



# S-ASX-LPi

## Commercial Low GWP Air-To-Water Heat Pump

55 – 100 kW



Air-to-Water Heat Pump

The S-ASX-LPi range comprises three models with nominal thermal outputs of 55,75 and 100kW. Each model is a robust commercial air source heat pump designed to offer optimal operating efficiency and low running costs. The units have outstanding SCOP of between 4.27 and 4.33 at 35°C and, depending on model, can deliver seamless heat power output of between 20.5kW to 108kW at condition A7W35 due to the seamless operation of the in-built inverter scroll compressor(s) with vapour injection technology. At this air temperature, with a flow of 35°C, the COP varies between 5.01 and 4.11 from minimum to maximum thermal output. The units are capable of generating up to 68°C outlet flow temperature and can be used to generate useful space heating or as a source for DHW provision. The control system allows the units to be operated in cascade allowing up to 16 units.

All the units are of monobloc design suitable for outdoor design only. Heat energy from the ambient air is obtained from the high density low GWP R454BA refrigerant circulating inside a bank of copper and aluminium fins and then this energy is passed, after the compression cycle, to the heating circuit through a stainless steel brazed heat exchanger. The circuit is controlled by the standard supplied temperature probes and pressure transducers and is protected by high and low pressure switches. The plate heat exchanger and all hydraulic pipework is thermally insulated to avoid condensation and reduce heat loss.

As standard each unit is supplied with an in-built fully modulating circulating flow pump. The unit is also fitted with anti-vibration dampers and remote monitoring interface. Additionally, low noise insulation is fitted as standard to minimise the operating sound level.

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Commercial  
Heating Engineers  
Since 1975

Low Pollutant Refrigerant and Embodied Carbon

R454B, or Opteon™ XL41, as it is also known, is significantly less harmful to the environment than R410A or R32 refrigerants with a GWP of 467. R454B offers a 76% reduction in direct GWP against R410A and 34% reduction against R32. Embodied carbon, calculated using the CIBSE TM65 ‘mid-level’ method, is a measure of the total carbon footprint of a device including elements of material components, manufacturing, transport as well as ‘after-use’ disposal. The S-ASX-LPi55 unit benefits from relatively low tonnage of embodied carbon due to the low GWP of R454B refrigerant. Full information is available in the Technical section online.

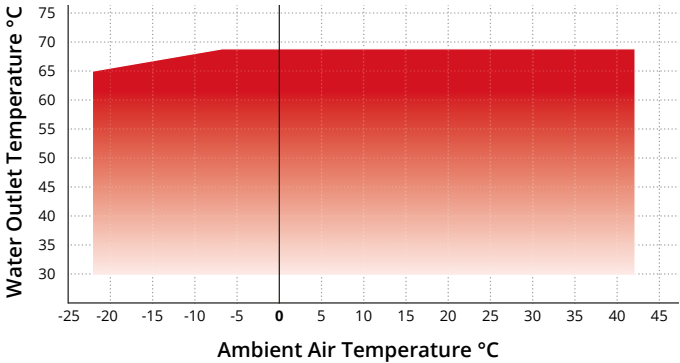


| Model                                   |                  |     | LPi55 |         |      | LPi75 |         |       | LPi100 |         |       |
|-----------------------------------------|------------------|-----|-------|---------|------|-------|---------|-------|--------|---------|-------|
| Efficiency label at 35°C <sup>[1]</sup> |                  |     | A++   |         |      | A++   |         |       | A++    |         |       |
| Efficiency label at 55°C <sup>[1]</sup> |                  |     | A++   |         |      | A++   |         |       | A++    |         |       |
| SCOP at 35°C                            |                  |     | 4.27  |         |      | 4.33  |         |       | 4.28   |         |       |
| SCOP at 45°C                            |                  |     | 3.71  |         |      | 3.76  |         |       | 3.72   |         |       |
| SCOP at 55°C                            |                  |     | 3.48  |         |      | 3.52  |         |       | 3.49   |         |       |
| SCOP at 65°C                            |                  |     | 3.13  |         |      | 3.17  |         |       | 3.13   |         |       |
|                                         |                  |     | Min   | Nominal | Max  | Min   | Nominal | Max   | Min    | Nominal | Max   |
|                                         |                  |     | 19.8  | 46.70   | 53.8 | 32.9  | 73.9    | 86.0  | 41.1   | 92.5    | 108.0 |
| A7W35                                   | Heating capacity | kW  | 19.8  | 46.70   | 53.8 | 32.9  | 73.9    | 86.0  | 41.1   | 92.5    | 108.0 |
|                                         | Power input      | kW  | 3.98  | 10.3    | 13.1 | 6.57  | 16.20   | 20.60 | 8.31   | 20.50   | 26.10 |
|                                         | COP              |     | 4.97  | 4.49    | 4.11 | 5.01  | 4.56    | 4.17  | 4.95   | 4.51    | 4.14  |
|                                         | Water flow rate  | l/h | 3430  | 7966    | 9263 | 5681  | 12753   | 14830 | 7106   | 15951   | 18549 |
|                                         | Pressure drops   | kPa | 5     | 26      | 35   | 5     | 22      | 30    | 6      | 25      | 33    |
| A7W45                                   | Heating capacity | kW  | 20.1  | 46.8    | 54.4 | 33.3  | 74.8    | 87.0  | 41.6   | 93.6    | 109.0 |
|                                         | Power input      | kW  | 4.96  | 12.8    | 16.3 | 8.19  | 20.20   | 25.70 | 10.40  | 25.60   | 32.5  |
|                                         | COP              |     | 4.05  | 3.66    | 3.34 | 4.07  | 3.70    | 3.39  | 4.00   | 3.66    | 3.35  |
|                                         | Water flow rate  | l/h | 3483  | 8089    | 9406 | 5769  | 12949   | 15058 | 7216   | 16197   | 18835 |
|                                         | Pressure drops   | kPa | 5     | 27      | 36   | 5     | 23      | 30    | 6      | 26      | 34    |
| A7W55                                   | Heating capacity | kW  | 20.4  | 47.5    | 55.2 | 33.8  | 76.0    | 88.4  | 42.3   | 95.1    | 111.0 |
|                                         | Power input      | kW  | 5.96  | 15.3    | 19.5 | 9.86  | 24.20   | 30.7  | 12.50  | 30.70   | 38.9  |
|                                         | COP              |     | 3.42  | 3.10    | 2.83 | 3.43  | 3.14    | 2.88  | 3.38   | 3.10    | 2.85  |
|                                         | Water flow rate  | l/h | 2224  | 5165    | 6006 | 3684  | 8269    | 9615  | 4608   | 10343   | 12027 |
|                                         | Pressure drops   | kPa | 2     | 11      | 15   | 2     | 10      | 13    | 3      | 11      | 15    |
| A7W65                                   | Heating capacity | kW  | 20.9  | 48.6    | 56.5 | 34.6  | 77.7    | 90.4  | 43.3   | 97.3    | 113.0 |
|                                         | Power input      | kW  | 7.37  | 18.9    | 24.0 | 12.20 | 29.90   | 37.9  | 15.40  | 37.8    | 48.0  |
|                                         | COP              |     | 2.84  | 2.57    | 2.35 | 2.84  | 2.60    | 2.39  | 2.81   | 2.57    | 2.35  |
|                                         | Water flow rate  | l/h | 1828  | 4244    | 4936 | 3027  | 6795    | 7901  | 3786   | 8499    | 9883  |
|                                         | Pressure drops   | kPa | 2     | 8       | 10   | 2     | 7       | 9     | 2      | 8       | 10    |
| A2W35                                   | Heating capacity | kW  | 16.7  | 39.0    | 45.3 | 27.70 | 62.3    | 72.5  | 34.7   | 78.0    | 90.7  |
|                                         | Power input      | kW  | 3.99  | 10.3    | 13.1 | 6.59  | 16.30   | 20.60 | 8.33   | 20.60   | 26.10 |
|                                         | COP              |     | 4.19  | 3.79    | 3.46 | 4.20  | 3.82    | 3.52  | 4.17   | 3.79    | 3.48  |
|                                         | Water flow rate  | l/h | 2894  | 6721    | 7815 | 4793  | 10759   | 12511 | 5995   | 13458   | 15649 |
|                                         | Pressure drops   | kPa | 4     | 19      | 25   | 4     | 17      | 22    | 4      | 18      | 24    |
| A2W45                                   | Heating capacity | kW  | 17.0  | 39.6    | 46.1 | 28.20 | 63.3    | 73.7  | 35.2   | 79.2    | 92.2  |
|                                         | Power input      | kW  | 4.97  | 12.8    | 16.3 | 8.21  | 20.20   | 25.70 | 10.40  | 25.60   | 32.5  |
|                                         | COP              |     | 3.42  | 3.09    | 2.83 | 3.43  | 3.13    | 2.87  | 3.38   | 3.09    | 2.84  |
|                                         | Water flow rate  | l/h | 2951  | 6852    | 7968 | 4887  | 10970   | 12756 | 6113   | 13721   | 15956 |
|                                         | Pressure drops   | kPa | 4     | 20      | 26   | 4     | 17      | 22    | 4      | 19      | 25    |
| A2W55                                   | Heating capacity | kW  | 17.4  | 40.4    | 47.0 | 28.80 | 64.7    | 75.2  | 36.0   | 80.9    | 94.1  |
|                                         | Power input      | kW  | 5.98  | 15.4    | 19.5 | 9.88  | 24.30   | 30.8  | 12.50  | 30.70   | 39.0  |
|                                         | COP              |     | 2.91  | 2.62    | 2.41 | 2.91  | 2.66    | 2.44  | 2.88   | 2.64    | 2.41  |
|                                         | Water flow rate  | l/h | 1893  | 4396    | 5112 | 3135  | 7037    | 8183  | 3921   | 8802    | 10235 |
|                                         | Pressure drops   | kPa | 2     | 8       | 11   | 2     | 8       | 10    | 2      | 9       | 11    |
| A2W65                                   | Heating capacity | kW  | 17.9  | 41.6    | 48.3 | 29.60 | 66.5    | 77.4  | 37.1   | 83.2    | 96.8  |
|                                         | Power input      | kW  | 7.38  | 18.9    | 24.0 | 12.20 | 30.00   | 38.0  | 15.40  | 37.9    | 48.1  |
|                                         | COP              |     | 2.43  | 2.20    | 2.01 | 2.43  | 2.22    | 2.04  | 2.41   | 2.20    | 2.01  |
|                                         | Water flow rate  | l/h | 1564  | 3633    | 4224 | 2591  | 5815    | 6762  | 3240   | 7274    | 8458  |
|                                         | Pressure drops   | kPa | 1     | 6       | 8    | 1     | 5       | 7     | 1      | 6       | 8     |
| A-4W35                                  | Heating capacity | kW  | 15.2  | 35.4    | 41.1 | 25.20 | 56.6    | 65.8  | 31.5   | 70.7    | 82.3  |
|                                         | Power input      | kW  | 4.00  | 10.3    | 13.1 | 6.62  | 16.30   | 20.70 | 8.37   | 20.60   | 26.20 |
|                                         | COP              |     | 3.80  | 3.44    | 3.14 | 3.81  | 3.47    | 3.18  | 3.76   | 3.43    | 3.14  |
|                                         | Water flow rate  | l/h | 2627  | 6100    | 7093 | 4350  | 9765    | 11356 | 5442   | 12215   | 14204 |
|                                         | Pressure drops   | kPa | 3     | 16      | 21   | 3     | 14      | 18    | 4      | 15      | 20    |
| A-4W45                                  | Heating capacity | kW  | 15.5  | 36.1    | 42.0 | 25.70 | 57.7    | 67.2  | 32.1   | 72.2    | 84.0  |
|                                         | Power input      | kW  | 4.98  | 12.8    | 16.3 | 8.23  | 20.30   | 25.70 | 10.40  | 25.60   | 32.5  |
|                                         | COP              |     | 3.11  | 2.82    | 2.58 | 3.12  | 2.84    | 2.61  | 3.09   | 2.82    | 2.58  |
|                                         | Water flow rate  | l/h | 2690  | 6248    | 7265 | 4456  | 10002   | 11631 | 5573   | 12510   | 14548 |
|                                         | Pressure drops   | kPa | 3     | 16      | 22   | 3     | 14      | 19    | 4      | 16      | 21    |
| A-4W55                                  | Heating capacity | kW  | 15.9  | 37.0    | 43.1 | 26.40 | 59.2    | 68.9  | 33.0   | 74.1    | 86.2  |
|                                         | Power input      | kW  | 5.99  | 15.4    | 19.5 | 9.91  | 24.30   | 30.9  | 12.50  | 30.80   | 39.1  |
|                                         | COP              |     | 2.65  | 2.40    | 2.21 | 2.66  | 2.44    | 2.23  | 2.64   | 2.41    | 2.20  |
|                                         | Water flow rate  | l/h | 1734  | 4027    | 4683 | 2872  | 6447    | 7497  | 3593   | 8064    | 9377  |
|                                         | Pressure drops   | kPa | 2     | 7       | 10   | 1     | 7       | 9     | 2      | 7       | 10    |
| A-4W65                                  | Heating capacity | kW  | 16.5  | 38.3    | 44.5 | 27.30 | 61.3    | 71.3  | 34.1   | 76.6    | 89.1  |
|                                         | Power input      | kW  | 7.39  | 19.0    | 24.1 | 12.20 | 30.00   | 38.1  | 15.50  | 38.0    | 48.2  |
|                                         | COP              |     | 2.23  | 2.02    | 1.85 | 2.24  | 2.04    | 1.87  | 2.20   | 2.02    | 1.85  |
|                                         | Water flow rate  | l/h | 1441  | 3346    | 3891 | 2386  | 5357    | 6229  | 2985   | 6700    | 7791  |
|                                         | Pressure drops   | kPa | 1     | 5       | 7    | 1     | 5       | 6     | 1      | 5       | 7     |

Technical Specification performances based on Delta T of 5°C for W35,45,55 and Delta T of 10°C for W65.

Operating Range

The graph to the right shows the operating range area inside which the correct working of the unit is guaranteed.



Warranty

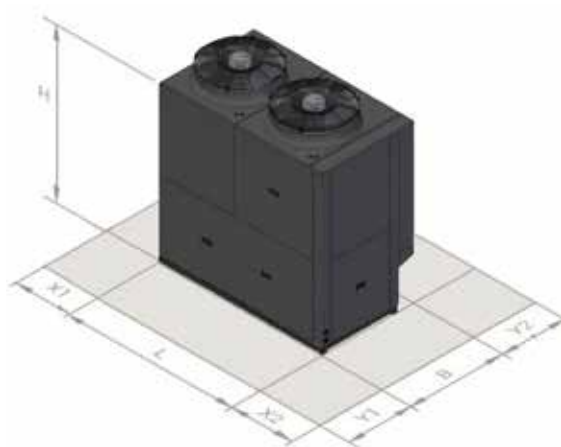
All Strebel heat pumps are offered with the standard 2-year warranty on the main units.



The date of the warranty will be considered to run from the time the heat pump is commissioned on site.

## Strebel S-ASX-LPi Technical Data

| Model                                    |        | LPI55                                                            | LPI75 | LPI100 |
|------------------------------------------|--------|------------------------------------------------------------------|-------|--------|
| Power Supply                             | V-p-Hz | 400-3-50                                                         |       |        |
| Compressor Type                          |        | High Temperature Scroll Inverter Brushless with Vapour Injection |       |        |
| No. compressors/No. refrigerant circuits | Qty    | 1,1                                                              | 2,1   | 2,1    |
| Refrigerant                              |        | R454B                                                            |       |        |
| Plant heat exchanger type                |        | Stainless steel brazed plates                                    |       |        |
| Integrated Modulating Pump               |        | Not standard supply (supplied loose)                             |       |        |
| Source heat exchanger                    |        | Finned coil copper - hydrophilic aluminium                       |       |        |
| Fans                                     |        | Axial EC                                                         |       |        |
| No. fans                                 | Qty    | 2                                                                | 3     | 4      |
| Hydraulic fittings                       |        | 1 1/2"M                                                          | 2"M   | 2"M    |
| Weight                                   | kg     | 475                                                              | 673   | 810    |
| Maximum power input                      | kW     | 26                                                               | 41    | 51     |
| Low Noise Acoustic Setting (as standard) |        |                                                                  |       |        |
| Sound power level                        | dB(A)  | 76                                                               | 77    | 78     |
| Sound pressure at 1 metre                | dB(A)  | 59                                                               | 60    | 61     |
| Sound pressure at 5 metres               | dB(A)  | 50                                                               | 50    | 52     |
| Sound pressure at 10 metres              | dB(A)  | 45                                                               | 45    | 47     |



## Unit Dimensions

|    |    | LPI55 | LPI75 | LPI100 |
|----|----|-------|-------|--------|
| L  | mm | 1730  | 2480  | 3230   |
| B  | mm | 930   | 930   | 930    |
| H  | mm | 1830  | 1830  | 1830   |
| X1 | mm | 1000  | 1000  | 1000   |
| X2 | mm | 1000  | 1000  | 1000   |
| Y1 | mm | 1000  | 1000  | 1000   |
| Y2 | mm | 1000  | 1000  | 1000   |

Unit Dimensions shown for maintenance purposes only.



## Customer Support

As with all Strebel products, the S-ASX-VP heat pump range is fully supported by our excellent customer service team and experienced technical engineers. Whether you are looking for product advice or for maintenance and repair, our service team are on hand to support you and can be contacted easily via telephone or online.

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