

The Intelligent Workplace HVAC





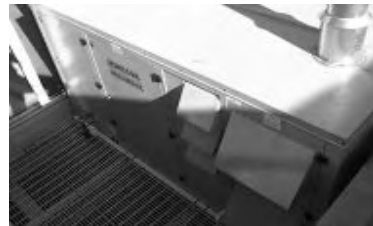
LTG Coolwave™ ceiling-mounted cooling units



Modular, reconfigurable ducting with tether connections to individual air diffusers



Rooftop ventilators for stack-assist ventilation



Engelhard/ICC desiccant air handling unit



LTG BLA™ floor diffusers



LTG displacement ventilation perimeter diffusers



LTG Fancoil unit for Service pub



Johnson Controls Personal Environmental Module™ (PEM)

The Intelligent Workplace HVAC for Thermal Comfort, Air Quality, Resource Effectiveness

- **Maximize Use of Natural Conditioning and Thermally Neutralize the Enclosure**

Natural cooling with stack assist/ roof top ventilators
Natural ventilation with stack assist/ roof top ventilators
Dynamic shading, insulation, load balancing

- **Split Thermal and Ventilation Systems**

Air & Water

Modular water-based cooling, radiant facades, radiant ceilings
& displacement ventilation

Air & Air

Workstation mixing boxes, Desiccant cooling
(including heat recovery for 100% outside air)

- **Micro-zone with User-based Controls Split Ambient and Task Conditioning**

Radiant facade temperature controls

Coolwave on/off controls

PEM air speed, direction and temperature control

PEM local air filtration

Intelligent control system - maximize user control and minimize energy use

- **Design/Engineer Interfaces with Enclosure, Structure & Interior Systems**

Relocatable, modular, floor-based HVAC integrated with structure

Water-flow mullion facade using waste heat

Relocatable diffusers (location and density) for interior reconfigurability

Sprinkler system as coolwave/fan-coil loop

Photovoltaic facade for DC power to distributed fans & heat pumps

- **Advance Resource Effective Technologies and Assemblies**

High efficiency generation, distribution and terminal units

Prefabrication without on-site waste

Reconfigurable, modular components (versus redundancy or misfit)

Environmentally responsible materials

Off-site outgassing