



# High-Efficiency Small Cycling Dryers

10-150 scfm (17-255 m<sup>3</sup>/hr)



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

## 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, our high-efficiency small cycling dryers minimize energy waste. And, they use R-134a refrigerant that has a zero Ozone Depletion Potential (ODP) to minimize overall environmental impact.

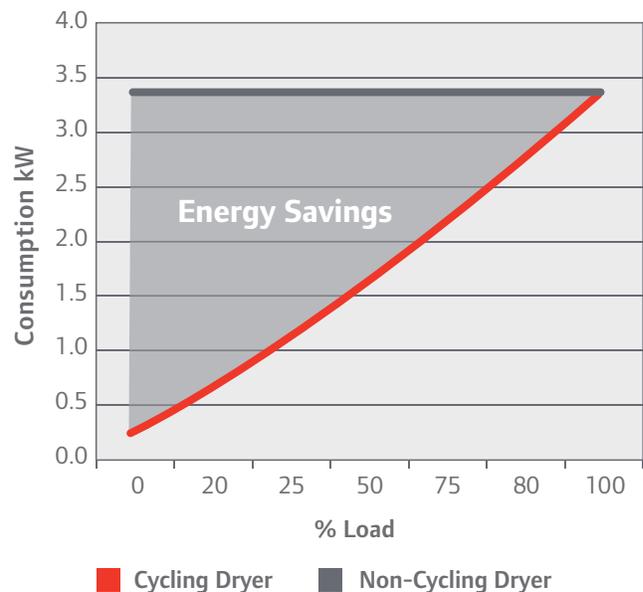
## Higher Efficiency, Lower Cost

The Ingersoll Rand high-efficiency small cycling 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 each dryer, such as microprocessor control, a highly efficient refrigeration system, a heavy duty drain and robust construction that enhance performance and provide maximum reliability.

## Energy Savings by Technology



## Operating Efficiency is the Bottom Line

Ingersoll Rand high-efficiency small cycling dryers include innovative features to enhance the efficiency of your compressed air system and the quality of the air delivered.

- 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.

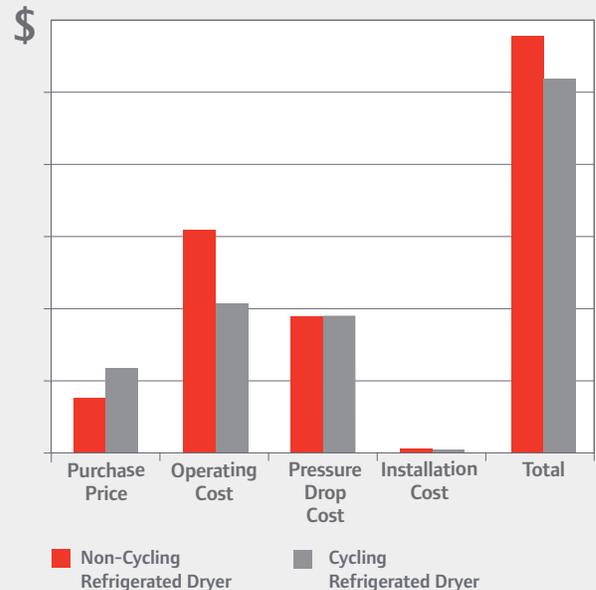
- Compact size
- Advanced circuit design eliminates the need for thermal expansion valves and fan control switches



Every cycling dryer is manufactured with premium components under stringent quality control, resulting in years of dependable operation.

## Low Operating Cost

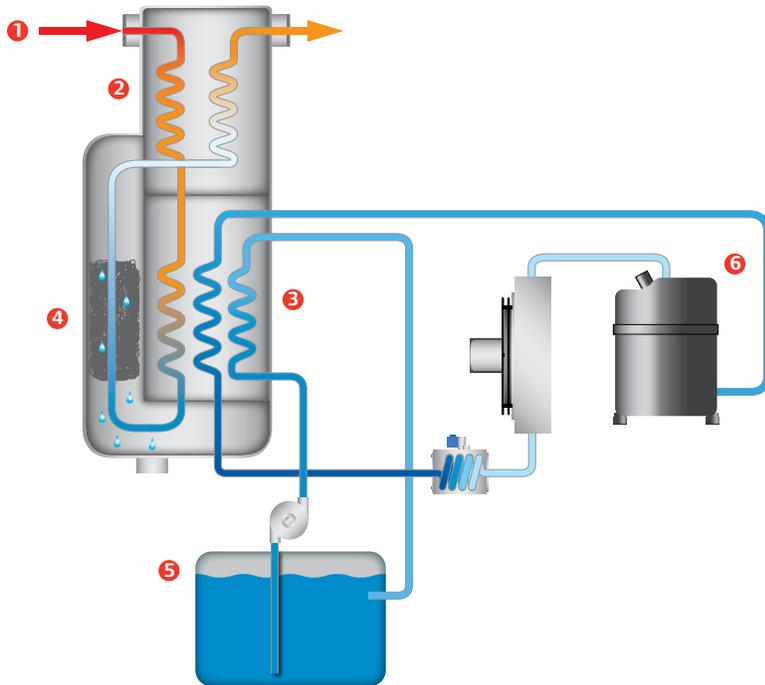
In a typical compressed air dryer, the refrigerant compressor runs continuously, regardless of demand. Our high-efficiency small cycling dryer deactivates the refrigeration system when demand is low. This combined with a low pressure drop helps the dryer provide lower operating costs.



- 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 variable speed compressors and for critical applications where the demand for compressed air fluctuates on a regular basis

## How Cycling Refrigerated Dryers Work

Most facilities operate with varying degrees of compressed air usage. Ingersoll Rand high-efficiency small cycling dryers are designed to minimize energy cost through the use of thermal mass, cold energy storage.



- ❶ Compressed air enters the dryer through the heat exchanger
- ❷ Air is cooled by cold outgoing air in the pre-cooler/re-heater
- ❸ Circulating glycol cools the compressed air, allowing the refrigerant compressor to turn-off during low demands
- ❹ A moisture separator removes the condensed liquid, which is purged from the dryer using a no-loss drain
- ❺ Thermal mass cold energy storage reduces compressor run time, saving energy
- ❻ Refrigerant compressor runs only as needed



## The CARE Service Program Advantage

Compressed air is critical to your operation. A proper maintenance strategy is crucial to avoiding unplanned, unbudgeted downtime and production interruptions. By choosing an Ingersoll Rand CARE service program, you are investing in your future with a trusted partner.

Depending on your system maintenance requirements, choose from one of these programs:



- Greatest value
- Equipment risk transfer
- Up to 10 years
- Scheduled maintenance and all repairs
- No production interruptions



- All planned maintenance
- Predictable, on-time
- Preventative diagnostics
- Up to 10-year coverage on airend components



- Genuine OEM parts at an agreed-to price
- Planned parts inventory
- Experienced support
- Up to 5-year coverage on airend

## Ingersoll Rand 60 Hz Performance

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
DA17EC	17	10	1/2" FPT	.35	500 x 386 x 662	19.69 x 15.19 x 26.05	38.6	85
DA31EC	31	18	1/2" FPT	.43	500 x 386 x 662	19.69 x 15.19 x 26.05	38.6	85
DA41EC	41	24	1/2" FPT	.45	500 x 386 x 662	19.69 x 15.19 x 26.05	40.8	90
DA59EC	59	35	1/2" FPT	.53	500 x 386 x 662	19.69 x 15.19 x 26.05	43.1	95
DA85EC	85	50	3/4" FPT	.68	500 x 386 x 662	19.69 x 15.19 x 26.05	47.6	105
DA127EC	127	75	1" FPT	.94	570 x 422 x 772	22.44 x 16.63 x 30.38	68.0	150
DA170EC	170	100	1" FPT	.98	570 x 422 x 772	22.44 x 16.63 x 30.38	70.3	155
DA212EC	212	125	1" FPT	1.10	570 x 422 x 772	22.44 x 16.63 x 30.38	72.6	160
DA255EC	255	150	1-1/2" NPT	1.25	500 x 768 x 953	19.66 x 30.25 x 37.5	119.3	263

Performance based on ISO 7183, Table 2, Option A2 (100 psig inlet air pressure, 100°F inlet air temperature, 100°F ambient air temperature)

All models available with 115V/1/60 Hz; DA127EC, DA212EC and DA255EC also available with 230V/1/60 Hz

\*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

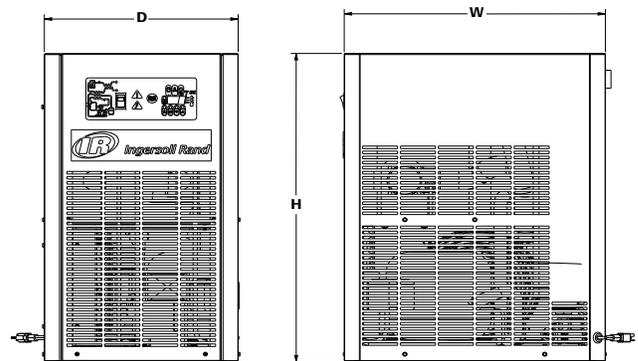
Glycol Circulation Pump

Timed Solenoid Drain

Drain Isolation Valve

Compact Size

Optional No-Loss Drain (DA127EC - DA255EC only)



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