CHAMPION®

CYCLING REFRIGERATED DRYER | 10–800 CFM

XCCYA Series

X Series: NeXt-Generation Champion Air Treatment

XCCYA SERIES | CYCLING REFRIGERATED DRYERS

XCCYA Series Cycling Refrigerated Dryer provides reliability like no other dryer in its class: reliability that you can count on to protect your air system day in and day out; reliability built in by design.

Optimized for Efficiency

An advanced cycling dryer, the XCCYA Series provides significant savings because it does not waste energy costs through continuous operation of its refrigeration system, as do traditional non-cycling dryers. Each component of the XCCYA Series has been designed to provide not only durability, but maximum energy efficiency. This combination of system design and individual component design adds up to the most energy efficient cycling refrigerated dryer available.

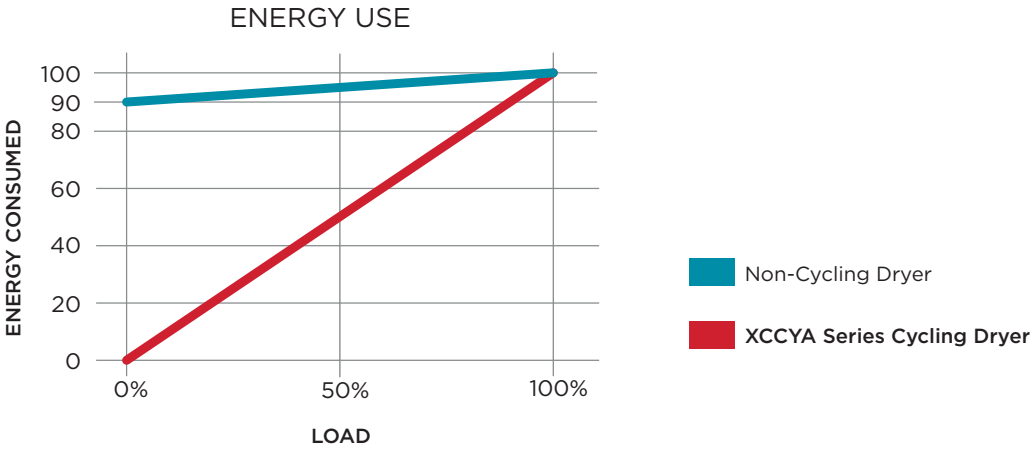
Factors contributing to the XCCYA Series' energy efficiency:

- Patented heat exchanger design that provides high heat transfer with low pressure drop because of uniquely short flow length.
- Heat exchanger presents a flow area three to five times that of an equivalent copper tubing exchanger, and it is self-cleaning, which greatly reduces the potential for fouling.
- Design includes a refrigeration system combined with a thermal mass that efficiently stores cold energy.
- Refrigeration compressor cycles off during periods of reduced load, while dryer continues to remove moisture and contaminants from the compressed air.
- Unique centrifugal separator design provides effective moisture separation maintaining consistent dew point, regardless of partial load operation.

Best in Class Design

The XCCYA Series cycling dryer uses centrifugal separation to remove moisture from the chilled air. Separation occurs at the coldest point in the system by means of centrifugal acceleration, then expands into an area of low velocity containing a sump, and change of air flow direction. The result is highly-efficient moisture removal, providing exceptionally dry, clean air under all operating conditions.

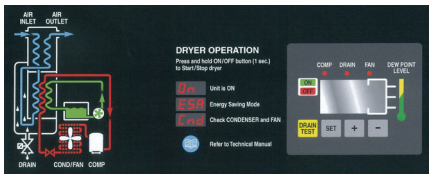
- Increased sustainability utilizing R513A refrigerant, achieving an 85% reduction in Global Warming Potential (GWP).
- Electrical certified to meet UL safety standards 60335-1 and 60335-2-40
- Minimum refrigerant charge enhances sustainability



High Heat Transfer at Work

The superior performance of the XCCYA Series dryer can be attributed to the effective heat transfer capabilities of the exchanger design, utilized throughout the compressed air circuit. The dryer design includes a pre-cooling system with heat exchangers to properly condition the air for drying. A re-heater section of the dryer's air side also uses these high performance heat exchangers to prepare the dried compressed air for re-entry into the air system. This prevents pipe sweating and readies the compressed air for use in process applications.

- **100% CORROSIVE-RESISTANT MATERIAL CONSTRUCTION** permits optimal heat transfer, resulting in a consistent pressure dew point. It is used in all the XCCYA Series dryer's air circuit heat exchangers, providing durability in environments unsuitable for copper or other metals.
- **XCCYA SERIES DRYER'S AIR CIRCUIT HEAT EXCHANGERS** combine a high heat transfer coefficient with unmatched low pressure drop.



Updated Microprocessor LED Controller with a NEMA 1 package protection.

Updated Microprocessor Controller

The easy-to-use controller automatically manages dryer operation for optimum air treatment and for maximum energy efficiency.

- Simple and easily read interface with LED indication
- Digital display of chiller temperature available at a glance to ensure optimal dryer performance
- Percent of energy savings available at the touch of a button
- Dedicated buttons enable convenient adjustment of solenoid drain timing as well as drain function test
- Automatic dryer restart in the event of a sudden loss of power
- Adjustable chiller temperature set point to further reduce energy expense
- Microprocessor control constantly monitors dryer functions including thermal mass temperature and provides alarms to minimize dryer downtime

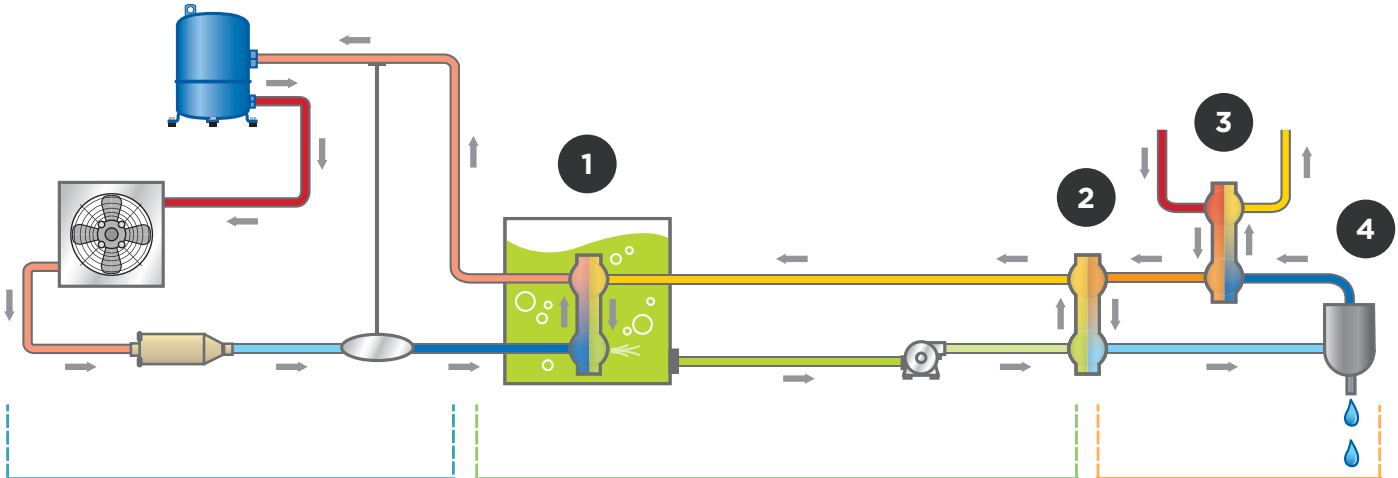
Inside the Cycle

1 SUBMERGED EVAPORATOR THERMAL MASS STORAGE TANK is fully insulated to maintain a consistently cold propylene glycol-water mixture for continuous pressure dew point control. The thermal tank temperature is monitored by the controller permitting the refrigerant compressor to cycle off during low heat loads resulting in energy savings.

2 AIR CHILLER corrosive-resistant heat exchangers to provide efficient heat transfer between the compressed air and the dryer's cooling thermal mass, assuring a consistent and continuous 38ºF/3ºC pressure dew point.

3 PRE-COOLER/RE-HEATER assures that compressed air is properly conditioned for cooling while simultaneously reducing the energy costs of removing the initial heat load. Clean, dry air leaving the dryer is reheated to maintain low relative humidity in the process air, further protecting the compressed air system.

4 CENTRIFUGAL AIR/MOISTURE SEPARATOR efficiently and effectively removes moisture for all applications even under partial load conditions.



REFRIGERATION SYSTEM employs a reliable, time-proven hermetic reciprocating compressor.

THERMAL MASS COOLING SYSTEM circulates the thermal mass fluid to provide a continuous cold medium for heat transfer.

COMPRESSED AIR SIDE SYSTEM pre-cools the inlet air, chills the air to 38°F/3°C, removes moisture through the centrifugal separator and is re-heated for process use.

International Air Quality Class Standards

ISO 8573-1, the international standard for compressed air quality, defines the amount of contamination permissible in compressed air.

The ISO standard identifies three primary forms of contamination in compressed air systems: solid particles, water and oil. These contaminants are classified and assigned a quality class, ranging from Class 0, the highest purity level, to Class 6, the most relaxed.

XCCYA Series refrigerated air dryers offer the perfect balance between technology and simplicity to dry compressed air systems to ISO 8573-1 Air Quality Class 4-5 pressure dew points.

Standard Pre-Filtration

Included XC Series GP grade filtration removes solid and oil contaminants from the air stream before entering the dryer.*

ISO Air Quality Class:

- Solids – Class 2
- Remaining oil – Class 4
- Removes solids 1.0 micron and larger
- Remaining oil content < 2.0 mg/m^3

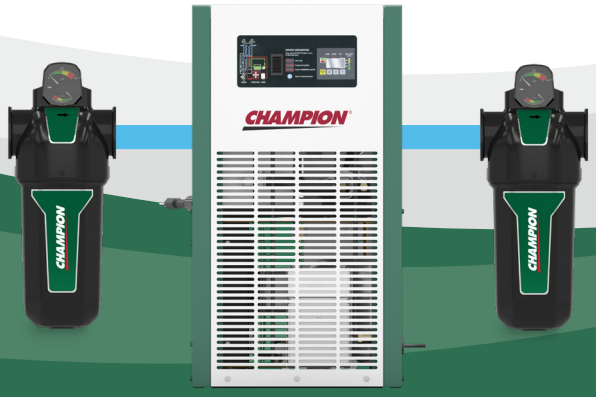
Standard After-Filtration

Included XC Series HE grade filtration provides high efficiency oil removal protecting downstream equipment.*

ISO Air Quality Class:

- Solids – Class 1
- Remaining oil – Class 1
- Removes 99.999+% of solids ≥ 0.01 micron
- Remaining oil content < 0.01 mg/m^3

300+ scfm



10–250 scfm

Integrated Filter Design Reduces Installation Costs & Simplifies Maintenance

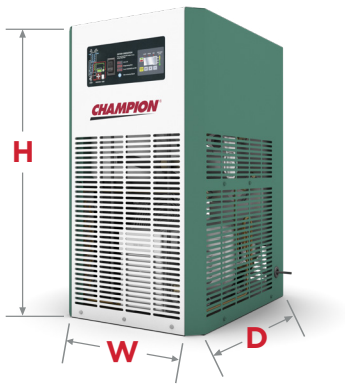
The dryer's built-in filters eliminate the need for separate housings, reducing installation complexity and cost. Filter elements are easily accessible from the side of the unit—no need to remove panels or disturb existing pipework.

*Filters ship loose for 10–250 scfm, and are integrated on 300 scfm and up.

XCCYA SERIES | CYCLING REFRIGERATED DRYER SPECIFICATIONS

MODEL*	INLET FLOW		PRESSURE DROP	VOLTAGE**	IN/OUT CONNEC-TIONS	POWER CONSUMP-TION	REFRIG-ERANT	DIMENSIONS H × W × D		WEIGHT	
	SCFM	NM^3/H	PSI			KW		INCHES	MM	LBS	KG
XCCYA10	10	17	0.46	115/1/60	½" FNPT	0.35	R-513A	26.5 × 15.2 × 19.7	673 × 386 × 500	130	59
XCCYA18	18	31	0.8	115/1/60	½" FNPT	0.43	R-513A	26.5 × 15.2 × 19.7	673 × 386 × 500	130	59
XCCYA25	25	42	1.22	115/1/60	½" FNPT	0.45	R-513A	26.5 × 15.2 × 19.7	673 × 386 × 500	135	61
XCCYA35	35	60	2.1	115/1/60	½" FNPT	0.53	R-513A	26.5 × 15.2 × 19.7	673 × 386 × 500	140	65
XCCYA50	50	85	0.77	115/1/60	¾" FNPT	0.68	R-513A	26.5 × 15.2 × 19.7	673 × 386 × 500	145	66
XCCYA75	75	128	1.38	115/1/60	1" FNPT	0.94	R-513A	30.4 × 16.6 × 22.4	772 × 422 × 569	175	80
XCCYA100	100	170	2.36	115/1/60	1" FNPT	0.98	R-513A	30.4 × 16.6 × 22.4	772 × 422 × 569	180	82
XCCYA125	125	213	3.56	115/1/60	1" FNPT	1.1	R-513A	30.4 × 16.6 × 22.4	772 × 422 × 569	185	84
XCCYA150	150	255	1.8	115/1/60	1½" FNPT	1.25	R-513A	37.5 × 19.66 × 30.25	953 × 499 × 768	263	119
XCCYA200	200	340	1.9	460/3/60	1½" MNPT	1.9	R-513A	49.25 × 22.91 × 32.52	1251 × 582 × 826	490	222
XCCYA250	250	425	2.1	460/3/60	1½" MNPT	2.1	R-513A	49.25 × 22.91 × 32.52	1251 × 582 × 826	490	222
XCCYA300A XCCYA300W	300	510	1.9	460/3/60	2" MNPT	2.4	R-513A	34.0 × 49.2 × 55.6 34.0 × 49.2 × 48.1	864 × 1250 × 1413 864 × 1250 × 1222	875 815	397 370
XCCYA400A XCCYA400W	400	680	2.7	460/3/60	2" MNPT	3 1.9	R-513A	34.0 × 49.2 × 55.6 34.0 × 49.2 × 48.1	864 × 1250 × 1414 864 × 1250 × 1222	895 840	406 381
XCCYA500A XCCYA500W	500	850	1	460/3/60	3" MNPT	2.7 2.2	R-513A	41.4 × 57.5 × 59.8 41.4 × 57.5 × 53.4	1052 × 1461 × 1519 1052 × 1461 × 1357	1341 1299	608 589
XCCYA600A XCCYA600W	600	1020	1.1	460/3/60	3" MNPT	2.9 2.6	R-513A	41.4 × 57.5 × 59.8 41.4 × 57.5 × 53.4	1052 × 1461 × 1520 1052 × 1461 × 1357	1366 1325	620 601
XCCYA700A XCCYA700W	700	1190	1.7	460/3/60	3" MNPT 3" MNPT	4.4 1.7	R-513A	41.4 × 57.5 × 59.8 41.4 × 57.5 × 53.4	1052 × 1461 × 1519 1052 × 14615 × 1357	1391 1349	631 612
XCCYA800A XCCYA800W	800	1360	2.2	460/3/60	3" MNPT	4.8 2.2	R-513A	41.4 × 57.5 × 59.8 41.4 × 57.5 × 53.4	1052 × 1461 × 1519 1052 × 1461 × 1357	1416 1376	643 625

Performance data presented in accordance with ISO 7183 (Option A2) conditions: 100°F inlet temperature, 100°F ambient temperature and 100 psig conditions.
Overall dimensions include base, threaded conn., elec enclosure protrusions.
*"A" at the end of the model number denotes air-cooled and "W" denotes water-cooled models.
**See price book for available voltages.



Premium Warranty†

1 Year—Standard

4 Years—Extended

5 Years—Total

†Parts and labor included. Contact your local distributor for more details.

Champion is committed to delivering superior products built with the exceptional standards you expect.

CHAMPION®

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QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001

MEMBER OF 100 YEARS OF INDUSTRY LEADERSHIP CAGI Compressed Air & Gas Institute www.cagi.org

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Please recycle after use.