

REFRIGERANT CHOICES

		Low Pressure			Medium Pressure				High Pressure					
		R-123	R-1233zd	R-514A	R-134a	R-513A	R-1234ze	R-1234yf	R-22	R-410A	R-466A	R-452B	R-454B	R-32
Flammability	ASHRAE Class	1	1	1	1	1	2L	2L	1	1	1	2L	2L	2L
Toxicity ¹	ASHRAE Class	Higher (B)	Lower (A)	Higher (B)	Lower (A)	Lower (A)	Lower (A)	Lower (A)	Lower (A)	Lower (A)	Lower (A)	Lower (A)	Lower (A)	Lower (A)
	OEL	50	800	320	1000	650	800	500	1000	1000	860	870	850	1000
Efficiency (COP)		8.95	8.85	8.91	8.47	8.28	8.45	8.17	8.48	7.99	8.14	8.14	8.15	8.22
Capacity Change		baseline	~35% gain	~5% loss	baseline	similar	~25% loss	~5% loss		baseline	~1% loss	~2% loss	~3% loss	~9% gain
GWP ²		79	1	2	1300	573	1	1	1760	1924	703	675	466	677
Atmospheric Life		1.3 years	26 days	22 days	13.4 years	5.9 years	16 days	11 days	11.9 years	17 years	5.6 years	5.5 years	3.6 years	5.2 years

¹ None of the refrigerants shown in the table are considered "toxic" or "highly toxic" as defined by the IFC, UFC, NFPA 1 or OSHA regulations.

² GWP values reported are per the Fifth Assessment Report (AR5) of the IPCC (Intergovernmental Panel on Climate Change).