

DRU

DATA ROOM UNITS

273,000 - 410,000 Btu/hr (80 - 120 kW)

DOWNFLOW COOLING



DRU



HUNTAIR[®]
LEADERS IN AIRFLOW MANAGEMENT

DATA ROOM UNITS

The DRU Range of high efficiency Data Room Units, are designed for high density load areas where a large cooling duty is required from a compact footprint, but without compromising the critical application of data centre cooling.

This downflow range of air conditioning units are available in DX air cooled, water cooled or chilled water media with optional glycol cooling. All configurations have energy reduction features as well as heating or humidification options.

The DRU Range has been designed around a modular frame and panel design providing maximum unit strength as well as all round access where applicable. However, all maintenance and service has been designed for front access only where site restrictions dictate.

The units are designed to take return air at a high level which is then filtered and conditioned before being discharged via the base fan section located in the ventilated raised floor.

Multiple high efficiency direct drive fans provide even, efficient air supply and inherent redundancy. Alternatively, the units can be fitted with speed controllable EC fans.

All DX units are supplied with twin compressor 4-stage cooling, whilst chilled water units provide stepless 0 to 100% cooling. Where applicable glycol economy cooling coils can be coupled to dry coolers or economy cooling chillers to maximise efficiency and minimise running costs.

Where required, the units can be supplied with electrode boiler humidifiers providing high efficiency stepless output of sterile steam, and electric heaters are available in case of reheat requirement.



Model DRU8 shown.

Features

Benefits

Multiple key components share system loads:	Increased efficiency and reduced system impact in the unlikely event of a key component failure.
Vertical AHU frame and panel construction:	All round access and high unit strength and rigidity.
Modular split fan / coil sections:	Ease of installation.
Underfloor multiple backward curved fans:	Efficient air distribution.
Hydrophilic coils:	Long life and efficient moisture removal.
Modular component assembly:	Designed for easy and quick component maintenance/ replacement.
Fully programmable DDC controller:	Customised programming and network capabilities.
Customised control systems:	Ease of integration for existing site upgrades.

UNIT FEATURES & CONTROLLER



1

1. Fan Section.
2. Electrical Section.
3. Compressor Section.



2



3

DRU



The DRU is fitted with a fully programmable unitary controller complete with display/user interface. The controller monitors the temperature and relative humidity of the return air and activates cooling humidification or dehumidification to provide precise and efficient conditioning of the supply air.

Additionally, the controller monitors the in-built safety devices of the unit which constantly ensure the healthy state of key components. In the unlikely event of a component malfunction the item is automatically isolated to enable the plant to continue running, and an alarm signal will be generated.

Where required, multiple units can be networked together to provide group or run/standby control.

Units can be monitored locally or remotely, and if required, an enhanced 'web enabled' controller can be supplied, providing password restricted access from a suitable Internet access point.

Control Features

- Fully programmable.
- Data logging.
- Standalone or group control.
- BMS interface.
- Remote monitoring.
- Energy saving control strategies.

Monitored Information and Alarm Points

- Temperature.
- Relative humidity.
- Airflow.
- Filter condition.
- Refrigerant monitoring.
- Water detection.
- Humidifier status.
- Heater status.
- Fire shutdown.
- VFC relay alarms.
- Smoke detection.

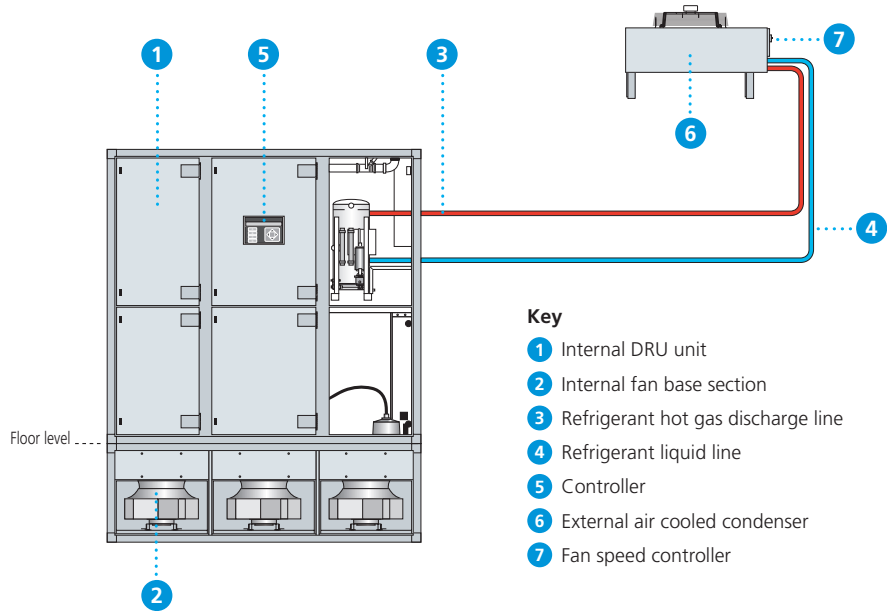
SYSTEM SELECTION

Air Cooled

The air cooled DX system circulates refrigerant to absorb heat from the conditioned space at the indoor unit, which is then rejected at the external air cooled condenser.

Twin evaporator coil / compressor circuits with multiple supply fans, provide redundancy with four stages of cooling and are coupled to two individual low noise level air cooled condensers, complete with fan speed controls.

Optional humidification control can be provided by an electrode boiler humidifier, and optional heaters provide reheat where required during dehumidification mode.

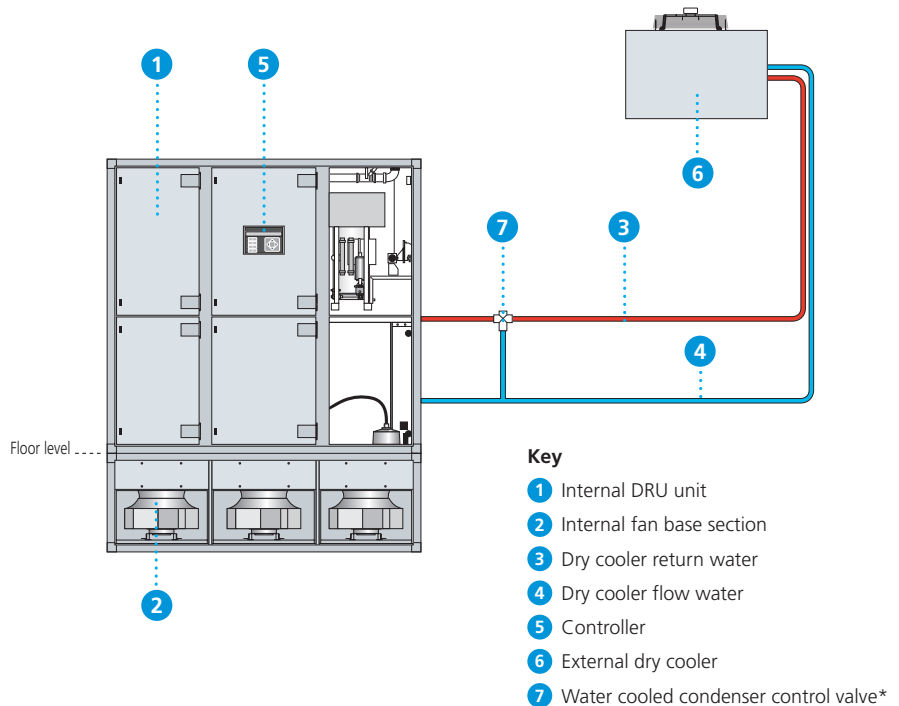


Water Cooled

The water cooled DX system circulates refrigerant to absorb heat from the conditioned space at the indoor unit, which is then rejected via an external dry cooler or similar.

Twin evaporator coil / compressor circuits with multiple supply fans, provide redundancy with four stages of cooling and are coupled with an individual plate heat exchanger for water cooled heat rejection, complete with three port head pressure control valves.

Optional humidification control is provided by an electrode boiler humidifier and optional heaters provide reheat where required during dehumidification mode.



* The valves depicted are purely shown schematically and are physically located within the unit.

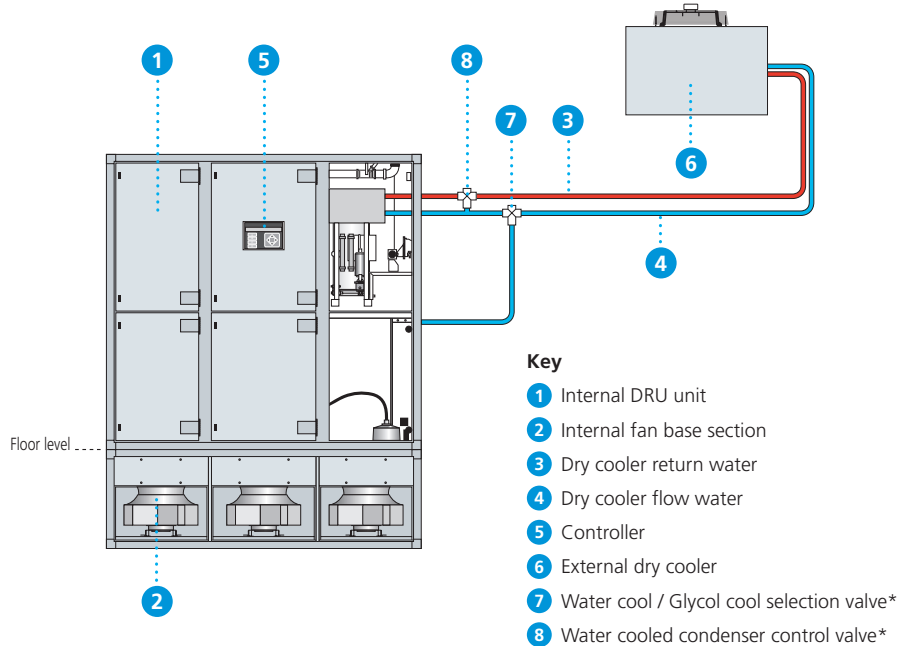
SYSTEM SELECTION

Water Cooled with Glycol Economy Cooling

The water cooled DX system circulates refrigerant to absorb heat from the conditioned space at the indoor unit, which is then rejected via an external dry cooler or similar.

Twin evaporator coil / compressor circuits with multiple supply fans provide redundancy with four stages of cooling and are coupled with an individual plate heat exchanger for water cooled heat rejection, complete with three port head pressure control valves. An additional glycol cooling coil provides low energy cooling when ambient conditions dictate.

Optional humidification control is provided by an electrode boiler humidifier and optional heaters provide reheat where required during dehumidification mode.

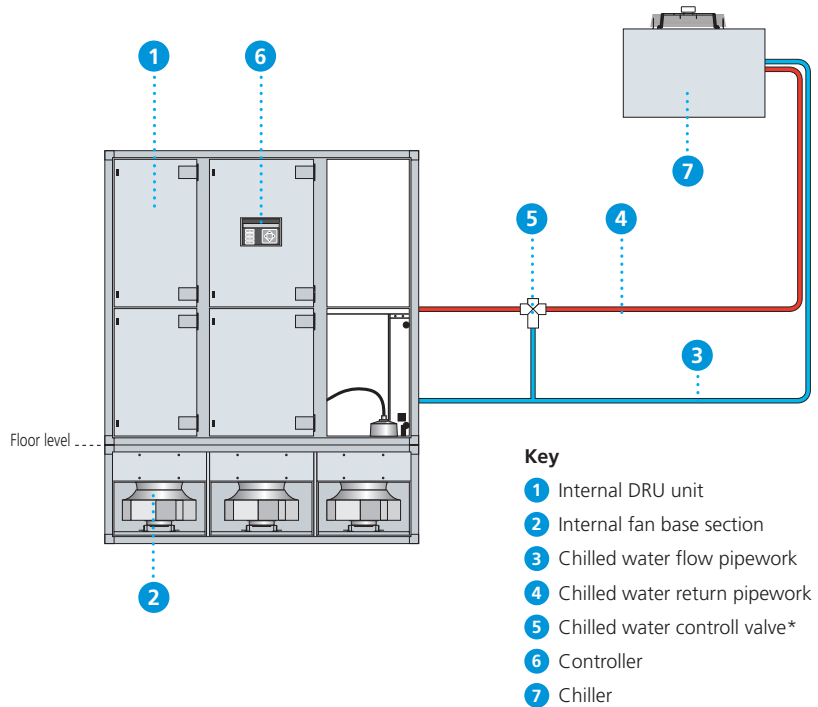


Chilled Water

The chilled water system circulates water to absorb heat from the conditioned space at the indoor unit which is then rejected at the external chiller.

Twin cooling coil with multiple supply fans provide fully modulating 0 to 100% cooling complete with two or three port control valves.

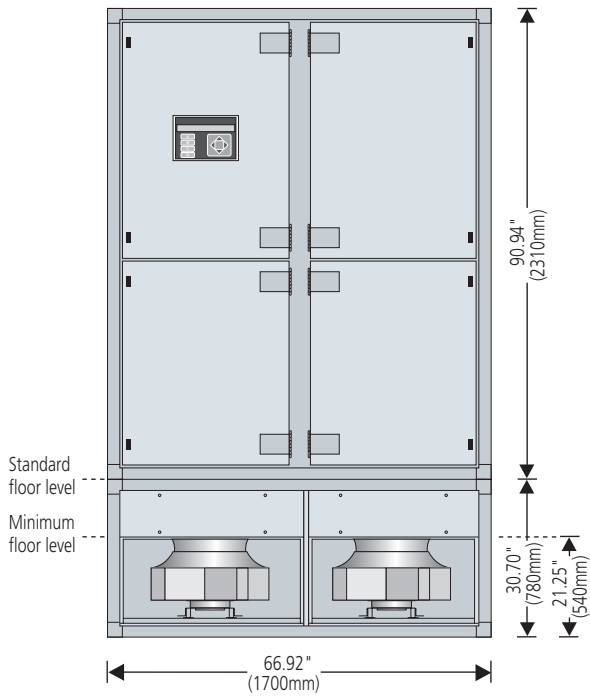
Optional humidification control is provided by an electrode boiler humidifier and optional heaters provide reheat where required by the dehumidification mode.



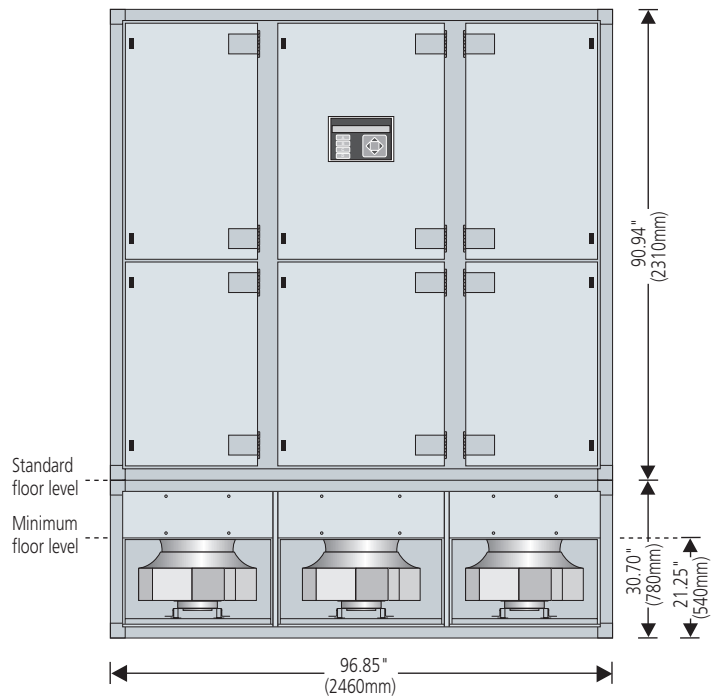
* The valves depicted are purely shown schematically and are physically located within the unit.

UNIT DIMENSIONS

DRU8



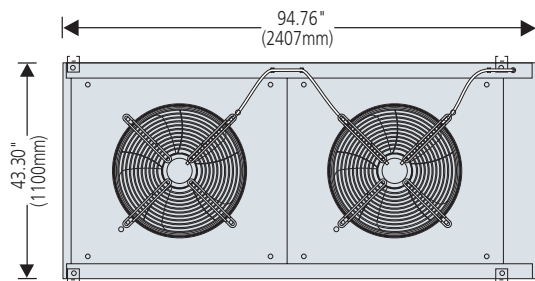
DRU10/DRU12



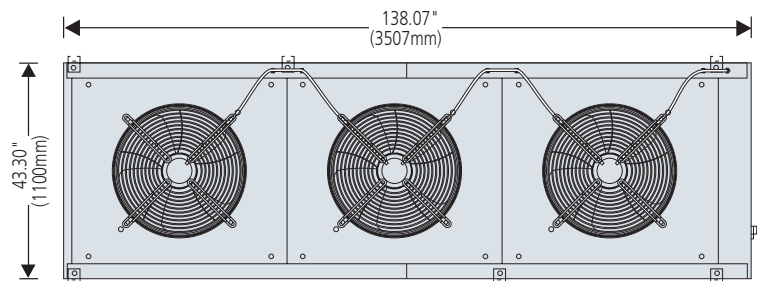
Note: All DRU units are (42.91") 1090mm deep.

INCO DX AIR COOLED CONDENSER

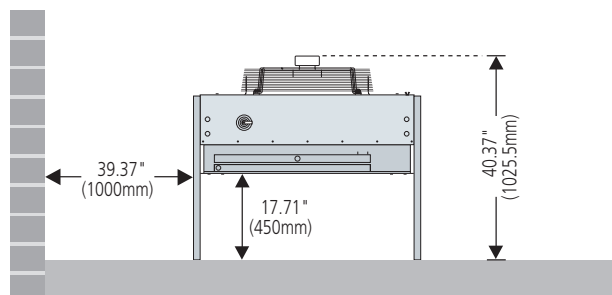
Twin Fan Unit



Triple Fan Unit



Horizontal Mount (Vertical Air Flow) Elevation



Vertical Mount (Horizontal Air Flow) Elevation

