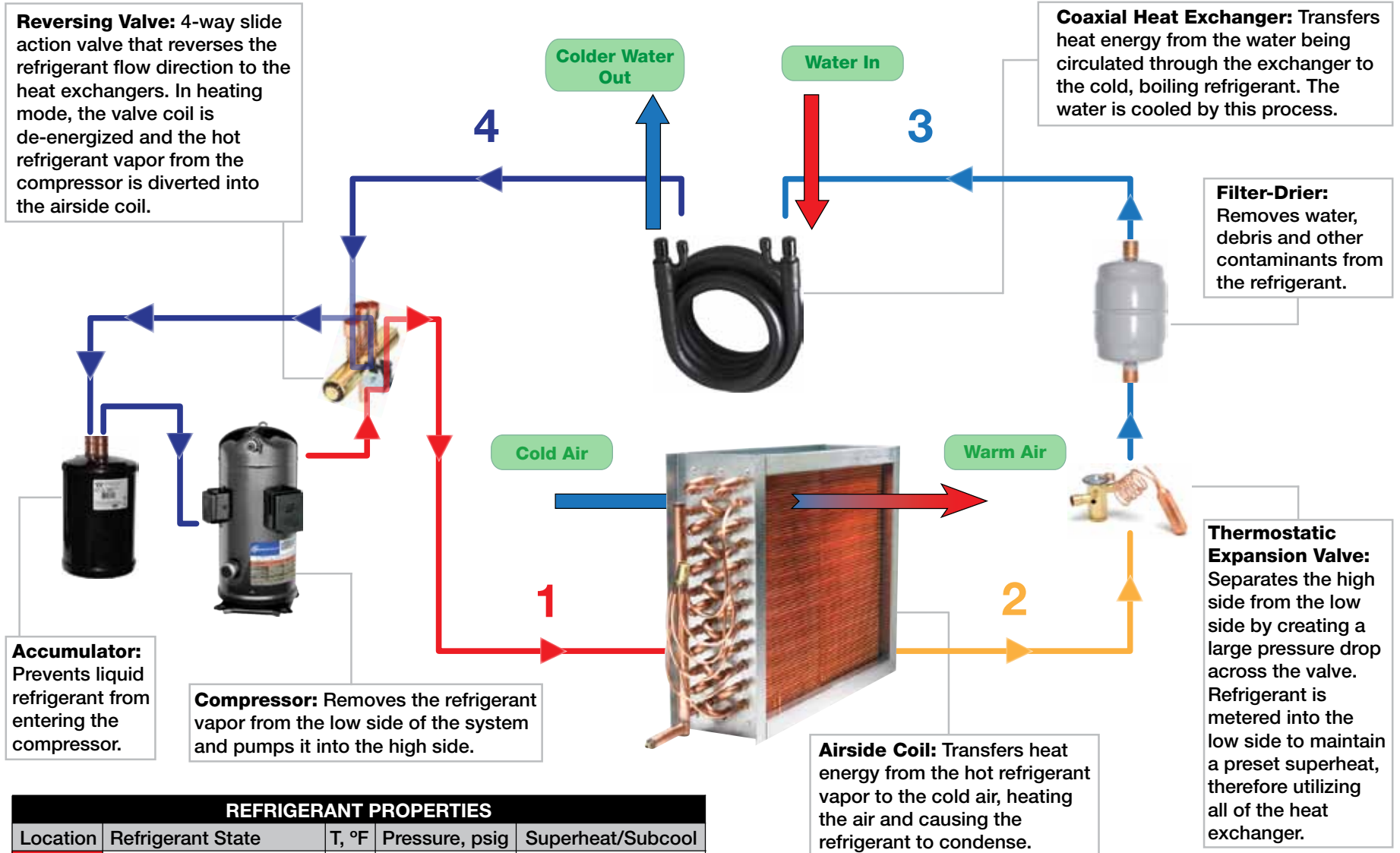


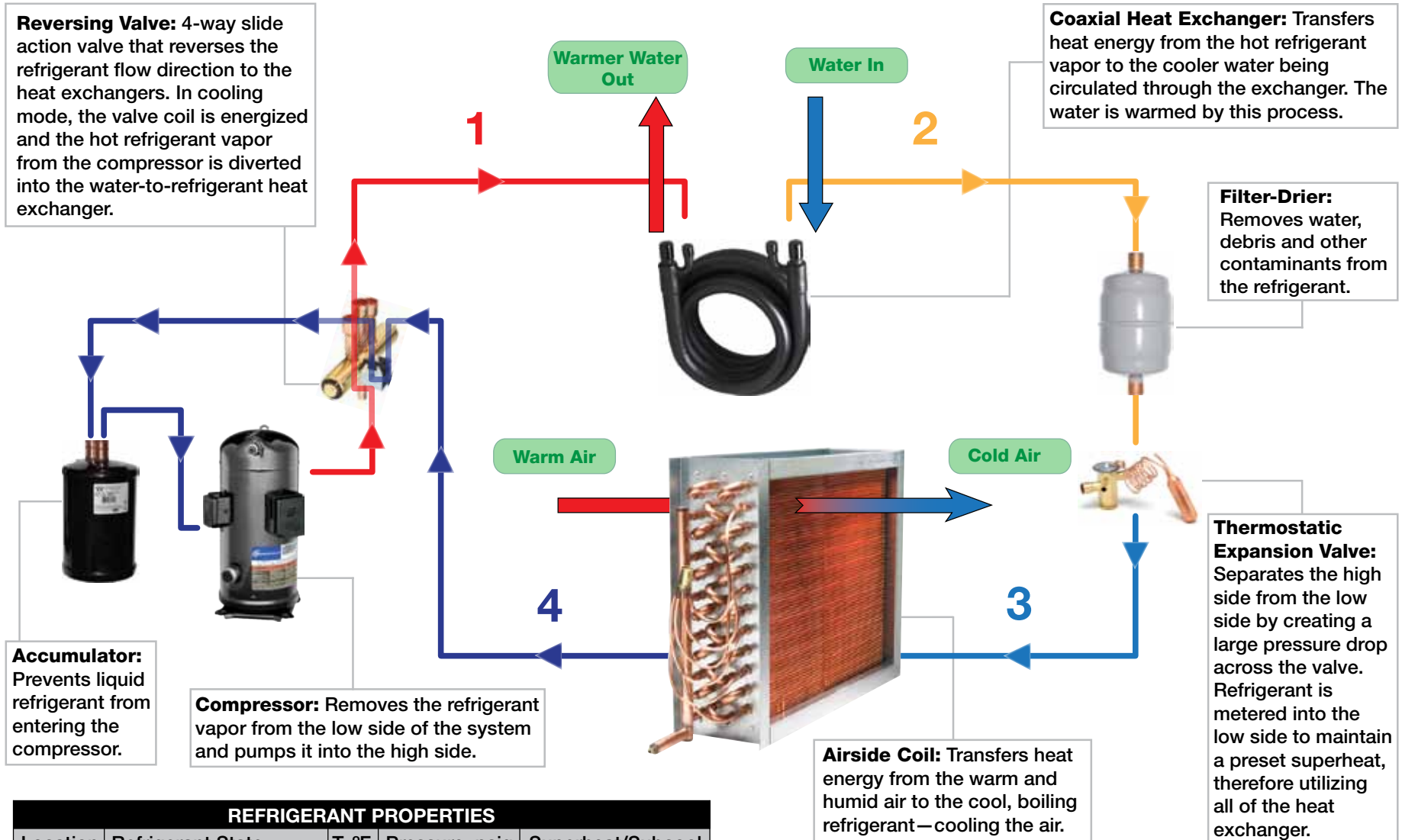
## Heat Pump Refrigeration System – Heating Mode



REFRIGERANT PROPERTIES				
Location	Refrigerant State	T, °F	Pressure, psig	Superheat/Subcool
1	Hot Vapor	135	250	50°F Superheat
2	Warm Liquid	70	250	15°F Subcool
3	Saturated Liquid-Vapor Mix	~35	105	
4	Cold Vapor	45	105	10°F Superheat

Water entering the coaxial heat exchanger is cooled through the heat being absorbed by the refrigerant and typically leaves about 6°F cooler.

## Heat Pump Refrigeration System – Cooling Mode



REFRIGERANT PROPERTIES				
Location	Refrigerant State	T, °F	Pressure, psig	Superheat/Subcool
1	Hot Vapor	150	320	50°F Superheat
2	Warm Liquid	85	320	15°F Subcool
3	Saturated Liquid-Vapor Mix	~45	130	
4	Cold Vapor	55	130	10°F Superheat

Water entering the coaxial heat exchanger is warmed by the heat it absorbs from the refrigerant and typically leaves about 10°F warmer.

