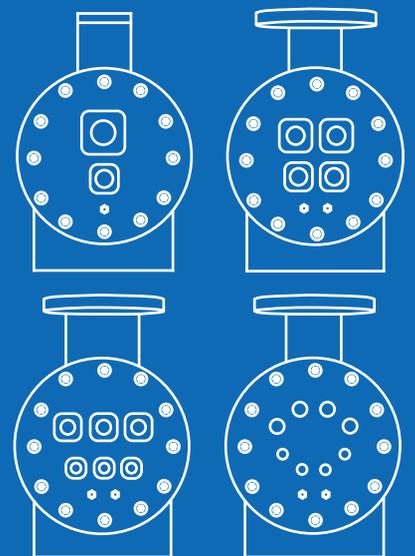


RF SERIES EVAPORATOR





ABOUT US

Refkar is one of the preferred institutions in the Turkish market for heat transfer products related to freon systems. With its 15 years of experience, it aims to gain strength and become a global brand in the international market.



OUR FACTORY

It performs production in international standards with its 3.500 m² closed factory area established on 6.500 m² outdoor area, advanced technology production systems, and trained operator staff.



COMPETENT STAFF

Since its establishment, Refkar has worked with a highly skilled team. It has trained and developed its employees within the framework of their competencies.



FAIRS AND TRAVELS

Refkar has conducted business trips, partner visits, and participated in fairs to more than 50 countries. As a result, it has succeeded in becoming a recognized brand in the international market.



PERFORMANCE

RF series evaporators are standard-manufactured for R410A and designed for easy use with R407C and R454B fluid coolants. Areas of use include comfort and industrial chillers under high-evaporation temperatures (+2/+10).

RF range evaporators offer cooling gas circuit options based on the number of compressors:

- **RFS** for 1 independent compressor circuit,
- **RFD** for 2 independent compressor circuits,
- **RFT** for 3 independent compressor circuits,
- **RFQ** for 4 independent compressor circuits.

“Refkar SELECTOR Software” can be used to select evaporators for other operating temperatures.



RFS - 1



RFD - 2



RFT - 3



RFQ - 4

DESIGN AND MATERIALS

All materials used on Refkar shell&tube evaporators are selected and used in line with the EN norm. Materials with the following specifications are used on standard products.

| | |
|--------------------------------------|---------------------------|
| Heat transfer pipes | Copper / internal threads |
| Tube sheet | Carbon steel |
| Chassis piping and water connections | Carbon steel |
| Guide screens | Plastic |
| Cover and coolant connections | Carbon steel |

Evaporators can be manufactured with the materials and for the requirements listed below.

| | |
|--------------------------------------|--|
| Heat transfer pipes | Copper-Nickel 90/10 alloy, AISI 316L and AISI 304L stainless steel, carbon steel |
| Tube sheet | AISI 316L or AISI 304L stainless steel |
| Chassis piping and water connections | AISI 316L and AISI 304L stainless steel |
| Guide screens | Carbon steel, AISI 316L and AISI 304L stainless steel |

QUALITY AND TESTS

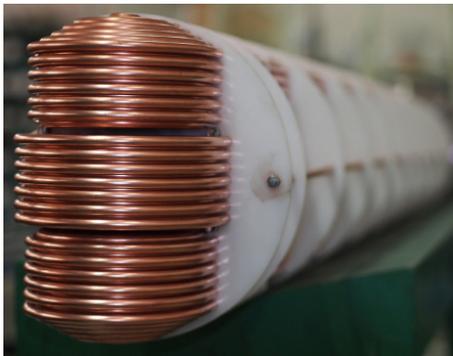
Mechanical calculations of Refkar RF range evaporators are in compliance with TS EN 13445-3 standards and ISO 9001:2015 quality management system and they have CE certification. Refkar Shell&Tube evaporators are tested with dry nitrogen at 33 bar at the gas side and 11 bar at the water side. [Helium leak test is a standard test for all evaporators](#). Refkar offers fluid coolant non-leakage guarantee for its products for 2 gr/year. Tests are performed at different pressure levels on products with multiple circuits and no-leakage between circuits is guaranteed.

| Approval | PS | | Ts min | Ts max | Category |
|----------|-----------|------------|--------|--------|--------------------------|
| | Tube Side | Shell Side | | | |
| CE/EAC | 30 bar | 10 bar | -10 °C | 90 °C | Up to Cat.IV, 2014/68/EU |

POLLUTION FACTOR

The pollution factor (f.f.) is a major issue to be considered while choosing and evaporator. The pollution factors required under specific circumstances are listed below.

| | |
|-------------------------|-----------------------------------|
| Closed loop mains water | f.f.= 0.000043 m ² K/W |
| Open loop mains water | f.f.= 0.000086 m ² K/W |
| Glycol solution < %40 | f.f.= 0.000086 m ² K/W |
| Glycol solution > %40 | f.f.= 0.000172 m ² K/W |



ANTIFREEZE RECOMMENDATIONS

The table below lists the recommended glycol solution for low-temperature operating conditions.

| Freezing Point [°C] | Ethilene Glyco [% Weight] | Propylene Glycol [% Weight] |
|---------------------|---------------------------|-----------------------------|
| -5 | 12 | 16 |
| -10 | 22 | 26 |
| -15 | 30 | 34 |
| -20 | 36 | 40 |
| -25 | 40 | 44 |
| -30 | 44 | 48 |
| -35 | 48 | 52 |

INSTALLATION AND OPERATION

Please ensure the following operating conditions for best use of your evaporator.

- The evaporator should be used in horizontal position.
- The air inside the product should be discharged before filling water.
- Ensure that the pressure drop and implementation conditions are in accordance with catalog values.
- Do not stop the water flow before the coolant in the evaporator is discharged.
- When not in use, fill the evaporator fully with anti-freeze fluid with no air in it and fully evacuate it, ensuring that it is dry.
- Regularly check the chemical properties of the water inside the evaporator. Incompliant water damages the evaporator.
- In case of a capacity decrease, you can reverse-operate the system for a short time for cleaning.
- Keep the evaporator away from sources of vibration.
- Prevent foreign particles in the water.
- Use anti-frees solution below 0°C.
- Prevent air in the pump cavitation and the system.
- Do not run the cooled fluids close to their freezing conditions.
- Do not exceed the allowed water flow.

CAPACITY, WATER FLOW AND VOLUME TABLE

The values listed in the table were calculated based on the following operating conditions.

| Coolant | Water input | Water output | Condensation temperature | Evaporation temperature | Superheat value | Pollution factor f.f |
|---------|-------------|--|--------------------------|-------------------------|-----------------|-----------------------------|
| R410A | 12°C | 7°C (temperature between RF141-144 is 8°C) | 42°C | 3°C | 5 K | 0,000043 m ² K/W |

| MODEL | Q Nominal (kW) | ΔP Nominal (kPa) | W Nominal (m ³ /h) | Volume Freon (L) | Volume Water (L) |
|-------|----------------|------------------|-------------------------------|------------------|------------------|
| RF141 | 12,3 | 3,1 | 2,1 | 2,9 L | 6,6 L |
| RF142 | 20,1 | 6,6 | 3,4 | 3,5 L | 7,9 L |
| RF143 | 32,4 | 15 | 5,5 | 4,1 L | 9,6 L |
| RF144 | 43,8 | 27,3 | 7,5 | 4,8 L | 11,1 L |
| RF161 | 49,5 | 21 | 8,5 | 5,7 L | 13,9 L |
| RF162 | 61,4 | 29,2 | 10,5 | 6,4 L | 15,4 L |
| RF163 | 70,3 | 25,3 | 12 | 7,4 L | 17,8 L |
| RF164 | 78,3 | 27,9 | 13,4 | 7,8 L | 18,6 L |
| RF191 | 93,1 | 26,6 | 15,9 | 10,6 L | 25,2 L |
| RF192 | 114,9 | 35,3 | 19,7 | 11,7 L | 27,8 L |
| RF193 | 136,4 | 46 | 23,4 | 12,8 L | 30,3 L |
| RF194 | 166,5 | 57,3 | 28,5 | 14,2 L | 33,5 L |
| RF195 | 189,9 | 67 | 32,6 | 15,5 L | 36,6 L |
| RF211 | 222,2 | 46,3 | 38,1 | 18,4 L | 41,5 L |
| RF212 | 273,4 | 53,6 | 46,9 | 22,1 L | 49,4 L |
| RF213 | 287,5 | 56 | 49,3 | 23,2 L | 51,6 L |
| RF271 | 296,5 | 29,4 | 50,8 | 26,4 L | 85,3 L |
| RF272 | 346,2 | 38,9 | 59,4 | 29,4 L | 81,8 L |
| RF273 | 429 | 60,8 | 73,6 | 35,0 L | 75,3 L |
| RF321 | 448,4 | 39,9 | 76,9 | 39,2 L | 122,1 L |
| RF322 | 548 | 56,9 | 94 | 46,1 L | 114,0 L |
| RF323 | 595,6 | 32,7 | 102,2 | 53,4 L | 105,4 L |
| RF401 | 718,8 | 61 | 123,3 | 60,1 L | 220,0 L |
| RF402 | 822,6 | 34,3 | 141,2 | 70,8 L | 207,5 L |
| RF403 | 898 | 40,2 | 154,1 | 75,5 L | 202,1 L |
| RF404 | 1042,9 | 52,5 | 179 | 86,8 L | 188,8 L |
| RF405 | 1207,7 | 51,3 | 207,3 | 101,8 L | 219,9 L |
| RF451 | 1369,1 | 61,4 | 235 | 114,8 L | 259,9 L |
| RF452 | 1414,4 | 63,3 | 242,7 | 118,1 L | 255,9 L |
| RF501 | 1594 | 47,6 | 273,6 | 134,7 L | 396,9 L |
| RF502 | 1849,7 | 98,3 | 317,5 | 153,4 L | 375,0 L |

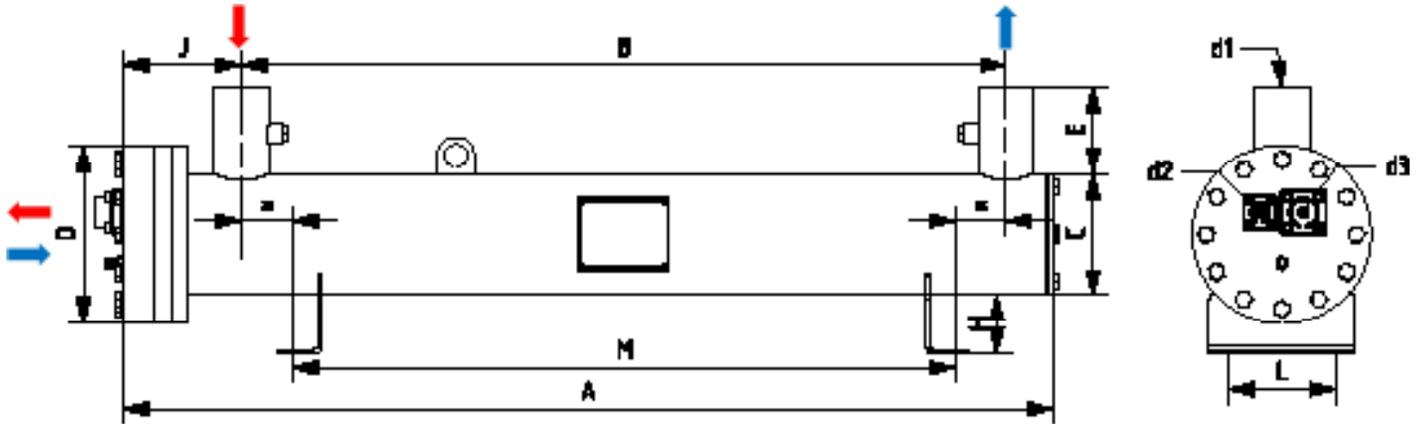
| | |
|-------------------------------|-------------------------------------|
| Q Nominal (kW) | Nominal cooling capacity |
| ΔP Nominal (kPa) | Nominal water circuit pressure loss |
| W Nominal (m ³ /h) | Nominal water flow |
| Volume Freon (L) | Coolant circuit volume |
| Volume Water (L) | Water circuit volume |

Note: Common capacity table for all RF models (RFS, RFD, RFT, RFQ).

RFS

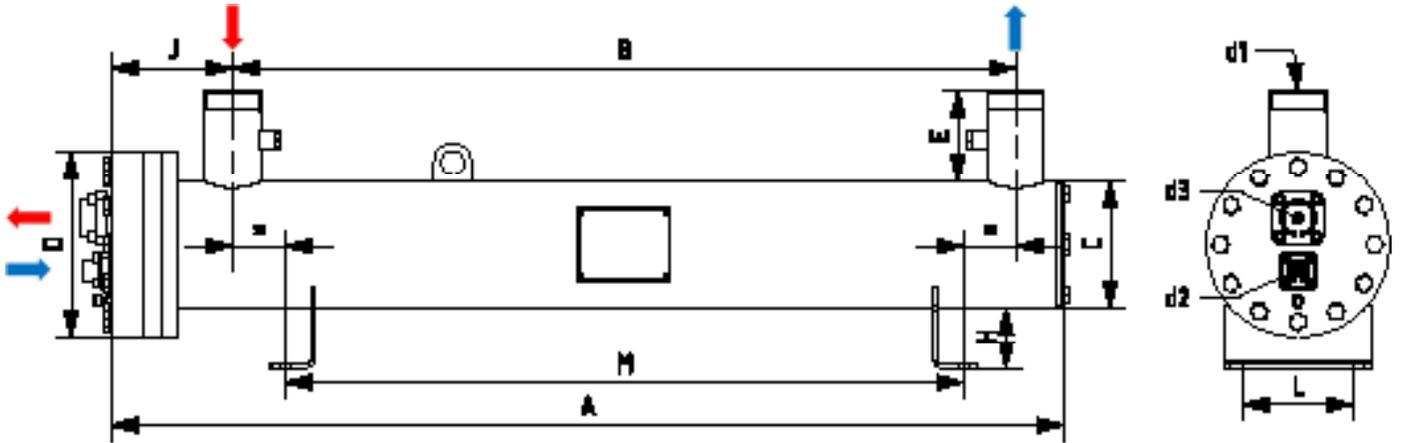
MEASURING TABLES

RF141S - RF164S / 1 Independent Compressor Circuit



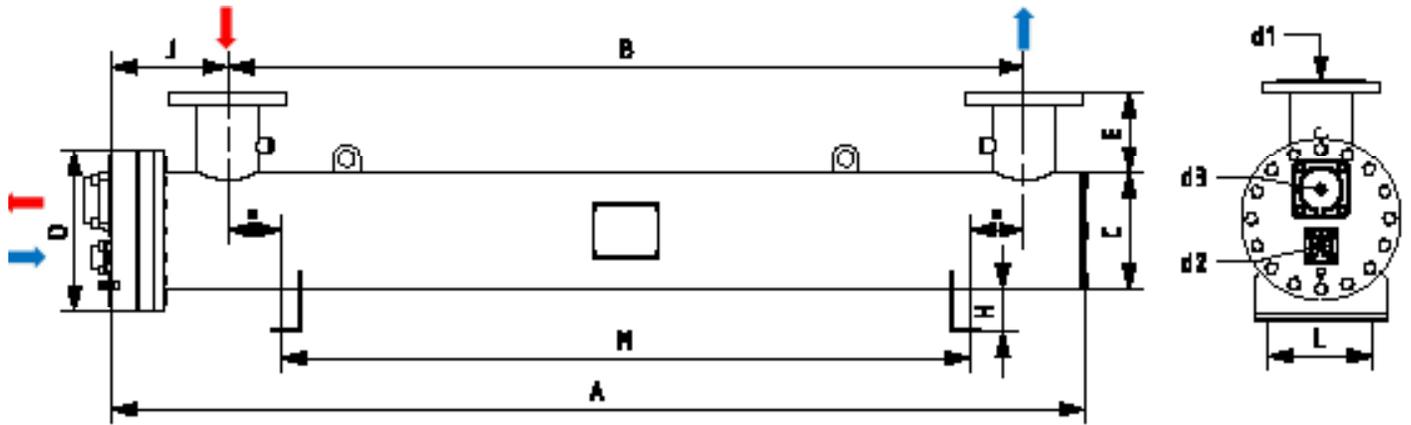
| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|-----------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|--------|
| RF141S-4P | 768 | 542 | 139,7 | 195 | 120 | 80 | 120 | 157 | 472 | G1.5" | FL22 | FL35 | 36 kg |
| RF142S-4P | 908 | 682 | 139,7 | 195 | 120 | 80 | 120 | 157 | 612 | G1.5" | FL22 | FL35 | 39 kg |
| RF143S-4P | 1078 | 840 | 139,7 | 195 | 120 | 80 | 120 | 163 | 764 | G2" | FL22 | FL35 | 42 kg |
| RF144S-4P | 1238 | 1000 | 139,7 | 195 | 120 | 80 | 120 | 163 | 924 | G2" | FL22 | FL35 | 45 kg |
| RF161S-4P | 1037 | 783 | 168,3 | 245 | 120 | 80 | 150 | 171 | 699 | G2.5" | FL22 | FL42 | 58 kg |
| RF162S-4P | 1147 | 893 | 168,3 | 245 | 120 | 80 | 150 | 171 | 809 | G2.5" | FL22 | FL42 | 61 kg |
| RF163S-4P | 1327 | 1073 | 168,3 | 245 | 120 | 80 | 150 | 171 | 989 | G2.5" | FL22 | FL42 | 69 kg |
| RF164S-4P | 1392 | 1138 | 168,3 | 245 | 120 | 80 | 150 | 171 | 1054 | G2.5" | FL22 | FL42 | 70 kg |

RF191S - RF195S / 1 Independent Compressor Circuit



| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-----|------|------|--------|
| RF191S | 1401 | 1134 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1044 | G3" | FL35 | FL54 | 80 kg |
| RF192S | 1546 | 1279 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1189 | G3" | FL35 | FL54 | 84 kg |
| RF193S | 1686 | 1419 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1329 | G3" | FL35 | FL54 | 89 kg |
| RF194S | 1866 | 1599 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1509 | G3" | FL35 | FL54 | 95 kg |
| RF195S | 2036 | 1769 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1679 | G3" | FL35 | FL54 | 100 kg |

RF211S - RF502S / 1 Independent Compressor Circuit

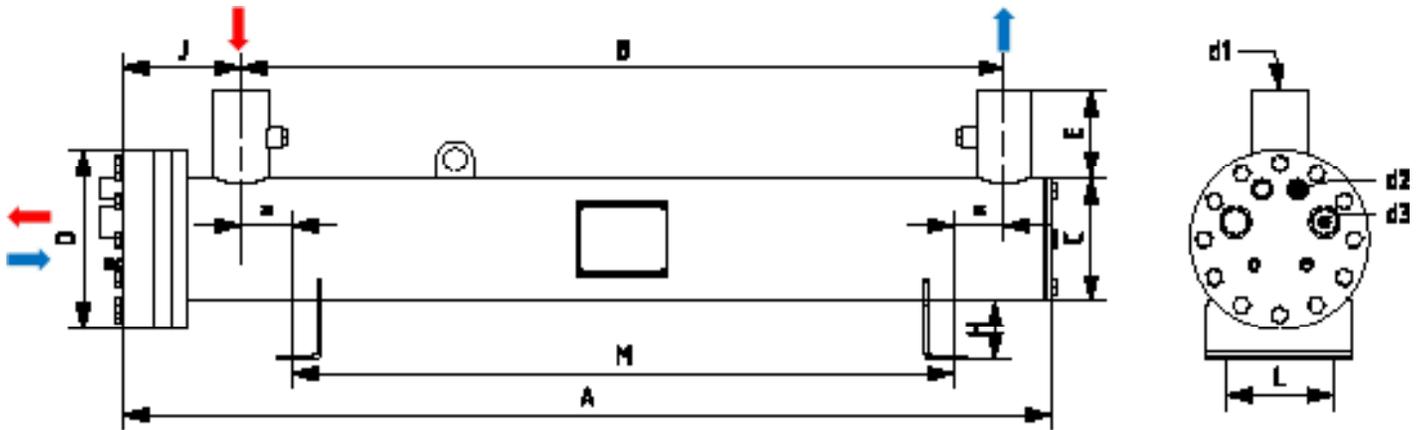


| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|--------|
| RF211S | 1789 | 1471 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1361 | DN100 | FL35 | FL80 | 133 kg |
| RF212S | 2139 | 1821 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1711 | DN100 | FL35 | FL80 | 148 kg |
| RF213S | 2239 | 1921 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1811 | DN100 | FL35 | FL80 | 152 kg |
| RF271S | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | FL42 | FL80 | 185 kg |
| RF272S | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | FL42 | FL80 | 191 kg |
| RF273S | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | FL42 | FL80 | 201 kg |
| RF321S | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | FL42 | FL80 | 251 kg |
| RF322S | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | FL42 | FL80 | 263 kg |
| RF323S | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | FL42 | FL80 | 277 kg |
| RF401S | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 403 kg |
| RF402S | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 422 kg |
| RF403S | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 431 kg |
| RF404S | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 451 kg |
| RF405S | 2770 | 2303 | 406,4 | 510 | 150 | 100 | 370 | 297 | 2132 | DN200 | FL54 | FL105 | 497 kg |
| RF451S | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | FL67 | FL140 | 635 kg |
| RF452S | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | FL67 | FL140 | 642 kg |
| RF501S | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | FL67 | FL140 | 733 kg |
| RF502S | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | FL67 | FL140 | 767 kg |

RFD

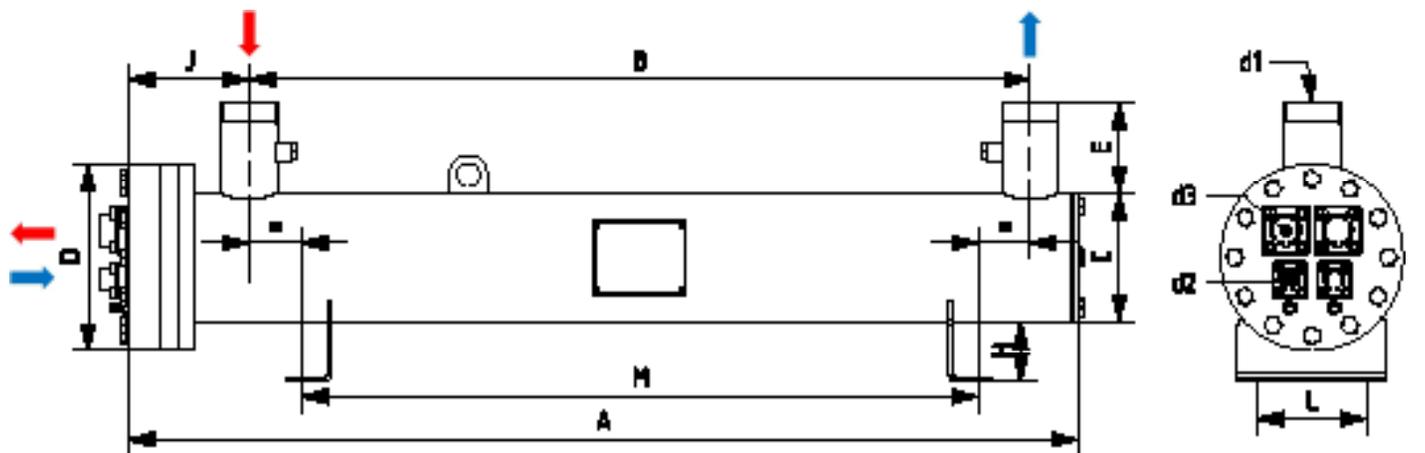
MEASURING TABLES

RF161D - RF164D / 2 Independent Compressor Circuits



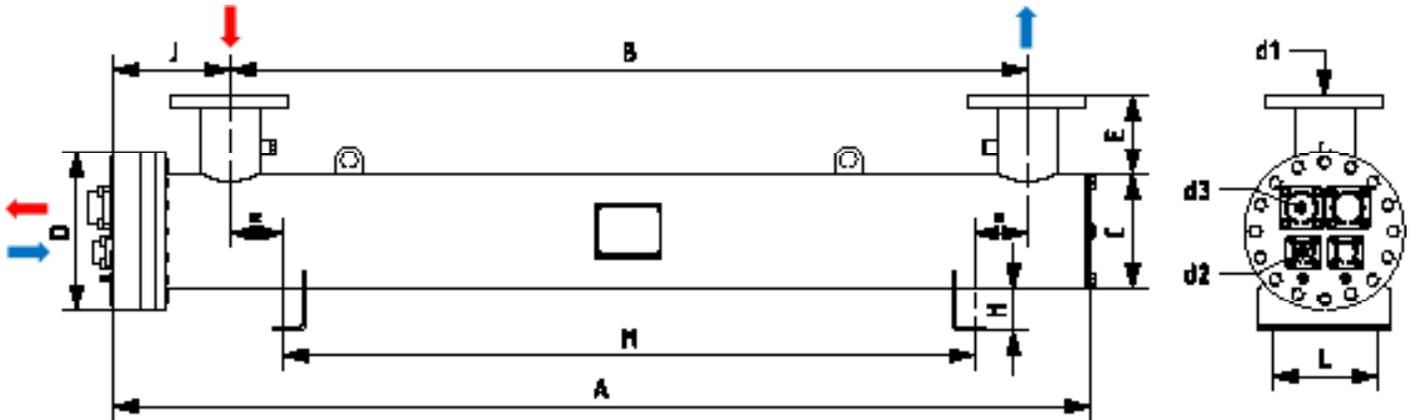
| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|-----------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|--------|
| RF161D-4P | 1037 | 783 | 168,3 | 245 | 120 | 80 | 150 | 171 | 699 | G2.5" | FL22 | FL42 | 58 kg |
| RF162D-4P | 1147 | 893 | 168,3 | 245 | 120 | 80 | 150 | 171 | 809 | G2.5" | FL22 | FL42 | 61 kg |
| RF163D-4P | 1327 | 1073 | 168,3 | 245 | 120 | 80 | 150 | 171 | 989 | G2.5" | FL22 | FL42 | 69 kg |
| RF164D-4P | 1392 | 1138 | 168,3 | 245 | 120 | 80 | 150 | 171 | 1054 | G2.5" | FL22 | FL42 | 70 kg |

RF191D - RF195D / 2 Independent Compressor Circuits



| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-----|------|------|--------|
| RF191D | 1401 | 1134 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1044 | G3" | FL35 | FL54 | 80 kg |
| RF192D | 1546 | 1279 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1189 | G3" | FL35 | FL54 | 84 kg |
| RF193D | 1686 | 1419 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1329 | G3" | FL35 | FL54 | 89 kg |
| RF194D | 1866 | 1599 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1509 | G3" | FL35 | FL54 | 95 kg |
| RF195D | 2036 | 1769 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1679 | G3" | FL35 | FL54 | 100 kg |

RF211D - RF502D / 2 Independent Compressor Circuits

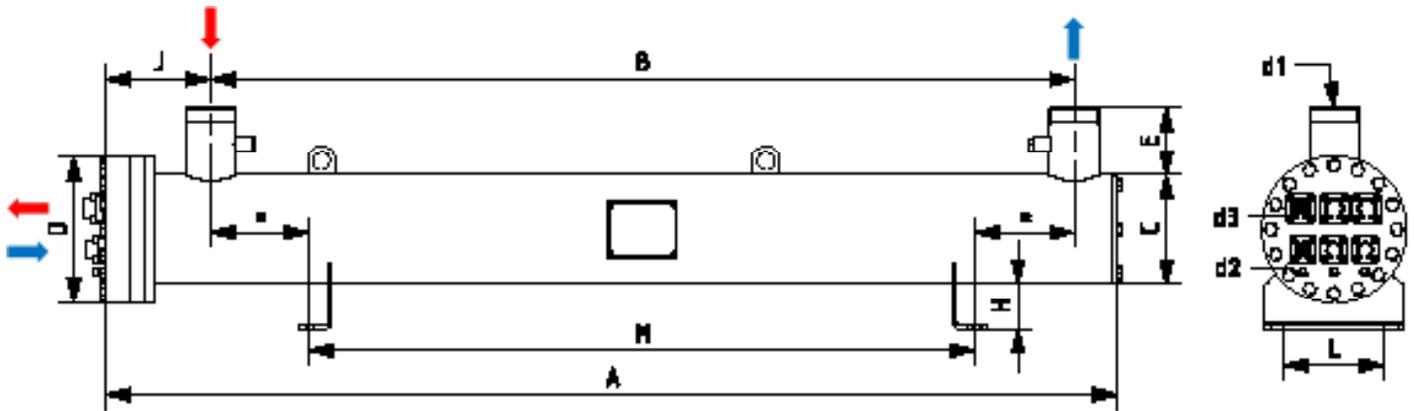


| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|--------|
| RF211D | 1789 | 1471 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1361 | DN100 | FL35 | FL80 | 133 kg |
| RF212D | 2139 | 1821 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1711 | DN100 | FL35 | FL80 | 148 kg |
| RF213D | 2239 | 1921 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1811 | DN100 | FL35 | FL80 | 152 kg |
| RF271D | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | FL42 | FL80 | 185 kg |
| RF272D | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | FL42 | FL80 | 191 kg |
| RF273D | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | FL42 | FL80 | 201 kg |
| RF321D | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | FL42 | FL80 | 251 kg |
| RF322D | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | FL42 | FL80 | 263 kg |
| RF323D | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | FL42 | FL80 | 277 kg |
| RF401D | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 403 kg |
| RF402D | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 422 kg |
| RF403D | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 431 kg |
| RF404D | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | FL54 | FL105 | 451 kg |
| RF405D | 2770 | 2303 | 406,4 | 510 | 150 | 100 | 370 | 297 | 2132 | DN200 | FL54 | FL105 | 497 kg |
| RF451D | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | FL67 | FL140 | 635 kg |
| RF452D | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | FL67 | FL140 | 642 kg |
| RF501D | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | FL67 | FL140 | 733 kg |
| RF502D | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | FL67 | FL140 | 767 kg |

RFT

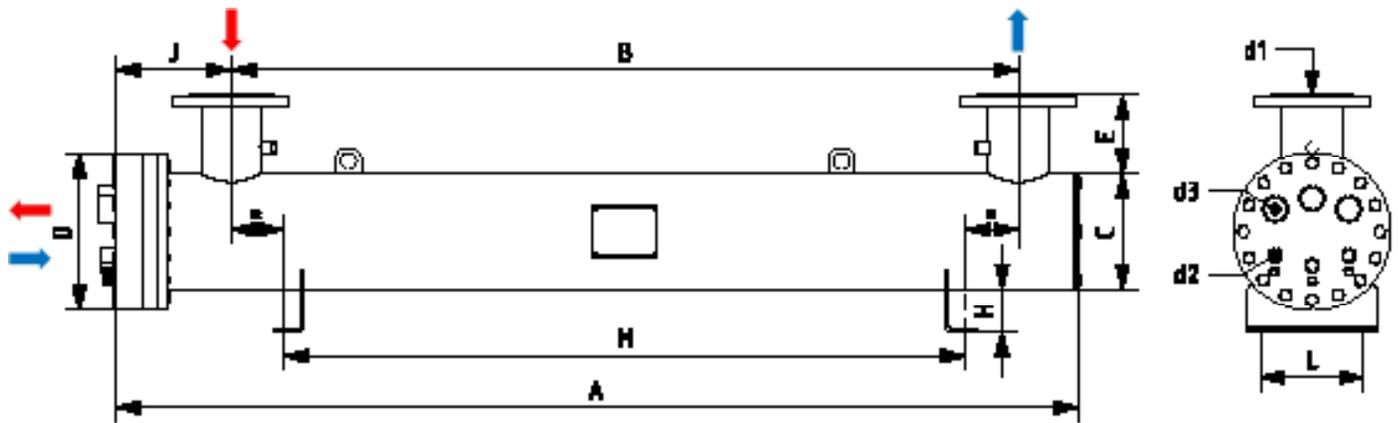
MEASURING TABLES

RF191T - RF195T / 3 Independent Compressor Circuits



| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-----|-----|-----|--------|
| RF191T | 1401 | 1134 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1044 | G3" | W35 | W54 | 80 kg |
| RF192T | 1546 | 1279 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1189 | G3" | W35 | W54 | 84 kg |
| RF193T | 1686 | 1419 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1329 | G3" | W35 | W54 | 89 kg |
| RF194T | 1866 | 1599 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1509 | G3" | W35 | W54 | 95 kg |
| RF195T | 2036 | 1769 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1679 | G3" | W35 | W54 | 100 kg |

RF211T - RF502T / 3 Independent Compressor Circuits

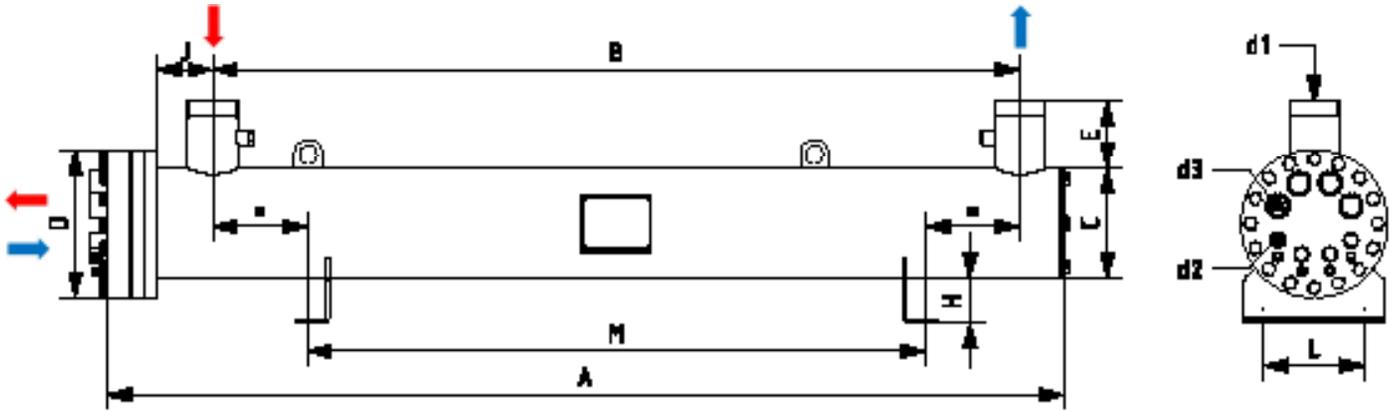


| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-----|------|--------|
| RF211T | 1789 | 1471 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1361 | DN100 | W35 | W80 | 133 kg |
| RF212T | 2139 | 1821 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1711 | DN100 | W35 | W80 | 148 kg |
| RF213T | 2239 | 1921 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1811 | DN100 | W35 | W80 | 152 kg |
| RF271T | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | W42 | W80 | 185 kg |
| RF272T | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | W42 | W80 | 191 kg |
| RF273T | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | W42 | W80 | 201 kg |
| RF321T | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | W42 | W80 | 251 kg |
| RF322T | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | W42 | W80 | 263 kg |
| RF323T | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | W42 | W80 | 277 kg |
| RF401T | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W05 | 403 kg |
| RF402T | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W105 | 422 kg |
| RF403T | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W105 | 431 kg |
| RF404T | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W105 | 451 kg |
| RF405T | 2770 | 2303 | 406,4 | 510 | 150 | 100 | 370 | 297 | 2132 | DN200 | W54 | W105 | 497 kg |
| RF451T | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | W67 | W140 | 635 kg |
| RF452T | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | W67 | W140 | 642 kg |
| RF501T | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | W67 | W140 | 733 kg |
| RF502T | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | W67 | W140 | 767 kg |

RFQ

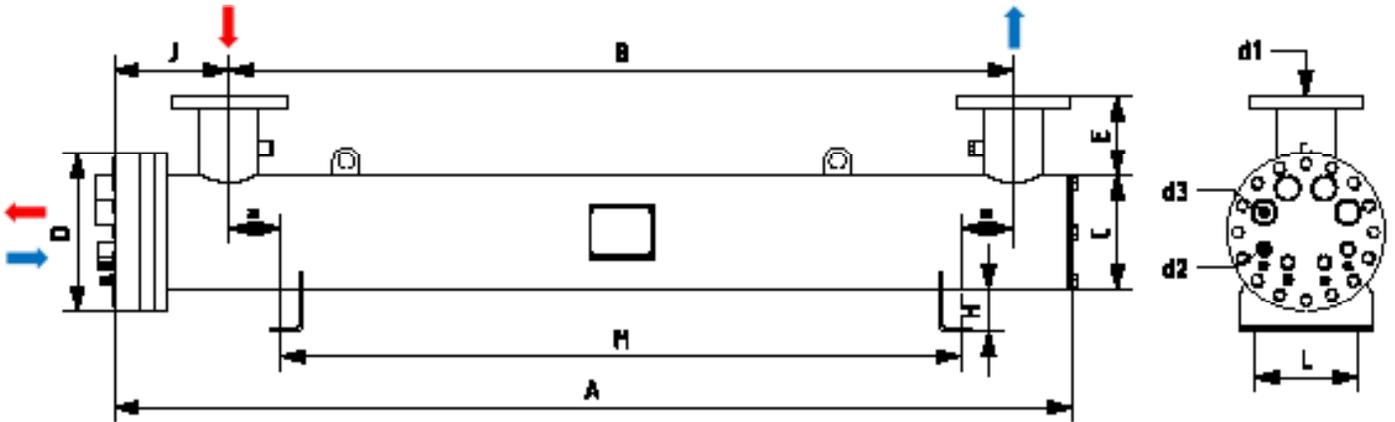
MEASURING TABLES

RF191Q - RF195Q / 4 Independent Compressor Circuits



| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-----|-----|-----|--------|
| RF191Q | 1401 | 1134 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1044 | G3" | W35 | W54 | 80 kg |
| RF192Q | 1546 | 1279 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1189 | G3" | W35 | W54 | 84 kg |
| RF193Q | 1686 | 1419 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1329 | G3" | W35 | W54 | 89 kg |
| RF194Q | 1866 | 1599 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1509 | G3" | W35 | W54 | 95 kg |
| RF195Q | 2036 | 1769 | 193,7 | 260 | 120 | 80 | 180 | 177 | 1679 | G3" | W35 | W54 | 100 kg |

RF211Q - RF502Q / 4 Independent Compressor Circuits

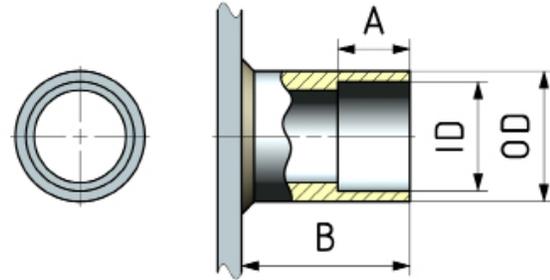


| MODEL | A(mm) | B(mm) | C (mm) | D(mm) | E(mm) | H(mm) | L(mm) | J(mm) | M(mm) | d1 | d2 | d3 | P (kg) |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-----|------|--------|
| RF211Q | 1789 | 1471 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1361 | DN100 | W35 | W80 | 133 kg |
| RF212Q | 2139 | 1821 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1711 | DN100 | W35 | W80 | 148 kg |
| RF213Q | 2239 | 1921 | 219,1 | 300 | 150 | 80 | 200 | 208 | 1811 | DN100 | W35 | W80 | 152 kg |
| RF271Q | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | W42 | W80 | 185 kg |
| RF272Q | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | W42 | W80 | 191 kg |
| RF273Q | 2102 | 1749 | 273 | 350 | 150 | 100 | 240 | 228 | 1624 | DN125 | W42 | W80 | 201 kg |
| RF321Q | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | W42 | W80 | 251 kg |
| RF322Q | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | W42 | W80 | 263 kg |
| RF323Q | 2135 | 1747 | 323,9 | 420 | 150 | 100 | 280 | 246 | 1604 | DN150 | W42 | W80 | 277 kg |
| RF401Q | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W05 | 403 kg |
| RF402Q | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W105 | 422 kg |
| RF403Q | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W105 | 431 kg |
| RF404Q | 2370 | 1903 | 406,4 | 510 | 150 | 100 | 370 | 297 | 1732 | DN200 | W54 | W105 | 451 kg |
| RF405Q | 2770 | 2303 | 406,4 | 510 | 150 | 100 | 370 | 297 | 2132 | DN200 | W54 | W105 | 497 kg |
| RF451Q | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | W67 | W140 | 635 kg |
| RF452Q | 2563 | 2071 | 457 | 570 | 150 | 100 | 420 | 322 | 1900 | DN200 | W67 | W140 | 642 kg |
| RF501Q | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | W67 | W140 | 733 kg |
| RF502Q | 2913 | 2416 | 508 | 620 | 150 | 100 | 470 | 327 | 2245 | DN200 | W67 | W140 | 767 kg |

COOLANT CONNECTION OPTIONS

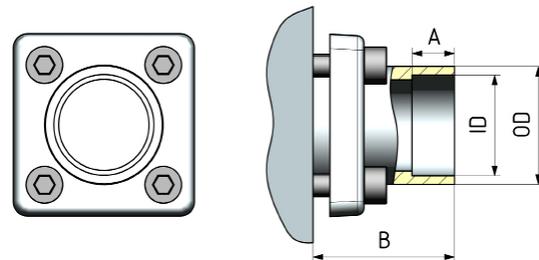
Welded connection (W)

| Dimensions | | | | |
|------------|----|----|------|------|
| CODE | A | B | ID | OD |
| W 16 | 15 | 30 | 16,2 | 21,3 |
| W 19 | 15 | 30 | 19,4 | 25 |
| W 22 | 15 | 30 | 22,6 | 26,9 |
| W 28 | 15 | 30 | 28,8 | 33,7 |
| W 35 | 15 | 30 | 35,4 | 42,4 |
| W 42 | 15 | 35 | 42,3 | 48,3 |
| W 54 | 15 | 45 | 54,3 | 60,3 |
| W 67 | 20 | 50 | 67 | 76 |
| W 80 | 20 | 50 | 80,5 | 88,9 |
| W 105 | 20 | 50 | 106 | 114 |



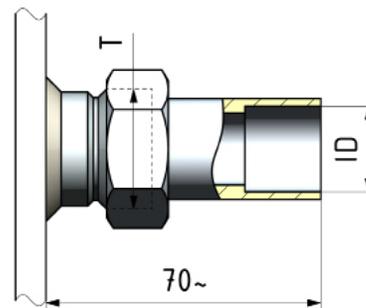
Flanged connection (FL)

| Dimensions | | | | |
|------------|----|----|------|------|
| CODE | A | B | ID | OD |
| FL 16 | 15 | 40 | 16,1 | 20,5 |
| FL 19 | 15 | 40 | 19,4 | 24 |
| FL 22 | 15 | 40 | 22,6 | 28 |
| FL 28 | 15 | 40 | 29 | 35 |
| FL 35 | 15 | 40 | 35,4 | 41,4 |
| FL 42 | 15 | 40 | 42 | 48 |
| FL 54 | 15 | 50 | 54,8 | 61 |
| FL 67 | 25 | 55 | 67 | 74 |
| FL 80 | 25 | 55 | 80,5 | 85 |
| FL 105 | 25 | 55 | 106 | 115 |



Rotalock connection (RLA)

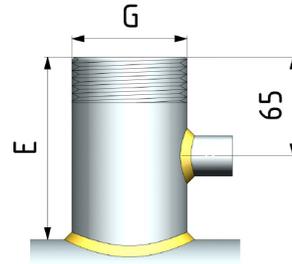
| Dimensions | | |
|------------|------|--------------|
| CODE | ID | T |
| RLA 16 | 16,2 | 1"14-UNS |
| RLA 19 | 19,4 | 1"14-UNS |
| RLB 22 | 22,6 | 1 1/4"12-UNF |
| RLB 28 | 28,8 | 1 1/4"12-UNF |
| RLC 28 | 28,8 | 1 3/4"12-UN |
| RLC 35 | 35,4 | 1 3/4"12-UN |
| RLC 42 | 42,3 | 1 3/4"12-UN |



WATER CIRCUIT CONNECTION OPTIONS

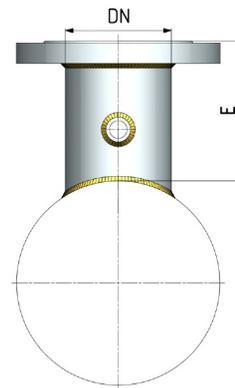
Threaded pipe connection (G)

| Dimensions | | | |
|------------|--------|-------|-------|
| CODE | G | G(mm) | E(mm) |
| G1 | G 1" | 33,7 | 120 |
| G11 | G 1 ½" | 48,3 | 120 |
| G2 | G 2" | 60,4 | 120 |
| G21 | G 2 ½" | 73,1 | 120 |
| G3 | G 3" | 88,9 | 120 |



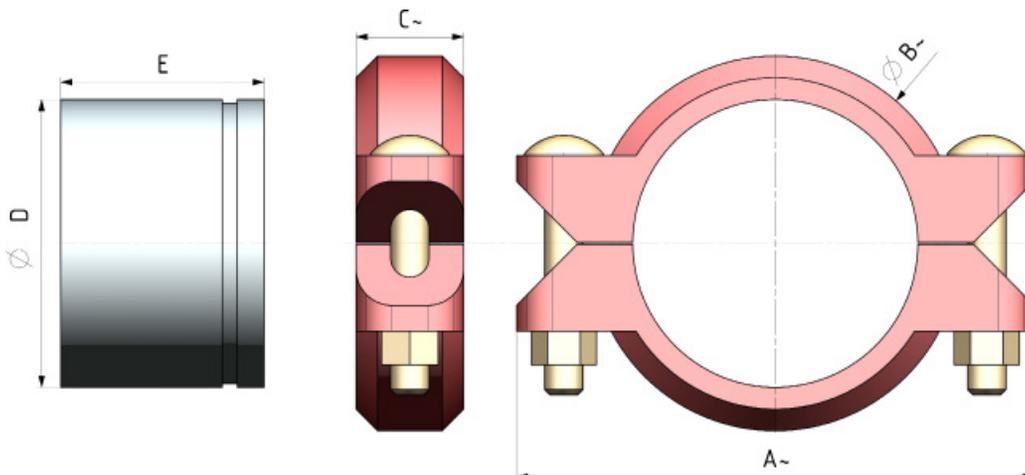
Flanged connection (DN)

| Dimensions | | |
|------------|--------|-------|
| CODE | DN(mm) | E(mm) |
| DN 100 | 114 | 120 |
| DN 125 | 140 | 120 |
| DN 150 | 168 | 120 |
| DN 200 | 220 | 120 |



Flexible coupling (FLC)

| Dimensions | | | | | |
|------------|-----|-----|----|-------|-----|
| CODE | A | B | C | D | E |
| J3 FLC089 | 165 | 115 | 50 | 88,9 | 80 |
| J4 FLC114 | 200 | 145 | 50 | 114,3 | 100 |
| J5 FLC140 | 245 | 175 | 50 | 139,7 | 100 |
| J6 FLC168 | 275 | 205 | 55 | 168,3 | 150 |
| J8 FLC220 | 345 | 265 | 60 | 219,1 | 150 |





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