

Compressor Capacity (operating condition known)

Use Tables (1-5) with the compressor capacity (tons) to select the separator with the maximum capacity equal to or greater than that of the compressor.

TABLE 1. R-717 SINGLE (HIGH) STAGE

MAXIMUM TONS (TR) PER COALESCING SEPARATOR MODEL								
MODEL	COND. °F	SAT. EVAPORATOR TEMPERATURE (°F)						
		-20°	-10°	0°	+10°	+20°	+30°	+40°
OCS-035/OCSF-037	75°	27 TR	28 TR	28 TR	29 TR	30 TR	31 TR	32 TR
OCS-070/OCSF-072		53	56	57	59	60	62	64
OCS-145/OCSF-147		111	115	118	122	125	128	132
OCS-215/OCSF-217		164	171	175	181	185	190	195
OCS-250/OCSF-252		191	198	203	210	216	221	227
OCS-035/OCSF-037	85°	30	31	32	33	36	35	36
OCS-070/OCSF-072		60	62	64	66	68	69	71
OCS-145/OCSF-147		124	128	133	137	141	144	148
OCS-215/OCSF-217		184	190	197	203	209	213	219
OCS-250/OCSF-252		214	221	229	236	243	248	255
OCS-035/OCSF-037	95°	33	34	36	37	38	39	43
OCS-070/OCSF-072		66	69	71	74	75	78	80
OCS-145/OCSF-147		137	142	148	153	156	161	165
OCS-215/OCSF-217		203	211	219	226	231	239	244
OCS-250/OCSF-252		236	245	255	263	269	278	284

TABLE 2. R-22 SINGLE (HIGH) STAGE

MAXIMUM TONS (TR) PER COALESCING SEPARATOR MODEL								
MODEL	COND. °F	SAT. EVAPORATOR TEMPERATURE (°F)						
		-20°	-10°	0°	+10°	+20°	+30°	+40°
OCS-035/OCSF-037	75°	18 TR	19 TR	19 TR	20 TR	20 TR	21 TR	22 TR
OCS-070/OCSF-072		36	37	38	40	41	42	43
OCS-145/OCSF-147		79	81	85	87	90	93	96
OCS-215/OCSF-217		114	119	123	127	131	136	139
OCS-250/OCSF-252		132	137	142	147	152	157	161
OCS-035/OCSF-037	85°	20	20	21	22	23	23	24
OCS-070/OCSF-072		39	40	42	43	45	46	48
OCS-145/OCSF-147		86	89	92	96	99	102	105
OCS-215/OCSF-217		125	129	134	139	144	148	152
OCS-250/OCSF-252		145	149	155	161	167	171	176
OCS-035/OCSF-037	95°	21	22	23	24	24	25	26
OCS-070/OCSF-072		42	44	45	47	49	51	52
OCS-145/OCSF-147		92	96	100	104	107	111	115
OCS-215/OCSF-217		134	140	145	151	155	162	167
OCS-250/OCSF-252		155	162	168	175	180	187	193
OCS-035/OCSF-037	105°	23	24	25	25	26	27	28
OCS-070/OCSF-072		45	47	49	51	53	54	56
OCS-145/OCSF-147		100	104	108	111	116	120	124
OCS-215/OCSF-217		145	151	157	162	168	174	180
OCS-250/OCSF-252		168	175	181	187	195	201	208

EXAMPLE: 92 TONS OPERATING AT: R-717, 22°F SUCTION, 80°F COND. USE THE NEXT HIGHEST SUCTION TEMP. AND NEXT LOWEST COND. USE 30°F SUCTION AND 75°F COND. SELECT AN OCS-145 WITH MAX CAPACITY AT OPERATING CONDITIONS OF 128 TONS.

TABLE 3. R-134a SINGLE (HIGH) STAGE

MAXIMUM TONS (TR) PER COALESCING SEPARATOR MODEL								
MODEL	COND. °F	SAT. EVAPORATOR TEMPERATURE (°F)						
		-20°	-10°	0°	+10°	+20°	+30°	+40°
OCS-035/OCSF-037	75°	13 TR	14 TR	14 TR	15 TR	15 TR	16 TR	16 TR
OCS-070/OCSF-072		27	28	29	30	30	31	32
OCS-145/OCSF-147		59	61	63	65	67	69	71
OCS-215/OCSF-217		86	89	92	95	98	100	103
OCS-250/OCSF-252		99	103	106	109	113	116	119
OCS-035/OCSF-037	85°	15	15	16	16	17	17	18
OCS-070/OCSF-072		30	31	32	33	34	35	36
OCS-145/OCSF-147		65	68	70	72	75	77	79
OCS-215/OCSF-217		95	99	102	105	109	112	115
OCS-250/OCSF-252		110	114	118	122	126	129	133
OCS-035/OCSF-037	95°	16	17	18	18	19	19	20
OCS-070/OCSF-072		33	34	35	36	38	39	40
OCS-145/OCSF-147		72	75	77	80	83	85	87
OCS-215/OCSF-217		105	109	113	117	120	124	127
OCS-250/OCSF-252		121	126	130	135	139	143	147
OCS-035/OCSF-037	105°	18	19	19	20	20	21	22
OCS-070/OCSF-072		35	37	38	40	41	42	44
OCS-145/OCSF-147		78	81	85	87	90	93	96
OCS-215/OCSF-217		113	119	123	127	131	136	140
OCS-250/OCSF-252		131	137	142	147	152	157	162
OCS-035/OCSF-037	115°	19	20	21	22	22	23	24
OCS-070/OCSF-072		38	40	42	43	45	46	48
OCS-145/OCSF-147		84	88	92	95	98	102	105
OCS-215/OCSF-217		122	128	133	138	143	148	152
OCS-250/OCSF-252		141	148	154	159	165	171	176

TABLE 4. R-717 BOOSTER

MAXIMUM TONS (TR) PER COALESCING SEPARATOR MODEL						
MODEL	COND. °F	SAT. EVAPORATOR TEMPERATURE (°F)				
		-60°	-50°	-40°	-30°	-20°
OCS-035/OCSF-037	0°	8 TR	8 TR	8 TR	9 TR	9 TR
OCS-070/OCSF-072		15	16	17	18	19
OCS-145/OCSF-147		31	33	35	37	39
OCS-215/OCSF-217		46	49	52	55	57
OCS-250/OCSF-252		54	57	60	64	66
OCS-035/OCSF-037	10°	9	9	10	10	11
OCS-070/OCSF-072		18	19	20	21	22
OCS-145/OCSF-147		37	39	41	43	46
OCS-215/OCSF-217		55	58	61	64	68
OCS-250/OCSF-252		64	68	71	75	79
OCS-035/OCSF-037	20°	10	11	12	12	13
OCS-070/OCSF-072		21	22	23	24	26
OCS-145/OCSF-147		43	46	48	51	53
OCS-215/OCSF-217		64	68	71	75	79
OCS-250/OCSF-252		74	79	83	87	92

TABLE 5. R-22 BOOSTER

MAXIMUM TONS (TR) PER COALESCING SEPARATOR MODEL						
MODEL	COND. °F	SAT. EVAPORATOR TEMPERATURE (°F)				
		-60°	-50°	-40°	-30°	-20°
OCS-035/OCSF-037	0°	6 TR	6 TR	6 TR	6 TR	7 TR
OCS-070/OCSF-072		12	12	12	13	13
OCS-145/OCSF-147		26	27	27	28	29
OCS-215/OCSF-217		38	39	40	41	42
OCS-250/OCSF-252		44	45	46	47	48
OCS-035/OCSF-037	10°	7	7	7	7	8
OCS-070/OCSF-072		14	14	15	15	15
OCS-145/OCSF-147		31	32	32	33	34
OCS-215/OCSF-217		45	46	47	48	49
OCS-250/OCSF-252		52	53	54	55	57
OCS-035/OCSF-037	20°	8	8	9	9	9
OCS-070/OCSF-072		16	17	17	17	18
OCS-145/OCSF-147		36	37	37	38	39
OCS-215/OCSF-217		52	53	54	56	57
OCS-250/OCSF-252		60	61	63	64	66

Compressor model, or theoretical displacement (at operating speed) and operating condition known.

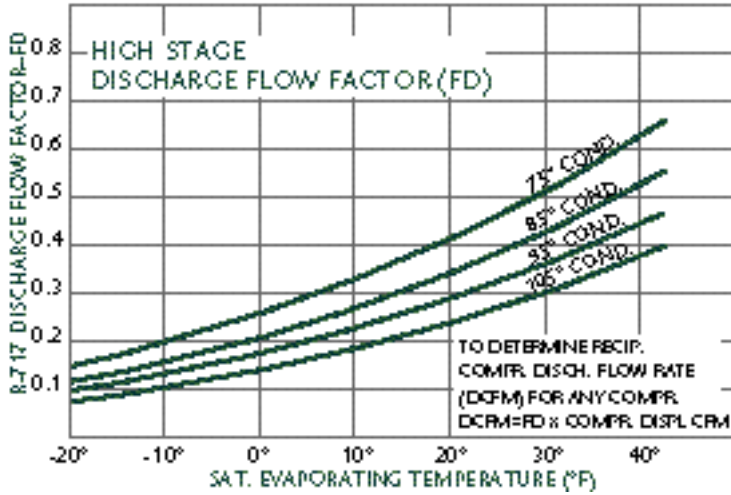
This method may be utilized to determine the compressor discharge gas flow velocity when the compressor capacity at the operating condition is not known. Enter the Discharge Flow Factor Graphs (1-5) with the compressor operating condition to find the flow factor, FD. Then multiply the factor by the compressor theoretical displacement at the actual operating speed to obtain the compressor discharge gas flow DCFM. Select the separator with the maximum DCFM equal to or greater than the compressor DCFM. The theoretical displacement is directly proportional to the operating speed.

Compressor DCFM = FD x Compressor displacement (CFM)

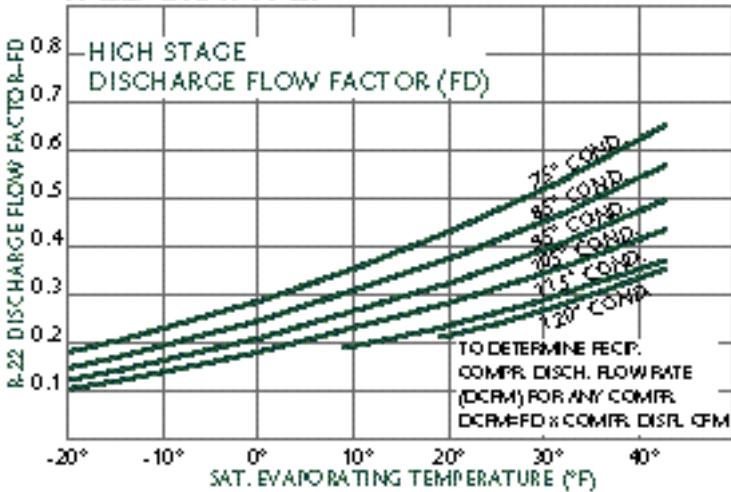
EXAMPLE: COMPRESSOR IS RATED AT 435 CFM DISPLACEMENT AT FULL SPEED. OPERATING AT: R-717, 10°F SUCTION, 85°F COND. FD=0.27 (GRAPH 1.) $FD 0.27 \times 435 \text{ CFM} = 117 \text{ DCFM}$

CAPACITY REQ = 110 DCFM. CHOOSE MODEL #OCS-145

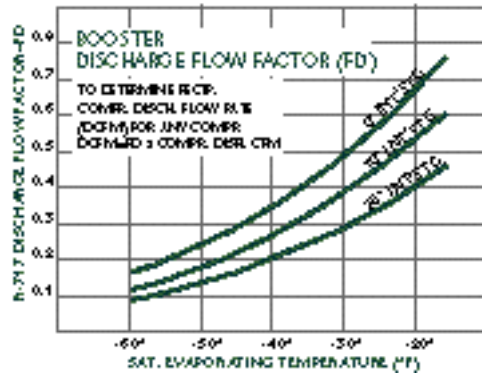
R-717 GRAPH 1.



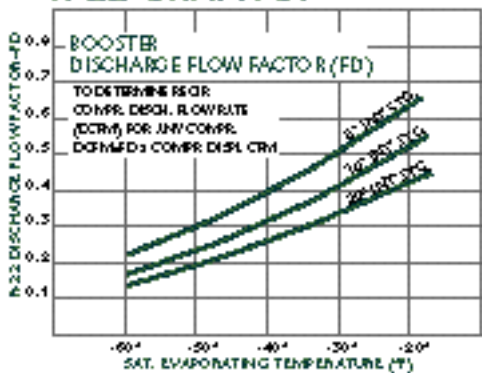
R-22 GRAPH 2.



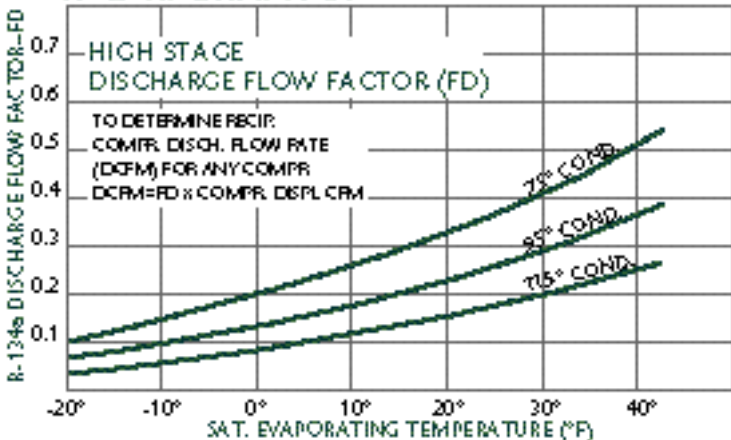
R-717 GRAPH 4.



R-22 GRAPH 5.



R-134a GRAPH 3.



SEPARATOR CAPACITY: MAXIMUM DCFM

MODEL	R-717	(R-22/R-134a)
OCS-035/OCSF-037	35	25 DCFM
OCS-070/OCSF-072	70	50 DCFM
OCS-145/OCSF-147	145	110 DCFM
OCS-215/OCSF-217	215	160 DCFM
OCS-250/OCSF-252	250	185 DCFM

NOTE: THEORETICAL DISPLACEMENT CFM = SWEEPED VOLUME (FT³/REV) X SPEED (RPM)