# Calculation and Selection Result

## A.Visão geral do projeto

| | |
|---|---|
| Nome do projeto | PREFEITURA DE FRANCISCO BELTRÃO |
| País | BRASIL |
| Cidade | FRANCISCO BELTRÃO |
| Endereço | |
| Nome do cliente | PREFEITURA |
| Endereço do cliente | |
| Referência | |
| Revisão | |
| Data do projeto | 3 / 2 / 2022 |
| Altitude | 760 m |
| Condição de refrigeração: bulbo seco interior | 27,0 °C |
| Condição de refrigeração: humidade rel. interior | 47,0285 |
| Condição de refrigeração: bulbo seco exterior | 33,5 °C |
| Cooling condition: outdoor wet bulb | 13,2 °C |
| Condição de aquecimento: bulbo seco interior | 20,0 °C |
| Condição de aquecimento: bulbo seco exterior | 7,0 °C |
| Condição de aquecimento: humidade rel. exterior | 86,9 |

## B.Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1065WV2GN1 | 3 | V6 VRF (380V) |
| MV6-450WV2GN1 | 3 | V6 VRF (380V) |
| MV6-615WV2GN1 | 3 | V6 VRF (380V) |
| MI2-56Q4DHN1 | 100 | Four-way Cassette (2nd DC IDU) |
| MI2-36Q4DHN1 | 2 | Four-way Cassette (2nd DC IDU) |
| MV6-1285WV2GN1 | 3 | V6 VRF (380V) |
| MV6-615WV2GN1 | 3 | V6 VRF (380V) |
| MV6-670WV2GN1 | 3 | V6 VRF (380V) |
| MI2-71Q4DHN1 | 60 | Four-way Cassette (2nd DC |

| Modelo | Quantidade | Descrição |
|---|---|---|
| | | IDU) |
| MV6-1120WV2GN1 | 1 | V6 VRF (380V) |
| MV6-335WV2GN1 | 1 | V6 VRF (380V) |
| MV6-785WV2GN1 | 1 | V6 VRF (380V) |
| MI2-45Q4DHN1 | 48 | Four-way Cassette (2nd DC IDU) |
| MV6-1400WV2GN1 | 2 | V6 VRF (380V) |
| MV6-615WV2GN1 | 2 | V6 VRF (380V) |
| MV6-785WV2GN1 | 2 | V6 VRF (380V) |
| MI2-28Q4CDHN1 | 2 | Compact Four-way Cassette (2nd DC IDU) |
| MV6-850WV2GN1 | 1 | V6 VRF (380V) |
| MI2-80Q4DHN1 | 6 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 15 | Distribuidor |
| FQZHN-03D | 40 | Distribuidor |
| FQZHN-02D | 47 | Distribuidor |
| FQZHN-01D | 106 | Distribuidor |
| FQZHW-02N1E | 9 | Distribuidor |
| Ø1-5/8 | 620,0 m | Tubo Cobre |
| Ø1-1/2 | 55,0 m | Tubo Cobre |
| Ø1-3/8 | 24,0 m | Tubo Cobre |
| Ø1-1/4 | 91,0 m | Tubo Cobre |
| Ø1-1/8 | 66,0 m | Tubo Cobre |
| Ø1 | 30,0 m | Tubo Cobre |
| Ø7/8 | 831,0 m | Tubo Cobre |
| Ø3/4 | 251,0 m | Tubo Cobre |
| Ø5/8 | 750,0 m | Tubo Cobre |
| Ø1/2 | 389,0 m | Tubo Cobre |
| Ø3/8 | 852,0 m | Tubo Cobre |
| Ø1/4 | 165,0 m | Tubo Cobre |
| WDC-86E/K | 7 | 2nd generation wired controller |
| WDC-120G/WK | 26 | 2nd generation wired controller |

# ST-01 - 38 HP (18+18)

## 1.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1065WV2GN1 | 1 | V6 VRF (380V) |
| MV6-450WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MI2-56Q4DHN1 | 20 | Four-way Cassette (2nd DC IDU) |
| MI2-36Q4DHN1 | 1 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 1 | Distribuidor |
| FQZHN-03D | 2 | Distribuidor |
| FQZHN-02D | 8 | Distribuidor |
| FQZHN-01D | 9 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-86E/K | 1 | 2nd generation wired controller |
| WDC-120G/WK | 2 | 2nd generation wired controller |
| Ø1-5/8 | 50,0 m | Tubo Cobre |
| Ø1-1/4 | 10,0 m | Tubo Cobre |
| Ø1-1/8 | 5,0 m | Tubo Cobre |
| Ø7/8 | 77,0 m | Tubo Cobre |
| Ø3/4 | 8,0 m | Tubo Cobre |
| Ø5/8 | 90,0 m | Tubo Cobre |
| Ø1/2 | 7,0 m | Tubo Cobre |
| Ø3/8 | 110,0 m | Tubo Cobre |
| Ø1/4 | 7,0 m | Tubo Cobre |

# 1.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

Project Name PREFEITURA DE FRANCISCO BELTRÃO
BRASIL,FRANCISCO BELTRÃO
Date 2022 / 3 / 2

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-12.200 | MI2-36Q4DHN1 | 28(M) | 21,30 | 840*230*840 | 220-240,60,1 | 25 | 0.41 | 15 |

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16172 | 0 | 9929 | 20,0 | 0 | 18151 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16172 | 0 | 9929 | 20,0 | 0 | 18097 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16049 | 0 | 9853 | 20,0 | 0 | 17958 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15925 | 0 | 9777 | 20,0 | 0 | 17819 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15842 | 0 | 9726 | 20,0 | 0 | 17727 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16104 | 0 | 9886 | 20,0 | 0 | 18020 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16007 | 0 | 9827 | 20,0 | 0 | 17912 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15911 | 0 | 9768 | 20,0 | 0 | 17804 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15815 | 0 | 9709 | 20,0 | 0 | 17696 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15733 | 0 | 9659 | 20,0 | 0 | 17603 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15952 | 0 | 9794 | 20,0 | 0 | 17850 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15829 | 0 | 9718 | 20,0 | 0 | 17711 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15705 | 0 | 9642 | 20,0 | 0 | 17572 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15581 | 0 | 9566 | 20,0 | 0 | 17433 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15499 | 0 | 9515 | 20,0 | 0 | 17341 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16007 | 0 | 9827 | 20,0 | 0 | 17912 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15884 | 0 | 9751 | 20,0 | 0 | 17773 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15760 | 0 | 9675 | 20,0 | 0 | 17634 | 744(M) | N/A |

Project Name PREFEITURA DE FRANCISCO BELTRÃO
BRASIL,FRANCISCO BELTRÃO
Date 2022 / 3 / 2

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15636 | 0 | 9599 | 20,0 | 0 | 17495 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15513 | 0 | 9524 | 20,0 | 0 | 17356 | 744(M) | N/A |
| UEKVRF-12.200 | MI2-36Q4DHN1 | 27,0/47,0% | 0 | 9852 | 0 | 6644 | 20,0 | 0 | 10919 | 658(M) | N/A |

# 1.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ST-01 | MV6-1065WV2GN1 | MV6-450WV2GN1 | 1340*1635*850 | 277,00 | 13,00 | 31,03 | 380-415-3-50 | 33.1 | 40 |
| | | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | | 380-415-3-50 | 47.9 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ST-01 | MV6-1065WV2GN1 | 108,54 | 33,5 | 334161 | 0 | 7,0/87% | 374968 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ST-01 | MV6-1065WV2GN1 | 3,68 | 4,28 | 29,66 | 27,02 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 1.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 21/63 |
| Simultaneidade | 108,54% |
| Carga de refrigerante adicional | 31,03 kg<br>= 8,00(1/4) * 0,022 + 130,50(3/8) * 0,057 + 11,50(5/8) * 0,170 + 5,00(3/4) * 0,260 + 56,00(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 30,00 kg |
| Carga de refrigerante total | 61,03 kg |
| Comprimento Total da Tubulação | 204,5 m / 1000 m |
| Real mais distante | 84 m / 175 m |
| Equivalente mais distante | 95 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 39,5 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 15 m / 90 m |
| Capacidade de Resfriamento Disponível | 334161 Btu/h |
| Capacidade de Aquecimento Disponível | 374968 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 50,0 m | Ø41.2 | Ø7/8 |
| (2) | 4,0 m | Ø1-1/4 | Ø3/4 |
| (3) | 5,0 m | Ø1-1/8 | Ø5/8 |
| (4) | 2,0 m | Ø7/8 | Ø3/8 |
| (5) | 4,0 m | Ø7/8 | Ø3/8 |
| (6) | 2,0 m | Ø7/8 | Ø3/8 |
| (7) | 4,0 m | Ø7/8 | Ø3/8 |
| (8) | 4,0 m | Ø7/8 | Ø3/8 |
| (9) | 4,0 m | Ø7/8 | Ø3/8 |
| (10) | 3,0 m | Ø7/8 | Ø3/8 |
| (11) | 4,0 m | Ø5/8 | Ø3/8 |
| (12) | 3,0 m | Ø5/8 | Ø3/8 |
| (13) | 4,0 m | Ø5/8 | Ø3/8 |
| (14) | 3,0 m | Ø5/8 | Ø3/8 |
| (15) | 4,0 m | Ø7/8 | Ø3/8 |
| (16) | 4,0 m | Ø5/8 | Ø3/8 |

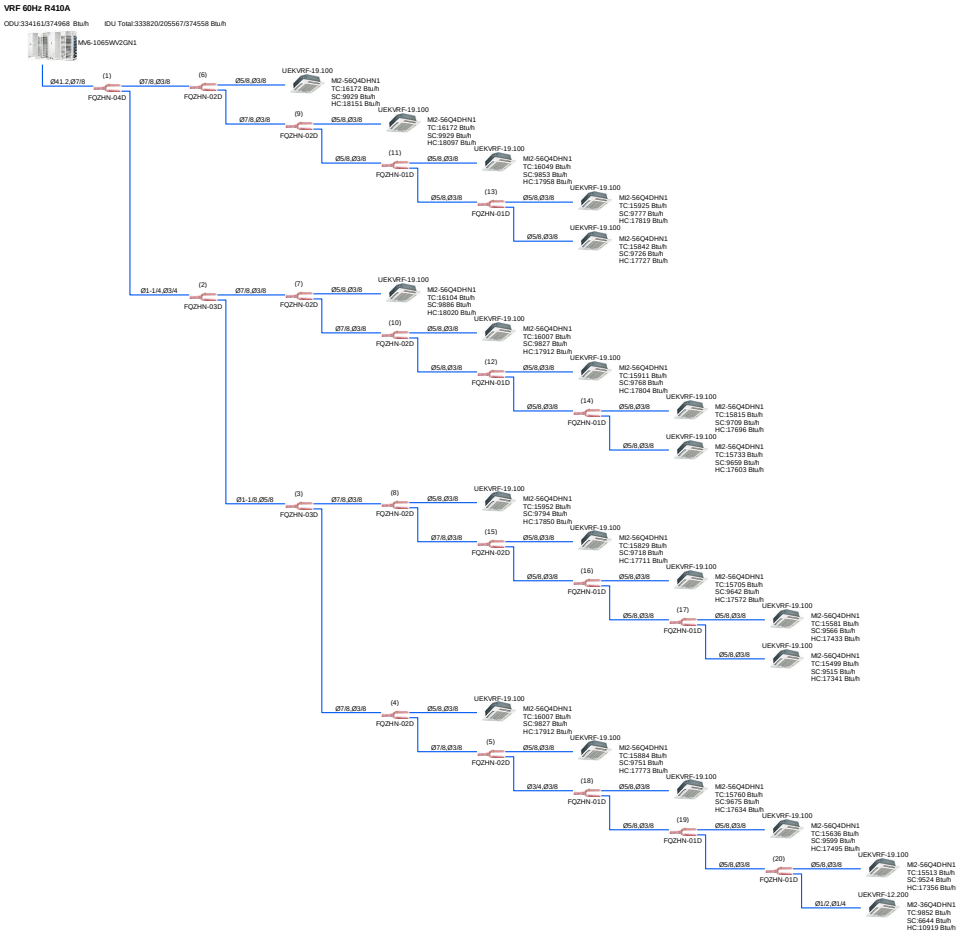
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 4,0 m | Ø5/8 | Ø3/8 |
| (18) | 4,0 m | Ø3/4 | Ø3/8 |
| (19) | 4,0 m | Ø5/8 | Ø3/8 |
| (20) | 2,0 m | Ø5/8 | Ø3/8 |
| (21) | 2,0 m | Ø5/8 | Ø3/8 |
| (22) | 2,0 m | Ø5/8 | Ø3/8 |
| (23) | 2,0 m | Ø5/8 | Ø3/8 |
| (24) | 5,0 m | Ø5/8 | Ø3/8 |
| (25) | 2,0 m | Ø5/8 | Ø3/8 |
| (26) | 2,0 m | Ø5/8 | Ø3/8 |
| (27) | 2,0 m | Ø5/8 | Ø3/8 |
| (28) | 2,0 m | Ø5/8 | Ø3/8 |
| (29) | 5,0 m | Ø5/8 | Ø3/8 |
| (30) | 2,0 m | Ø5/8 | Ø3/8 |
| (31) | 2,0 m | Ø5/8 | Ø3/8 |
| (32) | 2,0 m | Ø5/8 | Ø3/8 |
| (33) | 2,0 m | Ø5/8 | Ø3/8 |
| (34) | 5,0 m | Ø5/8 | Ø3/8 |
| (35) | 2,0 m | Ø5/8 | Ø3/8 |
| (36) | 2,0 m | Ø5/8 | Ø3/8 |
| (37) | 4,0 m | Ø5/8 | Ø3/8 |
| (38) | 2,0 m | Ø5/8 | Ø3/8 |
| (39) | 2,0 m | Ø5/8 | Ø3/8 |
| (40) | 2,0 m | Ø5/8 | Ø3/8 |
| (41) | 7,0 m | Ø1/2 | Ø1/4 |

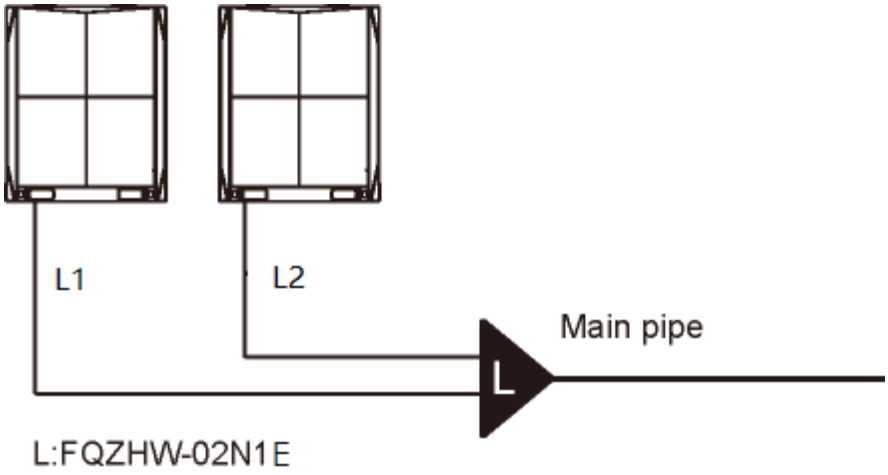
Distribuidor

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 394416 | FQZHN-04D |
| (2) | 298882 | FQZHN-03D |
| (3) | 203349 | FQZHN-03D |
| (4) | 107816 | FQZHN-02D |
| (5) | 88709 | FQZHN-02D |
| (6) | 95533 | FQZHN-02D |
| (7) | 95533 | FQZHN-02D |
| (8) | 95533 | FQZHN-02D |
| (9) | 76427 | FQZHN-02D |
| (10) | 76427 | FQZHN-02D |
| (11) | 57320 | FQZHN-01D |
| (12) | 57320 | FQZHN-01D |
| (13) | 38213 | FQZHN-01D |

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (14) | 38213 | FQZHN-01D |
| (15) | 76427 | FQZHN-02D |
| (16) | 57320 | FQZHN-01D |
| (17) | 38213 | FQZHN-01D |
| (18) | 69603 | FQZHN-01D |
| (19) | 50496 | FQZHN-01D |
| (20) | 31389 | FQZHN-01D |

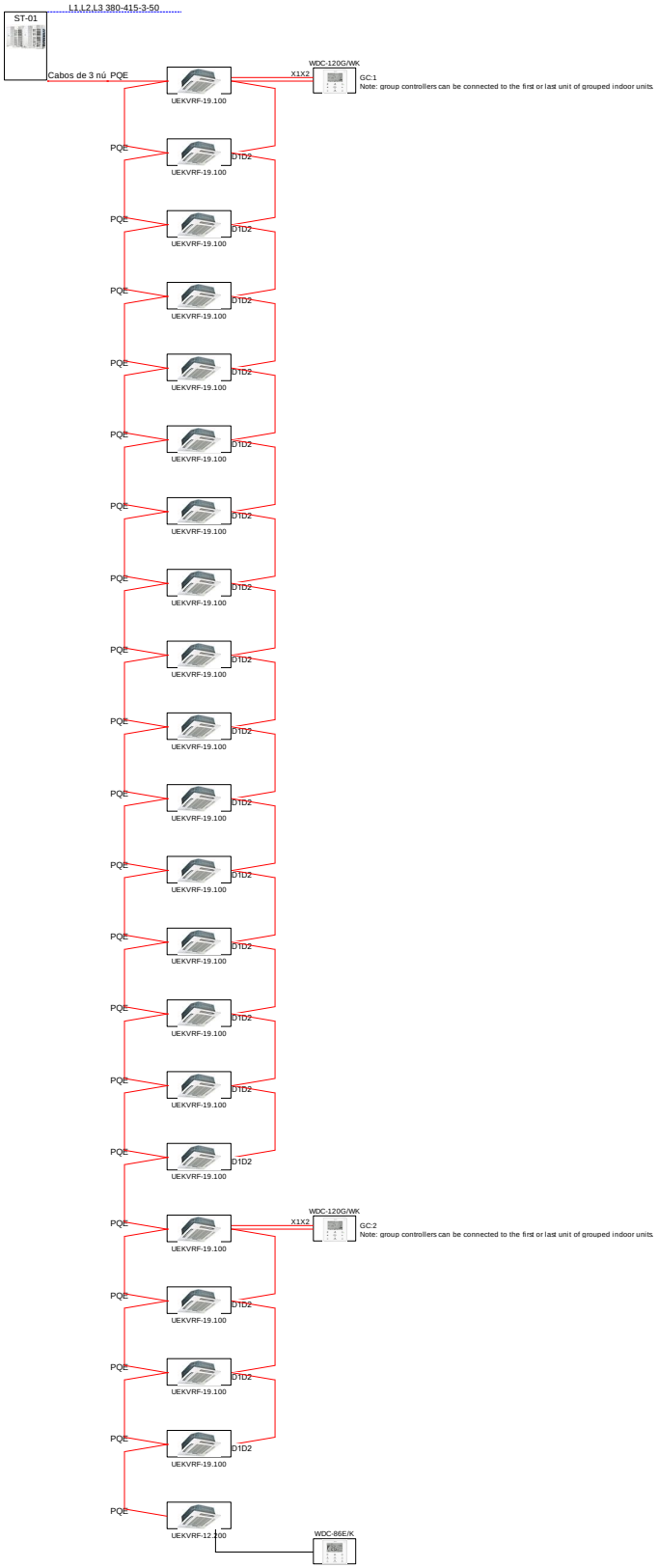
# 1.5 Diagrama da tubagem






L:FQZHW-02N1E

# 1.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-02 - 46HP (22+24)

## 2.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1285WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MV6-670WV2GN1 | 1 | V6 VRF (380V) |
| MI2-71Q4DHN1 | 20 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 2 | Distribuidor |
| FQZHN-03D | 5 | Distribuidor |
| FQZHN-02D | 4 | Distribuidor |
| FQZHN-01D | 8 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-120G/WK | 2 | 2nd generation wired controller |
| Ø1-5/8 | 50,0 m | Tubo Cobre |
| Ø1-1/2 | 8,0 m | Tubo Cobre |
| Ø1-1/4 | 7,0 m | Tubo Cobre |
| Ø1-1/8 | 12,0 m | Tubo Cobre |
| Ø7/8 | 65,0 m | Tubo Cobre |
| Ø3/4 | 28,0 m | Tubo Cobre |
| Ø5/8 | 70,0 m | Tubo Cobre |
| Ø1/2 | 12,0 m | Tubo Cobre |
| Ø3/8 | 98,0 m | Tubo Cobre |

# 2.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |

Project Name PREFEITURA DE FRANCISCO BELTRÃO
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| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20369 | 0 | 13033 | 20,0 | 0 | 23064 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20369 | 0 | 13033 | 20,0 | 0 | 22995 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20213 | 0 | 12934 | 20,0 | 0 | 22819 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20057 | 0 | 12834 | 20,0 | 0 | 22642 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19954 | 0 | 12768 | 20,0 | 0 | 22525 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20282 | 0 | 12978 | 20,0 | 0 | 22897 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20161 | 0 | 12901 | 20,0 | 0 | 22760 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20040 | 0 | 12823 | 20,0 | 0 | 22623 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19919 | 0 | 12745 | 20,0 | 0 | 22486 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19815 | 0 | 12679 | 20,0 | 0 | 22368 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20092 | 0 | 12856 | 20,0 | 0 | 22682 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19936 | 0 | 12756 | 20,0 | 0 | 22505 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19780 | 0 | 12657 | 20,0 | 0 | 22329 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19625 | 0 | 12557 | 20,0 | 0 | 22152 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19521 | 0 | 12491 | 20,0 | 0 | 22035 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20161 | 0 | 12901 | 20,0 | 0 | 22760 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20005 | 0 | 12801 | 20,0 | 0 | 22584 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19850 | 0 | 12701 | 20,0 | 0 | 22407 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19694 | 0 | 12601 | 20,0 | 0 | 22231 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19555 | 0 | 12513 | 20,0 | 0 | 22074 | 800(M) | N/A |

# 2.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU1 | MV6-1285WV2GN1 | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | 32,53 | 380-415-3-50 | 47.9 | 63 |
| | | MV6-670WV2GN1 | 1730*1830*850 | 430,00 | 22,00 | | 380-415-3-50 | 48.4 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU1 | MV6-1285WV2GN1 | 110,51 | 33,5 | 407586 | 0 | 7,0/87% | 461425 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU1 | MV6-1285WV2GN1 | 3,70 | 4,28 | 35,79 | 33,2 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 2.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 20/64 |
| Simultaneidade | 110,51% |
| Carga de refrigerante adicional | 32,53 kg<br>= 114,00(3/8) * 0,057 + 16,00(1/2) * 0,110 + 2,00(5/8) * 0,170 + 14,50(3/4) * 0,260 + 56,00(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 39,00 kg |
| Carga de refrigerante total | 71,53 kg |
| Comprimento Total da Tubulação | 196 m / 1000 m |
| Real mais distante | 80 m / 175 m |
| Equivalente mais distante | 90 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 34,5 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 15 m / 90 m |
| Capacidade de Resfriamento Disponível | 407586 Btu/h |
| Capacidade de Aquecimento Disponível | 461425 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 50,0 m | Ø41.2 | Ø7/8 |
| (2) | 4,0 m | Ø1-1/2 | Ø3/4 |
| (3) | 5,0 m | Ø1-1/4 | Ø3/4 |
| (4) | 2,0 m | Ø1-1/8 | Ø1/2 |
| (5) | 4,0 m | Ø7/8 | Ø3/8 |
| (6) | 2,0 m | Ø1-1/8 | Ø1/2 |
| (7) | 4,0 m | Ø1-1/8 | Ø1/2 |
| (8) | 4,0 m | Ø1-1/8 | Ø1/2 |
| (9) | 4,0 m | Ø7/8 | Ø3/8 |
| (10) | 3,0 m | Ø7/8 | Ø3/8 |
| (11) | 4,0 m | Ø3/4 | Ø3/8 |
| (12) | 3,0 m | Ø3/4 | Ø3/8 |
| (13) | 4,0 m | Ø5/8 | Ø3/8 |
| (14) | 3,0 m | Ø5/8 | Ø3/8 |
| (15) | 4,0 m | Ø7/8 | Ø3/8 |
| (16) | 4,0 m | Ø3/4 | Ø3/8 |

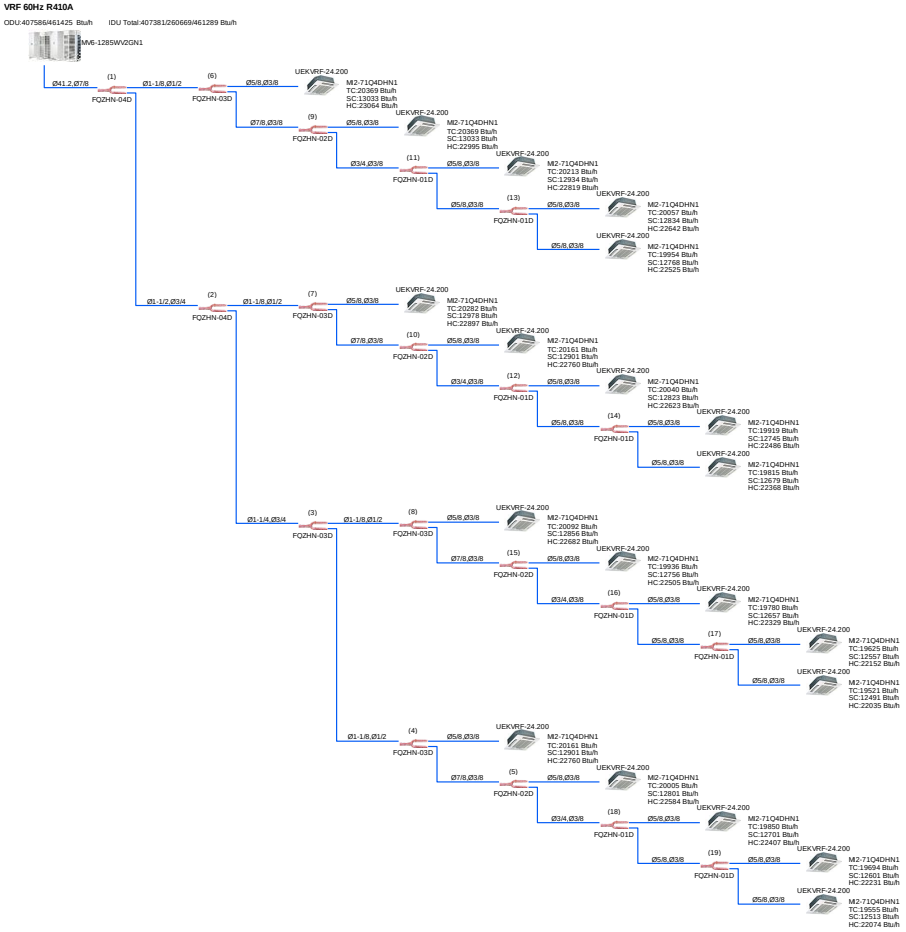
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 4,0 m | Ø5/8 | Ø3/8 |
| (18) | 4,0 m | Ø3/4 | Ø3/8 |
| (19) | 4,0 m | Ø5/8 | Ø3/8 |
| (20) | 2,0 m | Ø5/8 | Ø3/8 |
| (21) | 2,0 m | Ø5/8 | Ø3/8 |
| (22) | 2,0 m | Ø5/8 | Ø3/8 |
| (23) | 2,0 m | Ø5/8 | Ø3/8 |
| (24) | 5,0 m | Ø5/8 | Ø3/8 |
| (25) | 2,0 m | Ø5/8 | Ø3/8 |
| (26) | 2,0 m | Ø5/8 | Ø3/8 |
| (27) | 2,0 m | Ø5/8 | Ø3/8 |
| (28) | 2,0 m | Ø5/8 | Ø3/8 |
| (29) | 5,0 m | Ø5/8 | Ø3/8 |
| (30) | 2,0 m | Ø5/8 | Ø3/8 |
| (31) | 2,0 m | Ø5/8 | Ø3/8 |
| (32) | 2,0 m | Ø5/8 | Ø3/8 |
| (33) | 2,0 m | Ø5/8 | Ø3/8 |
| (34) | 5,0 m | Ø5/8 | Ø3/8 |
| (35) | 2,0 m | Ø5/8 | Ø3/8 |
| (36) | 2,0 m | Ø5/8 | Ø3/8 |
| (37) | 2,0 m | Ø5/8 | Ø3/8 |
| (38) | 2,0 m | Ø5/8 | Ø3/8 |
| (39) | 6,0 m | Ø5/8 | Ø3/8 |

Distribuidor

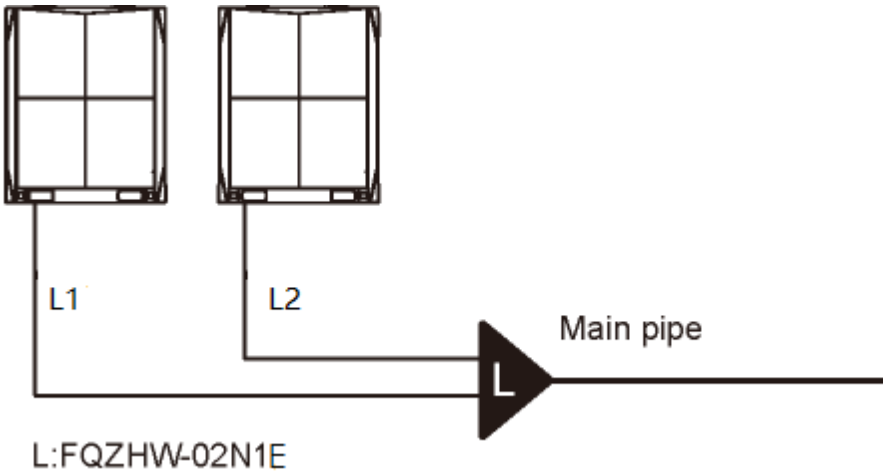
| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 484490 | FQZHN-04D |
| (2) | 363367 | FQZHN-04D |
| (3) | 242245 | FQZHN-03D |
| (4) | 121122 | FQZHN-03D |
| (5) | 96898 | FQZHN-02D |
| (6) | 121122 | FQZHN-03D |
| (7) | 121122 | FQZHN-03D |
| (8) | 121122 | FQZHN-03D |
| (9) | 96898 | FQZHN-02D |
| (10) | 96898 | FQZHN-02D |
| (11) | 72673 | FQZHN-01D |
| (12) | 72673 | FQZHN-01D |
| (13) | 48449 | FQZHN-01D |
| (14) | 48449 | FQZHN-01D |
| (15) | 96898 | FQZHN-02D |

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (16) | 72673 | FQZHN-01D |
| (17) | 48449 | FQZHN-01D |
| (18) | 72673 | FQZHN-01D |
| (19) | 48449 | FQZHN-01D |

# 2.5 Diagrama da tubagem

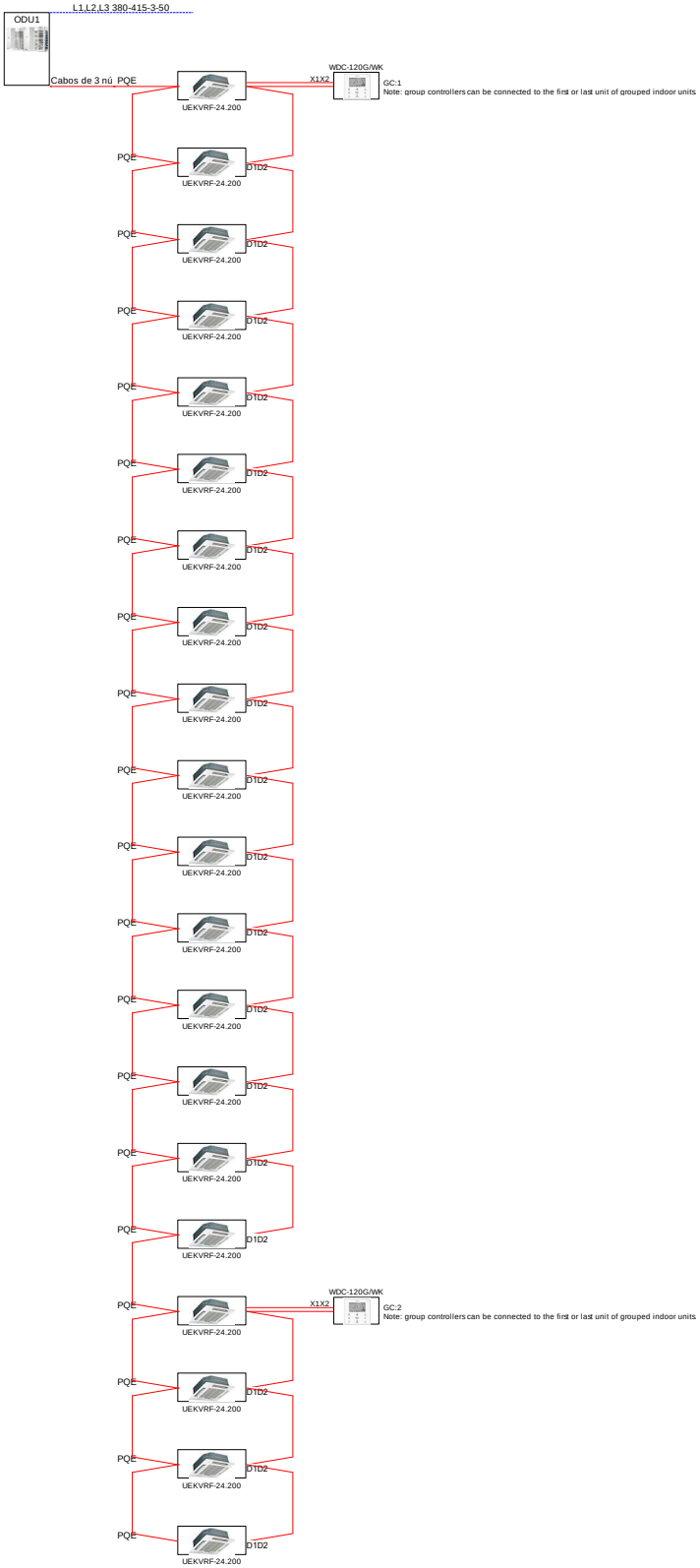



The piping size may be different with the actual situation because of the software's illustration limitation, please confirm the piping size according to the installation manual before installation.




L:FQZHW-02N1E

# 2.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-03 - 40HP (20+20)

## 3.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1120WV2GN1 | 1 | V6 VRF (380V) |
| MV6-335WV2GN1 | 1 | V6 VRF (380V) |
| MV6-785WV2GN1 | 1 | V6 VRF (380V) |
| MI2-45Q4DHN1 | 16 | Four-way Cassette (2nd DC IDU) |
| MI2-71Q4DHN1 | 4 | Four-way Cassette (2nd DC IDU) |
| MI2-56Q4DHN1 | 3 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 2 | Distribuidor |
| FQZHN-03D | 6 | Distribuidor |
| FQZHN-02D | 1 | Distribuidor |
| FQZHN-01D | 13 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-86E/K | 2 | 2nd generation wired controller |
| WDC-120G/WK | 4 | 2nd generation wired controller |
| Ø1-5/8 | 60,0 m | Tubo Cobre |
| Ø1-1/2 | 5,0 m | Tubo Cobre |
| Ø1-3/8 | 10,0 m | Tubo Cobre |
| Ø1-1/4 | 13,0 m | Tubo Cobre |
| Ø1 | 6,0 m | Tubo Cobre |
| Ø7/8 | 83,0 m | Tubo Cobre |
| Ø3/4 | 37,0 m | Tubo Cobre |
| Ø5/8 | 44,0 m | Tubo Cobre |
| Ø1/2 | 93,0 m | Tubo Cobre |
| Ø3/8 | 33,0 m | Tubo Cobre |
| Ø1/4 | 44,0 m | Tubo Cobre |

# 3.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

Project Name PREFEITURA DE FRANCISCO BELTRÃO
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| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13136 | 0 | 8564 | 20,0 | 0 | 14432 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13136 | 0 | 8564 | 20,0 | 0 | 14432 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13058 | 0 | 8513 | 20,0 | 0 | 14303 | 744(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19616 | 0 | 12550 | 20,0 | 0 | 21773 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19757 | 0 | 12641 | 20,0 | 0 | 21930 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19916 | 0 | 12742 | 20,0 | 0 | 22106 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20074 | 0 | 12844 | 20,0 | 0 | 22283 | 800(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15760 | 0 | 9673 | 20,0 | 0 | 17482 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15760 | 0 | 9673 | 20,0 | 0 | 17482 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12857 | 0 | 8382 | 20,0 | 0 | 14082 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12756 | 0 | 8316 | 20,0 | 0 | 13972 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12678 | 0 | 8265 | 20,0 | 0 | 13886 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12578 | 0 | 8200 | 20,0 | 0 | 13776 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12767 | 0 | 8324 | 20,0 | 0 | 13984 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12667 | 0 | 8258 | 20,0 | 0 | 13874 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12566 | 0 | 8193 | 20,0 | 0 | 13763 | 744(M) | N/A |

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| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12466 | 0 | 8127 | 20,0 | 0 | 13653 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12745 | 0 | 8309 | 20,0 | 0 | 13960 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12645 | 0 | 8244 | 20,0 | 0 | 13849 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12544 | 0 | 8178 | 20,0 | 0 | 13739 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12444 | 0 | 8113 | 20,0 | 0 | 13628 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13136 | 0 | 8564 | 20,0 | 0 | 14432 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16246 | 0 | 9971 | 20,0 | 0 | 18023 | 744(M) | N/A |

# 3.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU2 | MV6-1120WV2GN1 | MV6-335WV2GN1 | 990*1635*790 | 227,00 | 11,00 | 42,31 | 380-415-3-50 | 26.4 | 32 |
| | | MV6-785WV2GN1 | 1730*1830*850 | 430,00 | 22,00 | | 380-415-3-50 | 58.7 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU2 | MV6-1120WV2GN1 | 104,64 | 33,5 | 342418 | 0 | 7,0/87% | 378482 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU2 | MV6-1120WV2GN1 | 3,58 | 4,10 | 31,69 | 28,61 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 3.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 23/64 |
| Simultaneidade | 104,64% |
| Carga de refrigerante adicional | 42,31 kg<br>= 53,50(1/4) * 0,022 + 37,50(3/8) * 0,057 + 58,50(1/2) * 0,110 + 12,50(5/8) * 0,170 + 7,00(3/4) * 0,260 + 79,50(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 33,00 kg |
| Carga de refrigerante total | 75,31 kg |
| Comprimento Total da Tubulação | 242 m / 1000 m |
| Real mais distante | 96 m / 175 m |
| Equivalente mais distante | 107,5 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 42 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 15 m / 90 m |
| Capacidade de Resfriamento Disponível | 342418 Btu/h |
| Capacidade de Aquecimento Disponível | 378482 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 60,0 m | Ø41.2 | Ø7/8 |
| (2) | 1,0 m | Ø1-1/2 | Ø7/8 |
| (3) | 4,0 m | Ø1-3/8 | Ø7/8 |
| (4) | 4,0 m | Ø1-3/8 | Ø7/8 |
| (5) | 2,0 m | Ø1-1/4 | Ø3/4 |
| (6) | 4,0 m | Ø1-1/4 | Ø5/8 |
| (7) | 2,0 m | Ø1/2 | Ø1/4 |
| (8) | 2,0 m | Ø1/2 | Ø1/4 |
| (9) | 2,0 m | Ø1/2 | Ø1/4 |
| (10) | 2,0 m | Ø1-3/8 | Ø7/8 |
| (11) | 7,0 m | Ø1-1/4 | Ø5/8 |
| (12) | 4,0 m | Ø1 | Ø1/2 |
| (13) | 2,0 m | Ø3/4 | Ø1/2 |
| (14) | 4,0 m | Ø7/8 | Ø1/2 |
| (15) | 4,0 m | Ø3/4 | Ø1/2 |
| (16) | 6,0 m | Ø5/8 | Ø3/8 |

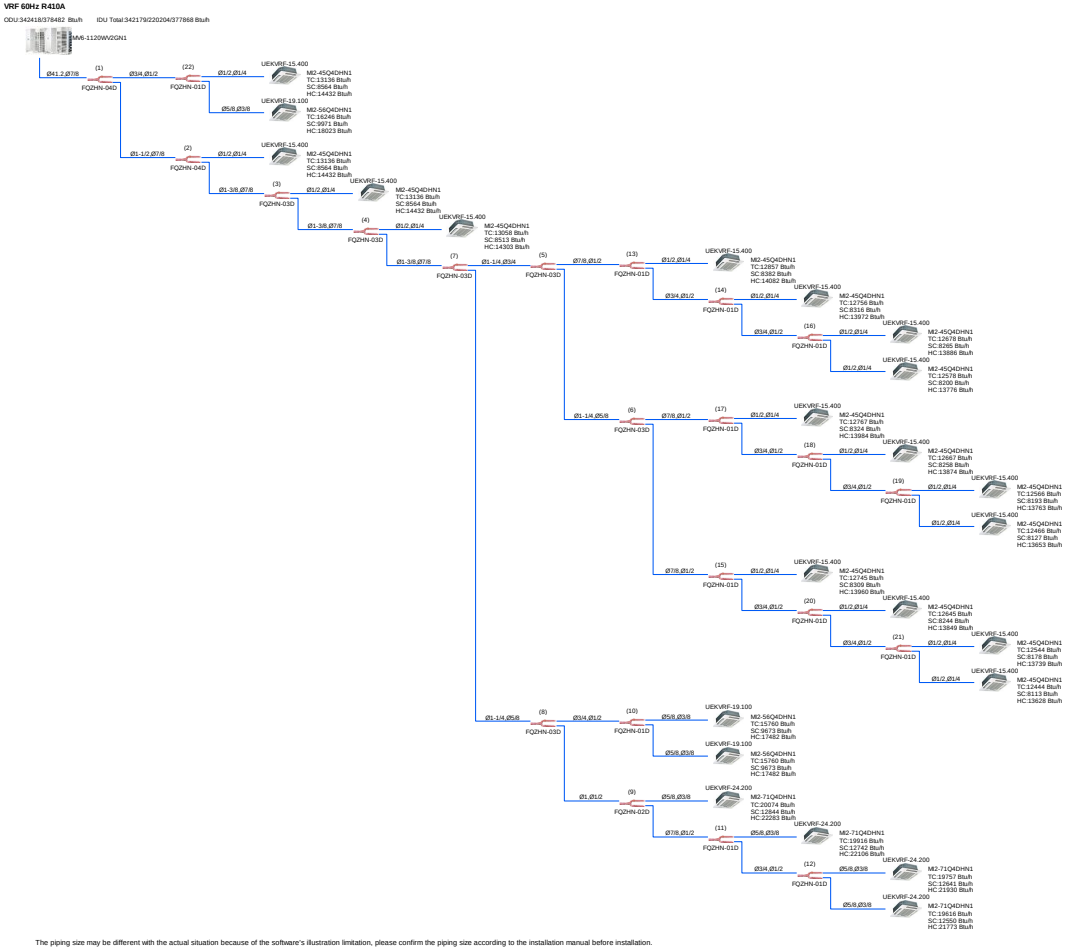
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 2,0 m | Ø5/8 | Ø3/8 |
| (18) | 2,0 m | Ø5/8 | Ø3/8 |
| (19) | 2,0 m | Ø5/8 | Ø3/8 |
| (20) | 6,0 m | Ø5/8 | Ø3/8 |
| (21) | 6,0 m | Ø5/8 | Ø3/8 |
| (22) | 3,0 m | Ø7/8 | Ø1/2 |
| (23) | 4,0 m | Ø3/4 | Ø1/2 |
| (24) | 3,0 m | Ø7/8 | Ø1/2 |
| (25) | 3,0 m | Ø3/4 | Ø1/2 |
| (26) | 2,0 m | Ø1/2 | Ø1/4 |
| (27) | 2,0 m | Ø1/2 | Ø1/4 |
| (28) | 2,0 m | Ø1/2 | Ø1/4 |
| (29) | 6,0 m | Ø1/2 | Ø1/4 |
| (30) | 2,0 m | Ø7/8 | Ø1/2 |
| (31) | 4,0 m | Ø3/4 | Ø1/2 |
| (32) | 4,0 m | Ø3/4 | Ø1/2 |
| (33) | 4,0 m | Ø3/4 | Ø1/2 |
| (34) | 4,0 m | Ø3/4 | Ø1/2 |
| (35) | 2,0 m | Ø1/2 | Ø1/4 |
| (36) | 2,0 m | Ø1/2 | Ø1/4 |
| (37) | 2,0 m | Ø1/2 | Ø1/4 |
| (38) | 6,0 m | Ø1/2 | Ø1/4 |
| (39) | 2,0 m | Ø1/2 | Ø1/4 |
| (40) | 2,0 m | Ø1/2 | Ø1/4 |
| (41) | 2,0 m | Ø1/2 | Ø1/4 |
| (42) | 6,0 m | Ø1/2 | Ø1/4 |
| (43) | 2,0 m | Ø3/4 | Ø1/2 |
| (44) | 2,0 m | Ø1/2 | Ø1/4 |
| (45) | 9,0 m | Ø5/8 | Ø3/8 |

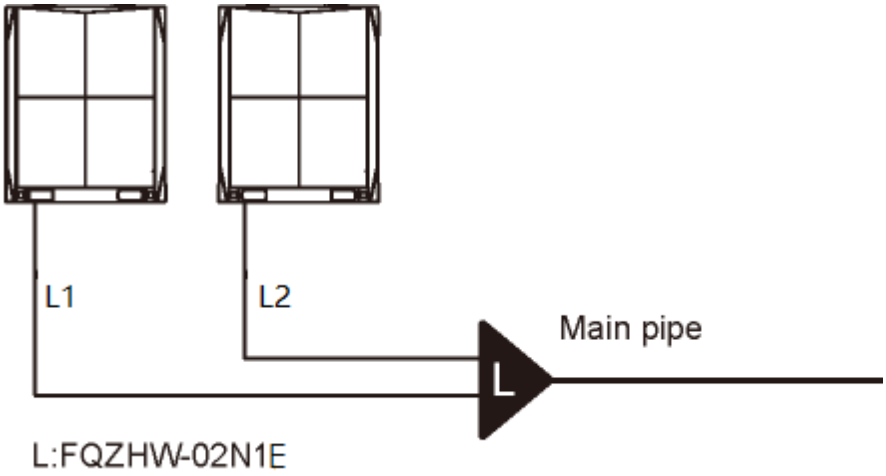
Distribuidor

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 399875 | FQZHN-04D |
| (2) | 365414 | FQZHN-04D |
| (3) | 350061 | FQZHN-03D |
| (4) | 334707 | FQZHN-03D |
| (5) | 184243 | FQZHN-03D |
| (6) | 122828 | FQZHN-03D |
| (7) | 319354 | FQZHN-03D |
| (8) | 135111 | FQZHN-03D |
| (9) | 96898 | FQZHN-02D |

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (10) | 38213 | FQZHN-01D |
| (11) | 72673 | FQZHN-01D |
| (12) | 48449 | FQZHN-01D |
| (13) | 61414 | FQZHN-01D |
| (14) | 46061 | FQZHN-01D |
| (15) | 61414 | FQZHN-01D |
| (16) | 30707 | FQZHN-01D |
| (17) | 61414 | FQZHN-01D |
| (18) | 46061 | FQZHN-01D |
| (19) | 30707 | FQZHN-01D |
| (20) | 46061 | FQZHN-01D |
| (21) | 30707 | FQZHN-01D |
| (22) | 34460 | FQZHN-01D |

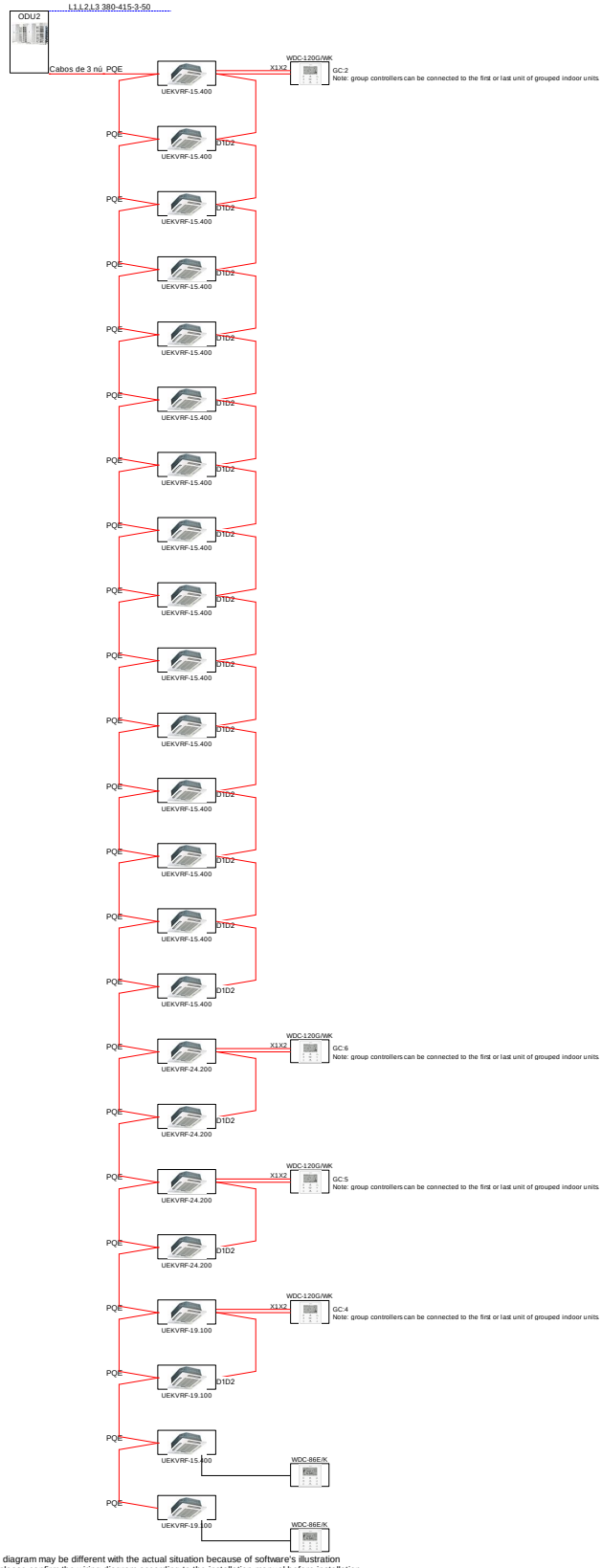
# 3.5 Diagrama da tubagem






L:FQZHW-02N1E

# 3.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-04 - 38 HP (18+18)

## 4.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1065WV2GN1 | 1 | V6 VRF (380V) |
| MV6-450WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MI2-56Q4DHN1 | 20 | Four-way Cassette (2nd DC IDU) |
| MI2-36Q4DHN1 | 1 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 1 | Distribuidor |
| FQZHN-03D | 2 | Distribuidor |
| FQZHN-02D | 8 | Distribuidor |
| FQZHN-01D | 9 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-86E/K | 1 | 2nd generation wired controller |
| WDC-120G/WK | 2 | 2nd generation wired controller |
| Ø1-5/8 | 80,0 m | Tubo Cobre |
| Ø1-1/4 | 10,0 m | Tubo Cobre |
| Ø1-1/8 | 5,0 m | Tubo Cobre |
| Ø7/8 | 107,0 m | Tubo Cobre |
| Ø3/4 | 8,0 m | Tubo Cobre |
| Ø5/8 | 90,0 m | Tubo Cobre |
| Ø1/2 | 7,0 m | Tubo Cobre |
| Ø3/8 | 110,0 m | Tubo Cobre |
| Ø1/4 | 7,0 m | Tubo Cobre |

# 4.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

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| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-12.200 | MI2-36Q4DHN1 | 28(M) | 21,30 | 840*230*840 | 220-240,60,1 | 25 | 0.41 | 15 |

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15661 | 0 | 9622 | 20,0 | 0 | 17981 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15661 | 0 | 9622 | 20,0 | 0 | 17927 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15541 | 0 | 9548 | 20,0 | 0 | 17789 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15421 | 0 | 9474 | 20,0 | 0 | 17652 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15341 | 0 | 9425 | 20,0 | 0 | 17560 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15594 | 0 | 9581 | 20,0 | 0 | 17850 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15501 | 0 | 9523 | 20,0 | 0 | 17743 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15408 | 0 | 9466 | 20,0 | 0 | 17636 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15315 | 0 | 9409 | 20,0 | 0 | 17529 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15235 | 0 | 9360 | 20,0 | 0 | 17438 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15448 | 0 | 9491 | 20,0 | 0 | 17682 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15328 | 0 | 9417 | 20,0 | 0 | 17545 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15208 | 0 | 9343 | 20,0 | 0 | 17407 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15088 | 0 | 9270 | 20,0 | 0 | 17270 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15008 | 0 | 9221 | 20,0 | 0 | 17178 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15501 | 0 | 9523 | 20,0 | 0 | 17743 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15381 | 0 | 9450 | 20,0 | 0 | 17606 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15261 | 0 | 9376 | 20,0 | 0 | 17468 | 744(M) | N/A |

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| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15141 | 0 | 9303 | 20,0 | 0 | 17331 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15022 | 0 | 9229 | 20,0 | 0 | 17193 | 744(M) | N/A |
| UEKVRF-12.200 | MI2-36Q4DHN1 | 27,0/47,0% | 0 | 9560 | 0 | 6449 | 20,0 | 0 | 10790 | 658(M) | N/A |

# 4.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU3 | MV6-1065WV2GN1 | MV6-450WV2GN1 | 1340*1635*850 | 277,00 | 13,00 | 42,55 | 380-415-3-50 | 33.1 | 40 |
| | | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | | 380-415-3-50 | 47.9 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU3 | MV6-1065WV2GN1 | 108,54 | 33,5 | 323653 | 0 | 7,0/87% | 371112 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU3 | MV6-1065WV2GN1 | 3,68 | 4,28 | 29,66 | 27,02 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 4.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 21/63 |
| Simultaneidade | 108,54% |
| Carga de refrigerante adicional | 42,55 kg<br>= 8,00(1/4) * 0,022 + 130,50(3/8) * 0,057 + 11,50(5/8) * 0,170 + 5,00(3/4) * 0,260 + 88,00(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 30,00 kg |
| Carga de refrigerante total | 72,55 kg |
| Comprimento Total da Tubulação | 236,5 m / 1000 m |
| Real mais distante | 114 m / 175 m |
| Equivalente mais distante | 127 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 39,5 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 10 m / 90 m |
| Capacidade de Resfriamento Disponível | 323653 Btu/h |
| Capacidade de Aquecimento Disponível | 371112 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 80,0 m | Ø41.2 | Ø7/8 |
| (2) | 4,0 m | Ø1-1/4 | Ø3/4 |
| (3) | 5,0 m | Ø1-1/8 | Ø5/8 |
| (4) | 2,0 m | Ø7/8 | Ø3/8 |
| (5) | 4,0 m | Ø7/8 | Ø3/8 |
| (6) | 2,0 m | Ø7/8 | Ø3/8 |
| (7) | 4,0 m | Ø7/8 | Ø3/8 |
| (8) | 4,0 m | Ø7/8 | Ø3/8 |
| (9) | 4,0 m | Ø7/8 | Ø3/8 |
| (10) | 3,0 m | Ø7/8 | Ø3/8 |
| (11) | 4,0 m | Ø5/8 | Ø3/8 |
| (12) | 3,0 m | Ø5/8 | Ø3/8 |
| (13) | 4,0 m | Ø5/8 | Ø3/8 |
| (14) | 3,0 m | Ø5/8 | Ø3/8 |
| (15) | 4,0 m | Ø7/8 | Ø3/8 |
| (16) | 4,0 m | Ø5/8 | Ø3/8 |

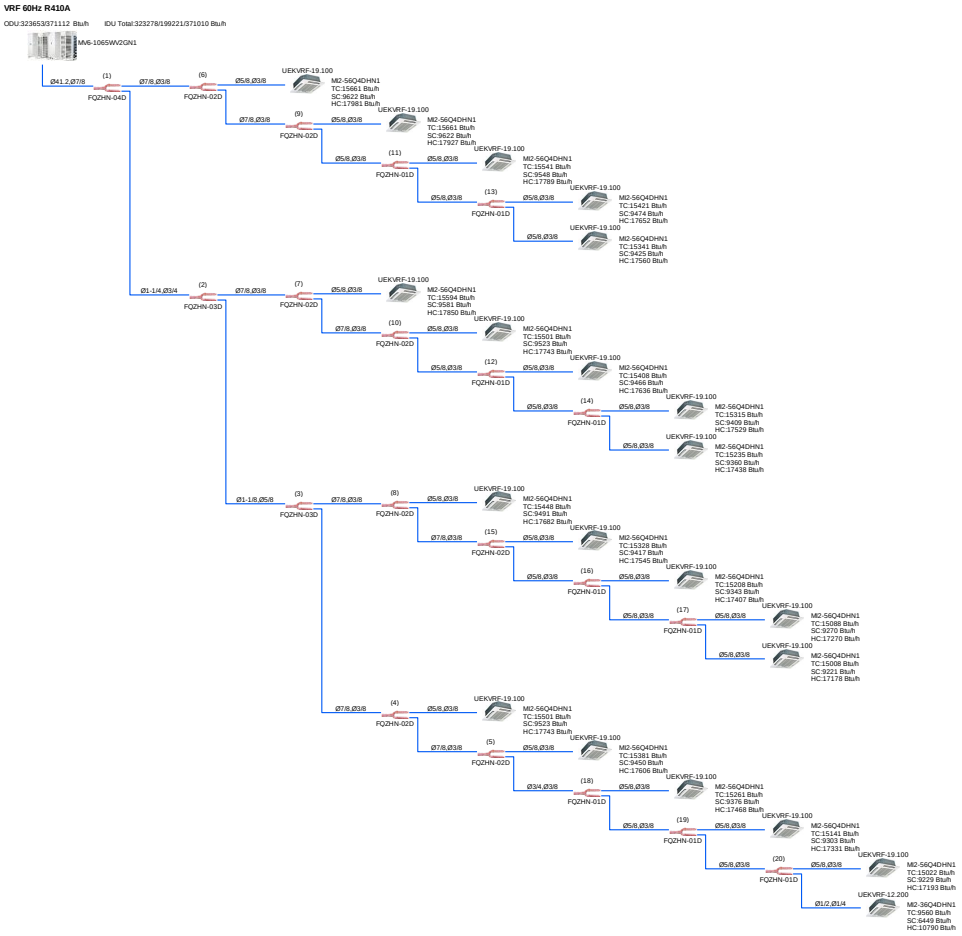
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 4,0 m | Ø5/8 | Ø3/8 |
| (18) | 4,0 m | Ø3/4 | Ø3/8 |
| (19) | 4,0 m | Ø5/8 | Ø3/8 |
| (20) | 2,0 m | Ø5/8 | Ø3/8 |
| (21) | 2,0 m | Ø5/8 | Ø3/8 |
| (22) | 2,0 m | Ø5/8 | Ø3/8 |
| (23) | 2,0 m | Ø5/8 | Ø3/8 |
| (24) | 5,0 m | Ø5/8 | Ø3/8 |
| (25) | 2,0 m | Ø5/8 | Ø3/8 |
| (26) | 2,0 m | Ø5/8 | Ø3/8 |
| (27) | 2,0 m | Ø5/8 | Ø3/8 |
| (28) | 2,0 m | Ø5/8 | Ø3/8 |
| (29) | 5,0 m | Ø5/8 | Ø3/8 |
| (30) | 2,0 m | Ø5/8 | Ø3/8 |
| (31) | 2,0 m | Ø5/8 | Ø3/8 |
| (32) | 2,0 m | Ø5/8 | Ø3/8 |
| (33) | 2,0 m | Ø5/8 | Ø3/8 |
| (34) | 5,0 m | Ø5/8 | Ø3/8 |
| (35) | 2,0 m | Ø5/8 | Ø3/8 |
| (36) | 2,0 m | Ø5/8 | Ø3/8 |
| (37) | 4,0 m | Ø5/8 | Ø3/8 |
| (38) | 2,0 m | Ø5/8 | Ø3/8 |
| (39) | 2,0 m | Ø5/8 | Ø3/8 |
| (40) | 2,0 m | Ø5/8 | Ø3/8 |
| (41) | 7,0 m | Ø1/2 | Ø1/4 |

Distribuidor

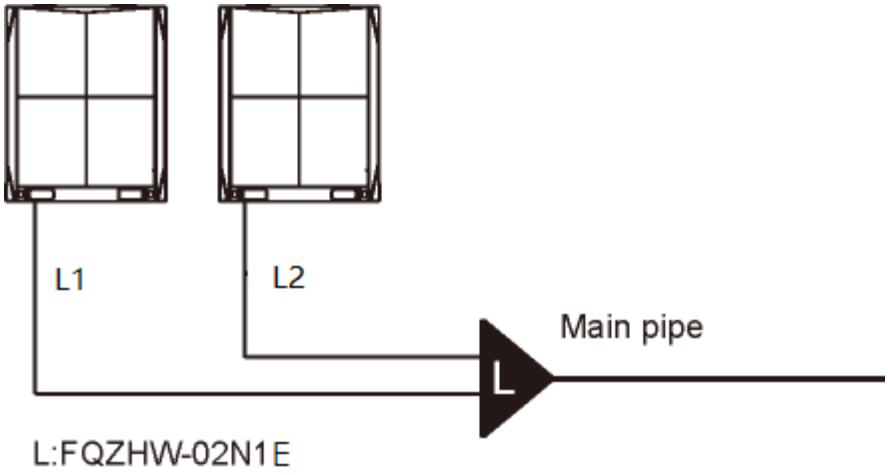
| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 394416 | FQZHN-04D |
| (2) | 298882 | FQZHN-03D |
| (3) | 203349 | FQZHN-03D |
| (4) | 107816 | FQZHN-02D |
| (5) | 88709 | FQZHN-02D |
| (6) | 95533 | FQZHN-02D |
| (7) | 95533 | FQZHN-02D |
| (8) | 95533 | FQZHN-02D |
| (9) | 76427 | FQZHN-02D |
| (10) | 76427 | FQZHN-02D |
| (11) | 57320 | FQZHN-01D |
| (12) | 57320 | FQZHN-01D |
| (13) | 38213 | FQZHN-01D |

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (14) | 38213 | FQZHN-01D |
| (15) | 76427 | FQZHN-02D |
| (16) | 57320 | FQZHN-01D |
| (17) | 38213 | FQZHN-01D |
| (18) | 69603 | FQZHN-01D |
| (19) | 50496 | FQZHN-01D |
| (20) | 31389 | FQZHN-01D |

# 4.5 Diagrama da tubagem

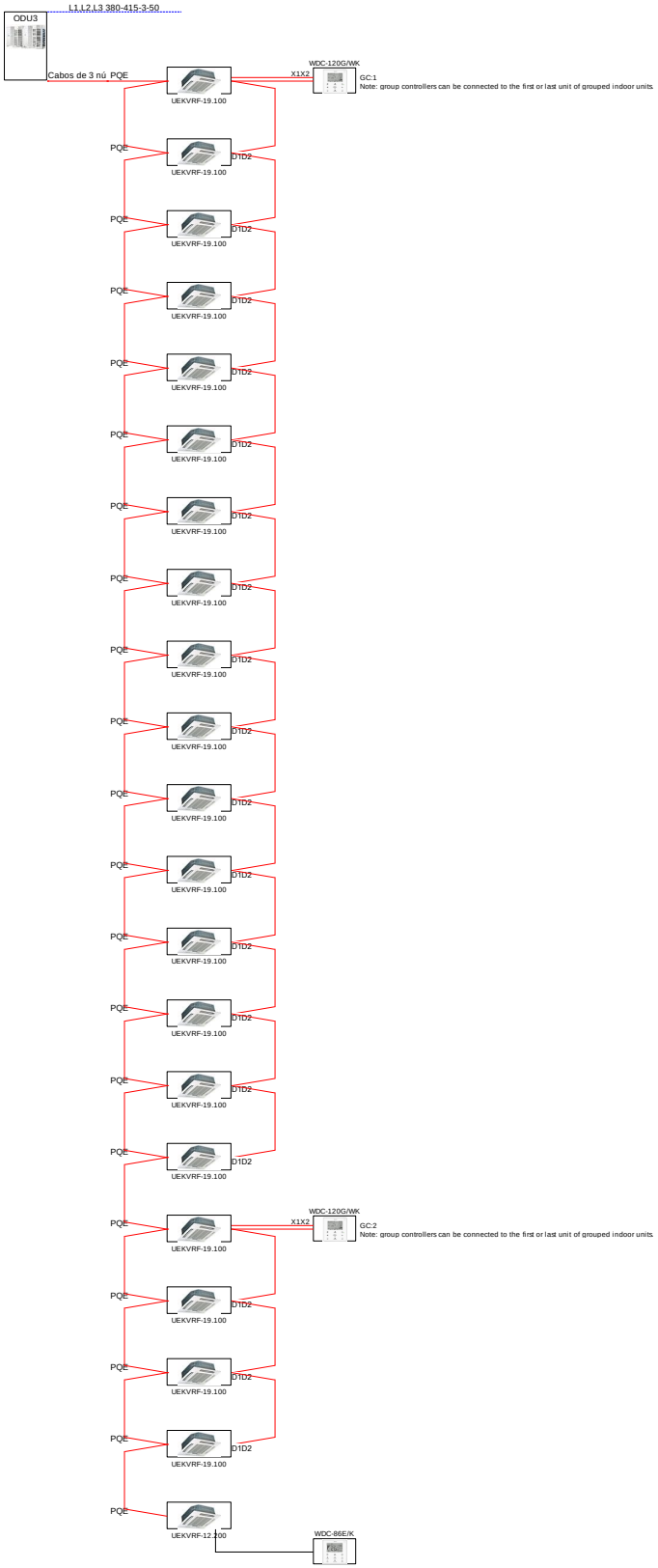



The piping size may be different with the actual situation because of the software's illustration limitation, please confirm the piping size according to the installation manual before installation.




L:FQZHW-02N1E

# 4.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-05 - 46 (22+24)

## 5.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1285WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MV6-670WV2GN1 | 1 | V6 VRF (380V) |
| MI2-71Q4DHN1 | 20 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 2 | Distribuidor |
| FQZHN-03D | 5 | Distribuidor |
| FQZHN-02D | 4 | Distribuidor |
| FQZHN-01D | 8 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-120G/WK | 2 | 2nd generation wired controller |
| Ø1-5/8 | 80,0 m | Tubo Cobre |
| Ø1-1/2 | 8,0 m | Tubo Cobre |
| Ø1-1/4 | 7,0 m | Tubo Cobre |
| Ø1-1/8 | 12,0 m | Tubo Cobre |
| Ø7/8 | 95,0 m | Tubo Cobre |
| Ø3/4 | 28,0 m | Tubo Cobre |
| Ø5/8 | 70,0 m | Tubo Cobre |
| Ø1/2 | 12,0 m | Tubo Cobre |
| Ø3/8 | 98,0 m | Tubo Cobre |

# 5.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |

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Date 2022 / 3 / 2

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19721 | 0 | 12624 | 20,0 | 0 | 22826 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19721 | 0 | 12624 | 20,0 | 0 | 22757 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19570 | 0 | 12527 | 20,0 | 0 | 22583 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19419 | 0 | 12431 | 20,0 | 0 | 22408 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19318 | 0 | 12366 | 20,0 | 0 | 22291 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19637 | 0 | 12570 | 20,0 | 0 | 22660 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19520 | 0 | 12495 | 20,0 | 0 | 22524 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19402 | 0 | 12420 | 20,0 | 0 | 22389 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19285 | 0 | 12345 | 20,0 | 0 | 22253 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19184 | 0 | 12281 | 20,0 | 0 | 22136 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19453 | 0 | 12452 | 20,0 | 0 | 22447 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19302 | 0 | 12356 | 20,0 | 0 | 22272 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19151 | 0 | 12259 | 20,0 | 0 | 22097 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19000 | 0 | 12163 | 20,0 | 0 | 21923 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 18899 | 0 | 12098 | 20,0 | 0 | 21806 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19520 | 0 | 12495 | 20,0 | 0 | 22524 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19369 | 0 | 12399 | 20,0 | 0 | 22350 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19218 | 0 | 12302 | 20,0 | 0 | 22175 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19067 | 0 | 12206 | 20,0 | 0 | 22000 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 18933 | 0 | 12120 | 20,0 | 0 | 21845 | 800(M) | N/A |

# 5.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU4 | MV6-1285WV2GN1 | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | 44,05 | 380-415-3-50 | 47.9 | 63 |
| | | MV6-670WV2GN1 | 1730*1830*850 | 430,00 | 22,00 | | 380-415-3-50 | 48.4 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU4 | MV6-1285WV2GN1 | 110,51 | 33,5 | 394825 | 0 | 7,0/87% | 456649 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU4 | MV6-1285WV2GN1 | 3,70 | 4,28 | 35,79 | 33,2 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 5.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 20/64 |
| Simultaneidade | 110,51% |
| Carga de refrigerante adicional | 44,05 kg<br>= 114,00(3/8) * 0,057 + 16,00(1/2) * 0,110 + 2,00(5/8) * 0,170 + 14,50(3/4) * 0,260 + 88,00(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 39,00 kg |
| Carga de refrigerante total | 83,05 kg |
| Comprimento Total da Tubulação | 228 m / 1000 m |
| Real mais distante | 110 m / 175 m |
| Equivalente mais distante | 122 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 34,5 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 10 m / 90 m |
| Capacidade de Resfriamento Disponível | 394825 Btu/h |
| Capacidade de Aquecimento Disponível | 456649 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 80,0 m | Ø41.2 | Ø7/8 |
| (2) | 4,0 m | Ø1-1/2 | Ø3/4 |
| (3) | 5,0 m | Ø1-1/4 | Ø3/4 |
| (4) | 2,0 m | Ø1-1/8 | Ø1/2 |
| (5) | 4,0 m | Ø7/8 | Ø3/8 |
| (6) | 2,0 m | Ø1-1/8 | Ø1/2 |
| (7) | 4,0 m | Ø1-1/8 | Ø1/2 |
| (8) | 4,0 m | Ø1-1/8 | Ø1/2 |
| (9) | 4,0 m | Ø7/8 | Ø3/8 |
| (10) | 3,0 m | Ø7/8 | Ø3/8 |
| (11) | 4,0 m | Ø3/4 | Ø3/8 |
| (12) | 3,0 m | Ø3/4 | Ø3/8 |
| (13) | 4,0 m | Ø5/8 | Ø3/8 |
| (14) | 3,0 m | Ø5/8 | Ø3/8 |
| (15) | 4,0 m | Ø7/8 | Ø3/8 |
| (16) | 4,0 m | Ø3/4 | Ø3/8 |

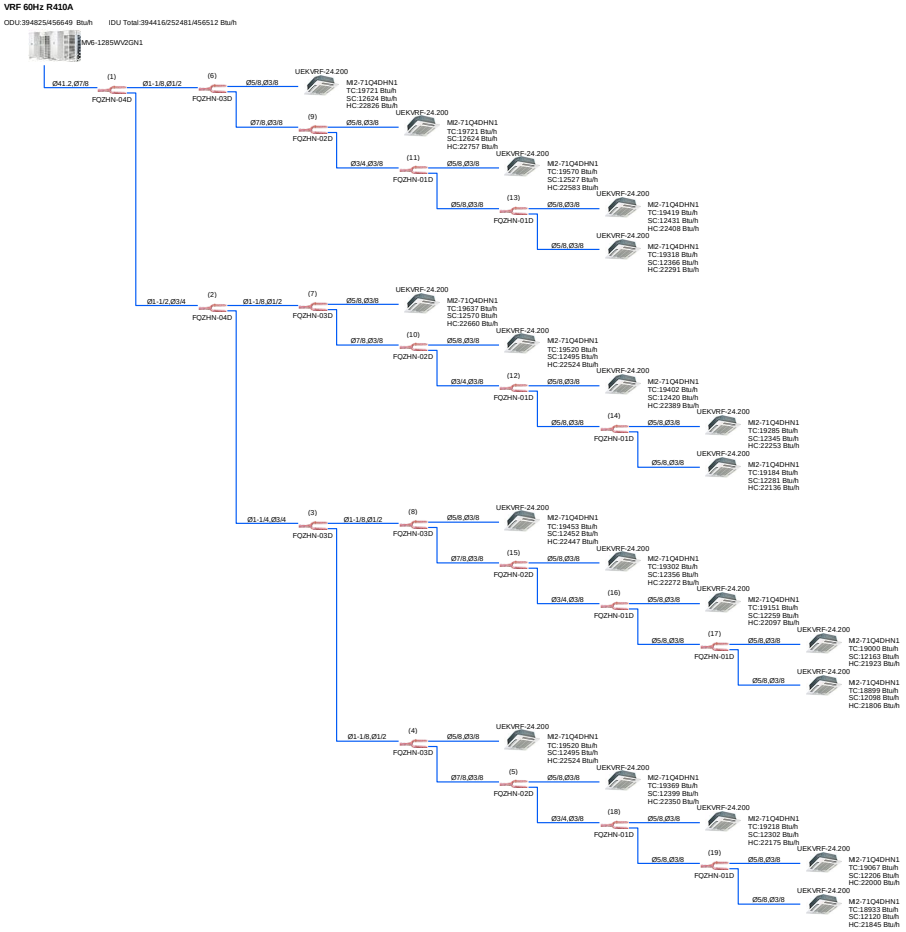
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 4,0 m | Ø5/8 | Ø3/8 |
| (18) | 4,0 m | Ø3/4 | Ø3/8 |
| (19) | 4,0 m | Ø5/8 | Ø3/8 |
| (20) | 2,0 m | Ø5/8 | Ø3/8 |
| (21) | 2,0 m | Ø5/8 | Ø3/8 |
| (22) | 2,0 m | Ø5/8 | Ø3/8 |
| (23) | 2,0 m | Ø5/8 | Ø3/8 |
| (24) | 5,0 m | Ø5/8 | Ø3/8 |
| (25) | 2,0 m | Ø5/8 | Ø3/8 |
| (26) | 2,0 m | Ø5/8 | Ø3/8 |
| (27) | 2,0 m | Ø5/8 | Ø3/8 |
| (28) | 2,0 m | Ø5/8 | Ø3/8 |
| (29) | 5,0 m | Ø5/8 | Ø3/8 |
| (30) | 2,0 m | Ø5/8 | Ø3/8 |
| (31) | 2,0 m | Ø5/8 | Ø3/8 |
| (32) | 2,0 m | Ø5/8 | Ø3/8 |
| (33) | 2,0 m | Ø5/8 | Ø3/8 |
| (34) | 5,0 m | Ø5/8 | Ø3/8 |
| (35) | 2,0 m | Ø5/8 | Ø3/8 |
| (36) | 2,0 m | Ø5/8 | Ø3/8 |
| (37) | 2,0 m | Ø5/8 | Ø3/8 |
| (38) | 2,0 m | Ø5/8 | Ø3/8 |
| (39) | 6,0 m | Ø5/8 | Ø3/8 |

Distribuidor

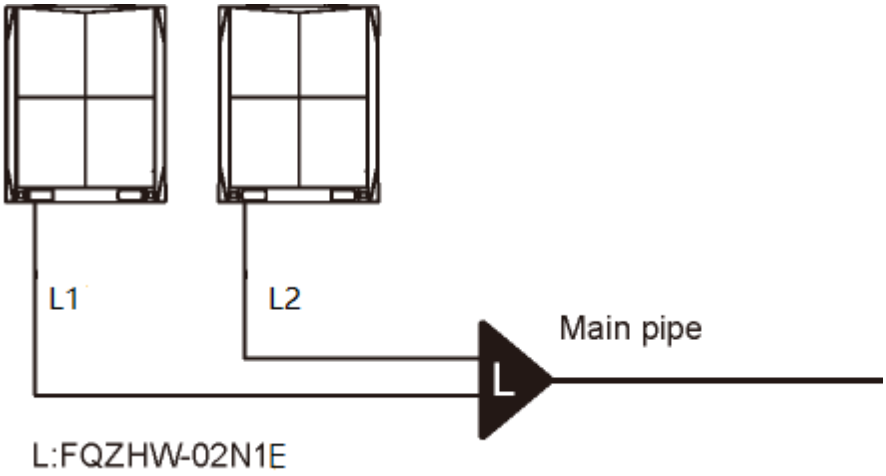
| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 484490 | FQZHN-04D |
| (2) | 363367 | FQZHN-04D |
| (3) | 242245 | FQZHN-03D |
| (4) | 121122 | FQZHN-03D |
| (5) | 96898 | FQZHN-02D |
| (6) | 121122 | FQZHN-03D |
| (7) | 121122 | FQZHN-03D |
| (8) | 121122 | FQZHN-03D |
| (9) | 96898 | FQZHN-02D |
| (10) | 96898 | FQZHN-02D |
| (11) | 72673 | FQZHN-01D |
| (12) | 72673 | FQZHN-01D |
| (13) | 48449 | FQZHN-01D |
| (14) | 48449 | FQZHN-01D |
| (15) | 96898 | FQZHN-02D |

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (16) | 72673 | FQZHN-01D |
| (17) | 48449 | FQZHN-01D |
| (18) | 72673 | FQZHN-01D |
| (19) | 48449 | FQZHN-01D |

# 5.5 Diagrama da tubagem

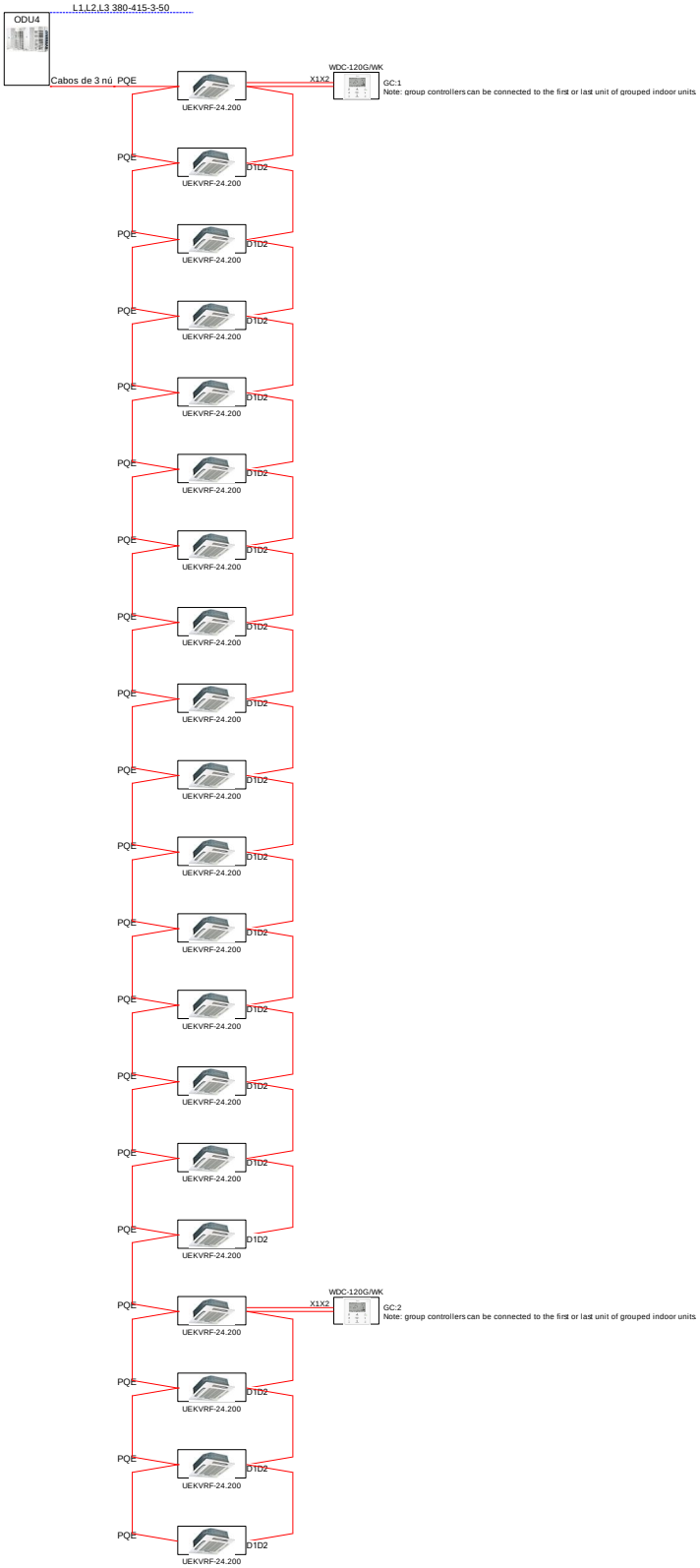



The piping size may be different with the actual situation because of the software's illustration limitation, please confirm the piping size according to the installation manual before installation.




L:FQZHW-02N1E

# 5.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-06 - 50 HP (22+28)

## 6.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1400WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MV6-785WV2GN1 | 1 | V6 VRF (380V) |
| MI2-56Q4DHN1 | 13 | Four-way Cassette (2nd DC IDU) |
| MI2-45Q4DHN1 | 16 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 2 | Distribuidor |
| FQZHN-03D | 5 | Distribuidor |
| FQZHN-02D | 3 | Distribuidor |
| FQZHN-01D | 18 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-120G/WK | 2 | 2nd generation wired controller |
| Ø1-5/8 | 80,0 m | Tubo Cobre |
| Ø1-1/2 | 5,0 m | Tubo Cobre |
| Ø1-3/8 | 7,0 m | Tubo Cobre |
| Ø1-1/4 | 14,0 m | Tubo Cobre |
| Ø1 | 12,0 m | Tubo Cobre |
| Ø7/8 | 96,0 m | Tubo Cobre |
| Ø3/4 | 56,0 m | Tubo Cobre |
| Ø5/8 | 54,0 m | Tubo Cobre |
| Ø1/2 | 118,0 m | Tubo Cobre |
| Ø3/8 | 42,0 m | Tubo Cobre |
| Ø1/4 | 48,0 m | Tubo Cobre |

# 6.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

Project Name PREFEITURA DE FRANCISCO BELTRÃO
BRASIL,FRANCISCO BELTRÃO
Date 2022 / 3 / 2

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15516 | 0 | 9533 | 20,0 | 0 | 17335 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15625 | 0 | 9600 | 20,0 | 0 | 17458 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15748 | 0 | 9676 | 20,0 | 0 | 17596 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15871 | 0 | 9752 | 20,0 | 0 | 17734 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15967 | 0 | 9810 | 20,0 | 0 | 17841 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15858 | 0 | 9743 | 20,0 | 0 | 17719 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12931 | 0 | 8427 | 20,0 | 0 | 14296 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12865 | 0 | 8384 | 20,0 | 0 | 14180 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12788 | 0 | 8334 | 20,0 | 0 | 14095 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12689 | 0 | 8270 | 20,0 | 0 | 13986 | 744(M) | N/A |

Project Name PREFEITURA DE FRANCISCO BELTRÃO
BRASIL,FRANCISCO BELTRÃO
Date 2022 / 3 / 2

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12854 | 0 | 8377 | 20,0 | 0 | 14168 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12755 | 0 | 8313 | 20,0 | 0 | 14059 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12656 | 0 | 8248 | 20,0 | 0 | 13949 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12557 | 0 | 8184 | 20,0 | 0 | 13840 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12832 | 0 | 8363 | 20,0 | 0 | 14144 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12733 | 0 | 8298 | 20,0 | 0 | 14034 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12634 | 0 | 8234 | 20,0 | 0 | 13925 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12535 | 0 | 8170 | 20,0 | 0 | 13816 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15639 | 0 | 9609 | 20,0 | 0 | 17473 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15748 | 0 | 9676 | 20,0 | 0 | 17596 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15447 | 0 | 9491 | 20,0 | 0 | 17258 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15570 | 0 | 9566 | 20,0 | 0 | 17396 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15694 | 0 | 9642 | 20,0 | 0 | 17535 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15324 | 0 | 9415 | 20,0 | 0 | 17120 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15201 | 0 | 9339 | 20,0 | 0 | 16982 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12931 | 0 | 8427 | 20,0 | 0 | 14296 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12931 | 0 | 8427 | 20,0 | 0 | 14296 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12876 | 0 | 8392 | 20,0 | 0 | 14192 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12766 | 0 | 8320 | 20,0 | 0 | 14071 | 744(M) | N/A |

# 6.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU5 | MV6-1400WV2GN1 | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | 52,58 | 380-415-3-50 | 47.9 | 63 |
| | | MV6-785WV2GN1 | 1730*1830*850 | 430,00 | 22,00 | | 380-415-3-50 | 58.7 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU5 | MV6-1400WV2GN1 | 103,43 | 33,5 | 416661 | 0 | 7,0/87% | 463984 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU5 | MV6-1400WV2GN1 | 3,45 | 3,92 | 40,87 | 36,99 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 6.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 29/64 |
| Simultaneidade | 103,43% |
| Carga de refrigerante adicional | 52,58 kg<br>= 58,50(1/4) * 0,022 + 49,00(3/8) * 0,057 + 84,00(1/2) * 0,110 + 13,00(5/8) * 0,170 + 7,50(3/4) * 0,260 + 97,50(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 39,00 kg |
| Carga de refrigerante total | 91,58 kg |
| Comprimento Total da Tubulação | 303 m / 1000 m |
| Real mais distante | 117 m / 175 m |
| Equivalente mais distante | 130,5 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 43 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 10 m / 90 m |
| Capacidade de Resfriamento Disponível | 416661 Btu/h |
| Capacidade de Aquecimento Disponível | 463984 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

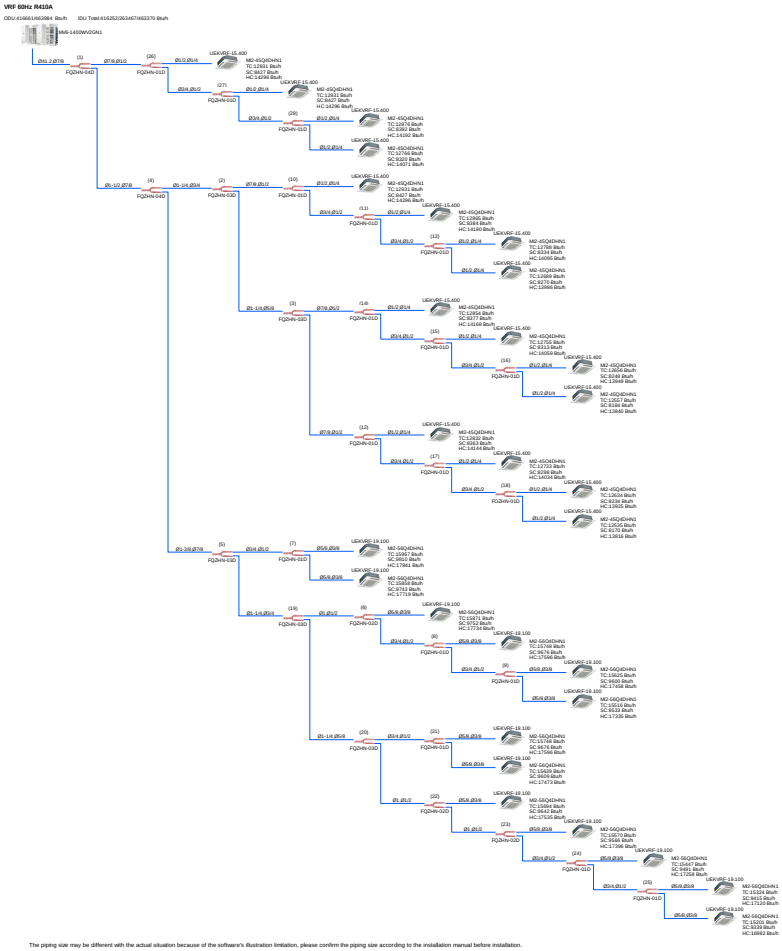
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 80,0 m | Ø41.2 | Ø7/8 |
| (2) | 1,0 m | Ø1-1/4 | Ø3/4 |
| (3) | 4,0 m | Ø1-1/4 | Ø5/8 |
| (4) | 1,0 m | Ø1-1/2 | Ø7/8 |
| (5) | 7,0 m | Ø1-3/8 | Ø7/8 |
| (6) | 4,0 m | Ø1 | Ø1/2 |
| (7) | 2,0 m | Ø3/4 | Ø1/2 |
| (8) | 4,0 m | Ø3/4 | Ø1/2 |
| (9) | 4,0 m | Ø3/4 | Ø1/2 |
| (10) | 6,0 m | Ø5/8 | Ø3/8 |
| (11) | 2,0 m | Ø5/8 | Ø3/8 |
| (12) | 2,0 m | Ø5/8 | Ø3/8 |
| (13) | 2,0 m | Ø5/8 | Ø3/8 |
| (14) | 2,0 m | Ø5/8 | Ø3/8 |
| (15) | 6,0 m | Ø5/8 | Ø3/8 |
| (16) | 2,0 m | Ø7/8 | Ø1/2 |

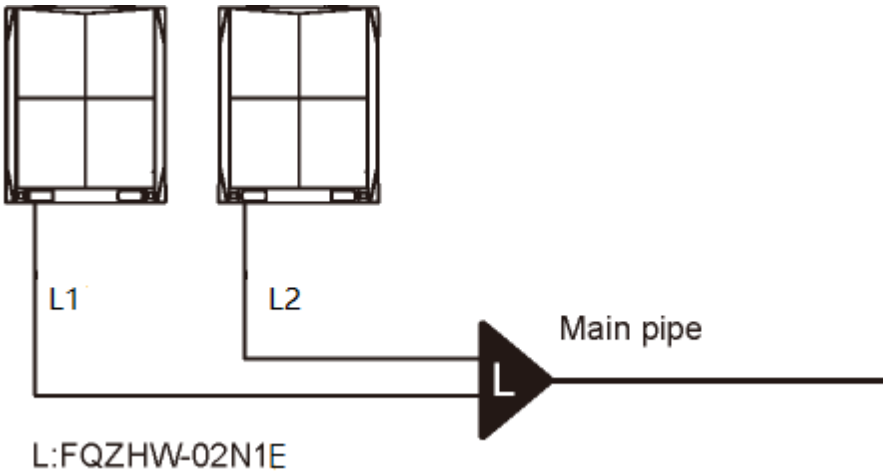
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 4,0 m | Ø3/4 | Ø1/2 |
| (18) | 3,0 m | Ø7/8 | Ø1/2 |
| (19) | 3,0 m | Ø3/4 | Ø1/2 |
| (20) | 2,0 m | Ø1/2 | Ø1/4 |
| (21) | 2,0 m | Ø1/2 | Ø1/4 |
| (22) | 2,0 m | Ø1/2 | Ø1/4 |
| (23) | 6,0 m | Ø1/2 | Ø1/4 |
| (24) | 2,0 m | Ø7/8 | Ø1/2 |
| (25) | 4,0 m | Ø3/4 | Ø1/2 |
| (26) | 4,0 m | Ø3/4 | Ø1/2 |
| (27) | 4,0 m | Ø3/4 | Ø1/2 |
| (28) | 4,0 m | Ø3/4 | Ø1/2 |
| (29) | 2,0 m | Ø1/2 | Ø1/4 |
| (30) | 2,0 m | Ø1/2 | Ø1/4 |
| (31) | 2,0 m | Ø1/2 | Ø1/4 |
| (32) | 6,0 m | Ø1/2 | Ø1/4 |
| (33) | 2,0 m | Ø1/2 | Ø1/4 |
| (34) | 2,0 m | Ø1/2 | Ø1/4 |
| (35) | 2,0 m | Ø1/2 | Ø1/4 |
| (36) | 6,0 m | Ø1/2 | Ø1/4 |
| (37) | 1,0 m | Ø1-1/4 | Ø3/4 |
| (38) | 6,0 m | Ø1-1/4 | Ø5/8 |
| (39) | 2,0 m | Ø3/4 | Ø1/2 |
| (40) | 6,0 m | Ø5/8 | Ø3/8 |
| (41) | 2,0 m | Ø5/8 | Ø3/8 |
| (42) | 4,0 m | Ø1 | Ø1/2 |
| (43) | 4,0 m | Ø1 | Ø1/2 |
| (44) | 4,0 m | Ø3/4 | Ø1/2 |
| (45) | 2,0 m | Ø5/8 | Ø3/8 |
| (46) | 2,0 m | Ø5/8 | Ø3/8 |
| (47) | 2,0 m | Ø5/8 | Ø3/8 |
| (48) | 4,0 m | Ø3/4 | Ø1/2 |
| (49) | 2,0 m | Ø5/8 | Ø3/8 |
| (50) | 6,0 m | Ø5/8 | Ø3/8 |
| (51) | 1,0 m | Ø7/8 | Ø1/2 |
| (52) | 2,0 m | Ø1/2 | Ø1/4 |
| (53) | 3,0 m | Ø3/4 | Ø1/2 |
| (54) | 2,0 m | Ø1/2 | Ø1/4 |
| (55) | 4,0 m | Ø3/4 | Ø1/2 |
| (56) | 2,0 m | Ø1/2 | Ø1/4 |
| (57) | 6,0 m | Ø1/2 | Ø1/4 |

Distribuidor

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 494043 | FQZHN-04D |
| (2) | 184243 | FQZHN-03D |
| (3) | 122828 | FQZHN-03D |
| (4) | 432629 | FQZHN-04D |
| (5) | 248386 | FQZHN-03D |
| (6) | 76427 | FQZHN-02D |
| (7) | 38213 | FQZHN-01D |
| (8) | 57320 | FQZHN-01D |
| (9) | 38213 | FQZHN-01D |
| (10) | 61414 | FQZHN-01D |
| (11) | 46061 | FQZHN-01D |
| (12) | 61414 | FQZHN-01D |
| (13) | 30707 | FQZHN-01D |
| (14) | 61414 | FQZHN-01D |
| (15) | 46061 | FQZHN-01D |
| (16) | 30707 | FQZHN-01D |
| (17) | 46061 | FQZHN-01D |
| (18) | 30707 | FQZHN-01D |
| (19) | 210173 | FQZHN-03D |
| (20) | 133746 | FQZHN-03D |
| (21) | 38213 | FQZHN-01D |
| (22) | 95533 | FQZHN-02D |
| (23) | 76427 | FQZHN-02D |
| (24) | 57320 | FQZHN-01D |
| (25) | 38213 | FQZHN-01D |
| (26) | 61414 | FQZHN-01D |
| (27) | 46061 | FQZHN-01D |
| (28) | 30707 | FQZHN-01D |

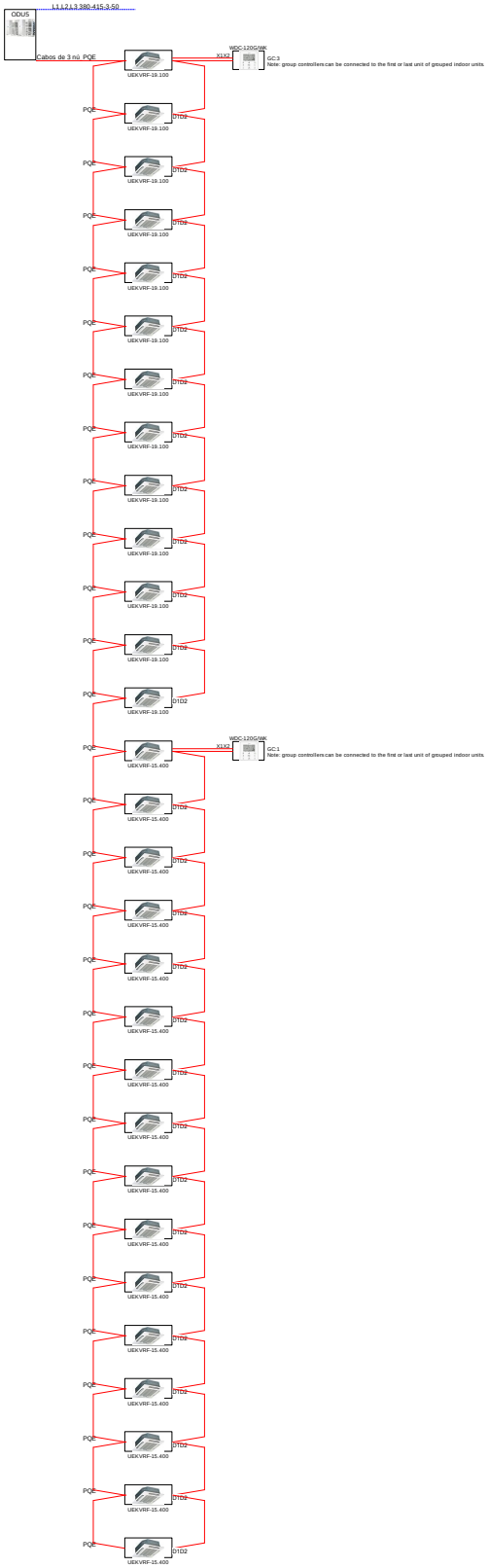
# 6.5 Diagrama da tubagem






L:FQZHW-02N1E

# 6.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-07 - 38 HP (18+18)

## 7.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1065WV2GN1 | 1 | V6 VRF (380V) |
| MV6-450WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MI2-56Q4DHN1 | 20 | Four-way Cassette (2nd DC IDU) |
| MI2-28Q4CDHN1 | 1 | Compact Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 1 | Distribuidor |
| FQZHN-03D | 2 | Distribuidor |
| FQZHN-02D | 8 | Distribuidor |
| FQZHN-01D | 9 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-86E/K | 1 | 2nd generation wired controller |
| WDC-120G/WK | 2 | 2nd generation wired controller |
| Ø1-5/8 | 80,0 m | Tubo Cobre |
| Ø1-1/4 | 10,0 m | Tubo Cobre |
| Ø1-1/8 | 5,0 m | Tubo Cobre |
| Ø7/8 | 107,0 m | Tubo Cobre |
| Ø3/4 | 8,0 m | Tubo Cobre |
| Ø5/8 | 90,0 m | Tubo Cobre |
| Ø1/2 | 7,0 m | Tubo Cobre |
| Ø3/8 | 110,0 m | Tubo Cobre |
| Ø1/4 | 7,0 m | Tubo Cobre |

# 7.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

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| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-9.100 | MI2-28Q4CDHN1 | 29(M) | 18,00 | 630*260*570 | 220-240,60,1 | 35 | 0.43 | 15 |

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15763 | 0 | 9656 | 20,0 | 0 | 17947 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15763 | 0 | 9656 | 20,0 | 0 | 17893 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15642 | 0 | 9582 | 20,0 | 0 | 17755 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15522 | 0 | 9508 | 20,0 | 0 | 17618 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15441 | 0 | 9459 | 20,0 | 0 | 17527 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15696 | 0 | 9615 | 20,0 | 0 | 17816 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15602 | 0 | 9557 | 20,0 | 0 | 17710 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15508 | 0 | 9500 | 20,0 | 0 | 17603 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15415 | 0 | 9442 | 20,0 | 0 | 17496 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15334 | 0 | 9393 | 20,0 | 0 | 17405 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15549 | 0 | 9524 | 20,0 | 0 | 17649 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15428 | 0 | 9450 | 20,0 | 0 | 17511 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15307 | 0 | 9377 | 20,0 | 0 | 17374 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15187 | 0 | 9303 | 20,0 | 0 | 17237 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15106 | 0 | 9254 | 20,0 | 0 | 17145 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15602 | 0 | 9557 | 20,0 | 0 | 17710 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15482 | 0 | 9483 | 20,0 | 0 | 17572 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15361 | 0 | 9409 | 20,0 | 0 | 17435 | 744(M) | N/A |

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| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15240 | 0 | 9336 | 20,0 | 0 | 17298 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15120 | 0 | 9262 | 20,0 | 0 | 17161 | 744(M) | N/A |
| UEKVRF-9.100 | MI2-28Q4CDHN1 | 27,0/47,0% | 0 | 7454 | 0 | 5120 | 20,0 | 0 | 8626 | 313(M) | N/A |

# 7.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU6 | MV6-1065WV2GN1 | MV6-450WV2GN1 | 1340*1635*850 | 277,00 | 13,00 | 42,55 | 380-415-3-50 | 33.1 | 40 |
| | | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | | 380-415-3-50 | 47.9 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU6 | MV6-1065WV2GN1 | 107,79 | 33,5 | 323312 | 0 | 7,0/87% | 368349 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU6 | MV6-1065WV2GN1 | 3,68 | 4,29 | 29,59 | 26,82 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 7.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 21/63 |
| Simultaneidade | 107,79% |
| Carga de refrigerante adicional | 42,55 kg<br>= 8,00(1/4) * 0,022 + 130,50(3/8) * 0,057 + 11,50(5/8) * 0,170 + 5,00(3/4) * 0,260 + 88,00(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 30,00 kg |
| Carga de refrigerante total | 72,55 kg |
| Comprimento Total da Tubulação | 236,5 m / 1000 m |
| Real mais distante | 114 m / 175 m |
| Equivalente mais distante | 127 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 39,5 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 5 m / 90 m |
| Capacidade de Resfriamento Disponível | 323312 Btu/h |
| Capacidade de Aquecimento Disponível | 368349 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 80,0 m | Ø41.2 | Ø7/8 |
| (2) | 4,0 m | Ø1-1/4 | Ø3/4 |
| (3) | 5,0 m | Ø1-1/8 | Ø5/8 |
| (4) | 2,0 m | Ø7/8 | Ø3/8 |
| (5) | 4,0 m | Ø7/8 | Ø3/8 |
| (6) | 2,0 m | Ø7/8 | Ø3/8 |
| (7) | 4,0 m | Ø7/8 | Ø3/8 |
| (8) | 4,0 m | Ø7/8 | Ø3/8 |
| (9) | 4,0 m | Ø7/8 | Ø3/8 |
| (10) | 3,0 m | Ø7/8 | Ø3/8 |
| (11) | 4,0 m | Ø5/8 | Ø3/8 |
| (12) | 3,0 m | Ø5/8 | Ø3/8 |
| (13) | 4,0 m | Ø5/8 | Ø3/8 |
| (14) | 3,0 m | Ø5/8 | Ø3/8 |
| (15) | 4,0 m | Ø7/8 | Ø3/8 |
| (16) | 4,0 m | Ø5/8 | Ø3/8 |

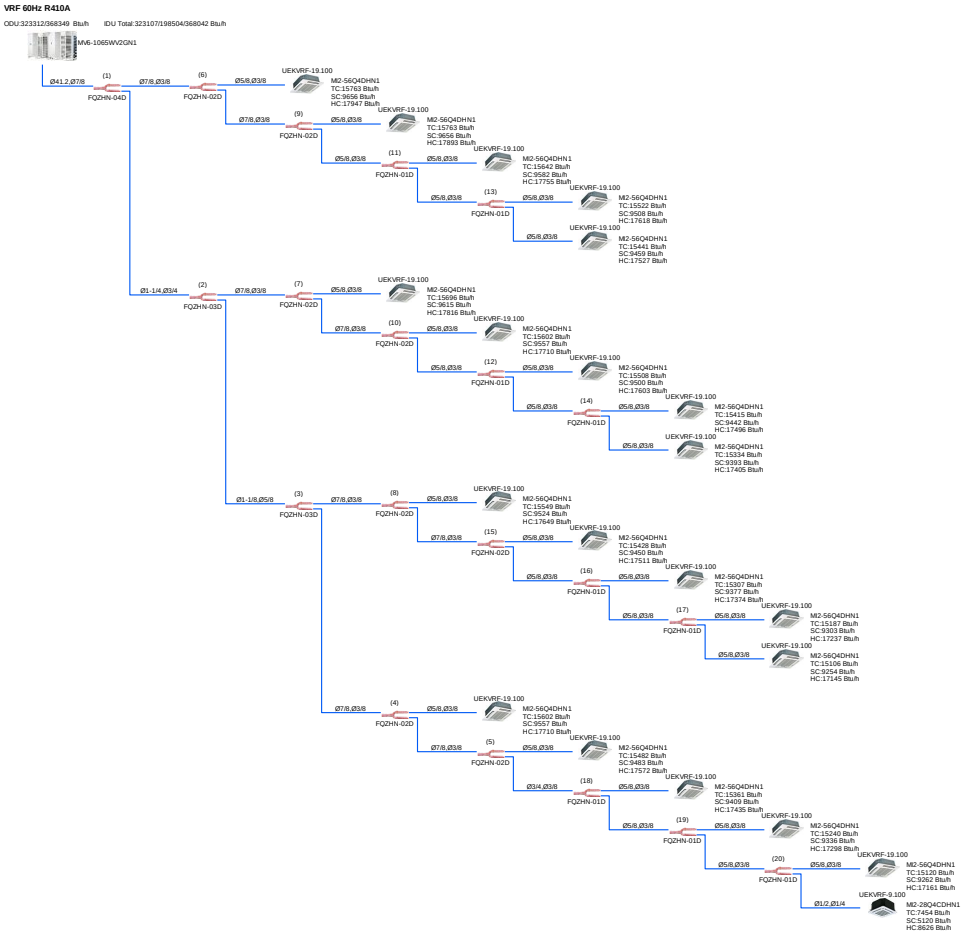
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 4,0 m | Ø5/8 | Ø3/8 |
| (18) | 4,0 m | Ø3/4 | Ø3/8 |
| (19) | 4,0 m | Ø5/8 | Ø3/8 |
| (20) | 2,0 m | Ø5/8 | Ø3/8 |
| (21) | 2,0 m | Ø5/8 | Ø3/8 |
| (22) | 2,0 m | Ø5/8 | Ø3/8 |
| (23) | 2,0 m | Ø5/8 | Ø3/8 |
| (24) | 5,0 m | Ø5/8 | Ø3/8 |
| (25) | 2,0 m | Ø5/8 | Ø3/8 |
| (26) | 2,0 m | Ø5/8 | Ø3/8 |
| (27) | 2,0 m | Ø5/8 | Ø3/8 |
| (28) | 2,0 m | Ø5/8 | Ø3/8 |
| (29) | 5,0 m | Ø5/8 | Ø3/8 |
| (30) | 2,0 m | Ø5/8 | Ø3/8 |
| (31) | 2,0 m | Ø5/8 | Ø3/8 |
| (32) | 2,0 m | Ø5/8 | Ø3/8 |
| (33) | 2,0 m | Ø5/8 | Ø3/8 |
| (34) | 5,0 m | Ø5/8 | Ø3/8 |
| (35) | 2,0 m | Ø5/8 | Ø3/8 |
| (36) | 2,0 m | Ø5/8 | Ø3/8 |
| (37) | 4,0 m | Ø5/8 | Ø3/8 |
| (38) | 2,0 m | Ø5/8 | Ø3/8 |
| (39) | 2,0 m | Ø5/8 | Ø3/8 |
| (40) | 2,0 m | Ø5/8 | Ø3/8 |
| (41) | 7,0 m | Ø1/2 | Ø1/4 |

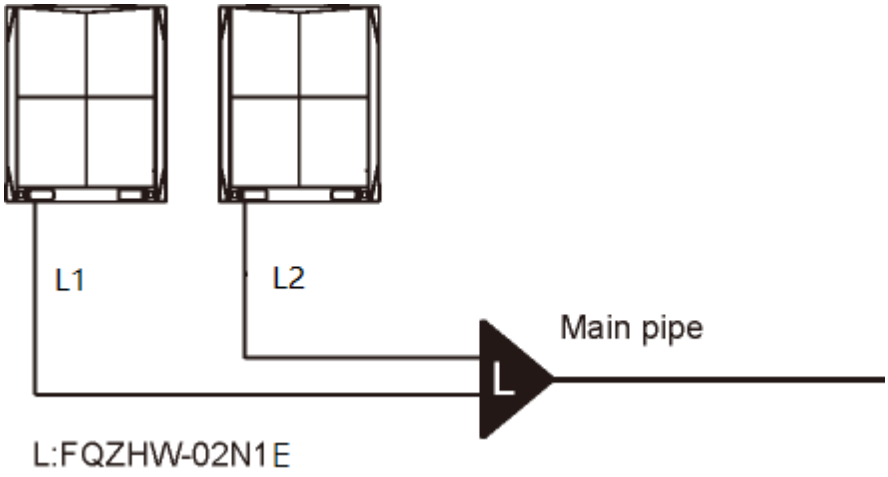
Distribuidor

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 391686 | FQZHN-04D |
| (2) | 296153 | FQZHN-03D |
| (3) | 200620 | FQZHN-03D |
| (4) | 105087 | FQZHN-02D |
| (5) | 85980 | FQZHN-02D |
| (6) | 95533 | FQZHN-02D |
| (7) | 95533 | FQZHN-02D |
| (8) | 95533 | FQZHN-02D |
| (9) | 76427 | FQZHN-02D |
| (10) | 76427 | FQZHN-02D |
| (11) | 57320 | FQZHN-01D |
| (12) | 57320 | FQZHN-01D |
| (13) | 38213 | FQZHN-01D |

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (14) | 38213 | FQZHN-01D |
| (15) | 76427 | FQZHN-02D |
| (16) | 57320 | FQZHN-01D |
| (17) | 38213 | FQZHN-01D |
| (18) | 66873 | FQZHN-01D |
| (19) | 47767 | FQZHN-01D |
| (20) | 28660 | FQZHN-01D |

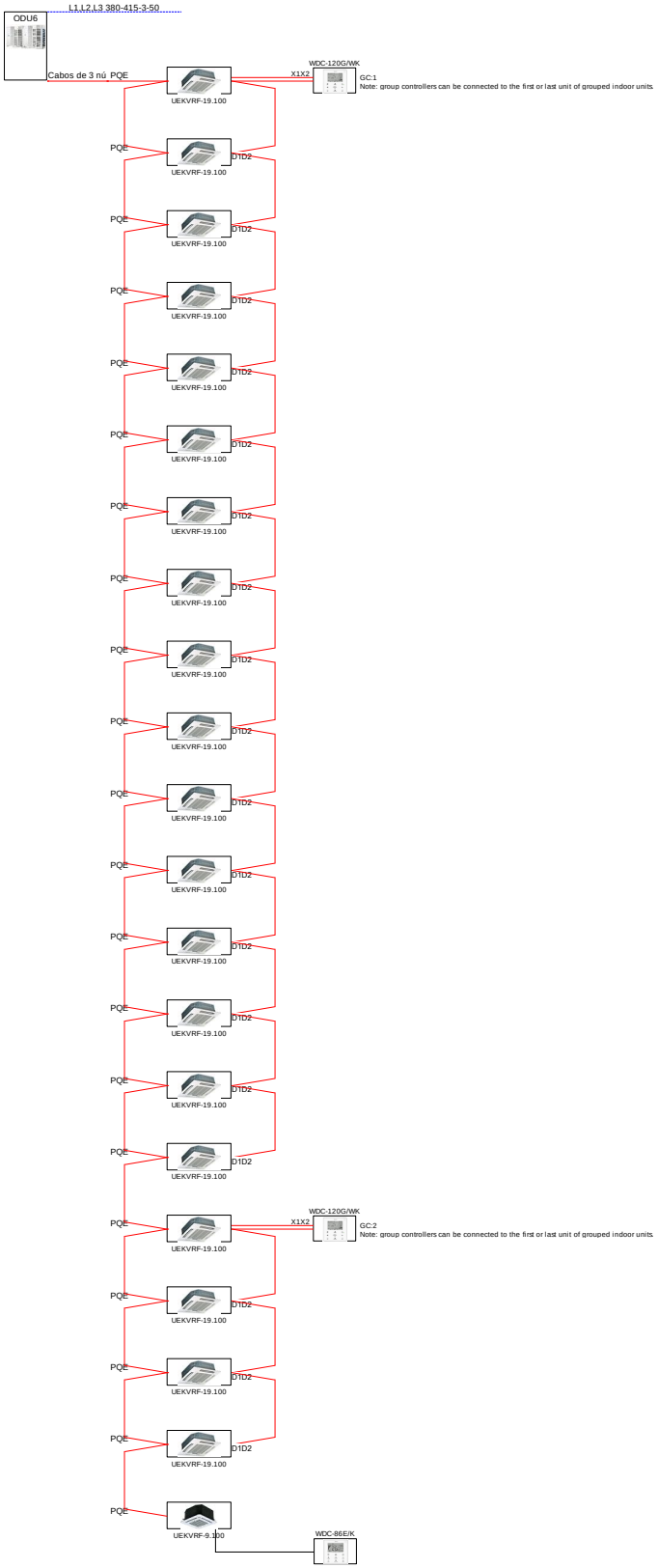
# 7.5 Diagrama da tubagem






L:FQZHW-02N1E

# 7.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-08 - 46HP (22+24)

## 8.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1285WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MV6-670WV2GN1 | 1 | V6 VRF (380V) |
| MI2-56Q4DHN1 | 4 | Four-way Cassette (2nd DC IDU) |
| MI2-71Q4DHN1 | 16 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 1 | Distribuidor |
| FQZHN-03D | 4 | Distribuidor |
| FQZHN-02D | 6 | Distribuidor |
| FQZHN-01D | 8 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-120G/WK | 5 | 2nd generation wired controller |
| Ø1-5/8 | 70,0 m | Tubo Cobre |
| Ø1-1/2 | 4,0 m | Tubo Cobre |
| Ø1-1/4 | 6,0 m | Tubo Cobre |
| Ø1-1/8 | 13,0 m | Tubo Cobre |
| Ø7/8 | 88,0 m | Tubo Cobre |
| Ø3/4 | 22,0 m | Tubo Cobre |
| Ø5/8 | 109,0 m | Tubo Cobre |
| Ø1/2 | 8,0 m | Tubo Cobre |
| Ø3/8 | 134,0 m | Tubo Cobre |

# 8.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 46 | 0.56 | 15 |

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| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16116 | 0 | 9887 | 20,0 | 0 | 17823 | 744(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20154 | 0 | 12901 | 20,0 | 0 | 22358 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20154 | 0 | 12901 | 20,0 | 0 | 22358 | 800(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16241 | 0 | 9963 | 20,0 | 0 | 17961 | 744(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20574 | 0 | 13170 | 20,0 | 0 | 22894 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20381 | 0 | 13047 | 20,0 | 0 | 22611 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20259 | 0 | 12968 | 20,0 | 0 | 22475 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20137 | 0 | 12890 | 20,0 | 0 | 22339 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20014 | 0 | 12812 | 20,0 | 0 | 22202 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20014 | 0 | 12812 | 20,0 | 0 | 22202 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19787 | 0 | 12666 | 20,0 | 0 | 21949 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19787 | 0 | 12666 | 20,0 | 0 | 21949 | 800(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15827 | 0 | 9709 | 20,0 | 0 | 17501 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15951 | 0 | 9785 | 20,0 | 0 | 17639 | 744(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20259 | 0 | 12968 | 20,0 | 0 | 22475 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19822 | 0 | 12689 | 20,0 | 0 | 21988 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19822 | 0 | 12689 | 20,0 | 0 | 21988 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 19944 | 0 | 12767 | 20,0 | 0 | 22125 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20067 | 0 | 12845 | 20,0 | 0 | 22261 | 800(M) | N/A |
| UEKVRF-24.200 | MI2-71Q4DHN1 | 27,0/47,0% | 0 | 20189 | 0 | 12924 | 20,0 | 0 | 22397 | 800(M) | N/A |

# 8.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU7 | MV6-1285WV2GN1 | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | 41,46 | 380-415-3-50 | 47.9 | 63 |
| | | MV6-670WV2GN1 | 1730*1830*850 | 430,00 | 22,00 | | 380-415-3-50 | 48.4 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU7 | MV6-1285WV2GN1 | 105,84 | 33,5 | 394552 | 0 | 7,0/87% | 438668 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU7 | MV6-1285WV2GN1 | 3,70 | 4,29 | 35,29 | 31,75 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 8.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 20/64 |
| Simultaneidade | 105,84% |
| Carga de refrigerante adicional | 41,46 kg<br>= 152,00(3/8) * 0,057 + 10,00(1/2) * 0,110 + 7,50(5/8) * 0,170 + 9,00(3/4) * 0,260 + 78,00(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 39,00 kg |
| Carga de refrigerante total | 80,46 kg |
| Comprimento Total da Tubulação | 250 m / 1000 m |
| Real mais distante | 98 m / 175 m |
| Equivalente mais distante | 110 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 32,5 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 5 m / 90 m |
| Capacidade de Resfriamento Disponível | 394552 Btu/h |
| Capacidade de Aquecimento Disponível | 438668 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 70,0 m | Ø41.2 | Ø7/8 |
| (2) | 4,0 m | Ø1-1/4 | Ø3/4 |
| (3) | 5,0 m | Ø1-1/8 | Ø5/8 |
| (4) | 2,0 m | Ø7/8 | Ø3/8 |
| (5) | 4,0 m | Ø1-1/8 | Ø1/2 |
| (6) | 4,0 m | Ø7/8 | Ø3/8 |
| (7) | 3,0 m | Ø7/8 | Ø3/8 |
| (8) | 4,0 m | Ø3/4 | Ø3/8 |
| (9) | 3,0 m | Ø3/4 | Ø3/8 |
| (10) | 4,0 m | Ø5/8 | Ø3/8 |
| (11) | 3,0 m | Ø5/8 | Ø3/8 |
| (12) | 2,0 m | Ø5/8 | Ø3/8 |
| (13) | 5,0 m | Ø5/8 | Ø3/8 |
| (14) | 5,0 m | Ø5/8 | Ø3/8 |
| (15) | 2,0 m | Ø5/8 | Ø3/8 |
| (16) | 5,0 m | Ø5/8 | Ø3/8 |

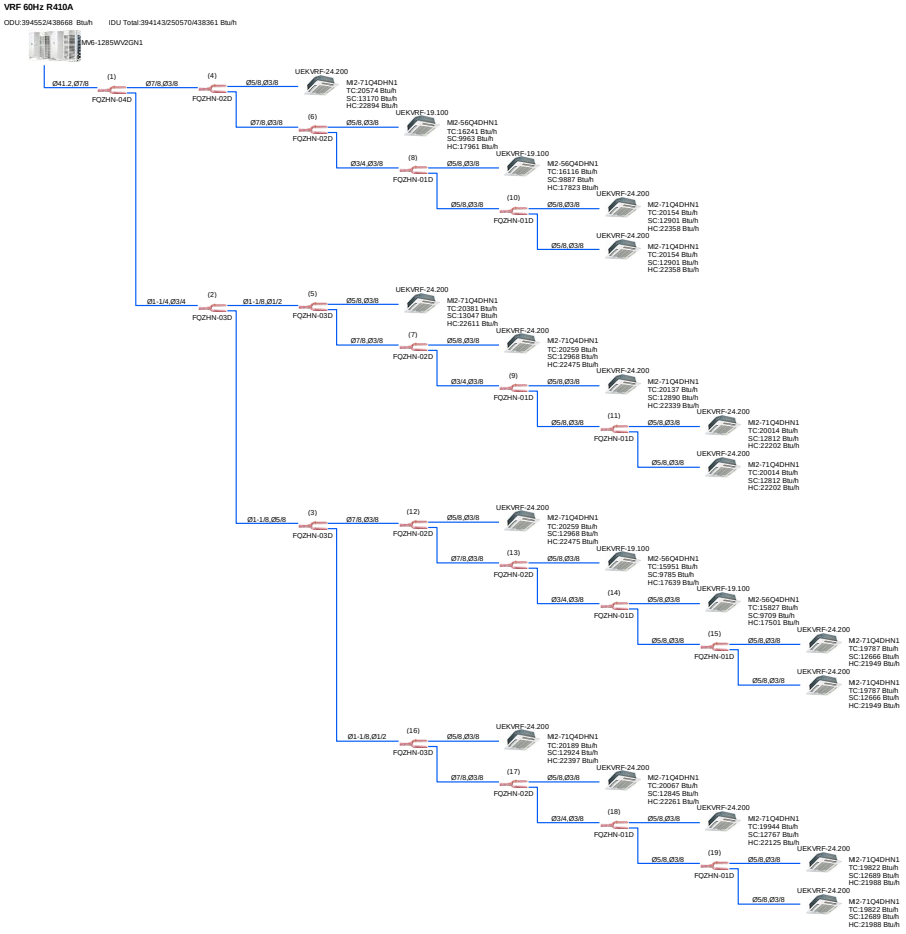
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 5,0 m | Ø5/8 | Ø3/8 |
| (18) | 5,0 m | Ø5/8 | Ø3/8 |
| (19) | 5,0 m | Ø5/8 | Ø3/8 |
| (20) | 5,0 m | Ø5/8 | Ø3/8 |
| (21) | 5,0 m | Ø5/8 | Ø3/8 |
| (22) | 2,0 m | Ø7/8 | Ø3/8 |
| (23) | 4,0 m | Ø7/8 | Ø3/8 |
| (24) | 4,0 m | Ø3/4 | Ø3/8 |
| (25) | 4,0 m | Ø5/8 | Ø3/8 |
| (26) | 5,0 m | Ø5/8 | Ø3/8 |
| (27) | 5,0 m | Ø5/8 | Ø3/8 |
| (28) | 2,0 m | Ø5/8 | Ø3/8 |
| (29) | 2,0 m | Ø5/8 | Ø3/8 |
| (30) | 5,0 m | Ø5/8 | Ø3/8 |
| (31) | 4,0 m | Ø1-1/8 | Ø1/2 |
| (32) | 3,0 m | Ø7/8 | Ø3/8 |
| (33) | 3,0 m | Ø3/4 | Ø3/8 |
| (34) | 3,0 m | Ø5/8 | Ø3/8 |
| (35) | 5,0 m | Ø5/8 | Ø3/8 |
| (36) | 5,0 m | Ø5/8 | Ø3/8 |
| (37) | 5,0 m | Ø5/8 | Ø3/8 |
| (38) | 5,0 m | Ø5/8 | Ø3/8 |
| (39) | 5,0 m | Ø5/8 | Ø3/8 |

Distribuidor

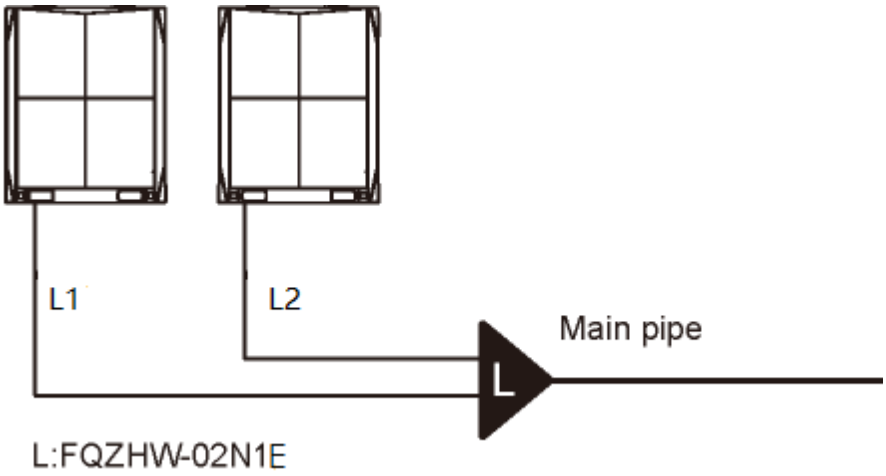
| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 464018 | FQZHN-04D |
| (2) | 353132 | FQZHN-03D |
| (3) | 232009 | FQZHN-03D |
| (4) | 110887 | FQZHN-02D |
| (5) | 121122 | FQZHN-03D |
| (6) | 86662 | FQZHN-02D |
| (7) | 96898 | FQZHN-02D |
| (8) | 67556 | FQZHN-01D |
| (9) | 72673 | FQZHN-01D |
| (10) | 48449 | FQZHN-01D |
| (11) | 48449 | FQZHN-01D |
| (12) | 110887 | FQZHN-02D |
| (13) | 86662 | FQZHN-02D |
| (14) | 67556 | FQZHN-01D |
| (15) | 48449 | FQZHN-01D |

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (16) | 121122 | FQZHN-03D |
| (17) | 96898 | FQZHN-02D |
| (18) | 72673 | FQZHN-01D |
| (19) | 48449 | FQZHN-01D |

# 8.5 Diagrama da tubagem

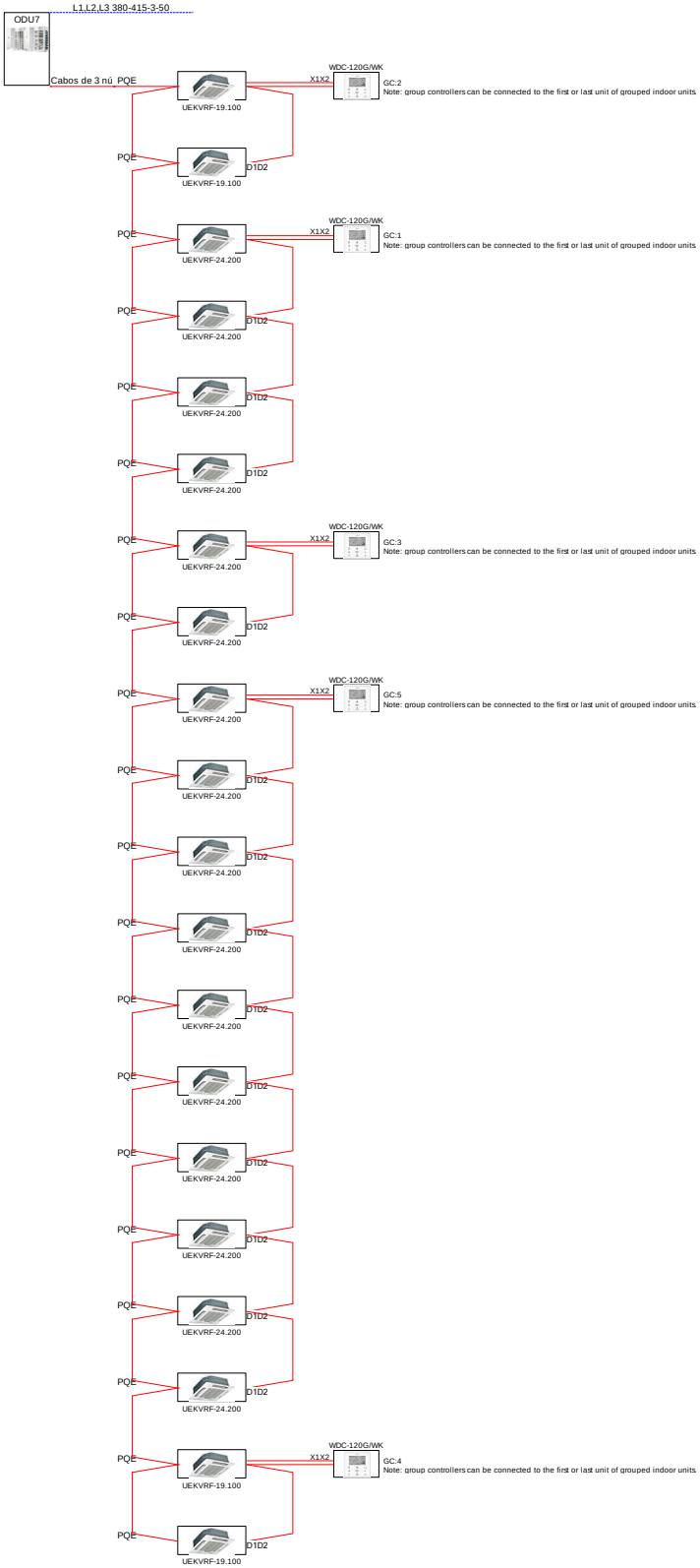



The piping size may be different with the actual situation because of the software's illustration limitation, please confirm the piping size according to the installation manual before installation.




L:FQZHW-02N1E

# 8.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-09 - 50HP (22+28)

## 9.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-1400WV2GN1 | 1 | V6 VRF (380V) |
| MV6-615WV2GN1 | 1 | V6 VRF (380V) |
| MV6-785WV2GN1 | 1 | V6 VRF (380V) |
| MI2-56Q4DHN1 | 13 | Four-way Cassette (2nd DC IDU) |
| MI2-45Q4DHN1 | 16 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 2 | Distribuidor |
| FQZHN-03D | 5 | Distribuidor |
| FQZHN-02D | 3 | Distribuidor |
| FQZHN-01D | 18 | Distribuidor |
| FQZHW-02N1E | 1 | Distribuidor |
| WDC-120G/WK | 2 | 2nd generation wired controller |
| Ø1-5/8 | 70,0 m | Tubo Cobre |
| Ø1-1/2 | 5,0 m | Tubo Cobre |
| Ø1-3/8 | 7,0 m | Tubo Cobre |
| Ø1-1/4 | 14,0 m | Tubo Cobre |
| Ø1 | 12,0 m | Tubo Cobre |
| Ø7/8 | 86,0 m | Tubo Cobre |
| Ø3/4 | 56,0 m | Tubo Cobre |
| Ø5/8 | 54,0 m | Tubo Cobre |
| Ø1/2 | 118,0 m | Tubo Cobre |
| Ø3/8 | 42,0 m | Tubo Cobre |
| Ø1/4 | 48,0 m | Tubo Cobre |

# 9.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

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| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15713 | 0 | 9631 | 20,0 | 0 | 17368 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15824 | 0 | 9699 | 20,0 | 0 | 17491 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15948 | 0 | 9776 | 20,0 | 0 | 17629 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16073 | 0 | 9852 | 20,0 | 0 | 17768 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16170 | 0 | 9912 | 20,0 | 0 | 17875 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16059 | 0 | 9844 | 20,0 | 0 | 17752 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13068 | 0 | 8530 | 20,0 | 0 | 14364 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13001 | 0 | 8486 | 20,0 | 0 | 14248 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12923 | 0 | 8435 | 20,0 | 0 | 14162 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12823 | 0 | 8370 | 20,0 | 0 | 14052 | 744(M) | N/A |

Project Name PREFEITURA DE FRANCISCO BELTRÃO
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| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12990 | 0 | 8479 | 20,0 | 0 | 14236 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12890 | 0 | 8414 | 20,0 | 0 | 14126 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12790 | 0 | 8348 | 20,0 | 0 | 14016 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12690 | 0 | 8283 | 20,0 | 0 | 13906 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12968 | 0 | 8464 | 20,0 | 0 | 14211 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12868 | 0 | 8399 | 20,0 | 0 | 14101 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12768 | 0 | 8334 | 20,0 | 0 | 13991 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12668 | 0 | 8269 | 20,0 | 0 | 13881 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15838 | 0 | 9708 | 20,0 | 0 | 17506 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15948 | 0 | 9776 | 20,0 | 0 | 17629 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15643 | 0 | 9589 | 20,0 | 0 | 17291 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15768 | 0 | 9665 | 20,0 | 0 | 17429 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15893 | 0 | 9742 | 20,0 | 0 | 17568 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15519 | 0 | 9513 | 20,0 | 0 | 17153 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 15394 | 0 | 9436 | 20,0 | 0 | 17014 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13068 | 0 | 8530 | 20,0 | 0 | 14364 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13068 | 0 | 8530 | 20,0 | 0 | 14364 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 13012 | 0 | 8493 | 20,0 | 0 | 14260 | 744(M) | N/A |
| UEKVRF-15.400 | MI2-45Q4DHN1 | 27,0/47,0% | 0 | 12901 | 0 | 8421 | 20,0 | 0 | 14138 | 744(M) | N/A |

# 9.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU8 | MV6-1400WV2GN1 | MV6-615WV2GN1 | 1340*1635*825 | 348,00 | 17,00 | 48,98 | 380-415-3-50 | 47.9 | 63 |
| | | MV6-785WV2GN1 | 1730*1830*850 | 430,00 | 22,00 | | 380-415-3-50 | 58.7 | 63 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU8 | MV6-1400WV2GN1 | 103,43 | 33,5 | 421711 | 0 | 7,0/87% | 465315 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU8 | MV6-1400WV2GN1 | 3,45 | 3,92 | 40,87 | 36,99 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 9.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 29/64 |
| Simultaneidade | 103,43% |
| Carga de refrigerante adicional | 48,98 kg<br>= 58,50(1/4) * 0,022 + 49,00(3/8) * 0,057 + 84,00(1/2) * 0,110 + 13,00(5/8) * 0,170 + 7,50(3/4) * 0,260 + 87,50(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 39,00 kg |
| Carga de refrigerante total | 87,98 kg |
| Comprimento Total da Tubulação | 293 m / 1000 m |
| Real mais distante | 107 m / 175 m |
| Equivalente mais distante | 120,5 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 43 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 5 m / 90 m |
| Capacidade de Resfriamento Disponível | 421711 Btu/h |
| Capacidade de Aquecimento Disponível | 465315 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

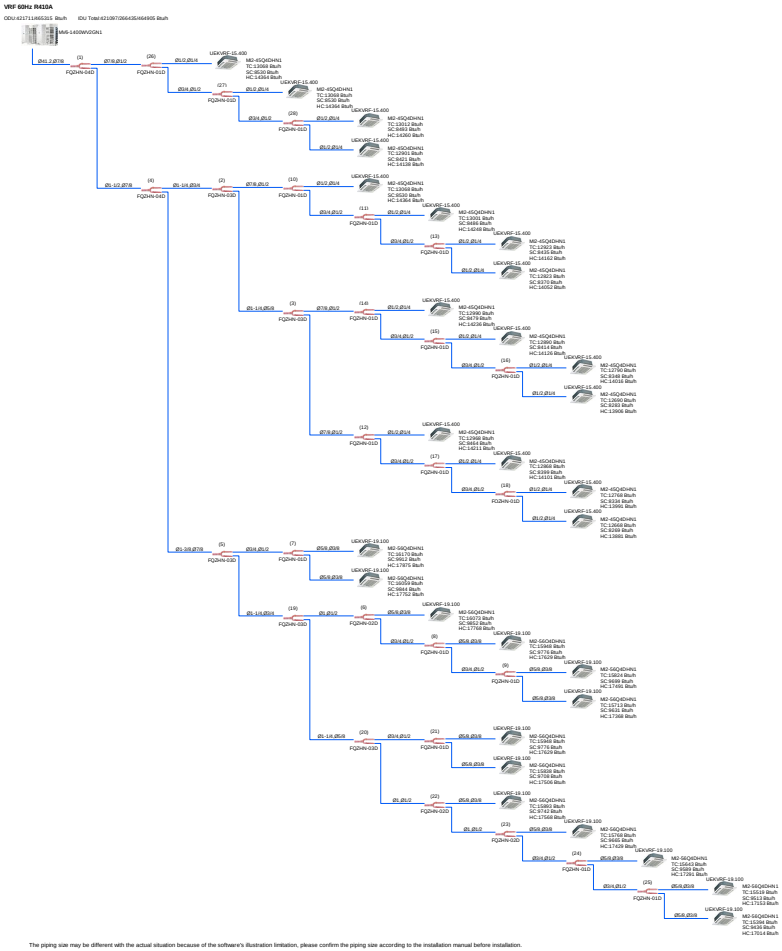
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 70,0 m | Ø41.2 | Ø7/8 |
| (2) | 1,0 m | Ø1-1/4 | Ø3/4 |
| (3) | 4,0 m | Ø1-1/4 | Ø5/8 |
| (4) | 1,0 m | Ø1-1/2 | Ø7/8 |
| (5) | 7,0 m | Ø1-3/8 | Ø7/8 |
| (6) | 4,0 m | Ø1 | Ø1/2 |
| (7) | 2,0 m | Ø3/4 | Ø1/2 |
| (8) | 4,0 m | Ø3/4 | Ø1/2 |
| (9) | 4,0 m | Ø3/4 | Ø1/2 |
| (10) | 6,0 m | Ø5/8 | Ø3/8 |
| (11) | 2,0 m | Ø5/8 | Ø3/8 |
| (12) | 2,0 m | Ø5/8 | Ø3/8 |
| (13) | 2,0 m | Ø5/8 | Ø3/8 |
| (14) | 2,0 m | Ø5/8 | Ø3/8 |
| (15) | 6,0 m | Ø5/8 | Ø3/8 |
| (16) | 2,0 m | Ø7/8 | Ø1/2 |

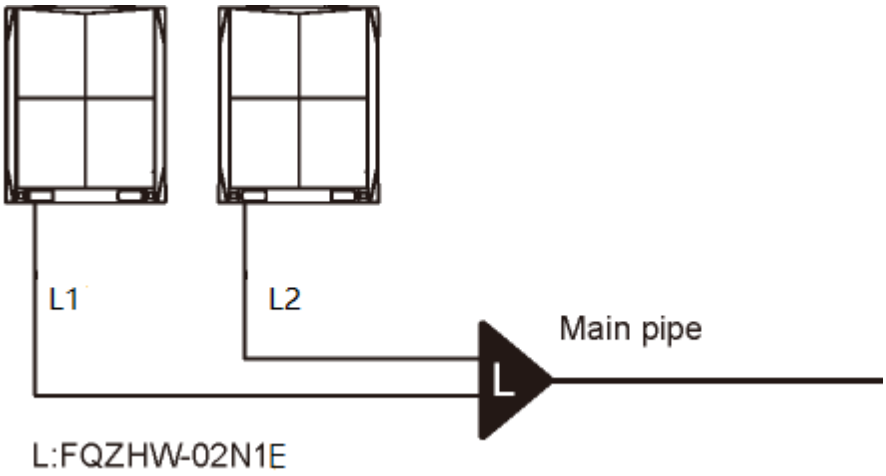
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 4,0 m | Ø3/4 | Ø1/2 |
| (18) | 3,0 m | Ø7/8 | Ø1/2 |
| (19) | 3,0 m | Ø3/4 | Ø1/2 |
| (20) | 2,0 m | Ø1/2 | Ø1/4 |
| (21) | 2,0 m | Ø1/2 | Ø1/4 |
| (22) | 2,0 m | Ø1/2 | Ø1/4 |
| (23) | 6,0 m | Ø1/2 | Ø1/4 |
| (24) | 2,0 m | Ø7/8 | Ø1/2 |
| (25) | 4,0 m | Ø3/4 | Ø1/2 |
| (26) | 4,0 m | Ø3/4 | Ø1/2 |
| (27) | 4,0 m | Ø3/4 | Ø1/2 |
| (28) | 4,0 m | Ø3/4 | Ø1/2 |
| (29) | 2,0 m | Ø1/2 | Ø1/4 |
| (30) | 2,0 m | Ø1/2 | Ø1/4 |
| (31) | 2,0 m | Ø1/2 | Ø1/4 |
| (32) | 6,0 m | Ø1/2 | Ø1/4 |
| (33) | 2,0 m | Ø1/2 | Ø1/4 |
| (34) | 2,0 m | Ø1/2 | Ø1/4 |
| (35) | 2,0 m | Ø1/2 | Ø1/4 |
| (36) | 6,0 m | Ø1/2 | Ø1/4 |
| (37) | 1,0 m | Ø1-1/4 | Ø3/4 |
| (38) | 6,0 m | Ø1-1/4 | Ø5/8 |
| (39) | 2,0 m | Ø3/4 | Ø1/2 |
| (40) | 6,0 m | Ø5/8 | Ø3/8 |
| (41) | 2,0 m | Ø5/8 | Ø3/8 |
| (42) | 4,0 m | Ø1 | Ø1/2 |
| (43) | 4,0 m | Ø1 | Ø1/2 |
| (44) | 4,0 m | Ø3/4 | Ø1/2 |
| (45) | 2,0 m | Ø5/8 | Ø3/8 |
| (46) | 2,0 m | Ø5/8 | Ø3/8 |
| (47) | 2,0 m | Ø5/8 | Ø3/8 |
| (48) | 4,0 m | Ø3/4 | Ø1/2 |
| (49) | 2,0 m | Ø5/8 | Ø3/8 |
| (50) | 6,0 m | Ø5/8 | Ø3/8 |
| (51) | 1,0 m | Ø7/8 | Ø1/2 |
| (52) | 2,0 m | Ø1/2 | Ø1/4 |
| (53) | 3,0 m | Ø3/4 | Ø1/2 |
| (54) | 2,0 m | Ø1/2 | Ø1/4 |
| (55) | 4,0 m | Ø3/4 | Ø1/2 |
| (56) | 2,0 m | Ø1/2 | Ø1/4 |
| (57) | 6,0 m | Ø1/2 | Ø1/4 |

Distribuidor

| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 494043 | FQZHN-04D |
| (2) | 184243 | FQZHN-03D |
| (3) | 122828 | FQZHN-03D |
| (4) | 432629 | FQZHN-04D |
| (5) | 248386 | FQZHN-03D |
| (6) | 76427 | FQZHN-02D |
| (7) | 38213 | FQZHN-01D |
| (8) | 57320 | FQZHN-01D |
| (9) | 38213 | FQZHN-01D |
| (10) | 61414 | FQZHN-01D |
| (11) | 46061 | FQZHN-01D |
| (12) | 61414 | FQZHN-01D |
| (13) | 30707 | FQZHN-01D |
| (14) | 61414 | FQZHN-01D |
| (15) | 46061 | FQZHN-01D |
| (16) | 30707 | FQZHN-01D |
| (17) | 46061 | FQZHN-01D |
| (18) | 30707 | FQZHN-01D |
| (19) | 210173 | FQZHN-03D |
| (20) | 133746 | FQZHN-03D |
| (21) | 38213 | FQZHN-01D |
| (22) | 95533 | FQZHN-02D |
| (23) | 76427 | FQZHN-02D |
| (24) | 57320 | FQZHN-01D |
| (25) | 38213 | FQZHN-01D |
| (26) | 61414 | FQZHN-01D |
| (27) | 46061 | FQZHN-01D |
| (28) | 30707 | FQZHN-01D |

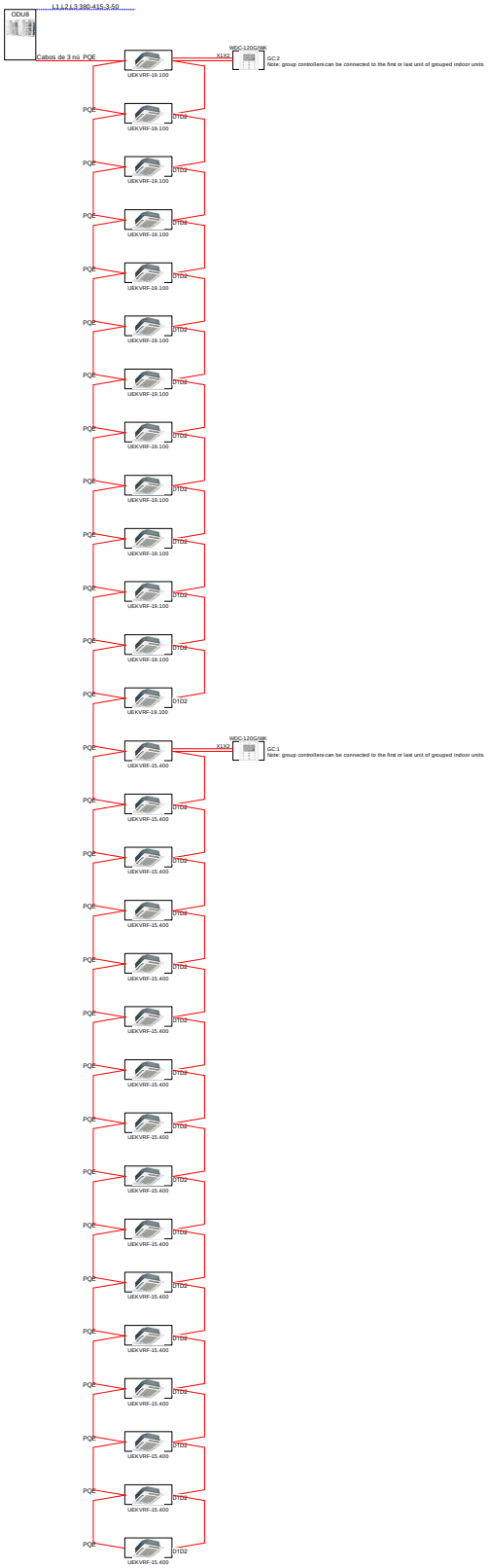
# 9.5 Diagrama da tubagem






L:FQZHW-02N1E

# 9.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.

# ST-10 - 30 HP (30)

## 10.1 Lista de Materiais

| Modelo | Quantidade | Descrição |
|---|---|---|
| MV6-850WV2GN1 | 1 | V6 VRF (380V) |
| MI2-80Q4DHN1 | 6 | Four-way Cassette (2nd DC IDU) |
| MI2-28Q4CDHN1 | 1 | Compact Four-way Cassette (2nd DC IDU) |
| MI2-56Q4DHN1 | 7 | Four-way Cassette (2nd DC IDU) |
| FQZHN-04D | 1 | Distribuidor |
| FQZHN-02D | 2 | Distribuidor |
| FQZHN-01D | 6 | Distribuidor |
| FQZHN-03D | 4 | Distribuidor |
| WDC-86E/K | 2 | 2nd generation wired controller |
| WDC-120G/WK | 3 | 2nd generation wired controller |
| Ø1-1/2 | 20,0 m | Tubo Cobre |
| Ø1-1/8 | 14,0 m | Tubo Cobre |
| Ø7/8 | 27,0 m | Tubo Cobre |
| Ø5/8 | 79,0 m | Tubo Cobre |
| Ø1/2 | 7,0 m | Tubo Cobre |
| Ø3/8 | 75,0 m | Tubo Cobre |
| Ø1/4 | 4,0 m | Tubo Cobre |

# 10.2 Especificações da unidade interior

| Nome de IDU | Modelo | Som (dBA) | Peso(kg) | Dimensão(mm) W x H x D | Alimentação | Rated Power(W) | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|
| UEKVRF-27.300 | MI2-80Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 48 | 0.76 | 15 |
| UEKVRF -9.100 | MI2-28Q4CDHN1 | 29(M) | 18,00 | 630*260*570 | 220-240,60,1 | 35 | 0.43 | 15 |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 48 | 0.76 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 48 | 0.76 | 15 |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 48 | 0.76 | 15 |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 48 | 0.76 | 15 |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 48 | 0.76 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 31(M) | 23,20 | 840*230*840 | 220-240,60,1 | 31 | 0.56 | 15 |

| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-27.300 | MI2-80Q4DHN1 | 27,0/47,0% | 0 | 24566 | 0 | 17060 | 20,0 | 0 | 26272 | 977(M) | N/A |
| UEKVRF -9.100 | MI2-28Q4CDHN1 | 27,0/47,0% | 0 | 8309 | 0 | 5727 | 20,0 | 0 | 9009 | 313(M) | N/A |

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| Nome de IDU | Modelo | EAT de refrigeração (°C) | Req.TC (Btu/h) | TC (Btu/h) | Req.SC (Btu/h) | SC (Btu/h) | EAT de aquecimento (°C) | Req.HC (Btu/h) | HC (Btu/h) | Fluxo de ar (m^3/h) | ESP (Pa) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UEKVRF-27.300 | MI2-80Q4DHN1 | 27,0/47,0% | 0 | 23939 | 0 | 16624 | 20,0 | 0 | 25523 | 977(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16743 | 0 | 10265 | 20,0 | 0 | 17850 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16611 | 0 | 10184 | 20,0 | 0 | 17710 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16670 | 0 | 10220 | 20,0 | 0 | 17772 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16626 | 0 | 10193 | 20,0 | 0 | 17725 | 744(M) | N/A |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 27,0/47,0% | 0 | 24294 | 0 | 16871 | 20,0 | 0 | 25903 | 977(M) | N/A |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 27,0/47,0% | 0 | 24232 | 0 | 16827 | 20,0 | 0 | 25836 | 977(M) | N/A |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 27,0/47,0% | 0 | 24440 | 0 | 16972 | 20,0 | 0 | 26059 | 977(M) | N/A |
| UEKVRF-27.300 | MI2-80Q4DHN1 | 27,0/47,0% | 0 | 24524 | 0 | 17030 | 20,0 | 0 | 26148 | 977(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16933 | 0 | 10381 | 20,0 | 0 | 18054 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16801 | 0 | 10301 | 20,0 | 0 | 17913 | 744(M) | N/A |
| UEKVRF-19.100 | MI2-56Q4DHN1 | 27,0/47,0% | 0 | 16714 | 0 | 10247 | 20,0 | 0 | 17819 | 744(M) | N/A |

# 10.3 Especificações da unidade exterior

| Nome | Modelo | Module | Dimensão(mm) | Peso(kg) | Ref. base(kg) | Adicionar ref.(kg) | Alimentação | MCA(A) | MFA(A) |
|---|---|---|---|---|---|---|---|---|---|
| ODU9 | MV6-850WV2GN1 | MV6-850WV2GN1 | 1730*1830*850 | 475,00 | 25,00 | 16,51 | 380-415-3-50 | 64.9 | 80 |

| Nome | Modelo | Comb. % | Temp.(°C) | CC(Btu/h) | Req CC(Btu/h) | Temp. (H/RH)(°C) | HC(Btu/h) | Req HC(Btu/h) |
|---|---|---|---|---|---|---|---|---|
| ODU9 | MV6-850WV2GN1 | 105,88 | 33,5 | 276432 | 0 | 7,0/87% | 295846 | 0 |

| Nome | Modelo | EER | COP | Cooling Power(kW) | Heating Power(kW) |
|---|---|---|---|---|---|
| ODU9 | MV6-850WV2GN1 | 3,26 | 3,69 | 26,5 | 24,43 |

Req.TC: Capacidade total de refrigeração necessária

Req.SC: Capacidade de refrigeração sensível necessária

Req.HC: Required Total Heating Capacity

TC: Capacidade total de refrigeração disponível

SC: Capacidade de refrigeração sensível disponível

HC: Available Total Heating Capacity

AT: Ambient Temperature

ESP: Pressão estática externa

Req.CC: Required Cooling Capacity

CC: Available Cooling Capacity

# 10.4 Dispositivos de seleção da tubagem e modo

| | |
|---|---|
| Quantidade de IDU | 14/50 |
| Simultaneidade | 105,88% |
| Carga de refrigerante adicional | 16,51 kg<br>= 5,00(1/4) * 0,022 + 88,00(3/8) * 0,057 + 4,00(1/2) * 0,110 + 12,50(5/8) * 0,170 + 24,50(7/8) * 0,360 |
| Carga de refrigerante de fábrica | 25,00 kg |
| Carga de refrigerante total | 41,51 kg |
| Comprimento Total da Tubulação | 134 m / 1000 m |
| Real mais distante | 45 m / 175 m |
| Equivalente mais distante | 54,5 m / 200 m |
| Mais distante equivalente da primeira derivação para IDU | 30 m / 40(90) m |
| Desnível entre IDU | 0 m / 30 m |
| Desnível entre IDU e ODU (abaixo ODU) | 1 m / 90 m |
| Capacidade de Resfriamento Disponível | 276432 Btu/h |
| Capacidade de Aquecimento Disponível | 295846 Btu/h |

Note:

1.The equivalent length of each branch joint is 0.5m.

Tubo

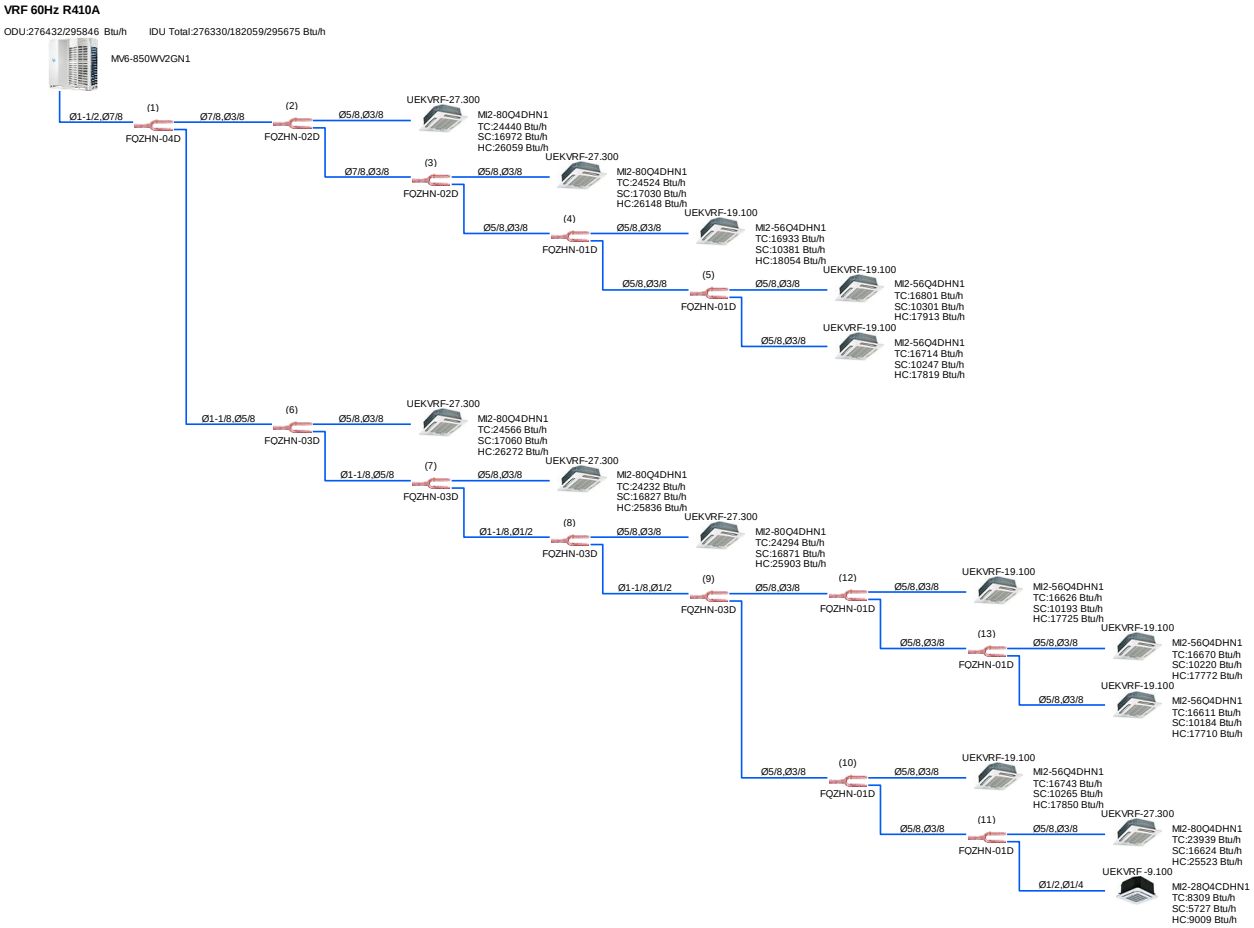
| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (1) | 20,0 m | Ø1-1/2 | Ø7/8 |
| (2) | 5,0 m | Ø7/8 | Ø3/8 |
| (3) | 2,0 m | Ø7/8 | Ø3/8 |
| (4) | 7,0 m | Ø5/8 | Ø3/8 |
| (5) | 4,0 m | Ø5/8 | Ø3/8 |
| (6) | 2,0 m | Ø5/8 | Ø3/8 |
| (7) | 4,0 m | Ø1-1/8 | Ø5/8 |
| (8) | 7,0 m | Ø1-1/8 | Ø5/8 |
| (9) | 1,0 m | Ø1-1/8 | Ø1/2 |
| (10) | 2,0 m | Ø1-1/8 | Ø1/2 |
| (11) | 3,0 m | Ø5/8 | Ø3/8 |
| (12) | 2,0 m | Ø5/8 | Ø3/8 |
| (13) | 4,0 m | Ø1/2 | Ø1/4 |
| (14) | 2,0 m | Ø5/8 | Ø3/8 |
| (15) | 5,0 m | Ø5/8 | Ø3/8 |
| (16) | 6,0 m | Ø5/8 | Ø3/8 |

| N° | Comprimento | Tubo de Gás | Tubulação de Liquido |
|---|---|---|---|
| (17) | 1,0 m | Ø5/8 | Ø3/8 |
| (18) | 4,0 m | Ø5/8 | Ø3/8 |
| (19) | 3,0 m | Ø5/8 | Ø3/8 |
| (20) | 5,0 m | Ø5/8 | Ø3/8 |
| (21) | 2,0 m | Ø5/8 | Ø3/8 |
| (22) | 5,0 m | Ø5/8 | Ø3/8 |
| (23) | 6,0 m | Ø5/8 | Ø3/8 |
| (24) | 2,0 m | Ø5/8 | Ø3/8 |
| (25) | 2,0 m | Ø5/8 | Ø3/8 |
| (26) | 2,0 m | Ø5/8 | Ø3/8 |
| (27) | 5,0 m | Ø5/8 | Ø3/8 |

Distribuidor

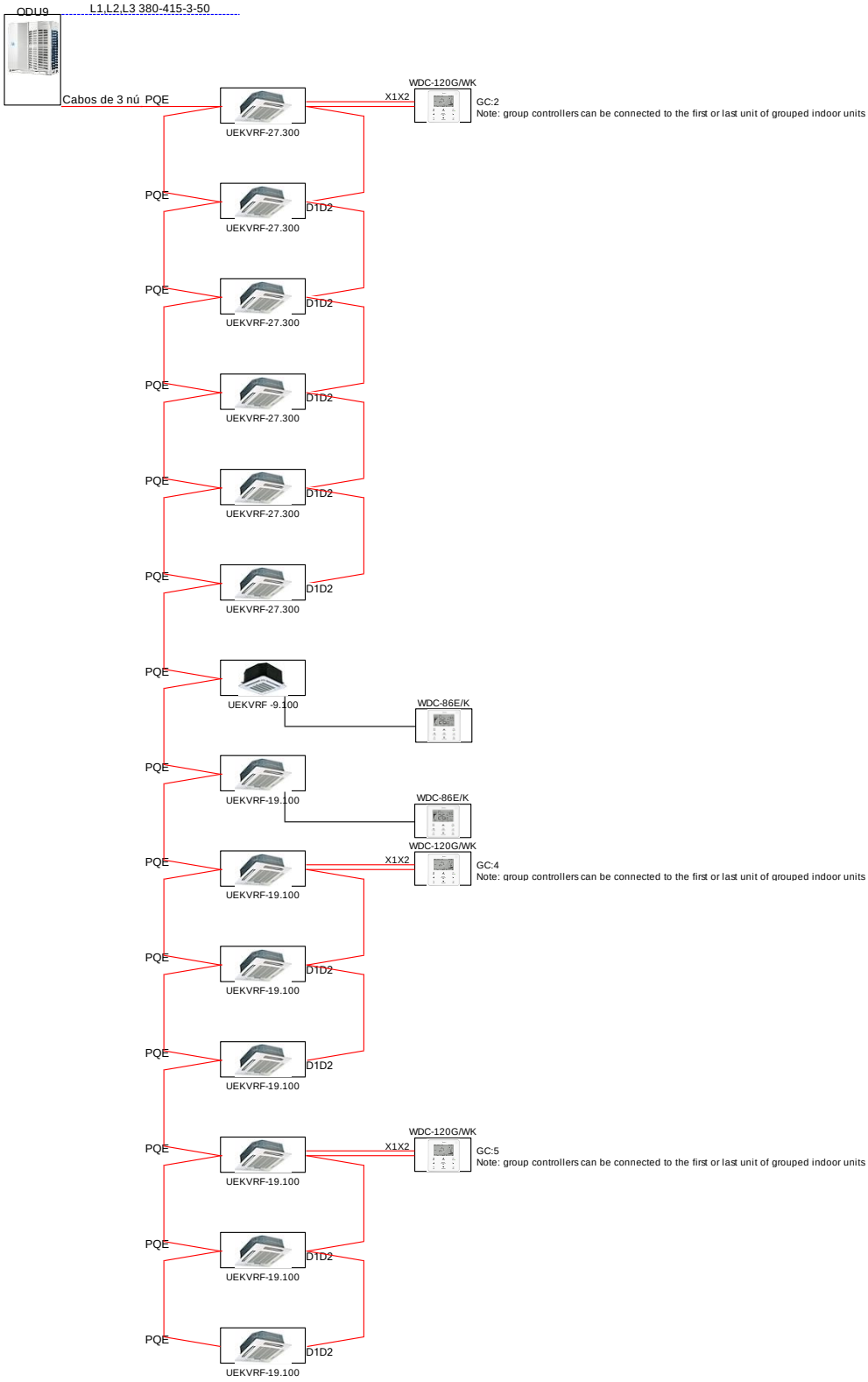
| N° | Carga Btu/h | Modelo |
|---|---|---|
| (1) | 307071 | FQZHN-04D |
| (2) | 111910 | FQZHN-02D |
| (3) | 84615 | FQZHN-02D |
| (4) | 57320 | FQZHN-01D |
| (5) | 38213 | FQZHN-01D |
| (6) | 195161 | FQZHN-03D |
| (7) | 167865 | FQZHN-03D |
| (8) | 140570 | FQZHN-03D |
| (9) | 113275 | FQZHN-03D |
| (10) | 55955 | FQZHN-01D |
| (11) | 36849 | FQZHN-01D |
| (12) | 57320 | FQZHN-01D |
| (13) | 38213 | FQZHN-01D |

# 10.5 Diagrama da tubagem




The piping size may be different with the actual situation because of the software's illustration limitation, please confirm the piping size according to the installation manual before installation.

# 10.6 Diagrama de cablagem




The wiring diagram may be different with the actual situation because of software's illustration limitation, please confirm the wiring diagram according to the installation manual before installation.