



JACCO

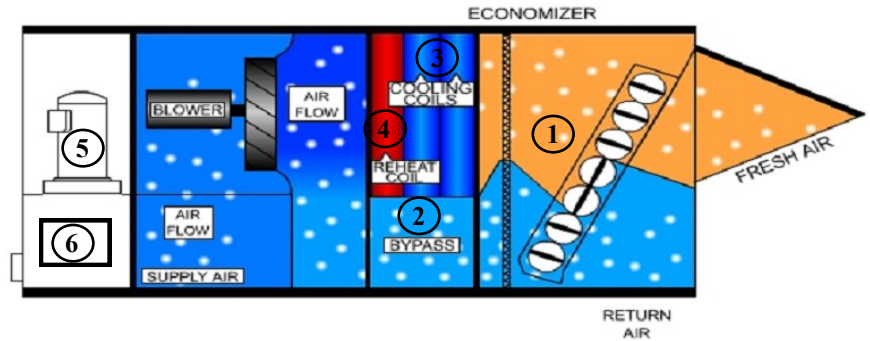


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★ *Aaon Named Product of the Year!* ★

The Aaon Digital Precise Air Control (D-PAC) unit is the 2008 Most Valuable Product according to Consulting-Specifying Engineer Magazine. The Product of the Year awards were established by the magazine to present readers with the top new products in the MEP industry. The winner was chosen by the readers through a voting process established online.

The D-PAC unit was designed with the intention of optimizing technology and control logic to maintain space temperature and humidity in the most energy efficient manner possible. The result is the ability to control temperature within $\pm 1^{\circ}\text{F}$ and humidity within $\pm 5\%$ RH at all ambient conditions and with efficiencies that rival a chilled water system.



- ① OA & RA enters the unit through a 3 section economizer with independent dampers for OA, RA and RA Bypass. A mixture of OA and RA will always go through the cooling coil.
- ② The RA Bypass damper modulates to provide reheat to the MA passing through the cooling coil. Up to 50% of the RA can be bypassed and used for reheat to control light humidity loads.
- ③ The DX coil dehumidifies the MA to maintain latent cooling and dehumidification loads.
- ④ The Modulating Hot Gas Reheat Coil raises the MAT in order to satisfy the sensible cooling load when the RA Bypass air is not enough. The reheat coil is used to control high humidity loads.
- ⑤ The Digital Scroll Compressor modulates from 10-100% capacity for tighter temperature control, greater dehumidification and lower operational costs. The compressor capacity modulates according to the cooling and dehumidification loads.
- ⑥ The Digital Precise Controller controls all components in the D-PAC unit including fan, outside air, return air and return air bypass actuators, modulating hot gas reheat, modulating compressor, heating and optional energy recovery wheel to insure proper operation, tight temperature and humidity control, and energy efficiency.

Part Load Steady State Conditions						
	Space DB	Space RH	Supply Air DB	Compressor Load	Reheat Amount	Return Air Bypass Amount
Controlling Temperature Only						
Conventional System	75°F	89%	72°F	2.2 Tons	NA	NA
Controlling Temperature and Humidity						
With Only Return Air Bypass (RAB)	75°F	45%	72°F	2.5 Tons	NA	1400 CFM
With Only Modulating Hot Gas Reheat (MHGR)				9.8 Tons	63100 BTU/H	NA
With a Digital Scroll, RAB and MHGR (D-PAC™)				7.1 Tons		
D-PAC™ with Sensible Energy Recovery Wheel				6.0 Tons	30800 BTU/H	1400 CFM
D-PAC™ with Total (Enthalpy) Energy Recovery Wheel				5.6 Tons		



Assume the ambient conditions of 95°F DB and 75°F WB with 2,800 CFM of supply air, 700 CFM of which is outside air. The unit is attempting to control to 75°F space temperature and if the unit includes humidity control options 45% space relative humidity. The space part load conditions are 10 MBH sensible load and 10 MBH latent load for a sensible heat ratio of 0.5. Supply fan motor heat is neglected.

Focused On The Engineered Environment