

# Refrigerated Air Dryer

## IDFA□E/F Series

For use in Europe, Asia and Oceania

### Standard/IDFA□E Series

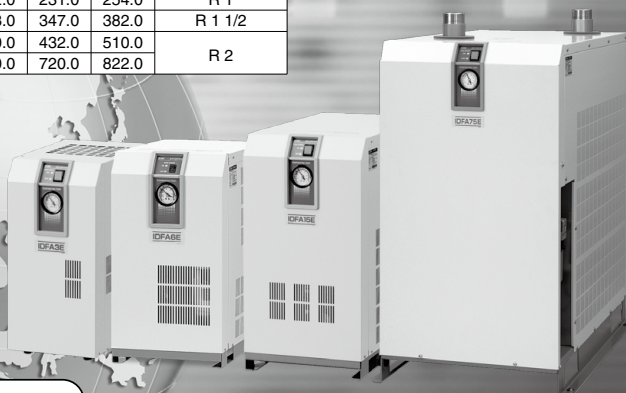
●Power supply voltage: Single-phase 230 VAC (50Hz)

Model	Rated inlet condition	Air flow capacity (m³/h [ANR])			Port size
		Outlet air pressure dew point			
		3°C	7°C	10°C	
IDFA3E	35°C 0.7 MPa	12.0	15.0	17.0	Rc 3/8
IDFA4E		24.0	31.0	34.0	Rc 1/2
IDFA6E		36.0	46.0	50.0	Rc 3/4
IDFA8E		65.0	83.0	91.0	
IDFA11E		80.0	101.0	112.0	
IDFA15E1		120.0	152.0	168.0	Rc 1
IDFA22E		182.0	231.0	254.0	R 1
IDFA37E		273.0	347.0	382.0	R 1 1/2
IDFA55E		390.0	432.0	510.0	R 2
IDFA75E	660.0	720.0	822.0		

Refrigerant **R134a(HFC)**  
**R407C(HFC)**

Coefficient of destruction for ozone is zero.

Improved corrosion resistance with the use of stainless steel, plate type heat exchanger (IDFA4E to 75E, 100F to 150F)



### Large size/IDFA□F Series

●Power supply voltage: Three-phase 380 VAC (50Hz) For Asia and Oceania  
Three-phase 400 VAC (50Hz) For Europe

Tolerant of high temperature environment!  
Top of its class in the industry for the large air-cooled type  
Ambient temperature 45°C at max.  
Inlet air temperature 60°C at max.

Energy saving design  
Exhaust heat reduced by 25% at max.  
Ambient temperature increase suppressed.  
Employs a heat exchanger made of high corrosion-resistant stainless steel.

Refrigerant **R407C(HFC)**

Coefficient of destruction for ozone is zero.



Model	Rated inlet condition	Outlet air pressure dew point	Air flow capacity (m³/h [ANR])	Port size
IDFA100F-38	40°C 0.7 MPa	10°C	960	R 2
IDFA125F-38			1210	R 2 1/2
IDFA150F-38			1500	DIN flange 80
IDFA100F-40	35°C 0.7 MPa	3°C	860	R 2
IDFA125F-40			1100	R 2 1/2
IDFA150F-40			1340	DIN flange 80

# Refrigerant R407C (HFC)

## IDFA100F/125F/150F Series

For use in Europe, Asia and Oceania

(Max. inlet air temperature: 60°C, Max. ambient temperature: 45°C)



### How to Order

For use in  
Asia and Oceania

**IDFA 100F - 38 -**

**Size**

Size
100F
125F
150F

**Voltage**

Symbol	Voltage
38	Three-phase 380 VAC (50 Hz)

**Option**

Nil
C
G
K
R
V

Symbol <sup>(Note)</sup>	Description
Nil	None
C	Anti-corrosive treatment for copper tube
G	With Chinese labels and a Chinese operation manual
K	Moderate pressure specification
R	With a circuit breaker
V	With a timer controlled solenoid valve type auto drain

(Note) Enter alphabetically when multiple options are combined.

Example: When the IDFA100F-38 is provided with options C or R or V, the model number will be the IDFA100F-38-CRV.

For use in Europe

**IDFA 100F - 40 -**

**Size**

Size
100F
125F
150F

**Voltage**

Symbol	Voltage
40	Three-phase 400 VAC (50 Hz)

**Option**

Nil
C
G
K
R
V

Symbol <sup>(Note)</sup>	Description
Nil	None
C	Anti-corrosive treatment for copper tube
G	With Chinese labels and a Chinese operation manual
K	Moderate pressure specification (1.6 MPa)
R	With a circuit breaker
V	With a timer controlled solenoid valve type auto drain

(Note) Enter alphabetically when multiple options are combined.

Example: When the IDFA100F-40 is provided with options C or R or V, the model number will be the IDFA100F-40-CRV.

## Standard Specifications



Model		For use in Asia and Oceania			For use in Europe		
Specifications		IDFA100F-38	IDFA125F-38	IDFA150F-38	IDFA100F-40	IDFA125F-40	IDFA150F-40
Operating conditions	Fluid	Compressed air					
	Inlet air temperature °C	5 to 60					
	Inlet air pressure MPa	0.15 to 1.0/0.15 to 1.6 for option K					
	Ambient temperature (humidity) °C	2 to 45 (Relative humidity 85% or less)					
Rated conditions	Air flow capacity m <sup>3</sup> /h	960	1210	1500	860	1100	1340
	Standard condition (ANR) (Note 1) Compressor intake condition (Note 2)	1000	1255	1560	875	1119	1363
Rated conditions	Inlet air pressure MPa	0.7					
	Inlet air temperature °C	40			35		
	Ambient temperature °C	32			25		
	Outlet air pressure dew point °C	10			3		
Electrical specifications	Power supply voltage	Three-phase 380 VAC			Three-phase 400 VAC		
	Power consumption kW	2.8	3.4	3.4	2.5	2.7	2.7
Electrical specifications	Operating current A	5.1	6.3	6.3	4.5	5.3	5.9
	Applicable circuit breaker capacity (Note 4) A	15					
Electrical specifications	Heat discharge from condenser kW	7.5	9	11.5	7	8	10
	Refrigerant	R407C (HFC)					
Electrical specifications	Refrigerant charge kg	1.25	1.36	2.0	1.25	1.36	1.8
	Auto drain	Float type (Normally open) The option V stands for a timer type solenoid valve.					
Electrical specifications	Port size	R2	R2 1/2	DIN flange 80	R2	R2 1/2	DIN flange 80
	Weight kg	245	270	350	245	270	350
Electrical specifications	Coating color	Body panel: White 1 Base: Gray 2					
	Compliant standards	EC Directive compliant (with CE marking)					

Note 1) Air flow capacity under the standard condition (ANR) [atmospheric pressure 20°C, relative humidity 65%]

Note 2) Air flow capacity converted by the compressor intake condition [atmospheric pressure 32°C]

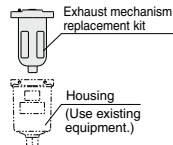
Note 3) The operation range does not guarantee the use with normal air flow capacity. When operating conditions are different from the rated specifications, please select a model in accordance with Model Selection (page 91).

Note 4) Install a circuit breaker with a sensitivity 30 mA.

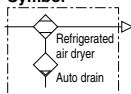
### Replacement Parts

Air dryer model	IDFA100F	IDFA125F	IDFA150F
Heavy duty auto drain replacement part no. (Note 5)	ADH-E400		
Dustproof filter set for condenser	IDF-FL219		IDF-FL220

Note 5) Part number of only the exhaust mechanism replacement kit excluding the housing

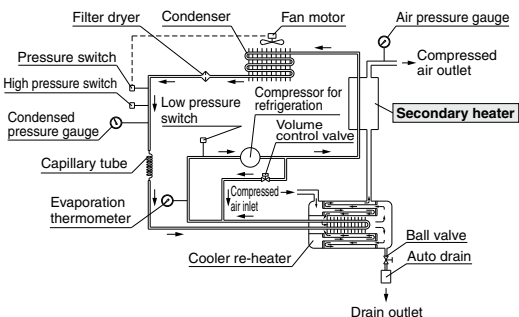


### Symbol



## Construction (Air/Refrigerant Circuit)

### IDFA100F/125F/150F



Hot and humid air entering the air dryer is cooled down by the cooler re-heater (heat exchanger). The moisture which is condensed and separated is automatically exhausted by the auto drain. The air which has had its moisture removed is heated in two stages by the re-heater (heat exchanger) in the cooler re-heater and by the secondary heater, and is supplied to the outlet side as warm and dry air.

### Secondary heater

Compressed air from which drainage has been exhausted exchanges heat with refrigerant which has been compressed by the refrigerator, to give the following effects:

1. The outlet air temperature increases, preventing condensation of the piping on the outlet side.
2. The amount of heat exhausted from the condenser is reduced.
3. Energy saving operation of the dryer is achieved by reducing the amount of heat exhausted from the condenser.