

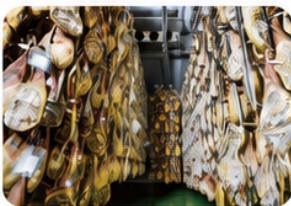
CS Series

Ceiling Air Cooler





CS Series Ceiling Air Cooler



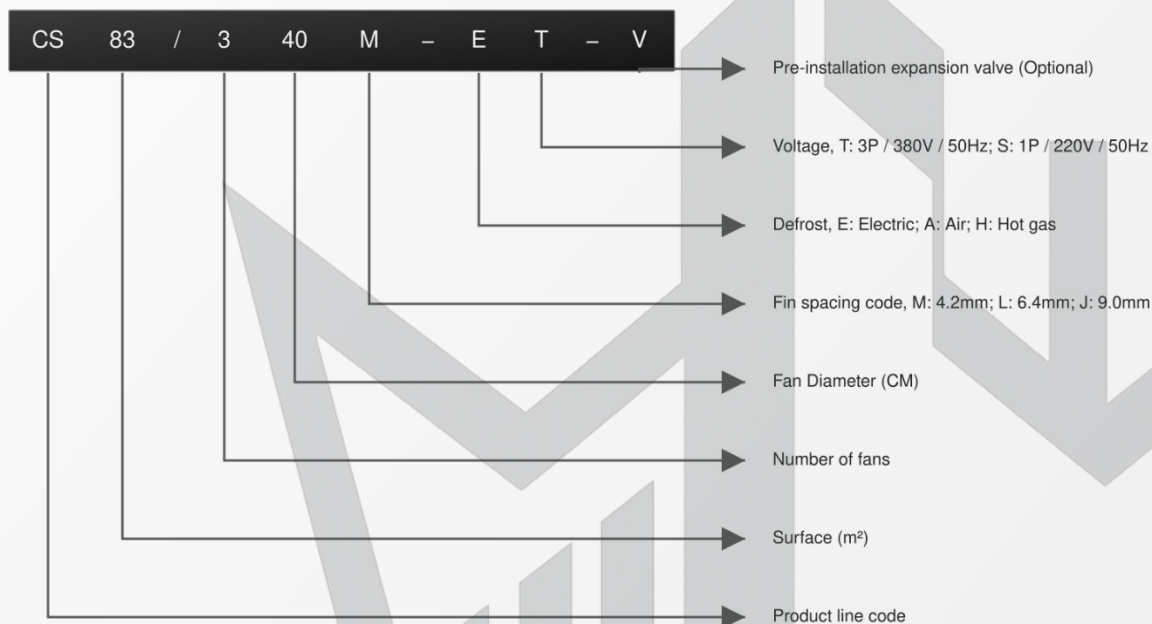


CS Series Ceiling Air Cooler

1. Product Description

- 1 Casing: Adopt high-quality steel plate with RAL 9003 powder coating. Hinged structure is adopted for both side plates and the external drip tray, which is convenient and quick to operate.
- 2 Heat Exchanger Coil: Copper tubing $\phi 15$, spacing 50×50 , square arrangement. Corrugated aluminium fins with 4.2mm, 6.4mm and 9.0mm fin spacing.
- 3 Fans: Axial fans with high wind circle, working temperature -40°C to 60°C . High air-duct design with integral stretching provides good ventilation, further airflow and lower noise. Fans are individually connected to the junction box. Fan blade $\phi 300$ (optional), $\phi 350$, $\phi 400$, $\phi 500$ or $\phi 630$; standard 4-pole motor.
- 4 Defrosting: Standard electric defrosting with stainless heating pipes installed in the middle of the coil and inner water plate. Independent electric-heating-tube junction box. Hot-gas defrosting or coil hot-gas defrosting can also be used.
- 5 Compatible refrigerants: R404A, R507A, R448A, R449A, R134a, R22 and other refrigerants.

2. Model Description





Performance Data Sheet

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3.1 Fin Spacing 4.2mm

Model	Capacity R404A (kW)		Surface (m ²)	Volume (dm ³)	Airflow (m ³ /h)	Air Throw (m)	Connection Pipe			Weight (kg)
	T _c = 0°C ΔT = 8K	T _c = −18°C ΔT = 7K					Inlet	Outlet	Drain	
Fan 350										
CS10/135M-ES	1.8	1.4	10.4	1.8	2300	6	φ12	φ19	G1"	32
CS15/135M-ES	2.2	1.7	15.0	2.6	2000	5	φ12	φ19	G1"	35
CS21/235M-ES	3.6	2.8	20.7	3.2	4600	8	φ12	φ19	G1"	51
CS28/235M-ES	4.1	3.2	27.6	4.3	4000	7	φ12	φ22	G1"	53
CS31/335M-ES	5.3	4.2	31.1	4.6	6900	10	φ12	φ22	G1"	69
CS42/335M-ES	6.2	4.8	41.5	6.2	6000	10	φ16	φ28	G1"	74
CS42/435M-ES	7.0	5.5	41.5	6.1	9200	12	φ12	φ22	G1"	87
CS56/435M-ES	8.2	6.5	56	8.1	8000	12	φ16	φ28	G1"	94
Fan 400										
CS27/140M-ET	4.6	3.7	27.0	4.4	3000	8	φ12	φ22	G1"	48
CS36/140M-ET	5.4	4.3	35.9	5.9	2700	7	φ12	φ22	G1"	53
CS36/240M-ET	6.5	5.4	35.9	5.9	6400	13	φ12	φ22	G1"	74
CS54/240M-ET	9.2	7.4	53.9	8.2	6000	12	φ16	φ28	G1"	81
CS72/240M-ET	10.8	8.6	71.9	10.9	5400	11	φ16	φ28	G1"	88
CS83/340M-ET	14.1	11.3	82.9	12.3	9000	15	φ22	φ42	2"G1"	123
CS110/340M-ET	16.6	13.3	110.6	16.4	8100	13	φ22	φ42	2"G1"	134
CS108/440M-ET	18.3	14.6	107.8	15.8	12000	16	φ22	φ42	2"G1"	158
CS144/440M-ET	21.6	17.3	143.8	21.1	10800	15	φ22	φ42	2"G1"	172
CS180/540M-ET	27.0	21.6	179.7	26.2	13500	18	φ28	φ50	3"G1"	215

Remarks: In the table, T_c is the cold-room temperature, and ΔT is the difference between the cold-room temperature and the evaporation temperature.



Performance Data Sheet

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3.1 Fin Spacing 4.2mm

Model	Capacity R404A (kW)		Surface (m ²)	Volume (dm ³)	Airflow (m ³ /h)	Air Throw (m)	Connection Pipe			Weight (kg)
	T _c = 0°C ΔT = 8K	T _c = -18°C ΔT = 7K					Inlet	Outlet	Drain	
Fan 500										
CS58/150M-ET	9.86	7.89	58.0	9.3	6000	18	φ16	φ28	G1"	78
CS73/150M-ET	11.2	8.95	72.6	11.3	5750	17	φ16	φ28	G1"	84
CS87/150M-ET	12.5	10.0	87.1	13.3	5500	17	φ16	φ28	G1"	90
CS116/250M-ET	19.72	15.8	116.1	17.4	12000	21	φ22	φ42	G1"	145
CS145/250M-ET	22.4	17.9	145.2	21.4	11500	20	φ22	φ42	G1"	156
CS174/250M-ET	25.0	20.0	174.2	25.5	11000	20	φ22	φ42	G1"	167
CS174/350M-ET	29.6	23.68	174.2	25.5	18000	23	φ28	φ50	2"G1"	202
CS218/350M-ET	33.6	26.8	217.7	31.6	17300	22	φ28	φ50	2"G1"	220
CS261/350M-ET	37.5	30.0	261.3	37.6	16500	22	φ28	φ50	2"G1"	236
CS232/450M-ET	39.4	31.52	232.2	33.5	24000	25	φ28	φ50	3"G1"	263
CS290/450M-ET	44.5	35.6	290.3	41.6	23000	24	φ28	φ50	3"G1"	285
CS348/450M-ET	49.6	39.68	348.4	49.7	22000	24	φ28	φ50	3"G1"	307
Fan 630										
CS100/163M-ET	15.9	12.7	99.5	15.0	10200	28	φ22	φ28	G1"	123
CS125/163M-ET	18.1	14.5	124.4	18.8	9900	27	φ22	φ35	G1"	134
CS150/163M-ET	20.2	16.1	149.3	22.5	9600	27	φ22	φ35	G1"	145
CS199/263M-ET	31.8	25.4	199.0	28.9	20400	32	φ22	φ42	2"G1"	213
CS249/263M-ET	36.1	28.9	248.8	36.1	19800	31	φ22	φ42	2"G1"	233
CS299/263M-ET	40.4	32.3	298.5	43.3	19200	31	φ22	φ42	2"G1"	253
CS299/363M-ET	47.7	38.2	298.5	42.8	30600	35	φ28	φ50	3"G1"	303
CS373/363M-ET	54.2	43.4	373.2	53.5	29700	34	φ28	φ50	3"G1"	333
CS448/363M-ET	60.6	48.5	447.8	64.1	28800	34	φ28	φ50	3"G1"	362

Remarks: In the table, T_c is the cold-room temperature, and ΔT is the difference between the cold-room temperature and the evaporation temperature.



Performance Data Sheet

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3.2 Fin Spacing 6.4mm

Model	Capacity R404A (kW)		Surface (m ²)	Volume (dm ³)	Airflow (m ³ /h)	Air Throw (m)	Connection Pipe			Weight (kg)
	T _c = 0°C ΔT = 8K	T _c = −18°C ΔT = 7K					Inlet	Outlet	Drain	
Fan 350										
CS7/135L-ES	1.6	1.3	7.0	1.8	2300	6	φ12	φ19	G1"	31
CS10/135L-ES	1.9	1.5	10.0	2.6	2000	5	φ12	φ19	G1"	34
CS14/235L-ES	3.1	2.4	13.9	3.2	4600	8	φ12	φ19	G1"	49
CS19/235L-ES	3.5	2.8	18.5	4.3	4000	7	φ12	φ22	G1"	52
CS21/335L-ES	4.7	3.7	20.8	4.6	6900	10	φ16	φ28	G1"	66
CS28/335L-ES	5.3	4.3	27.8	6.2	6000	10	φ16	φ28	G1"	70
CS28/435L-ES	6.2	4.9	27.8	6.1	9200	12	φ16	φ28	G1"	84
CS38/435L-ES	7.1	5.7	38	8.1	8000	12	φ16	φ28	G1"	89
Fan 400										
CS18/140L-ET	3.2	2.6	18.0	4.4	3200	8	φ12	φ22	G1"	46
CS24/140L-ET	4.1	3.3	24.1	5.9	2900	7	φ12	φ22	G1"	50
CS24/240L-ET	4.6	3.8	24.1	5.9	6600	13	φ12	φ22	G1"	71
CS36/240L-ET	6.4	5.1	36.1	8.2	6400	12	φ16	φ28	G1"	76
CS48/240L-ET	8.2	6.6	48.2	10.9	5800	11	φ16	φ28	G1"	82
CS56/340L-ET	9.7	7.8	55.6	12.3	9600	14	φ22	φ42	2"G1"	116
CS74/340L-ET	12.5	10.0	74.1	16.4	8700	13	φ22	φ42	2"G1"	124
CS72/440L-ET	12.8	10.2	72.3	15.8	12800	16	φ22	φ42	2"G1"	149
CS96/440L-ET	16.4	13.1	96.3	21.1	11600	15	φ22	φ42	2"G1"	160
CS120/540L-ET	20.5	16.4	120.4	26.2	14500	18	φ28	φ50	3"G1"	200

Remarks: In the table, T_c is the cold-room temperature, and ΔT is the difference between the cold-room temperature and the evaporation temperature.



Performance Data Sheet

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3.2 Fin Spacing 6.4mm

Model	Capacity R404A (kW)		Surface (m ²)	Volume (dm ³)	Airflow (m ³ /h)	Air Throw (m)	Connection Pipe			Weight (kg)	
	Tc = 0°C ΔT = 8K	Tc = -18°C ΔT = 7K					Inlet	Outlet	Drain		
Fan 500											
CS39/150L-ET	8.26	6.61	38.9	9.3	6200	18	φ16	φ28	G1"	73	
CS49/150L-ET	9.61	7.68	48.6	11.3	5950	17	φ16	φ28	G1"	78	
CS58/150L-ET	10.95	8.76	58.4	13.3	5700	17	φ16	φ28	G1"	83	
CS78/250L-ET	16.5	13.22	77.8	17.4	12400	21	φ22	φ42	G1"	135	
CS97/250L-ET	19.2	15.37	97.3	21.5	11900	20	φ22	φ42	G1"	144	
CS117/250L-ET	21.9	17.52	116.7	25.5	11400	20	φ22	φ42	G1"	152	
CS117/350L-ET	24.8	19.83	116.7	25.5	18600	23	φ28	φ50	2"G1"	187	
CS146/350L-ET	28.9	23.1	145.9	31.6	17850	22	φ28	φ50	2"G1"	200	
CS175/350L-ET	32.85	26.28	175.1	37.6	17100	22	φ28	φ50	2"G1"	214	
CS156/450L-ET	33.0	26.44	155.6	33.5	24800	25	φ28	φ50	3"G1"	243	
CS195/450L-ET	38.4	30.7	194.5	41.6	23800	24	φ28	φ50	3"G1"	260	
CS234/450L-ET	43.75	35.0	233.5	49.7	22800	24	φ28	φ50	3"G1"	277	
Fan 630											
CS67/163L-ET	13.4	10.7	66.7	15.0	10600	28	φ22	φ28	G1"	114	
CS83/163L-ET	15.5	12.4	83.4	18.8	10300	27	φ22	φ35	G1"	123	
CS100/163L-ET	17.5	14.0	100.1	22.5	10000	27	φ22	φ35	G1"	132	
CS133/263L-ET	26.7	21.4	133.4	28.9	21200	32	φ22	φ42	2"G1"	196	
CS167/263L-ET	30.9	24.7	166.8	36.1	20600	31	φ22	φ42	2"G1"	212	
CS200/263L-ET	35.0	28.0	200.2	43.3	20000	31	φ22	φ42	2"G1"	227	
CS200/363L-ET	40.0	32.0	200.1	42.8	31800	35	φ28	φ50	3"G1"	278	
CS250/363L-ET	46.3	37.0	250.1	53.5	30900	34	φ28	φ50	3"G1"	300	
CS300/363L-ET	52.5	42.0	300.2	64.1	30000	34	φ28	φ50	3"G1"	323	

Remarks: In the table, T_c is the cold-room temperature, and ΔT is the difference between the cold-room temperature and the evaporation temperature.



Performance Data Sheet

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3.3 Fin Spacing 9.0mm

Model	Capacity R404A (kW)		Surface (m ²)	Volume (dm ³)	Airflow (m ³ /h)	Air Throw (m)	Connection Pipe			Weight (kg)
	Tc = 0°C ΔT = 8K	Tc = -18°C ΔT = 7K					Inlet	Outlet	Drain	
Fan 350										
CS5/135J-ES	1.3	1.0	5.1	1.8	2300	6	φ12	φ19	G1"	31
CS7/135J-ES	1.7	1.4	7.3	2.6	2000	5	φ12	φ19	G1"	34
CS10/235J-ES	2.6	2.0	10.1	3.2	4600	8	φ12	φ19	G1"	49
CS14/235J-ES	3.2	2.6	13.5	4.3	4000	7	φ12	φ22	G1"	52
CS15/335J-ES	3.8	3.0	15.2	4.6	6900	10	φ16	φ28	G1"	65
CS21/335J-ES	4.8	3.8	21	6.2	6000	10	φ16	φ28	G1"	69
CS20/435J-ES	5.2	4.2	20.3	6.1	9200	12	φ16	φ28	G1"	83
CS27/435J-ES	6.3	5.0	27.0	8.1	8000	12	φ16	φ28	G1"	88
Fan 400										
CS13/140J-ET	2.5	2.0	13.2	4.4	3400	8	φ12	φ22	G1"	46
CS18/140J-ET	3.2	2.6	17.6	5.9	3100	7	φ12	φ22	G1"	50
CS18/240J-ET	3.7	3.0	17.6	5.9	7000	13	φ12	φ22	G1"	71
CS26/240J-ET	5.0	4.0	26.3	8.2	6800	12	φ16	φ28	G1"	76
CS35/240J-ET	6.4	5.1	35.1	10.9	6200	11	φ16	φ28	G1"	82
CS41/340J-ET	7.6	6.1	40.5	12.3	10200	14	φ22	φ42	2"G1"	116
CS54/340J-ET	9.7	7.8	54.0	16.4	9300	13	φ22	φ42	2"G1"	124
CS53/440J-ET	10.0	8.0	52.7	15.8	13600	16	φ22	φ42	2"G1"	149
CS70/440J-ET	12.8	10.2	70.3	21.1	12400	15	φ22	φ42	2"G1"	160
CS88/540J-ET	16.0	12.8	87.8	26.2	15500	18	φ28	φ50	3"G1"	200
Fan 500										
CS28/150J-ET	7.08	5.66	28.3	9.3	6400	18	φ16	φ28	G1"	73
CS36/150J-ET	8.6	6.88	35.5	11.3	6150	17	φ16	φ28	G1"	78
CS43/150J-ET	10.1	8.08	42.5	13.3	5900	17	φ16	φ28	G1"	83
CS57/250J-ET	14.15	11.32	56.6	17.4	12800	21	φ22	φ42	G1"	135
CS71/250J-ET	17.2	13.74	70.9	21.5	12300	20	φ22	φ42	G1"	144
CS85/250J-ET	20.2	16.16	85.0	25.5	11800	20	φ22	φ42	G1"	152
CS85/350J-ET	21.22	16.98	85.0	25.5	19200	23	φ28	φ50	2"G1"	187
CS107/350J-ET	25.8	20.6	106.4	31.6	18450	22	φ28	φ50	2"G1"	200
CS128/350J-ET	30.3	24.24	127.5	37.6	17700	22	φ28	φ50	2"G1"	214
CS114/450J-ET	28.3	22.64	113.3	33.5	25600	25	φ28	φ50	3"G1"	243
CS142/450J-ET	34.4	27.45	141.9	41.6	24600	24	φ28	φ50	3"G1"	260
CS170/450J-ET	40.4	32.32	170.0	49.7	23600	24	φ28	φ50	3"G1"	277

Remarks: In the table, T_c is the cold-room temperature, and ΔT is the difference between the cold-room temperature and the evaporation temperature.



Performance Data Sheet

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3.3 Fin Spacing 9.0mm — Fan 630

Model	Capacity R404A (kW)		Surface (m ²)	Volume (dm ³)	Airflow (m ³ /h)	Air Throw (m)	Connection Pipe			Weight (kg)
	T _c = 0°C ΔT = 8K	T _c = -18°C ΔT = 7K					Inlet	Outlet	Drain	
Fan 630										
CS49/163J-ET	11.6	9.3	48.6	15.0	11000	28	φ22	φ28	G1"	114
CS61/163J-ET	13.7	11.0	60.8	18.8	10700	27	φ22	φ35	G1"	123
CS73/163J-ET	15.7	12.6	72.8	22.5	10400	27	φ22	φ35	G1"	132
CS97/263J-ET	23.1	18.5	97.1	28.9	22000	32	φ22	φ42	2"G1"	196
CS122/263J-ET	27.3	21.8	121.6	36.1	21400	31	φ22	φ42	2"G1"	211
CS146/263J-ET	31.4	25.1	145.7	43.3	20800	31	φ22	φ42	2"G1"	227
CS146/363J-ET	34.7	27.8	145.7	42.8	33000	35	φ28	φ50	3"G1"	278
CS182/363J-ET	40.9	32.7	182.4	53.5	32100	34	φ28	φ50	3"G1"	300
CS219/363J-ET	47.1	37.7	218.5	64.1	31200	34	φ28	φ50	3"G1"	323

Electrical Parameter Table

4

Model	Fan Motor				Electric Defrost		
	Voltage (V)	Power (W)	Current (A)	Speed (r/min)	Coil (kW)	Tray (kW)	Total (kW)
CS*/135**	220-1	185	0.54	1330	2×0.5	1×0.5	1.5
CS*/235**	220-1	370	1.08	1330	2×0.9	1×0.9	2.7
CS*/335**	220-1	555	1.62	1330	2×1.3	1×1.3	3.9
CS*/435**	220-1	740	2.16	1330	2×1.7	1×1.7	5.1
CS27/140M-ET CS18/140L-ET CS13/140J-ET	380-3	240	0.52	1330	2×0.65	1×0.7	2.0
CS36/140M-ET CS24/140L-ET CS18/140J-ET	380-3	240	0.52	1330	4×0.65	1×0.7	3.3
CS36/240M-ET CS24/240L-ET CS18/240J-ET	380-3	480	1.04	1330	2×1.17	1×1.22	3.56
CS54/240M-ET CS36/240L-ET CS26/240J-ET	380-3	480	1.04	1330	2×1.17	1×1.22	3.56
CS72/240M-ET CS48/240L-ET CS35/240J-ET	380-3	480	1.04	1330	4×1.17	1×1.22	5.9
CS83/340M-ET CS56/340L-ET CS41/340J-ET	380-3	720	1.56	1330	2×1.73	1×1.78	5.2
CS110/340M-ET CS74/340L-ET CS54/340J-ET	380-3	720	1.56	1330	4×1.73	1×1.78	8.7
CS108/440M-ET CS72/440L-ET CS53/440J-ET	380-3	960	2.08	1330	2×2.2	1×2.26	6.7
CS144/440M-ET CS96/440L-ET CS70/440J-ET	380-3	960	2.08	1330	4×2.2	1×2.26	11.1
CS180/540M-ET CS120/540L-ET CS89/540J-ET	380-3	1200	2.6	1330	4×2.73	1×2.8	13.7

Remarks: In the table, T_c is the cold-room temperature, and ΔT is the difference between the cold-room temperature and the evaporation temperature.



Electrical Parameter Table

4

Model	Fan Motor				Electric Defrost		
	Voltage (V)	Power (W)	Current (A)	Speed (r/min)	Coil (kW)	Tray (kW)	Total (kW)
CS58/150M-ET CS39/150L-ET CS28/150J-ET	380-3	548	1.1	1380	4×0.85	2×0.9	5.2
CS73/150M-ET CS49/150L-ET CS36/150J-ET	380-3	548	1.1	1380	6×0.85	2×0.9	6.9
CS87/150M-ET CS58/150L-ET CS43/150J-ET	380-3	548	1.1	1380	6×0.85	2×0.9	6.9
CS116/250M-ET CS78/250L-ET CS57/250J-ET	380-3	1096	2.2	1380	4×1.57	2×1.62	9.5
CS145/250M-ET CS97/250L-ET CS71/250J-ET	380-3	1096	2.2	1380	6×1.57	2×1.62	12.7
CS174/250M-ET CS117/250L-ET CS85/250J-ET	380-3	1096	2.2	1380	6×1.57	2×1.62	12.7
CS174/350M-ET CS117/350L-ET CS85/350J-ET	380-3	1644	3.3	1380	4×2.3	2×2.34	13.9
CS218/350M-ET CS146/350L-ET CS107/350J-ET	380-3	1644	3.3	1380	6×2.3	2×2.34	18.5
CS261/350M-ET CS175/350L-ET CS128/350J-ET	380-3	1644	3.3	1380	6×2.3	2×2.34	18.5
CS232/450M-ET CS156/450L-ET CS114/450J-ET	380-3	2192	4.4	1380	4×3.0	2×3.1	18.2
CS290/450M-ET CS195/450L-ET CS142/450J-ET	380-3	2192	4.4	1380	6×3.0	2×3.1	24.2
CS348/450M-ET CS234/450L-ET CS170/450J-ET	380-3	2192	4.4	1380	6×3.0	2×3.1	24.2
CS100/163M-ET CS67/163L-ET CS49/163J-ET	380-3	937	1.75	1378	6×1.16	2×1.28	9.52
CS125/163M-ET CS83/163L-ET CS61/163J-ET	380-3	937	1.75	1378	9×1.16	2×1.28	13.0
CS150/163M-ET CS100/163L-ET CS73/163J-ET	380-3	937	1.75	1378	9×1.16	2×1.28	13.0
CS199/263M-ET CS133/263L-ET CS97/263J-ET	380-3	1874	3.5	1378	6×2.12	2×2.24	17.2
CS249/263M-ET CS167/263L-ET CS122/263J-ET	380-3	1874	3.5	1378	9×2.12	2×2.24	23.6
CS299/263M-ET CS200/263L-ET CS146/263J-ET	380-3	1874	3.5	1378	9×2.12	2×2.24	23.6
CS299/363M-ET CS200/363L-ET CS146/363J-ET	380-3	2811	5.25	1378	6×3.1	2×3.2	25.0
CS373/363M-ET CS250/363L-ET CS182/363J-ET	380-3	2811	5.25	1378	9×3.1	2×3.2	34.3
CS448/363M-ET CS300/363L-ET CS219/363J-ET	380-3	2811	5.25	1378	9×3.1	2×3.2	34.3

Remarks: In the table, T_c is the cold-room temperature, and ΔT is the difference between the cold-room temperature and the evaporation temperature.

Outline & Installation Dimensions

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Model	Outline Dimensions (mm)			Installation Dimensions (mm)							
	L	W	H	A	B	B1	B2	B3	B4	C	Installation Hole
CS*/135**	900	515	590	380	530	/	/	/	/	300	4-φ13
CS*/235**	1400	515	590	380	1030	/	/	/	/	300	4-φ13
CS*/335**	1900	515	590	380	1530	/	/	/	/	300	4-φ13
CS*/435**	2400	515	590	380	2030	/	1000	/	/	300	6-φ13
CS*/140**	1050	540	730	430	680	/	/	/	/	400	4-φ13
CS*/240**	1700	540	730	430	1330	/	/	/	/	400	4-φ13
CS*/340**	2400	540	730	430	2030	/	/	/	/	400	4-φ13
CS*/440**	3000	540	730	430	2630	/	1300	/	/	400	6-φ13
CS*/540**	3650	540	730	430	3280	/	1300	1950	/	400	8-φ13
CS*/150**	1300	700	830	530	930	/	/	/	/	500	4-φ13
CS*/250**	2200	700	830	530	1830	900	/	/	/	500	6-φ13
CS*/350**	3100	700	830	530	2730	900	1800	/	/	500	8-φ13
CS*/450**	4000	700	830	530	3630	900	1800	2700	/	500	10-φ13
CS*/163**	1650	810	1030	620	1230	/	/	/	/	600	4-φ13
CS*/263**	2850	810	1030	620	2430	1200	/	/	/	600	6-φ13
CS*/363**	4050	810	1030	620	3630	1200	2400	/	/	600	8-φ13

