



CDS SERIES

ENERGY SAVING
REFRIGERATED AIR DRYERS



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Figure (1): Superior full-range energy efficiency is engineered into every CDS Series dryer.

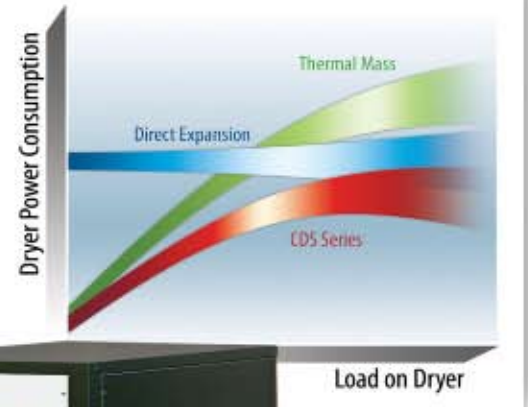
Another cool idea from FSCURTIS®

THE eVOLUTION OF COOL

Since 1854, CURTIS Air Compressors has empowered generations with the air power needed to turn visions into reality. Today, FSCURTIS' evolutionary CDS Series compressed air dryers combine a traditional refrigeration circuit with advanced controls to deliver cool savings. Benefit with improved productivity from dry air, low energy costs, long life, and reliable performance. Featuring DemandSmart™ energy management technology, CDS Series saves energy and boosts productivity from 265 through 6,000 scfm at pressures to 203 psig.

TRADITIONAL REFRIGERATED CONTROLS

Some plant air systems operate near full capacity all the time. Others, vary greatly from zero demand to full demand with extended periods anywhere in between. Operate a standard compressor at reduced demand and you waste energy. But, did you know that most VSD driven compressors consume more energy than standard models when run at full capacity? Each technology is application specific so it is important to choose wisely.



The same applies to refrigerated dryer control technologies. Traditional hot gas or direct expansion controls operate most efficiently near full capacity whereas, cycling dryers are energy efficient at reduced capacity but consume more energy when operated near full capacity. These inflexible designs force you to choose between wasting energy or paying a premium for energy saving technology.



Did you know...

...the difference in pressure drop for FSCURTIS CDS Series refrigerated dryers versus typical refrigerated dryers can save you at least 1.5% in compressor drive motor energy? That's over \$1,000 per year on a 100 HP compressor. Ask us how!

CDS Series Energy Savings

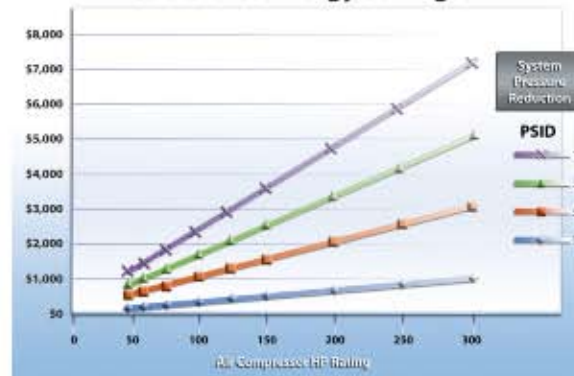


Figure (2): Assumes 8,760 hours/year, 10 cents/kWh, EPAct motor efficiencies. *Pounds per Square Inch Differential

REFRIGERATED AIR DRYERS

DemandSmart™ eENERGY INTELLIGENCE

Advanced CDS Series refrigerated air dryers give you complete flexibility by combining hot gas bypass with cycling technology to deliver your best value year round. DemandSmart™ sensory intelligence automatically selects the best operating mode as your air demands change to save you money. High levels of demand use hot gas bypass mode, whereas reduced levels benefit from cycling mode. Our industry leading low pressure drop (< 2 psid), and savings from DemandSmart's™ sophisticated algorithms ensure you extract maximum performance and energy efficiency from every kilowatt you use.

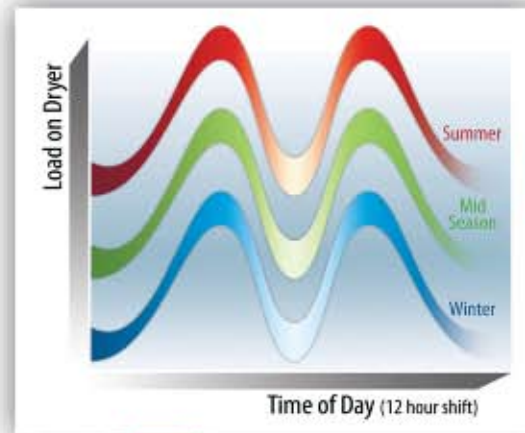
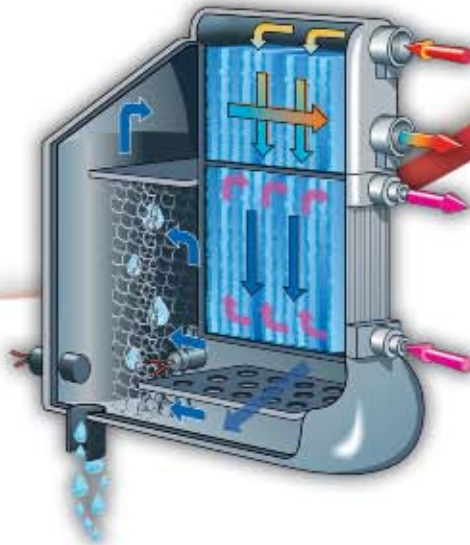


Figure (3): Energy saving potential with DemandSmart™ energy management system.



THE eVOLUTION OF SUPERIOR DESIGN

FSCURTIS CDS Series dryers are engineered for durability and performance. Condensers are oversized to allow operation with inlet temperatures to 140°F and ambient to 122°F, and even include a cleanable pre-filter for fast and easy upkeep. Exceptional dew point stability across the entire design flow range results from slow flow velocities. Our broad bore heat exchangers and expansive demister cavities are designed to provide the lowest (<2 psid) pressure drop in the industry and to maximize energy savings through lower air compressor pressure settings.

Robust aluminum heat exchangers are encapsulated in an insulated thermal shield to protect against heat degradation of the cold storage. Compliant scroll compressors offer energy savings of 20-30% over piston types. If you've ever had a condensate drain stop functioning, you know that the ability to drain condensate makes or breaks your system. That is why CDS Series incorporates level sensing intelligence that detects rising condensate levels and then ensures positive drainage without air loss. In the event of a drain malfunction, an alarm is signaled and the system switches over to a conventional timed solenoid drain to give you complete peace of mind.



DemandSmart™ COMMUNICATIONS & CONTROL CENTER

Standard Features:

- Digital LED dew point display
- Automatic DemandSmart™ Cycling or Hot Gas Bypass Operation
- Self-diagnostic control with warnings and alarms
- DemandSmart™ energy management system
- Optional RS485 BMS interface



SPECIFICATIONS AND PERFORMANCE

Model	Air Connections inches	Nominal Capacity	Dimensions L x W x H		Voltages V / Ph / Hz	CDS Series Recommended Filtration		Weight lbs Kg	
			inches	mm		General Purpose Coalescer	Oil Aerosol & Liquid Removal		
						Pre-filter	After-filter		
CD265	2" NPT-F	265	41 x 28 x 42	1041 x 711 x 1067	230 / 3 / 60 460 / 3 / 60	CES339GP150	CES339C150	320	145
CDS325		325				CES339GP150	CES339C150	320	145
CDS400		400				CES466GP200	CES466C200	320	145
CDS500		500				CES699GP200	CES699C200	342	155
CDS700		700				CES699GP200	CES699C200	529	240
CDS800	3" NPT-M	800	46 x 32 x 52	1168 x 813 x 1321	460 / 3 / 60	CES911GP3000	CES911C300	529	240
CDS1000		1000				CES1314GP300	CES1314C300	551	250
CDS1200	4" Flg	1200	43 x 40 x 67	1092 x 1016 x 1702	460 / 3 / 60	CES1314GP300	CES1314C300	816	370
CDS1600		1600				CES2119GP400	CES2119C400	1279	580
CDS2000	6" Flg	2000	71 x 40 x 68	1803 x 1016 x 1727	460 / 3 / 60	CES2119GP400	CES2119C400	1477	670
CDS2400		2400				C/F	C/F	1521	690
CDS3000		3000				71 x 40 x 81	1803 x 1016 x 2057	C/F	C/F

575V/3Ph/60Hz available upon request, please contact factory.

C1 Ambient Temperature			C2 Inlet Temperature			C3 Inlet Pressure		
F	C	Correction Factor	F	C	Correction Factor	psi g	bar g	Correction Factor
90	32	1.05	90	32	1.22	50	3	.077
100	38	1.00	100	38	1.00	80	6	0.93
110	43	0.94	110	43	0.82	100	7	1.00
120	49	0.79	120	49	0.69	125	9	1.07
122	50	0.71	130	54	0.56	150	10	1.12
			140	60	0.46	174	12	1.15
						203	14	1.18

AIR FLOW CORRECTION FACTORS:

Capacity correction factors to be used when operating conditions differ from those shown above.

To obtain dryer capacity at new conditions multiply **nominal capacity** * C1 x C2 x C3

- Maximum ambient temp. – 122°F (50°C)
- Minimum ambient temp. – 41°F (5°C)
- Refrigerant – 407c
- Maximum inlet temp. – 140°F (60°C)
- Maximum pressure – 203 psi g (16 bar g)

Distributed By:



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