

<b>SP</b> <i>Solo Plus range abbreviation</i>	<b>101</b> <i>model reference</i>	<b>HW</b> <i>High Temp Wall Mount</i>
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# Solo Plus

## features

- 6 wall mounted and 5 ceiling mounted models
- Hot gas defrost system, faster and more efficient than the traditional electric systems
- R404 standard on all models
- Fully programmable control panel
- Control of thermostat/operating settings, coldroom lighting and remote alarm facility (coldroom light not supplied)
- Easy to install, no need for connection to external drain
- All units supplied with mains supply cable (less plug), internal light cable (less light), evaporator fan door switch (switch not supplied) and for low temperature models a door frame/PRV supply cable
- SP 101, SP 201 and SP 301 LW available as either 230-1-50Hz or 400-3-50Hz electrical supply
- All units available in 60Hz electrical supply
- Low ambient models (below 5°C) available - model suffix LA.
- Low noise models available - model suffix LN

## options

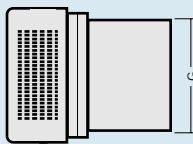
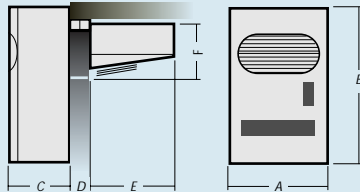
- SP 501 HW, SP 601 HW available as 230-1-50Hz electrical supply

## dimensions

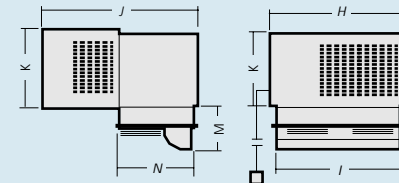
Model	Condensing Unit a x b x c (mm) h x j x k (mm)	Evaporator Unit g x e x f (mm) i x m x n (mm)	Plug Size w x h (mm)	Cut-out Size* w x h (mm)
SP 101 H & LW	400 x 735 x 280	368 x 410 x 264	-	-
SP 201 H	400 x 735 x 280	368 x 410 x 264	-	-
SP 201 LW	620 x 830 x 280	585 x 410 x 264	-	-
SP 301 H	400 x 735 x 280	368 x 410 x 264	-	-
SP 301 LW	620 x 830 x 280	585 x 410 x 264	-	-
SP 401 HW	620 x 830 x 280	585 x 410 x 264	-	-
SP 501 HW	620 x 830 x 280	585 x 410 x 264	-	-
SP 601 HW	620 x 830 x 350	585 x 532 x 364	-	-
SP 1 HC	620 x 719 x 357	545 x 150 x 332	545 x 332	550 x 337
SP 2 H & LC	620 x 719 x 357	545 x 150 x 332	545 x 332	550 x 337
SP 3 H & LC	820 x 809 x 390	745 x 150 x 332	745 x 332	750 x 337
SP 4 HC	820 x 809 x 390	745 x 150 x 332	745 x 332	750 x 337
SP 4 LC	820 x 929 x 427	745 x 220 x 452	745 x 452	750 x 458
SP 5 HC	820 x 929 x 427	745 x 220 x 452	745 x 452	750 x 458

Note: W = Wall mounted unit, C = Ceiling mounted unit.  
\* For wall panel cut-out details see installation instructions  
Dimension D = 100mm

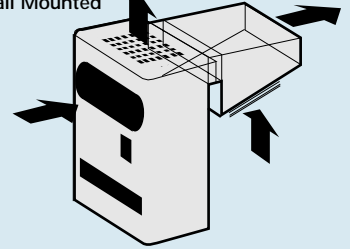
### Wall Mounted Units



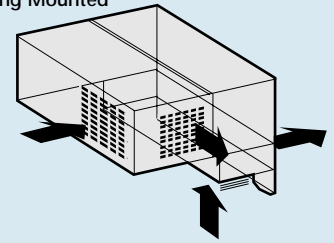
### Ceiling Mounted Units



### Air Flow Direction Wall Mounted



### Ceiling Mounted



## specifications & details

Model	32°C Ambient		43°C Ambient		Air Throw (m)	Air Vol m <sup>3</sup> /hr	Heat of Rejection Watts @ 32°C Amb.	Electrical			Compressor Nom HP	Net Weight Kg	Gross Weight Kg	Noise dBA	Fuse Rating
	Watts	Room Cap m <sup>3</sup>	Watts	Room Cap m <sup>3</sup>				Supply	Nom Amps	Nom Watts					
<b>10°C</b>															
SP 101 HW	1300	11	1160	8	4	600	1900	230-1-50	3.5	600	0.5	53	74	60	13
SP 201 HW	1450	13	1200	11	4	600	2050	230-1-50	4.1	700	0.7	56	77	60	13
SP 301 HW	1800	16	1550	14	4	600	2700	230-1-50	5.6	900	1.0	64	85	62	16
SP 401 HW	2550	25	2200	20	4	1200	3650	230-1-50	6.7	1100	1.0	80	110	62	16
SP 501 HW	3100	33	2700	27	4	1200	5100	400-3-50	5.2	1800	1.5	80	110	63	16
SP 601 HW	4700	58	4000	48	9.5	1800	6900	400-3-50	5.9	2200	2.0	100	135	65	16
<b>1/4°C</b>															
SP 101 HW	1050	7	900	6	4	600	1850	230-1-50	3.5	600	0.5	53	74	60	13
SP 201 HW	1150	9	1050	7	4	600	1756	230-1-50	4.1	600	0.7	56	77	60	13
SP 301 HW	1450	13	1300	10	4	600	2356	230-1-50	5.6	900	1.0	64	85	62	16
SP 401 HW	1900	20	1600	14	4	1200	3000	230-1-50	6.7	1100	1.0	80	110	62	16
SP 501 HW	2700	30	2350	24	4	1200	4500	400-3-50	5.2	1800	1.5	80	110	63	16
SP 601 HW	4100	50	3300	35	9.5	1800	6300	400-3-50	5.9	2200	2.0	100	135	65	16
<b>0/±2°C</b>															
SP 101 HW	850	6	750	5	4	600	1450	230-1-50	3.5	600	0.5	53	74	60	13
SP 201 HW	950	7	850	6	4	600	1550	230-1-50	4.1	600	0.7	56	77	60	13
SP 301 HW	1300	11	1200	9	4	600	2100	230-1-50	5.6	900	1.0	64	85	62	16
SP 401 HW	1700	15	1400	11	4	1200	2600	230-1-50	6.7	1100	1.0	80	110	62	16
SP 501 HW	2300	21	2000	17	4	1200	4100	400-3-50	5.2	1800	1.5	80	110	63	16
SP 601 HW	3350	36	2800	26	9.5	1800	5550	400-3-50	5.9	2200	2.0	100	135	65	16
<b>STORAGE TEMPERATURE</b>															
<b>10°C</b>															
SP 101 LW	1050	7	850	5	4	600	1950	230-1-50	5.2	900	1.8	64	85	63	16
SP 201 LW	1700	14	1400	10	4	1200	3200	400-3-50	4.3	1500	2.0	80	110	65	16
SP 301 LW	2700	28	2250	20	9.5	1800	4400	400-3-50	4.5	1700	3.0	105	140	67	16
<b>0/±2°C</b>															
SP 1 HC	1550	10	1400	7	3	550	2300	230-1-50	4.4	700	0.625	59	90	59	13
SP 2 HC	1750	12	1600	10	3	550	2675	230-1-50	5.2	800	0.75	59	90	60	13
SP 3 HC	2600	20	2200	16	3.5	1100	3750	230-1-50	6.9	1100	1.0	74	114	60	16
SP 4 HC	2900	28	2700	22	3.5	1100	4200	400-3-50	4.4	1500	1.2	75	115	60	16
SP 5 HC	5200	56	4600	48	6	2300	7200	400-3-50	5.1	2100	2.0	93	139	63	16
<b>1/4°C</b>															
SP 1 HC	1150	7	1050	5	3	550	1950	230-1-50	4.4	700	0.625	59	90	59	13
SP 2 HC	1350	9	1250	6	3	550	2200	230-1-50	5.2	800	0.75	59	90	60	13
SP 3 HC	1900	17	1600	10	3.5	1100	2850	230-1-50	6.9	1100	1.0	74	114	60	16
SP 4 HC	2300	20	2050	12	3.5	1100	3350	400-3-50	4.4	1500	1.2	75	115	60	16
SP 5 HC	4100	46	3600	28	6	2300	5700	400-3-50	5.1	2100	2.0	93	139	63	16
<b>0/±2°C</b>															
SP 1 HC	1050	6	925	4	3	550	1250	230-1-50	4.4	700	0.625	59	90	59	13
SP 2 HC	1200	7	1100	5	3	550	2000	230-1-50	5.2	800	0.75	59	90	60	16
SP 3 HC	1700	12	1450	9	3.5	1100	2050	230-1-50	6.9	1100	1.0	74	114	60	16
SP 4 HC	2000	15	1700	12	3.5	1100	3150	400-3-50	4.4	1500	1.2	75	115	60	16
SP 5 HC	3600	36	3200	26	6	2300	5100	400-3-50	5.1	2100	2.0	93	139	63	16
<b>-25°C</b>															
SP 2 LC	1200	6	1050	3	3	550	2050	230-1-50	5.9	900	1.7	68	99	60	16
SP 3 LC	1650	11	1400	7	3.5	1100	2850	400-3-50	4.2	1400	2.0	87	118	61	16
SP 4 LC	2400	18	2200	13.5	6	2300	5000	400-3-50	4.6	1800	3.0	102	142	63	16
SP 2 LC	950	3	825	2	3	550	1650	230-1-50	5.9	900	1.7	68	99	60	16
SP 3 LC	1200	6	1000	4	3.5	1100	3300	400-3-50	4.2	1400	2.0	87	118	61	16
SP 4 LC	2000	10	1650	6	6	2300	3600	400-3-50	4.6	1800	3.0	102	142	63	16

When ordering H or L models the temperature must be specified. Room capacity figures should be used for guide purposes only. Noise levels taken in a room with a concrete floor, no sound attenuation and ceiling height of 7 metres with the unit base 1.5 metres from floor level, installed in a coldroom and the sound meter 3 metres distance

<b>DUET</b> Duet range	<b>3-3</b> Condensing Unit Reference	<b>M</b> Temperature (M Fresh Meat)
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# Duet

## control panel

- Remote control panel mounted on the coldroom itself, in a central control room or on any convenient wall
- Monitors and displays the Duet's operation
- Isolator
- Temperature indicator/controller
- Fan delay
- Compressor run and defrost indicators
- Defrost termination
- High/low temperature alarm
- Remote alarm facility

## installation

- Condensing unit housed for external operation

## flexibility

- Coolers supplied complete with thermostatic expansion valve (supplied loose)
- Low temperature models fitted with electric defrost heaters and supplied with 3m of drain line heater (supplied loose)

## Environment

- R404a zero ODP refrigerant used

## dimensions

Dimensions (w x d x h) mm



Condensing Unit Model No.	Condensing Unit	Control Panel
DCU 1-1H	660 x 330 x 368	500 x 200 x 300
DCU 2-1H	660 x 330 x 368	
DCU 3-1H	880 x 400 x 458	
DCU 4-3H	880 x 400 x 458	<b>SH/SL Cooler Range</b>
DCU 5-3H	880 x 400 x 458	
DCU 6-3H	1075 x 532 x 595	see Unit Cooler Tech Spec 10
DCU 1-1L	660 x 330 x 368	
DCU 2-1L	880 x 400 x 458	
DCU 3-3L	880 x 400 x 458	
DCU 4-3L	880 x 400 x 458	
DCU 5-3L	1075 x 532 x 595	
DCU 6-3L	1575 x 642 x 654	

## options

- Wall brackets for condensing unit
- Crankcase heater (only necessary for 1-1 models and 2-1, HV, GP, C, F and M models, standard on all other models)
- Low ambient kit (NB supplied as standard on 5.3 and 6.3 models, therefore not required for these)
- Oil separator (Not available for 1-1 models or 2-1, HV, GP, C, F and M models)
- Low noise level option available

## installation information

If being sited in high salt atmosphere, consult Foster  
 Maximum standard pipe run is 50m (not supplied). Consult Foster where longer pipe runs are required  
 For horizontal pipe runs longer than 20m, outside application in low ambient conditions or where there is a vertical rise exceeding 5m, we recommend that an oil separator be fitted  
 Wall brackets for the condensing unit are now supplied as an optional extra  
 Liquid line solenoid valve is included  
 See Duet Technical Manual for further specification details

## temperatures & capacities

	Duet Model No.	Condensing Unit Model No.	Unit Cooler Model No.	32°C Ambient		43°C Ambient		Condensing Unit Weight kg	Electrical Supply (Hz)	Defrost Load (Watts)	Main Fuse Rating	Line Cable
				Cap. (Watts)	Room Cap m <sup>3</sup>	Cap. (Watts)	Room Cap m <sup>3</sup>					
Vegetables +5/8°C Evap -2°C	Duet 1-1 HV	DCU1-1H	MR210	1409	0 > 9	1051	0 > 4	39	230-1-50	n/a	16	3 x 1.5mm
	Duet 2-1 HV	DCU2-1H	SH24	1737	9 > 12	1478	4 > 7	43	230-1-50	n/a	20	3 x 2.5mm
	Duet 3-1 HV	DCU3-1H	SH30	2545	12 > 19	2012	7 > 11	61	230-1-50	n/a	20	3 x 2.5mm
	Duet 4-3 HV	DCU4-3H	SH52	3893	19 > 34	3039	11 > 20	62	400-3-50	n/a	16	5 x 1.5mm
	Duet 5-3 HV	DCU5-3H	SH62	4534	34 > 42	3582	20 > 25	64	400-3-50	n/a	20	5 x 2.5mm
Duet 6-3 HV	DCU6-3H	SH82	6796	42 > 68	5424	25 > 56	102	400-3-50	n/a	20	5 x 2.5mm	
Chiller +2/5°C Evap -5°C	Duet 1-1 GP	DCU1-1H	MR210	1284	0 > 8	956	0 > 3	39	230-1-50	n/a	16	3 x 1.5mm
	Duet 2-1 GP	DCU2-1H	SH24	1568	8 > 11	1333	3 > 6	43	230-1-50	n/a	20	3 x 2.5mm
	Duet 3-1 GP	DCU3-1H	SH30	2302	11 > 19	1807	6 > 10	61	230-1-50	n/a	20	3 x 2.5mm
	Duet 4-3 GP	DCU4-3H	SH52	3498	19 > 33	2709	10 > 18	62	400-3-50	n/a	16	5 x 1.5mm
	Duet 5-3 GP	DCU5-3H	SH62	4162	33 > 44	3270	18 > 24	64	400-3-50	n/a	20	5 x 2.5mm
Duet 6-3 GP	DCU6-3H	SH82	6068	44 > 70	4859	24 > 44	102	400-3-50	n/a	20	5 x 2.5mm	
Chilled Food 0/+2°C Evap -7°C	Duet 1-1 C	DCU1-1H	MRE210	1166	0 > 10	889	0 > 3	39	230-1-50	1200	20	3 x 2.5mm
	Duet 2-1 C	DCU2-1H	SL27	1417	10 > 13	1230	3 > 7	43	230-1-50	1000	25	3 x 2.5mm
	Duet 3-1 C	DCU3-1H	SL35	2060	13 > 23	1659	7 > 11	61	230-1-50	1000	25	3 x 2.5mm
	Duet 4-3 C	DCU4-3H	SL55	3094	23 > 46	2462	11 > 22	62	400-3-50	2160	20	5 x 2.5mm
	Duet 5-3 C	DCU5-3H	SL73	3736	46 > 63	3006	22 > 32	64	400-3-50	2160	25	5 x 2.5mm
Duet 6-3 C	DCU6-3H	SL95	5398	63 > 108	4402	32 > 56	102	400-3-50	3280	25	5 x 2.5mm	
Wet Fish -1/+1°C Evap -8°C	Duet 1-1 F	DCU1-1H	MRE135	1126	0 > 6	886	0 > 2	39	230-1-50	730	20	3 x 2.5mm
	Duet 2-1 F	DCU2-1H	SL27	1360	6 > 8	1190	2 > 5	43	230-1-50	1000	25	3 x 2.5mm
	Duet 3-1 F	DCU3-1H	SL35	1970	8 > 13	1600	5 > 7	61	230-1-50	1000	25	3 x 2.5mm
	Duet 4-3 F	DCU4-3H	SL55	2950	13 > 24	2372	7 > 13	62	400-3-50	2160	20	5 x 2.5mm
	Duet 5-3 F	DCU5-3H	SL73	3566	24 > 32	2901	13 > 18	64	400-3-50	2160	25	5 x 2.5mm
Duet 6-3 F	DCU6-3H	SL95	5131	32 > 51	4220	18 > 30	102	400-3-50	3280	25	5 x 2.5mm	
Fresh Meat 0/+2°C Evap -10°C	Duet 1-1 M	DCU1-1H	MRE135	1049	0 > 6	882	0 > 2	39	230-1-50	730	20	3 x 2.5mm
	Duet 2-1 M	DCU2-1H	MRE210	1267	6 > 9	1128	2 > 4	43	230-1-50	1200	25	3 x 2.5mm
	Duet 3-1 M	DCU3-1H	SL27	1819	9 > 19	1511	4 > 7	61	230-1-50	1000	25	3 x 2.5mm
	Duet 4-3 M	DCU4-3H	SL35	2690	19 > 29	2215	7 > 14	62	400-3-50	1000	20	5 x 2.5mm
	Duet 5-3 M	DCU5-3H	SL48	3310	29 > 42	2742	14 > 22	64	400-3-50	1600	25	5 x 2.5mm
Duet 6-3 M	DCU6-3H	SL73	4729	42 > 69	3945	22 > 37	102	400-3-50	2160	25	5 x 2.5mm	
Freezer -18/+21°C Evap -28°C	Duet 1-1 L	DCU1-1L	MRE135	965	0 > 5	831	0 > 2	46	230-1-50	730	25	3 x 2.5mm
	Duet 2-1 L	DCU2-1L	SL27	1300	5 > 8	1000	2 > 3	65	230-1-50	1000	25	3 x 2.5mm
	Duet 3-3 L	DCU3-3L	SL35	1718	8 > 14	1481	3 > 6	65	400-3-50	1000	20	5 x 2.5mm
	Duet 4-3 L	DCU4-3L	SL35	2168	14 > 19	1835	6 > 11	73	400-3-50	1000	25	5 x 2.5mm
	Duet 5-3 L	DCU5-3L	SL55	3672	19 > 44	2908	11 > 22	120	400-3-50	2160	32	5 x 4.0mm
Duet 6-3 L	DCU6-3L	SL95	5413	44 > 80	4261	22 > 44	187	400-3-50	3280	32	5 x 4.0mm	
Ice Cream -25°C Evap -32°C	Duet 3-3 IC	DCU3-3L	SL27	1587	6 > 12	1289	2 > 4	65	400-3-50	1000	20	5 x 2.5mm
	Duet 4-3 IC	DCU4-3L	SL35	2028	12 > 18	1604	4 > 6	73	400-3-50	1000	25	5 x 2.5mm
	Duet 5-3 IC	DCU5-3L	SL55	3564	18 > 47	2667	6 > 17	120	400-3-50	2160	32	5 x 4.0mm
Duet 6-3 IC	DCU6-3L	SL95	5042	47 > 90	3620	17 > 27	187	400-3-50	2160	32	5 x 4.0mm	

Note: The above selections are based on coldrooms being supplied with modular insulated floor panels. For floorless applications, consult Foster regarding accurate selection. For selection criteria, refer to the Duet Technical Manual. When installing SL Unit Coolers allow sufficient space at the sides equal to the length of the finned face area to remove defrost heaters

<b>S</b> Unit Cooler range abbreviation	<b>H</b> Temperature above +2°C	<b>24</b> Capacity
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# Unit Coolers

## design & construction

- Easily removable side end panels and drain pan allow full access to all components, including coil, fan motors, defrost heaters and connections
- Coils are pressure tested up to 30 bars
- Coils are thoroughly degreased and dried in dry air to prevent any future corrosion

## MR range - multi temperature coldrooms

- A range of compact unit coolers ideal for use in small coldrooms
- Available with electric defrost for low temperature application

## SL range - coldroom temperature +1°C and below

- Finned coils with 6.35mm fins
- Defrost achieved incorporating electric coil defrost and drain pan heaters
- Schrader valve fitted on the suction connection for testing purposes

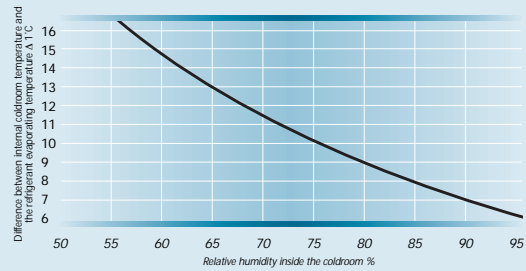
## SH range - coldroom temperature above +1°C

- Finned coils with 4.23mm fin spacing
- Schrader valve fitted for testing and maintenance purposes

## ordering example

<b>MR</b>	<b>135</b>	<b>E</b>
Compact	Capacity	Electric defrost
Medium/Low temperature	Watts ( $\Delta T 10^\circ K$ )	
<b>SH &amp; SL</b>	<b>62</b>	(SL range only)
Compact	Capacity	Electric defrost
Medium/Low temperature	Watts ( $\Delta T 10^\circ K$ )	

## humidity



## correction factor F (R404a) evaporating temperature °C

		+5	0	-5	-10	-15	-20	-25	-30
MR	$\Delta T C 10$	1.00	1.00	1.00	0.99	0.98	0.97	0.95	0.93
	9	0.91	0.91	0.91	0.89	0.89	0.88	0.86	0.85
	8	0.81	0.81	0.80	0.80	0.80	0.79	0.78	0.77
	7	0.71	0.71	0.71	0.71	0.70	0.70	0.69	0.68
	6	0.61	0.61	0.60	0.60	0.60	0.59	0.58	0.57
	5	0.51	0.51	0.51	0.50	0.50	0.50	0.49	0.48
SH	$\Delta T C 10$	1.04	1.02	1.01	1.00	-	-	-	-
	9	0.93	0.93	0.91	0.90	-	-	-	-
	8	0.83	0.82	0.81	0.80	-	-	-	-
	7	0.73	0.72	0.71	0.70	-	-	-	-
	6	0.62	0.62	0.61	0.60	-	-	-	-
	5	0.51	0.51	0.51	0.50	-	-	-	-
SL	$\Delta T C 10$	1.01	1.00	0.99	0.98	0.97	0.95	0.92	0.90
	9	0.92	0.91	0.90	0.89	0.88	0.86	0.83	0.81
	8	0.82	0.81	0.80	0.79	0.78	0.77	0.76	0.75
	7	0.72	0.71	0.70	0.69	0.68	0.67	0.66	0.65
	6	0.61	0.61	0.60	0.60	0.59	0.58	0.57	0.56
	5	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.46

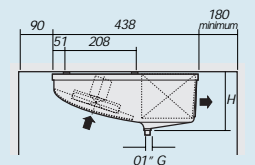
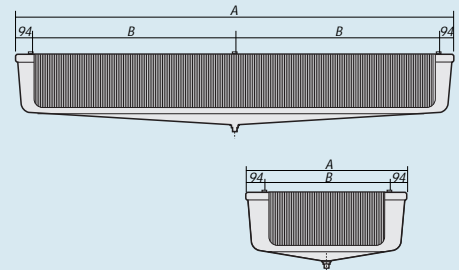
For selection purposes multiply the nominal watts capacity by the correction factor to establish the correct performance  
For R134a refrigerant multiply the watts capacity by the correction factor of 0.95

## options

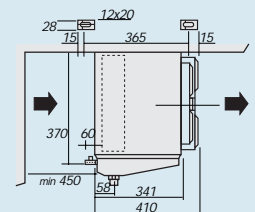
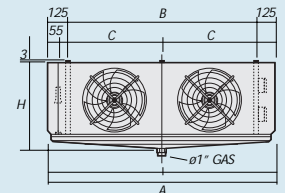
- Hot gas defrost
- Glycol cooling
- 220V/1/60 electrical supply

Note: fixing bolts are only supplied when the unit cooler is sold with a coldroom

### MR range



### SH/SL range



## common characteristics

		capacity 10K TD (Watts)	air volume (m3/hr)	fans	motor power consumption 230V -1.50Hz (watts)	motor power consumption 230V -1.50Hz (amps)	defrost -230V (watts) (E)	air throw (m)	circuit volume (dm3)	surface (m2)	fin spacing (mm)	dimension A (mm)	dimension B (mm)	dimension C (mm)	dimension H (mm)	connections inlet	connections outlet	weight (kg)
MR	MR 135 (E)	1587	580	2x200mm	76	0.5	730	-	1.05	6.1	-	784	596	-	-	1/2"	1/2"	9.5
	MR 210 (E)	2575	870	3x200mm	114	0.75	1200	-	1.73	10.05	-	1174	493	-	-	1/2"	1/2"	15
SH	SH 24	2380	1526	1x300mm	102	0.44	-	13	1.23	6.3	4.23	710	460	458	458	1/2"	1/2"	13
	SH 30	2972	1472	1x300mm	102	0.44	-	13	1.64	8.4	4.23	710	460	458	458	1/2"	1/2"	14
	SH 38	3751	1332	1x300mm	102	0.44	-	12	2.46	12.7	4.23	710	460	458	458	1/2"	5/8"	16
	SH 52	5164	1569	1x300mm	102	0.44	-	14	3.64	19.9	4.23	940	690	460	460	1/2"	5/8"	21
	SH 62	6153	2985	2x300mm	204	0.89	-	13	3.22	17.5	4.23	1170	920	463	463	1/2"	5/8"	25
	SH 82	8173	3264	2x300mm	204	0.89	-	15	4.78	26.5	4.23	1630	1380	468	468	5/8"	7/8"	32
SL (Electric)	SL 27	2678	1554	1x300mm	102	0.44	1000	13	1.64	5.8	6.35	710	460	485	485	1/2"	1/2"	16
	SL 35	3520	1431	1x300mm	102	0.44	1000	12	2.46	8.7	6.35	710	460	458	458	1/2"	5/8"	18
	SL 48	4727	1616	1x300mm	102	0.44	1600	14	3.64	13.7	6.35	940	690	460	460	1/2"	5/8"	23
	SL 55	5523	3142	2x300mm	204	0.89	2160	14	3.22	12.1	6.35	1170	920	463	463	1/2"	5/8"	28
	SL 73	7249	2908	2x300mm	204	0.89	2160	13	4.82	18.1	6.35	1170	920	463	463	5/8"	7/8"	32
	SL 95	9499	3231	2x300mm	204	0.89	3280	14	7.18	27.5	6.35	1630	1380	468	468	5/8"	7/8"	42

Note:  
All models require an externally equalised expansion valve.  
Allow sufficient distance between wall and cooler end for removal of defrost heaters (SL range only)  
TD: the difference between the air temperature entering the evaporator and the evaporator temperature