

Sequences of Operation

Rooftop Units

CV Reheat

File Name	Description
<i>RTU Reheat</i>	Reheat system RTU, serving electric reheat coils, w/dehumidification cycle & RA CO2 override of OAD

CV Single Zone

File Name	Description
<i>RTU SZ (from PC)</i>	Single zone RTU, controlled by a programmable thermostat
<i>RTU SZ Generic</i>	Single zone RTU, generic description, with power exhauster
<i>RTU SZ Multiple Units</i>	Single zone RTUs, one sentence descriptions of multiple units for a single project
<i>RTU SZ Prog Thermostat</i>	Single zone RTU, controlled by a programmable thermostat, with smoke detector
<i>RTU SZ Short Version</i>	Single zone RTU, short description of programmable thermostat control
<i>RTU SZ Trane Tracer</i>	Single zone RTU, typical control of a networked Trane RTU on a Tracer system
<i>RTU SZ Trane with Zone Sensor</i>	Single zone RTU, typical control of a stand-alone Trane RTU

Misc.

File Name	Description
<i>Economizer</i>	Short description of economizer operation as it applies to packaged RTUs
<i>Economizer (from PC)</i>	Long description of economizer operation as it applies to packaged RTUs
<i>Refrig Cycle (from PC)</i>	Basic description of the refrigeration cycle as it applies to packaged RTUs
<i>T7300-Q7300</i>	RTU operation of the Honeywell T7300 programmable thermostat, with the Q7300 switching subbase

VAV

File Name	Description
<i>RTU VAV Elec Heat VFD</i>	VAV RTU, DX cooling and electric heating, supply fan VFD, generic description
<i>RTU VAV Gas Heat IGV's</i>	VAV RTU, DX cooling and gas heating, supply fan IGVs, Trane RTU and VAV boxes (Tracer)
<i>RTU VAV Trane Intellipak</i>	VAV RTU, Trane Intellipak, point style sequence of operation of the whole VAV system
<i>RTU VAV Traq Dampers</i>	VAV RTU, elaborate description of the operation of Trane's Traq Dampers
<i>RTU VAV Two Units One System</i>	Two VAV RTUs serving the same ductwork distribution system, version 1
<i>RTU VAV Two Units One System</i>	Two VAV RTUs serving the same ductwork distribution system, version 2

Make Up Air Units

Built Up

File Name	Description
<i>MAU Blt Up HW</i>	Built up MAU, 100% OA, hot water preheat coil and circ pump, chilled water coil, electric reheat coil
<i>MAU Blt Up HW CHW Elec</i>	Built up MAU, 100% OA, hot water coil and circ pump, no cooling, combustion air unit
<i>MAU Blt Up Steam</i>	Built up MAU, 100% OA, steam coil with face/byp dampers, no cooling, microprocessor-based control

Packaged 100% OA

File Name	Description
<i>MAU 100% OA Generic</i>	Packaged MAU, DA control with space reset, short description
<i>MAU 100% OA with CHW 1</i>	Packaged gas-fired MAU, DA control, with CHW coil and separate cooling DA control system
<i>MAU 100% OA with CHW 2</i>	Packaged gas-fired MAU, DA control, with CHW coil, integration of htg and clg via digital controller
<i>MAU 100% OA with DX 1</i>	Packaged gas-fired heating / DX cooling MAU, factory controls with some BAS integration
<i>MAU 100% OA with DX 2</i>	Packaged gas-fired heating / DX cooling MAU, factory controls
<i>MAU 100% OA with DX 3</i>	Packaged gas-fired heating / DX cooling MAU, factory controls
<i>MAU 100% OA with VFD</i>	Packaged gas-fired MAU, with supply fan VFD and space pressure control

Packaged 80-20

File Name	Description
<i>MAU 80-20 1</i>	Packaged gas-fired MAU, DA control with space reset, space pressure control of OA/RA dampers
<i>MAU 80-20 2</i>	Packaged gas-fired MAU, DA control with space reset, space pressure control of OA/RA dampers

Fan Coil Units

Built Up

File Name	Description
<i>FCU Blt Up Dual Temp</i>	Built up FCU, one coil for both heating and cooling, controlled by a programmable thermostat
<i>FCU Blt Up DX Elec</i>	Built up FCU, DX clg, electric and hot water htg coils, controlled by a non-programmable thermostat
<i>FCU Blt Up DX Elec HW</i>	Built up FCU, DX cooling and electric heating, controlled by an electronic thermostat
<i>FCU Blt Up DX HW</i>	Built up FCU, DX cooling and hot water heating, controlled by an electronic thermostat

Packaged

File Name	Description
<i>FCU Four-pipe</i>	Packaged FCU, chilled water cooling and hot water heating, controlled by a unit mounted thermostat
<i>FCU Split System</i>	Packaged FCU, DX cooling and electric heating, controlled by a remote mounted thermostat
<i>FCU Two-pipe 1</i>	Packaged FCU, one coil for both heating and cooling, controlled by a unit mounted thermostat
<i>FCU Two-pipe 2</i>	Packaged FCU, one coil for both heating and cooling, controlled by a non-programmable thermostat
<i>FCU Two-pipe 3</i>	Packaged FCU, one coil for both heating and cooling, controlled by a unit/wall mounted thermostat
<i>FCU Two-pipe 4</i>	Packaged FCU, one coil for both heating and cooling, controlled by a unit mtd stat, with electric heat

Air Handling Units

CV Reheat

File Name	Description
<i>AHU Reheat (from PC)</i>	Reheat system AHU, hot and chilled water coils, supply and E/R fans, night setback and morning warmup
<i>AHU Reheat Long</i>	Reheat system AHU, hot and chilled water coils, supply and exhaust fans, 24/7 operation
<i>AHU Reheat Short</i>	Reheat system AHU, short description, night setback

CV Single Zone

File Name	Description
<i>AHU SZ (from PC)</i>	Single zone AHU, hot and chilled water coils, supply and E/R fans, night setback
<i>AHU SZ CHW Steam</i>	Single zone AHU, steam and chilled water coils, supply and exhsuat fans
<i>AHU SZ Dual Temp</i>	Single zone AHU, single coil for both hot and chilled water, supply fan, night setback
<i>AHU SZ DX no Heat</i>	Single zone AHU, DX coil, supply and E/R fans, safeties and limits, smoke evacuation mode

Smoke Purge

File Name	Description
<i>Smoke Purge</i>	Point style sequence of a particular AHU smoke purge configuration

VAV

File Name	Description
<i>AHU VAV (from PC)</i>	VAV AHU, hot and chilled water coils, supply and E/R fans, night setback and morning warmup
<i>AHU VAV CHW HW VFD</i>	VAV AHU, hot and chilled water coils, supply and exhaust fans w/VFDs, safeties and limits, NSB, MWU
<i>AHU VAV CHW IGV's</i>	VAV AHU, chilled water coil, supply fan w/IGVs, interlocked exhaust fan, no economizer (fixed OA, RA)
<i>AHU VAV CHW Steam VFD</i>	VAV AHU, steam and chilled water coils, supply and E/R fans w/VFDs, night setback and morning warmup
<i>AHU VAV DX VFD</i>	VAV AHU, DX coil, supply fan w/VFD, E/R fan, safeties and limits

VVT Systems

VVT Systems

File Name	Description
<i>VVT Airlink</i>	Airlink rooftop unit zoning system
<i>VVT Carrier</i>	Carrier rooftop unit zoning system (VVT)
<i>VVT System (from PC)</i>	Generic description of rooftop unit zoning system
<i>VVT Trane</i>	Trane rooftop unit zoning system (Varitrac)

VAV & Fan Powered Boxes

Cooling with Reheat

File Name	Description
<i>VAV CV (from PC)</i>	Constant volume terminal unit, with electric/hot water reheat
<i>VAV Elec Htg (from PC)</i>	VAV box with electric reheat
<i>VAV HW Htg (from PC)</i>	VAV box with hot water reheat

Cooling-only

File Name	Description
<i>VAV Clg Only (from PC)</i>	VAV box, cooling-only

Fan Powered

File Name	Description
<i>FP Parallel (from PC)</i>	Parallel fan powered box with electric/hot water heat
<i>FP Series (from PC)</i>	Series fan powered box with electric/hot water reheat
<i>FP Unocc Mode (from PC)</i>	Unoccupied mode operation of a series or parallel fan powered box (one version)

Reheat Coils

Reheat Coils

File Name	Description
<i>DH Electric</i>	Electric duct heater in a reheat application
<i>DH Hot Water</i>	Hot water coil in a reheat application
<i>DH Steam</i>	Steam coil in a reheat application

Exhaust Fans

Exhaust Fans

File Name	Description
<i>Exhaust Fans Various Control</i>	One/two sentence descriptions of various exhaust fan control methods

Pumps

Pumps

File Name	Description
<i>Auto Alt Auto Backup</i>	Two full sized pumps, automatic time-based alternation, automatic backup upon failure
<i>Each Half Capacity</i>	Two pumps, each sized for half capacity
<i>Manual Alt & Backup</i>	Two full sized pumps, manual alternation, non-automatic (manual) backup upon failure
<i>Manual Alt Auto Backup</i>	Two full sized pumps, manual alternation, automatic backup upon failure
<i>Pump Seq (from PC)</i>	Two full sized pumps, automatic alternation and automatic backup upon failure, detailed description

Boilers & Chillers

Boilers

File Name	Description
<i>HW Boilers (from PC)</i>	Multiple HW boiler system, generic description
<i>Hydrotherm Control</i>	Multiple HW boiler system, controlled by the Hydrotherm Model S boiler controller
<i>Single HW Boiler</i>	Single HW boiler system, operated via its own factory controller
<i>Two Blrs, 3-way Valve, Ext Ctrl</i>	Multiple HW boiler system, operated via external controller, with 3-way valve for reset control
<i>Two Boilers & 3-Way Valve</i>	Multiple HW boiler system, operated via external ctrlr., 3-way valve for reset, and 2-way press. byp. valve
<i>Two Boilers External Control</i>	Multiple HW boiler system, operated via external controller

Boilers & Chillers

File Name	Description
<i>Dual Temp Auto Chgover 1</i>	Boiler/chiller plant, primary-secondary system, dual-temp with motorized valves for auto changeover
<i>Dual Temp Auto Chgover 2</i>	Boiler/chiller plant, primary-secondary system, dual-temp with motorized valves for auto changeover
<i>Dual Temp Auto Chgover 3</i>	Boiler/chiller plant, primary-secondary system, dual-temp with motorized valves for auto changeover
<i>Dual Temp Manual Chgover</i>	Boiler/chiller plant, primary-secondary system, dual-temp, motorized valves for chgvr, manually initiated
<i>Four-pipe System</i>	Boiler/chiller plant, separate piping distribution systems, for hot and chilled water

Chillers

File Name	Description
<i>Single Chiller</i>	Single air cooled chiller system, operated via its own factory controller
<i>Two Chillers Complex System</i>	Multiple water cooled chiller system, for a complex process application
<i>Two Chillers Integral Control</i>	Multiple air cooled chiller system, both chillers operated via their own factory controllers.

Misc.

File Name	Description
<i>Fill System</i>	Self-contained pressure fill system

Heat Exchangers

Heat Exchangers

File Name	Description
<i>HE One Valve Control</i>	Steam to hot water heat exchanger, controlled via a single steam valve
<i>HE Two Valve Control</i>	Steam to hot water heat exchanger, controlled by two steam valves

Unitary Heating Equipment

Baseboard Heaters

File Name	Description
<i>BBD Electric Integral Control</i>	Electric radiator controlled by an integral thermostat
<i>BBD Electric Remote Stat</i>	Electric radiator controlled by a remote thermostat
<i>BBD Electric with VAV</i>	Electric radiator zoned and controlled via a VAV box
<i>BBD Hot Water Thermostatic Val</i>	Hot water radiator controlled by a self-contained thermostatic control valve
<i>BBD Hot Water with VAV</i>	Hot water radiator zoned and controlled via a VAV box
<i>BBD Steam Thermostatic Valve</i>	Steam radiator controlled by a self-contained thermostatic control valve
<i>BBD Steam with VAV</i>	Steam radiator zoned and controlled via a VAV box

Cab Unit Heaters

File Name	Description
<i>CUH Electric</i>	Electric cabinet unit heater controlled via factory control packages
<i>CUH Hot Water</i>	Hot water cabinet unit heater controlled via factory control packages

Unit Heaters

File Name	Description
<i>UH Electric</i>	Electric unit heater controlled by an integral thermostat
<i>UH Gas Fired</i>	Gas fired unit heater controlled by a remote thermostat
<i>UH Hot Water</i>	Hot water unit heater served by a dual-temp system, controlled by a remote thermostat
<i>UH Hot Water (Dual Temp)</i>	Hot water unit heater controlled by a remote thermostat
<i>UH Steam</i>	Steam unit heater controlled by a remote thermostat

Computer Room Units

Air Cooled

File Name	Description
<i>CRU Air Cooled</i>	Short description of a split system operated via factory controls

Fluid Cooled

File Name	Description
<i>CRU Fluid Cooled</i>	Description of two fluid cooled A/C systems

Water Source Heat Pumps

Water Source Heat Pumps

File Name	Description
<i>WSHP System</i>	Heat pump core water system

Miscellaneous

Miscellaneous

File Name	Description
<i>CO & CO2 Mon Sys</i>	Centralized monitoring systems with remote sensors wired back to central panels
<i>CO Mon Sys 1</i>	Centralized monitoring system with remote sensors wired back to a central panel
<i>CO Mon Sys 2</i>	Centralized monitoring system with remote sensors wired back to a central panel
<i>CO Mon Sys 3</i>	Stand-alone detectors with contacts wired in parallel to start fans and open dampers
<i>Glycol Sys</i>	Glycol system consisting of pumps, drycoolers, heat pumps, and computer room A/C units
<i>Ref Mon Sys</i>	Refrigerant monitoring system consisting of monitor/sensor, exhaust fan, and OAI damper
<i>Tracker System</i>	Brief description of Trane Tracker system supervising the operation of packaged rooftop units