Rebel Product Summary
Rebel Target Customers

• Discerning: Quality, Premium Performance, Sound
• Green / Carbon footprint / Sustainability
• LEED, ASHRAE Standard 189.1
• Customers who pay their utility bills
• Retrofit or new construction
• Commercial building owners and operators – Not residential, speculative construction, or rentals
Daikin McQuay Rooftop Product Offerings

Tons

0  20  40  60  80  100  120  140

Maverick I 3-25

Maverick II 15-75

Rebel 3-15

RoofPak RPS / RDT 15-140
Product Offering

- 3 ~ 15 tons
- Small cabinet
  - 3~6 tons
- Large cabinet
  - 7~15 tons
Application

• 100% Outdoor Air and Standard Rooftops
• CAV or VAV
• Cooling only
• Cooling with heating  
  • Nat. gas, electric, hot water
• Heat pump
• Heat pump with auxiliary heating
• 100% Outdoor air
• 208-230/3ph and 460V/3ph  
  • 575V/3ph in spec using transformer (delayed for structural reinforcement and cost challenge)
  • 50Hz is not in our product strategy
Rebel Energy Efficiency 6 to 12 Tons

- Full load - Up to 13% better
- Part load - Up to 67% better

ASHRAE 90.1 standards represent performance of most existing competitive products
Rebel Energy Efficiency 3 to 5 Tons

• SEER - Up to 41% better

ASHRAE 90.1 standards represent performance of most existing competitive products
## Performance Summary – Large Cabinet

### Cooling Efficiencies

<table>
<thead>
<tr>
<th>Size</th>
<th>Rebel IEER</th>
<th>Aaon IEER</th>
<th>%</th>
<th>90.1 IEER</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>7.5T</td>
<td>18.9</td>
<td>13.9</td>
<td>36.0%</td>
<td>11.2</td>
<td>68.8%</td>
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</tbody>
</table>

### Heat Pump Efficiencies

<table>
<thead>
<tr>
<th>Size</th>
<th>Rebel COP</th>
<th>Aaon COP</th>
<th>%</th>
<th>90.1 COP</th>
<th>%</th>
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<tr>
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<td>4.31</td>
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Performance Summary – Small Cabinet

### Cooling Efficiencies

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<tr>
<th>Size</th>
<th>Rebel SEER</th>
<th>Aaon SEER</th>
<th>%</th>
<th>90.1 SEER</th>
<th>%</th>
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<td>14.3</td>
<td>0.0%</td>
<td>13.0</td>
<td>10.0%</td>
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<tr>
<td>4T</td>
<td>15.0</td>
<td>15.3</td>
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<tr>
<td>5T</td>
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<td>14.3</td>
<td>24.9%</td>
<td>13.0</td>
<td>37.4%</td>
</tr>
<tr>
<td>6T*</td>
<td>18.9</td>
<td>14.1</td>
<td>34.0%</td>
<td>11.2</td>
<td>68.8%</td>
</tr>
</tbody>
</table>

* IEER

### Heat Pump Efficiencies

<table>
<thead>
<tr>
<th>Size</th>
<th>Rebel HSPF</th>
<th>Aaon HSPF</th>
<th>%</th>
<th>90.1 HSPF</th>
<th>%</th>
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<tbody>
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<tr>
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<td>Not AHRI published</td>
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<td>7.7</td>
<td>16.9%</td>
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<tr>
<td>6T*</td>
<td>4.1</td>
<td>3.3</td>
<td>24.2%</td>
<td></td>
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</tr>
</tbody>
</table>

Aaon Heat Pump – Aaon has not submitted to AHRI. If we find quotes/proposals, they are in violation of AHRI rules. Please inform us
Rebel Key Features

- Modulating hot gas reheat coil
- ECM Supply Fan – VFD built-in
- Daikin OD Fans + IPM motor
- MicroTech III Controls Available with Open-Choice™
- Flexible Heat Options (Modulating Gas, SCR Electric Heat, Heat Pump, Hot Water)
- Foam Cabinet
- Daikin Inverter Compressors IPM motor

15 ton, Energy Recovery and 575V Options to Follow
Heat Pump

• 3 ~ 15 tons
• Auxiliary heating
  • Electric
    • Staged or SCR
• Hybrid heating
  • Natural gas
    • 10:1 Mod

• COP – 12% ~ 30% better
Why Rebel Heat Pumps

Heat Pump
• Rated to 0°F ambient, but will run lower
• Hybrid Heat
  • User sets transition temperature
  • Standard & 100% OA
  • True Gas heat backup

Cooling
• Rated up to 115°F ambient, but will run higher

Optimized performance in both heating and cooling
• Controls
• Refrigerant circuit

Current Heat Pump RTU is primarily residential. Current Commercial HP market size is small – McQuay will need to educate value and develop the commercial market
Why 100% Outdoor Air Models?

• ASHRAE 62.1
  • High ventilation rates under extreme conditions

• Drivers
  • LEED
  • Green building design
  • ASHRAE Advanced Energy Design Guides
  • ASHRAE 189.1
  • ASHRAE 90.1 (energy recovery)
  • ASHRAE 62.1 (ventilation)
100% Outdoor Air Key Features and Benefits

- Inverter Technologies
- Modulating Hot Gas Reheat
- Gas, Electric, Hot Water and Heat Pumps
  - Modulating gas up to 10:1 turndown and 100TR
  - SCR electric
- Higher Latent Capacity Coils + Coatings
- Foam Cabinet
- Energy Recovery Wheels with Modulating Defrost
100% OA Common Applications - VRV

Specify D3 comm module
- Schedule occupancy
- Adjust discharge air temperature set point
- Monitor alarms

Specify efficiencies

Most comfortable, best efficiency, seamless and reliable connectivity with VRV equals best value
Reduced Sound Benefits

Excellent sound quality

Discharge Sound

Rebel Radiated Sound

Rebel radiated sound level 80 dBA. Most competitors sound level 92 dBA
Key Vertical Markets - Healthcare: MOBs, Clinics, Nursing Homes/Assisted Living

*Healthcare Summit in June, 2011:*
“*I’m about to buy 4 Aaon units, but I’d much rather have this Rebel unit.*”

- High air exchange
- Reliability top priority
- Energy efficiency priority
  - 69% of energy consumed by HVACR
  - Retrofit opportunities

Rebel creates comfortable, safe, controlled environments
Rebel increases staff satisfaction and enhances the patient outcome
Rebel delivers superior care – efficiently, cost-effectively and sustainably
Key Vertical Markets - K12 Schools

*Sick schools lead to sick kids*

- Healthy student environment and comfort is top priority
  - Temperature
  - Humidity
  - Fresh air (CO₂, particulates, VOCs)
  - Sound
- Energy efficiency a priority
- Reliability a priority
- 15% of US commercial buildings
  - Retrofit opportunities
  - 70% of utility bill is electricity
  - Outsourced service
  - Rooftops preferred

Rebel creates comfortable, safe, controlled environments
Rebel increases staff satisfaction and enhances student success rates
Other vertical markets

• Retail national accounts - DOE connections
• Any building owner or operator who pays the utility bill
  • Commercial office buildings
  • ESCOs
  • Local, State and Fed Government
  • Churches
  • Fitness Centers
  • Museums
  • Supermarkets