



Common Refrigerant Types and Applications

	Refrigerant	Application Temperature Range	Applications
Common-purpose Use	Ammonia	Low & medium	Mainly used in large-tonnage refrigerator
	R11	High	Mainly used in large-tonnage central air conditioning (centrifugal chiller) and other similar refrigeration plant
	R123	High	Replacing R11 to be used in large-tonnage refrigerator
	R12	Low & medium	Mainly used in vehicle air conditioner, household refrigerator, small refrigeration
	R134a	Low & medium	Replacing R12; mainly used in refrigerator, freezer, water dispenser, vehicle air conditioner, refrigeration storage, central air conditioning, dehumidifier, commercial refrigerating plant, chiller, ice cream machine, freezing & condensing unit and other refrigeration equipments
	R22	Low & medium	Mainly used in household air conditioner, commercial air conditioner, mobile air conditioner, heat-pump water heater, dehumidifier, refrigerant type dryer, refrigeration storage, icy food machine, marine refrigerating plant, industrial refrigerating plant, commercial refrigerating plant, freezing & condensing unit, supermarket-used display cabinet and other refrigerating plant
	R407c	Low & medium	Replacing R22; mainly used in household air conditioner, small or medium commercial air conditioner (small or medium unit-typed air conditioner, household central air conditioner, VRV), mobile air conditioner (vehicle air conditioner), dehumidifier, refrigerant type dryer, marine refrigerating plant, and industrial refrigerating plant
	R410A	Low & medium	Mainly used in household air conditioner, small or medium commercial air conditioner (small or medium unit-typed air conditioner, household central air conditioner, VRV), mobile air conditioner, dehumidifier, refrigerant type dryer, marine refrigerating plant, and industrial refrigerating plant
	R404A	Low & medium	Replacing R22 and R502; usually used in refrigerator, icy food machine, marine refrigerating plant, industrial subzero refrigeration, commercial subzero refrigeration, transport used refrigeration plant (refrigerator car), freezing & condensing unit,

			supermarket-used display cabinet and other refrigeration plant.
	R507	Low & medium	Replacing R22 and R502; usually used in refrigerator, icy food machine, marine refrigerating plant, industrial subzero refrigeration, commercial subzero refrigeration, refrigerator car, freezing & condensing unit, supermarket-used display cabinet and other refrigeration plant
	R142b	High	Mainly used in refrigeration air conditioner amid high temperature, heat pump
	R124	High	Mainly used in refrigeration air conditioner amid high temperature
	R417A	Low & medium	Replacing R22 directly; widely used to replace refrigerant of central air-conditioning in market, hotel, supermarket and office space
	R600a	Low & medium	Household refrigerator freeze or refrigeration storage
Special-purpose Use	R13	Ultra-low	Mainly used in ultra-low temperature freezer or refrigerator, blood bank refrigerator, lyophilizer/freeze dryer, environmental test chamber/equipment (thermal shock test machine), deep freeze refrigeration plant such as biochemical test chamber (including scientific research-used refrigeration and medical refrigeration); mainly used in low temperature section of above cascade refrigerating system
	R14	Ultra-low	Mainly used in deep freeze refrigeration plant asking for ultra-low temperature (including scientific research-used refrigeration and medical refrigeration)
	R23	Ultra-low	Replacing R13 and R14; mainly used in environmental test chamber/equipment (thermal shock test machine), lyophilizer /freeze dryer, ultra-low temperature refrigerator, blood bank refrigerator, deep freeze refrigeration plant such as biochemical test chamber (including scientific research-used refrigeration and medical refrigeration), mainly used in low temperature section of above cascade refrigerating system