

S-ASX
Commercial High Temperature
Air-To-Water Heat Pump

30 – 100 kW

Air-to-Water Heat Pump

The S-ASX range comprises 10 models offering LTHW heating in 30,35,40,45,50 outputs in the single fan range and 60,70,80,90 and 100kW outputs in the multiple fan format. All the units are capable of generating up to 65°C flow temperature. Depending on model the units achieve COP between 4.58 and 4.72 at 7°C ambient air temperature and 35°C flow. The control system allows the units to be operated in cascade allowing up to 16 units.

The units are of monobloc design, with the 30-50kW model suitable for indoor or outdoor installation, and the multi fan 60-100kW units for outdoor installation only. Heat energy from the ambient air is obtained from the R410A 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.

All models are fitted as standard with a modulating pump allowing close matching of heat demand to heat delivery and come, as standard, with multiple cascade capability and ModBus connectivity. Electrical load soft start is also standard ensuring electrical load on start-up is minimal. Additionally the units are designed as standard with the lowest acoustic performance in mind with external 'wings' on the 30-50Kw units and integral dampers on the larger output multi-fan units.

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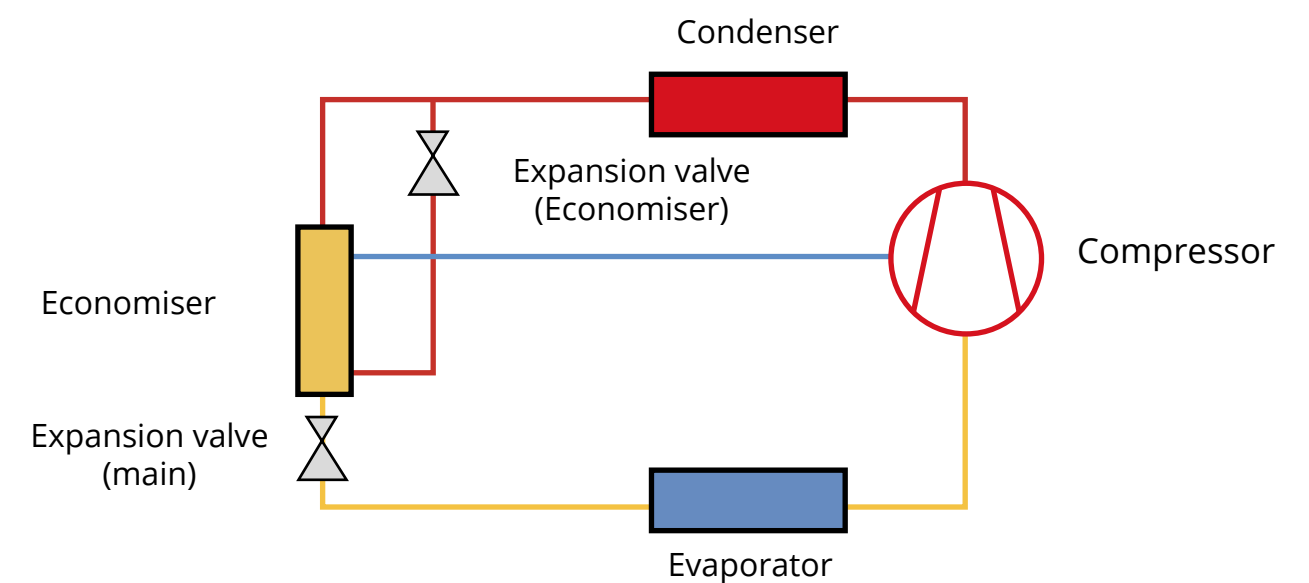
Trusted By Commercial Heating Engineers Since 1893

High Temperature Design

The S-ASX range of high temperature heat pumps has many applications being well suited both to new build applications with low flow temperatures as well as retrofit applications when operating at temperatures as high as 65°C.

Not all heat pumps have the ability to operate up to 65°C as the condensation pressure that occurs at this temperature is higher than the operating pressure of most compressors. As such, the S-ASX unit is supplied with a specialised high pressure resistant compressor. Additionally, in order to ensure that high temperature water can even be produced at very low ambient air temperature (down to -20°C) the compressor needs to be provided with a vapour and liquid refrigerant by means of an additional economised refrigeration circuit.

Enhanced Vapour Injection System



This vapour injection technology consists of cooling the refrigerant at an intermediate stage of the compression process to ensure a low discharge temperature from the compressor. The cooling is obtained by injecting 'cold' refrigerant, in a vapour or liquid state, into the compressor so that it mixes with the 'hot' refrigerant in the compression phase.

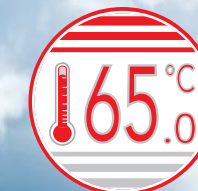
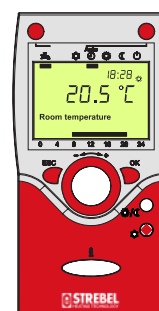
To obtain the 'cold' refrigerant to be injected inside the compressor, it is necessary to change the refrigerant circuit compared to a normal heat pump, by adding a refrigerant/refrigerant economiser exchanger powered through an expansion valve.

Aside from utilising high temperature water for retrofit space heating applications such as elevated flow temperatures can also be useful for DHW pre-heat source in twin-coiled calorifier systems. An additional heat generator, such as an ultra-low NOx gas boiler, will still be required to achieve legionella purge conditions for the storage of hot water.

Digital Controller

A sophisticated wired or wireless controller manages heating and hot water, using a three way diverter valve, by modulating the frequency of the compressor to maintain the flow temperature to the required set point.

The controller also will ensure that legionella is safely managed as well as integrating with other heat sources which may also be operating alongside the heat pump.



Strebel S-ASX Technical Specifications

Model		30	35	40	45	50	
Efficiency label at 35°C ⁽¹⁾		A+	A+	A+	A+	A+	
Efficiency label at 55°C ⁽¹⁾		A+	A+	A+	A+	A+	
SCOP at 35°C		3.64	3.64	3.65	3.62	3.62	
SCOP at 55°C		2.87	2.86	2.86	2.86	2.86	
A7W35	Heating capacity	kW	29.2	34.4	38.6	44.1	50.4
	Power input	kW	6.32	7.48	8.40	9.59	11.0
	COP		4.62	4.60	4.60	4.60	4.58
	Water flow rate	l/h	5039	5923	6650	7602	8676
	Pressure drops	kPa	21	28	35	31	40
A7W45	Heating capacity	kW	29.6	34.8	39.1	44.6	51.0
	Power input	kW	8.07	9.54	10.7	12.12	14.0
	COP		3.67	3.65	3.65	3.66	3.64
	Water flow rate	l/h	5127	6013	6761	7716	8811
	Pressure drops	kPa	22	29	36	32	41
A7W55	Heating capacity	kW	30.0	35.3	39.7	45.4	51.7
	Power input	kW	9.89	11.6	13.1	15.0	17.1
	COP		3.03	3.04	3.03	3.03	3.02
	Water flow rate	l/h	3269	3846	4315	4936	5623
	Pressure drops	kPa	9	12	15	14	17
A7W65	Heating capacity	kW	30.7	36.1	40.5	46.3	53.0
	Power input	kW	12.3	14.5	16.2	18.6	21.3
	COP		2.50	2.49	2.50	2.49	2.49
	Water flow rate	l/h	2686	3158	3543	4051	4628
	Pressure drops	kPa	6	9	11	9	12
A2W35	Heating capacity	kW	24.7	29.0	32.6	37.2	42.5
	Power input	kW	6.32	7.46	8.36	9.55	11.0
	COP		3.91	3.89	3.90	3.90	3.86
	Water flow rate	l/h	4260	5005	5628	6425	7325
	Pressure drops	kPa	15	21	26	22	29
A2W45	Heating capacity	kW	25.1	29.5	33.1	37.8	43.2
	Power input	kW	8.06	9.52	10.7	12.12	14.0
	COP		3.11	3.10	3.12	3.10	3.09
	Water flow rate	l/h	4345	5109	5735	6552	7473
	Pressure drops	kPa	16	21	27	23	30
A2W55	Heating capacity	kW	25.6	30.1	33.7	38.6	44.1
	Power input	kW	9.91	11.6	13.0	14.9	17.1
	COP		2.58	2.59	2.59	2.59	2.58
	Water flow rate	l/h	2789	3280	3672	4206	4794
	Pressure drops	kPa	7	9	11	10	13
A2W65	Heating capacity	kW	26.3	31.0	34.7	39.7	45.3
	Power input	kW	12.4	14.5	16.2	18.6	21.2
	COP		2.12	2.14	2.14	2.13	2.14
	Water flow rate	l/h	2301	2712	3036	3473	3963
	Pressure drops	kPa	5	6	8	7	9
A-4W35	Heating capacity	kW	22.4	26.5	29.7	33.9	38.8
	Power input	kW	6.34	7.47	8.37	9.57	11.0
	COP		3.53	3.55	3.55	3.54	3.53
	Water flow rate	l/h	3879	4572	5126	5853	6685
	Pressure drops	kPa	13	17	22	19	24
A-4W45	Heating capacity	kW	22.9	27.0	30.3	34.6	39.6
	Power input	kW	8.08	9.53	10.7	12.2	14.0
	COP		2.83	2.83	2.83	2.84	2.83
	Water flow rate	l/h	3980	4675	5249	5996	6847
	Pressure drops	kPa	13	18	23	20	26
A-4W55	Heating capacity	kW	23.5	27.6	31	35.4	40.4
	Power input	kW	9.93	11.7	13.0	14.9	17.1
	COP		2.37	2.36	2.38	2.38	2.36
	Water flow rate	l/h	2561	3007	3378	3857	4402
	Pressure drops	kPa	6	8	10	9	11
A-4W65	Heating capacity	kW	24.3	28.6	32.1	36.7	41.8
	Power input	kW	12.2	14.6	16.3	18.6	21.3
	COP		1.96	1.96	1.97	1.97	1.96
	Water flow rate	l/h	2126	2502	2808	3211	3657
	Pressure drops	kPa	4	6	7	6	8

A7W65 = source : air in 7°C d.b. 6°C w.b. / plant : water in 55°C out 65°C
A7W55 = source : air in 7°C d.b. 6°C w.b. / plant : water in 47°C out 55°C
A7W45 = source : air in 7°C d.b. 6°C w.b. / plant : water in 40°C out 45°C
A7W35 = source : air in 7°C d.b. 6°C w.b. / plant : water in 30°C out 35°C
A2W65 = source : air in 2°C d.b. 1 °C w.b. / plant : water 55°C out 65°C
A2W55 = source : air in 2°C d.b. 1 °C w.b. / plant : water 47°C out 55°C

A2W45 = source : air in 2°C d.b. 1 °C w.b. / plant water 40°C out 45°C
A2W35 = source : air in 2°C d.b. 1 °C w.b. / plant water 30°C out 35°C
A-4W65 = source : air in -4°C d.b. -5°C w.b. / plant : water in 55°C out 65°C
A-4W55 = source : air in -4°C d.b. -5°C w.b. / plant : water in 47°C out 55°C
A-4W45 = source : air in -4°C d.b. -5°C w.b. / plant : water in 40°C out 45°C
A-4W35 = source : air in -4°C d.b. -5°C w.b. / plant : water in 30°C out 35°C

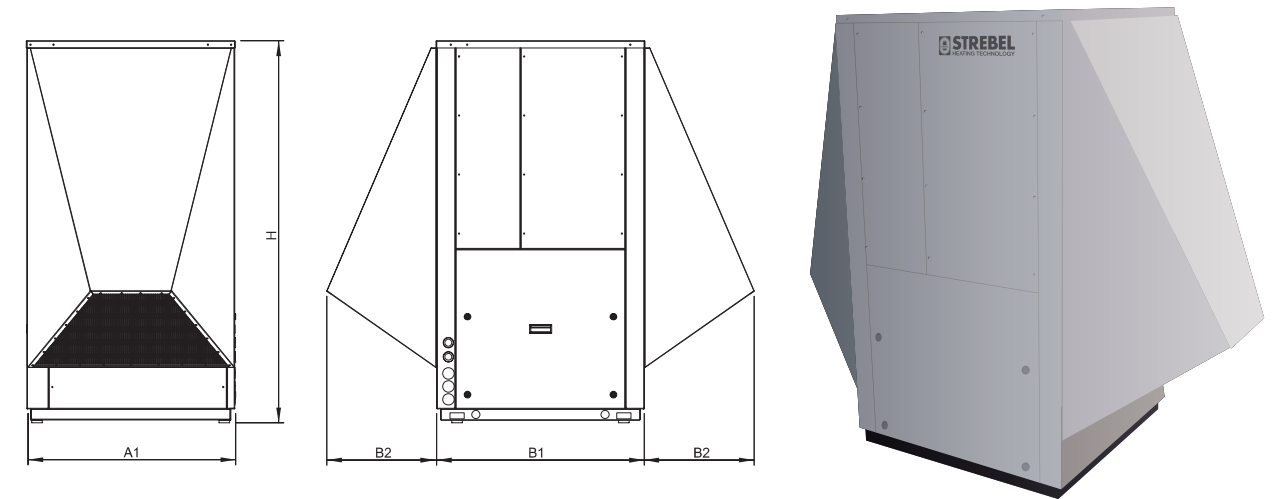
Strebel S-ASX 30-50 Technical Data

Model		30	35	40	45	50
Power supply	V-p-Hz	400 - 3N - 50				
Compressor type	Scroll with Vapour Injection (EVI)					
No. compressors/No. refrigerant circuits	Qty	1/1				
Plant heat exchanger type	Stainless steel brazed plates					
Source heat exchanger	Finned Coil					
Fans	Plug Fan					
No. fans	Qty	1				
Hydraulic fittings	1" 1/4 M					
Heat recovery	1" M					
Weight	kg	430	432	435	511	513
Maximum power input	kW	13.9	15.5	17.1	21.6	24.5
Low Noise Acoustic Setting						
Sound power level	dB(A)	72	73	73	74	74
Sound pressure at 1 metre	dB(A)	56	57	57	58	58
Sound pressure at 5 metres	dB(A)	46	47	47	48	48
Sound pressure at 10 metres	dB(A)	41	42	42	43	43
Dimensions						
		30 / 35 / 40			45 / 50	
A1	mm	1180			1480	
B1	mm	880			880	
B2	mm	465			465	
H	mm	1620			1620	

The acoustic data performances are referred to units operating in heating mode at nominal conditions A7W35.

The sound power level is measured in accordance to ISO 3744 standard.

The sound pressure level is calculated according to ISO 3744 and is referred to a distance of 1/5/10 metres from the external surface of the unit.



The values are referred to units without options and accessories.

COP (Coefficient Of Performance) = ratio of the total heating capacity to the effective power input of the unit
All COP data in accordance with EN 14511 ⁽¹⁾ In accordance with European regulation 811/2013

The company reserves the right to change the specifications and dimensions without prior notice. E.&O.E.

Strebel S-ASX Technical Specifications

Model		60	70	80	90	100	
	Efficiency label at 35°C ⁽¹⁾	A++	A++	A++	A++	A++	
	Efficiency label at 55°C ⁽¹⁾	A++	A++	A++	A++	A++	
	SCOP at 35°C	4.25	4.21	4.24	4.23	4.26	
	SCOP at 55°C	3.56	3.55	3.57	3.56	3.56	
A7W35	Heating capacity	kW	57.5	67.8	75.7	85.4	99.5
	Power input	kW	12.2	14.4	16.1	18.1	21.1
	COP		4.71	4.71	4.70	4.72	4.72
	Water flow rate	l/h	9923	11689	13058	14737	17179
	Pressure drops	kPa	22	24	24	22	21
A7W45	Heating capacity	kW	58.2	68.6	76.6	86.4	101
	Power input	kW	15.6	18.4	20.5	23.1	27.0
	COP		3.73	3.73	3.74	3.74	3.74
	Water flow rate	l/h	10080	11870	13260	14963	17449
	Pressure drops	kPa	22	24	25	22	22
A7W55	Heating capacity	kW	59.2	69.7	77.8	87.8	102
	Power input	kW	19.1	22.5	25.1	28.3	33.1
	COP		3.10	3.10	3.10	3.10	3.08
	Water flow rate	l/h	6440	7584	8466	9556	11147
	Pressure drops	kPa	10	11	11	10	10
A7W65	Heating capacity	kW	60.5	71.2	79.5	89.8	105
	Power input	kW	23.8	27.9	31.3	35.3	41.3
	COP		2.54	2.55	2.54	2.54	2.54
	Water flow rate	l/h	5293	6229	6955	7856	9160
	Pressure drops	kPa	7	8	8	7	7
A2W35	Heating capacity	kW	48.5	57.3	63.9	72.1	84.0
	Power input	kW	12.2	14.4	16.1	18.1	21.1
	COP		3.98	3.98	3.97	3.98	3.98
	Water flow rate	l/h	8382	9888	11031	12451	14512
	Pressure drops	kPa	16	18	18	16	16
A2W45	Heating capacity	kW	49.3	58.2	64.9	73.3	85.4
	Power input	kW	15.5	18.3	20.5	23.1	27.0
	COP		3.18	3.18	3.17	3.17	3.16
	Water flow rate	l/h	8551	10080	11244	12704	14807
	Pressure drops	kPa	17	18	18	16	16
A2W55	Heating capacity	kW	50.3	59.3	66.3	74.9	87.3
	Power input	kW	19.1	22.4	25.2	28.4	33.2
	COP		2.63	2.65	2.63	2.64	2.63
	Water flow rate	l/h	5481	6462	7213	8150	9502
	Pressure drops	kPa	7	8	8	7	7
A2W65	Heating capacity	kW	51.8	61.0	68.2	77.0	89.7
	Power input	kW	23.8	28.0	31.4	35.3	41.3
	COP		2.18	2.18	2.17	2.18	2.17
	Water flow rate	l/h	4532	5337	5967	6736	7847
	Pressure drops	kPa	5	6	6	5	5
A-4W35	Heating capacity	kW	44.2	52.1	58.1	65.6	76.6
	Power input	kW	12.2	14.4	16.1	18.1	21.2
	COP		3.62	3.62	3.61	3.62	3.61
	Water flow rate	l/h	7637	9005	10044	11343	13231
	Pressure drops	kPa	14	15	15	13	13
A-4W45	Heating capacity	kW	45.1	53.1	59.3	66.9	78.1
	Power input	kW	15.6	18.3	20.5	23.1	27.1
	COP		2.89	2.90	2.89	2.90	2.88
	Water flow rate	l/h	7821	9211	10288	11609	13538
	Pressure drops	kPa	14	16	16	14	14
A-4W55	Heating capacity	kW	46.3	54.5	60.9	68.7	80.2
	Power input	kW	19.1	22.5	25.2	28.4	33.3
	COP		2.42	2.42	2.42	2.42	2.41
	Water flow rate	l/h	5045	5939	6636	7486	8728
	Pressure drops	kPa	6	7	7	6	6
A-4W65	Heating capacity	kW	47.8	56.4	63.0	71.1	82.8
	Power input	kW	23.9	28.1	31.4	35.4	41.4
	COP		2.00	2.01	2.01	2.01	2.00
	Water flow rate	l/h	4182	4934	5512	6220	7244
	Pressure drops	kPa	5	5	5	5	5

A7W65 = source : air in 7°C d.b. 6°C w.b. / plant : water in 55°C out 65°C
A7W55 = source : air in 7°C d.b. 6°C w.b. / plant : water in 47°C out 55°C
A7W45 = source : air in 7°C d.b. 6°C w.b. / plant : water in 40°C out 45°C
A7W35 = source : air in 7°C d.b. 6°C w.b. / plant : water in 30°C out 35°C
A2W65 = source : air in 2°C d.b. 1°C w.b. / plant : water 55°C out 65°C
A2W55 = source : air in 2°C d.b. 1°C w.b. / plant : water 47°C out 55°C

A2W45 = source : air in 2°C d.b. 1°C w.b. / plant water 40°C out 45°C
A2W35 = source : air in 2°C d.b. 1°C w.b. / plant water 30°C out 35°C
A-4W65 = source : air in -4°C d.b. -5°C w.b. / plant : water in 55°C out 65°C
A-4W55 = source : air in -4°C d.b. -5°C w.b. / plant : water in 47°C out 55°C
A-4W45 = source : air in -4°C d.b. -5°C w.b. / plant : water in 40°C out 45°C
A-4W35 = source : air in -4°C d.b. -5°C w.b. / plant : water in 30°C out 35°C

Strebel S-ASX 60-100 Technical Data

Model		60	70	80	90	100
Power supply	V-p-Hz	400 - 3 - 50				
Compressor type		Scroll with Vapour Injection (EVI)				
No. compressors/No. refrigerant circuits	Qty	2/1				
Plant heat exchanger type		Stainless steel brazed plates				
Source heat exchanger		Finned Coil				
Fans		Axial				
No. fans	Qty	2	3			4
Hydraulic fittings		2" M				
Heat recovery (VD)		1" 1/4 M				
Weight	kg	801	928	938	1063	1078
Maximum power input	kW	27.8	31.6	34.8	40.0	45.8
Low Noise Acoustic Setting						
Sound power level	dB(A)	76	77	77	78	78
Sound pressure at 1 metre	dB(A)	58	59	59	59	58
Sound pressure at 5 metres	dB(A)	49	50	50	51	51
Sound pressure at 10 metres	dB(A)	44	45	45	46	46
Dimensions						
		60	70/80	90/100		
A	mm	1130	1130	1130		
B	mm	1710	2430	3130		
H	mm	1980	1980	1980		

The acoustic data performances are referred to units operating in heating mode at nominal conditions A7W35.

The sound power level is measured in accordance to ISO 3744 standard.

The sound pressure level is calculated according to ISO 3744 and is referred to a distance of 1/5/10 metres form the external surface of the unit.



The values are referred to units without options and accessories.

COP (Coefficient Of Performance) = ratio of the total heating capacity to the effective power input of the unit
All COP data in accordance with EN 14511 ⁽¹⁾ in accordance with European regulation 811/2013

The company reserves the right to change the specifications and dimensions without prior notice. E.&O.E.

Seven Reasons to Use Strebel

We are proud of our history and the disciplines instilled in the company by our founder Josef Strebel.

It's the Strebel way - uncompromising product quality and customer care.

S AFETY

At the heart of everything we do

T RUSTED

By engineers since 1893

R OBUST

High quality components

E ASE

Of installation

B EST

Practice throughout design, manufacturing and installation

E NGINEERED

For long trouble free product life

L OGICAL

Sophisticated control software

Services and Warranty

Installation, Service and Spares

All heat pumps should be installed in accordance with the relevant installation instructions by experienced engineers. Upon request Strebel Service engineers can verify heat pump installation at time of commissioning but will not carry out wiring, or make changes to incorrect wiring, between heat pump and storage vessel as this is the responsibility of the installer.

Our Service Department offers a range of servicing options that can be tailored to meet individual requirements. Please contact us for more information.

Availability of Spares to the right specification at the right time is essential to the successful operation of any plant room item. At our central Warehouse facility we stock a wide range of commonly used parts which can be dispatched directly to site for the following day assuming the order is received the morning before.



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.

2 YEAR
WARRANTY



Customer Support

As with all Strebel products, the S-ASX 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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