

## Mini ECOi LZ2 Series R32

Outstanding efficiency in a compact body and continuous operation even at extreme ambient temperatures. VRF with outstanding energy saving performance and superior SEER and SCOP.



**EXTRAORDINARY SAVINGS.**  
SEER 8,50 <sup>1)</sup>  
SCOP 5,05 <sup>1)</sup>



**RELIABLE QUALITY - R32 STANDARD-COMPLIANT <sup>2)</sup>**



**PANASONIC DNA COMPRESSORS**



**LOW HEIGHT 996 MM**

**35Pa ESP**

**HIGH EXTERNAL STATIC PRESSURE 35 PA**



**QUIET MODE OPERATION WITH LOW CAPACITY DROP**



**CONTINUOUS OPERATION AT EXTREME AMBIENT TEMPERATURES**  
52°C  
-20°C

**150%**

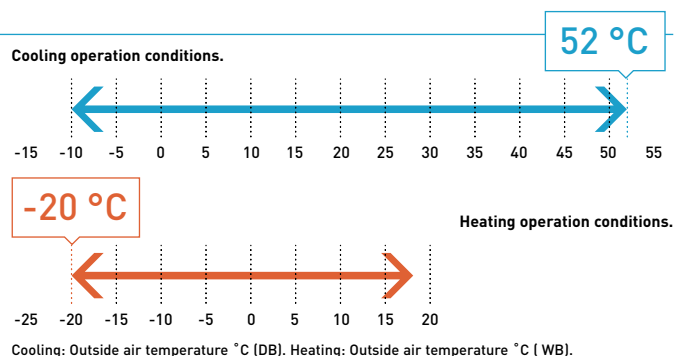
**INCREASED INDOOR / OUTDOOR CAPACITY RATIO UP TO 150%**

<sup>1)</sup> for 4 HP model. <sup>2)</sup> Panasonic's R32 safety measures comply with IEC 60335-2-40 (ed. 7.0) and EN 378 (ISO 5149).

## Mini ECOi LZ2 provides the optimal performance in any climatic condition.

### Extended design operation conditions

LZ2 mini VRF is extremely reliable even under the most difficult conditions. The units can operate in cooling mode at extreme temperatures, 52 °C in cooling and -20 °C in heating mode.



### Compatible with a large range of indoor units and controls

An expansion of Panasonic VRF line up, the Mini ECOi R32 is compatible with a large range of indoor units, either supporting Panasonic's optional R32 refrigerant leak detector alarm or having built-in detectors provide a great flexibility for all types of installation, and can utilize all Panasonic's scalable control and monitoring solutions.

#### Connects R32 refrigerant leak detector - CZ-CGLSC2

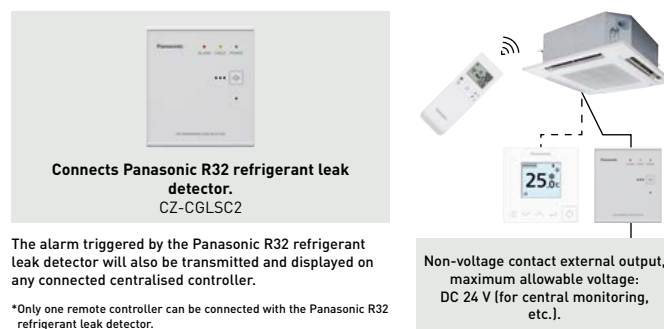


#### Built-in R32 sensors



### Panasonic R32 refrigerant leak detector/alarm (optional)

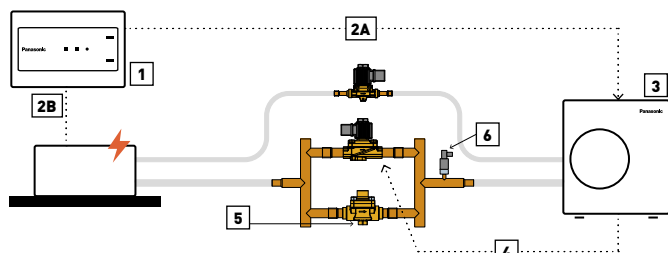
The optional R32 refrigerant leak detector (CZ-CGLSC2) is available for compatible indoor units, allowing customers to determine if the detector is required for safety compliance or if the indoor unit can be installed without it. This sensor includes an integrated alarm buzzer and can connect to a central alarm system. It links to the indoor unit's remote control terminals and is compatible with any VRF remote controllers, wired or wireless.



### R32 Pump Down solution

R32 Pump Down solution offers the assurance of additional safety protection, whilst expanding the potential installation cases, allowing for installation within smaller rooms.

Suitable for the Mini ECOi LZ2 range up to 10 HP, compatible indoor units connected to CZ-CGLSC2 or integrated Panasonic R32 refrigerant leak detector.

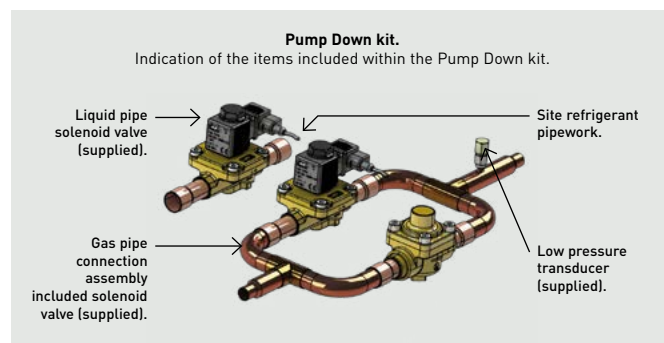


Operation steps: 1 | A leak is detected by the leak detection sensor. 2A | Leak alarm signal is sent to the outdoor unit. 2B | Indoor unit fan activated and runs at maximum speed. 3 | Pump Down procedure is activated. 4 | Solenoid valves are closed preventing refrigerant returning to indoor units. 5 | Outdoor unit is operating in Pump Down mode and check valve only allows flow to the outdoor unit. 6 | Low pressure switch threshold is reached. Error signal isolates the outdoor unit, preventing restart.

### Technical focus

- Simplified design and installation
- Complies with IEC 60335-2-40 ed.6.0
- Recovers base charge within outdoor unit
- Expands potential installation cases
- IP rated connections for outdoor installation

| Model reference | Description                                                       |
|-----------------|-------------------------------------------------------------------|
| PAW-PUD2WB-1    | Basic Pump Down system (2 way) for one R32 Mini ECOi outdoor unit |



**Mini ECOi LZ2 Series 4 to 6 HP - R32**

**Outstanding efficiency in a compact body and continuous operation even at extreme ambient temperatures.**

- SEER levels up to 8,5 and SCOP levels up to 5,0 (for 4 HP model)
- Continuous operation at extreme ambient temperatures: -20 °C (heating) to 52 °C (cooling)
- Unique indoors with nanoe™ X, hydroxyl radicals contained in water

Low height  
**996 mm**



| HP                                                              |                       |           | 4 HP                          | 5 HP                          | 6 HP                          | 4 HP                          | 5 HP                          | 6 HP                          |
|-----------------------------------------------------------------|-----------------------|-----------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Outdoor unit                                                    |                       |           | U-4LZ2E5                      | U-5LZ2E5                      | U-6LZ2E5                      | U-4LZ2E8                      | U-5LZ2E8                      | U-6LZ2E8                      |
| Power supply                                                    | Voltage               | V         | 220-230-240                   | 220-230-240                   | 220-230-240                   | 380-400-415                   | 380-400-415                   | 380-400-415                   |
|                                                                 | Phase                 |           | Single phase                  | Single phase                  | Single phase                  | Three phase                   | Three phase                   | Three phase                   |
|                                                                 | Frequency             | Hz        | 50                            | 50                            | 50                            | 50                            | 50                            | 50                            |
| Cooling capacity                                                |                       | kW        | 12,1                          | 14,0                          | 15,5                          | 12,1                          | 14,0                          | 15,5                          |
| EER <sup>1)</sup>                                               |                       | W/W       | 4,53                          | 4,12                          | 3,88                          | 4,53                          | 4,12                          | 3,88                          |
| Current                                                         |                       | A         | 13,30-12,80-12,20             | 16,90-16,20-15,50             | 19,60-18,70-18,00             | 4,37-4,15-4,00                | 5,50-5,23-5,04                | 6,44-6,12-5,89                |
| Input power                                                     |                       | kW        | 2,67                          | 3,40                          | 4,00                          | 2,67                          | 3,40                          | 4,00                          |
| Heating capacity                                                |                       | kW        | 12,5                          | 16,0                          | 16,5                          | 12,5                          | 16,0                          | 16,5                          |
| COP <sup>1)</sup>                                               |                       | W/W       | 5,27                          | 4,71                          | 4,42                          | 5,27                          | 4,71                          | 4,42                          |
| Current                                                         |                       | A         | 12,00-11,40-11,00             | 16,90-16,20-15,50             | 18,50-17,70-17,00             | 3,91-3,71-3,58                | 5,50-5,22-5,03                | 6,02-5,72-5,51                |
| Input power                                                     |                       | kW        | 2,37                          | 3,40                          | 3,73                          | 2,37                          | 3,40                          | 3,73                          |
| Starting current                                                |                       | A         | 1,0                           | 1,0                           | 1,0                           | 1,0                           | 1,0                           | 1,0                           |
| Maximum current                                                 |                       | A         | 19,6                          | 23,7                          | 26,5                          | 7,2                           | 9,2                           | 9,9                           |
| Maximum input power                                             |                       | kW        | 3,92-4,10-4,28                | 4,76-4,98-5,19                | 5,41-5,66-5,90                | 4,40-4,63-4,80                | 5,69-5,99-6,22                | 6,15-6,47-6,72                |
| Maximum number of connectable indoor units <sup>2)</sup>        |                       |           | 7(10)                         | 8(12)                         | 9(12)                         | 7(10)                         | 8(12)                         | 9(12)                         |
| External static pressure                                        |                       | Pa        | 0-35                          | 0-35                          | 0-35                          | 0-35                          | 0-35                          | 0-35                          |
| Air flow                                                        |                       | m³/min    | 69                            | 72                            | 74                            | 69                            | 72                            | 74                            |
| Sound pressure                                                  | Cool                  | dB(A)     | 52                            | 53                            | 54                            | 52                            | 53                            | 54                            |
|                                                                 | Cool (Silent 1/2/3/4) | dB(A)     | 49/47/45/45                   | 50/48/46/45                   | 51/49/47/45                   | 49/47/45/45                   | 50/48/46/45                   | 51/49/47/45                   |
|                                                                 | Heat                  | dB(A)     | 54                            | 56                            | 56                            | 54                            | 56                            | 56                            |
| Sound power                                                     | Cool / Heat           | dB(A)     | 69/72                         | 70/74                         | 72/75                         | 69/72                         | 70/74                         | 72/75                         |
| Dimension                                                       | H x W x D             | mm        | 996 x 980 x 370               | 996 x 980 x 370               | 996 x 980 x 370               | 996 x 980 x 370               | 996 x 980 x 370               | 996 x 980 x 370               |
| Net weight                                                      |                       | kg        | 94                            | 94                            | 94                            | 94                            | 94                            | 94                            |
| Piping diameter                                                 | Liquid                | Inch (mm) | 3/8(9,52)                     | 3/8(9,52)                     | 3/8(9,52)                     | 3/8(9,52)                     | 3/8(9,52)                     | 3/8(9,52)                     |
|                                                                 | Gas                   | Inch (mm) | 5/8(15,88)                    | 5/8(15,88)                    | 5/8(15,88)                    | 5/8(15,88)                    | 5/8(15,88)                    | 5/8(15,88)                    |
| Maximum piping length (total)                                   |                       | m         | 90(180)                       | 90(180)                       | 90(180)                       | 90(180)                       | 90(180)                       | 90(180)                       |
| Elevation difference (in / out)                                 |                       | m         | 50(OU above)/<br>40(OU below) | 50(OU above)/<br>40(OU below) | 50(OU above)/<br>40(OU below) | 50(OU above)/<br>40(OU below) | 50(OU above)/<br>40(OU below) | 50(OU above)/<br>40(OU below) |
| Refrigerant (R32)                                               |                       | kg        | 2,7                           | 2,7                           | 2,7                           | 2,7                           | 2,7                           | 2,7                           |
| Maximum allowable indoor / outdoor capacity ratio <sup>3)</sup> |                       | %         | 50-150(130)                   | 50-150(130)                   | 50-150(130)                   | 50-150(130)                   | 50-150(130)                   | 50-150(130)                   |
| Operating range                                                 | Cool Min - Max        | °C        | -10-52                        | -10-52                        | -10-52                        | -10-52                        | -10-52                        | -10-52                        |
|                                                                 | Heat Min - Max        | °C        | -20-18                        | -20-18                        | -20-18                        | -20-18                        | -20-18                        | -20-18                        |

**ErP data <sup>4)</sup>**

|                    |        |        |        |        |        |        |
|--------------------|--------|--------|--------|--------|--------|--------|
| SEER <sup>5)</sup> | 8,50   | 8,12   | 7,71   | 8,50   | 8,12   | 7,71   |
| $\eta_{s,c}$       | 337,0% | 321,8% | 305,4% | 337,0% | 321,8% | 305,4% |
| SCOP <sup>5)</sup> | 5,05   | 4,61   | 4,59   | 5,05   | 4,61   | 4,59   |
| $\eta_{s,h}$       | 199,0% | 181,4% | 180,6% | 199,0% | 181,4% | 180,6% |

1) EER and COP calculation is based in accordance to EN 14511. 2) The number in parenthesis indicates maximum number of connectable indoor unit in case of 1,5 kW indoor units connection. 3) The number in parenthesis indicates maximum allowed indoor / outdoor capacity ratio in case of 1,5 kW indoor units connection. 4) SEER / SCOP and  $\eta_{s,c}$  /  $\eta_{s,h}$  are in accordance with ErP test data for U2 type 4 way 90x90 cassette indoor units. 5) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF.

**Minimum environmental impact**

Panasonic has designed the LZ2 series in order to minimize the environmental impact of the system. Low GWP refrigerant R32 and highest efficiency levels ensure this through the total operational lifetime.

**For the most challenging spaces**

The Mini ECOi LZ2 R32 VRF system is the ideal solution to fit into any application thanks to its compact design and long piping lengths.

**Technical focus**

- Widest range of connectable units in R32 VRF
- Allowing wide range of installations with and without mitigation measures
- Flexible mitigation measures, with Panasonic R32 refrigerant leak detector / alarm to be installed only when required



INTERNET CONTROL: Optional.



## Industry 1st 8 HP and 10 HP Mini VRF units with R32



### Mini ECOi LZ2 Series 8 and 10 HP - R32

#### Introducing widest range of R32 Mini VRF.

- SEER levels up to 7,6 and SCOP levels up to 4,6 (for 8 HP model)
- Continuous operation at extreme ambient temperatures: -20 °C (heating) to 52 °C (cooling)
- Unique indoors with nanoe™ X, hydroxyl radicals contained in water

| HP                                                              |                       |                     | 8 HP                      | 10 HP                     |
|-----------------------------------------------------------------|-----------------------|---------------------|---------------------------|---------------------------|
| Outdoor unit                                                    |                       |                     | U-8LZ2E8                  | U-10LZ2E8                 |
| Power supply                                                    | Voltage               | V                   | 380-400-415               | 380-400-415               |
|                                                                 | Phase                 |                     | Three phase               | Three phase               |
|                                                                 | Frequency             | Hz                  | 50                        | 50                        |
| Cooling capacity                                                |                       | kW                  | 22,4                      | 28,0                      |
| EER <sup>1)</sup>                                               |                       | W/W                 | 3,84                      | 3,47                      |
| Current                                                         |                       | A                   | 9,73 - 9,25 - 8,91        | 13,2 - 12,5 - 12,1        |
| Input power                                                     |                       | kW                  | 5,83                      | 8,07                      |
| Heating capacity                                                |                       | kW                  | 25,0                      | 28,0                      |
| COP <sup>1)</sup>                                               |                       | W/W                 | 4,30                      | 4,47                      |
| Current                                                         |                       | A                   | 9,81 - 9,32 - 8,98        | 10,5 - 9,93 - 9,57        |
| Input power                                                     |                       | kW                  | 5,81                      | 6,26                      |
| Starting current                                                |                       | A                   | 1,0                       | 1,0                       |
| Maximum current                                                 |                       | A                   | 13,7                      | 19,5                      |
| Maximum input power                                             |                       | kW                  | 8,21 - 8,64 - 8,96        | 11,9 - 12,6 - 13,0        |
| Maximum number of connectable indoor units <sup>2)</sup>        |                       |                     | 16                        | 16                        |
| External static pressure                                        |                       | Pa                  | 0 ~ 35                    | 0 ~ 35                    |
| Air flow                                                        |                       | m <sup>3</sup> /min | 158                       | 167                       |
| Sound pressure                                                  | Cool                  | dB(A)               | 59,0                      | 60,0                      |
|                                                                 | Cool (Silent 1/2/3/4) | dB(A)               | 56/54/52/50               | 57/55/53/50               |
| Sound power                                                     | Cool                  | dB(A)               | 72                        | 74                        |
| Dimension                                                       | H x W x D             | mm                  | 1500 x 980 x 370          | 1500 x 980 x 370          |
| Net weight                                                      |                       | kg                  | 125                       | 126                       |
| Piping diameter                                                 | Liquid                | Inch (mm)           | 3/8(9,52)                 | 3/8(9,52)                 |
|                                                                 | Gas                   | Inch (mm)           | 3/4(19,05)                | 7/8(22,22)                |
| Maximum piping length (total)                                   |                       | m                   | 100(300)                  | 100(300)                  |
| Elevation difference (in / out)                                 |                       | m                   | 50(OU above)/40(OU below) | 50(OU above)/40(OU below) |
| Refrigerant (R32)                                               |                       | kg                  | 4,9                       | 5,1                       |
| Maximum allowable indoor / outdoor capacity ratio <sup>3)</sup> |                       | %                   | 50 ~ 150(130)             | 50 ~ 150(130)             |
| Operating range                                                 | Cool Min ~ Max        | °C                  | -10 ~ 52                  | -10 ~ 52                  |
|                                                                 | Heat Min ~ Max        | °C                  | -20 ~ 18                  | -20 ~ 18                  |

#### ErP data <sup>4)</sup>

|                    |        |        |
|--------------------|--------|--------|
| SEER <sup>5)</sup> | 7,56   | 7,08   |
| $\eta_{s,c}$       | 299,4% | 280,2% |
| SCOP <sup>5)</sup> | 4,59   | 4,60   |
| $\eta_{s,h}$       | 180,6% | 181,0% |

1) EER and COP calculation is based in accordance to EN 14511. 2) The number in parenthesis indicates maximum number of connectable indoor unit in case of 1,5 kW indoor units connection. 3) The number in parenthesis indicates maximum allowed indoor / outdoor capacity ratio in case of 1,5 kW indoor units connection. 4) SEER / SCOP and  $\eta_{s,c}$  /  $\eta_{s,h}$  are in accordance with ErP test data for F2 type variable static pressure hide-away indoor units. 5) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency " $\eta$ " values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = ( $\eta$  + Correction) × PEF.

### Perfect fit for small to medium size projects

8 and 10 HP LZ2 Mini VRF units bring in the total benefits of a VRF system in a smaller application. You can enjoy advanced individual and central VRF control options including the revolutionary Panasonic AC Smart Cloud and AC Service Cloud.

### For the most difficult conditions

The Mini ECOi LZ2 series are able to operate at the hardest conditions from -20 °C up to +52 °C providing continuous and efficient, heating and cooling for your space all year long.

### Technical focus

- Widest range of connectable units in R32 VRF
- Allowing wide range of installations with and without refrigerant mitigation
- Flexible mitigation measures, with Panasonic R32 refrigerant leak detector / alarm to be installed only when required



INTERNET CONTROL: Optional.

Rating conditions: Cooling indoor 27 °C DB / 19 °C WB. Cooling outdoor 35 °C DB / 24 °C WB. Heating indoor 20 °C DB. Heating outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb). Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites [www.aircon.panasonic.eu](http://www.aircon.panasonic.eu) or [www.ptc.panasonic.eu](http://www.ptc.panasonic.eu).

