Airtek® Cold Energy Saver
(200 - 1000 scfm)
Airtek® Smart Cycle Plus
(1250 - 3000 scfm)
Cycling Refrigerated Air Dryers

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

5 Year Warranty
The importance of compressed air as a provider of energy for modern industrial processes is widely known. What is often overlooked however is the need to provide quality treatment for this air.

In fact, the air entering the system contains condensate which, when cooled, will turn into liquid water, causing extensive damage not only to the compressed air network, but also to the finished product.

These costly contamination problems can be avoided by installing a Cold Energy Saver or Smart Cycle Plus Refrigerated Air Dryer package complete with Airtek® filtration. The combination of our thermal mass dryer and high quality filtration provides air quality to ISO 8573.1 Class 1.4.1.

A refrigerated dryer is typically selected to achieve its design performance at the user’s most extreme working conditions. (ie. a warm summer day with the air compressor operating at maximum load).

This maximum condition, however, is very rarely achieved in everyday conditions. First, the air compressor load will vary significantly during a working day and will rarely be at full load, thereby significantly reducing the load on the dryer itself.

Furthermore, average temperatures are well below the maximum inlet and ambient temperatures for which the system has been sized. Reduced temperatures at colder moments during the day and overall temperature reductions during the mid-season and winter add a further reduction to the load on the dryer.

Cold Energy Saver and Smart Cycle Plus perfectly and continuously adapt to the actual operating conditions, ensuring perfect dewpoint control together with the lowest operating costs. Over and above this extreme flexibility of use, Cold Energy Saver and Smart Cycle Plus’ advanced technical solutions offer reliability, efficiency, energy savings, compact dimensions and low weight, making it the ideal solution for all industrial users.

Benefits:

- 5 year warranty
- Optimum dewpoint levels for highest system performance
- Lowest operating costs
- Continuously and automatically adjusts to actual working parameters
- High reliability, easy to use and maintain
- Patented 4-in-1 ColdPack heat exchanger (CES200 - CES1000)
- Integral zero air loss energy saving drain
- Low pressure drop design
- ColdControl microprocessor based energy management controller (CES200 - CES1000)
- Unique Thermal Mass ColdStorage (CES200 - CES1000) reduces power consumption and improves temperature control.
- Advanced scroll compressor (CES400 - CES1000)
- Patented flood level control protects refrigerant circuit (SCP1200 - SCP3000)
- Tube in Shell heat exchanger (SCP1200 - SCP3000)
Patented ColdPack 4-in-1 heat exchanger design (CES200 - CES1000)

Patented 4-in-1 ColdPack heat exchanger features an extremely robust, all-in-one aluminum design, with no interconnecting tubing.

ColdPack features the lowest pressure drop in the industry, notable energy savings and guaranteed dewpoint. Optimum dewpoint performance is ensured thanks to wide air channels leading to low air velocities, an oversized slowflow demister separator offering perfect condensate separation even at partial air flows and a dewpoint sensor within the air flow for improved control. The generously sized air-to-air section and Thermal Shield Insulation (TSI) contribute to a very low power consumption.

The 4-in-1 design promotes Continuous Active Separation. Separation occurs as soon as the condensate forms so most of the condensate is already removed before the air reaches the demister separator. This allows the demister to act as a final polisher - removing only the finest condensate droplets that have made it this far. The demister separator is unique in that it provides efficient separation at any air flow. Most competitors use centrifugal separators, which are designed to operate efficiently at 100% of their rated flow, but lose efficiency at higher or lower flows.

A truly unique part of ColdPack is the integral zero loss drain. The drainage chamber is integrated into the heat exchanger while the valve mechanism is fitted in an easily accessible drain niche. The drain continuously adjusts itself to the actual working conditions, ensuring zero air loss and a notable reduction in system power consumption. An innovative control system continuously monitors for fault situations. If a fault does occur, an alarm is signaled and the drain switches to conventional timed solenoid drain operation. The dual mode circuitry ensures maximum reliability.

Minimal direct energy costs (CES200 - CES1000)

The ColdControl automatically and precisely adjusts energy consumption in response to actual operating conditions (air variability and seasonal changes), avoiding unnecessary waste. ColdControl controls the dryer operation via multiple sensors guaranteeing maximum savings and avoiding dewpoint surges. ColdPack’s all-in-one design and thermal insulation further enhance the overall energy savings.

Environmentally friendly

Montreal Protocol compliant R404A refrigerant allows for zero ozone depletion, low global warming potential and low refrigerant charge. Because R404A does not separate easily, it is more reliable for these designs and therefore the refrigerant of choice for cycling applications.

Reduced CO₂ emissions

Many countries worldwide are looking closely at their manufacturing industries in an effort to reduce the amount of harmful greenhouse gases released into the atmosphere. The use of electricity has a direct impact on the generation and release of CO₂. By significantly reducing the energy consumption of its products, Parker Airtek can help you reduce your carbon footprint and protect the environment.
Cold Energy Saver (CES200 - CES1000)

Features

- 5 year warranty
- High operating limits
- Easy removable panels with frontal access to all major components
- Drain niche for easy drain access
- User friendly control panel
- Aluminum heat exchangers for maximum efficiency
- Environmentally friendly propylene glycol
- ETL listed complete unit
- ColdControl - UL listed
- Refrigerant compressor overload protection switch
- Rugged sheet metal enclosure with polyester-based powder coat finish withstands harsh environment.
- Automatic fan cycling controls on each fan (air-cooled models)
- Suction pressure gauge - Standard all models
- Remote board loop 4-20 mA - Optional
- Scroll compressor (CES400 - CES1000)
- Integral zero air loss drain valve (CES400 - CES1000)

Display LEDs
- Dryer ON
- Common Alarm
- Drain Open
- Drain Alarm
- Power Save

Setting
- Degrees °F/°C
- Set Dewpoint

Fault Alarm Warnings (W) and Shutdowns (S)
- High dewpoint (S)
- Low evaporative temperature alarm shutdown (S)
- Dryer overload alarm shutdown
- Low refrigerant pressure alarm shut down (S)
- High refrigerant pressure alarm shut down (S)
- Low coolant temperature shutdown alarm (S)
- Drain fault alarm with back-up time drain mode
- Sensor fault open dewpoint sensor alarm
- Sensor fault shorted dewpoint sensor alarm
- Sensor fault open thermal mass sensor alarm
- Sensor fault shorted thermal mass sensor alarm
- Phase monitor alarm 400-1000 (Display will alarm “A4”) (S)
- Service due indicator
- Compressor protection anti short cycle warning (“OP”) (W)
- Short cycle shutdown (“A7”) (W)

ColdControl Microprocessor-based Energy Management Controller - Standard

Display LEDs
- Dryer ON
- Common Alarm
- Drain Open
- Drain Alarm
- Power Save

Setting
- Degrees °F/°C
- Set Dewpoint

Digital Display Readouts
- Process control temperature
- Set auto drain off time (minutes)
- Factory dewpoint set at 39°F (4°C)

Adjustable Operating Parameters
- Adjustable dewpoint (36-50°F (2-10°C))
- Automatic drain close time
- Automatic drain test
Smart Cycle Plus (SCP1200 - SCP3000)

The Next Generation - Full cycling mode standard with compressed air twice as dry as conventional dryers

The Smart Cycle Plus configuration combines the advantages of superior performance and energy savings with the oil removal efficiency of a built-in, multi-stage separator/cold coalescer.

By locating the coalescing filter at the coldest point in the air system, filtration efficiency is greatly enhanced, and because of the pre-separation of bulk contaminants prior to entering the element(s), pressure drop and operating costs are dramatically reduced.

Features

- Best in class dewpoint performance
- Tri Mode Operation allows dryer to operate in cycling, non-cycling or auto mode.
- Patented refrigeration system
- Unlimited cycling due to unloaded “soft start”
- Multi-stage separation and filtration
- Level actuated drain
- Diagnostic readouts indicate need for service
- 5 year warranty
- Smart Cycle Plus Controller (SCP1200 - SCP3000)

Benefits

- Lower dewpoint temperature achieved with Smart Cycle Plus results in a cleaner operation.
- Longer lasting components
- Upstream malfunction that results in more severe inlet conditions can be readily handled without resulting in downstream problems.
- Lower operating costs, no performance sacrifice
- Dryer runs only as needed
- Environmentally friendly refrigerant
- Tube & shell heat exchanger with grooved tube sheets provide greatest mechanical strength and lowest pressure drop
- Patented flood level control protects refrigeration circuit
## Technical (CES200 - CES1000)

### Air-Cooled Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Capacity (scfm)</th>
<th>Air Connection</th>
<th>Dimensions (ins mm)</th>
<th>Weight lbs (kg)</th>
<th>Electrical Supply</th>
<th>Recommended Pre Filter</th>
<th>Recommended After Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CES200</td>
<td>200</td>
<td>1.5” NPT</td>
<td>27.0 (686.8) 55.5 (1409.7) 24.5 (622.3)</td>
<td>454 (206)</td>
<td>230V/1Ph/60Hz</td>
<td>JC0250-C10</td>
<td>JC0250-C</td>
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<tr>
<td>CES250</td>
<td>250</td>
<td>1.5” NPT</td>
<td>27.1 (686.8) 58.0 (1473.2) 27.6 (701.0)</td>
<td>532 (241)</td>
<td>230V/1Ph/60Hz 230V/3Ph/60Hz/460V/3Ph/60Hz</td>
<td>JC0250-C10</td>
<td>JC0250-C</td>
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<tr>
<td>CES325</td>
<td>325</td>
<td>1.5” NPT</td>
<td>27.1 (686.8) 58.0 (1473.2) 27.6 (701.0)</td>
<td>547 (248)</td>
<td>230V/1Ph/60Hz 230V/3Ph/60Hz/460V/3Ph/60Hz</td>
<td>JC0350-C10</td>
<td>JC0350-C</td>
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<tr>
<td>CES400</td>
<td>400</td>
<td>2” NPT</td>
<td>47.1 (1196.3) 65.0 (1651.0) 35.1 (891.5)</td>
<td>929 (421)</td>
<td>230V/3Ph/60Hz 460V/3Ph/60Hz</td>
<td>JC0450-C10</td>
<td>JC0450-C</td>
</tr>
<tr>
<td>CES500</td>
<td>500</td>
<td>2” NPT</td>
<td>47.1 (1196.3) 65.0 (1651.0) 35.1 (891.5)</td>
<td>941 (427)</td>
<td>230V/3Ph/60Hz 460V/3Ph/60Hz</td>
<td>JC0625-C10</td>
<td>JC0625-C</td>
</tr>
<tr>
<td>CES700</td>
<td>700</td>
<td>3” NPT</td>
<td>56.0 (1422.4) 70.8 (1801.3) 33.5 (850.9)</td>
<td>1158 (525)</td>
<td>230V/3Ph/60Hz 460V/3Ph/60Hz</td>
<td>JC0800-C10</td>
<td>JC0800-C</td>
</tr>
<tr>
<td>CES850</td>
<td>850</td>
<td>3” NPT</td>
<td>56.0 (1422.4) 70.8 (1801.3) 33.5 (850.9)</td>
<td>1236 (561)</td>
<td>230V/3Ph/60Hz 460V/3Ph/60Hz</td>
<td>JC1000-C10</td>
<td>JC1000-C</td>
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<tr>
<td>CES1000</td>
<td>1000</td>
<td>3” NPT</td>
<td>56.0 (1422.4) 70.8 (1801.3) 33.5 (850.9)</td>
<td>1236 (561)</td>
<td>230V/3Ph/60Hz 460V/3Ph/60Hz</td>
<td>JC1000-C10</td>
<td>JC1000-C</td>
</tr>
</tbody>
</table>

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### Technical data

- Maximum ambient temperature: 115°F (46°C)
- Maximum inlet temperature: 131°F (55°C)
- Minimum ambient temperature: 41°F (5°C)
- Maximum Pressure: SCP1200 - SCP1500: 200 psi g (13.7 bar g), SCP2000 - SCP3000: 150 psi g (10.3 bar g)
- Refrigerant: R404A

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## Technical (SCP1200 - SCP3000)

### Technical data

- Maximum ambient temperature: 115°F (46°C)
- Maximum inlet temperature: 131°F (55°C)
- Minimum ambient temperature: 41°F (5°C)
- Maximum Pressure: SCP1200 - SCP1500: 200 psi g (13.7 bar g), SCP2000 - SCP3000: 150 psi g (10.3 bar g)
- Refrigerant: R404A

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Airtek® High Efficiency Filtration

- Maximum oil carryover 0.008 PPM w/w - ISO12500-1 tested at 40 PPM inlet challenge.
- ISO 8573-1 Class performance with fridge dryer 1-4-1
- Elements are self sealing.
- Epoxy saturated borosilicate glass micro-fiber media with outer synthetic fabric dryer layer allowing swift removal of coalesced liquids.
- Includes DPI (Differential Pressure Indicator) providing visual assurance of performance.
- Durable aluminum chromated heads and bowls with powder coated finish.
- Large sump capacity to handle condensate.
- Simple installation and easy maintenance.
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