



COMPRESSED AIR SYSTEMS FOR THE
SEMICONDUCTOR AND ELECTRONICS



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INDUSTRY BACKGROUND

The semiconductor and electronics form the cornerstone of modern technological advancement. For decades, semiconductor chips have served as the primary driver of technological progress, enabling the operation of automobiles, mobile phones, computers, and a vast range of electronic products. As technology continues to evolve—whether in quantum computing, 6G communications, the Internet of Things (IoT), cloud computing, or artificial intelligence (AI)—all these advancements rely on the support of semiconductor technology. However, the manufacturing processes for semiconductors and electronic products are highly energy-intensive and impose stringent requirements on the cleanliness of the production environment. Any moisture, particle, or oil contamination can jeopardize an entire batch of semiconductor products or even damage stainless steel components within the production equipment, resulting in losses amounting to millions of dollars. Therefore, ensuring a stable supply of high-quality, clean, and dry compressed air is not only critical for maintaining production continuity but also a in controlling operating costs and improving production output.

To meet the specific requirements for producing semiconductor and electronics, the design and manufacturing of compressed air system must adhere to three core principles: - **Engineered for Reliability:** By innovative design, premium components, and committing to high-standard manufacturing, we help customers maximize production efficiency and ensure that semiconductor fabs operate at peak efficiency in a 24/7 continuous manner. - **Pure Compressed Air:** Utilizing oil-free compressors combined with unique rotary drum-type and compressed air heat dryers, we guarantee the delivery of air quality meeting the highest industry standards, ensuring the stable operation of production systems in an energy-efficient manner to reduce operating costs. - **Reducing Cost in Nitrogen Generation:** We offer a variety of heavy-duty nitrogen generators specifically designed for high purity and low operating costs.



CDA CLEAN DRY AIR STANDARD

1.CDA

CDA (Clean Dry Air) refers to clean, dry air and represents a specialized compressed air quality standard for the semiconductor industry. In semiconductor manufacturing, the importance of CDA far exceeds that in most other industrial applications. This is because semiconductor production not only requires oil-free, dust-free, or dry compressed air but must simultaneously satisfy all three stringent conditions. Any minor contamination can lead to the failure of entire batch or equipment corrosion; therefore, CDA systems are indispensable for cleanrooms and semiconductor production lines.

2. ISO 8573-1:2010 Standard

ISO 8573-1:2010 is an internationally recognized standard for air quality, which specifies the maximum permissible limits for three primary pollutants that may be present in compressed air (moisture, oil contamination, and particulate matter). This standard classifies air quality into seven grades; the lower the grade, the higher the air quality. For semiconductor cleanrooms, the humidity, oil mist, and dust levels in the air must all meet the highest "Class 0" standard, meaning that the concentrations of these three pollutants in the air must approach zero.

3. Grade 0 Quality Standard

In the electronics industry, to prevent production downtime and product contamination, compressed air must be oil-free, dry, and free of particulate matter. Meeting Class 0 quality requirements means:

- Zero contamination risk: Eliminates all impurities that may affect semiconductor yield at the source.
- Equipment Protection: Prevents corrosion of precision stainless steel components in the cleanroom environment and production equipment caused by moisture or oil contamination.
- Continuous production assurance: Ensure that air quality does not become a production bottleneck during high-precision processes such as lithography and etching.

4.Pollutant Control Methods

To achieve Class 0 control of moisture, oil contamination, and dust, a systematic approach is required:

- Oil Contamination Control: The entire process begins with the right air compressor. Investing in certified oil-free compressor units eliminates oil contamination risks at the source.
- Particulate matter control: Use dedicated filters to remove dust or other particulate matter from compressed air. To achieve Class 0 standard, a multi-stage filtration system is typically required, comprising a pre-filter, a post-filter, and a high-purity PTFE membrane filter.
- Moisture Control: Utilizing high-performance adsorbent-type dryer ensures that the compressed air pressure dew point (PDP) remains below -70°C , completely eliminating corrosion risks and meeting stringent process drying requirements.



CDA SYSTEM CONFIGURATION SOLUTION

1.system setup

A typical compressed air system compliant with CDA standards should include the following core components in the order of the process flow



2.Description of component function

- Oil-free compressor: Serving as the power source, it delivers stable, energy-efficient oil-free air, significantly reducing operating costs.
- Pre-filter: Installed between the compressor and the dryer, it captures most of the particulate matter in the compressed air, significantly purifying the air before it enters the dryer and thereby reducing the need of dryer maintenance.
- Zero-Gas Consumption Compression Thermal Dryer: A core drying unit that removes moisture, achieving a pressure dew point below -70°C . Note that adsorption dryer may generate tiny amount of desiccant dust during operation.
- Post-filter: Installed after the dryer, it is specifically designed to filter out remaining drying agent dust and to further purify the air.
- PTFE membrane filter: As a terminal precision filter, it employs surface filtration technology to capture particles as small as $0.01\ \mu\text{m}$, ensuring that the air entering the cleanroom meeting the absolute cleanliness of Class 0 standard.



CDA SYSTEM CONFIGURATION SOLUTION

3. Advantages of procuring from one single supplier

- Procuring a complete CDA system from a single supplier offers significant advantages:
 - System synergy: The compressor, dryer, and filter are all designed for optimal matching, enabling them to work in concert effectively and achieve peak performance.
 - Quality consistency: All devices comply with the unified CDA high standards, thereby avoiding compatibility risks associated with the use of multiple brands.
 - Service convenience: The single-source provider offers optional components, installation, and maintenance support, simplifying supply chain management and ensuring the efficient operation of the system throughout its entire service life.

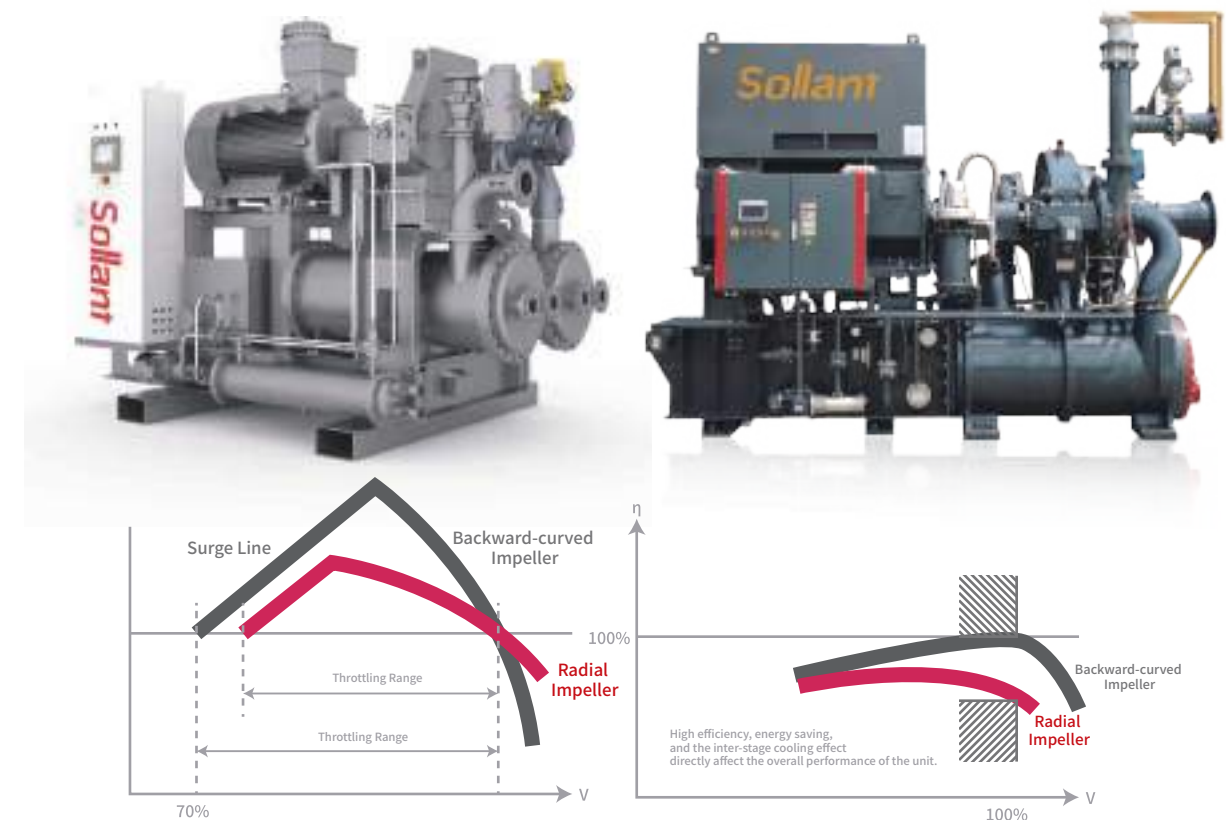


CORE PRODUCTS AND SOLUTIONS

Oil-free air

Centrifugal Air Compressor

Sollant compressor series are specifically engineered for the semiconductor industry, delivering certified oil-free air to ensure zero contamination in critical applications, while offering exceptional energy efficiency and reliability.



Technical Parameters of Centrifugal Compressor

Model	Working pressure barg	Capacity m3/min	Power(KW)	Power(HP)	Dimensions L (mm) W(mm) H(mm)			Weight (kg)
SLT-300C	0.6-9	24-48	132-263	176-350	2750	1550	1820	3800
SLT-600C	0.6-12	45-82	248-450	330-600	3280	1850	2200	6300
SLT-900C	0.6-12	76-122	400-640	530-900	3500	2000	2250	8160
SLT-1200C	0.6-12	118-150	630-800	840-1200	4200	2150	2350	11500
SLT-1500C	0.6-16	118-228	760-1300	1010-1750	4200	2150	2350	12000
SLT-2000C	0.6-16	186-310	980-1600	1320-2150	4600	2200	2500	17200
SLT-3000C	0.6-16	268-438	1380-2250	1840-3000	5300	2300	2970	21500

DRY OIL-FREE SCREW AIR COMPRESSOR



Industry-leading original oil-free air end

1. The air compression chamber is completely separated from the oil chamber. The air compression chamber uses a The airend features non-contact rotors and corrosion-resistant coated rotors, sealed by multi-stage labyrinth seals with conditioned sealing air, ensuring absolute oil-free compression. The oil chamber has a wear-free sealing system with seal. The two do not contact ;
2. The compressed air passing through the cooler after the first stage of compression has inseparable water vapor. In order to prevent the water vapor from corroding the surface of the compressor's second-stage main machine rotor, the second-stage rotor is made of stainless steel, which is more reliable
3. The industry's first-class super coating (UITRACOAT) is applied to the rotor and compression chamber inner wall of the main machine. It can effectively prevent softening and shedding that are easy to occur with general coatings such as Teflon. It has excellent anti-corrosion and reduces meshing clearance. During the whole life cycle, there is no significant decrease in air volume
4. Filtered lubricating oil is used for cooling in the cabinet compartment of the air end. Efficient cooling, avoiding the scale caused by water cooling, thus improving the reliability of operation.



Smart electronic control system

Large-size color LCD touch screen, with a good human-machine communication interface; custom vector inhuman, perfectly matched with the motor; a special program, fully monitoring the parameters of the machine, automatically control the state of the machine, no need for special care; independent air duct design, suitable for each kind of working condition.



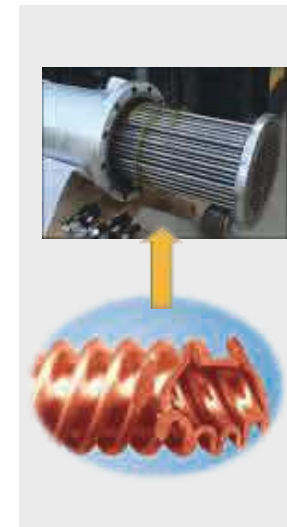
Independent air intake system

Independent air intake to ensure that the intake air temperature is equal to the ambient temperature. Large-capacity air filter is used, which has better filtering effect, lower intake pressure loss, energy saving and high efficiency. Maintenance and replacement are more convenient



Noise reduction sheet metal design

The multiple noise reduction design is calculated according to the noise theory. The special flame retardant muffler cotton is attached inside to reduce the noise of the unit and provide a quieter environment for use.



Efficient water cooler

Sollant dry screw air compressor water cooler uses a new type of threaded finned tube shell and tube heat exchanger. Compressed air goes inside the tube, cooling water goes to the shell side, and the tube nest is a new plum blossom copper tube, which is more conventional than water cooling. For the heater, the advantages are as follows

1. Compressed air goes through the tube and the pressure-bearing capacity of the outer finned tube is improved ;
2. Cooling water walks on the shell side. Compared with the process selection in the walking pipe, the cooling water passes through multiple sets of baffle parts, the degree of turbulence increases, the probability of the formation of dirt attached to the pipe wall is reduced, the equipment cleaning cycle is extended, and the user's maintenance cost is reduced.
3. The gas travels along the tube and the fins extend axially in the tube. Compared with the outer fins sweeping the wind, the pressure drop generated by the unit windward area is lower than that of the outer fins. It is safe and reliable to use, and the fins are not easy to fall off ;
4. The installation of the heat exchanger is simple and the same as that of the conventional shell and tube heat exchanger ;
5. The side of the tube is made of stainless steel to prevent corrosion and rust of the cooler due to high temperature and high pressure, which affects the life of the compressor and air quality
6. The tube nest can be disassembled independently, which is convenient for users to maintain
7. Compressed air goes to the tube side and water goes to the shell side to reduce the noise generated by compressed air.



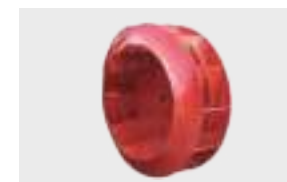
Noise reduction venturi

The first and second air ends of the air compressor all adopt the newly developed venturi muffler, and there is also an impedance integrated muffler, which can greatly eliminate the noise emitted by the compressor pipeline.



Reliable hydraulic intake valve

High-efficiency intake valve adopts hydraulic control, the work is more stable and reliable, avoiding the regular replacement of pneumatic components, reducing unnecessary downtime and maintenance costs.



Silent centrifugal fan

Silent centrifugal fan Sollant dry screw air compressor adopts the latest centrifugal fan, which has large cooling air volume, low noise, stable and uniform wind pressure, so that the cooling area of the cooler is fully utilized, and the noise of the air compressor is greatly reduced by 6-8dB(A). Give customers a quiet environment

Dry Oil-Free Variable Speed Screw Air Compressor

Model	Working pressure		Capacity		Power		Noise	Air outlet pipe diameter	Net weight		Dimensions(mm)						
	bar	psig	m³/min	cfm	kW	hp	dB		Air-cooled	Water-cooled	Air-cooled L*W*H			Water-cooled L*W*H			
SLTOF-45VD	7	102	4.5- 7.8	159- 275	45	60	69±3	DN50	1800	1850	2200	1400	2000	2200	1500	1720	
	8	116	4.0- 6.8	141- 240	45	60	69±3	DN50	1800	1850	2200	1400	2000	2200	1500	1720	
	10	145	3.7- 6.4	132- 226	45	60	69±3	DN50	1800	1850	2200	1400	2000	2200	1500	1720	
SLTOF-55VD	7	102	5.7- 9.8	202- 346	55	75	69±3	DN50	1900	1950	2200	1400	2000	2200	1500	1720	
	8	116	5.2- 9.0	182- 318	55	75	69±3	DN50	1900	1950	2200	1400	2000	2200	1500	1720	
	10	145	4.4- 7.8	157- 275	55	75	69±3	DN50	1900	1950	2200	1400	2000	2200	1500	1720	
SLTOF-75VD	7	102	7.6- 13.0	268- 459	75	100	70±3	DN50	2000	2050	2200	1400	2000	2200	1500	1720	
	8	116	7.2- 12.2	253- 431	75	100	70±3	DN50	2000	2050	2200	1400	2000	2200	1500	1720	
	10	145	6.6- 11.2	234- 396	75	100	70±3	DN50	2000	2050	2200	1400	2000	2200	1500	1720	
SLTOF-90VD	7	102	9.6- 16.0	332- 565	90	120	71±3	DN50	2100	2150	2200	1400	2000	2200	1500	1720	
	8	116	8.1- 13.8	286- 487	90	120	71±3	DN50	2100	2150	2200	1400	2000	2200	1500	1720	
	10	145	7.6- 13.1	269- 463	90	120	71±3	DN50	2100	2150	2200	1400	2000	2200	1500	1720	
SLTOF-110VD	7	102	12.1- 20.6	429- 727	110	150	71±3	DN65	3100	3150	3000	1990	2180	2800	1900	1990	
	8	116	11.6- 19.5	408- 689	110	150	71±3	DN65	3100	3150	3000	1990	2180	2800	1900	1990	
	10	145	11.1- 19.5	391- 664	110	150	71±3	DN65	3100	3150	3000	1990	2180	2800	1900	1990	
SLTOF-132VD	7	102	14.7- 24.8	518- 876	132	175	73±3	DN65	3200	3250	3000	1990	2180	2800	1990	1990	
	8	116	13.6- 23.0	480- 812	132	175	73±3	DN65	3200	3250	3000	1990	2180	2800	1990	1990	
	10	145	11.5- 19.5	406- 689	132	175	73±3	DN65	3200	3250	3000	1990	2180	2800	1990	1990	
SLTOF-160VD	7	102	16.9- 28.5	596- 1006	160	215	73±3	DN65	3300	3400	3000	1990	2180	2800	1900	1990	
	8	116	15.6- 26.3	550- 929	160	215	73±3	DN65	3300	3400	3000	1990	2180	2800	1900	1990	
	10	145	14.1- 23.8	497- 840	160	215	73±3	DN65	3300	3400	3000	1990	2180	2800	1900	1990	
SLTOF-185VD	7	102	19.5- 32.8	687- 1158	185	250	74±3	DN65	3400	4500	3000	1990	2180	2800	1990	1990	
	8	116	17.1- 28.9	605- 1021	185	250	74±3	DN65	3400	4500	3000	1990	2180	2800	1990	1990	
	10	145	16.3- 27.5	575- 971	185	250	74±3	DN65	3400	4500	3000	1990	2180	2800	1990	1990	
SLTOF-200VD	7	102	20.0- 33.6	706.3- 1186.6	200	270	74±3	DN100	5570	5000	4500	2000	2150	3100	2200	2103	
	8	116	20.0- 33.6	706.3- 1186.6	200	270	74±3	DN100	5570	5000	4500	2000	2150	3100	2200	2103	
	10	145	17.3- 29.2	610.9- 1031.2	200	270	74±3	DN100	5570	5000	4500	2000	2150	3100	2200	2103	
SLTOF-250VD	7	102	27.3- 46.0	964- 1624	250	335	74±3	DN100	5800	5200	4500	2000	2150	3100	2200	2103	
	8	116	25.3- 42.0	893- 1511	250	335	74±3	DN100	5800	5200	4500	2000	2150	3100	2200	2103	
	10	145	22.7- 38.2	803- 1348	250	335	74±3	DN100	5800	5200	4500	2000	2150	3100	2200	2103	

Dry Oil-Free Fixed Speed Screw Air Compressor

Model	Working pressure		Capacity		Power		Noise	Air outlet pipe diameter	Net weight		Dimensions(mm)						
	bar	psig	m³/min	cfm	kW	hp	dB		Air-cooled	Water-cooled	Air-cooled L*W*H			Water-cooled L*W*H			
SLTOF-45FD	7	102	7.8	275.5	45	60	69±3	DN50	1900	1950	2200	1400	2000	2200	1500	1720	
	8	116	6.8	240.1	45	60	69±3	DN50	1900	1950	2200	1400	2000	2200	1500	1720	
	10	145	6.4	226.2	45	60	69±3	DN50	1900	1950	2200	1400	2000	2200	1500	1720	
SLTOF-55FD	7	102	9.8	346.1	55	75	69±3	DN50	2000	2050	2200	1400	2000	2200	1500	1720	
	8	116	9.0	317.8	55	75	69±3	DN50	2000	2050	2200	1400	2000	2200	1500	1720	
	10	145	7.8	275.5	55	75	69±3	DN50	2000	2050	2200	1400	2000	2200	1500	1720	
SLTOF-75FD	7	102	13.0	459.1	75	100	70±3	DN50	2150	2200	2200	1400	2000	2200	1500	1720	
	8	116	12.2	430.8	75	100	70±3	DN50	2150	2200	2200	1400	2000	2200	1500	1720	
	10	145	11.2	395.5	75	100	70±3	DN50	2150	2200	2200	1400	2000	2200	1500	1720	
SLTOF-90FD	7	102	16.0	565.0	90	120	71±3	DN50	2250	2300	2200	1400	2000	2200	1500	1720	
	8	116	13.8	487.3	90	120	71±3	DN50	2250	2300	2200	1400	2000	2200	1500	1720	
	10	145	13.1	462.6	90	120	71±3	DN50	2250	2300	2200	1400	2000	2200	1500	1720	
SLTOF-110FD	7	102	20.6	727.5	110	150	71±3	DN65	3360	3400	3000	1990	2180	2800	1900	1990	
	8	116	19.5	688.6	110	150	71±3	DN65	3360	3400	3000	1990	2180	2800	1900	1990	
	10	145	18.8	663.9	110	150	71±3	DN65	3400	3400	3000	1990	2180	2800	1900	1990	
SLTOF-132FD	7	102	24.8	875.8	132	175	73±3	DN65	3500	3550	3000	1990	2180	2800	1900	1990	
	8	116	23.0	812.2	132	175	73±3	DN65	3500	3550	3000	1990	2180	2800	1900	1990	
	10	145	19.5	688.6	132	175	73±3	DN65	3500	3550	3000	1990	2180	2800	1900	1990	
SLTOF-160FD	7	102	28.5	1006.5	160	215	73±3	DN65	3750	3850	3000	1990	2180	2800	1900	1990	
	8	116	26.3	928.8	160	215	73±3	DN65	3750	3850	3000	1990	2180	2800	1900	1990	
	10	145	23.8	840.5	160	215	73±3	DN65	3750	3850	3000	1990	2180	2800	1900	1990	
SLTOF-185FD	7	102	32.8	1158.3	185	250	74±3	DN65	3860	3960	3000	1990	2180	2800	1900	1990	
	8	116	28.9	1020.6	185	250	74±3	DN65	3860	3960	3000	1990	2180	2800	1900	1990	
	10	145	27.5	971.2	185	250	74±3	DN65	3860	3960	3000	1990	2180	2800	1900	1990	
SLTOF-200FD	7	102	36.8	1299.6	200	270	74±3	DN100	5730	5230	4500	2000	2150	3100	2200	2103	
	8	116	34.6	1221.9	200	270	74±3	DN100	5730	5230	4500	2000	2150	3100	2200	2103	
	10	145	30.6	1080.6	200	270	74±3	DN100	5730	5230	4500	2000	2150	3100	2200	2103	
SLTOF-250FD	7	102	46.0	1624.5	250	335	74±3	DN100	7000	6000	5070	2200	2300	3100	2200	2103	
	8	116	42.8	1511.5	250	335	74±3	DN100	7000	6000	5070	2200	2300	3100	2200	2103	
	10	145	38.2	1347.7	250	335	74±3	DN100	7000	6000	5070	2200	2300	3100	2200	2103	

MODULAR DRYER



Technical Indicators	
Inlet Temperature	10~60℃
Working Pressure Range	0.6~1.0MPa (higher pressure can be customized)
Ambient Temp	2~45℃
Cooling Water Pressure	0.2~0.4MPa
Cooling Water Temp	2~32℃
Cooling	Air/Water Cooled (optional upon request)
Pressure Dew Point	≤-40℃
Regen Mode	Heatless Regen

Note: Other special standards can be customized; more details please contact us.

Low energy consumption: The regenerated gas consumption of the heated regenerated combined dryer is only 5%~8%, saving the consumption of compressed air. Compressed air with different dewpoints can be provided for different gas points.

All operating switches and display instruments of the combined dryer are concentrated on the panel of the box plate. According to the different needs of users, the desiccant air dryer can be operated independently or refrigeration and adsorption at the same time. The gas-liquid separator combines two separation technologies, cyclone separation and filter element separation, which can fully separate the cooled liquid water and give full play to the effect of freeze drying. For desiccant dryer part, the use of high quality pilot solenoid valve, pneumatic butterfly valve. Reliable performance, stable switching, accurate action.

The heat exchanger and condenser of the refrigerated dryer are equipped with high quality and high efficiency threaded tubes. Desiccant dryer part adopts scientific and reasonable twin tower adsorption regeneration structure design. Original compressed air diffuser, distribution plate, airflow distribution tube design, which ensure full contact of the adsorbent and compressed air, and avoid tunnel effect, effectively reduce the impact of high-speed airflow on the adsorbent, reduce the wear of the adsorbent, prolong the life of the adsorbent, and ensure the stability of air dew point.

Integrated arrangement, reasonable design, no foundation installation, easy maintenance.



Specifications Table

MODEL	AIR CAPACITY (m³/min)	REFRIGERATION COMPRESSOR POWER(kW)	HEATING POWER kW	AIR INLET/ OUTLET	WATER INLET/ OUTLET	DIMENSIONS(mm)			WEIGHT(KG)
						LENGTH	WIDTH	HEIGHT	
SLTCAD-015AR	1.5	0.59	2	R1	/	820	1050	1613	247
SLTCAD-026AR	2.6	0.75	2	R1	/	910	1160	1330	300
SLTCAD-038AR	3.8	0.88	2	R1-1/2	/	1070	1330	1438	364
SLTCAD-069AR	6.9	1.23	2	R1-1/2	/	1170	1380	1509	481
SLTCAD-110AR	11	1.98	3	DN50	/	1420	1550	1871	641
SLTCAD-140AR/WR	14	2.68	4	DN65	R1	1420	1600	1885	849
SLTCAD-180AR/WR	18	3.1	5	DN65	R1	1620	1900	2156	1043
SLTCAD-220AR/WR	22	3.65	5	DN80	R1	1620	1900	2254	1151
SLTCAD-280AR/WR	28	4.54	6	DN80	R1	1420	2137	2243	1322
SLTCAD-320AR/WR	32	5.43	7	DN80	R1-1/2	1570	2405	2300	1571
SLTCAD-380AR/WR	38	5.81	7	DN100	R1-1/2	1920	2600	2374	1870
SLTCAD-460AR/WR	46	6.75	8	DN100	R1-1/2	1920	2700	2633	2100
SLTCAD-550AR/WR	55	9.1	10	DN125	R2	2120	3075	2736	2605
SLTCAD-670AR/WR	67	10.8	15	DN125	R2	2270	3100	2764	3600
SLTCAD-750AR/WR	75	11.6	20	DN125	R2	2320	3300	2824	3820
SLTCAD-850AR/WR	85	13.5	22	DN150	R2	2320	3400	2824	4900
SLTCAD-950AR/WR	95	13.6	28	DN150	R2	2540	3543	2864	5400
SLTCAD-1100AR/WR	110	18.22	34	DN150	R2-1/2	2620	3750	2934	6000
SLTCAD-1300AR/WR	130	20.2	39	DN200	R2-1/2	2620	4200	2920	6400
SLTCAD-1500AR/WR	150	22.6	45	DN200	R2-1/2	3150	5000	3132	7800
SLTCAD-1700AR/WR	170	27.2	54	DN200	R3	3200	5000	3190	8800

ZERO-GAS-CONSUMPTION
COMPRESSION THERMAL DRYER

To meet stringent requirement for extremely dry air in semiconductor manufacturing, the zero-energy-compression thermal dryer employs advanced adsorption technology. It offers superior efficiency and reliability while consistently delivering a pressure dew point below -70°C, making it the optimal choice for critical applications.



Technical Indicators	
Intake Temperature	110~180°C
Working Pressure Range	0.6~1.0MPa
Ambient Temperature	2~40°C
Cooling Water Pressure	0.2~0.4MPa
Cooling Water Temperature	2~32°C
Pressure Dew Point	-20~-40°C
Regen Mode	Compression Heat Regen
Standard Adsorption Cycle	8h
Regenerative Air Consumption	0

Note: Other special standards can be customized; more details please contact us.

- Reliable Adsorption: With a specific surface area of 350 mi/g, this high-efficiency adsorbent developedin collaboration with upstream suppliers has an excellent adsorption rate to ensure the stable dewpoint.
- Durable Performance: Vacuum negative pressure filing, ensuring tightness and anti-puiverization for longer service ltfe.
- Intelligent Energy Saving: Equipped with a PLC controller, it enables real-time monitoring and data storage, integrating time, load and dew point control for high energy efficiency
- Patented Design Patented compression heat shunt regeneration low power enables high-temperature regeneration, with lower dew point and higher energy effciency.
- Smart IoT integration: With IoT functionality, it supports easy remote control, centrallzed management, intelligent analysis and prediction to optimize operation.



Zero loss compression heat series desiccant air dryer

Model	Handling capacity (N³M/Min)	Dimensions(mm)			Inlet/Outlet	Cooling Water Flow (t/h)	Weight (kg)
		Length	Width	Height			
SLTAD-300NLW	30	2300	1750	2600	DN80	34	2500
SLTAD-460NLW	46	2490	1770	2732	DN100	52	3550
SLTAD-550NLW	55	2800	2200	2930	DN125	62	4150
SLTAD-670NLW	67	2800	2300	3200	DN125	76	5025
SLTAD-750NLW	75	3000	2360	3150	DN125	85	5625
SLTAD-850NLW	85	3200	2400	3200	DN150	96	5000
SLTAD-1000NLW	100	3400	2400	3200	DN150	68	6800
SLTAD-1200NLW	120	3450	2500	3263	DN150	85	9000
SLTAD-1500NLW	150	4150	2950	3479	DN200	101	11300
SLTAD-1800NLW	180	4400	3000	3650	DN200	122	12000
SLTAD-2000NLW	200	4400	3000	3700	DN200	135	12500
SLTAD-2500NLW	250	4300	5186	3562	DN250	106	16000
SLTAD-3000NLW	300	4706	5271	3604	DN250	127	20500
SLTAD-3500NLW	350	5000	5500	3800	DN300	148	24500
SLTAD-4000NLW	400	5300	5600	3900	DN300	169	28000
SLTAD-4500NLW	450	5500	5800	4000	DN300	190	31500
SLTAD-5000NLW	500	6000	6100	4200	DN350	211	35500
SLTAD-5500NLW	550	6200	6300	4300	DN350	232	39000
SLTAD-6000NLW	600	6500	6600	4500	DN400	253	43000

FILTER SERIES

To meet specific CDA requirements, we provide a comprehensive filter solution encompassing everything from pre-filters for protecting the dryer to post-filters for removing drying agent dust, as well as terminal PTFE membrane filters; this multi-stage protection ensures that particles at the 0.01 μm level are thoroughly

Ultra-clean precision filters provide users with high-quality compressed air filtration, which is specially usng,advanced spraying, food,electronics, petrochemical and other industries. By installing filters, compresswater, dust, etc.) can be effectively removed



- 1. Compressed air inlet
- 2. Compressed air outlet
- 3. Filter cartridges
- 4. Stainless steel diamond mesh design has a large airflow area and lowresistance
- 5. Aluminum alloy material high-strength and high hardness material, internaland external surge treatment
- 6. The water valve is equipped with a sealing ring, which does not require the useof adhesive tape and is easy and fast to install



Product selection

Filter model	Flow rate		dimension						connection size		Type of filterelement
	Nm³/min	CFM	A(mm)	B(mm)	C(mm)	∅D(mm)	E(mm)	F(mm)	G	Pc	
SLT-005*	0.7	24.7	208	169	22	70	76.5	5	1/2" 1/4" 3/8"	1N/A	F-005*
SLT-010*	1.2	42.4	277	238	33	91.5	95	6.5	1/2"3/4" 1"	N/A	F-010*
SLT-020*	2.3	81.2	316	277	33	91.5	95	6.5	1/2" 3/4 1"	N/A	F-020*
SLT-030*	3.5	123.6	345	307	40	117.5	123.5	8.5	1-1/2" 1"	N/A	FJ-030*
SLT-050"	5.7	201.3	563	424	40	117.5	123.5	8.5	1-1/2"1"	N/A	F-050*
SLT-070*	7.8	275.5	563	424	40	117.5	123.5	8.5	1-1/2"1"	N/A	F-070*
SLT-110*	11.6	409.7	589	550	46.5	160	170	12	N/A	2"	F-110*
SLT-150*	15.5	547.4	589	550	46.5	160	170	12	N/A	2"	F-150*
SLT-200*	20.8	734.5	689	650	65	195	205	12	N/A	2-1/2"	FX-200*
SLT-250*	25.3	893.5	689	650	65	195	205	12.5	N/A	2-1/2"	FX-250*
SLT-300*	30.8	1087.7	844	805	65	195	205	12.5	N/A	3"	FJX-300*
SLT-400*	40.5	1430.2	867	828	78.5	195	210	12.5	N/A	4"	FJX-400*

NITROGEN GENERATOR

The nitrogen generator is specifically designed for the semiconductor and electronics industries, providing high-purity nitrogen. In processes such as electronic component soldering, the use of high-purity nitrogen not only enhances product performance but also delivers significant environmental benefits. This product series is renowned for its low operating costs and robust design, meeting the growing industry demand for nitrogen supply



Technical Indicators	
Inlet Temperature	10~60℃
Inlet Pressure	0.6~1.0MPa
Ambient Temperature	2~45℃
Nitrogen Purity	98-99.999%
Nitrogen Flow Rate	10~200Nm³/h
Power	220V/380V/50HZ
Noise	≤85dB
Nitrogen Dew Point	≤-40℃
Control Method	Standard separate control High match integrated controller

Note: Other special standards can be customized; more details please contact us.

Product Features

- Convenient & Stable: Integrates compressed air purification system, front/rear tanks of nitrogen generator, and PSA nitrogen generator into a unit, which is easy to install and simply connected to a compressed air source for stable output of high-purity nitrogen with low dew point.
- Flexible Application: Compressed air purification system supports optional refrigerated air dryers, filters, or desiccant air dryers for integrated skid mounting, tailored to different gas usage scenarios.
- High Efficiency Integration: Combines features of multiple skid-mounted products with a centralized control system to maximize performance.
- Energy Saving Adaptability: VP control automatically adjusts system load, adapting to top peak or low peak and intermittent gas demand for maximum energy savings.

APPLICATION SCENARIOS IN SEMICONDUCTOR & ELECTRONIC MANUFACTURING

Clean Room

Cleanrooms constitute the core area of semiconductor manufacturing. In addition to strict control over temperature and humidity, all dust and contaminants must be eliminated. Therefore, the compressed air supplied to cleanrooms must be Class 0 oil-free air to ensure absolutely purity.

Lithography

Graphic etching or photolithography techniques are critical processes for printing specific circuit patterns onto wafers. This process is highly sensitive to air quality; any minute particles may lead to short circuits or open circuits in the circuitry, necessitating the use of high-purity CDA.

Instrumentation and Pneumatic Tools

Compressed air is widely used in processes such as sorting, packaging, inspection, handling, assembly, and etching. The use of oil-free air ensures that products remain free from oil contamination throughout the entire production process, thereby guaranteeing the reliability of the final product.

Purification/Decontamination

The cleaning of vacuum pumps and Venturi pumps must be performed using oil-free air to prevent the introduction of secondary contamination during the cleaning process and to ensure the cleanliness of the equipment interior.



APPLICATION SCENARIOS IN SEMICONDUCTOR & ELECTRONIC MANUFACTURING

Wastewater treatment

Wastewater generated during the production process in electronic factories must undergo rigorous treatment before being discharged back into the natural environment. Compressed air plays a critical role in various stages of the wastewater treatment system, such as aeration and mixing.

Welding

In electronic component assembly, using high-purity nitrogen for soldering offers multiple advantages. As a protective gas, nitrogen prevents oxidation at the solder joint, enhances soldering quality and product performance, while reducing the amount of flux required.

Cooling

Product cooling in cleanrooms is one of the most critical aspects of CDA applications. The cooling air must simultaneously meet the requirements of being clean, dry, and oil-free to prevent contamination or thermal stress damage to precision chips during the cooling process.

