Compressed Air Dryers

Refrigerant Air Dryers

Drytec knows the importance of high quality compressed air and provides customers with the highest quality air possible. Using clean, dry air is extremely important for most air powered applications. Moisture or contamination in the air from the compressor discharge will result in many complications to production equipment. These complications will decrease productivity and may affect the production quality of final products.

Advantages

- Low pressure drop saves compressor energy consumption.
- Quick start and reaction time ensures production uptime.
- Highly energy-efficient R134a refrigerant is standard across all models.
- A state of the art Drytec "3 in 1" heat exchanger design provides the unmatched longevity and efficiency of cooling.
- Best in class refrigerant compressors consume less energy.
- Cycle logic of the condenser's fan motor enables further energy savings.

The Refrigerant Circuit and Insulation

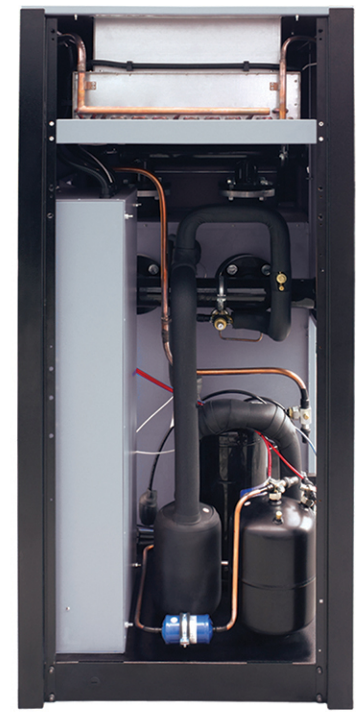
Drytec exclusively uses environmentally friendly R134a refrigerant gas in the dryers. This refrigerant is suitable for both low and high temperature applications. R-134a has excellent thermodynamic properties and can operate at very low pressure compared to other refrigerants. This will in turn increase the refrigerant compressor's service life.

With R-134a Drytec dryers can operate at very high ambient temperatures. Drytec engineers add extra capability to the heat exchangers with a superior no loss insulation system. Drytec SDE-US Series Digital Cycling air dryers supply constant dewpoint at all flow ranges. This perfect insulation philosophy continues to the refrigeration circuit side also. Superior insulation and oversized condensers (for ultra-high ambient temperatures) enable the SDE-US Series Dryers to offer continuous air quality.

SDE-US Series

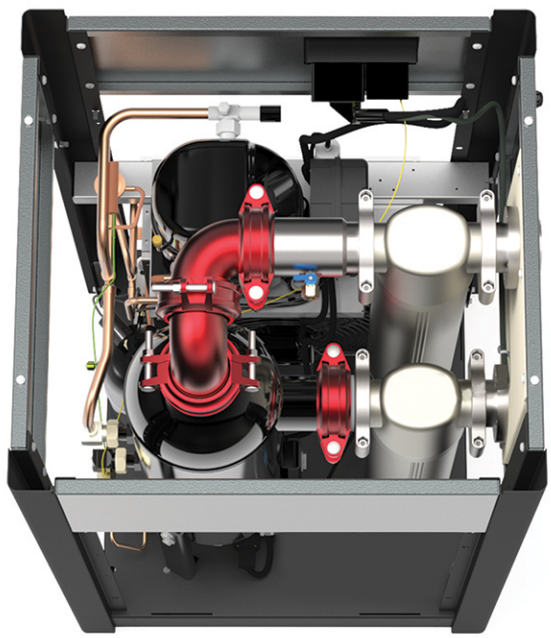
Applications

Drytec provides an entire range of products for filtration and air purification applications to fit various market requirements (ISO 8573 Standards).
Food production, pharmaceuticals, dairies, breweries, clean conveying air, chemical plants, pure air and clean room technology, pharmaceutical industry, weaving machines, photo labs, paint spraying, powder coating, packaging, control and instrument air, sand and/or shot blasting,general air works, microchip production, optics, process air as well as many other markets.



Compact Design

SDE-US Series air dryers are highly reliable,efficient, have small space requirements and offer low cost ownership. Integration of pre / post filtration within the dryer cabinet saves labor time, installation cost and valued production space. The compact size also offers flexibility and economy during transporation.

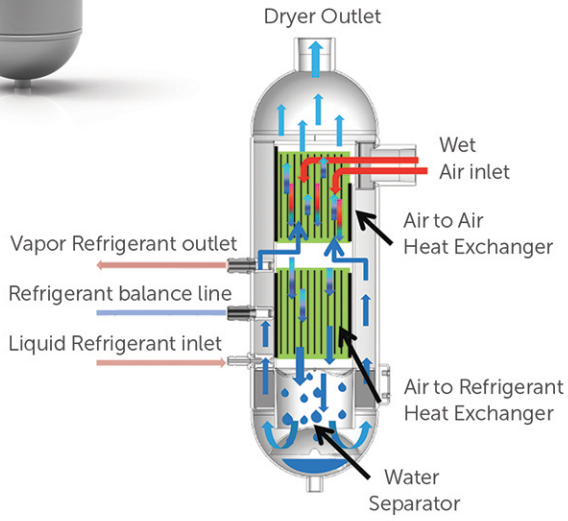


SAFETY - Electrical cabinet isolation

- Electrical Panel separated from service areas of the dryer.
- Minimization of electrical components from refrigerant side of dryer.
- Electrical controls access without exposure to high heat areas.

Aluminum Heat Exchanger

- Very low pressure drop
- Thick aluminum plates
- High heat transfer surface area
- Thick external cylindrical wall
- Optimized water separator for best performance



Easy Service

Easy access in to the cooling components in seconds by the help of "easy lift" panels with integrated finger slots . Simplifies service access with quick access by technicians (no screws / fasteners to remove)

Scroll Compressors

Scroll Compressors are energy efficient and strong against liquid shocks. For maximum energy savings, scroll compressors are used in larger models.

SDE-US Series

Features

- High Efficiency
- Eco Mode Digital Cycling
- Very Low Pressure Drop
- Designed for extreme tropical conditions
- 140°F Max Inlet Temp Design @ Max Flow

Digi-Pro Digital Controller
(10 scfm to 510 scfm units)

Drytec SDE-US Series air dryers incorporate our exclusive Digi-Pro series controller. The Digi-Pro series controllers have outstanding technology for both functionality and durability in addition to visual appeal.
The new controller design offers ease of adjustment with one finger, with accurate digital dew point display in addition to coded alarm monitoring of the dryer.

Digital controller with embedded features,

- Digital dew point monitoring
- Energy-saving "Eco Mode" display
- Periodic maintenance interval display
- Status report
- Hours run meter
- Fahrenheit and Centigrade selection

The Refrigerant Circuit Pressure Gauges

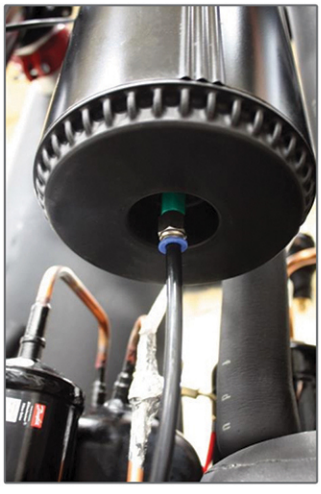
SDE-US Series Dryers are Service Friendly.
The suction and discharge pressure gauges are already hooked up on the refrigerant circuit of SDE-US Series Dryers.

ESD Digital Controller
(620 scfm to 5600 scfm units)

Drytec SDE-US Series Air dryers of larger capacity feature the feature rich ESD Digital controller.. With the help of the highly engineered ESD Digital Controls on the SDE-US Series Cycling Air dryers will reduce your energy consumption. The ESD interface assists the users to monitor many useful parameters on the dryer and guides them to troubleshoot any problem very easily. During the nights, weekends and holidays many companies do not stop their dryers although the compressors may be stopped. The ESD Digital Controller saves huge amounts of money by simply shutting the dryer down automatically when it is not in use.

Zero Clearance Compressed Air Filters with High Performance Elements

Drytec X & Y compressed air filters are an SDE-US Series dryer standard. The X Pre-Filter coalescing filter for water removal) is used for up to 1 micron particles and the Y Post-Filter (coalescing filter for oil removal) is used to remove oil down to 0.01 ppm Listening to customer needs our engineers created a service friendly design. The Zero clearance design helps service technicians to replace the element in just a few minutes. SDE-US Series integral filtration ensure optimum dryer protection and achievement of high air purity standards. The compressed air circuit utilizes grooved couplings and fittings to ensure a positive connection without leaks. These couplings assist the service technician to dismantle and assemble pipes easily and quickly



Service Safety

The Filter integration features an auto drain with manual valves. Manual valves allow the system to be depressurized safely when service is needed.

SDE-US Series

Process Air Quality Protection

Pressure drop is a large concern in compressed air. In many applications high pressure drops will cause a decrease in the pressure at the point of use relating to machines or processes not operating correctly. Presence of dirt particles and oil in the compressed air system may result in filter blockage. It is important for the end users and service technicians to recognize if there is a problem in the system. The performance of the filters directly affects the pressure drop and system performance. Therefore, it is very important that the filter elements are changed at the filter service time. SDE-US Series Digital Controls feature an alarm / warning indicating the appropriate time to change the filter elements. When the indication should occur, the element change will assist to avoid loss of performance and pressure drop.

Technical Specifications

Part No	Capacity (scfm)	Voltage (Standard)	Connection Size	Pre Filter and Post Filter	Replacement Element Type	Pressure Drop (psig)	Controller Type	Dimensions (inch) Weight (lbs)			
								Width	Length	Height	Weight
SDE-US-10	10	115/1/60	1/2" NPT	Included	MKO-US-27 KIT	1,8	Digi-Pro	17	16	23	71
SDE-US-15	15	115/1/60	1/2" NPT	Included	MKO-US-27 KIT	2,0	Digi-Pro	17	16	23	71
SDE-US-25	25	115/1/60	1/2" NPT	Included	MKO-US-27 KIT	3,3	Digi-Pro	17	16	23	71
SDE-US-35	35	115/1/60	1/2" NPT	Included	MKO-US-41 KIT	3,2	Digi-Pro	17	16	23	77
SDE-US-40	40	115/1/60	3/4" NPT	Included	MKO-US-90 KIT	1,3	Digi-Pro	19	18	33	113
SDE-US-65	65	115/1/60	3/4" NPT	Included	MKO-US-90 KIT	1,8	Digi-Pro	19	18	33	117
SDE-US-80	80	115/1/60	3/4" NPT	Included	MKO-US-90 KIT	2,7	Digi-Pro	19	18	33	121
SDE-US-115	115	115/1/60	1 1/2" NPT	Included	MKO-US-300 KIT	1,8	Digi-Pro	22	20	35	172
SDE-US-150	150	115/1/60	1 1/2" NPT	Included	MKO-US-300 KIT	2,5	Digi-Pro	22	20	35	183
SDE-US-175	175	230/1/60	2" NPT	Included	MKO-US-500 KIT	1,8	Digi-Pro	27	26	46	352
SDE-US-255	255	230/1/60	2" NPT	Included	MKO-US-700 KIT	2,2	Digi-Pro	27	26	46	363
SDE-US-310	310	230/1/60	2" NPT	Included	MKO-US-700 KIT	2,1	Digi-Pro	29	38	54	450
SDE-US-380	380	230/1/60	2" NPT	Included	MKO-US-700 KIT	3,0	Digi-Pro	29	38	54	485
SDE-US-510	510	230/1/60	2" NPT	Included	MKO-US-700 KIT	3,3	Digi-Pro	29	38	54	506
SDE-US-620	620	460/3/60	3" NPT	Included	MKO-US-1100 KIT	2,3	ESD-3	32	38	58	595
SDE-US-825	825	460/3/60	3" NPT	Included	MKO-US-1100 KIT	2,8	ESD-3	32	38	58	627
SDE-US-1050	1050	460/3/60	3" NPT	Included	MKO-US-1600 KIT	2,0	ESD-3	31	46	68	863
SDE-US-1250	1250	460/3/60	3" NPT	Included	MKO-US-1600 KIT	2,5	ESD-3	31	46	68	902
SDE-US-1550	1550	460/3/60	4" Flange	Not Included	Not Included	2,0	ESD-3	34	55	70	1082
SDE-US-1800	1800	460/3/60	4" Flange	Not Included	Not Included	2,2	ESD-3	34	55	70	1145
SDE-US-2300	2300	460/3/60	4" Flange	Not Included	Not Included	3,1	ESD-3	43	58	76	1532
SDE-US-2750	2750	460/3/60	4" Flange	Not Included	Not Included	3,3	ESD-3	43	58	76	1580
SDE-US-3100	3100	460/3/60	6" Flange	Not Included	Not Included	2,8	ESD-3	42	87	76	1980
SDE-US-3550	3550	460/3/60	6" Flange	Not Included	Not Included	2,8	ESD-3	42	87	76	2035
SDE-US-4100	4100	460/3/60	6" Flange	Not Included	Not Included	2,8	ESD-3	36	89	78	2145
SDE-US-4550	4550	460/3/60	8" Flange	Not Included	Not Included	2,8	ESD-3	36	89	78	2420
SDE-US-5600	5600	460/3/60	8" Flange	Not Included	Not Included	2,8	ESD-3	61	101	83	3080

Note: Different Voltage options are available.

Maximum Working Pressure : 230 psig
Maximum Ambient Temperature : 120 °F
Maximum Inlet Temperature : 140 °F

CORRECTION FACTORS										
Inlet Temperature (°F)	85	90	95	100	110	120	130	140	150	-
F1	1.20	1.14	1.08	1.00	0.75	0.60	0.50	0.45	0.35	-
Ambient Temperature (°F)	60	80	90	100	105	110	115	120	-	-
F2	1.12	1.08	1.06	1.00	0.96	0.90	0.80	0.65	-	-
Pressure (psi)	60	60	75	100	115	125	150	175	200	230
F3	0.75	0.77	0.85	1.00	1.06	1.10	1.16	1.25	1.30	1.35

If an air compressor delivers 180 scfm at 150 psi, the dryer inlet temperature is 130°F and ambient temperature is 115°F.
170 / 1,16/ 0,50 / 0,80 = 365 scfm
Dryer Part No for this application is SDE-US-380