



High Performance,  
reliable and trouble free  
compressed air treatment  
from SMC.

## Refrigerated Air Dryer Series IDFA

### The importance of dry air in machines and systems:

Excellent operational performance with high quality productivity and increased machine reliability are probably the three most requested attributes that modern machinery and systems using pneumatic components must meet today.

However, water contained in compressed air systems (CAS) is the leading enemy in achieving this goal. When water forms in a CAS, not only does it reduce the overall working life of the machine, it also affects the reliability of its pneumatic equipment. By installing a good quality air dryer in your CAS it effectively removes the build-up of water bringing improved performance and productivity.

# Refrigerated Air Dryer - Series IDFA

**Gain the competitive advantage by installing a good quality air dryer in your CAS:**

Our Series IDFA range of air dryers will make you more competitive because the:

High quality materials used in the IDFA's component parts guarantees the highest levels of operational reliability in your machine - unlike similar looking products on the market, the IDFA's internal heat exchanger is made of stainless steel thereby preventing the formation of rust

Design of our IDFA range ensures stable outlet-dew point performance with a minimum pressure drop across the dryer, helping to improve the efficiency of your machine

Compact size and the subsequent reduction in overall weight of our IDFA range, will help to make your machines smaller, easy to handle and more attractive

**The benefits of a global one-stop-shop for all your dryer and pneumatic needs:**

As the world's leading experts in pneumatics, with sales offices in over 78 countries around the world, we can provide you with the highest levels of technical and service support.

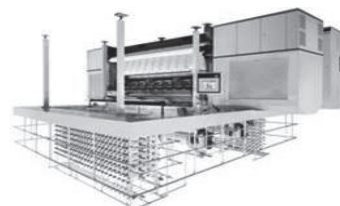
No matter where you're located, our experts are on-hand to help you.

**We call it our "working closely approach", to help provide you with complete peace of mind and total customer satisfaction.**

**The Benefits:**

- State of the art design ensures a constant 3°C pressure dew point.
- High efficiency heat exchanger.
- Environmentally ozone friendly R134a and R407C refrigerant.
- Conforms to stringent ISO8573-1 standards.
- Simple control system, incorporating an easy to read evaporator gauge.
- Stainless steel heat exchanger providing long life and low pressure drops.
- Compact design for ease of installation.

Industry	Application	Benefits from using a IDFA dryer
Life science	Lens polishing machines	Good lens quality
Life science	Dental equipment	Optimal maintenance of the tools
Life science	Pharmaceutical production	Integrity and stability of the drugs during production
Food, life science, general	Ozone generators for cleaning and disinfection	Ozone generation in a greater proportion
Food, machinery	Food production and packaging machines	High quality, fine looking food products
Process, food	Stirring (cement and food processing equipment)	Clogging of the hopper avoided
Process	Industrial chemicals production	Integrity and stability of the chemicals during production
Machinery	Textile machines	Optimal maintenance of the equipment
Machinery	3D measuring equipment, metrology machines, CMM machines	Optimal maintenance of the equipment
Printing	Printing machines	Optimal maintenance of the equipment
Machinery	Drilling machine/machining centre	Optimal maintenance of the equipment
Machinery	Sandblasting	Formation of sand clusters clogging the equipment is avoided
Car, general	Painting equipment	Paint is not repelled
General	Cooling	Overheating is prevented
General	Pneumatic tools	Optimal maintenance of the tools



Textile machines



Ozone generators



Packaging machines



Lens polishing machines



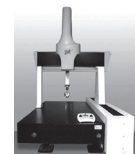
Pneumatic tools



Painting equipment



Printing machines



3D Measuring equipment

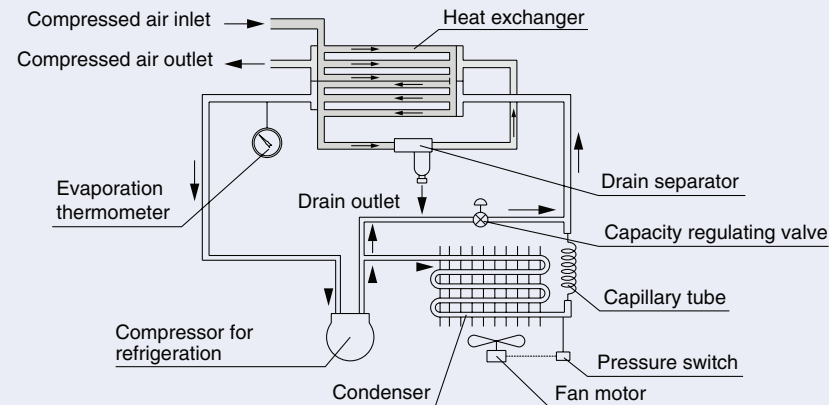
**Standard Specifications**

Model	Operating range			Power supply voltage	Power consumption (W)	Air port connections	Refrigerant	Weight (kg)	Nominal Air Flow Rate [m³/h (ANR)]			
	Inlet air pressure (bar)	Inlet air temperature (°C)	Ambient temperature (°C)						4 (3°C PDP)	5 (7°C PDP)	6 (10°C PDP)	
IDFA3E-23	1.5 to 10	5 to 50	2 to 40 (Relative humidity of 85% or less)	Single Phase 230 VAC 50Hz	180	Rc 3/8	R134a	18	12	15	17	
IDFA4E-23-LR								Rc1/2	22	24	31	34
IDFA6E-23-LR								Rc 3/4	23	36	46	50
IDFA8E-23-LR					760	R 1		27	65	83	91	
IDFA11E-23-LR								R 1 1/2	28	80	101	112
IDFA15E-23-LR									46	120	152	168
IDFA22E-23-LR								R 2	54	182	231	254
IDFA37E-23-LR					62	273			347	382		
IDFA55E-23-LR					100	390			432	510		
IDFA75E-23-LR					1130	1700		116	660	720	822	

Note 1) The standard condition (ANR) is under the conditions of 20°C at atmospheric pressure and relative humidity of 65%.  
 Note 2) The performance data for pressure dew point is in accordance with the following operating conditions from ISO 7183: Inlet air pressure: 7 bar; Inlet air temperature: 35°C (saturated); Cooling air temperature: 25°C

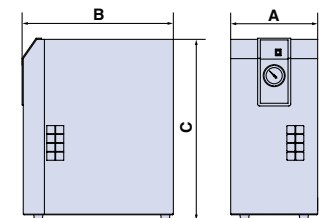
**Operation Principle**

Saturated compressed air enters the air-to-air heat exchanger, the incoming air is then pre-cooled by the cold air exiting the dryer. The air then passes through the evaporator, where it is further cooled, to a 3°C dew point. As the air cools, the water condenses from a vapour to a liquid which is removed by the automatic drain. The dry air is then passed back through the air-to-air heat exchanger where it is reheated before leaving the dryer.



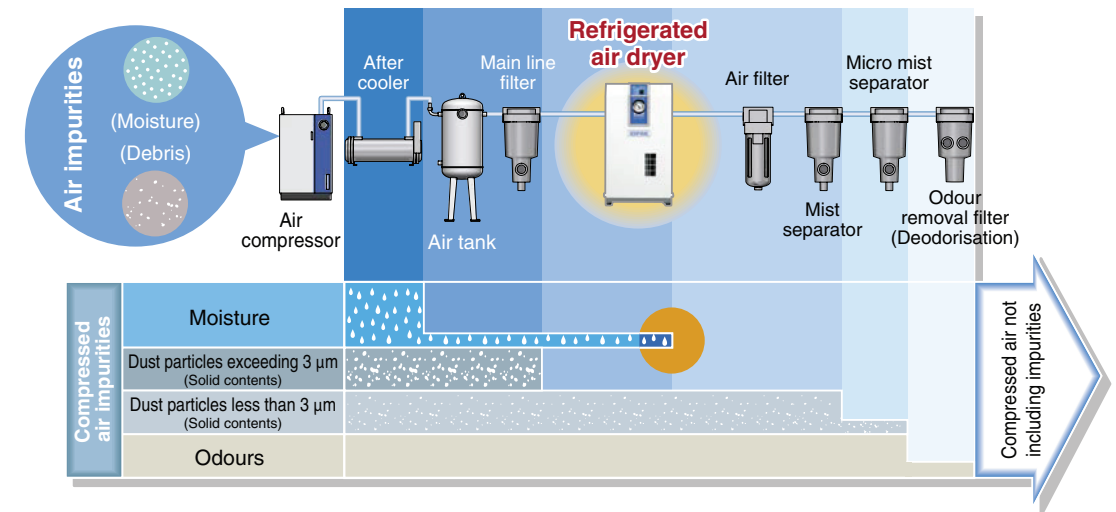
**Dimensions (mm)**

Model	A	B	C
IDFA3E-23	226	410	473
IDFA4E-23-LR	270	453	498
IDFA6E-23-LR		455	
IDFA8E-23-LR		485	568
IDFA11E-23-LR	300	603	578
IDFA15E-23-LR	290	775	623
IDFA22E-23-LR			
IDFA37E-23-LR	470	855	800
IDFA55E-23-LR			900
IDFA75E-23-LR			



**Air purification system. Significance of a dryer**

Compressed air includes foreign objects such as moisture (water vapour, water droplets), oil and debris. Water droplets, oil and debris can be removed by using air filters, mist separators, etc., but it is necessary to eliminate moisture by using a dryer.



## Related products

### Membrane air dryer: Series IDG



Dehumidification

Series	Atmospheric pressure dew point (C)	Outlet flow rate l/min (ANR)	Port size
<b>IDG</b>	-15, -20, -40, -60	10 to 1000	1/8 to 1/2

### Water separator: Series AMG



Removal of water droplets

Series	Air flow rate l/min (ANR)	Port size
<b>AMG</b>	300 to 12000	1/8 to 2

### Main line filter: Series AFF



Separation and filtration of particles

Series	Nominal filtration degree (µm)	Rated flow l/min (ANR)	Port size
<b>AFF</b>	3 (95% filtered particle size)	300 to 12000	1/8 to 2

### Mist separator: Series AM



Separation and filtration of oil mists

Series	Nominal filtration degree (µm)	Rated flow l/min (ANR)	Port size
<b>AM</b>	0.3 (95% filtered particle size)	300 to 12000	1/8 to 2

### Micro mist separator: Series AMD



Separation and filtration of particles

Series	Nominal filtration degree (µm)	Rated flow l/min (ANR)	Port size
<b>AMD</b>	0.01 (95% filtered particle size)	200 to 12000	1/8 to 2

### Micro mist separator with pre-filter: Series AMH



Separation and filtration of oil mists

Series	Nominal filtration degree (µm)	Rated flow l/min (ANR)	Port size
<b>AMH</b>	0.01 (95% filtered particle size)	200 to 12000	1/8 to 2

### Super mist separator: Series AME



Absorption and filtration of oil mists

Series	Nominal filtration degree (µm)	Rated flow l/min (ANR)	Port size
<b>AME</b>	0.01 (95% filtered particle size)	200 to 12000	1/8 to 2

### Odour removal filter: Series AMF



Deodorisation

Series	Nominal filtration degree (µm)	Rated flow l/min (ANR)	Port size
<b>AMF</b>	0.01 (95% filtered particle size)	200 to 12000	1/8 to 2

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