ZEKS
COMPRESSED AIR SOLUTIONS®

HSGM Series
3,600-24,000 SCFM

ZEKS
Next Generation Design

MultiPlex™

Cycling Refrigerated Dryers
For Large Capacity Compressed Air Systems

- *Energy-Saving Cycling Operation*
- *Operational Redundancy Assures Continuous Air Treatment*
- *Environmentally-Friendly*

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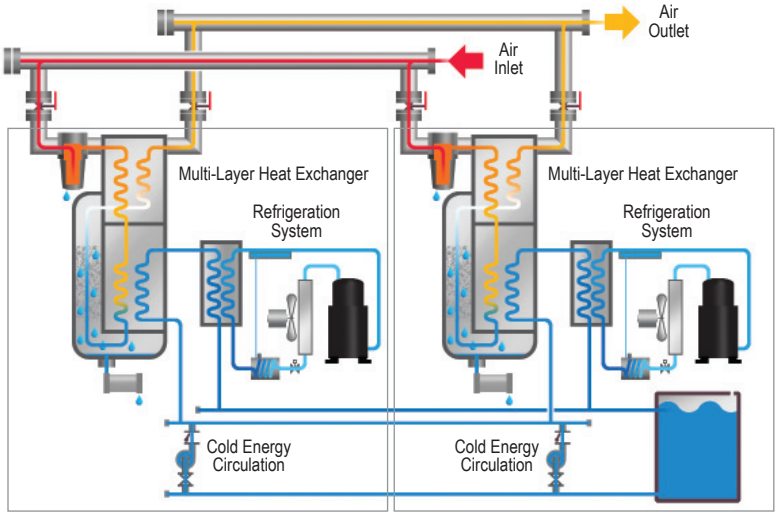
True-Cycling™ – The ZEKS Advantage

Common manufacturing practices, process machinery cycling, and changing production requirements result in uneven compressed air volume use. This, combined with lower ambient and inlet air temperatures, results in a variable, reduced load on a compressed air dryer. ZEKS pioneered the thermal mass refrigerated dryer design and True-Cycling™ operation that efficiently stores cold energy. This is what allows the refrigeration compressors in MultiPlex™ dryers to cycle off during periods of reduced load while the dryer maintains the capacity to remove moisture and contaminants from the air stream. When compared to non-cycling dryers, MultiPlex™ dryers provide significant energy savings - as high as 80%!

Eliminate The Need For Multiple Dryers

A MultiPlex™ dryer is an assembly of multiple air treatment modules, each with a cycling refrigeration system, multi-layer heat exchanger and no air-loss drain system. A microprocessor Sequencer is utilized to monitor individual module performance while commanding overall operation of the dryer to optimize performance and reliability. This modular approach provides inherent redundancy of critical dryer components.



Two-module configuration depicted.

Designed For Continuous Duty

Each module is equipped with the means to isolate various systems within the dryer. Individual electrical disconnects permit module electrical components to be serviced while the standard air and water isolation valves and pump isolation valves allow servicing of critical dryer components, all while the balance of the dryer remains on-line.

Consistent Dew Point

The unique MultiPlex™ design enables users to maintain dryer operation even when one of the independent modules is taken off-line for service or maintenance. Properly sized, the dryer outlet pressure dew point will not be compromised if a single module is de-energized.

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6,000 SCFM unit shown configured with air-cooled, microchannel refrigeration condensers. Side panels have been removed, revealing accessibility of serviceable parts.

Balanced Operation - MultiPlex™ design includes a microprocessor Sequencer that's configured with a proprietary program that monitors the refrigerant compressor operating hours of each module, adjusting the chiller temperature set-points as needed to achieve uniform operating hours for each module. Additionally, the Sequencer permits:

- Remote operation via a field supplied remote contact.
- Remote monitoring for the operating parameters of each module and inlet/outlet compressed air conditions.
- Modbus communications via a RS485 central communications port. Ethernet option available.

Next Generation Design

1. **Multi-Layer Heat Exchangers** – Proprietary design integrates Precooler/Reheater, Chiller, Evaporator and Moisture Separator for maximum efficiency.
2. **High Efficiency Refrigeration Condensers** – Microchannel air-cooled condensers allow increased heat rejection in a smaller footprint; top-mounted water-cooled condensers simplify installation and serviceability.
3. **Optimized Air Circuit** – Precooler / Reheater assemblies are oversized to reduce air temperature entering chillers, saving energy.
4. **Digital Controller** – Microprocessor controller controls all dryer module functions with an easy-to-view backlit LCD display.

5. **Scroll Compressors** – Provide quiet, balanced, reliable operation.

   R-410A Refrigerant – Features zero ODP and low GDP. Minimal refrigerant charge enhances reliability and sustainability.
6. **No Air-Loss Condensate Drains** – Pneumatically operated demand drains feature a large discharge port that resists clogging. Liquid level sensor communicates fault condition via module controller.
7. **Integrated Filtration** – Dual-element filter removes particles as small as .1 micron from the airstream.
8. **Versatile and Expandable** – MultiPlex™ modules share a single INLET and a single OUTLET air header, each with dual connection capability. This permits connection to either side of the dryer to suit site conditions.

   In addition, MultiPlex™ dryers are engineered to address the ever-changing manufacturing environment. Because header center line position is common among all MultiPlex™ models, planned increase in air treatment capacity can be accommodated through addition of modules.

MultiPlex™

Cycling Refrigerated Dryers
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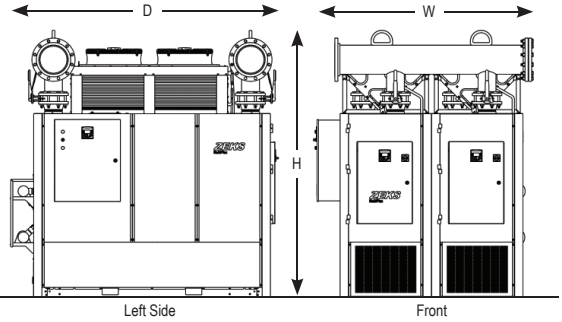
Standard Features

- **Multi-Layer Heat Exchanger** - Proprietary design; Enhanced Precooler/Reheater; Low pressure drop
- **Advanced Digital Control** - Automatic dryer control; Drain setting; Performance and fault display
- **Master Sequencer** - Balances operation of each Module; Modbus-ready
- **Scroll Compressors** - Maintenance-free; Long service life
- **Internal Filtration** (each Module) - Assures high quality air
- **R410A Refrigerant** - Highly efficient; Small charge volume; Environmentally friendly
- **Efficient Refrigeration Condenser** - Air- or water-cooled; Top-Mounted
- **No Air-Loss Condensate Drains** (each Module) - Reliable condensate removal
- **Single Point Electrical Connection** - Simplifies service connection
- **Single Air Inlet/Outlet Connection Points** - Left or right configuration

Optional Features

- **NEMA 4 Electrical Protection Class** - Provides protection against splashing and hose-directed water
- **Removable Head Condensers** - Permit cleaning of the condensers in applications where water has high concentrations of silt or particulate. Top-mounted for convenient access.
- **Remote Air-Cooled Condenser** - Allows installation flexibility
- **Ethernet** - Remote communications; Other communication protocols available



Technical Specifications

Model	Capacity SCFM*	Number Of Modules	Pressure Drop PSIG	Dimensions** W IN.	D IN.	H IN.	SHIP WT. LBS.	IN/OUT Air Conn. FLG	Drain Conn. FNPT (Qty.)	Operating KW*** AC	WC	REFRIG. TYPE	MAXIMUM WORKING PRESSURE	VOLTAGE
3600HSGM	3,600	2	4.1	81.46	99.42	97.84	5,581	8" FLG	1/2" (2)	10.2	13.2	R410A	200 PSIG	460/3/60
4800HSGM	4,800	2	4.1	81.46	99.42	95.72	5,948	8" FLG	1/2" (2)	26.0	16.6	R410A	200 PSIG	460/3/60
6000HSGM	6,000	2	4.1	81.53	99.42	98.89	6,502	10" FLG	1/2" (2)	29.4	20.4	R410A	200 PSIG	460/3/60
7200HSGM	7,200	3	4.1	115.6	99.42	103.93	8,793	10" FLG	1/2" (3)	39.0	24.9	R410A	200 PSIG	460/3/60
9000HSGM	9,000	3	4.1	115.1	99.42	104.94	10,349	12" FLG	1/2" (3)	44.1	30.6	R410A	200 PSIG	460/3/60
12000HSGM	12,000	4	4.1	149.98	99.42	105.53	14,382	14" FLG	1/2" (4)	58.8	40.8	R410A	200 PSIG	460/3/60
15000HSGM	15,000	5	4.1	180.14	99.42	105.53	17,019	14" FLG	1/2" (5)	73.5	51.0	R410A	200 PSIG	460/3/60
18000HSGM	18,000	6	4.1	217.98	99.42	106.53	19,605	16" FLG	1/2" (6)	88.2	61.2	R410A	200 PSIG	460/3/60
21000HSGM	21,000	7	4.1	252.0	100.75	106.53	23,381	16" FLG	1/2" (7)	102.9	71.4	R410A	200 PSIG	460/3/60
24000HSGM	24,000	8	4.1	286.0	100.75	106.53	26,963	16" FLG	1/2" (8)	117.6	81.6	R410A	200 PSIG	460/3/60

* Performance based on ISO 7183, Table 2, Option A2. (100 PSIG Inlet Air Pressure; 100ºF Inlet Air Temperature; 100ºF Ambient Air Temperature; 100% Relative Humidity)
** Overall Dimensions shown.
*** Average kilowatts per hour of dryer operation at full rated capacity. AC = Air-Cooled; WC = Water-Cooled
Air INLET and OUTLET centerline remains consistent throughout the MultiPlex™ model range.
NEMA 1 Electrical Protection Class is standard.

MEMBER OF CAGI Compressed Air & Gas Institute

ZEKS MultiPlex™ compressed air dryers are not designed, intended or approved for breathing air applications.

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