

Free-match Technical Specifications (R410A)

| 20 SEER2 Free-match Technical Specifications         |                                  |         | ODU 1 drive 2      | ODU 1 drive 3      | ODU 1 drive 4      |
|------------------------------------------------------|----------------------------------|---------|--------------------|--------------------|--------------------|
| Marketing model                                      |                                  |         | TUM-18HA2/I2I19-21 | TUM-27HA2/I2I18-21 | TUM-36HA2/I2I18-21 |
| Type                                                 |                                  |         | cooling & heating  | cooling & heating  | cooling & heating  |
| Power supply                                         |                                  |         | 208/230V~/60Hz/1P  | 208/230V~/60Hz/1P  | 208/230V~/60Hz/1P  |
| Rated Cooling (95F/35C)                              | Rated cooling capacity (95F/35C) | Btu/h   | 18000              | 27000              | 36000              |
|                                                      | EER2 (95F/35C)                   | Btu/W.h | 11.0               | 10.0               | 10.0               |
|                                                      | SEER2                            | Btu/W.h | 20.0               | 19.0               | 19.0               |
| Rated Heating                                        | Rated Heating capacity(47F/8.3C) | Btu/h   | 20000              | 27000              | 36000              |
|                                                      | HSPF2 Rating (Region IV)         | Btu/W.h | 8.5                | 8.5                | 8.5                |
|                                                      | COP2 (47F/8.3C)                  | W/W     | 3.3                | 3.3                | 3.3                |
|                                                      | COP2 (5F/-15C)                   | W/W     | 1.8                | 1.8                | 1.8                |
| NEEP, Canada                                         |                                  |         | YES                | YES                | YES                |
| Max. Fuse size                                       |                                  |         | A                  | 15                 | 20                 |
| Compressor                                           | Brand                            |         | SANYO              | SANYO              | GMCC               |
|                                                      | Type                             |         | Twin-ROTARY        | Twin-ROTARY        | Twin-ROTARY        |
| Fan motor                                            | Brand                            |         | Broad-Ocean        | Broad-Ocean        | SHIBAURA           |
| Noise level                                          |                                  |         |                    |                    |                    |
|                                                      |                                  |         |                    |                    |                    |
| Connecting Pipe                                      | Gas                              | inches  | 3/8                | 3/8                | 3/8                |
|                                                      | Liquid                           | inches  | 1/4                | 1/4                | 1/4                |
| Throttling mode Capillary/EEV.                       |                                  |         | EEV                | EEV                | EEV                |
| Refrigerant Type                                     |                                  |         | R410a              | R410a              | R410a              |
| Packing dimensions (W x D x H)                       |                                  |         | inches             | 37.79x16.92x29.53  | 40.47x18.7x34.06   |
| Factory PreCharge Line                               |                                  |         | m                  | 7.5                | 7.5                |
| Total length of liquid pipe                          |                                  |         | m                  | 30                 | 45                 |
| Maximum Line Length-Single IDU                       |                                  |         | m                  | 20                 | 20                 |
| Maximum Height Difference Between Indoor and Outdoor |                                  |         | m                  | 15                 | 15                 |
| Room temperature                                     | Indoor(cooling/ heating)         | C       | 16 C ~30C          | 16 C ~30C          | 16 C ~30C          |
|                                                      | Outdoor(cooling/heating)         | C       | -15~55C / -20~30C  | -15~55C / -20~30C  | -15~55C / -20~30C  |
|                                                      | Indoor(cooling/ heating)         | F       | 61~86              | 61~86              | 61~86              |
| Ambinet temperature                                  | Outdoor(cooling/heating)         | F       | 5~131/-4~86        | 5~131/-4~86        | 5~131/-4~86        |
|                                                      |                                  |         |                    |                    |                    |
| Loading Capacity (ODU)                               |                                  |         |                    | 189                | 143                |

| 22 SEER2 Free-match Technical Specifications - Energy Star Rated |                                  |         | ODU 1 drive 2        | ODU 1 drive 3        | ODU 1 drive 4        |
|------------------------------------------------------------------|----------------------------------|---------|----------------------|----------------------|----------------------|
| Marketing model                                                  |                                  |         | TUM-18HA2/I2I22-21ES | TUM-27HA2/I2I22-21ES | TUM-36HA2/I2I21-21ES |
| Type                                                             |                                  |         | cooling & heating    | cooling & heating    | cooling & heating    |
| Power supply                                                     |                                  |         | 208/230V~/60Hz/1P    | 208/230V~/60Hz/1P    | 208/230V~/60Hz/1P    |
| Rated Cooling (95F/35C)                                          | Rated cooling capacity (95F/35C) | Btu/h   | 17000                | 24000                | 33000                |
|                                                                  | EER2 (95F/35C)                   | Btu/W.h | 12.0                 | 12.0                 | 12.0                 |
|                                                                  | SEER2                            | Btu/W.h | 22.0                 | 22.0                 | 21.5                 |
| Rated Heating                                                    | Rated Heating capacity(47F/8.3C) | Btu/h   | 19600                | 26000                | 35600                |
|                                                                  | HSPF2 Rating (Region IV)         | Btu/W.h | 9.0                  | 9.0                  | 9.0                  |
|                                                                  | COP2 (47F/8.3C)                  | W/W     | 3.5                  | 3.5                  | 3.5                  |
|                                                                  | COP2 (5F/-15C)                   | W/W     | 1.8                  | 1.8                  | 1.8                  |
| NEEP, Canada                                                     |                                  |         | YES                  | YES                  | YES                  |
| E-star, US                                                       |                                  |         | YES                  | YES                  | YES                  |
| Min. Circuit Ampacity                                            |                                  |         | A                    | 12                   | 14                   |
| Max Fuse size                                                    |                                  |         | A                    | 15                   | 20                   |
| Compressor                                                       | Brand                            |         | SANYO                | SANYO                | GMCC                 |
|                                                                  | Type                             |         | Twin-ROTARY          | Twin-ROTARY          | Twin-ROTARY          |
| Fan motor                                                        | Brand                            |         | Broad-Ocean          | Broad-Ocean          | SHIBAURA             |
| Noise level                                                      |                                  |         |                      |                      |                      |
|                                                                  |                                  |         |                      |                      |                      |
| Connecting Pipe                                                  | Gas                              | inches  | 3/8                  | 3/8                  | 3/8                  |
|                                                                  | Liquid                           | inches  | 1/4                  | 1/4                  | 1/4                  |
| Throttling mode Capillary/EEV.                                   |                                  |         | EEV                  | EEV                  | EEV                  |
| Refrigerant Type                                                 |                                  |         | R410a                | R410a                | R410a                |
| Packing dimensions (W x D x H)                                   |                                  |         | inches               | 37.79x16.92x29.53    | 40.47x18.7x34.06     |
| Factory PreCharge Line                                           |                                  |         | m                    | 7.5                  | 7.5                  |
| Total length of liquid pipe                                      |                                  |         | m                    | 30                   | 45                   |
| Maximum Line Length-Single IDU                                   |                                  |         | m                    | 20                   | 20                   |
| Maximum Height Difference Between Indoor and Outdoor             |                                  |         | m                    | 15                   | 15                   |
| Room temperature                                                 | Indoor(cooling/ heating)         | C       | 16 C ~30C            | 16 C ~30C            | 16 C ~30C            |
|                                                                  | Outdoor(cooling/heating)         | C       | -15~55C / -20~30C    | -15~55C / -20~30C    | -15~55C / -20~30C    |
|                                                                  | Indoor(cooling/ heating)         | F       | 61~86                | 61~86                | 61~86                |
| Ambinet temperature                                              | Outdoor(cooling/heating)         | F       | 5~131/-4~86          | 5~131/-4~86          | 5~131/-4~86          |
|                                                                  |                                  |         |                      |                      |                      |
| Loading Capacity (ODU)                                           |                                  |         |                      | 189                  | 143                  |



Forced AUTO Defrost



Auto-restart



Self-troubleshooting



Fire-proved Electrical Box



Refrigerant Leakage Detector



Easy cable connecting



High Temperature Cooling



Low Temperature Cooling



Wide operation Voltage Range 165-265V



Applicable to Long line set



Free-match Technical Specifications (R454B)

| 20 SEER2 Free-match Technical Specifications         |                                  |         | ODU 1 drive 2       | ODU 1 drive 3       | ODU 1 drive 4       | ODU 1 drive 5       |
|------------------------------------------------------|----------------------------------|---------|---------------------|---------------------|---------------------|---------------------|
| Marketing model                                      |                                  |         | TMH20HEI2NAKOU24    | TMH28HEI2NAOOU24    | TMH36HEI2NAJOU24    | TMH45HEI2NAJOU24    |
| Type                                                 |                                  |         | cooling & heating   | cooling & heating   | cooling & heating   | cooling & heating   |
| Power supply                                         |                                  |         | 208/230V~/60Hz/1P   | 208/230V~/60Hz/1P   | 208/230V~/60Hz/1P   | 208/230V~/60Hz/1P   |
| Rated Cooling (95F/35C)                              | Rated cooling capacity (95F/35C) | Btu/h   | 20000               | 28000               | 35000               | 45000               |
|                                                      | EER2 (95F/35C)                   | Btu/W.h | 10.5                | 10.5                | 10.5                | 10.5                |
|                                                      | SEER2                            | Btu/W.h | 20.0                | 20.0                | 19.0                | 19.0                |
| Rated Heating                                        | Rated Heating capacity(47F/8.3C) | Btu/h   | 20000               | 28000               | 37000               | 45000               |
|                                                      | HSPF2 Rating (Region IV)         | Btu/W.h | 8.5                 | 8.5                 | 8.5                 | 8.5                 |
|                                                      | COP2 (47F/8.3C)                  | W/W     | 3.21                | 3.21                | 3.21                | 3.11                |
|                                                      | COP2 (5F/-15C)                   | W/W     | 1.8                 | 1.8                 | 1.8                 | 1.8                 |
| NEEP, Canada                                         |                                  |         | YES                 | YES                 | YES                 | YES                 |
| Max. Fuse size                                       |                                  |         | A                   | 15                  | 20                  | 25                  |
| Compressor                                           | Brand                            |         | SANYO               | GMCC                | HIGHLY              | HIGHLY              |
|                                                      | Type                             |         | Twin-ROTARY         | Twin-ROTARY         | Twin-ROTARY         | Twin-ROTARY         |
| Fan motor                                            | Brand                            |         | Broad-Ocean         | DAYANG              | DAYANG              | DAYANG              |
| Noise level                                          |                                  |         |                     |                     |                     |                     |
|                                                      |                                  |         |                     |                     |                     |                     |
| Connecting Pipe                                      | Gas                              | inches  | 3/8                 | 3/8                 | 3/8                 | 3/8                 |
|                                                      | Liquid                           | inches  | 1/4                 | 1/4                 | 1/4                 | 1/4                 |
| Throttling mode Capillary/EEV.                       |                                  |         | EEV                 | EEV                 | EEV                 | EEV                 |
| Refrigerant Type                                     |                                  |         | R454B               | R454B               | R454B               | R454B               |
| Packing dimensions (W x D x H)                       |                                  |         | inches              | 952×425×732         | 1022×480×835        | 1135×530×970        |
| Factory PreCharge Line                               |                                  |         | m                   | 7.5                 | 7.5                 | 7.5                 |
| Total length of liquid pipe                          |                                  |         | m                   | 40                  | 60                  | 80                  |
| Maximum Line Length-Single IDU                       |                                  |         | m                   | 20                  | 20                  | 20                  |
| Maximum Height Difference Between Indoor and Outdoor |                                  |         | m                   | 15                  | 15                  | 15                  |
| Room temperature                                     | Indoor(cooling/ heating)         | C       | 16 C ~30C           | 16 C ~30C           | 16 C ~30C           | 16 C ~30C           |
|                                                      | Outdoor(cooling/heating)         | C       | -15~55 C / -25~30 C | -15~55 C / -25~30 C | -15~55 C / -25~30 C | -15~55 C / -25~30 C |
|                                                      | Indoor(cooling/ heating)         | F       | 61~86               | 61~86               | 61~86               | 61~86               |
| Ambinet temperature                                  | Outdoor(cooling/heating)         | F       | 5~131/-13~86        | 5~131/-13~86        | 5~131/-13~86        | 5~131/-13~86        |
|                                                      |                                  |         |                     |                     |                     |                     |
| Loading Capacity (ODU)                               |                                  |         |                     | 189                 | 144                 | 88                  |

| 24 SEER2 Free-match Technical Specifications - Energy Star Rated |            |                                  |         | ODU 1 drive 2      | ODU 1 drive 3      | ODU 1 drive 4      | ODU 1 drive 5      |
|------------------------------------------------------------------|------------|----------------------------------|---------|--------------------|--------------------|--------------------|--------------------|
| Marketing model                                                  |            |                                  |         | TMH18HEI2NAOOU24   | TMH27HEI2NAOOU24   | TMH36HEI2NANOU24   | TMH42HEI2NALOU24   |
| Type                                                             |            |                                  |         | cooling & heating  | cooling & heating  | cooling & heating  | cooling & heating  |
| Power supply                                                     |            |                                  |         | 208/230V~/60Hz/1P  | 208/230V~/60Hz/1P  | 208/230V~/60Hz/1P  | 208/230V~/60Hz/1P  |
| Rated Cooling<br>(95F/35C)                                       | Non-Ducted | Rated cooling capacity (95F/35C) | Btu/h   | 18000              | 27000              | 33000              | 41000              |
|                                                                  |            | EER2 (95F/35C)                   | Btu/W.h | 13.0               | 12.5               | 12.0               | 12.0               |
|                                                                  |            | SEER2                            | Btu/W.h | 24.5               | 24.5               | 23.0               | 21.5               |
|                                                                  | Ducted     | Rated cooling capacity (95F/35C) | Btu/h   | 18000              | 27000              | 33000              | 41000              |
|                                                                  |            | EER2 (95F/35C)                   | Btu/W.h | 11.7               | 11.1               | 11.0               | 11.0               |
|                                                                  |            | SEER2                            | Btu/W.h | 20.0               | 20.0               | 19.0               | 19.0               |
| Rated Heating                                                    | Non-Ducted | Rated Heating capacity(47F/8.3C) | Btu/h   | 20000              | 27000              | 36000              | 42000              |
|                                                                  |            | HSPF2 Rating (Region IV)         | Btu/W.h | 10.0               | 10.0               | 9.5                | 9.5                |
|                                                                  |            | Rated Heating capacity(47F/8.3C) | Btu/h   | 20000              | 27000              | 36000              | 42000              |
|                                                                  | Ducted     | HSPF2 Rating (Region IV)         | Btu/W.h | 9.5                | 9.5                | 9.0                | 9.0                |
|                                                                  |            | COP2 (5F/-15C)                   | W/W     | 2.0                | 2.0                | 2.0                | 2.0                |
|                                                                  |            | NEEP, Canada                     |         |                    | YES                | YES                | YES                |
| E-star, Cold Climate, US                                         |            |                                  | YES     | YES                | YES                | YES                |                    |
| Min. Circuit Ampacity                                            |            |                                  | A       | 12                 | 14                 | 17                 | 23                 |
| Max Fuse size                                                    |            |                                  | A       | 15                 | 20                 | 25                 | 35                 |
| Compressor                                                       |            | Brand                            |         | SANYO              | GMCC               | HIGHLY             | HIGHLY             |
|                                                                  |            | Type                             |         | Twin-ROTARY        | Twin-ROTARY        | Twin-ROTARY        | Twin-ROTARY        |
| Fan motor                                                        |            | Brand                            |         | Broad-Ocean        | DAYANG             | DAYANG             | DAYANG             |
| Noise level                                                      |            |                                  | dB(A)   | 56                 | 58                 | 63                 | 65                 |
| Connecting Pipe                                                  |            | Gas                              | inches  | 3/8                | 3/8                | 3/8                | 3/8                |
|                                                                  |            | Liquid                           | inches  | 1/4                | 1/4                | 1/4                | 1/4                |
| Throttling mode Capillary/EEV.                                   |            |                                  |         | EEV                | EEV                | EEV                | EEV                |
| Refrigerant Type                                                 |            |                                  |         | R454B              | R454B              | R454B              | R454B              |
| Packing dimensions (W x D x H)                                   |            |                                  | inches  | 952×425×732        | 1022×480×835       | 1135×530×970       | 1135×530×970       |
| Factory PreCharge Line                                           |            |                                  | m       | 7.5                | 7.5                | 7.5                | 7.5                |
| Total length of liquid pipe                                      |            |                                  | m       | 40                 | 60                 | 80                 | 90                 |
| Maximum Line Length-Single IDU                                   |            |                                  | m       | 20                 | 20                 | 20                 | 20                 |
| Maximum Height Difference Between Indoor and Outdoor             |            |                                  | m       | 15                 | 15                 | 15                 | 15                 |
| Room temperature                                                 |            | Indoor(cooling/ heating)         | C       | 16℃~30℃            | 16℃~30℃            | 16℃~30℃            | 16℃~30℃            |
|                                                                  |            | Outdoor(cooling/heating)         | C       | -15~55 C / -25~30℃ | -15~55 C / -25~30℃ | -15~55 C / -25~30℃ | -15~55 C / -25~30℃ |
| Ambinet temperature                                              |            | Indoor(cooling/ heating)         | F       | 61~86              | 61~86              | 61~86              | 61~86              |
|                                                                  |            | Outdoor(cooling/heating)         | F       | 5~131/-13~86       | 5~131/-13~86       | 5~131/-13~86       | 5~131/-13~86       |
| Loading Capacity (ODU)                                           |            | 40 HC                            |         | 189                | 144                | 88                 | 88                 |



Forced AUTO Defrost



Auto-restart



Self-troubleshooting



Fire-proved Electrical Box



Refrigerant Leakage Detector



Easy cable connecting



High Temperature Cooling



Low Temperature Cooling



Wide operation Voltage Range 165-265V



Applicable to Long line set



ODU Self-clean

