GEM Equipments (P) Ltd.

GEM

Since 1984

Compressed Air & Cooling Systems

Refrigeration Air Dryers

2KD+ Series

WARRANTY 2 year

ECO FRIENDLY

ISO 9001 REGISTERED
DNV
MGMT. SYS.
RvA C 024
DNV Certification B.V., The Netherlands

Capacity : 20 - 2500 cfm • Working Pressure : 7 - 16 bar g • Package Power : 0.15 - 11 kW

Product Features

UNIQUE 7*X* HEAT EXCHANGER WITH MOISTURE SEPARATOR

Our 7*X* Heat Exchanger is the combination of Pre cooler, Evaporator and built in Stainless Steel demister moisture separator.

Pre cooler (air to air heat exchanger) and evaporator (air to refrigerant heat exchanger) are cross flow type with more cross sectional area for flow to make it non-clogging. Heat exchanger is designed to have better turbulance & maximised heat transfer rate.

Lesser difference in temperature between Inlet Air & Outlet Air ensures better effectiveness. Piping is completely eliminated and the air passage is non-ferrous.

The heat exchanger assembly is encapsulated by PUF Insulation (Eco friendly) to prevent the loss of cooling effect.

SPECIAL FEATURES OF 7X HEAT EXCHANGER

- High efficiency
- Corrosion resistance
- Lesser weight
- Compact in size
- Ease of access to inlet and outlet
- Use friendly
- Less maintenance

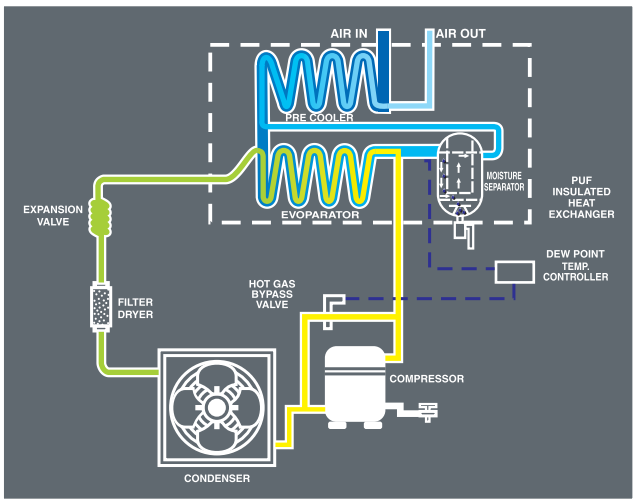
DEPENDABLE AUTOMATIC CONDENSATE DRAIN WITH THE FOLLOWING FEATURES:

Adjustable electronic timer controlled: Pilot operated / direct: compressed air powered Auto drain valve.

Positive discharge of even heavily contaminated condensate.

- » Compact Design
- » Low Pressure Drop
- » Consistent Dew Point
- » Power Saving
- » High Quality Finishing
- » Non-cyclic System
- » More Reliability
- » Ease of Installation
- » Environment Friendly
- » Reduced Maintenance

Schematic Diagram



NON-CYCLIC REFRIGERATION SYSTEM:

HOT GAS BY-PASS Value automatically maintains dew point temperature across a wide range of load and ambient conditions without the need for any adjustments.

High pressure, high temperature refrigerant vapour is introduced after the expansion value to ensure temperature control.

Direct expansion, non-cycling allows rapid response to changes in operating conditions.

EASE OF INSTALLATION:

All dryers are shipped pre-piped and wired, ready to install and operate. Installation is made easy with conveniently located Air and Drain connections.

ELECTRICAL:

In accordance with applicable codes with professional harnessing & wires as per IS : 694 -1990. Compressors for larger capacity dryers are protected with overloads and safety trips.

ENVIRONMENTAL:

GEM DRYERS are designed to have **low energy usage**, helping to conserve the Earth's Resources and minimize pollution. Refrigerants are with zero ozone depletion factor, and thereby making GEM dryers' **'OZONE FRIENDLY'**.

SERVICE

GEM DRYERS are designed to require little maintenance. Should service be necessary, a team of trained technicians is available to answer your questions about installation, operation and maintenance or repair. A complete inventory of spare parts is maintained at the factory and channel partners & local service providers located all over India.

TECHNICAL SPECIFICATION:

Base Model	Model Variance			Nominal Capacity ●		Maximum. Pressure ■		Electrical Connection		Air Connection	Rated Power ★ kW	
	B	E	F	cfm	m³/h	bar g	psi g	220V/ 1Ø/50Hz	415V/ 3Ø/50Hz	In / Out	Air Cooled	Water Cooled
2KD+ 002	✓			20	34	16	232	✓		½"BSP(F)	0.15	
2KD+ 004	✓			40	68	16	232	✓		½"BSP(F)	0.20	
2KD+ 006	✓			60	102	16	232	✓		1"BSP(F)	0.40	
2KD+ 008	✓			80	136	16	232	✓		1"BSP(F)	0.50	
2KD+ 010	✓			100	170	16	232	✓		1"BSP(F)	0.60	
2KD+ 015	✓			150	255	16	232		✓	1½"BSP(F)	0.90	
2KD+ 020	✓			200	340	16	232		✓	1½"BSP(F)	1.20	
2KD+ 025	✓			250	425	16	232		✓	2"BSP(F)	1.40	
2KD+ 030	✓			300	510	16	232		✓	2"BSP(F)	1.60	
2KD+ 040	✓			400	680	16	232		✓	2"BSP(F)	1.90	
2KD+ 050	✓			500	850	16	232		✓	2"BSP(F)	2.30	
2KD+ 060	✓			600	1020	16	232		✓	2"BSP(F)	2.80	
2KD+ 075		✓	✓	750	1275	16	232		✓	3"NB ASME Flg	3.80	3.00
2KD+ 100		✓	✓	1000	1700	16	232		✓	3"NB ASME Flg	5.0	4.10
2KD+ 125		✓	✓	1250	2125	16	232		✓	4"NB ASME Flg	5.70	4.80
2KD+ 150		✓	✓	1500	2550	12.5	180		✓	5"NB ASME Flg	6.80	6.20
2KD+ 200		✓	✓	2000	3400	12.5	180		✓	6"NB ASME Flg	8.70	8.00
2KD+ 250		✓	✓	2500	4100	12.5	180		✓	6"NB ASME Flg	11.00	9.60

- ● Flow capacities in accordance with ISO 7183, air suction of FAD 20°C (68°F), 1 bar (14.5 psi) at the operating conditions mentioned below
- ■ Voltage range **200 to 240V** for 1ø & **380 - 440V** for 3ø. Any other voltage may affect durability of product.
- ★ Rated power is the max power consumed at conditions as per ISO 7183 Option 2

NOTE: Models upto 600 cfm are with Reciprocating type refrigeration compressors. Scroll type compressors / Reciprocating type compressors for models from 750 cfm and above

Model Nomenclature :

2KD+ (Product Series) x x x (Capacity in cfm x 10) x

- B - Air Cooled, R134a Refrigerant
- E - Air Cooled, R407c Refrigerant
- F - Water Cooled, R407c Refrigerant

SIZING CONVERSION FACTORS:

Operating condition

		Rated / Ideal	Maximum
Inlet Temperature	:	45° C	60° C
Ambient Temperature	:	40° C	50° C
Inlet Pressure	:	7 bar (g)	16 bar (g)
Pressure Dew Point	:	3° C	

$$\text{Dryer Nominal Capacity} = \frac{\text{Compressor Actual Capacity}}{C_1 \times C_2 \times C_3 \times C_4}$$

Inlet Temperature : (C1)

Inlet Temperature, °C	30	35	40	45	50	55	60
Conversion Factor	1.2	1.15	1.05	1.0	0.85	0.8	0.7

Inlet Pressure : (C3)

Inlet Pressure	bar g	4	5	6	7	8	9	10.5	11	12.5	13	14	15	16
	psi g	58	73	87	100	116	131	150	160	180	189	200	218	232
Conversion Factor		0.75	0.85	0.95	1.00	1.06	1.11	1.15	1.18	1.20	1.22	1.23	1.25	1.28

Ambient Temperature : (C2)

Ambient Temperature, °C	25	30	35	40	45	50
Conversion Factor	1.2	1.14	1.1	1.0	0.9	0.8

Pressure Dew Point (C4)

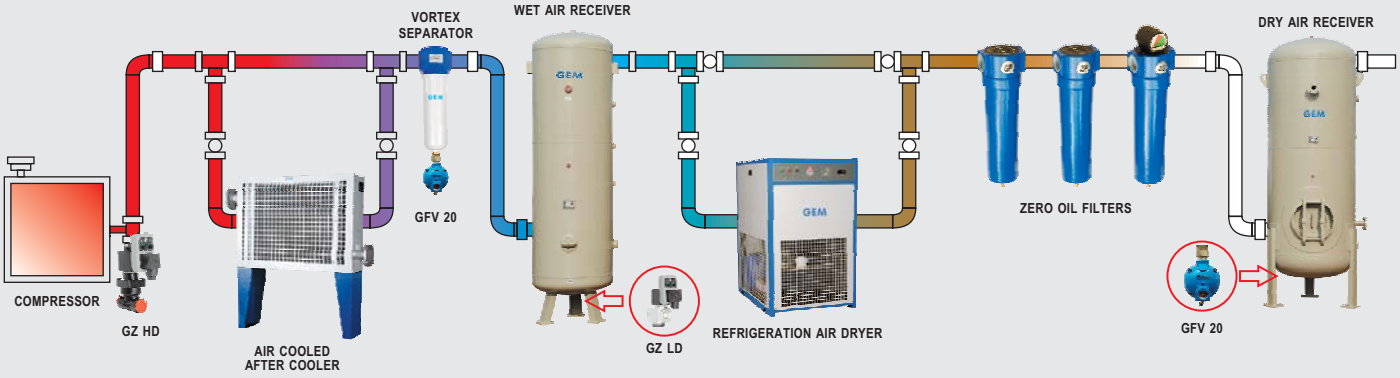
Pressure Dew Point, °C	3	7	10
Conversion Factor	1.0	1.15	1.3

Illustrations / Specifications are subject to change due to constant upgradation of products.

SHIPPING DATA

Base Model	Machine Dimensions, mm			Net Weight, kg
	Length A	Width B	Height C	
2KD+ 002	360	500	500	45
2KD+ 004	360	500	500	47
2KD+ 006	450	600	695	80
2KD+ 008	450	600	695	85
2KD+ 010	700	700	920	120
2KD+ 015	700	700	920	130
2KD+ 020	700	700	920	140
2KD+ 025	900	900	1230	160
2KD+ 030	900	900	1230	160
2KD+ 040	750	1000	1400	180
2KD+ 050	750	1000	1400	225
2KD+ 060	750	1000	1400	250
2KD+ 075	900	1300	1625	300
2KD+ 100	900	1300	1625	350
2KD+ 125	900	1200	1725	425
2KD+ 150	1300	1800	1650	650
2KD+ 200	1300	1800	1900	800
2KD+ 250	1300	1800	1900	850

TYPICAL INSTALLATION



TYPICAL APPLICATION

Automobile Industry
Chemical Industry
Electronics Industry
Food & Beverage Industry
Footwear Industry
Glass Industry
Leather Industry
Pharmaceutical Industry
Textile Industry

Cement Plants
Distilleries / Breweries
General Instrumentation & Plant Air
Health Care / Hospitals
Lacquering or Spray Painting
Paper Mills
PET - Stretch Blow Moulding
Power Plants
Printing
Rice Mills
Sand Blasting
Spinning / Knitting / Hosiery Mills
Sugar Mills
Tea Gardens
and many more

SALES & CUSTOMER CARE

Head Office
Coimbatore

Regional Offices
Chennai
Mumbai
Delhi
Pune

Channel Associates
Ahmedabad
Aurangabad
Bengaluru
Bhopal
Chandigarh
Cuttack
Delhi
Hyderabad
Jamshedpur
Lucknow
Madurai
Nagpur
Nasik
Pune
Rajkot
Sangli
Sivasagar
Surat
Vadodara
Visakhapatnam

F/MKT/024/05

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