



*inspired by
technology*



*arcticstar plus
Refrigeration Dryers
(265 - 6000 scfm)*

www.zanderusa.com



arcticstar plus Refrigeration Dryers

Why treat compressed air?

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 itself.

arcticstar plus refrigeration dryers actively remove this condensate to achieve extremely dry compressed air.

The benefits are notable: less system downtime, reduced costs and maintenance, and an improved finished product.



How arcticstar plus works

The hot wet air enters **arcticstar plus** where it immediately passes through the air-to-air exchanger, which pre-cools the incoming air by means of the warm exiting air.

The pre-cooled air then enters the evaporator where the air is cooled down further by the cold refrigerant to achieve the dewpoint temperature. The condensate in the air, which has now become a liquid thanks to the cooling process, is first separated by the demister and then removed by the condensate drain.

The cold dry air passes back through the return side of the air-to-air exchanger, where it is heated up by the warm incoming air. This process not only saves energy by pre-cooling the inlet air, but also, re-heats the exiting air to well above dewpoint and to prevent sweating in the piping.

ControlPlus

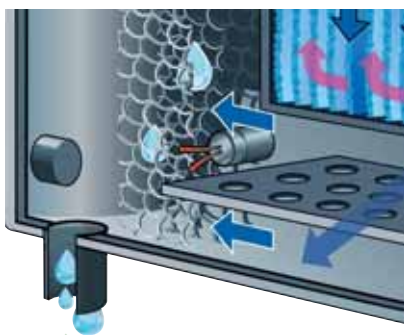


ControlPlus (patent pending) maximizes ease of use.

The multifunction display gives a digital dewpoint reading and displays coded alarms.

ControlPlus manages the SavePlus

(patent pending) function and informs the user when the dryer is in energy saving mode. Maintenance intervals are automatically signalled while a Status Report (showing the last 8 events) and working hour counter simplify service. Standard volt free contacts and an RS485 serial card option allow remote monitoring.



DrainPlus

The drainage chamber is integrated into the heat exchanger while the valve mechanism is fitted in an easily accessible drain niche. DrainPlus continuously adjusts itself to the actual working conditions ensuring zero air loss and a notable reduction in system power consumption.

A self diagnostic troubleshooting logic is included standard. If any fault occurs with the DrainPlus, an alarm will signal the drain to continue to operate in a pre-programmed timed drain pattern.



arcticstar plus Refrigeration Dryers

arcticstar plus: the lowest real operating costs



Capital costs

The dryer's purchase price, when measured over a 5 year period, actually only accounts for around 25% of the total costs.

arcticstar plus has laid particular attention to keeping maintenance costs at an absolute minimum.

The highest quality components, integrated with the latest design solutions and manufactured with the most sophisticated testing procedures to guarantee **arcticstar plus**' long-term reliability.

Easy access to all parts and dedicated maintenance kits simplify servicing.



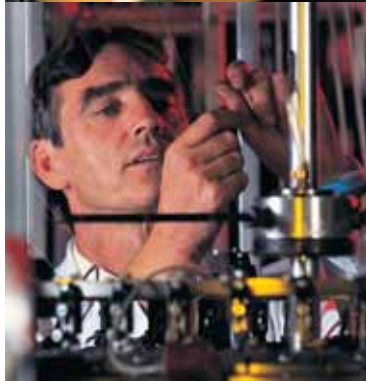
Selecting the optimum dryer package



The **arcticstar plus** selection software allows accurate product selection according to the user's individual application, ensuring the right dryer is selected and guaranteeing optimal operation at all times.

arcticstar plus energy savings, when installed in the user's specific compressed air network, are also calculated. Local ambient conditions, shift patterns, seasonal variations and electricity costs are all considered, giving a realistic output according to real operating conditions.

The software furthermore allows a comparison versus traditional dryer technologies, showing how **arcticstar plus** not only maximizes performance, but also minimizes costs.



smart technology: the benefits

PlusPack

The PlusPack (patent pending) heat exchanger features an extremely robust, all-in-one aluminum design, with no interconnecting tubing.

PlusPack offers class leading pressure drop levels guaranteeing notable energy savings. Maximum dewpoint performance is ensured thanks to wide air channels leading to low air velocities, an oversized demister separator offering excellent 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 very low power consumption.



guaranteed operation

arcticstar plus has been designed for trouble free operation in all worldwide conditions, however harsh.

All models feature oversized condensers to allow operation up to 140°F air inlet, 122°F ambient.

A condenser pre-filter reduces maintenance requirements and improves performance and reliability.



compliant scroll compressors

arcticstar plus features Compliant Scroll compressors offering energy savings of around 20% when compared with competitive solutions. The ability to tolerate liquid returns coupled with 50% fewer moving parts render them nearly indestructible and highly reliable. Low vibration levels increase overall refrigeration circuit longevity.





purecare goes well beyond simply designing a compressed air network. We stay close to the user, ensuring the system is correctly installed, commissioned and maintained.

- best standard warranty
- genuine preventive maintenance kits
- factory trained and certified service technicians
- immediate technical assistance via phone
- factory auditing
- training for local personnel
- global support

purecare ensures that the user's system operates perfectly and at the minimum cost at all times and for many years to come. Because neither time nor technology stand still, we ensure our users will continue to receive the very best support and the most advanced solutions. Solutions which will allow our users to concentrate on doing what they know best, maximizing their business.

welcome to purecare.



arcticstar plus: the advantages

- optimum dewpoint levels for highest system performance
- advanced patented design solutions
 - lowest real operating costs
- high reliability, easy to use and maintain

Minimal direct energy costs

The dryer's electrical energy consumption typically accounts for about 50% of the total costs over 5 years.

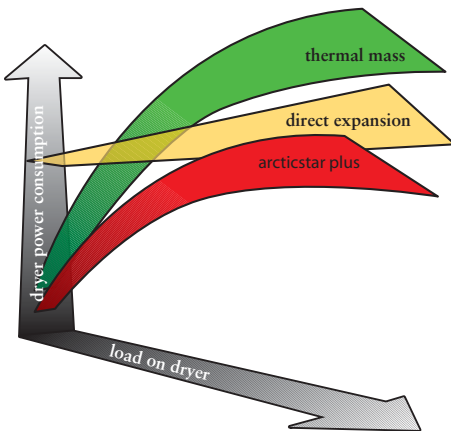
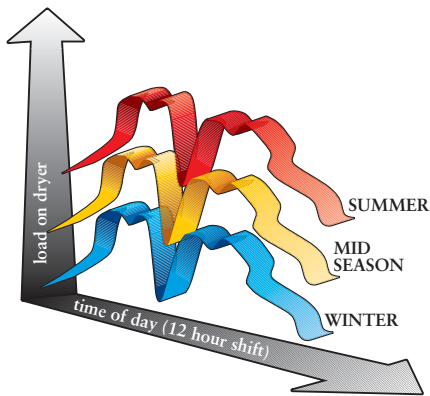
arcticstar plus leads the market with the lowest full load power consumption; this thanks to an oversized air-to-air exchanger, Compliant Scroll compressors, environmentally friendly refrigerant R407C and a direct exchange concept (which avoids the increased power consumption of thermal mass type dryers).

Fluctuating air demand and seasonal weather changes mean that, in real conditions, a dryer rarely operates at full load; typical dryers either operate continuously or inefficiently adapt themselves to these working conditions, wasting valuable energy. The SavePlus function automatically, continuously and precisely adapts dryer energy consumption according to the real operating conditions, avoiding unnecessary waste.

ControlPlus supervises SavePlus operation, using multiple sensors to ensure maximum savings without dew point spikes.

PlusPack's all-in-one aluminum construction, with its Thermal Shield Insulation (TSI), maximizes SavePlus' energy saving potential. The result: the most energy efficient dryer package available, whatever the working conditions.

arcticstar plus consumes less energy at full load, and saves more energy at partial loads.

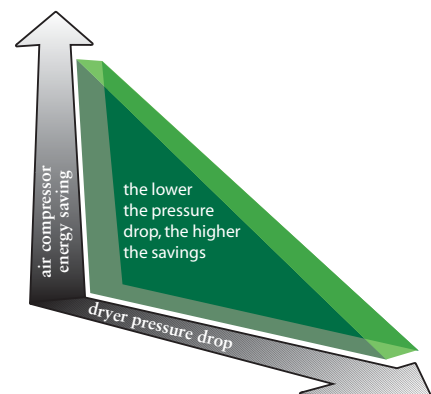


Reduced indirect costs

The electrical energy the air compressor requires to overcome the pressure drop created by the dryer accounts for about 25% of the overall costs over 5 years.

arcticstar plus offers average pressure drops of only 2 psi (0.15 bar), about half that of traditional solutions. This benefit is further increased when also specifying **ZANDER** Microfilters.

The air compressor expends further energy replenishing compressed air losses from traditional condensate drains. DrainPlus (patent pending) automatically adapts its drainage pattern to avoid any compressed air losses, thereby saving energy.



Technical data

Type	Capacity* (scfm)	Dimensions (ins)			Primary Voltages**	Connection (NPT)	Max. pressure	Weight (lbs) (psi)	Suitable pre-filter	Suitable after-filter
		A	B	C						
ASD265	265	28	42	41	230V/3Ph/60Hz & 460V/3Ph/60Hz	2" NPT-F	203	320	G 12 XP	G 12 ZP
ASD325	325	28	42	41	230V/3Ph/60Hz & 460V/3Ph/60Hz	2" NPT-F	203	320	G 13 XP	G 13 ZP
ASD400	400	28	42	41	230V/3Ph/60Hz & 460V/3Ph/60Hz	2" NPT-F	203	320	G 13 XP	G 13 ZP
ASD500	500	28	42	41	230V/3Ph/60Hz & 460V/3Ph/60Hz	2" NPT-F	203	342	G 14 XP	G 14 ZP
ASD700	700	32	52	46	230V/3Ph/60Hz & 460V/3Ph/60Hz	3" NPT-M	203	529	G 17 XP	G 17 ZP
ASD800	800	32	52	46	230V/3Ph/60Hz & 460V/3Ph/60Hz	3" NPT-M	203	529	G 17 XP	G 17 ZP
ASD1000	1000	32	52	46	460V/3Ph/60Hz	3" NPT-M	203	551	G 18 XP	G 18 ZP
ASD1200	1200	40	67	43	460V/3Ph/60Hz	3" NPT-M	203	816	G 18 XP	G 18 ZP
ASD1600	1600	40	68	71	460V/3Ph/60Hz	4" ANSI	203	1279	G 19 XP	G 19 ZP
ASD2000	2000	40	68	71	460V/3Ph/60Hz	6" ANSI	203	1477	TF 30 XP	TF 30 ZP
ASD2400	2400	40	68	71	460V/3Ph/60Hz	6" ANSI	203	1521	TF 30 XP	TF 30 ZP
ASD3000	3000	40	81	71	460V/3Ph/60Hz	6" ANSI	203	1609	TF 40 XP	TF 40 ZP
ASD3800	3800	40	81	71	460V/3Ph/60Hz	6" ANSI	203	1830	TF 50 XP	TF 50 ZP
ASD5000	5000	40	87	89	460V/3Ph/60Hz	8" ANSI	203	2425	TF 60 XP	TF 60 ZP
ASD6000	6000	40	87	89	460V/3Ph/60Hz	8" ANSI	203	2624	TF 80 XP	TF 80 ZP

*Capacities are based upon: Ambient temperature 100°F, Inlet temperature 100°F (Relative humidity 60%), Working pressure 100 psi g.
 **575V/3Ph/60Hz available upon request. Please consult factory.

Flow correction factors

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

Ambient Temperature °F (C1)	90	100	110	120	122		
Correction Factor	1.05	1.00	0.94	0.79	0.71		
Inlet Temperature °F (C2)	90	100	110	120	130	140	
Correction Factor	1.22	1.00	0.82	0.68	0.56	0.46	
Working Pressure psi g (C3)	50	80	100	125	150	174	203
Correction Factor	0.77	0.93	1.00	1.07	1.12	1.15	1.18

Technical Data

Maximum ambient temperature	122°F
Maximum inlet temperature	140°F
Minimum ambient temperature	41°F
Maximum pressure	203 psi g
Refrigerant:	R407C



We are constantly updating our product so we cannot be responsible for manufacturing and dimension changes.
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