

# CO2 Pumped Liquid Overfeed

Notes:

- A. The flow rates are calculated based on the assumption that the CO2 entering the coil is saturated liquid and the CO2 exiting the coil has a 50% quality (i.e., it is 50 percent vapor by mass)
- B. Pressure drop and flow rates are for the entire case.**
- C. Pressure drop and flow rates based on parallel loads for T8 lighted shelves when that option is offered
- D. See case data sheets for parallel cooling load data

						Application Data - Medium Temp		
Line	Model	Case Length (ft)	Discharge Air Temp °F	Defrost Freq (hours)	Defrost Duration (min.)	Sat. Evap Temp °F	Flow Rate (GPM)	Pressure Drop (psi)
1	B3XC-12LEP	12	32	8	30	20	0.58	4.28
2	B3XC-12LGEP	12	32	8	30	20	0.49	3.37
3	B3XC-6LEP	6	32	8	30	20	0.29	1.99
4	B3XC-8LEP	8	32	8	30	20	0.39	4.18
5	B3XC-8LGEP	8	32	8	30	20	0.33	3.27
6	B4X-12E	12	30	6	40	20	0.54	3.83
7	B4X-8E	8	30	6	40	20	0.36	3.73
8	C2X-12EP	12	31	6	30	20	0.29	1.36
9	C2X-8EP	8	31	6	30	20	0.19	1.26
10	C2X-12LEP	12	31	6	30	20	0.33	1.58
11	C2X-4LEP	4	31	6	30	20	0.11	1.38
12	C2X-6LEP	6	31	6	30	20	0.16	0.77
13	C2X-8LEP	8	31	6	30	20	0.22	1.48
14	C2X-4LGEP	4	31	6	30	20	0.09	1.04
15	C2X-6LGEP	6	31	6	30	20	0.14	0.79
16	C2X-8LGEP	8	31	6	30	20	0.18	1.14
17	C2X-12LGEP	12	31	6	30	20	0.27	1.24
18	C2X-4XLEP	4	31	6	30	20	0.15	2.21
19	C2X-6XLEP	6	31	6	30	20	0.22	1.52
20	C2X-8XLEP	8	31	6	30	20	0.30	2.31
21	C2X-12XLEP	12	31	6	30	20	0.44	2.41
22	C2X-4XLGEP	4	31	6	30	20	0.13	1.78
23	C2X-6XLGEP	6	31	6	30	20	0.19	1.25
24	C2X-8XLGEP	8	31	6	30	20	0.26	1.88
25	C2X-12XLGEP	12	31	6	30	20	0.39	1.98
26	C3X-12LGEP	12	30	6	30	20	0.56	4.03
27	C3X-4LGEP	4	30	6	30	20	0.19	3.83
28	C3X-6LGEP	6	30	6	30	20	0.28	1.88
29	C3X-8LGEP	8	30	6	30	20	0.37	3.93
30	C5X-4LEP	4	31	6	30	20	0.23	6.40
31	C5X-6LEP	6	31	6	30	20	0.35	3.03
32	C5X-8LEP	8	31	6	30	20	0.46	6.50
33	C5X-12LEP	12	31	6	30	20	0.69	6.60
34	C6X-12EP	12	31	6	30	20	0.70	6.63
35	C6X-12LEP	12	31	6	30	20	0.73	7.08
36	C6X-4EP	4	31	6	30	20	0.23	6.43
37	C6X-4LEP	4	31	6	30	20	0.24	6.88
38	C6X-6EP	6	31	6	30	20	0.35	3.04
39	C6X-6LEP	6	31	6	30	20	0.36	3.25
40	C6X-8EP	8	31	6	30	20	0.46	6.53
41	C6X-8LEP	8	31	6	30	20	0.48	6.98
42	D5NX-12EP	12	30	6	30	20	0.65	5.14
43	D5NX-8EP	8	30	6	30	20	0.44	5.04
44	D5NX-4LEP	4	30	6	30	20	0.23	5.25
45	D5NX-6LEP	6	30	6	30	20	0.34	2.52
46	D5X-4EP	4	30	8	30	20	0.20	4.40
47	D5X-6EP	6	30	8	30	20	0.30	2.13
48	D5X-8EP	8	30	8	30	20	0.40	4.50
49	D5X-10EP	10	30	8	30	20	0.51	3.50
50	D5X-12EP	12	30	8	30	20	0.61	4.60
51	D5X-4LEP	4	30	8	30	20	0.21	4.70
52	D5X-6LEP	6	30	8	30	20	0.32	2.27
53	D5X-8LEP	8	30	8	30	20	0.42	4.80
54	D5X-10LEP	10	30	8	30	20	0.53	3.72
55	D5X-12LEP	12	30	8	30	20	0.63	4.90
56	D5X-4RE	4	32	8	30	20	0.24	5.90
57	D5X-6RE	6	32	8	30	20	0.36	2.80
58	D5X-8RE	8	32	8	30	20	0.49	6.00
59	D5X-12RE	12	32	8	30	20	0.73	6.10
60	D5X-8ULEP	8	30	6	20	20	0.49	7.12
61	D5X-12ULEP	12	30	6	20	20	0.73	7.22
62	D5NX-8LEP	8	30	6	30	20	0.45	5.35
63	D5NX-12LEP	12	30	6	30	20	0.68	5.45
64	D5X-6ULEP	6	30	6	20	20	0.37	3.31
65	D5XRR1-8	8	32	6	50	20	0.32	3.11
66	D5XRR1-12	12	32	6	50	20	0.48	3.21

Line	Model	Case Length (ft)	Discharge Air Temp °F	Defrost Freq (hours)	Defrost Duration (min.)	Sat. Evap Temp °F	Flow Rate (GPM)	Pressure Drop (psi)
67	DD5X-12ULP	12	37	24	25	20	0.17	0.86
68	DD5X-4ULP	4	37	24	25	20	0.06	0.66
69	DD5X-6ULP	6	37	24	25	20	0.09	0.45
70	DD5X-8ULP	8	37	24	25	20	0.12	0.76
71	D6NX-12LEP	12	31	6	35	20	0.76	6.49
72	D6NX-4LEP	4	31	6	35	20	0.25	6.29
73	D6NX-6LEP	6	31	6	35	20	0.38	2.98
74	D6NX-8LEP	8	31	6	35	20	0.51	6.39
75	D6X-12ULEP	12	30	6	25	20	0.81	8.47
76	D6X-12URLE	12	27	6	45	20	0.61	4.63
77	D6X-4ULEP	4	30	6	25	20	0.27	8.27
78	D6X-6ULEP	6	30	6	25	20	0.41	3.87
79	D6X-6ULRE	6	27	6	45	20	0.30	2.14
80	D6X-8ULEP	8	30	6	25	20	0.54	8.37
81	D6X-8URLE	8	27	6	45	20	0.41	4.53
82	DD6X-12ULP	12	36	24	25	20	0.26	1.57
83	DD6X-4ULP	4	36	24	25	20	0.09	1.37
84	DD6X-6ULP	6	36	24	25	20	0.13	0.77
85	DD6X-8ULP	8	36	24	25	20	0.17	1.47
86	M1X-4GEP	4	30	6	35	20	0.05	0.35
87	M1X-6GEP	6	30	6	35	20	0.08	0.31
88	M1X-8GEP	8	30	6	35	20	0.10	0.45
89	M1X-12GEP	12	30	6	35	20	0.15	0.55
90	M1X-12EP	12	28	6	35	20	0.21	0.72
91	M1X-6EP	6	28	6	35	20	0.11	0.39
92	M1X-8EP	8	28	6	35	20	0.14	0.62
93	M1XD-12GEP	12	30	6	35	20	0.14	0.52
94	M1XD-8GEP	8	30	6	35	20	0.09	0.42
95	M1X-12XGE	12	26	6	35	20	0.23	0.79
96	M1X-8XGE	8	26	6	35	20	0.15	0.69
97	M3NX-12GEP	12	29	6	30	20	0.45	2.94
98	M3NX-8GEP	8	29	6	30	20	0.30	2.84
99	M3X-12EP	12	29	6	30	20	0.45	2.92
100	M3X-12GEP	12	29	6	30	20	0.39	2.41
101	M3X-6EP	6	29	6	30	20	0.22	1.38
102	M3X-8EP	8	29	6	30	20	0.30	2.82
103	M3X-8GEP	8	29	6	30	20	0.26	2.31
104	M4NX-12GEP	12	29	6	30	20	0.51	3.54
105	M4NX-8GEP	8	29	6	30	20	0.34	3.44
106	M4X-12EP	12	29	6	30	20	0.53	3.78
107	M4X-12GEP	12	29	6	30	20	0.49	3.33
108	M4X-6GEP	6	29	6	30	20	0.24	1.56
109	M4X-8EP	8	29	6	30	20	0.36	3.68
110	M4X-8GEP	8	29	6	30	20	0.33	3.23
111	M5NX-12EP	12	30	6	30	20	0.74	7.29
112	M5NX-8EP	8	30	6	30	20	0.49	7.19
113	M5NX-12GEP	12	30	6	30	20	0.62	5.54
114	M5NX-8GEP	8	30	6	30	20	0.41	5.44
115	M5X-4EP	4	30	6	30	20	0.22	6.06
116	M5X-6EP	6	30	6	30	20	0.33	2.88
117	M5X-8EP	8	30	6	30	20	0.45	6.16
118	M5X-12EP	12	30	6	30	20	0.67	6.26
119	M5X-4GEP	4	30	6	30	20	0.20	5.02
120	M5X-6GEP	6	30	6	30	20	0.30	2.41
121	M5X-8GEP	8	30	6	30	20	0.40	5.12
122	M5X-10GEP	10	30	6	30	20	0.50	3.96
123	M5X-12GEP	12	30	6	30	20	0.60	5.22
124	ME5X-12GP	12	27	6	25	20	0.55	4.62
125	ME5X-4GP	4	27	6	25	20	0.18	4.42
126	ME5X-6GP	6	27	6	25	20	0.27	2.14
127	ME5X-8GP	8	27	6	25	20	0.37	4.52
128	P1X50-12EP	12	31	6	30	20	0.26	0.88
129	P1X50-8EP	8	31	6	30	20	0.17	0.78
130	P4NX-12EP	12	31	6	30	20	0.67	6.19
131	P4NX-8EP	8	31	6	30	20	0.44	6.09
132	P4X-12EP	12	31	6	30	20	0.62	5.51
133	P4X-8EP	8	31	6	30	20	0.41	5.41

Line	Model	Case Length (ft)	Discharge Air Temp °F	Defrost Freq (hours)	Defrost Duration (min.)	Sat. Evap Temp °F	Flow Rate (GPM)	Pressure Drop (psi)
134	CW2U-90GE	7.42	28	6	45	20	0.40	1.58
135	CW2U-138GE	11.42	28	6	45	20	0.63	1.78
136	CW2-EGE	3.40	28	6	45	20	0.18	0.86
137	E1-12	12	27	6	30	20	0.23	0.77
138	E1-8	8	27	6	30	20	0.15	0.67
139	E1S-12	12	27	6	30	20	0.23	0.77
140	E1S-8	8	27	6	30	20	0.15	0.67
141	E2-4	4	27	6	30	20	0.14	2.07
142	E2-6	6	27	6	30	20	0.21	1.08
143	E2-8	8	27	6	30	20	0.28	2.17
144	E2-12	12	27	6	30	20	0.42	2.27
145	E2V-4	4	27	6	30	20	0.14	2.07
146	E2V-6	6	27	6	30	20	0.21	1.08
147	E2V-8	8	27	6	30	20	0.28	2.17
148	E2V-12	12	27	6	30	20	0.42	2.27
149	E2S-12	12	28	6	40	20	0.37	1.87
150	E2S-8	8	28	6	40	20	0.25	1.77
151	E2SP-4	4	28	6	40	20	0.14	1.96
152	E2SP-6	6	28	6	40	20	0.21	1.04
153	E2SP-8	8	28	6	40	20	0.27	2.06
154	E2SP-12	12	28	6	40	20	0.41	2.16
155	E2S-8	8	28	6	40	20	0.25	1.77
156	E2S-12	12	28	6	40	20	0.37	1.87
157	E3-8	8	29	6	40	20	0.38	3.31
158	E3-12	12	29	6	40	20	0.56	3.41
159	E3-6	6	29	6	40	20	0.28	1.60
160	E3S-8	8	29	6	40	20	0.38	3.31
161	E3S-12	12	29	6	40	20	0.56	3.41
162	E3XC-8	8	29	6	40	20	0.38	3.31
163	E3XC-12	12	29	6	40	20	0.56	3.41
164	E4-12	12	29	6	40	20	0.59	4.41
165	E4-8	8	29	6	40	20	0.39	4.31
166	E5-12	12	29	6	35	20	0.67	5.37
167	E5-8	8	29	6	35	20	0.45	5.27
168	ESBD-8	8	25	12	90	20	0.13	0.59
169	ESBD-12	12	25	12	90	20	0.20	0.69
170	ESBDHV-4	4	27	12	90	20	0.07	0.57
171	ESBDHV-6	6	27	12	90	20	0.11	0.41
172	ESBDHV-8	8	27	12	90	20	0.15	0.67
173	ESBDHV-12	12	27	12	90	20	0.22	0.77
174	ESBDS-4	4	25	12	90	20	0.07	0.49
175	ESBDS-6	6	25	12	90	20	0.10	0.37
176	ESBDS-8	8	25	12	90	20	0.13	0.59
177	ESBDS-12	12	25	12	90	20	0.20	0.69
178	ES1-4	4	28	12	90	20	0.04	0.26
179	ES1-6	6	28	12	90	20	0.06	0.27
180	ES1-8	8	28	12	90	20	0.08	0.36
181	ES1-12	12	28	12	90	20	0.12	0.46
182	ES1S-8	8	28	12	90	20	0.08	0.36
183	ES1S-12	12	28	12	90	20	0.12	0.46
184	ESGMS-8	8	27	24	90	20	0.08	5.10
185	ESGMS-12	12	27	24	90	20	0.12	5.35
186	ESGMS-6	6	27	24	90	20	0.06	4.93

Line	Model	Case Length (ft)	Discharge Air Temp °F	Defrost Freq (hours)	Defrost Duration (min.)	Sat. Evap Temp °F	Flow Rate (GPM)	Pressure Drop (psi)
187	RI1-8	8	27	4	20	20	0.39	0.27
188	RI1-12	12	27	4	20	20	0.58	0.48
189	RI1-14	14	27	4	20	20	0.68	0.66
190	RI1-16	16	27	4	20	20	0.78	0.89
191	RI2-8	8	27	4	20	20	0.44	0.29
192	RI2-10	10	27	4	20	20	0.56	0.40
193	RI2-12	12	27	4	20	20	0.67	0.55
194	RI2-14	14	27	4	20	20	0.78	0.77
195	RI2-16	16	27	4	20	20	0.89	1.06
196	RI3-8	8	27	4	20	20	0.56	0.33
197	RI3-10	10	27	4	20	20	0.70	0.48
198	RI3-12	12	27	4	20	20	0.84	0.72
199	RI3-14	14	27	4	20	20	0.98	1.03
200	RI3-16	16	27	4	20	20	1.12	1.45
201	RI4-10	10	27	4	20	20	0.88	0.61
202	RI4-12	12	27	4	20	20	1.06	0.95
203	RI4-14	14	27	4	20	20	1.24	1.41
204	RI4-16	16	27	4	20	20	1.41	2.01
205	BEXD-8	8	31	12	70	20	0.14	0.84
		<b>doors</b>						
206	RM-2	2	32	24	60	20	0.07	0.83
207	RM-3	3	32	24	60	20	0.10	2.30
208	RM-4	4	32	24	60	20	0.13	0.87
209	RM-5	5	32	24	60	20	0.16	1.49
		<b>ft</b>						
210	SMBT-4	4	24	12	90	20	0.06	0.47
211	SMBT-6	6	24	12	90	20	0.10	0.37
212	SMBT-8	8	24	12	90	20	0.13	0.57
213	SMBT-12	12	24	12	90	20	0.19	0.67
214	SMGV-8	8	25	24	70	20	0.06	0.35
215	SMGV-12	12	25	24	70	20	0.10	0.45
216	SMGT-8	8	24	24	70	20	0.13	0.66
217	SMGT-12	12	24	24	70	20	0.19	0.76
218	F-12	12	24	24	60	20	0.12	0.83
219	F-12G	12	24	24	60	20	0.14	0.97
220	F-8	8	24	24	60	20	0.08	1.61
221	F-8G	8	24	24	60	20	0.09	1.89
222	FI-12	12	24	24	60	20	0.18	1.76
223	FI-12G	12	24	24	60	20	0.20	2.09
224	FI-8	8	24	24	60	20	0.12	3.52
225	FI-8G	8	24	24	60	20	0.13	4.19
226	FN-12	12	24	24	60	20	0.13	0.88
227	FN-12G	12	24	24	60	20	0.14	0.95
228	FN-8	8	24	24	60	20	0.09	1.70
229	FN-8G	8	24	24	60	20	0.09	1.84
230	FW-12	12	24	24	60	20	0.19	0.68
231	FW-12G	12	24	24	60	20	0.20	0.73
232	FW-4	4	24	24	60	20	0.06	0.34
233	FW-4G	4	24	24	60	20	0.07	0.36
234	FW-6	6	24	24	60	20	0.10	0.66
235	FW-6G	6	24	24	60	20	0.10	0.71
236	FW-8	8	24	24	60	20	0.13	1.18
237	FW-8G	8	24	24	60	20	0.14	1.28
238	FWE	6.67	24	24	60	20	0.05	0.64
239	FWEG	6.67	24	24	60	20	0.06	0.80