

# TECHNICAL DATA SHEET



**ATTENTION:**  
FILL THE UNIT WITH  
GLYCOL SOLUTION  
25% IN CASE OF  
WINTER STORAGE

# VSE

CONDENSERLESS WATER  
CHILLER WITH SCROLL  
OR RECIPROCATING  
COMPRESSORS FOR  
INDOOR INSTALLATION



## VSE Range 19 - 611 kW

### VSE

Condenserless water chiller with scroll or reciprocating compressors to be connected with a remote condenser (RCE) for indoor installation



Scroll compressors (R410A)  
Reciprocating compressors (R290 or HFO1234-ze)  
Dry expansion evaporator



## General Description

The units of the VSE series are assembled on a strong self-supporting metal screwed and welded structure, painted with epoxy powder with anti-rust coating for outdoor installation.

All units are supplied completely wired and ready to be connected to the user's plant. Prior to delivery every machine is submitted to a performance test, with intervention tests of all the safety systems and components installed.

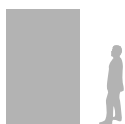
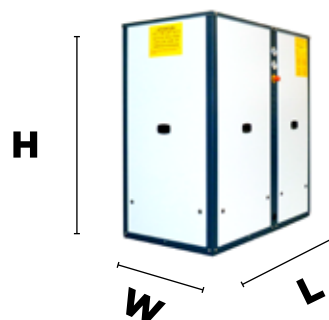
## Typical units dimensions

Length from 1.450 to 4.110 mm

Width: from 800 to 1.400 mm

Height: from 1.560 to 2.300 mm

Operating Weight: from 486 kg to 3.863 kg



Length from from 1.450 to 4.110 mm.

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Energymiser		VSE 1090-01	VSE 1105-01	VSE 1120-01	VSE 1140-01	VSE 1161-01	VSE 1184-01
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
Total cooling capacity	kW	<b>19</b>	<b>22.87</b>	<b>25.54</b>	<b>30.22</b>	<b>33.22</b>	<b>38.25</b>
Nominal power input	kW	<b>6.4</b>	<b>7.5</b>	<b>8.4</b>	<b>9.6</b>	<b>10.8</b>	<b>12.2</b>
E.E.R.	Coef.	<b>2.97</b>	<b>3.05</b>	<b>3.04</b>	<b>3.15</b>	<b>3.08</b>	<b>3.14</b>
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	<b>41</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>44</b>	<b>44</b>
Distance	m	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressors number	n°	1	1	1	1	1	1
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	<b>6.4</b>	<b>7.5</b>	<b>8.4</b>	<b>9.6</b>	<b>10.8</b>	<b>12.2</b>
Total running current	A	<b>11.9</b>	<b>14.7</b>	<b>15.6</b>	<b>17.7</b>	<b>18.9</b>	<b>22.6</b>
Total max current	A	<b>19</b>	<b>22</b>	<b>24</b>	<b>28</b>	<b>31</b>	<b>36</b>
Total starting current	A	<b>98</b>	<b>142</b>	<b>142</b>	<b>147</b>	<b>158</b>	<b>197</b>
<b>DIMENSIONS</b>							
Length with cabinet	mm	1450	1450	1450	1450	1450	1450
Width	mm	800	800	800	800	800	800
Height	mm	1560	1560	1560	1560	1560	1560
Shipping weight	kg	480	490	490	490	490	500
Operating weight	kg	486	496	496	496	496	506
(*1) BPHE: Brazed Plate Heat Exchanger							

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 1182-01	VSE 1195-01	VSE 1210-01	VSE 1212-01	VSE 1230-01	VSE 1242-01	VSE 1240-01	VSE 1260-01	VSE 1281-01	VSE 1282-01	VSE 1301-01
<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
<b>38</b>	<b>41.87</b>	<b>44.54</b>	<b>45.73</b>	<b>48.64</b>	<b>51.07</b>	<b>51.17</b>	<b>55.17</b>	<b>58.76</b>	<b>59.27</b>	<b>62.86</b>
12.7	13.9	14.8	15	16	16.8	16.4	18	19.2	19.3	20.4
2.99	3.01	3.01	3.05	3.04	3.04	3.12	3.07	3.06	3.07	3.08
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
44	46	46	46	46	46	52	46	47	46	47
10	10	10	10	10	10	10	10	10	10	10
Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
2	2	2	2	2	2	1	2	2	2	2
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
-	-	-	-	-	-	-	-	-	-	-
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
12.7	13.9	14.8	15	16	16.8	16.4	18	19.2	19.3	20.4
23.8	26.5	27.5	29.3	29.6	31.2	28.2	33.3	34.5	35.4	36.6
38	41	43	44	47	48	49	52	55	56	59
72.8	97.5	98.5	100.3	103.1	102.2	215	106.8	113.5	108.9	115.6
1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
800	800	800	800	800	800	800	800	800	800	800
1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560
550	560	560	570	560	570	550	570	580	580	580
556	566	566	576	566	576	556	576	588	588	588

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Energymiser		VSE 1304-01	VSE 1322-01	VSE 1324-01	VSE 1300-01	VSE 1345-01	VSE 1360-01
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
Total cooling capacity	kW	<b>63.79</b>	<b>66.45</b>	<b>67.88</b>	<b>64.36</b>	<b>71.47</b>	<b>75.71</b>
Nominal power input	kW	20.6	21.5	21.8	20.7	22.9	24.7
E.E.R.	Coef.	3.1	3.09	3.11	3.11	3.12	3.07
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	47	47	47	52	47	53
Distance	m	10	10	10	10	10	10
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressors number	n°	2	2	2	1	2	2
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	20.6	21.5	21.8	20.7	22.9	24.7
Total running current	A	38.2	37.7	40.3	35.3	41.4	43.4
Total max current	A	60	62	64	58	67	68
Total starting current	A	136.7	116.7	138.8	260	139.9	128.4
<b>DIMENSIONS</b>							
Length with cabinet	mm	1450	1450	1450	1450	1450	1450
Width	mm	800	800	800	800	800	800
Height	mm	1560	1560	1560	1560	1560	1560
Shipping weight	kg	580	580	580	610	590	690
Operating weight	kg	588	588	588	618	598	698
(*1) BPHE: Brazed Plate Heat Exchanger							

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 1368-01	VSE 1380-01	VSE 1420-01	VSE 1485-01	VSE 1480-01	VSE 1482-01	VSE 1550-01	VSE 1540-01	VSE 1600-01	VSE 1620-01	VSE 1680-01
<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
<b>76.5</b>	<b>77.17</b>	<b>89.03</b>	<b>99.5</b>	<b>102.21</b>	<b>102.34</b>	<b>113.56</b>	<b>115.53</b>	<b>128.71</b>	<b>128.34</b>	<b>141.52</b>
24.4	25.1	28.8	31.9	33	32.8	37.1	37.1	41.3	41.5	45.8
3.14	3.07	3.09	3.12	3.1	3.12	3.06	3.11	3.12	3.09	3.09
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
49	53	55	59	55	55	55	55	56	56	56
10	10	10	10	10	10	10	10	10	10	10
Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
2	1	2	1	2	2	3	2	2	2	2
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
-	-	-	-	-	-	-	-	-	-	-
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
24.4	25.1	28.8	31.9	33	32.8	37.1	37.1	41.3	41.5	45.8
45.1	44.2	49.9	54.7	57	56.3	65.1	63.5	70.6	72.3	79.5
72	72	83	89	92	98	102	107	116	121	130
143.6	320	157.4	413	187	163.8	186.9	193.5	200.6	232.3	239.5
1450	1450	1650	1650	1650	1650	2510	2110	2110	2110	2110
800	800	800	800	800	800	1000	800	800	800	800
1560	1560	1800	1800	1800	1800	2000	1900	1900	1900	1900
590	620	770	710	820	770	1230	920	1000	950	1010
598	629	779	719	829	779	1239	929	1013	963	1023

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

<b>Energymiser</b>		<b>VSE 1720-01</b>	<b>VSE 1760-01</b>	<b>VSE 1865-01</b>	<b>VSE 1970-01</b>	<b>VSE 1900-01</b>	<b>VSE 1114-01</b>
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
Total cooling capacity	kW	<b>153.52</b>	<b>175.14</b>	<b>200.23</b>	<b>225.32</b>	<b>219.68</b>	<b>262.71</b>
Nominal power input	kW	49.3	41.1	46.7	52.3	51	61.7
E.E.R.	Coef.	3.11	4.26	4.29	4.31	4.31	4.26
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	57	57	59	59	57	58
Distance	m	10	10	10	10	10	10
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressors number	n°	3	2	2	2	3	3
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	49.3	41.1	46.7	52.3	51	61.7
Total running current	A	84.5	77	85.4	93.8	91.5	115.4
Total max current	A	147	144	161	178	174	216
Total starting current	A	240.7	237	291.9	300.3	269.7	337.5
<b>DIMENSIONS</b>							
Length with cabinet	mm	2510	2110	2110	2110	2510	2510
Width	mm	1000	800	800	800	1000	1000
Height	mm	2000	1900	1900	1900	2000	2000
Shipping weight	kg	1260	1010	1030	1050	1420	1440
Operating weight	kg	1273	1023	1043	1063	1435	1455
(*1) BPHE: Brazed Plate Heat Exchanger							



Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 1145-01	VSE 2182-01	VSE 2195-01	VSE 2210-01	VSE 2212-01	VSE 2230-01	VSE 2242-01	VSE 2260-01	VSE 2281-01	VSE 2282-01	VSE 2301-01
<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
<b>337.98</b>	<b>86.6</b>	<b>94.72</b>	<b>101.48</b>	<b>102.82</b>	<b>110.32</b>	<b>116.36</b>	<b>125.2</b>	<b>133.8</b>	<b>134.04</b>	<b>142.66</b>
78.5	21	23	24.2	24.8	26.2	27.4	29.6	31.2	31.6	33.2
4.31	4.12	4.12	4.19	4.15	4.21	4.25	4.23	4.29	4.24	4.3
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
64	48	50	50	50	50	50	50	51	50	51
10	10	10	10	10	10	10	10	10	10	10
Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
3	4	4	4	4	4	4	4	4	4	4
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
-	-	-	-	-	-	-	-	-	-	-
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
78.5	21	23	24.2	24.8	26.2	27.4	29.6	31.2	31.6	33.2
140.7	42.2	47.6	48.8	52.8	52.4	55.4	59	60.4	62.4	63.8
267	76	82	86	88	94	96	104	110	112	118
419.1	161.7	190.2	194.1	207.1	207.1	215.6	228.5	235.8	239.6	246.9
2510	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
1510	1240	1250	1250	1270	1260	1270	1270	1280	1280	1280
1527	1251	1261	1261	1281	1271	1281	1281	1291	1291	1291

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

<b>Energymiser</b>		VSE 2304-01	VSE 2322-01	VSE 2324-01	VSE 2345-01	VSE 2360-01	VSE 2368-01
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
Total cooling capacity	kW	<b>144.88</b>	<b>151.26</b>	<b>153.72</b>	<b>162.32</b>	<b>171.9</b>	<b>173.4</b>
Nominal power input	kW	34	34.8	36	37.6	40	40.4
E.E.R.	Coef.	4.26	4.35	4.27	4.32	4.3	4.29
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	51	51	51	51	57	53
Distance	m	10	10	10	10	10	10
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressors number	n°	4	4	4	4	4	4
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	34	34.8	36	37.6	40	40.4
Total running current	A	68	65.2	71.4	72.8	75.2	80.4
Total max current	A	120	124	128	134	136	144
Total starting current	A	270.3	251.4	281.3	285.9	286.9	310.6
<b>DIMENSIONS</b>							
Length with cabinet	mm	2510	2510	2510	2510	2510	2510
Width	mm	1000	1000	1000	1000	1000	1000
Height	mm	2000	2000	2000	2000	2000	2000
Shipping weight	kg	1280	1290	1290	1290	1500	1300
Operating weight	kg	1291	1301	1301	1301	1511	1311
(*1) BPHE: Brazed Plate Heat Exchanger							

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 2420-01	VSE 2480-01	VSE 2482-01	VSE 2550-01	VSE 2540-01	VSE 2600-01	VSE 2620-01	VSE 2680-01	VSE 2720-01	VSE 2760-01	VSE 2865-01
<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>
<b>202.2</b>	<b>232.4</b>	<b>232.52</b>	<b>257.84</b>	<b>262.7</b>	<b>292.9</b>	<b>291.4</b>	<b>321.6</b>	<b>348.78</b>	<b>350.28</b>	<b>400.46</b>
46.6	54	53	60	60.6	68	67.6	75.2	79.6	82.2	93.4
4.34	4.3	4.39	4.3	4.33	4.31	4.31	4.28	4.38	4.26	4.29
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
59	59	59	59	59	60	60	60	61	61	63
10	10	10	10	10	10	10	10	10	10	10
Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
4	4	4	6	4	4	4	4	6	4	4
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
-	-	-	-	-	-	-	-	-	-	-
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
46.6	54	53	60	60.6	68	67.6	75.2	79.6	82.2	93.4
86	98.6	96.8	112.8	109.4	122	125.4	138	145.2	154	170.8
166	184	196	204	214	232	242	260	294	288	322
333.3	385.5	368.4	611.1	420.6	461.5	487.6	528.5	786	580.5	658.4
3010	3010	3010	4110	3010	3010	3010	3010	4110	3010	3010
1200	1200	1200	1400	1200	1200	1200	1200	1400	1200	1200
2200	2200	2200	2300	2200	2200	2200	2200	2300	2200	2200
1880	1990	1880	2810	1990	2120	2040	2140	2850	2150	2190
1894	2004	1894	2824	2004	2140	2060	2160	2870	2170	2210

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Energymiser		VSE 2900-01	VSE 2970-01	VSE 2114-01	VSE 2145-01		
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R410A</b>	<b>R410A</b>	<b>R410A</b>	<b>R410A</b>		
Total cooling capacity	kW	<b>439.36</b>	<b>397.98</b>	<b>463</b>	<b>596.98</b>		
Nominal power input	kW	102	127.4	150.6	191.2		
E.E.R.	Coef.	4.31	3.12	3.07	3.12		
Energy class		-	-	-	-		
E.S.E.E.R.	Coef.	-	-	-	-		
Noise Pressure Level	dB(A)	61	63	62	68		
Distance	m	10	10	10	10		
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Scroll	Scroll	Scroll	Scroll		
Compressors number	n°	6	4	6	6		
Inlet water temperature	°C	12	12	12	12		
Outlet water temperature	°C	6	6	6	6		
Ambient temperature	Type	-	-	-	-		
Evaporator type (*1)	Type	BPHE	BPHE	S&T	S&T		
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50		
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50		
Total power input	kW	102	127.4	150.6	191.2		
Total running current	A	183	218.6	265	328		
Total max current	A	348	356	432	534		
Total starting current	A	988.8	813.7	1422.5	1763.5		
<b>DIMENSIONS</b>							
Length with cabinet	mm	4110	3010	4110	4110		
Width	mm	1400	1200	1400	1400		
Height	mm	2300	2200	2300	2300		
Shipping weight	kg	3160	2230	3570	3750		
Operating weight	kg	3180	2250	3703	3863		
(*1) BPHE: Brazed Plate Heat Exchanger							



Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Greenmiser		VSE 1G7-290	VSE 1S7-290	VSE 1S12-290	VSE 1S15-290	VSE 1S20-290	VSE 1V20-290
<b>CHILLER PERFORMANCE</b>							
Refrigerant		R290	R290	R290	R290	R290	R290
Total cooling capacity	kW	19.07	23.16	28.37	34.55	39.2	41.33
Nominal power input	kW	6.3	7.1	9.1	11	12.4	12.8
E.E.R.	Coef.	3.03	3.26	3.12	3.14	3.16	3.23
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	41	44	45	45	47	48
Distance	m	10	10	10	10	10	10
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
Compressors number	n°	1	1	1	1	1	1
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	6.3	7.1	9.1	11	12.4	12.8
Total running current	A	11.8	13.4	17	20.6	23.3	24
Total max current	A	17.4	18.9	21.6	28.7	35.9	30.2
Total starting current	A	87.3	47	59.1	74.8	87.5	106.6
<b>DIMENSIONS</b>							
Length with cabinet	mm	1450	1450	1450	1450	1450	1650
Width	mm	800	800	800	800	800	800
Height	mm	1560	1560	1560	1560	1560	1800
Shipping weight	kg	500	540	550	550	560	680
Operating weight	kg	506	546	556	556	566	686
(*1) BPHE: Brazed Plate Heat Exchanger							

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 1V30-290	VSE 1V32-290	VSE 1Z35-290	VSE 1Z40-290	VSE 1W40-290	VSE 1Z50-290	VSE 1W50-290	VSE 1W60-290	VSE 1W70-290	VSE 1W75-290	VSE 1W80-290
<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>
<b>58.08</b>	<b>61.25</b>	<b>69.62</b>	<b>82.79</b>	<b>90.74</b>	<b>97.15</b>	<b>105.91</b>	<b>119.05</b>	<b>129.57</b>	<b>145.02</b>	<b>152.76</b>
17.5	19.5	21.6	26.2	29.1	31.2	36.1	40.9	44.3	47.9	50.1
3.32	3.14	3.22	3.16	3.12	3.11	2.93	2.91	2.92	3.03	3.05
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
51	51	51	52	53	52	55	58	58	60	61
10	10	10	10	10	10	10	10	10	10	10
Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
1	1	1	1	1	1	1	1	1	1	1
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
-	-	-	-	-	-	-	-	-	-	-
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
17.5	19.5	21.6	26.2	29.1	31.2	36.1	40.9	44.3	47.9	50.1
32.7	36.5	40.5	49.1	54.5	58.5	67.7	76.7	83.1	89.7	93.9
44	42.8	53.9	61	72.5	74.6	89.3	99.8	103.3	107.9	111.2
132.6	144.5	144.5	159.2	215	188.8	258	326	390	417	417
1650	1650	2110	2110	2110	2110	2110	2110	2110	2110	2110
800	800	800	800	800	800	800	800	800	800	800
1800	1800	1900	1900	1900	1900	1900	1900	1900	1900	1900
690	700	840	860	920	860	930	950	970	970	970
696	706	846	866	926	866	936	956	978	978	978

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Greenmiser		VSE 2Q7-290	VSE 2S7-290	VSE 2S12-290	VSE 2S15-290	VSE 2S20-290	VSE 2V20-290
<b>CHILLER PERFORMANCE</b>							
Refrigerant		R290	R290	R290	R290	R290	R290
Total cooling capacity	kW	38.14	46.32	56.74	69.1	78.4	82.66
Nominal power input	kW	12.6	14.2	18.2	22	24.8	25.6
E.E.R.	Coef.	3.03	3.26	3.12	3.14	3.16	3.23
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	45	48	49	49	51	52
Distance	m	10	10	10	10	10	10
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
Compressors number	n°	2	2	2	2	2	2
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	12.6	14.2	18.2	22	24.8	25.6
Total running current	A	23.6	26.8	34	41.2	46.6	48
Total max current	A	34.8	37.8	43.2	57.4	71.8	60.4
Total starting current	A	79.1	63.7	80.6	99.2	113.7	125.3
<b>DIMENSIONS</b>							
Length with cabinet	mm	2110	2110	2110	2110	2110	2510
Width	mm	800	800	800	800	800	1000
Height	mm	1900	1900	1900	1900	1900	2000
Shipping weight	kg	960	1040	1050	1060	1080	1400
Operating weight	kg	976	1056	1066	1076	1096	1416
(*1) BPHE: Brazed Plate Heat Exchanger							



Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 2V30-290	VSE 2V32-290	VSE 2Z35-290	VSE 2Z40-290	VSE 2W40-290	VSE 2Z50-290	VSE 2W50-290	VSE 2W60-290	VSE 2W70-290	VSE 2W75-290	VSE 2W80-290
<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>
<b>116.16</b>	<b>122.5</b>	<b>139.24</b>	<b>165.58</b>	<b>181.48</b>	<b>194.3</b>	<b>211.82</b>	<b>238.1</b>	<b>259.14</b>	<b>290.04</b>	<b>305.52</b>
35	39	43.2	52.4	58.2	62.4	72.2	81.8	88.6	95.8	100.2
3.32	3.14	3.22	3.16	3.12	3.11	2.93	2.91	2.92	3.03	3.05
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
55	55	55	56	57	56	59	62	62	64	65
10	10	10	10	10	10	10	10	10	10	10
Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
2	2	2	2	2	2	2	2	2	2	2
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
-	-	-	-	-	-	-	-	-	-	-
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
35	39	43.2	52.4	58.2	62.4	72.2	81.8	88.6	95.8	100.2
65.4	73	81	98.2	109	117	135.4	153.4	166.2	179.4	187.8
88	85.6	107.8	122	145	149.2	178.6	199.6	206.6	215.8	222.4
164.4	181.8	193.8	226.9	271	269.9	332.1	393.1	444.3	477.6	490.2
2510	2510	2510	2510	2810	2510	2810	2810	2810	2810	2810
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
1430	1440	1530	1570	1770	1580	1790	1820	1850	1890	1890
1446	1456	1548	1588	1788	1598	1808	1838	1868	1917	1917

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Greenmiser		VSE 4V20-290	VSE 4V30-290	VSE 4V32-290	VSE 4Z35-290	VSE 4Z40-290	VSE 4W40-290
<b>CHILLER PERFORMANCE</b>							
Refrigerant		R290	R290	R290	R290	R290	R290
Total cooling capacity	kW	165.32	232.32	245	278.48	331.16	362.96
Nominal power input	kW	51.2	70	78	86.4	104.8	116.4
E.E.R.	Coef.	3.23	3.32	3.14	3.22	3.16	3.12
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	55	58	58	58	59	60
Distance	m	10	10	10	10	10	10
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
Compressors number	n°	4	4	4	4	4	4
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	51.2	70	78	86.4	104.8	116.4
Total running current	A	96	130.8	146	162	196.4	218
Total max current	A	120.8	176	171.2	215.6	244	290
Total starting current	A	386.7	523.7	583.6	643.6	776.3	871.3
<b>DIMENSIONS</b>							
Length with cabinet	mm	3310	3310	3310	4110	4110	4110
Width	mm	1200	1200	1200	1400	1400	1400
Height	mm	2100	2100	2100	2300	2300	2300
Shipping weight	kg	2500	2560	2590	3340	3420	3670
Operating weight	kg	2523	2583	2613	3363	3443	3693
(*1) BPHE: Brazed Plate Heat Exchanger							

# VSE

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 4Z50-290	VSE 4W50-290	VSE 4W60-290	VSE 4W70-290	VSE 4W75-290	VSE 4W80-290					
<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>	<b>R290</b>					
<b>388.6</b>	<b>423.64</b>	<b>476.2</b>	<b>518.28</b>	<b>580.08</b>	<b>611.04</b>					
124.8	144.4	163.6	177.2	191.6	200.4					
3.11	2.93	2.91	2.92	3.03	3.05					
-	-	-	-	-	-					
-	-	-	-	-	-					
59	62	65	65	67	68					
10	10	10	10	10	10					
Recip.	Recip.	Recip.	Recip.	Recip.	Recip.					
4	4	4	4	4	4					
12	12	12	12	12	12					
6	6	6	6	6	6					
-	-	-	-	-	-					
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE					
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50					
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50					
124.8	144.4	163.6	177.2	191.6	200.4					
234	270.8	306.8	332.4	358.8	375.6					
298.4	357.2	399.2	413.2	431.6	444.8					
924.7	1080	1232	1344	1449.8	1512.8					
4110	4110	4110	4110	4110	4110					
1400	1400	1400	1400	1400	1400					
2300	2300	2300	2300	2300	2300					
3440	3720	3760	3820	3820	3820					
3463	3743	3783	3843	3843	3843					

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Greenmiser		VSE 1S10-ZE	VSE 1S12-ZE	VSE 1V15-ZE	VSE 1V20-ZE	VSE 1V25-ZE	VSE 1Z30-ZE
<b>CHILLER PERFORMANCE</b>							
Refrigerant		HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE
Total cooling capacity	kW	19.74	22.25	27.81	31.49	39.35	46.32
Nominal power input	kW	6.2	7.5	8.6	9.9	12.1	14.2
E.E.R.	Coef.	3.18	2.97	3.23	3.18	3.25	3.26
Energy class		-	-	-	-	-	-
E.S.E.E.R.	Coef.	-	-	-	-	-	-
Noise Pressure Level	dB(A)	45	47	47	50	51	52
Distance	m	10	10	10	10	10	10
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
Compressors number	n°	1	1	1	1	1	1
Inlet water temperature	°C	12	12	12	12	12	12
Outlet water temperature	°C	6	6	6	6	6	6
Ambient temperature	Type	-	-	-	-	-	-
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	6.2	7.5	8.6	9.9	12.1	14.2
Total running current	A	11.6	14.1	16.2	18.5	22.6	26.7
Total max current	A	14.7	16.1	20.2	27.2	29.9	33.8
Total starting current	A	59.5	59.5	59.5	89.9	122.7	122.7
<b>DIMENSIONS</b>							
Length with cabinet	mm	1450	1450	1450	1450	1450	2110
Width	mm	800	800	800	800	800	800
Height	mm	1560	1560	1560	1560	1560	1900
Shipping weight	kg	550	560	620	620	650	850
Operating weight	kg	556	566	626	626	656	856
(*1) BPHE: Brazed Plate Heat Exchanger							

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

VSE 1Z40-ZE	VSE 2S10-ZE	VSE 2S12-ZE	VSE 2V15-ZE	VSE 2V20-ZE	VSE 2V25-ZE	VSE 2Z30-ZE	VSE 2Z40-ZE	VSE 4S10-ZE	VSE 4S12-ZE	VSE 4V15-ZE
<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>	<b>HF01234ZE</b>
<b>56.22</b>	<b>39.48</b>	<b>44.5</b>	<b>55.62</b>	<b>62.98</b>	<b>78.7</b>	<b>92.64</b>	<b>112.44</b>	<b>78.96</b>	<b>89</b>	<b>111.24</b>
17.3	12.4	15	17.2	19.8	24.2	28.4	34.6	24.8	30	34.4
3.25	3.18	2.97	3.23	3.18	3.25	3.26	3.25	3.18	2.97	3.23
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
53	49	51	51	54	55	56	57	52	54	54
10	10	10	10	10	10	10	10	10	10	10
Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
1	2	2	2	2	2	2	2	4	4	4
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
-	-	-	-	-	-	-	-	-	-	-
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
17.3	12.4	15	17.2	19.8	24.2	28.4	34.6	24.8	30	34.4
32.4	23.2	28.2	32.4	37	45.2	53.4	64.8	46.4	56.4	64.8
41.1	29.4	32.2	40.4	54.4	59.8	67.6	82.2	58.8	64.4	80.8
144.5	64.6	72.1	78.4	100.5	129.2	141.5	169.5	188.9	226.4	257.9
2110	2110	2110	2510	2510	2510	2510	2510	3310	3310	3310
800	800	800	1000	1000	1000	1000	1000	1000	1000	1000
1900	1900	1900	2000	2000	2000	2000	2000	2100	2100	2100
870	1070	1090	1420	1430	1490	1540	1570	2090	2140	2340
876	1086	1106	1436	1446	1506	1556	1586	2113	2163	2363

Condenserless water chiller with scroll or reciprocating compressors for indoor installation

Greenmiser		VSE 4V20-ZE	VSE 4V25-ZE	VSE 4Z30-ZE	VSE 4Z40-ZE		
<b>CHILLER PERFORMANCE</b>							
Refrigerant		HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE		
Total cooling capacity	kW	19.74	22.25	27.81	31.49		
Nominal power input	kW	6.2	7.5	8.6	9.9		
E.E.R.	Coef.	3.18	2.97	3.23	3.18		
Energy class		-	-	-	-		
E.S.E.E.R.	Coef.	-	-	-	-		
Noise Pressure Level	dB(A)	45	47	47	50		
Distance	m	10	10	10	10		
<b>WORKING CONDITIONS</b>							
Compressors type	Type	Recip.	Recip.	Recip.	Recip.		
Compressors number	n°	1	1	1	1		
Inlet water temperature	°C	12	12	12	12		
Outlet water temperature	°C	6	6	6	6		
Ambient temperature	Type	-	-	-	-		
Evaporator type (*1)	Type	BPHE	BPHE	BPHE	BPHE		
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50		
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50		
Total power input	kW	6.2	7.5	8.6	9.9		
Total running current	A	11.6	14.1	16.2	18.5		
Total max current	A	14.7	16.1	20.2	27.2		
Total starting current	A	59.5	59.5	59.5	89.9		
<b>DIMENSIONS</b>							
Length with cabinet	mm	1450	1450	1450	1450		
Width	mm	800	800	800	800		
Height	mm	1560	1560	1560	1560		
Shipping weight	kg	550	560	620	620		
Operating weight	kg	556	566	626	626		
(*1) BPHE: Brazed Plate Heat Exchanger							

