



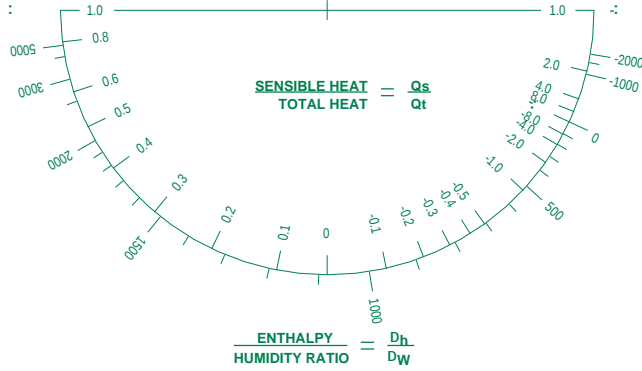
**ASHRAE PSYCHROMETRIC CHART NO.1**  
**NORMAL TEMPERATURE**  
**BAROMETRIC PRESSURE: 29.921 INCHES OF MERCURY**



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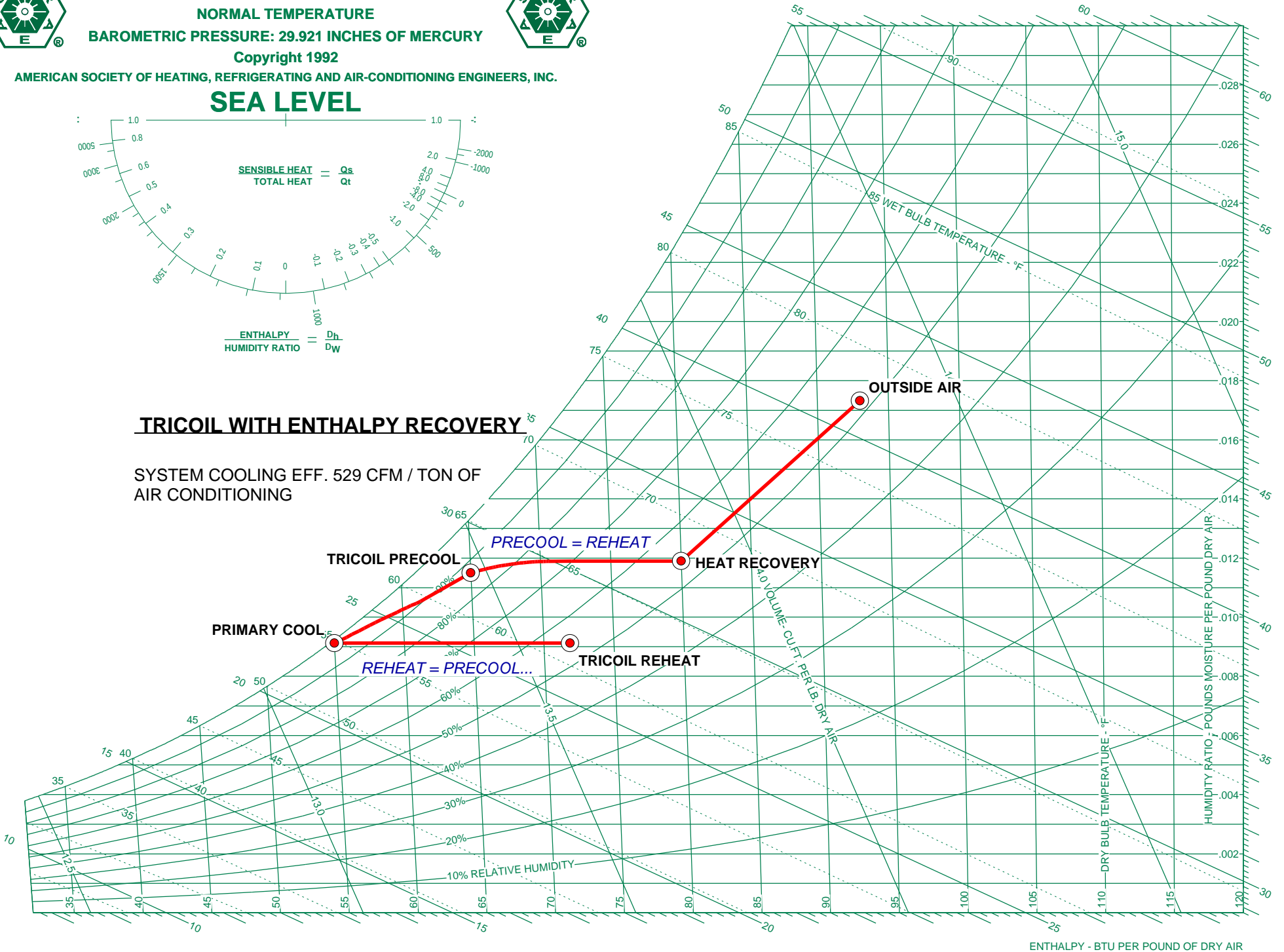
AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.

**SEA LEVEL**



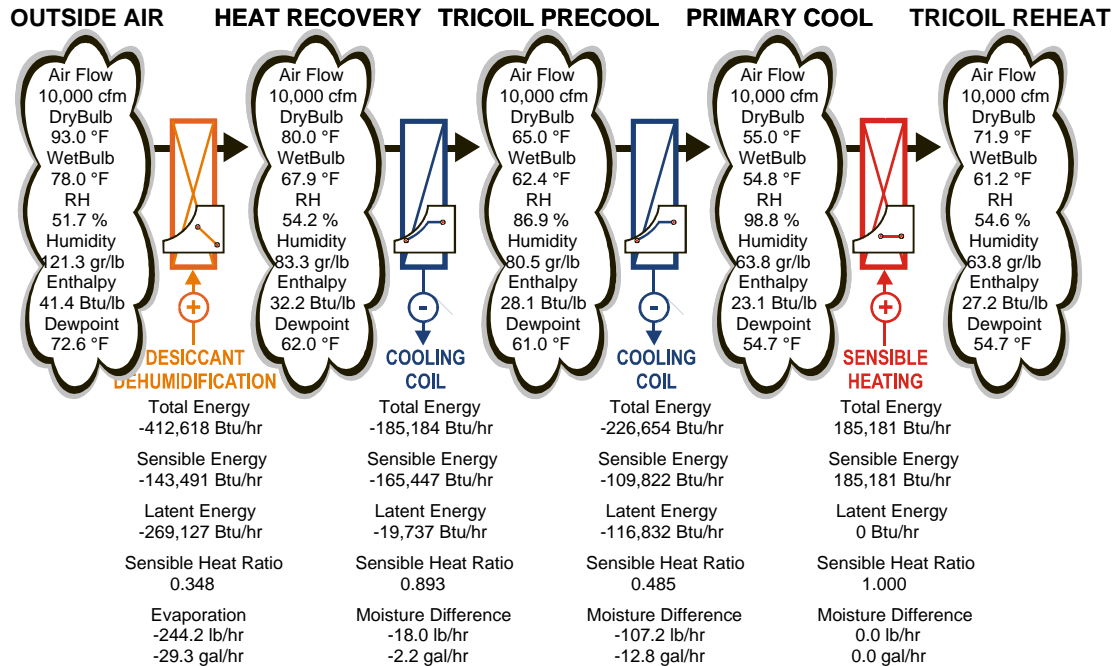
**TRICOIL WITH ENTHALPY RECOVERY**

SYSTEM COOLING EFF. 529 CFM / TON OF AIR CONDITIONING



## SYSTEM FLOW DIAGRAM - STATE POINT & PROCESS REPORT

Report Date: Wednesday, May 12, 2021  
 Project Information: TRICOIL WITH ENTHALPY RECOVERY  
 Altitude: 0 (Feet)  
 Barometric Pressure: 29.921 (in.Hg)  
 Atmospheric Pressure: 14.696 (psia)



# STATE POINT & PROCESS REPORT

Report Date: Wednesday, May 12, 2021  
 Project Information: TRICOIL WITH ENTHALPY RECOVERY  
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## 1. OUTSIDE AIR

### STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
10,000	93.000	78.000	51.7	0.01733	14.315	41.418	72.590	0.0711	0.8076	8.472

## 2. HEAT RECOVERY

### STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
10,000	80.000	67.913	54.2	0.01190	13.860	32.249	61.960	0.0730	0.5595	6.010

### Process: Desiccant Dehumidification

Start Point Name	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Dehumidification (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)	Sensible Energy Per Dehumidification (Btu/lb)
OUTSIDE AIR	-412,618	-143,491	-269,127	-244.2	0.348	1,690	587.7

## 3. TRICOIL PRECOOL

### STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
10,000	65.000	62.419	86.9	0.01150	13.466	28.133	61.010	0.0751	0.5410	5.978

### Process: Cooling Coil

Start Point Name	Total Cooling (tons)	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Dehumidification (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)
HEAT RECOVERY	-15.4	-185,184	-165,447	-19,737	-18.0	0.893	10,288

## 4. PRIMARY COOL

### STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
10,000	55.000	54.800	98.8	0.00912	13.160	23.097	54.660	0.0767	0.4305	4.850

### Process: Cooling Coil

Start Point Name	Total Cooling (tons)	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Dehumidification (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)
TRICOIL PRECOOL	-18.9	-226,654	-109,822	-116,832	-107.2	0.485	2,114

## 5. TRICOIL REHEAT

### STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
10,000	71.862	61.196	54.6	0.00912	13.591	27.212	54.660	0.0742	0.4305	4.696

### Process: Sensible Heating

Start Point Name	Total Heating (tons)	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Moisture Difference (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)
PRIMARY COOL	15.4	185,181	185,181	0	0.0	1.000	N/A