

ENGINEERING
TOMORROW

Danfoss

Catalogue | Standard MCHC condenser

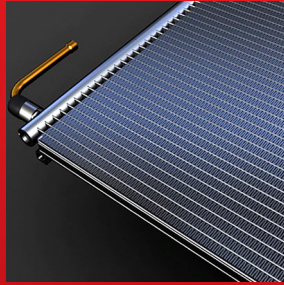
Save time and money with **MCHC** standard products

Micro-Channel Heat Exchanger

70%

Lower refrigerant
charge

Initial and lifetime
costs are significantly
reduced



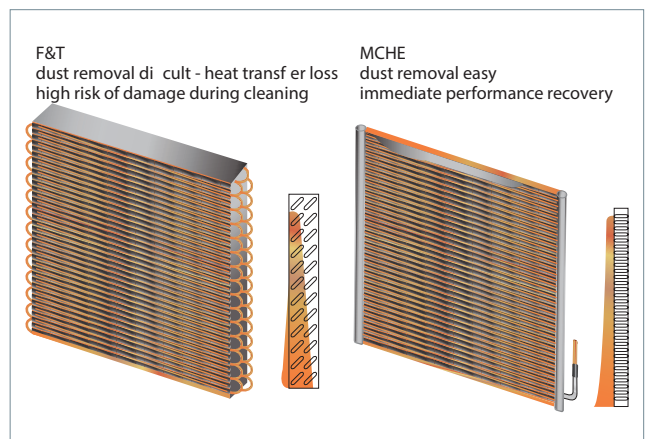
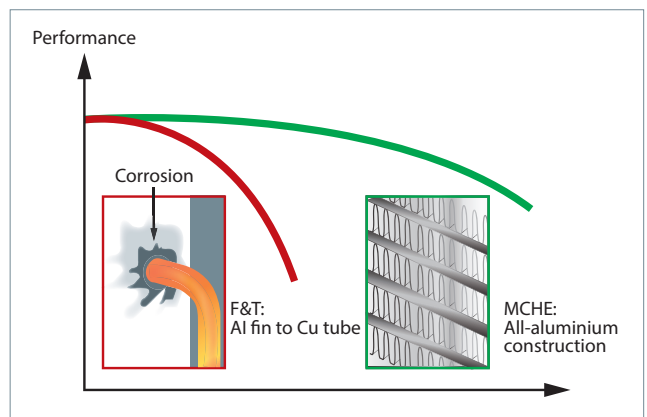
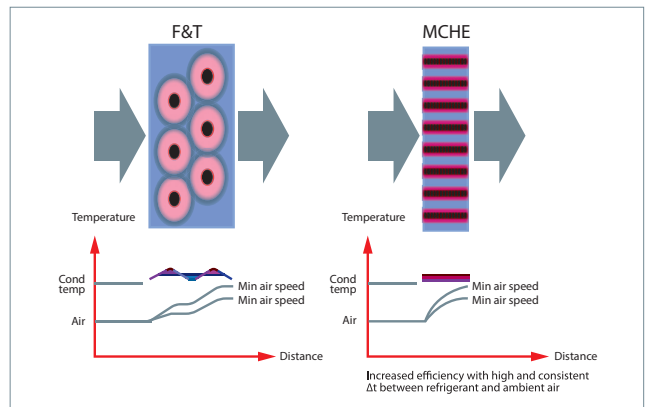
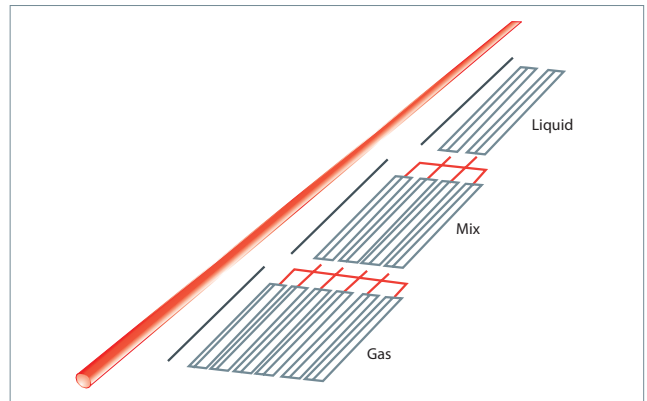


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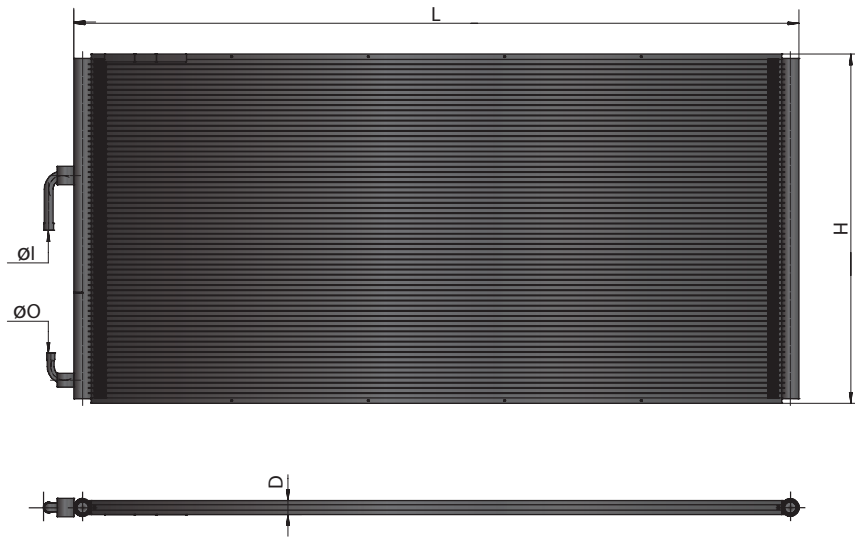
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Advantages – Comparison with Fin-Tube Heat Exchanger

- 1 Greater refrigerant-side heat transfer efficiency
- 2 Greater air-side heat transfer efficiency
- 3 Lower hold-up volumes and refrigerant charge
- 4 Compact design and light weight
- 5 Better corrosion characteristic
- 6 Lower noisy levels
- 7 Brazed tube to fin joint
- 8 Easy cleaning



Standard Specification



Standard Type	Total Length	Total Height	Tube Width	Inlet ID	Outlet ID	Coil Weight	Page
	[L]	[H]	[D]	[Φ]	[ΦO]		
	[mm/in]	[mm/in]	[mm/in]	[mm/in]	[mm/in]	[KG/LB]	
D1000-C	332/13.07	300.7/11.84	16/0.63	6.15/0.24	6.15/0.24	0.823/1.81	6
D1100-C	387/15.24	347.7/13.69	16/0.63	6.15/0.24	6.15/0.24	1.071/2.36	8
D1200-C	462/18.19	432.3/17.02	16/0.63	8.2/0.32	6.15/0.24	1.534/3.37	10
D1300-C	552/21.73	516.9/20.35	16/0.63	9.7/0.38	8.2/0.32	2.22/4.88	12
D1400-C	800/31.5	770.7/30.34	16/0.63	9.7/0.38	9.7/0.38	4.51/9.92	14
D1500-C	1074/42.28	516.9/20.35	25.4/1	12.9/0.51	12.9/0.51	6.515/14.33	16
D1600-C	1300/51.18	639.1/25.16	16/0.63	12.9/0.51	12.9/0.51	6.012/13.23	18
D1700-C	1324/52.13	639.1/25.16	25.4/1	16.1/0.63	12.9/0.51	9.777/21.51	20
D1800-C	1074/42.28	1212.5/47.74	25.4/1	22.4/0.88	22.4/0.88	15.139/33.31	22
D1900-C	1274/50.16	1362.9/53.66	25.4/1	22.4/0.88	22.4/0.88	19.88/43.74	24
D2000-C	2000/78.74	1058.3/41.67	25.4/1	25.4/1(OD)	22.4/0.88	26.273/57.8	26

Common Working Conditions

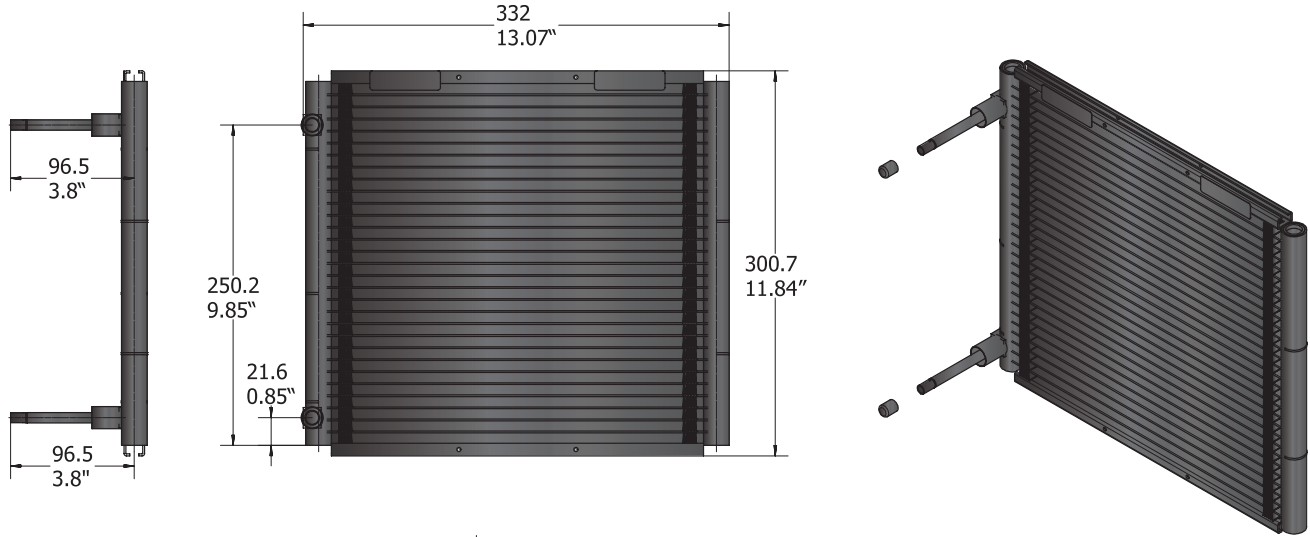
Working conditions	Units	Contents
Type of refrigerant	/	R410A / R134a
		R404A / R407C
Inlet air temperature	°C / °F	35/95
Inlet relative humidity	%	50
Sub cooling	K	4
Variable1: ($\Delta T=10$ K / 18 °F)		
Condensing temperature	°C / °F	45/113
Inlet refrigerant temperature	°C / °F	75/167
Variable1: ($\Delta T=15$ K / 27 °F)		
Condensing temperature	°C / °F	50/122
Inlet refrigerant temperature	°C / °F	80/176
Variable1: ($\Delta T=20$ K / 36 °F)		
Condensing temperature	°C / °F	55/131
Inlet refrigerant temperature	°C / °F	85/185
Variable1: ($\Delta T=25$ K / 45 °F)		
Condensing temperature	°C / °F	60/140
Inlet refrigerant temperature	°C / °F	90/194
Variable2: (air velocity)	[m/s] / [ft/min]	1.0/197
		1.5/295
		2.0/394
		2.5/492
		3.0/591

Remarks: ΔT = Condense temp. - Inlet air temp.

D1000-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

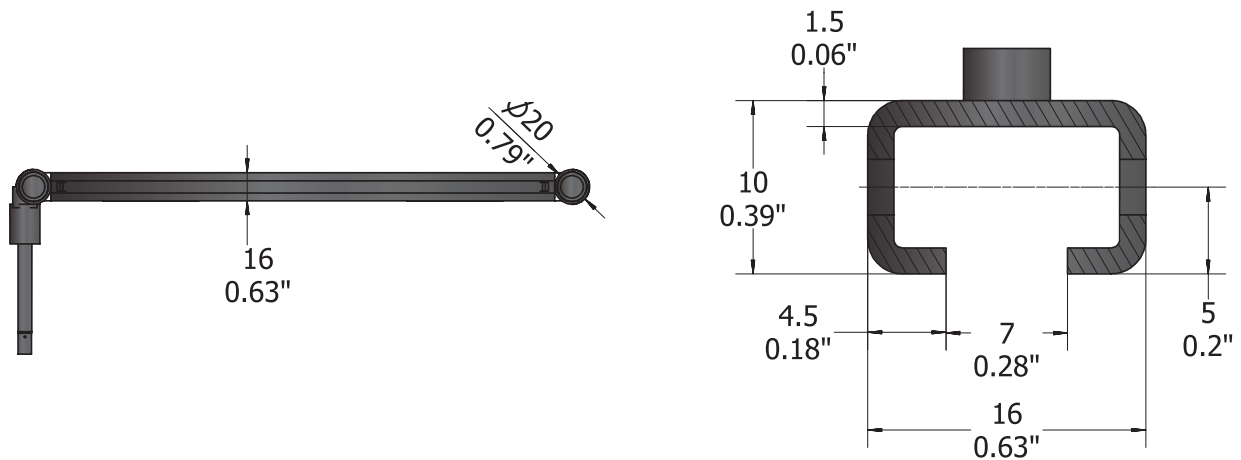


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1000-C	332 [mm]	300.7 [mm]	16 [mm]	1.1 [mm]	8.1 [mm]	20 [mm]
	13.07 [in]	11.84 [in]	0.63 [in]	23 [FPI]	0.32 [in]	0.79 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1000-C	1.3 [mm]	29	0.17 [L]	0.823 [KG]	6.15 [mm]	6.15 [mm]
	0.05 [in]		10.37 [in³]	1.81 [LB]	0.24 [in]	0.24 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



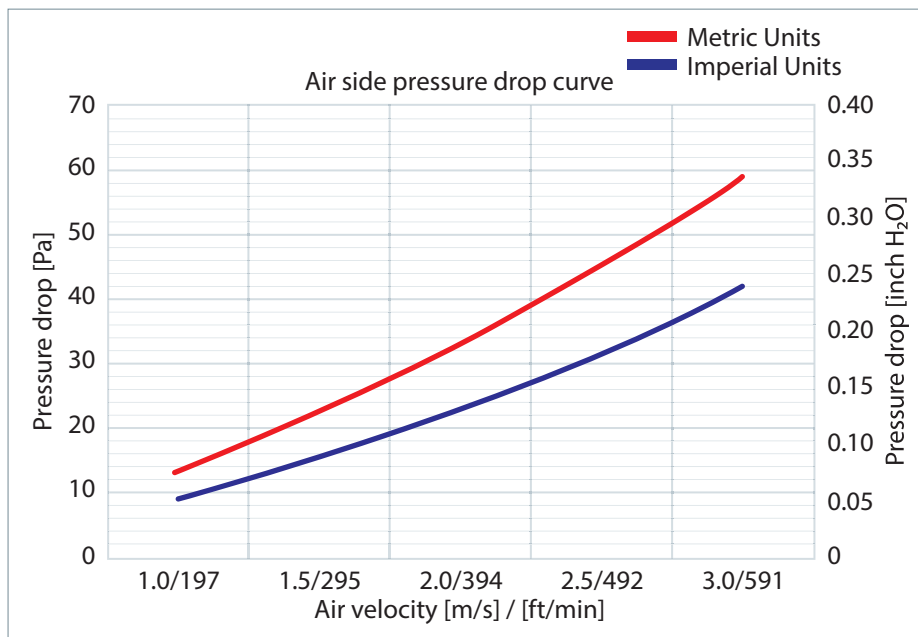
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	0.8/2.73	1.22/4.16	1.69/5.77	2.14/7.3	0.76/2.59	1.17/3.99	1.58/5.39	2.02/6.89
1.5/295	1.1/3.75	1.75/5.97	2.38/8.12	3.00/10.24	1.04/3.55	1.61/5.49	2.23/7.61	2.82/9.62
2.0/394	1.36/4.64	2.2/7.51	2.98/10.17	3.77/12.86	1.28/4.37	1.99/6.79	2.77/9.45	3.5/11.94
2.5/492	1.67/5.7	2.59/8.84	3.52/12.01	4.47/15.25	1.49/5.08	2.39/8.15	3.25/11.09	4.08/13.92
3.0/591	1.9/6.48	2.96/10.1	4.02/13.72	5.11/17.44	1.67/5.7	2.71/9.25	3.67/12.52	4.61/15.73

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	0.79/2.7	1.25/4.27	1.69/5.77	2.14/7.3	0.52/1.77	0.87/2.97	1.42/4.85	1.89/6.45
1.5/295	1.07/3.65	1.75/5.97	2.36/8.05	2.99/10.2	0.7/2.39	1.35/4.61	2.02/6.89	2.65/9.04
2.0/394	1.4/4.78	2.18/7.44	2.95/10.07	3.74/12.76	0.86/2.93	1.67/5.7	2.53/8.63	3.31/11.29
2.5/492	1.65/5.63	2.56/8.73	3.48/11.87	4.41/15.05	0.99/3.38	2.04/6.96	2.98/10.17	3.9/13.31
3.0/591	1.88/6.41	2.91/9.93	3.95/13.48	5.02/17.13	1.1/3.75	2.32/7.92	3.38/11.53	4.44/15.15

Air-side Pressure Drop Data

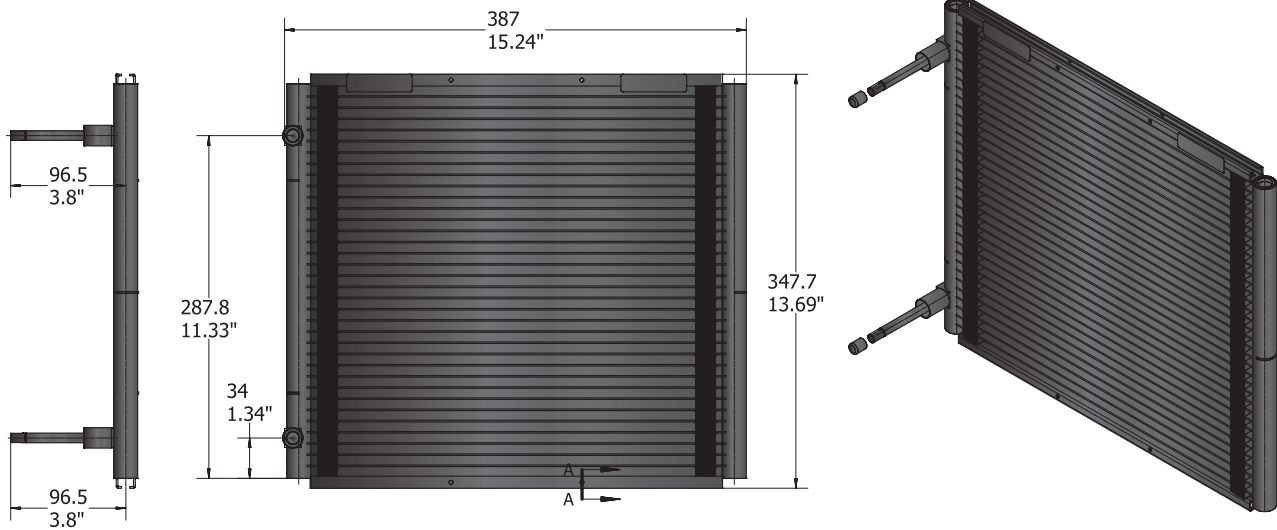
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	13.4/0.05	284.97/167.63
1.5/295	22.5/0.09	427.45/251.44
2.0/394	33.10/0.13	569.93/335.25
2.5/492	45.2/0.18	712.42/419.07
3.0/591	58.8/0.24	854.9/502.88



D1100-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

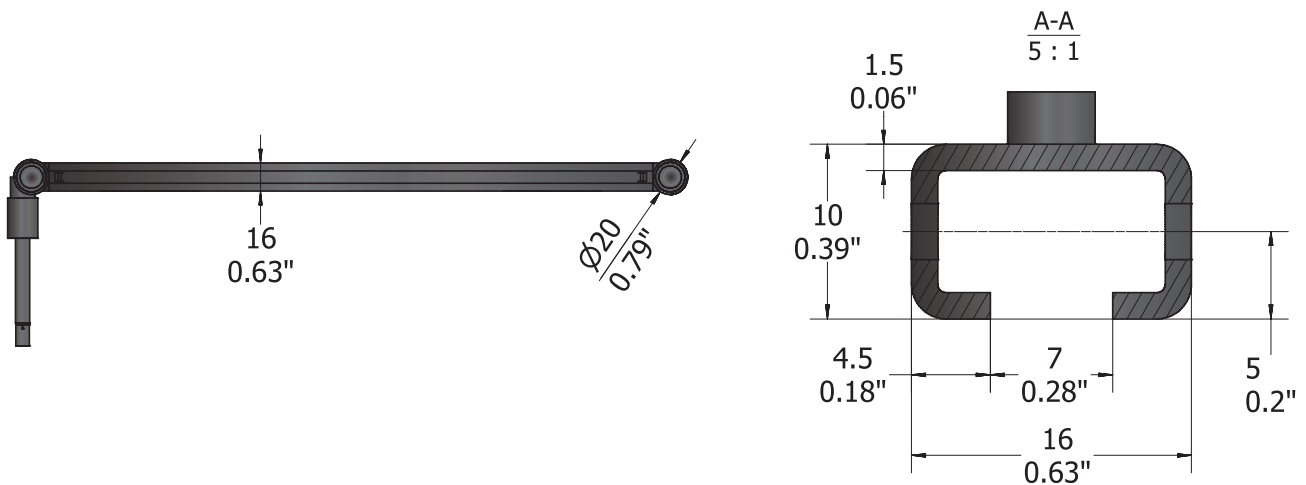


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1100-C	387 [mm]	347.7 [mm]	16 [mm]	1.1 [mm]	8.1 [mm]	20 [mm]
	15.24 [in]	13.69 [in]	0.63 [in]	23 [FPI]	0.32 [in]	0.79 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1100-C	1.3 [mm]	29	0.22 [L]	1.071 [KG]	6.15 [mm]	6.15 [mm]
	0.05 [in]		13.42 [in³]	2.36 [LB]	0.24 [in]	0.24 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



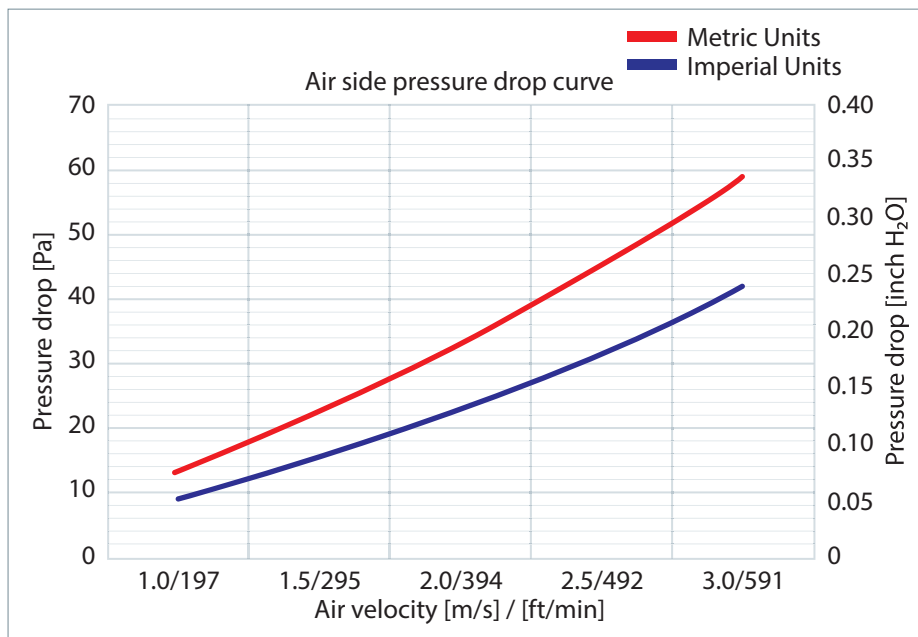
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	1.1/3.75	1.69/5.77	2.29/7.81	2.96/10.1	1.05/3.58	1.63/5.56	2.2/7.51	2.77/9.45
1.5/295	1.51/5.15	2.34/7.98	3.28/11.19	4.16/14.19	1.44/4.91	2.24/7.64	3.03/10.34	3.83/13.07
2.0/394	1.87/6.38	2.98/10.17	4.11/14.02	5.24/17.88	1.77/6.04	2.76/9.42	3.75/12.8	4.88/16.65
2.5/492	2.19/7.47	3.57/12.18	4.88/16.65	6.21/21.19	2.06/7.03	3.22/10.99	4.39/14.98	5.74/19.58
3.0/591	2.48/8.46	4.07/13.89	5.58/19.04	7.11/24.26	2.32/7.92	3.64/12.42	5.14/17.54	6.49/22.14

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	1.09/3.72	1.68/5.73	2.34/7.98	2.97/10.13	0.71/2.42	1.36/4.64	1.97/6.72	2.58/8.8
1.5/295	1.48/5.05	2.3/7.85	3.27/11.16	4.16/14.19	0.96/3.28	1.87/6.38	2.72/9.28	3.66/12.49
2.0/394	1.81/6.18	3/10.24	4.1/13.99	5.22/17.81	1.17/3.99	2.31/7.88	3.37/11.5	4.59/15.66
2.5/492	2.11/7.2	3.54/12.08	4.84/16.51	6.17/21.05	1.35/4.61	2.7/9.21	4.11/14.02	5.42/18.49
3.0/591	2.37/8.09	4.03/13.75	5.52/18.83	7.03/23.99	1.51/5.15	3.06/10.44	4.69/16	6.18/21.09

Air-side Pressure Drop Data

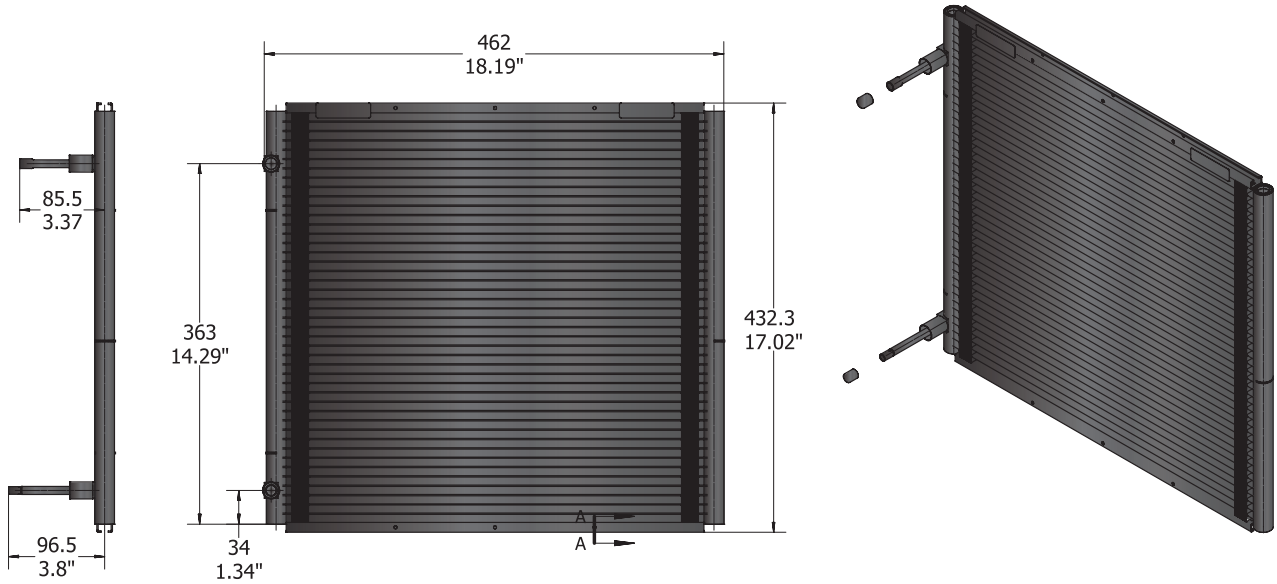
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	13.4/0.05	397.56/233.86
1.5/295	22.5/0.09	596.35/350.79
2.0/394	33.10/0.13	795.13/467.72
2.5/492	45.2/0.18	993.91/548.65
3.0/591	58.8/0.24	1192.7/701.59



D1200-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

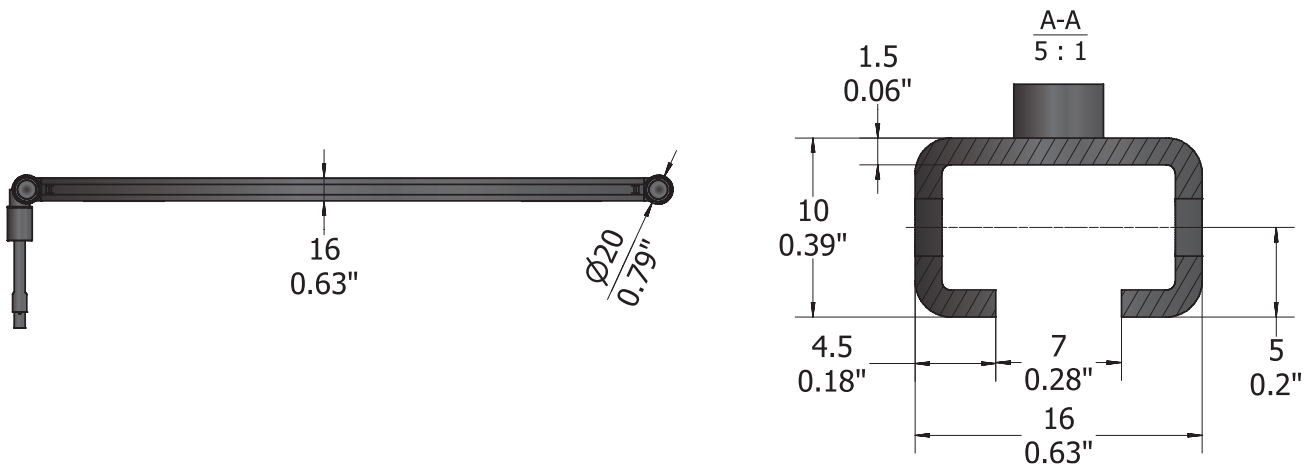


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1200-C	462 [mm]	432.3 [mm]	16 [mm]	1.1 [mm]	8.1 [mm]	20 [mm]
	18.19 [in]	17.02 [in]	0.63 [in]	23 [FPI]	0.32 [in]	0.79 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1200-C	1.3 [mm]	43	0.3 [L]	1.534 [KG]	8.2 [mm]	6.15 [mm]
	0.05 [in]		18.3 [in ³]	3.37 [LB]	0.32 [in]	0.24 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHEx to move in two dimensions.



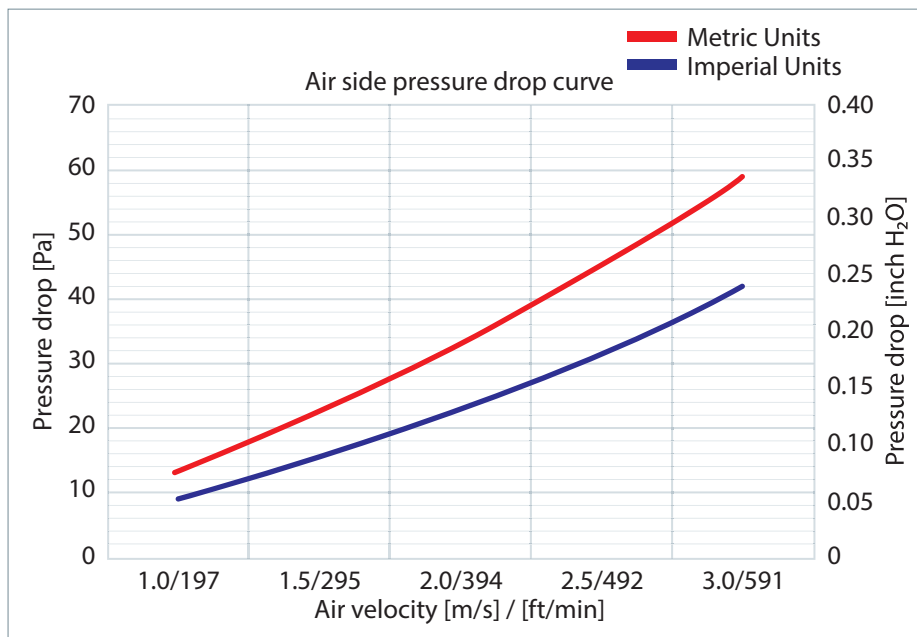
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	1.72/5.87	2.64/9.01	3.63/12.39	4.59/15.66	1.64/5.6	2.53/8.63	3.4/11.6	4.34/14.81
1.5/295	2.37/8.09	3.76/12.83	5.09/17.37	6.45/22.01	3.46/11.81	3.46/11.81	4.77/16.28	6.03/20.57
2.0/394	2.93/10	4.71/16.07	6.39/21.8	8.1/27.64	2.75/9.38	4.26/14.54	5.94/20.27	7.49/25.56
2.5/492	3.58/12.21	5.58/19.04	7.57/25.83	9.6/32.76	3.19/10.88	4.96/16.92	6.94/23.68	8.73/29.79
3.0/591	4.08/13.92	6.35/21.67	8.64/29.48	10.97/37.43	3.58/12.21	5.77/19.69	7.84/26.75	9.85/33.61

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	1.69/5.77	2.69/9.18	3.64/12.42	4.6/15.7	1.11/3.79	2.12/7.23	3.06/10.44	4.06/13.85
1.5/295	2.3/7.85	3.75/12.8	5.08/17.33	6.43/21.94	1.51/5.15	2.92/9.96	4.33/14.77	5.68/19.38
2.0/394	2.99/10.2	4.68/15.97	6.34/21.63	8.03/27.4	1.84/6.28	3.59/12.25	5.42/18.49	7.09/24.19
2.5/492	3.53/12.04	5.5/18.77	7.47/25.49	9.47/32.31	2.11/7.2	4.2/14.33	6.39/21.8	8.36/28.52
3.0/591	4.01/13.68	6.24/21.29	8.49/28.97	10.76/36.71	2.36/8.05	4.97/16.96	7.25/24.74	9.51/32.45

Air-side Pressure Drop Data

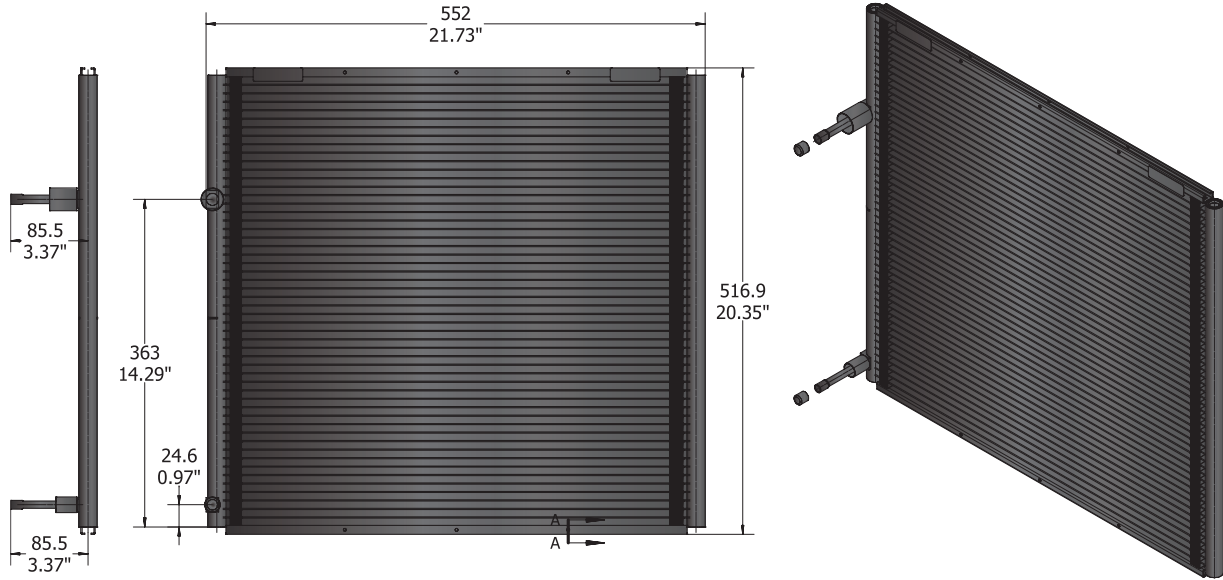
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	13.4/0.05	611.52/359.72
1.5/295	22.5/0.09	917.29/539.78
2.0/394	33.10/0.13	1223.05/719.44
2.5/492	45.2/0.18	1528.81/899.30
3.0/591	58.8/0.24	1834.57/1079.16



D1300-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

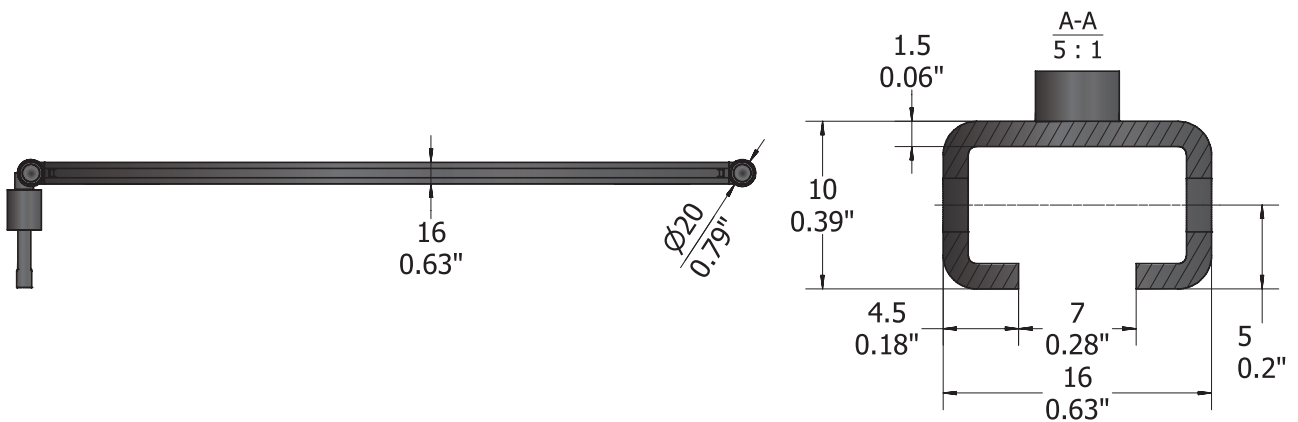


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1300-C	552 [mm]	516.9 [mm]	16 [mm]	1.1 [mm]	8.1 [mm]	20 [mm]
	21.73 [in]	20.35 [in]	0.63 [in]	23 [FPI]	0.32 [in]	0.79 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1300-C	1.3 [mm]	52	0.4 [L]	2.22 [KG]	9.7 [mm]	8.20 [mm]
	0.05 [in]		24.4 [in ³]	4.88 [LB]	0.38 [in]	0.32 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



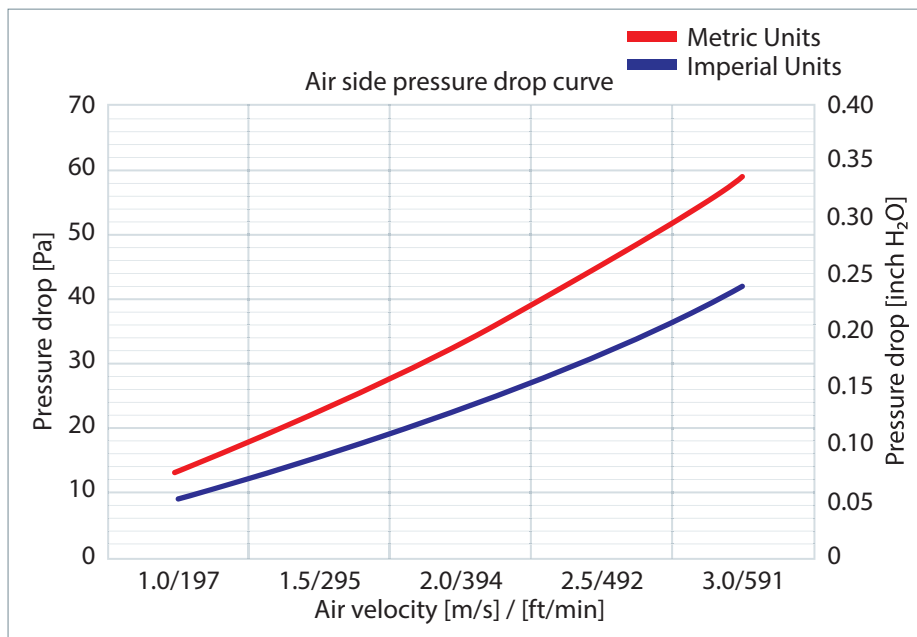
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	2.08/7.1	3.73/12.73	5.08/17.33	6.42/21.91	2.3/7.85	3.61/12.32	4.91/16.75	6.2/21.15
1.5/295	3.27/11.16	5.15/17.57	7.02/23.95	9.23/31.49	3.15/10.75	4.98/16.99	6.78/23.13	8.57/29.24
2.0/394	4.05/13.82	6.39/21.8	9.04/30.84	11.61/39.61	3.89/13.27	6.16/21.02	8.41/28.69	10.65/36.34
2.5/492	4.75/16.21	7.49/25.56	10.74/36.64	13.79/47.05	4.54/15.49	7.22/24.63	9.85/33.61	12.49/42.62
3.0/591	5.37/18.32	8.49/28.97	12.49/42.62	15.79/53.88	5.13/17.5	8.16/27.84	11.18/38.15	14.41/49.17

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	2.37/8.09	3.71/12.66	5.04/17.2	6.55/22.35	1.44/4.91	2.98/10.17	4.37/14.91	5.74/19.58
1.5/295	3.23/11.02	5.08/17.33	6.91/23.58	9.27/31.63	1.87/6.38	4.1/13.99	6.03/20.57	7.95/27.13
2.0/394	3.96/13.51	6.26/21.36	9.07/30.95	11.65/39.75	2.51/8.56	5.08/17.33	7.49/25.56	9.88/33.71
2.5/492	4.61/15.73	7.29/24.87	10.75/36.68	13.79/47.05	2.93/10	5.93/20.23	8.78/29.96	11.67/39.82
3.0/591	5.18/17.67	8.31/28.35	12.28/41.9	15.77/53.81	3.27/11.16	6.7/22.86	9.94/33.92	13.73/46.85

Air-side Pressure Drop Data

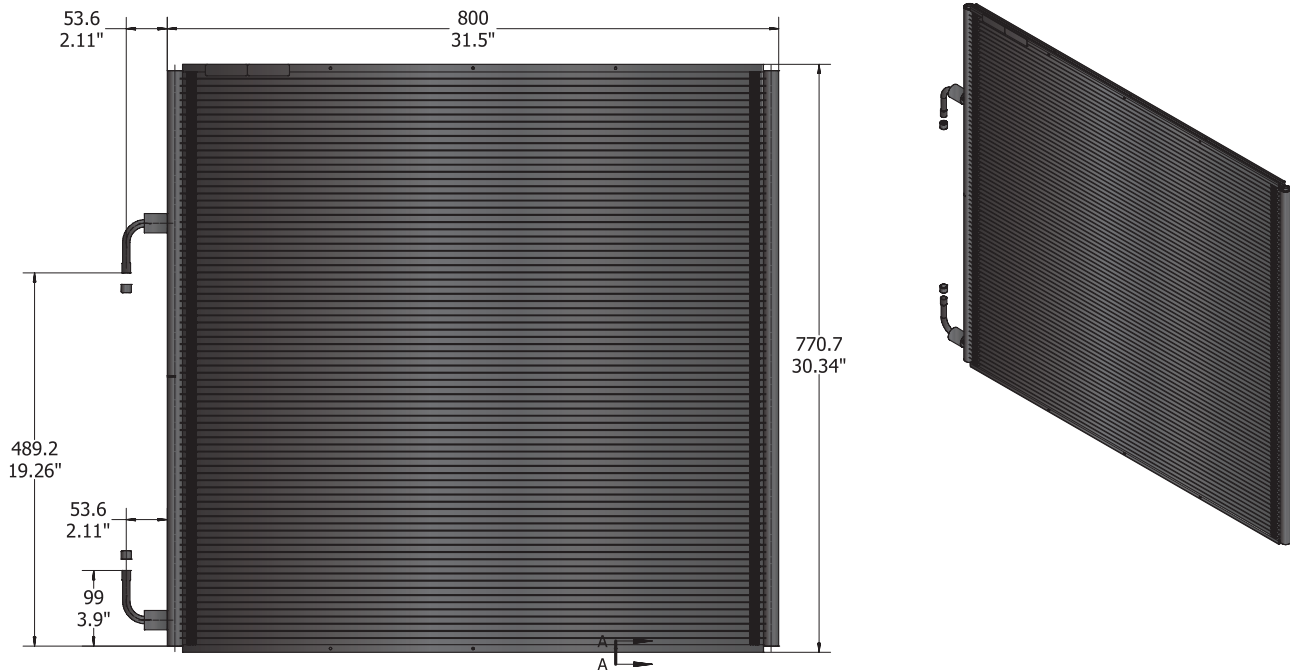
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	13.4/0.05	898/528.24
1.5/295	22.5/0.09	1347/792.35
2.0/394	33.10/0.13	1796/1056.47
2.5/492	45.2/0.18	2245/1320.59
3.0/591	58.8/0.24	2694/1584.71



D1400-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

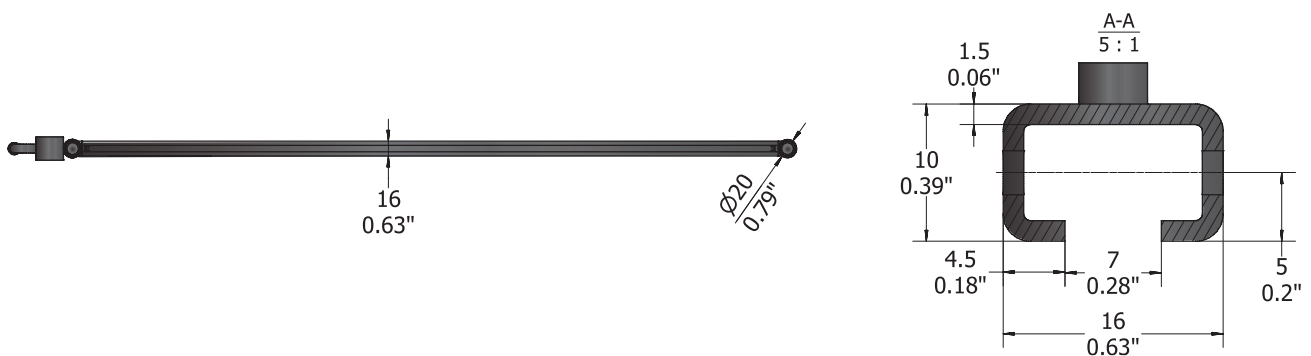


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1400-C	800 [mm]	770.7 [mm]	16 [mm]	1.1 [mm]	8.1 [mm]	20 [mm]
	31.5 [in]	30.34 [in]	0.63 [in]	23 [FPI]	0.32 [in]	0.79 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1400-C	1.3 [mm]	79	0.74 [L]	4.51 [KG]	9.7 [mm]	9.7 [mm]
	0.05 [in]		45.14 [in³]	9.92 [LB]	0.38 [in]	0.38 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



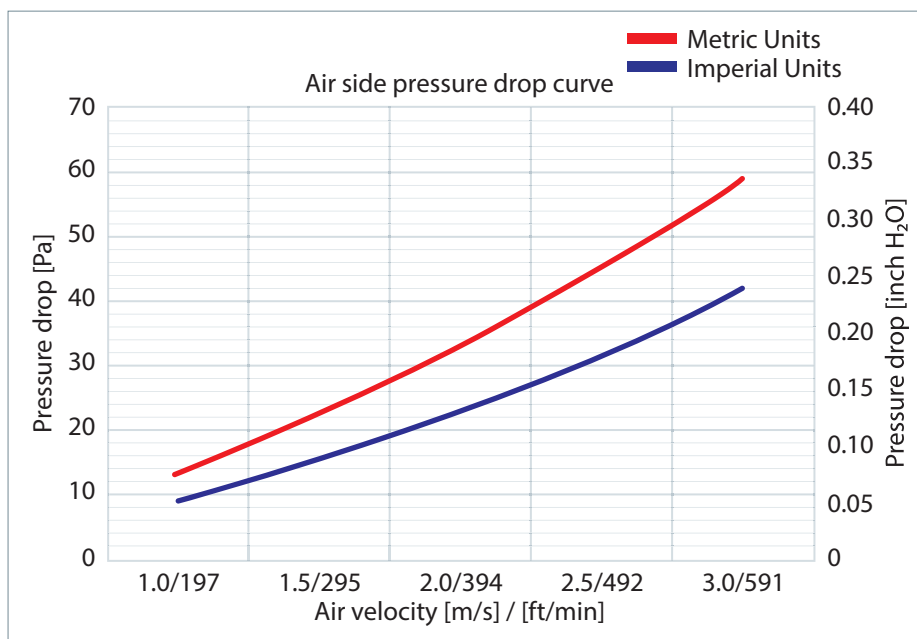
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	5.64/19.24	8.69/29.65	11.73/40.02	15.15/51.69	5.43/18.53	8.36/28.52	11.27/38.45	14.17/48.35
1.5/295	7.79/26.58	12.02/41.01	16.76/57.19	21.29/72.64	7.43/25.35	11.5/39.24	15.55/53.06	19.57/66.77
2.0/394	9.66/32.96	14.93/50.94	21.05/71.82	26.75/91.27	9.15/31.22	14.2/48.45	19.23/65.61	24.77/84.52
2.5/492	11.32/38.62	18.26/62.3	24.93/85.06	31.72/108.23	10.65/36.34	16.56/56.5	22.49/76.74	29.08/99.22
3.0/591	12.82/43.74	20.86/71.17	28.5/97.24	36.26/123.72	11.98/40.88	18.69/63.77	26.17/89.29	32.96/112.46

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	5.58/19.04	8.62/29.41	11.99/40.91	15.2/51.86	3.68/12.56	7/23.88	10.13/34.56	13.24/45.17
1.5/295	7.64/26.07	11.82/40.33	16.76/57.19	21.26/72.54	5/17.06	9.66/32.96	14.01/47.8	18.6/63.46
2.0/394	9.39/32.04	15.35/52.37	20.95/71.48	26.63/90.86	6.12/20.88	11.94/40.74	17.39/59.33	23.44/79.98
2.5/492	10.91/37.22	18.11/61.79	24.72/84.34	31.42/107.21	7.1/24.23	13.95/47.6	20.87/71.21	27.68/94.44
3.0/591	12.27/41.87	20.6/70.29	28.15/96.05	35.78/122.08	7.92/27.02	15.79/53.88	23.91/81.58	31.53/107.58

Air-side Pressure Drop Data

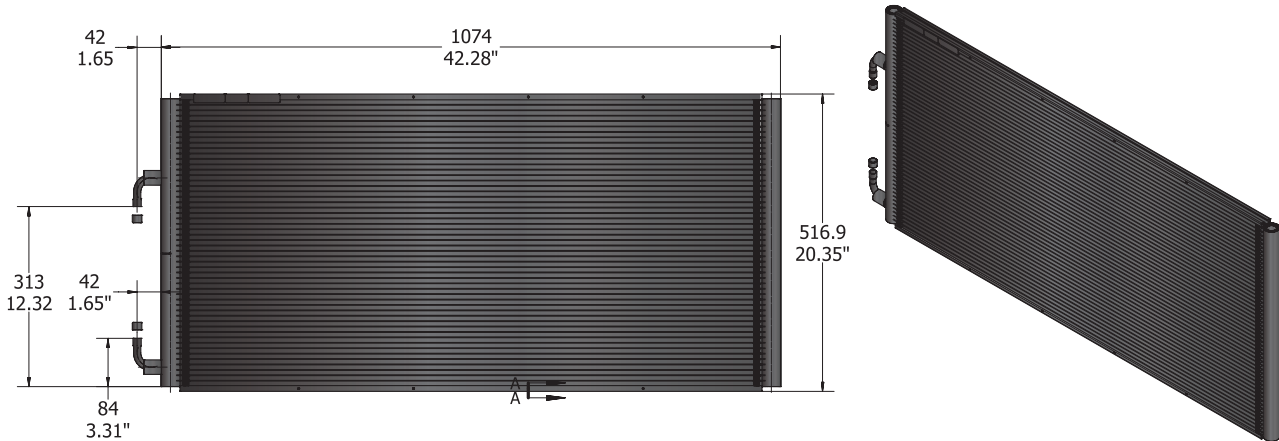
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	13.4/0.05	2026.89/1192.29
1.5/295	22.5/0.09	3040.33/1788.43
2.0/394	33.10/0.13	4053.78/2384.58
2.5/492	45.2/0.18	5067.2/2980.72
3.0/591	58.8/0.24	6080.67/3576.86



D1500-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

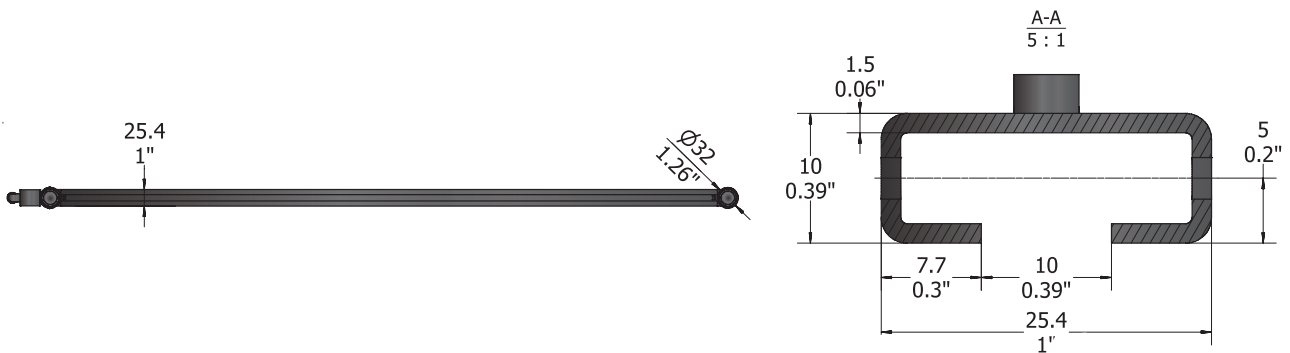


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1500-C	1074 [mm]	516.9 [mm]	25.4 [mm]	1.1 [mm]	8.1 [mm]	32 [mm]
	42.28 [in]	20.35 [in]	1 [in]	23 [FPI]	0.32 [in]	1.26 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1500-C	1.3 [mm]	52	1.15 [L]	6.515 [KG]	12.9 [mm]	12.9 [mm]
	0.05 [in]		70.76 [in ³]	14.33 [LB]	0.51 [in]	0.51 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



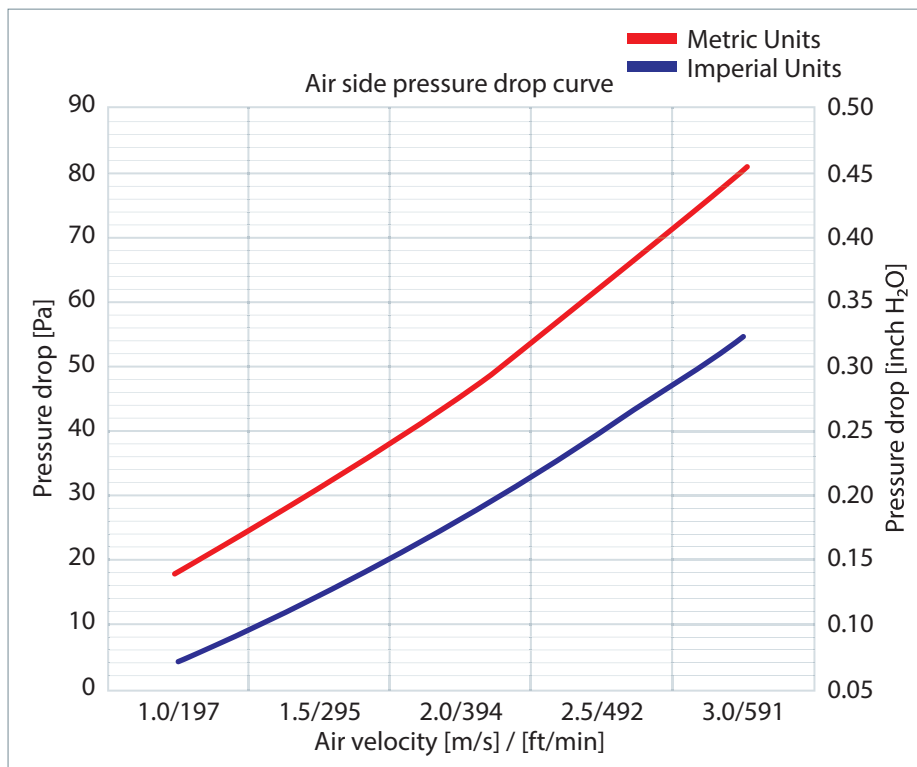
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	5.54/18.9	8.24/28.11	11.33/38.66	14.41/49.17	5.31/18.12	8.1/27.64	10.85/37.02	13.62/46.47
1.5/295	7.9/26.95	12.05/41.11	16.47/56.2	20.79/70.94	7.48/25.52	11.46/39.1	15.41/52.58	19.36/66.06
2.0/394	10.03/34.22	15.33/52.31	21.12/72.06	26.68/91.03	9.4/32.07	14.45/49.3	19.49/66.5	24.86/84.82
2.5/492	11.97/40.84	18.78/64.08	25.42/86.73	32.13/109.63	11.11/37.91	17.14/58.48	23.12/78.89	29.46/100.52
3.0/591	13.75/46.92	21.73/74.14	29.41/100.35	37.22/126.99	12.67/43.23	19.58/66.81	26.92/91.85	33.71/115.02

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	5.52/18.83	8.41/28.69	11.29/38.52	14.45/49.3	3.7/12.62	2.98/10.17	9.81/33.47	12.74/43.47
1.5/295	7.8/26.61	11.92/40.67	16.47/56.2	20.78/70.9	5.19/17.71	4.1/13.99	13.99/47.73	18.19/62.06
2.0/394	9.82/33.51	15.57/53.12	21.01/71.69	26.53/90.52	6.51/22.21	5.08/17.33	17.74/60.53	23.5/80.18
2.5/492	11.64/39.72	18.6/63.46	25.17/85.88	31.79/108.47	7.69/26.24	5.93/20.23	21.2/72.33	28.18/96.15
3.0/591	13.28/45.31	21.41/73.05	28.97/98.85	36.63/124.98	8.75/29.86	16.84/57.46	24.93/85.06	32.48/110.82

Air-side Pressure Drop Data

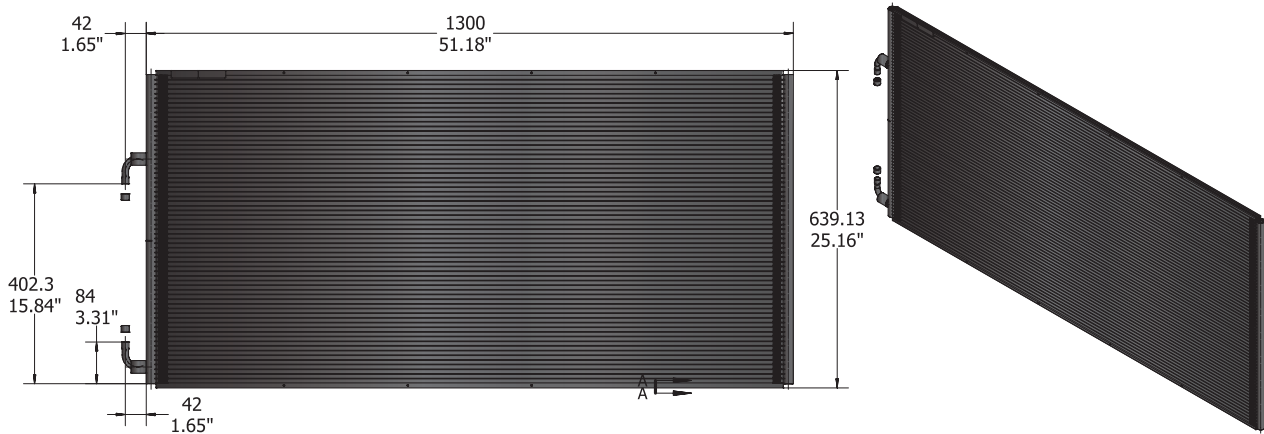
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	18.3/0.07	1788.84/1052.26
1.5/295	30.6/0.12	2683.26/1578.39
2.0/394	45.1/0.18	3577.68/2104.52
2.5/492	61.8/0.25	4472.1/2630.65
3.0/591	80.6/0.32	5366.52/3156.78



D1600-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

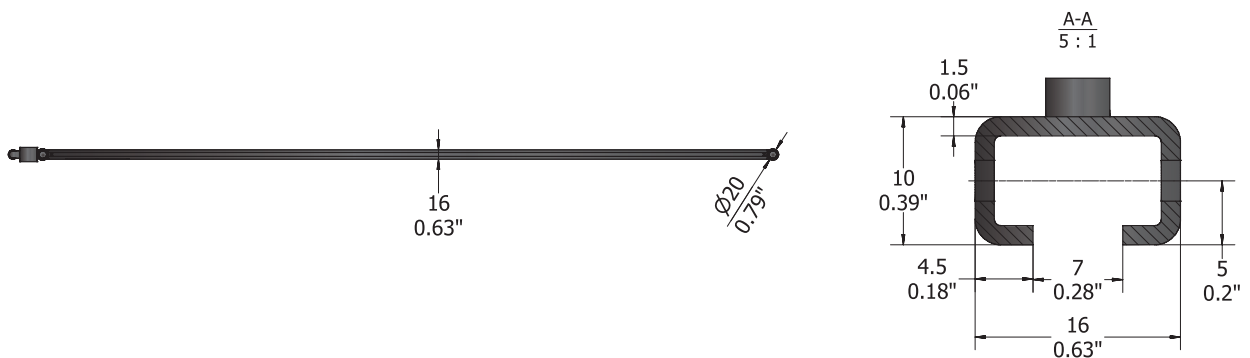


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1600-C	1300 [mm]	639.1 [mm]	16 [mm]	1.1 [mm]	8.1 [mm]	20 [mm]
	51.18 [in]	25.16 [in]	0.63 [in]	23 [FPI]	0.32 [in]	0.79 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1600-C	1.3 [mm]	65	0.84 [L]	6.012 [KG]	12.9 [mm]	12.9 [mm]
	0.05 [in]		51.24 [in ³]	13.23 [LB]	0.51 [in]	0.51 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



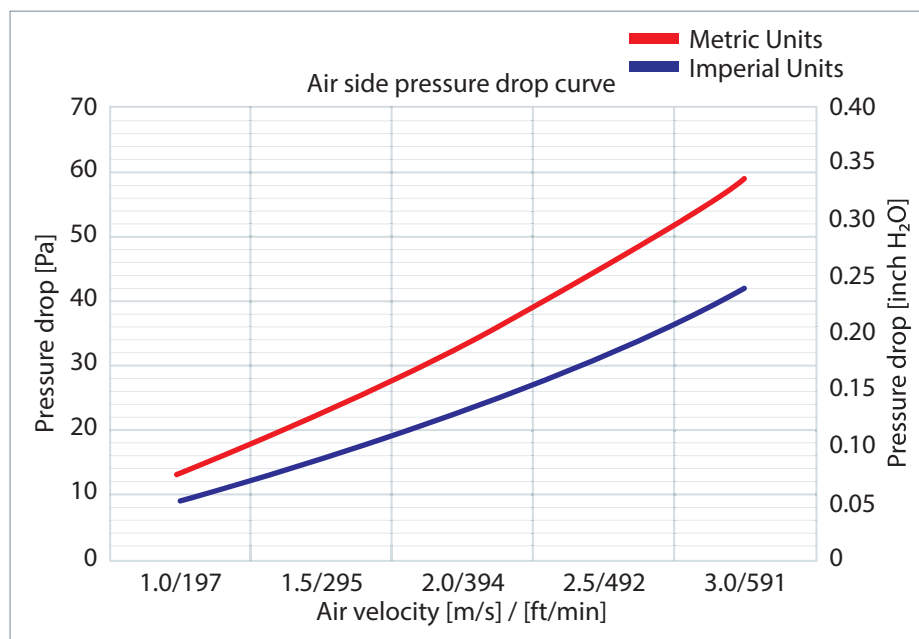
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	7.99/27.26	12.15/41.46	16.6/56.64	20.93/71.41	7.42/25.32	11.33/38.66	15.26/52.07	19.4/66.19
1.5/295	11.02/37.6	17.16/58.55	23.13/78.92	29.19/99.6	10/34.12	15.36/52.41	20.98/71.58	26.13/89.16
2.0/394	13.64/46.54	21.4/73.02	28.84/98.4	36.4/124.2	12.12/41.35	18.68/63.74	25.15/85.81	31.71/108.19
2.5/492	16.41/55.99	25.12/85.71	33.89/115.63	42.78/145.97	13.91/47.46	21.48/73.29	28.81/98.3	36.32/123.92
3.0/591	18.6/63.46	28.48/97.17	38.39/130.99	48.49/165.45	15.44/52.68	24.27/82.81	31.89/108.81	40.24/137.3

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	7.83/26.72	12.23/41.73	16.46/56.16	20.74/70.76	5.22/17.81	9.77/33.34	14.03/47.87	18.43/62.88
1.5/295	10.65/36.34	16.83/57.42	22.68/77.38	28.59/97.55	7.02/23.95	13.39/45.69	19.51/66.57	25.43/86.77
2.0/394	13.62/46.47	20.74/70.76	27.92/95.26	35.26/120.31	8.51/29.04	16.45/56.13	24.08/82.16	31.39/107.1
2.5/492	15.73/53.67	24.09/82.2	32.46/110.75	40.98/139.82	9.75/33.27	19.53/66.64	28.01/95.57	36.55/124.71
3.0/591	17.67/60.29	27.03/92.23	36.41/124.23	45.97/156.85	10.81/36.88	21.85/74.55	31.46/107.34	41.05/140.06

Air-side Pressure Drop Data

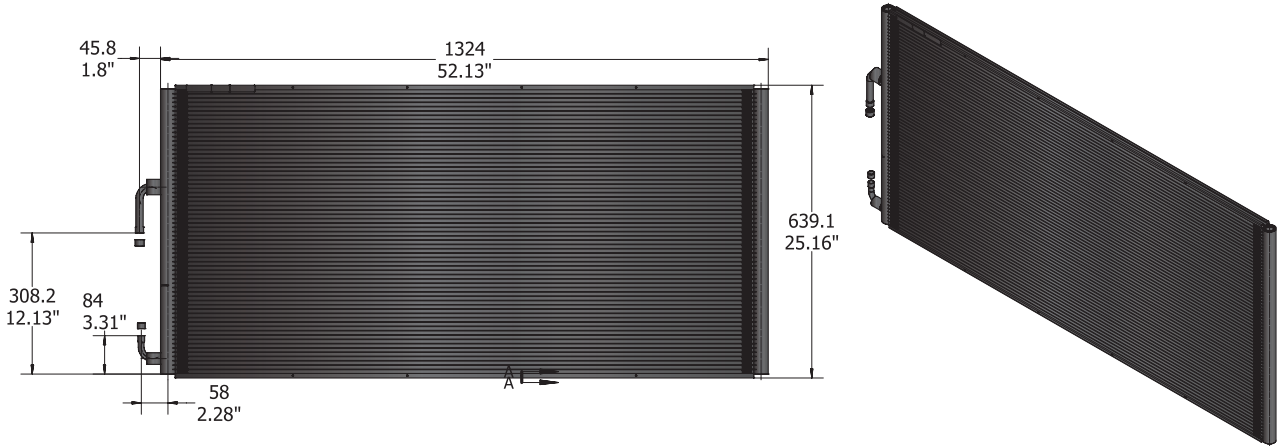
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	13.4/0.05	2785.95/1638.79
1.5/295	22.5/0.09	4178.93/2458.19
2.0/394	33.10/0.13	5571.9/3277.59
2.5/492	45.2/0.18	6964.88/4096.99
3.0/591	58.8/0.24	8357.85/4916.38



D1700-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

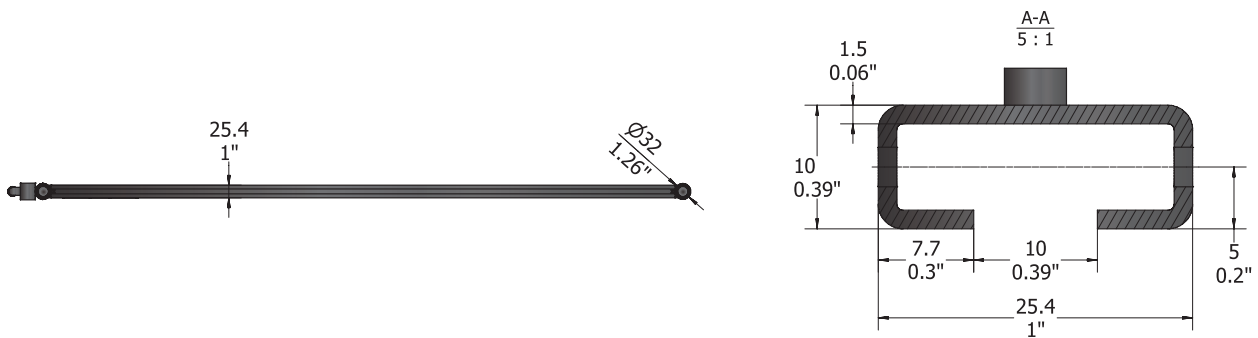


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1700-C	1324 [mm]	639.1 [mm]	25.4 [mm]	1.1 [mm]	8.1 [mm]	32 [mm]
	52.13 [in]	25.16 [in]	1 [in]	23 [FPI]	0.32 [in]	1.26 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1700-C	1.3 [mm]	65	1.63 [L]	9.777 [KG]	16.1 [mm]	12.9 [mm]
	0.05 [in]		99.43 [in ³]	21.51 [LB]	0.63 [in]	0.51 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



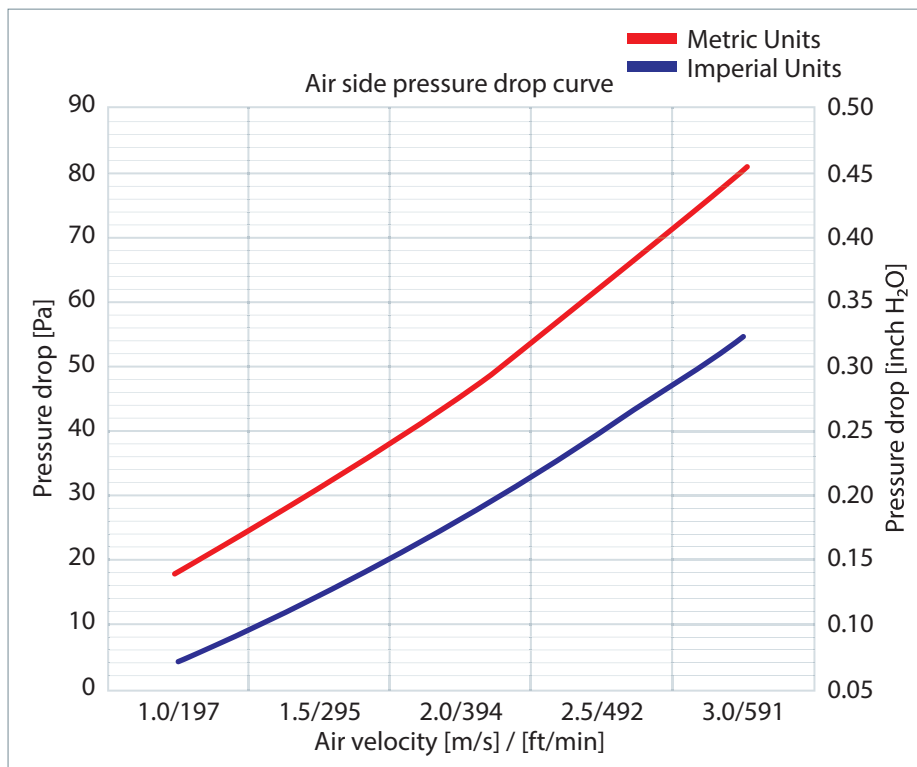
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	8.66/29.55	13.17/44.94	17.88/61.01	22.5/76.77	8.31/28.35	12.64/43.13	16.94/57.8	21.37/72.91
1.5/295	12.36/42.17	19.13/65.27	25.77/87.93	32.45/110.72	11.72/39.99	17.91/61.11	24.27/82.81	30.53/104.17
2.0/394	16.01/54.63	24.53/83.7	32.98/112.53	41.6/141.94	14.74/50.29	22.6/77.11	30.76/104.95	38.75/132.22
2.5/492	19.25/65.68	29.5/100.65	39.7/135.46	50.06/170.8	17.44/59.51	27.16/92.67	36.62/124.95	45.81/156.3
3.0/591	22.26/75.95	34.03/116.11	45.89/156.58	57.95/197.73	19.88/67.83	31.08/106.04	41.98/143.24	52.35/178.62

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	8.64/29.48	13.36/45.58	17.95/61.25	22.55/76.94	5.81/19.82	10.71/36.54	15.33/52.31	20.04/68.38
1.5/295	12.2/41.63	19.13/65.27	25.7/87.69	32.36/110.41	8.16/27.84	15.24/52	22.14/75.54	28.81/98.3
2.0/394	15.9/54.25	24.41/83.29	32.75/111.74	41.27/140.81	10.21/34.84	19.27/65.75	28.26/96.42	36.68/125.15
2.5/492	19.04/64.96	29.09/99.26	39.18/133.68	49.39/168.52	12.04/41.08	23.48/80.11	33.87/115.56	43.92/149.86
3.0/591	21.91/74.76	33.41/113.99	44.95/153.37	56.83/193.9	13.68/46.68	27.05/92.29	39.05/133.24	50.58/172.58

Air-side Pressure Drop Data

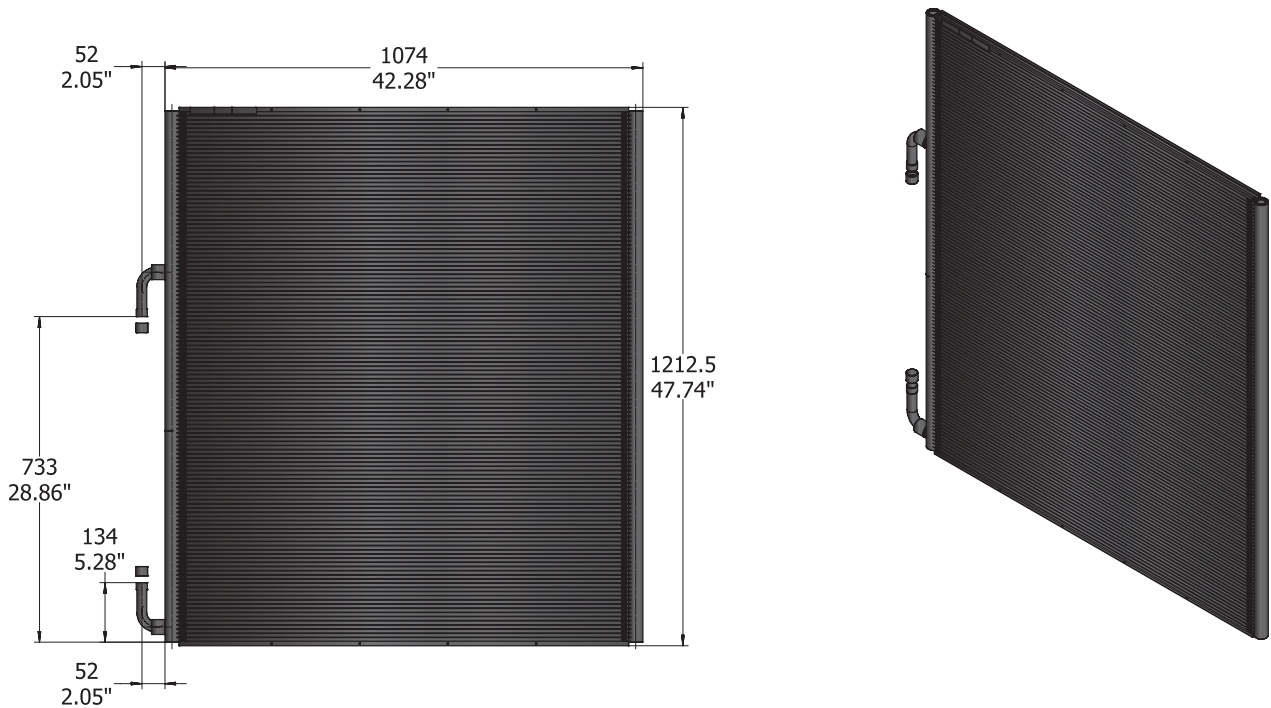
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	18.3/0.07	2785.95/1638.79
1.5/295	30.6/0.12	4178.93/2458.19
2.0/394	45.1/0.18	5571.9/3277.59
2.5/492	61.8/0.25	6964.88/4096.99
3.0/591	80.6/0.32	8357.85/4916.38



D1800-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

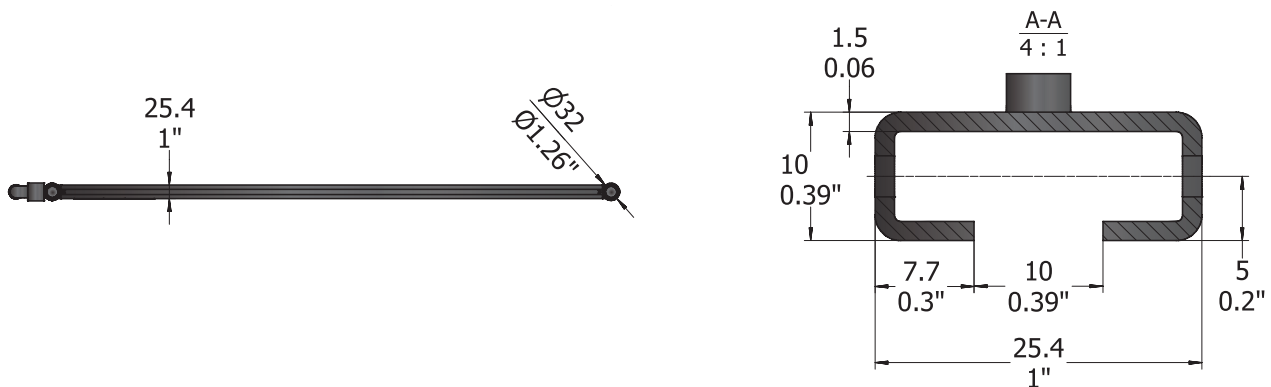


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1800-C	1074 [mm]	1212.5 [mm]	25.4 [mm]	1.1 [mm]	8.1 [mm]	32 [mm]
	42.28 [in]	47.74 [in]	1 [in]	23 [FPI]	0.32 [in]	1.26 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1800-C	1.3 [mm]	126	2.79 [L]	15.139 [KG]	22.4 [mm]	22.4 [mm]
	0.05 [in]		170.19 [in ³]	33.31 [LB]	0.88 [in]	0.88 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



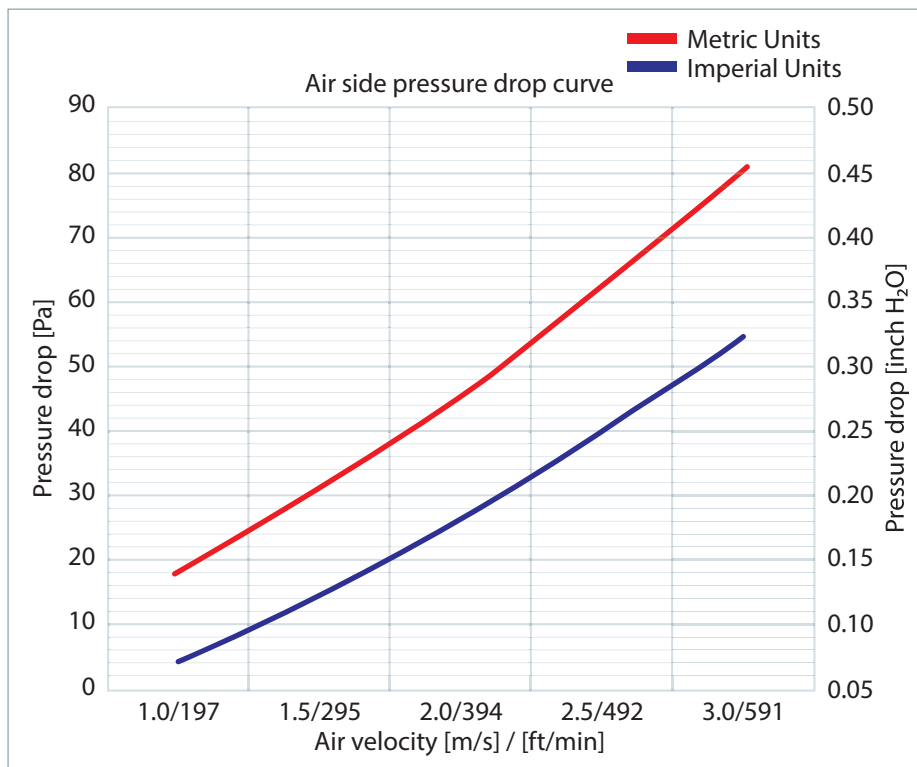
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	13.27/45.28	20.25/69.09	27.19/92.77	34.64/118.19	12.81/43.71	19.5/66.53	26.16/89.26	32.8/111.91
1.5/295	18.92/64.56	28.92/98.68	39.64/135.25	49.98/170.53	18.09/61.72	27.66/94.38	37.2/126.93	46.72/159.41
2.0/394	24.03/81.99	37.61/128.33	50.8/173.33	64.18/218.98	22.79/77.76	34.97/119.32	47.12/160.77	60.21/205.44
2.5/492	28.69/97.89	45.3/154.56	61.18/208.75	77.34/263.88	27.02/92.19	41.56/141.8	57.01/194.52	71.99/245.63
3.0/591	32.99/112.56	52.36/178.65	70.86/241.77	89.68/305.99	30.84/105.23	47.55/162.24	65.58/223.76	82.09/280.09

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	13.26/45.24	20.25/69.09	27.59/94.14	34.79/118.7	8.5/29	16.47/56.2	23.57/80.42	30.6/104.41
1.5/295	18.74/63.94	29.08/99.22	39.65/135.29	50.02/170.67	12.51/42.68	23.42/79.91	33.65/114.81	44.36/151.36
2.0/394	23.6/80.52	37.59/128.26	50.68/172.92	63.97/218.27	15.69/53.53	29.62/101.06	42.75/145.86	56.8/193.8
2.5/492	27.99/95.5	44.95/153.37	60.77/207.35	76.77/261.94	18.5/63.12	35.39/120.75	52.21/178.14	68.03/232.12
3.0/591	33.02/112.66	51.83/176.84	70.12/239.25	88.59/302.27	21.07/71.89	40.65/138.7	60.34/205.88	78.55/268.01

Air-side Pressure Drop Data

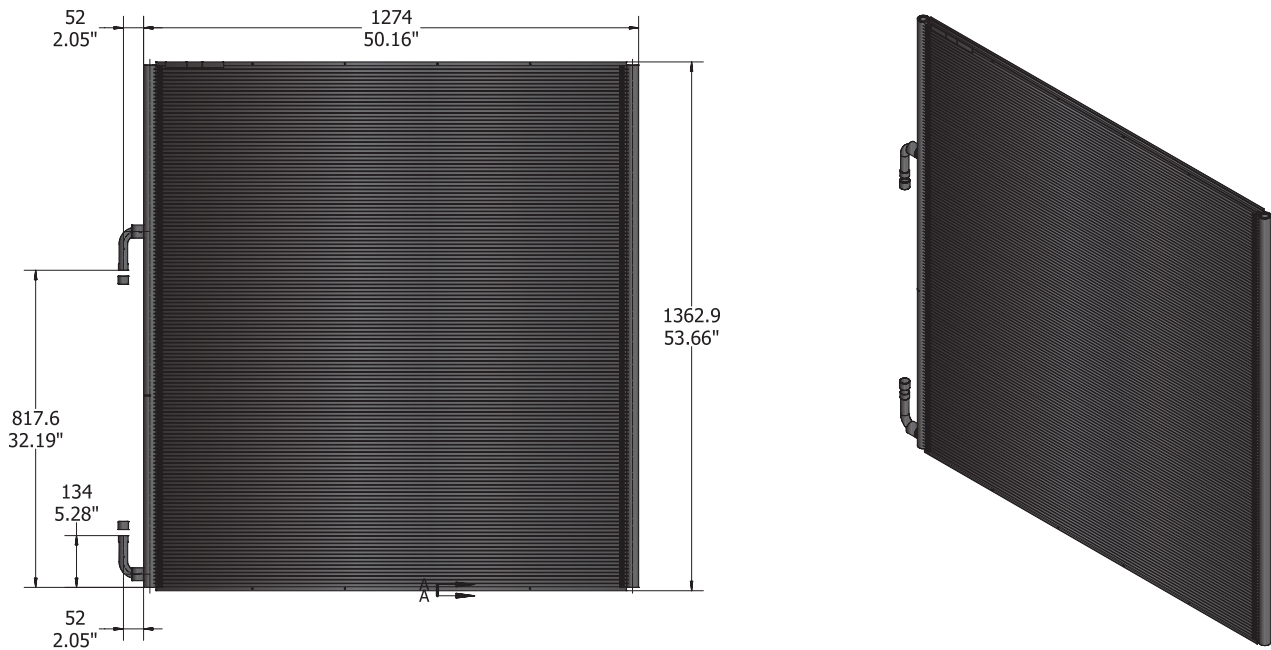
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	18.3/0.07	4293/2525.29
1.5/295	30.6/0.12	6439.5/3787.94
2.0/394	45.1/0.18	8586/5050.59
2.5/492	61.8/0.25	10732.5/6313.24
3.0/591	80.6/0.32	12879/7575.88



D1900-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

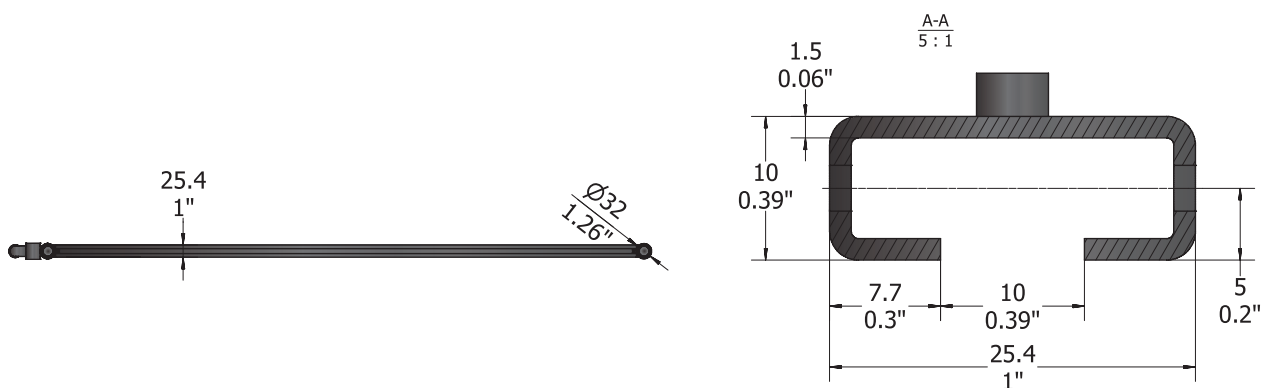


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D1900-C	1274 [mm]	1362.9 [mm]	25.4 [mm]	1.1 [mm]	8.1 [mm]	32 [mm]
	50.16 [in]	53.66 [in]	1 [in]	23 [FPI]	0.32 [in]	1.26 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D1900-C	1.3 [mm]	142	3.49 [L]	19.88 [KG]	22.4 [mm]	22.4 [mm]
	0.05 [in]		212.89 [in³]	43.74 [LB]	0.88 [in]	0.88 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



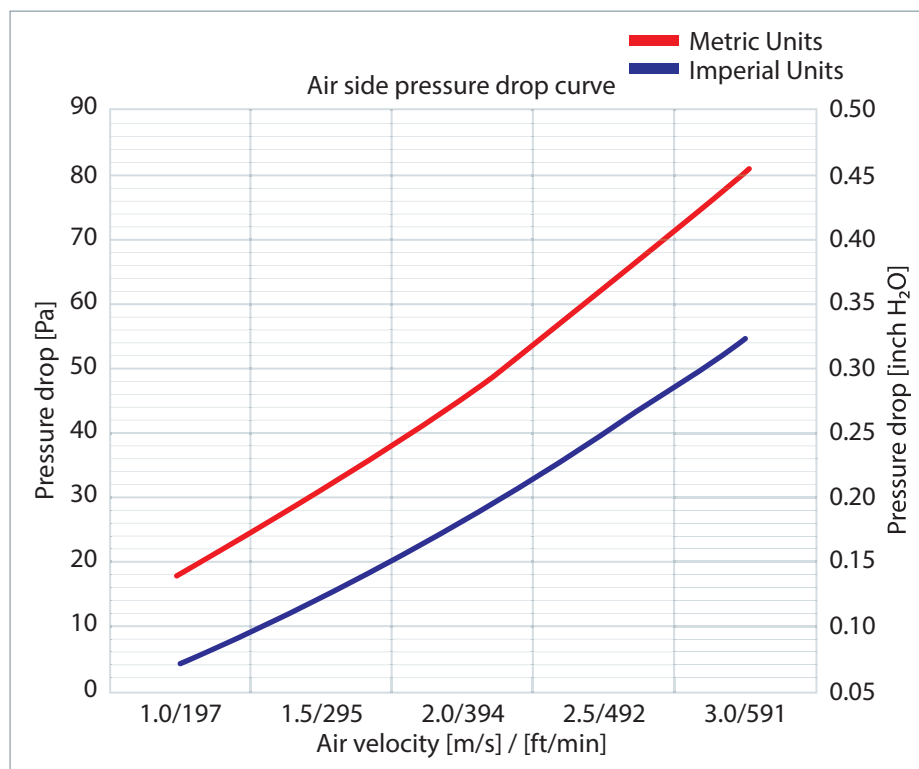
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	18.1/61.76	27.5/93.83	37.27/127.17	46.91/160.06	17.33/59.13	26.34/89.87	35.31/120.48	44.27/151.05
1.5/295	25.81/88.06	39.93/136.24	53.68/183.16	67.65/230.82	24.42/83.32	37.28/127.2	50.11/170.98	63.59/216.97
2.0/394	32.78/111.85	51.12/174.42	68.76/234.61	86.71/295.85	30.68/104.68	47/160.36	64.08/218.64	80.63/275.11
2.5/492	40.18/137.09	61.34/209.29	82.7/282.17	104.36/356.08	36.25/123.69	55.72/190.12	76.24/260.13	95.23/324.92
3.0/591	46.35/158.15	70.93/242.01	95.65/326.36	120.72/411.9	41.28/140.85	64.53/220.18	87.27/297.77	108.75/371.06

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	18.03/61.52	27.42/93.56	37.41/127.64	46.99/160.33	12.12/41.35	22.36/76.29	31.94/108.98	41.54/141.73
1.5/295	25.47/86.9	39.86/136	53.59/182.85	67.45/230.14	17.05/58.17	31.77/108.4	45.55/155.42	60.06/204.92
2.0/394	32.06/109.39	50.67/172.89	68.24/232.83	85.97/293.33	21.35/72.85	40.24/137.3	58.83/200.73	76.46/260.88
2.5/492	39.61/135.15	60.59/206.73	81.61/278.45	102.88/351.03	25.11/85.68	47.92/163.5	70.51/240.58	91.53/312.3
3.0/591	45.6/155.59	69.65/237.65	93.84/320.18	118.42/404.05	28.57/97.48	56.28/192.03	80.89/276	105.35/359.45

Air-side Pressure Drop Data

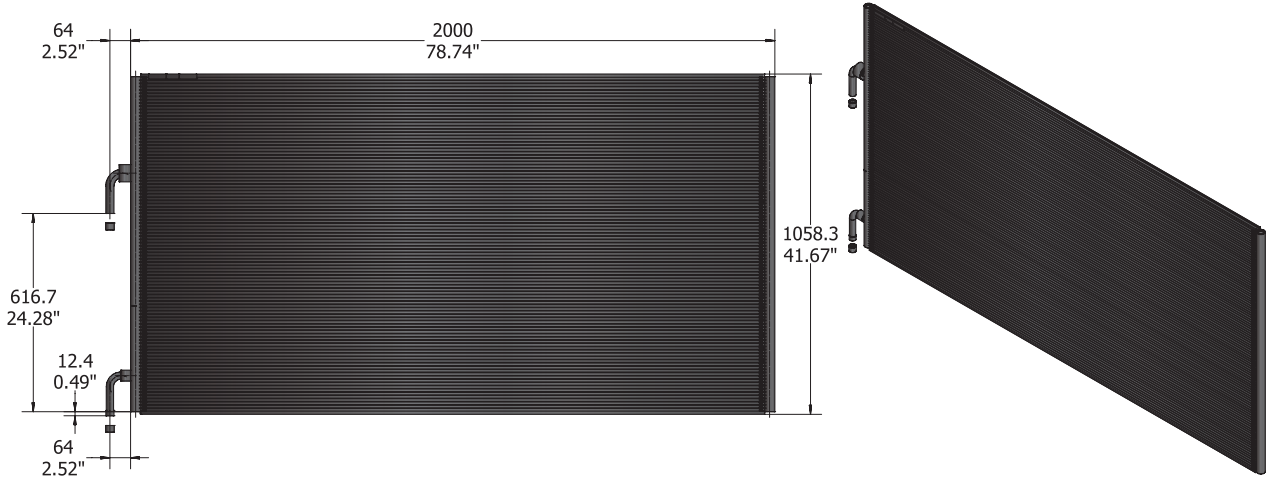
Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	18.3/0.07	5801.33/3412.55
1.5/295	30.6/0.12	8701.99/5118.82
2.0/394	45.1/0.18	11602.66/6825.09
2.5/492	61.8/0.25	14503.32/8531.36
3.0/591	80.6/0.32	17403.98/10237.64



D2000-C Condenser coil

Micro-Channel Heat Exchanger

Drawing of Overall Dimensions

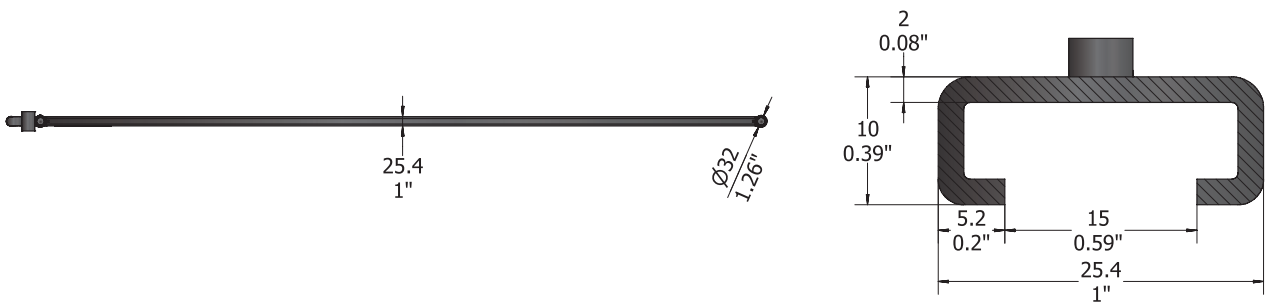


Technical Data

Model	Coil length	Coil height	Coil depth	Fin pitch	Fin height	Manifold diameter
D2000-C	2000 [mm]	1058.3 [mm]	25.4 [mm]	1.1 [mm]	8.1 [mm]	32 [mm]
	78.74 [in]	41.67 [in]	1 [in]	23 [FPI]	0.32 [in]	1.26 [in]
Model	Tubes height	Number of tubes	Internal volume	Coil weight	Inlet ID diameter	Outlet ID diameter
D2000-C	2 [mm]	102	5.44 [L]	26.273 [KG]	25.4 [mm]	22.4 [mm]
	0.08 [in]		331.84 [in ³]	57.8 [LB]	1 [in]	0.88 [in]

Mounting Bars

Aluminum MCHEs expand and contract when exposed to big temperature changes. Installation supports/brackets must allow the MCHE to move in two dimensions.



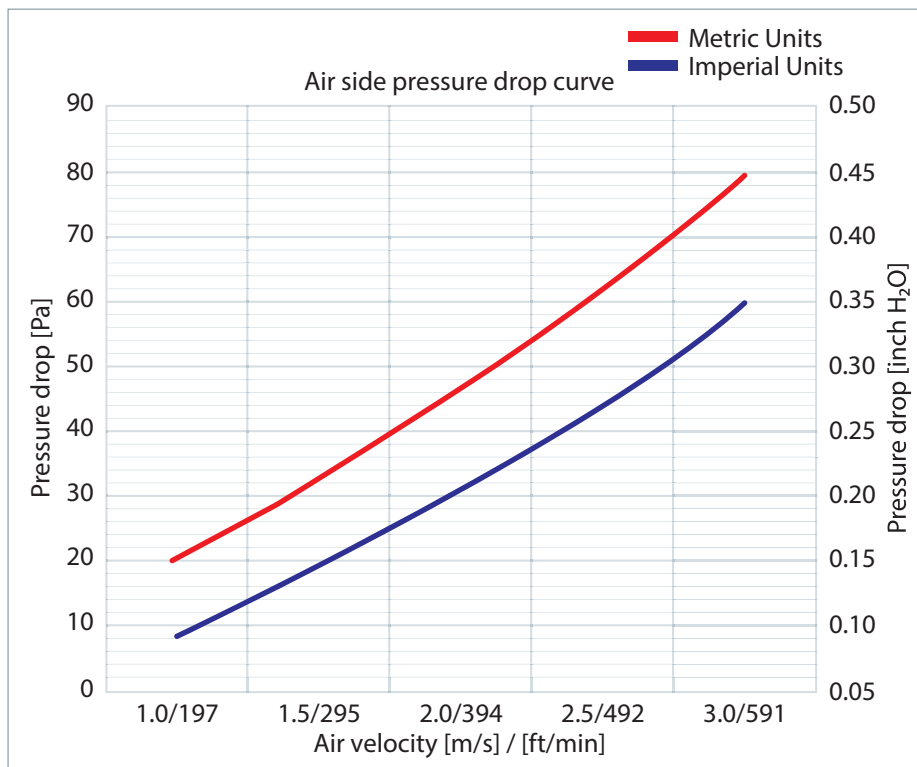
Performance Data

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R410A				R134a			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	22.66/77.32	34.85/118.91	46.82/159.75	58.88/200.9	21.92/74.79	33.22/113.35	44.83/152.96	56.24/191.89
1.5/295	33.06/112.8	50.49/172.27	67.85/231.5	85.42/291.45	31.13/106.22	48.02/163.84	64.5/220.07	80.99/276.34
2.0/394	42.5/145.01	64.89/221.4	87.4/298.21	110.18/375.93	39.36/134.3	61.3/209.16	82.37/281.05	102.95/351.27
2.5/492	51.27/174.93	78.32/267.23	105.58/360.24	133.2/454.48	46.77/159.58	73.36/250.3	97.98/334.31	123.15/420.19
3.0/591	59.52/203.08	90.96/310.36	122.63/418.41	154.83/528.28	55.06/187.86	84.43/288.08	112.51/383.88	141.52/482.87

Air Velocity	Performance [KW/Btu/h×1000]							
[m/s]	R404A				R407C			
[ft/min]	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F	Δ=10 K / 18 °F	Δ=15 K / 27 °F	Δ=20 K / 36 °F	Δ=25 K / 45 °F
1.0/197	22.51/79.1	35.06/123.2	47.04/165.3	59.11/207.71	15.26/53.62	28.04/98.53	40.51/142.35	52.57/184.73
1.5/295	33.08/116.24	50.5/177.46	67.86/238.46	85.43/300.2	21.44/75.34	40.57/142.56	58.53/205.67	75.92/266.78
2.0/394	42.35/148.82	64.63/227.11	87.06/305.93	109.66/385.35	26.89/94.49	52.25/183.61	75.17/264.15	97.44/342.4
2.5/492	50.86/178.72	77.81/273.42	104.73/368.02	131.99/463.81	31.78/111.67	62.87/220.93	90.17/316.86	117.32/412.26
3.0/591	58.57/205.81	89.79/315.52	121.08/425.48	152.69/536.55	36.18/127.14	72.78/255.75	104.24/366.3	135.74/476.99

Air-side Pressure Drop Data

Air Velocity	Pressure drop	Flow rate
[m/s]	[Pa] / [inch H ₂ O]	[m ³ /h] / [cfm]
[ft/min]		
1.0/197	20.9/0.08	7199.16/4234.8
1.5/295	34.7/0.14	10798.74/6352.2
2.0/394	50.7/0.2	14398.31/8469.59
2.5/492	68.9/0.28	17997.89/10586.99
3.0/591	89.4/0.36	21597.47/12704.39



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Danfoss Micro Channel Heat Exchanger (Jia Xing) Co., Ltd.

Add: No. 8, Sangdelan Road,
Wuyuan Street, Haiyan,
Zhejiang Province 314300,
P.R.China

Website: <http://www.danfoss.com>

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