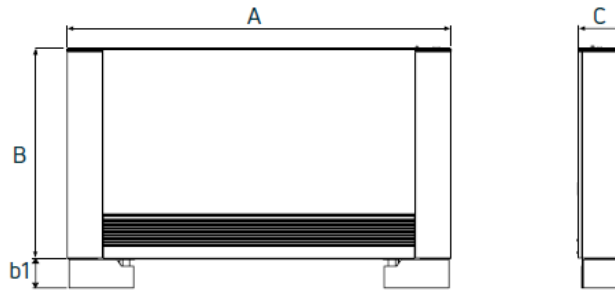## General Information

Provide MYSON iVector S2 VS or VS*i* series fan convectors in models and sizes as scheduled. All units must conform to standards UL 1995 and CSA C22.2 No. 236-15.  All exposed casings shall be finished in RAL 9003 electrostatically applied powder coated finish.  Other RAL colors may be specified at additional cost.

Each iVector S2 series is equipped with a DC motor with on board proportional integral derivative controller. The associated user-interface is a fully automatic/programmable *Smart Touch* control that is mounted to the unit (VS models) or wall mounted (VS*i* models).  VS on board control (PCB) is capable of controlling a single VS unit, where the wall mounted control is cable of controlling up to 30 units. Connection between wall mounted control and iVector S2 units shall be RS485 data cable (by others).
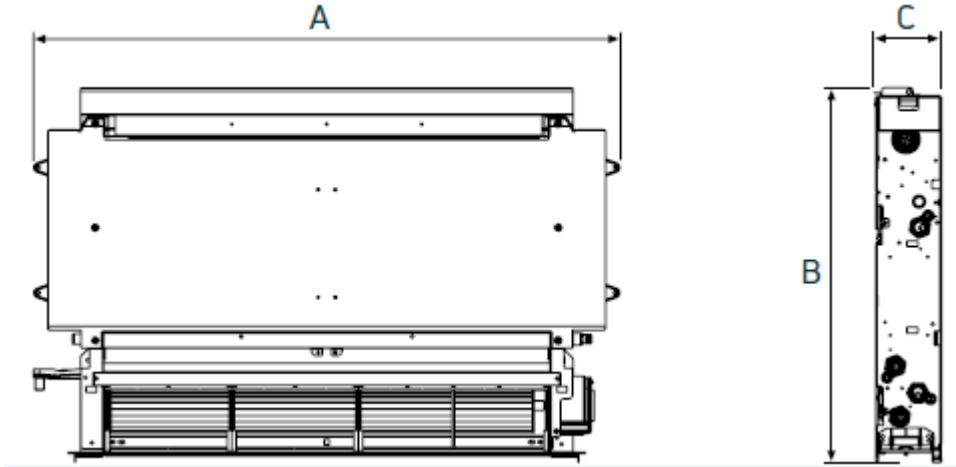
## Dimensional Details

iVector S2 VS models



| 2-PIPE VERSIONS | | Model | | | | |
|---|---|---|---|---|---|---|
| | | VS 7-2P | VS 9-2P | VS 11-2P | VS 13-2P | VS 15-2P |
| Dimensions | | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) |
| A | mm | 735 (29) | 935 (37) | 1135 (45) | 1335 (53) | 1535 (61) |
| B | mm | 579 (23) | 579 (23) | 579 (23) | 579 (23) | 579 (23) |
| b1 | mm | 82 (3) | 82 (3) | 82 (3) | 82 (3) | 82 (3) |
| C | mm | 131 (5) | 131 (5) | 131 (5) | 131 (5) | 131 (5) |
| Weight | | | | | | |
| Net | kg (lbs) | 17 (34.4) | 20 (44.0) | 23 (50.6) | 26 (57.2) | 29 (63.8) |

| 4-PIPE VERSIONS | | Model | | | | |
|---|---|---|---|---|---|---|
| | | VS 7-4P | VS 9-4P | VS 11-4P | VS 13-4P | VS 15-4P |
| Dimensions | | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) |
| A | mm | 735 (29) | 935 (37) | 1135 (45) | 1335 (53) | 1535 (61) |
| B | mm | 639 (25) | 639 (25) | 639 (25) | 639 (25) | 639 (25) |
| b1 | mm | 82 (3) | 82 (3) | 82 (3) | 82 (3) | 82 (3) |
| C | mm | 131 (5) | 131 (5) | 131 (5) | 131 (5) | 131 (5) |
| Weight | | | | | | |
| Net | kg (lbs) | 18 (39.6) | 21 (46.2) | 25 (55.0) | 28 (61.6) | 32 (70.4) |

## Dimensional Details

iVector VSi models



| 2-PIPE VERSIONS | | | | | | |
|---|---|---|---|---|---|---|
| | | **Model** | | | | |
| | | **VS 7-2P** | **VS 9-2P** | **VS 11-2P** | **VS 13-2P** | **VS 15-2P** |
| **Dimensions** | | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) |
| A | mm | 525 (21) | 725 (29) | 925 (37) | 1125 (45) | 1335 (53) |
| B | mm | 576 (23) | 576 (23) | 576 (23) | 576 (23) | 576 (23) |
| C | mm | 126 (5) | 126 (5) | 126 (5) | 126 (5) | 126 (5) |
| **Weight** | | | | | | |
| Net | kg (lbs) | 9 (19.8) | 12 (26.4) | 15 (33) | 18 (39.6) | 21 (46.2) |

| 4-PIPE VERSIONS | | | | | | |
|---|---|---|---|---|---|---|
| | | **Model** | | | | |
| | | **VS 7-4P** | **VS 9-4P** | **VS 11-4P** | **VS 13-4P** | **VS 15-4P** |
| **Dimensions** | | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) | (nominal inches) |
| A | mm | 525 (21) | 725 (29) | 925 (37) | 1125 (45) | 1335 (53) |
| B | mm | 579 (23) | 579 (23) | 579 (23) | 579 (23) | 579 (23) |
| C | mm | 126 (5) | 126 (5) | 126 (5) | 126 (5) | 126 (5) |
| **Weight** | | | | | | |
| Net | kg (lbs) | 10 (22.0) | 13 (28.6) | 17 (37.4) | 20 (44) | 24 (52.8) |

## Performance Details

iVector S2 Models (Metric Units – IP)

### 2-PIPE MODELS

| Parameter | Metric | Units (IP) | VS 7 / VSI 7 | VS 9 / VSI 9 | VS 11 / VSI 11 | VS 13 / VSI 13 | VS 15 / VSI 15 |
|---|---|---|---|---|---|---|---|
| Cooling/heating | Total cooling (45/54/81°F) | btu/h med (min – max)*1 | 2,491 (na - 3,106) | 4,641 (2,560 - 7,234) | 7,098 (3,924 - 9,589) | 8,156 (4,505 - 11,261) | 8,770 (4,812 - 12,660) |
| | Sensible cooling | btu/h med (min – max)*1 | 1,877 (na - 2,491) | 3,651 (2,014 - 5,860) | 5,153 (2,833 - 7,200) | 6,279 (3,481 - 9,247) | 6,757 (3,651 - 9,896) |
| | Flow rate | gpm med (min – max)*1 | 0.6 (na - 0.7) | 1.0 (0.6 - 1.6) | 1.6 (0.9 - 2.1) | 1.8 (1.0 - 2.4) | 1.9 (1.1 - 2.8) |
| | Pressure drop | ft of hd med (min – max)*1 | 3.4 (na - 4.0) | 1.4 (0.6 - 2.7) | 3.3 (0.9 - 5.7) | 2.9 (1.8 - 6.0) | 3.7 (4.6 - 7.1) |
| | Heating (176/167/68°F) | btu/h med (min – max)*1 | 6,859 (4,607 - 8,326) | 12,352 (6,927 - 17,710) | 17,982 (10,066 - 24,841) | 21,804 (12,352 - 31,631) | 23,442 (12,455 - 36,647) |
| | Flow rate | gpm med (min – max)*1 | 0.8 (0.5 - 0.9) | 1.4 (0.8 - 2.0) | 2.0 (1.1 - 2.8) | 2.5 (1.4 - 3.6) | 2.7 (1.4 - 4.2) |
| | Pressure drop | ft of hd med (min – max)*1 | 1.1 (0.4 - 2.6) | 1.4 (0.7 - 2.0) | 3.6 (1.2 - 6.4) | 4.0 (1.3 - 7.2) | 5.6 (1.8 - 12.2) |
| Hydraulic | Heat exchanger water volume | US gal | 0.12 | 0.21 | 0.30 | 0.39 | 0.48 |
| | Max. operating pressure | psi | 145 | 145 | 145 | 145 | 145 |
| | Operating temperatures | °F min - max | 39 - 185 | 39 - 185 | 39 - 185 | 39 - 185 | 39 - 185 |
| | Pipe S/R connections*2 | inch | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" |
| | Condensate drain size | mm | 14 | 14 | 14 | 14 | 14 |
| Airflow | Airflow*3 | cfm med (min – max) | 53.6 (28.8 - 85.9) | 123.6 (73.0 - 173.0) | 187.2 (114.2 - 277.8) | 241.3 (177.8 - 333.7) | 281.9 (214.2 - 390.2) |
| Electrical | Power supply | V/ph/Hz | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 |
| | Max. power | W | 11 | 19 | 20 | 29 | 33 |
| | Max. current | A | 0.22 | 0.32 | 0.36 | 0.52 | 0.56 |
| | Max. power @ min. speed | W | 4 | 4 | 5 | 5 | 5 |
| Acoustics | Sound power | dB(A) med (min – max)*1 | 44 (33 - 51) | 45 (35 - 53) | 46 (36 - 54) | 47 (36 - 55) | 48 (37 - 57) |
| | Sound pressure*4 | dB(A) med (min – max)*1 | 33 (24 - 41) | 34 (25 - 42) | 34 (25 - 44) | 35 (26 - 46) | 37 (27 - 47) |

### 4-PIPE MODELS

| Parameter | Metric | Units (IP) | VS 7 / VSI 7 | VS 9 / VSI 9 | VS 11 / VSI 11 | VS 13 / VSI 13 | VS 15 / VSI 15 |
|---|---|---|---|---|---|---|---|
| Cooling/heating | Total cooling (45/54/81°F) | btu/h med (min – max)*1 | 2,082 (1,058 - 2,457) | 3,856 (2,150 - 5,050) | 5,187 (2,696 - 7,030) | 6,108 (3,344 - 8,531) | 7,439 (4,129 - 10,237) |
| | Sensible cooling | btu/h med (min – max)*1 | 1,536 (819 - 1,911) | 2,867 (1,570 - 3,924) | 3,788 (2,082 - 5,255) | 4,812 (2,764 - 6,722) | 5,733 (3,174 - 7,883) |
| | Flow rate | gpm med (min – max)*1 | 0.5 (0.2 - 0.5) | 0.8 (0.5 - 1.1) | 1.1 (0.6 - 1.6) | 1.3 (0.7 - 1.9) | 1.6 (0.9 - 2.3) |
| | Pressure drop | ft of hd med (min – max)*1 | 2.5 (1.3 - 2.8) | 1.8 (1.1 - 2.2) | 3.2 (1.6 - 4.6) | 2.4 (1.3 - 3.6) | 4.9 (4.7 - 5.3) |
| | Heating (176/167/68°F) | btu/h med (min – max)*1 | 2,457 (1,434 - 2,798) | 4,709 (3,174 - 5,494) | 6,688 (5,187 - 7,814) | 9,657 (6,688 - 11,056) | 10,339 (7,132 - 12,387) |
| | Flow rate | gpm med (min – max)*1 | 0.3 (0.2 - 0.3) | 0.5 (0.4 - 0.6) | 0.8 (0.6 - 0.9) | 1.1 (0.8 - 1.3) | 1.2 (0.8 - 1.4) |
| | Pressure drop | ft of hd med (min – max)*1 | 1.4 (1.1 - 1.4) | 1.2 (1.2 - 2.3) | 2.7 (2.7 - 3.6) | 2.0 (1.5 - 2.4) | 1.7 (3.8 - 1.3) |
| Hydraulic | Heat exchanger water volume | US gal | 0.12 | 0.21 | 0.30 | 0.39 | 0.48 |
| | Max. operating pressure | psi | 145 | 145 | 145 | 145 | 145 |
| | Operating temperatures | °F min - max | 39 - 185 | 39 - 185 | 39 - 185 | 39 - 185 | 39 - 185 |
| | Pipe S/R connections*2 | inch | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" |
| | Condensate drain size | mm | 14 | 14 | 14 | 14 | 14 |
| Airflow | Airflow*3 | cfm med (min – max) | 53.6 (27.1 - 77.7) | 121.8 (73.0 - 153.0) | 171.3 (114.2 - 217.8) | 157.2 (145.4 - 280.2) | 244.8 (154.2 - 319.0) |
| Electrical | Power supply | V/ph/Hz | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 |
| | Max. power | W | 11 | 19 | 20 | 29 | 33 |
| | Max. current | A | 0.22 | 0.32 | 0.36 | 0.52 | 0.56 |
| | Max. power @ min. speed | W | 4 | 4 | 4 | 4 | 5 |
| Acoustics | Sound power | dB(A) med (min – max)*1 | 44 (33 - 51) | 45 (35 - 53) | 46 (36 - 54) | 47 (36 - 55) | 48 (37 - 57) |
| | Sound pressure*4 | dB(A) med (min – max)*1 | 33 (24 - 41) | 34 (25 - 42) | 34 (25 - 44) | 35 (26 - 46) | 37 (27 - 47) |

*1: In Auto mode, values will vary between min-max.
*2: Supply/return piping is on the left side of the unit. Right side connections available as special order.
*3: Airflow measured with clean filters
*4: Sound pressure measured in semianechoic chamber in compliance with ISO 7779 (distance 3 m) - onsite conditions will result in different values

## Performance Details
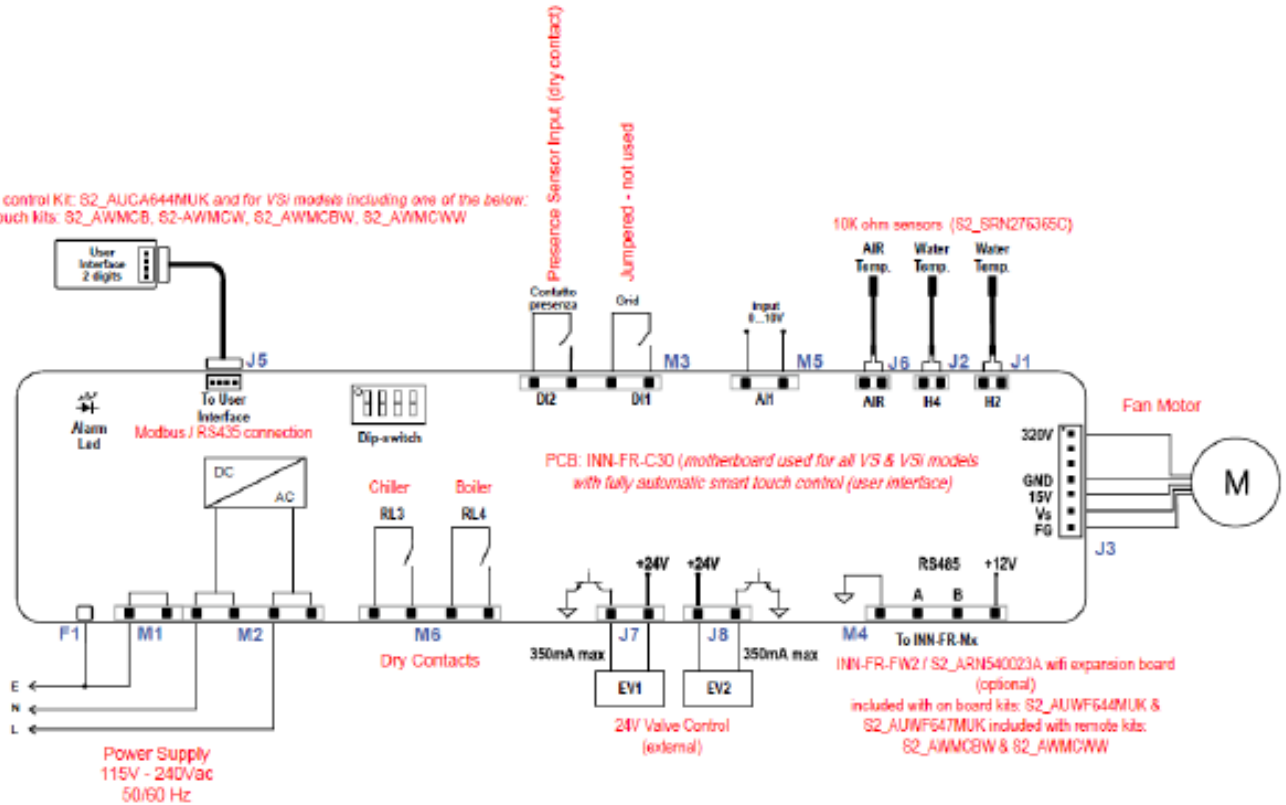
iVector S2 Models (Metric Units – SI)

### 2-PIPE MODELS

| Parameter | Metric | Units (SI) | VS7 / VSI7 | VS9 / VSI9 | VS11 / VSI11 | VS13 / VSI13 | VS15 / VSI15 |
|---|---|---|---|---|---|---|---|
| Cooling/heating | Total cooling (7/12/27°C) | kW med (min - max)*1 | 0.73 (na - 0.91) | 1.36 (0.75 - 2.12) | 2.08 (1.15 - 2.81) | 2.39 (1.32 - 3.30) | 2.57 (1.41 - 3.71) |
| | Sensible cooling | kW med (min - max)*1 | 0.55 (na - 0.73) | 1.07 (0.59 - 1.72) | 1.51 (0.83 - 2.11) | 1.84 (1.02 - 2.71) | 1.98 (1.07 - 2.09) |
| | Flow rate | l/h med (min - max)*1 | 125.3 (na - 156.1) | 233.3 (128.7 - 363.8) | 356.9 (197.3 - 482.1) | 410.1 (226.5 - 556.2) | 441.0 (241.5 - 636.6) |
| | Pressure drop | kPa med (min - max)*1 | 10.2 (na - 12.1) | 4.3 (1.9 - 8.2) | 9.9 (2.7 - 17.1) | 8.8 (2.5 - 18.0) | 11.1 (13.8 - 21.2) |
| | Heating (80/75/20°C) | kW med (min - max)*1 | 2.01 (1.35 - 2.44) | 3.62 (2.03 - 5.19) | 5.27 (2.95 - 7.28) | 6.39 (3.62 - 9.27) | 6.87 (3.65 - 10.74) |
| | Flow rate | l/h med (min - max)*1 | 176.9 (118.7 - 215.1) | 318.9 (179.2 - 457.6) | 464.5 (259.8 - 642.3) | 563.1 (319.2 - 817.3) | 605.9 (322.1 - 947.1) |
| | Pressure drop | kPa med (min - max)*1 | 3.3 (1.1 - 7.7) | 4.1 (2.0 - 5.9) | 10.9 (3.6 - 19.1) | 12.0 (4.0 - 21.6) | 16.7 (5.5 - 36.6) |
| Hydraulic | Heat exchanger water volume | l | 0.47 | 0.80 | 1.13 | 1.46 | 1.80 |
| | Max. operating pressure | bar | 10 | 10 | 10 | 10 | 10 |
| | Operating temperatures | °C min - max | 4 - 85 | 4 - 85 | 4 - 85 | 4 - 85 | 4 - 85 |
| | Pipe S/R connections*2 | Inch | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" |
| | Condensate drain size | mm | 14 | 14 | 14 | 14 | 14 |
| Airflow | Airflow*3 | m³/h med (min - max) | 91 (49 - 146) | 210 (124 - 294) | 318 (194 - 438) | 410 (302 - 567) | 479 (364 - 663) |
| Electrical | Power supply | V/ph/Hz | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 |
| | Max. power | W | 11 | 19 | 20 | 29 | 33 |
| | Max. current | A | 0.22 | 0.32 | 0.36 | 0.52 | 0.56 |
| | Max. power @ min. speed | W | 4 | 4 | 5 | 5 | 5 |
| Acoustics | Sound power | dB(A) med (min - max)*1 | 44 (33 - 51) | 45 (35 - 53) | 46 (36 - 54) | 47 (36 - 55) | 48 (37 - 57) |
| | Sound pressure*4 | dB(A) med (min - max)*1 | 33 (24 - 41) | 34 (25 - 42) | 34 (26 - 44) | 35 (26 - 46) | 38 (28 - 47) |

### 4-PIPE MODELS

| Parameter | Metric | Units (SI) | VS7 / VSI7 | VS9 / VSI9 | VS11 / VSI11 | VS13 / VSI13 | VS15 / VSI15 |
|---|---|---|---|---|---|---|---|
| Cooling/heating | Total cooling (7/12/27°C) | kW med (min - max)*1 | 0.61 (0.31 - 0.72) | 1.13 (0.63 - 1.48) | 1.52 (0.79 - 2.06) | 1.79 (0.98 - 2.50) | 2.18 (1.21 - 3.00) |
| | Sensible cooling | kW med (min - max)*1 | 0.45 (0.24 - 0.56) | 0.84 (0.46 - 1.15) | 1.11 (0.61 - 1.54) | 1.41 (0.81 - 1.97) | 1.68 (0.93 - 2.31) |
| | Flow rate | l/h med (min - max)*1 | 105.4 (52.5 - 124.2) | 193.0 (107.3 - 253.5) | 260.2 (135.2 - 353.6) | 306.4 (168.9 - 428.5) | 374.3 (207.8 - 514.2) |
| | Pressure drop | kPa med (min - max)*1 | 7.4 (3.9 - 8.4) | 5.3 (3.4 - 6.6) | 9.7 (4.9 - 13.7) | 7.3 (4.0 - 10.8) | 14.7 (14.0 - 15.7) |
| | Heating (80/75/20°C) | kW med (min - max)*1 | 0.72 (0.42 - 0.82) | 1.38 (0.93 - 1.61) | 1.96 (1.52 - 2.29) | 2.83 (1.96 - 3.24) | 3.03 (2.09 - 3.63) |
| | Flow rate | l/h med (min - max)*1 | 63.2 (37.3 - 72.3) | 121.7 (82.2 - 141.8) | 173.0 (134.4 - 202.2) | 249.9 (173.1 - 285.5) | 267.4 (184.5 - 320.1) |
| | Pressure drop | kPa med (min - max)*1 | 4.1 (3.2 - 4.3) | 3.7 (3.6 - 6.8) | 8.2 (8.2 - 10.9) | 5.9 (4.6 - 7.3) | 5.0 (11.4 - 3.8) |
| Hydraulic | Heat exchanger water volume | l | 0.47 | 0.80 | 1.13 | 1.46 | 1.80 |
| | Max. operating pressure | bar | 10 | 10 | 10 | 10 | 10 |
| | Operating temperatures | °C min - max | 4 - 82 | 4 - 82 | 4 - 82 | 4 - 82 | 4 - 82 |
| | Pipe S/R connections*2 | Inch | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" | Euroconus 3/4" |
| | Condensate drain size | mm | 14 | 14 | 14 | 14 | 14 |
| Airflow | Airflow*3 | m³/h med (min - max) | 91 (46 - 132) | 207 (124 - 260) | 291 (194 - 370) | 267 (247 - 476) | 416 (262 - 542) |
| Electrical | Power supply | V/ph/Hz | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 | 120/1/60 |
| | Max. power | W | 11 | 19 | 20 | 29 | 33 |
| | Max. current | A | 0.22 | 0.32 | 0.36 | 0.52 | 0.56 |
| | Max. power @ min. speed | W | 4 | 4 | 4 | 4 | 5 |
| Acoustics | Sound power | dB(A) med (min - max)*1 | 44 (33 - 51) | 45 (35 - 53) | 46 (36 - 54) | 47 (36 - 55) | 48 (37 - 57) |
| | Sound pressure*4 | dB(A) med (min - max)*1 | 33 (24 - 41) | 34 (25 - 42) | 34 (25 - 44) | 35 (26 - 46) | 37 (27 - 47) |

*1: In Auto mode, values will vary between min-max.
*2: Supply/return piping is on the left side of the unit. Right side connections available as special order
*3: Airflow measured with clean filters
*4: Sound pressure measured in semianechoic chamber in compliance with ISO 7779 (distance 3 m) - onsite conditions will result in different values

**Control Functionality**



Interface will be:
On board smart touch control Kit: S2_AUCA644MUK and for VSi models including one of the below:
Wall mounted smart touch kits: S2_AWMCB, S2-AWMCW, S2_AWMCBW, S2_AWMCWW

Presence Sensor Input (dry contact)

Jumpered - not used

10K ohm sensors (S2_SRN276365C)

User Interface 2 digits

AIR Temp.  Water Temp.  Water Temp.

Contatto presenza    Grid    Input 0...10V

J5    M3    M5    J6    J2    J1

Alarm Led    To User Interface Modbus / RS435 connection

Dip-switch    DI2    DI1    AII    AIR    H4    H2

PCB: INN-FR-C30 (motherboard used for all VS & VSi models with fully automatic smart touch control (user interface)

Fan Motor

320V
GND
15V
Vs
FG

DC / AC

Chiller    Boiler
RL3    RL4

+24V    +24V    RS465    +12V

A    B

F1    M1    M2    M6    J7    J8    M4    To INN-FR-Nx

E    Dry Contacts    350mA max    350mA max

N    EV1    EV2    INN-FR-FW2 / S2_ARN540023A wifi expansion board (optional)
included with on board kits: S2_AUWF644MUK & S2_AUWF647MUK included with remote kits: S2_AWMCBW & S2_AWMCWW

L

Power Supply
115V - 240Vac
50/60 Hz

24V Valve Control (external)

J3

**MODEL C**
INN-FR-C30

| Project Name: | Approval Date: |
|---|---|
| Architect: | |
| Engineer: | Approval Stamp or Signature |
| Submitted Date: | |

May 2022