

High Efficiency CRAC or CRAH – Retrofit Requirements			
Cooling Medium	Net Sensible Cooling Capacity	Minimum NSenCOP	
		Downflow Units	Upflow Units
Air-Cooled	<80,000 Btu/h	2.70	2.67
	≥80,000 Btu/h and <295,000 Btu/h	2.58	2.55
	≥295,000 Btu/h and <760,000 Btu/h	2.36	2.33
Air-Cooled with a Fluid Economizer	<80,000 Btu/h	2.70	2.67
	≥80,000 Btu/h and <295,000 Btu/h	2.58	2.55
	≥295,000 Btu/h and <760,000 Btu/h	2.36	2.33
Water-Cooled	<80,000 Btu/h	2.82	2.79
	≥80,000 Btu/h and <295,000 Btu/h	2.73	2.70
	≥295,000 Btu/h and <760,000 Btu/h	2.67	2.64
Water-Cooled with a Fluid Economizer	<80,000 Btu/h	2.77	2.74
	≥80,000 Btu/h and <295,000 Btu/h	2.68	2.65
	≥295,000 Btu/h and <760,000 Btu/h	2.61	2.58
Glycol-Cooled	<80,000 Btu/h	2.56	2.53
	≥80,000 Btu/h and <295,000 Btu/h	2.24	2.21
	≥295,000 Btu/h and <760,000 Btu/h	2.21	2.18
Glycol-Cooled with a Fluid Economizer	<80,000 Btu/h	2.51	2.48
	≥80,000 Btu/h and <295,000 Btu/h	2.19	2.16
	≥295,000 Btu/h and <760,000 Btu/h	2.15	2.12
High Efficiency CRAC or CRAH – New Construction Requirements			
Cooling Medium	Net Sensible Cooling Capacity	Minimum NSenCOP	
		Downflow Units	Upflow Units
Air-Cooled	<80,000 Btu/h	2.97	2.94
	≥80,000 Btu/h and <295,000 Btu/h	2.84	2.81
	≥295,000 Btu/h and <760,000 Btu/h	2.60	2.56
Air-Cooled with a Fluid Economizer	<80,000 Btu/h	2.97	2.94
	≥80,000 Btu/h and <295,000 Btu/h	2.84	2.81
	≥295,000 Btu/h and <760,000 Btu/h	2.60	2.56
Water-Cooled	<80,000 Btu/h	3.10	3.07
	≥80,000 Btu/h and <295,000 Btu/h	3.00	2.97
	≥295,000 Btu/h and <760,000 Btu/h	2.94	2.90
Water-Cooled with a Fluid Economizer	<80,000 Btu/h	3.05	3.01
	≥80,000 Btu/h and <295,000 Btu/h	2.95	2.92
	≥295,000 Btu/h and <760,000 Btu/h	2.87	2.84
Glycol-Cooled	<80,000 Btu/h	2.82	2.78
	≥80,000 Btu/h and <295,000 Btu/h	2.46	2.43
	≥295,000 Btu/h and <760,000 Btu/h	2.43	2.40
Glycol-Cooled with a Fluid Economizer	<80,000 Btu/h	2.76	2.73
	≥80,000 Btu/h and <295,000 Btu/h	2.41	2.38
	≥295,000 Btu/h and <760,000 Btu/h	2.37	2.33