Input Output Reference

The Encyclopedic Reference to EnergyPlus Input and Output

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### Coil:Cooling:DX:SingleSpeed

This DX cooling coil input requires an availability schedule, the gross rated total cooling capacity, the gross rated SHR, the gross rated COP, and the rated air volume flow rate. The latter 4 inputs determine the coil performance at the rating point (air entering the cooling coil at 26.7°C drybulb/19.4°C wetbulb and air entering the outdoor condenser coil at 35°C drybulb/23.9°C wetbulb). The rated air volume flow rate should be between .00004027 m3/s and .00006041 m3/s per watt of gross rated total cooling capacity (300 to 450 cfm/ton).

The rated volumetric air flow to total cooling capacity ratio for 100% dedicated outdoor air (DOAS) application DX cooling coils should be between 0.00001677 (m3/s)/W (125 cfm/ton) and 0.00003355 (m3/s)/W (250 cfm/ton).

Pumped refrigerant economizer integrated with the single speed DX cooling coil model will use exactly the same model except that performance curves use lookup table to cover the pumped refrigerant economizer and the compressor operating ranges. One or two independent variables may used to represent the performance data.This model requires 5 curves as follows:

1. The total cooling capacity modifier curve (function of temperature) is a curve with two independent variables: wet-bulb temperature of the air entering the cooling coil, and dry-bulb temperature of the air entering the air-cooled condenser coil (wet-bulb temperature if modeling an evaporative-cooled condenser). The output of this curve is multiplied by the gross rated total cooling capacity to give the gross total cooling capacity at specific temperature operating conditions (i.e., at temperatures different from the rating point temperatures). This curve is typically a biquadratic but any curve or table with two independent variables can be used.
2. The total cooling capacity modifier curve (function of flow fraction) is a curve or a lookup table with the independent variable being the ratio of the actual air flow rate across the cooling coil to the rated air flow rate (i.e., fraction of full load flow). The output of this curve is multiplied by the gross rated total cooling capacity and the total cooling capacity modifier curve (function of temperature) to give the gross total cooling capacity at the specific temperature and air flow conditions at which the coil is operating. This curve is typically a quadratic or cubic but any curve or table with one independent variables can be used.
3. The energy input ratio (EIR) modifier curve (function of temperature) is a curve with two independent variables: wet-bulb temperature of the air entering the cooling coil, and dry-bulb temperature of the air entering the air-cooled condenser coil (wet-bulb temperature if modeling an evaporative-cooled condenser). The output of this curve is multiplied by the rated EIR (inverse of the rated COP) to give the EIR at specific temperature operating conditions (i.e., at temperatures different from the rating point temperatures). This curve is typically a biquadratic but any curve or table with two independent variables can be used.
4. The energy input ratio (EIR) modifier curve (function of flow fraction) is a curve or a lookup table with the independent variable being the ratio of the actual air flow rate across the cooling coil to the rated air flow rate (i.e., fraction of full load flow). The output of this curve is multiplied by the rated EIR (inverse of the rated COP) and the EIR modifier curve (function of temperature) to give the EIR at the specific temperature and air flow conditions at which the coil is operating. This curve is typically a quadratic or cubic but any curve or table with one independent variables can be used.
5. The part load fraction correlation (function of part load ratio) is a curve or a lookup table with the independent variable being part load ratio (sensible cooling load / steady-state sensible cooling capacity). The output of this curve is used in combination with the rated EIR and EIR modifier curves to give the “effective” EIR for a given simulation timestep. The part load fraction (PLF) correlation accounts for efficiency losses due to compressor cycling. The curve should be normalized to a value of 1.0 when the part-load ratio equals 1.0 (i.e., the compressor(s) run continuously for the simulation timestep). This curve is typically a quadratic or cubic but any curve or table with one independent variables can be used.

The curves are simply specified by name. Curve inputs are described in the curve manager section of this document (see Performance Curves in this document).

The next four input fields are optional and relate to the degradation of latent cooling capacity when the supply air fan operates continuously while the cooling coil/compressor cycle on and off to meet the cooling load. The fan operating mode is determined in the partent object and is considered to either be constant (e.g. CoilSystem:Cooling:DX) or can be scheduled (e.g. AirLoopHVAC:UnitaryHeatCool). When scheduled, the schedule value must be greater than 0 to calculate degradation of latent cooling capacity. At times when the parent object’s supply air fan operating mode schedule is 0, latent degradation will be ignored. When modeling latent capacity degradation, these next four input fields must all have positive values.

The next input specifies the outdoor air node used to define the conditions of the air entering the outdoor condenser. If this field is left blank, the outdoor temperature entering the condenser is taken directly from the weather data. If this field is not blank, the node name specified must be listed in an OutdoorAir:Node object where the height of the node is taken into consideration when calculating outdoor temperature from the weather data. Alternately, the node name must be specified in an OutdoorAir:NodeList object where the outdoor temperature entering the condenser is taken directly from the weather data.

The next input describes the type of outdoor condenser coil used with the DX cooling coil (Air Cooled or Evap Cooled). The following three inputs are required when modeling an evaporative-cooled condenser: evaporative condenser effectiveness, evaporative condenser air volume flow rate, and the power consumed by the evaporative condenser pump. Crankcase heater capacity and cutout temperature are entered in the next two input fields. These two fields for this object define the name of the water storage tank for supply and condensate collection. See section “DX Cooling Coil Model” in the EnergyPlus Engineering Document for further details regarding this model.

The last two input fields following the Basin Heater Operating Schedule Name are the Sensible Heat Ratio (SHR) modifier cruve names for temperature and flow fraction. These two input fields are optional and used only when a user intends to override SHR calculated using the apparatus dew point (ADP) and bypass factor (BF) method. See section “SHR Calculation Using User Specified SHR Modifier Curves” in the EnergyPlus Engineering Document for further details.

#### Field: Name

A unique user-assigned name for an instance of a DX cooling coil. Any reference to this DX coil by another object will use this name.

#### Field: Availability Schedule Name

The name of the schedule (ref: Schedule) that denotes whether the DX cooling coil can run during a given time period. A schedule value greater than 0 (usually 1 is used) indicates that the unit can be on during a given time period. A value less than or equal to 0 (usually 0 is used) denotes that the unit must be off. If this field is blank, the schedule has values of 1 for all time periods.

#### Field: Gross Rated Total Cooling Capacity

The total, full load gross cooling capacity (sensible plus latent) in watts of the DX coil unit at rated conditions (air entering the cooling coil at 26.7°C drybulb/19.4°C wetbulb, air entering the outdoor condenser coil at 35°C drybulb/23.9°C wetbulb[[1]](#footnote-1), and a cooling coil air flow rate defined by field “rated air flow rate” below). Capacity should be “gross” (i.e., the effect of supply air fan heat is NOT accounted for). When used in a heat pump, the gross rated total cooling capacity should be within 20% of the gross rated heating capacity, otherwise a warning message is issued.

#### Field: Gross Rated Sensible Heat Ratio

The sensible heat ratio (SHR= gross sensible cooling capacity divided by gross total cooling capacity) of the DX cooling coil at rated conditions (air entering the cooling coil at 26.7°C drybulb/19.4°C wetbulb, air entering the outdoor condenser coil at 35°C drybulb/23.9°C wetbulb), and a cooling coil air flow rate defined by field “rated air flow rate” below). Both the sensible and total cooling capacities used to define the Rated SHR should be “gross” (i.e., the effect of supply air fan heat is NOT accounted for).

#### Field: Gross Rated Cooling COP

The coefficient of performance is the ratio of the gross total cooling capacity in watts to electrical power input in watts of the DX cooling coil unit at rated conditions (air entering the cooling coil at 26.7°C drybulb/19.4°C wetbulb, air entering the outdoor condenser coil at 35°C drybulb/ 23.9°C wetbulb, and a cooling coil air flow rate defined by field “rated air flow rate” below). The input power includes electric power for the compressor(s) and condenser fan(s) but does not include the power consumption of the supply air fan. The gross COP should NOT account for the supply air fan. If this input field is left blank, the default value is 3.0.

#### Field: Rated Air Flow Rate

The air volume flow rate, in m3 per second, across the DX cooling coil at rated conditions. The rated air volume flow rate should be between 0.00004027 m3/s and 0.00006041 m3/s per watt of gross rated total cooling capacity (300 to 450 cfm/ton). For DOAS applications the rated air volume flow rate should be between 0.00001677 m3/s and 0.00003355 m3/s per watt of gross rated total cooling capacity (125 to 250 cfm/ton). The gross rated total cooling capacity, gross rated SHR and gross rated COP should be performance information for the unit with air entering the cooling coil at 26.7°C drybulb/19.4°C wetbulb, air entering the outdoor condenser coil at 35°C drybulb/23.9°C wetbulb, and the rated air volume flow rate defined here.

#### Field: Rated Evaporator Fan Power Per Volume Flow Rate

This field is the electric power for the evaporator (cooling coil) fan per air volume flow rate through the coil at the rated conditions in W/(m3/s). The default value is 773.3 W/(m3/s) (365 W/1000 cfm) if this field is left blank. If a value is entered, it must be >= 0.0 and <= 1250 W/(m3/s). This value is only used to calculate Seasonal Energy Efficiency Ratio (SEER), Energy Efficiency Ratio (EER), Integrated Energy Efficiency Ratio (IEER) and the Standard Rating (Net) Cooling Capacity which will be outputs in the EnergyPlus eio file (ref. EnergyPlus Engineering Reference, Single Speed DX Cooling Coil, Standard Ratings). This value is not used for modeling the evaporator (cooling coil) fan during simulations; instead, it is used for calculating SEER, EER, IEER and Standard Rating Cooling Capacity to assist the user in verifying their inputs for modeling this type of equipment.

#### Field: Air Inlet Node Name

The name of the HVAC system node from which the DX cooling coil draws its inlet air.

#### Field: Air Outlet Node Name

The name of the HVAC system node to which the DX cooling coil sends its outlet air.

#### Field: Total Cooling Capacity Function of Temperature Curve Name

The name of a performance curve (ref: Performance Curves) that parameterizes the variation of the gross total cooling capacity as a function of the wet-bulb temperature of the air entering the cooling coil, and the dry-bulb temperature of the air entering the air-cooled condenser coil (wet-bulb temperature if modeling an evaporative-cooled condenser). The output of this curve is multiplied by the gross rated total cooling capacity to give the gross total cooling capacity at specific temperature operating conditions (i.e., at temperatures different from the rating point temperatures). The curve is normalized to have the value of 1.0 at the rating point. This curve is typically a biquadratic but any curve or table with two independent variables can be used.

#### Field: Total Cooling Capacity Function of Flow Fraction Curve Name

The name of a quadratic or cubic performance curve (ref: Performance Curves) that parameterizes the variation of the gross total cooling capacity as a function of the ratio of actual air flow rate across the cooling coil to the rated air flow rate (i.e., fraction of full load flow). The output of this curve is multiplied by the gross rated total cooling capacity and the total cooling capacity modifier curve (function of temperature) to give the gross total cooling capacity at the specific temperature and air flow conditions at which the coil is operating. The curve is normalized to have the value of 1.0 when the actual air flow rate equals the rated air flow rate.

#### Field: Energy Input Ratio Function of Temperature Curve Name

The name of a performance curve (ref: Performance Curves) that parameterizes the variation of the energy input ratio (EIR) as a function of the wet-bulb temperature of the air entering the cooling coil, and the dry-bulb temperature of the air entering the air-cooled condenser coil (wet-bulb temperature if modeling an evaporative-cooled condenser). The EIR is the inverse of the COP. The output of this curve is multiplied by the rated EIR (inverse of rated COP) to give the EIR at specific temperature operating conditions (i.e., at temperatures different from the rating point temperatures). The curve is normalized to a value of 1.0 at the rating point. This curve is typically a biquadratic but any curve or table with two independent variables can be used.

#### Field: Energy Input Ratio Function of Flow Fraction Curve Name

The name of a performance curve (Ref: Performance Curves) that parameterizes the variation of the energy input ratio (EIR) as a function of the ratio of actual air flow rate across the cooling coil to the rated air flow rate (i.e., fraction of full load flow). The EIR is the inverse of the COP. The output of this curve is multiplied by the rated EIR and the EIR modifier curve (function of temperature) to give the EIR at the specific temperature and air flow conditions at which the cooling coil is operating. This curve is normalized to a value of 1.0 when the actual air flow rate equals the rated air flow rate. This curve is typically a quadratic or cubic but any curve or table with one independent variables can be used.

#### Field: Part Load Fraction Correlation Curve Name

This alpha field defines the name of a performance curve (Ref: Performance Curves) that parameterizes the variation of electrical power input to the DX unit as a function of the part load ratio (PLR, sensible cooling load/steady-state sensible cooling capacity). The product of the rated EIR and EIR modifier curves is divided by the output of this curve to give the “effective” EIR for a given simulation timestep. The part load fraction (PLF) correlation accounts for efficiency losses due to compressor cycling. This curve is typically a quadratic or cubic but any curve or table with one independent variables can be used.

The part load fraction correlation should be normalized to a value of 1.0 when the part load ratio equals 1.0 (i.e., no efficiency losses when the compressor(s) run continuously for the simulation timestep). For PLR values between 0 and 1 (0 <= PLR < 1), the following rules apply:

PLF >= 0.7 and PLF >= PLR

If PLF < 0.7 a warning message is issued, the program resets the PLF value to 0.7, and the simulation proceeds. The runtime fraction of the coil is defined as PLR/PLF. If PLF < PLR, then a warning message is issued and the runtime fraction of the coil is limited to 1.0.

A typical part load fraction correlation for a conventional, single-speed DX cooling coil (e.g., residential unit) would be:

PLF = 0.85 + 0.15(PLR)

If the user wishes to model no efficiency degradation due to compressor cycling, the part load fraction correlation should be defined as follows:

PLF = 1.0 + 0.0(PLR)

#### Field: Nominal Time for Condensate Removal to Begin

The nominal time (in seconds) after startup for condensate to begin leaving the coil's condensate drain line at the coil's rated airflow and temperature conditions, starting with a dry coil. Nominal time is equal to the ratio of the energy of the coil's maximum condensate holding capacity (J) to the coil's steady-state latent capacity (W). Suggested value is 1000; zero value means the latent degradation model is disabled. The default value for this field is zero. The supply air fan operating mode must be continuous (i.e., the supply air fan operating mode may be specified in other ”parent” objects and is assumed continuous in some objects (e.g., CoilSystem:Cooling:DX) or can be scheduled in other objects [e.g., AirloopHVAC:UnitaryHeatCool]), and this field as well as the next three input fields for this object must have positive values in order to model latent capacity degradation.

#### Field: Ratio of Initial Moisture Evaporation Rate and Steady State Latent Capacity

Ratio of the initial moisture evaporation rate from the cooling coil (when the compressor first turns off, in Watts) and the coil's steady-state latent capacity (Watts) at rated airflow and temperature conditions. Suggested value is 1.5; zero value means the latent degradation model is disabled. The default value for this field is zero. The supply air fan operating mode must be continuous (i.e., the supply air fan operating mode may be specified in other ”parent” objects and is assumed continuous in some objects (e.g., CoilSystem:Cooling:DX) or can be scheduled in other objects [e.g., AirloopHVAC:UnitaryHeatCool]); and this field, the previous field and the next two fields must have positive values in order to model latent capacity degradation.

#### Field: Maximum Cycling Rate

The maximum on-off cycling rate for the compressor (cycles per hour), which occurs at 50% run time fraction. Suggested value is 3; zero value means latent degradation model is disabled. The default value for this field is zero. The supply air fan operating mode must be continuous (i.e., the supply air fan operating mode may be specified in other ”parent” objects and is assumed continuous in some objects (e.g., CoilSystem:Cooling:DX) or can be scheduled in other objects [e.g., AirloopHVAC:UnitaryHeatCool]); and this field, the previous two fields and the next field must have positive values in order to model latent capacity degradation.

#### Field: Latent Capacity Time Constant

Time constant (in seconds) for the cooling coil's latent capacity to reach steady state after startup. Suggested value is 45: supply air fan operating mode must be continuous. That is, the supply air fan operating mode may be specified in other ”parent” objects and is assumed continuous in some objects (e.g., CoilSystem:Cooling:DX) or can be scheduled in other objects (e.g., AirloopHVAC:UnitaryHeatCool), and this field as well as the previous three input fields for this object must have positive values in order to model latent capacity degradation.

#### Field: Condenser Air Inlet Node Name

This optional alpha field specifies the outdoor air node name used to define the conditions of the air entering the outdoor condenser. If this field is left blank, the outdoor air temperature entering the condenser (dry-bulb or wet-bulb) is taken directly from the weather data. If this field is not blank, the node name specified must also be specified in an OutdoorAir:Node object where the height of the node is taken into consideration when calculating outdoor air temperature from the weather data. Alternately, the node name may be specified in an OutdoorAir:NodeList object where the outdoor air temperature is taken directly from the weather data.

#### Field: Condenser Type

The type of condenser used by the DX cooling coil. Valid choices for this input field are **AirCooled** or **EvaporativelyCooled**. The default for this field is **AirCooled**.

#### Field: Evaporative Condenser Effectiveness

The effectiveness of the evaporative condenser, which is used to determine the temperature of the air entering the outdoor condenser coil as follows:



where

*Tcond inlet* = the temperature of the air entering the condenser coil (C)

*Twb,o*= the wet-bulb temperature of the outdoor air (C)

*Tdb,o*= the dry-bulb temperature of the outdoor air (C)

The resulting condenser inlet air temperature is used by the Total Cooling Capacity Modifier Curve (function of temperature) and the Energy Input Ratio Modifier Curve (function of temperature). The default value for this field is 0.9, although valid entries can range from 0.0 to 1.0. This field is not used when Condenser Type = Air Cooled.

If the user wants to model an air-cooled condenser, they should simply specify AirCooled in the field Condenser Type. In this case, the Total Cooling Capacity Modifier Curve (function of temperature) and the Energy Input Ratio Modifier Curve (function of temperature) input fields for this object should reference performance curves that are a function of outdoor dry-bulb temperature.

If the user wishes to model an evaporative-cooled condenser AND they have performance curves that are a function of the wet-bulb temperature of air entering the condenser coil, then the user should specify Condenser Type = Evap Cooled and the evaporative condenser effectiveness value should be entered as 1.0. In this case, the Total Cooling Capacity Modifier Curve (function of temperature) and the Energy Input Ratio Modifier Curve (function of temperature) input fields for this object should reference performance curves that are a function of the wet-bulb temperature of air entering the condenser coil.

If the user wishes to model an air-cooled condenser that has evaporative media placed in front of it to cool the air entering the condenser coil, then the user should specify Condenser Type = Evap Cooled. The user must also enter the appropriate evaporative effectiveness for the media. In this case, the Total Cooling Capacity Modifier Curve (function of temperature) and the Energy Input Ratio Modifier Curve (function of temperature) input fields for this object should reference performance curves that are a function of outdoor dry-bulb temperature. Be aware that the evaporative media will significantly reduce the dry-bulb temperature of the air entering the condenser coil, so the Total Cooling Capacity and EIR Modifier Curves must be valid for the expected range of dry-bulb temperatures that will be entering the condenser coil.

#### Field: Evaporative Condenser Air Flow Rate

The air volume flow rate, in m3 per second, entering the evaporative condenser. This value is used to calculate the amount of water used to evaporatively cool the condenser inlet air. The minimum value for this field must be greater than zero, and this input field is autosizable (equivalent to 0.000144 m3/s per watt of rated total cooling capacity [850 cfm/ton]). This field is not used when Condenser Type = Air Cooled.

#### Field: Evaporative Condenser Pump Rated Power Consumption

The rated power of the evaporative condenser water pump in Watts. This value is used to calculate the power required to pump the water used to evaporatively cool the condenser inlet air. The default value for this input field is zero, but it is autosizable (equivalent to 0.004266 W per watt [15 W/ton] of rated total cooling capacity). This field is not used when Condenser Type = Air Cooled.

#### Field: Crankcase Heater Capacity

This numeric field defines the crankcase heater capacity in Watts. When the outdoor air dry-bulb temperature is below the value specified in the input field “Maximum Outdoor Dry-bulb Temperature for Crankcase Heater Operation” (described below), the crankcase heater is enabled during the time that the compressor is not running. If this cooling coil is used as part of an air-to-air heat pump (Ref. AirLoopHVAC:UnitaryHeatPump:AirToAir or PackageTerminal: HeatPump:AirToAir), the crankcase heater defined for this DX cooling coil is ignored and the crankcase heater power defined for the DX heating coil (Ref. Coil:Heating:DX:SingleSpeed) is enabled during the time that the compressor is not running for either heating or cooling. The value for this input field must be greater than or equal to 0, and the default value is 0. To simulate a DX cooling coil without a crankcase heater, enter a value of 0.

#### Field: Maximum Outdoor Dry-Bulb Temperature for Crankcase Heater Operation

This numeric field defines the outdoor air dry-bulb temperature above which the compressor’s crankcase heater is disabled. The value for this input field must be greater than or equal to 0.0°C, and the default value is 10°C.

#### Field: Supply Water Storage Tank Name

This field is optional. It is used to describe where the coil obtains water used for evaporative cooling of its condenser. If blank or omitted, then the unit will obtain water directly from the mains. If the name of a Water Storage Tank object is used here, then the unit will obtain its water from that tank. If a tank is specified, the unit will attempt to obtain all the water it uses from the tank. However if the tank cannot provide all the water the condenser needs, then the unit will still operate and obtain the rest of the water it needs from the mains (referred to as StarvedWater).

#### Field: Condensate Collection Water Storage Tank Name

This field is optional. It is used to describe where condensate from the coil is collected. If blank or omitted, then any coil condensate is discarded. Enter the name of Water Storage Tank object defined elsewhere and the condensate will then be collected in that tank.

#### Field: Basin Heater Capacity

This numeric field contains the capacity of the DX coil’s electric evaporative cooler basin heater in watts per degree Kelvin. This field only applies for Condenser Type = EvaporativelyCooled. This field is used in conjunction with the Basin Heater Setpoint Temperature described in the following field. The basin heater electric power is equal to this field multiplied by the difference between the basin heater set point temperature and the outdoor dry-bulb temperature. The basin heater only operates when the DX coil is off, regardless of the basin heater schedule described below. The basin heater capacity must be greater than or equal to zero, with a default value of zero if this field is left blank.

#### Field: Basin Heater Setpoint Temperature

This numeric field contains the set point temperature (˚C) for the basin heater described in the previous field. This field only applies for Condenser Type = EvaporativelyCooled. The basin heater is active when the outdoor air dry-bulb temperature falls below this setpoint temperature, as long as the DX coil is off. This set point temperature must be greater than or equal to 2˚C, and the default value is 2˚C if this field is left blank.

#### Field: Basin Heater Operating Schedule Name

This alpha field contains the name of the basin heater operating schedule. This field only applies for Condenser Type = EvaporativelyCooled. The basin heater operating schedule is assumed to be an on/off schedule and the heater is available to operate any time the schedule value is greater than 0. The basin heater operates when scheduled on and the outdoor air dry-bulb temperature is below the set point temperature described in the previous field. If this field is left blank, the basin heater is available to operate throughout the simulation. Regardless of this schedule, the basin heater may only operate when the DX coil is off.

#### Field: Sensible Heat Ratio Function of Temperature Curve Name

The name of a biquadratic normalized curve (Ref: Performance Curves) that parameterizes the variation of the sensible heat ratio (SHR) as a function of DX cooling coil entering air wet-bulb and dry-bulb temperatures. The output of this curve is multiplied by the rated SHR and the SHR modifier curve (function of flow fraction) to give the SHR at the specific coil entering air temperature and air flow conditions at which the cooling coil is operating. This curve is normalized to a value of 1.0 at the rated condition. This input field is optional.

#### Field: Sensible Heat Ratio Function of Flow Fraction Curve Name

The name of a quadratic or cubic normalized curve (Ref: Performance Curves) that parameterizes the variation of the sensible heat ratio (SHR) as a function of the ratio of actual air flow rate across the cooling coil to the rated air flow rate (i.e., fraction of full load flow). The output of this curve is multiplied by the rated SHR and the SHR modifier curve (function of temperature) to give the SHR at the specific temperature and air flow conditions at which the cooling coil is operating. This curve is normalized to a value of 1.0 when the actual air flow rate equals the rated air flow rate. This input field is optional.

Following is an example input for a Coil:Cooling:DX:SingleSpeed coil.

Coil:Cooling:DX:SingleSpeed,

Zone1WindACDXCoil, ! Coil Name

FanAndCoilAvailSched, ! Availability Schedule

10548, ! Gross Rated Total Cooling Capacity

0.75, ! Gross Rated Sensible Heat Ratio

3.0, ! Gross Rated Cooling COP

0.637, ! Rated Air Flow Rate (m3/s)

773.3, ! Rated Evaporator Fan Power Per Volume Flow Rate {W/(m3/s)}

Zone1WindACFanOutletNode, ! Coil Air Inlet Node

Zone1WindACAirOutletNode, ! Coil Air Outlet Node

WindACCoolCapFT, ! Total Cooling Capacity Modifier Curve (function of temperature)

WindACCoolCapFFF, ! Total Cooling Capacity Modifier Curve (function of flow fraction)

WindACEIRFT, ! Energy Input Ratio Modifier Curve (function of temperature)

WindACEIRFFF, ! Energy Input Ratio Modifier Curve (function of flow fraction)

WindACPLFFPLR, ! Part Load Fraction Correlation (function of part load ratio)

1000., ! Nominal Time for Condensate Removal to Begin {s}

1.5, ! Ratio of Initial Moisture Evaporation Rate and Steady-state Latent Capacity

3.0, ! Maximum ON/OFF Cycling Rate {cycles/hr}

45.0, ! Latent Capacity Time Constant {s}

, ! Condenser Air Inlet Node Name

AirCooled, ! Condenser Type

, ! Evaporative Condenser Effectiveness

, ! Evaporative Condenser Air Volume Flow Rate {m3/s}

, ! Evaporative Condenser Pump Rated Power Consumption {W}

30., ! Crankcase Heater Capacity {W}

10.; ! Maximum Outdoor Dry-bulb Temperature for Crankcase Heater Operation {C}

### Coil:Cooling:DX:TwoSpeed

1. The 23.9°C wet-bulb temperature condition is not applicable for air-cooled condensers which do not evaporate condensate. [↑](#footnote-ref-1)