



# D-EC High-Efficiency Cycling Dryers

17-212 m<sup>3</sup>/hr (10-125 scfm)

Achieve maximum energy savings, while ensuring a continuous supply of dry high-quality compressed air.



### Higher Efficiency, Lower Cost

The Ingersoll Rand D-EC cycling refrigerated dryer design helps you achieve optimal performance at a lower cost compared to a non-cycling design. To reduce energy consumption, the dryer refrigeration system automatically deactivates during periods of low load and features a patented heat exchanger and thermal mass circuit.

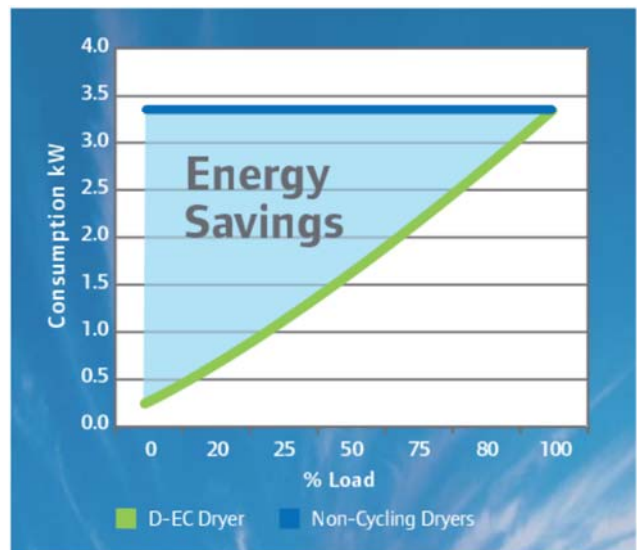
### Reliability through Experience

Building upon extensive dryer experience, Ingersoll Rand incorporates advanced features into the D-EC dryer, such as microprocessor control, a highly efficient refrigeration system, a heavy duty drain and robust construction that enhance performance and provide maximum reliability.

### Advanced Environmental Sustainability

Reducing energy use not only saves money, but decreases harmful greenhouse gases that hurt the environment. By shutting off the refrigeration system during periods of low loads, D-EC dryers minimize energy waste. And, they use R-134a refrigerant that has a zero Ozone Depletion Potential (ODP) to minimize overall environmental impact.

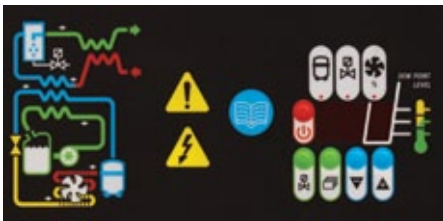
### Energy Savings by Technology



## Operating Efficiency is the Bottom Line

Ingersoll Rand D-EC dryers include innovative features to enhance the efficiency of your compressed air system and the quality of the air produced.

- Patented, energy saving heat exchanger
- Low pressure drop
- All energy savings readings on control panel
- Thermal mass cold energy storage reduces dryer compressor run time
- R134a refrigerant lowers energy consumption



Advanced microprocessor controller provides intuitive control over dryer functions and operation status

## Simply Reliable

With over fifty years of dryer experience, Ingersoll Rand has developed a comprehensive performance testing program and simplified dryer design that enhance product reliability and ease-of-use.

- Compact size
- Advanced circuit design eliminates the need for thermal expansion valves and fan control switches

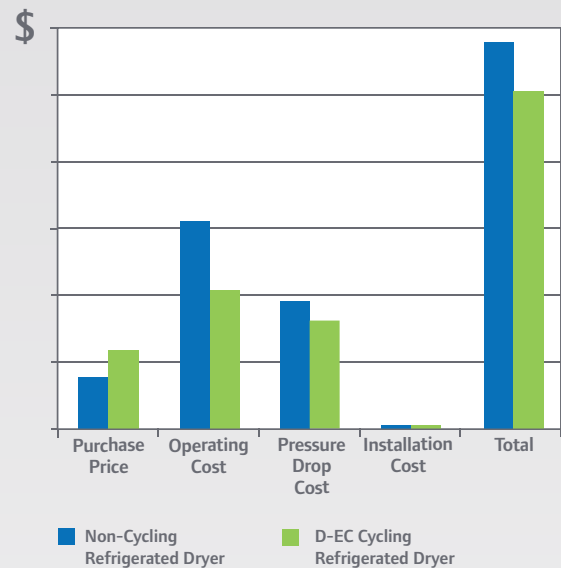


Every D-EC dryer is manufactured with premium components under stringent quality control resulting in years of dependable operation.

## Low Operating Cost

In a typical compressed air dryer, the refrigerant compressor runs continuously, regardless of demand. The D-EC dryer deactivates the refrigeration system when demand is low. This combined with a low pressure drop helps the D-EC dryer provide lower operating costs.

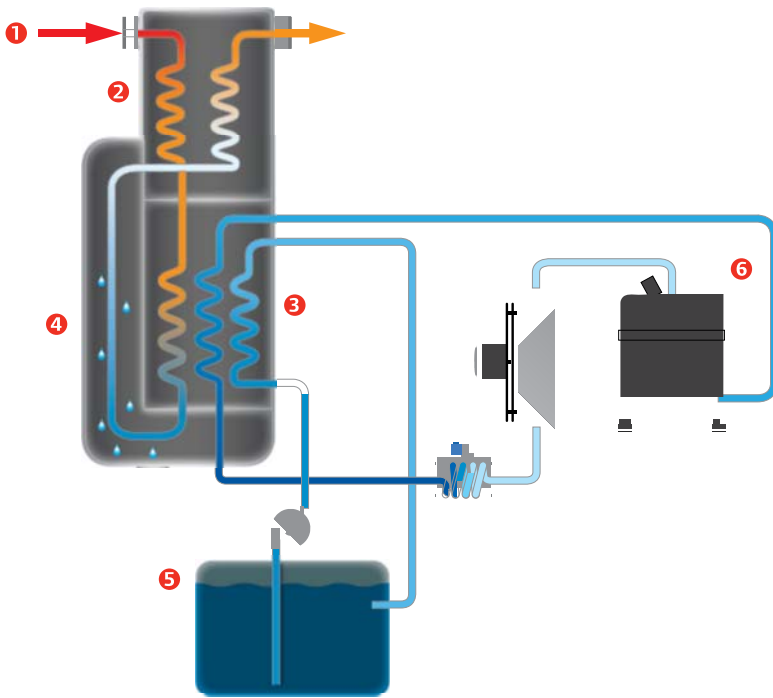
### Average 5-Year Lifecycle Cost Comparison



- Patented heat exchanger design provides high heat transfer efficiency, reducing compressor run time and energy costs.
- Low pressure drop.
- Minimized shipping and installation costs.
- A true plug and play installation with single point connections.
- Perfect match for the Ingersoll Rand high-efficiency Nirvana compressor and for critical applications where the demand for compressed air fluctuates on a regular basis.

## How the D-EC Dryer Works

Most facilities operate with varying degrees of compressed air usage. The Ingersoll Rand D-EC dryer meets actual air treatment demand by minimizing operating time through the use of thermal mass, cold energy storage.



- 1 Compressed air enters the dryer through the heat exchanger
- 2 Air is cooled by cold outgoing air in the pre-cooler/re-heater
- 3 Circulating glycol cools the compressed air allowing the refrigerant compressor to turn off during low demands
- 4 Condensed liquid is removed, which is purged using the dryer's drain valve
- 5 Thermal mass, cold energy storage reduces compressor run time saving energy
- 6 Refrigerant compressor runs only as needed

## Ingersoll Rand...At Your Service

No matter where your facility is located, Ingersoll Rand is committed to serving you 24 hours a day, seven days a week, available to support you with innovative and cost-effective service solutions that will keep you running at peak performance.

Let Ingersoll Rand handle the pressures and responsibilities of owning a compressed air system with our signature service contract.

With PackageCare, you can...

- Control costs and keep your equipment running at peak efficiency
- Protect yourself from all repair and replacement expenses over the life of the agreement
- Maintain or improve the operational efficiency of any compressor, regardless of age, make or model



## Specifications

Model	Flow Rate		In/Out Air Connect Size	Operating kW*	Dimensions (Width x Depth x Height)		Weight	
	m <sup>3</sup> /hr	scfm			mm	in	kg	lb
D17EC	17	10	1/2" FPT	.35	500 x 386 x 662	19.69 x 15.19 x 26.05	38.6	85
D31EC	31	18	1/2" FPT	.43	500 x 386 x 662	19.69 x 15.19 x 26.05	38.6	85
D41EC	41	24	1/2" FPT	.45	500 x 386 x 662	19.69 x 15.19 x 26.05	40.8	90
D59EC	59	35	1/2" FPT	.53	500 x 386 x 662	19.69 x 15.19 x 26.05	43.1	95
D85EC	85	50	3/4" FPT	.68	500 x 386 x 662	19.69 x 15.19 x 26.05	47.6	105
D127EC	127	75	1" FPT	.94	570 x 422 x 772	22.44 x 16.63 x 30.38	68.0	150
D170EC	170	100	1" FPT	.98	570 x 422 x 772	22.44 x 16.63 x 30.38	70.3	155
D212EC	212	125	1" FPT	1.10	570 x 422 x 772	22.44 x 16.63 x 30.38	72.6	160

Performance based on ISO 7183, Table 2, Option A2 (100 psig inlet air pressure, 100°F inlet air temperature, 100°F ambient air temperature)  
Voltage for all models is 115/1/60

\*Average kilowatts per hour of dryer operation at full rated capacity.

All models feature a 1/4" OD flexible drain line, have a 200 psig maximum working pressure and use R134a refrigerant.

Features Include
Multi-Layer Heat Exchanger
Digital Controller
Fully Hermetic Refrigeration Compressor
R134a Refrigerant
Efficient Refrigeration Condenser
Glycol Circulation Pump
Timed Solenoid Drain
Drain Isolation Valve
Compact Size
Optional No-Loss Drain (D127EC - D212EC only)

