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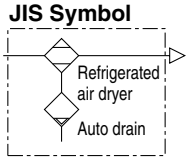
Standard Specifications

JIS Symbol



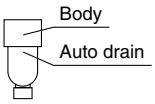
Specifications \ Model				Standard temperature air inlet							
				IDF1E	IDF2E	IDF3E	IDF4E	IDF6E	IDF8E	IDF11E	IDF15E
Operating ranges	Fluid			Compressed air							
	Inlet air temperature (°C)			5 to 50							
	Inlet air pressure (MPa)			0.15 to 1.0							
	Ambient temp. (humidity) (°C)			2 to 40 (Relative humidity of 85% or less)							
Rated conditions Note 3)	Air flow capacity (m^3/min)	Standard condition (ANR) Note 1)	50 Hz	0.10	0.20	0.32	0.52	0.75	1.22	1.65	2.8
			60 Hz	0.12	0.235	0.37	0.57	0.82	1.32	1.82	3.1
		Compressor intake condition Note 2)	50 Hz	0.10	0.21	0.33	0.54	0.78	1.27	1.72	2.9
			60 Hz	0.12	0.24	0.38	0.59	0.85	1.37	1.9	3.2
	Inlet air pressure (MPa)			0.7							
	Inlet air temperature (°C)			35							
	Ambient temperature (°C)			32							
	Outlet air pressure dew point (°C)			10							
Electric specifications	Power supply voltage (frequency) Note 4)			Single-phase: 100 VAC (50 Hz), 100/110 VAC (60 Hz) Note 4) Single-phase: 200 VAC (50 Hz), 200/220 VAC (60 Hz)							
	Power consumption (W) 50/60 Hz	Single-phase 100 V		180/202	180/202	180/202	180/202	180/202	208/236	385/440	540/620
		Single-phase 200 V		—	—						
	Operating current (A) 50/60 Hz	Single-phase 100 V		2.4/2.5	2.4/2.5	2.4/2.5	2.4/2.5	2.4/2.5	3.0/3.1	5.7/5.7	6.1/6.3
		Single-phase 200 V		—	—	1.2/1.3	1.2/1.3	1.2/1.3	1.5/1.5	3.4/3.0	3.8/4.0
Applicable circuit breaker capacity Note 5) (A)				10 (100 VAC), 5 (200 VAC)							10 (100 VAC) 10 (200 VAC)
Condenser				Air-cooled							
Refrigerant				R134a (HFC)							
Auto drain				Float type (Normally closed)	Float type (Normally open)						
Port size				Rc 3/8			Rc 1/2	Rc 3/4			Rc 1
Mass (kg)				16	17	18	22	23	27	28	46
Coating color				Body panel: White 1 Base: Gray 2							
Applicable air compressor output (Reference) For screw type (kW)				0.75	1.5	2.2	3.7	5.5	7.5	11	15

Note 1) Air flow capacity under the standard condition (ANR) [atmospheric pressure at 20°C, relative humidity at 65%]
Note 2) Air flow capacity converted by the compressor intake condition [atmospheric pressure at 32°C]
Note 3) Select air dryer according to "Model Selection" (pages 24 and 25) for the models beyond the rated specifications.
Note 4) When selecting a power supply voltage, refer to "How to Order" on page 26.
Note 5) Install a circuit breaker with a sensitivity of 30 mA.

Replacement Parts

Model	IDF1E	IDF2E	IDF3E	IDF4E	IDF6E	IDF8E	IDF11E	IDF15E
Auto drain replacement parts no. Note 6)	AD37	AD38			AD48			

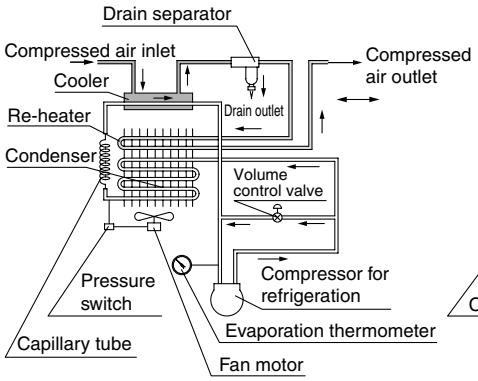
Note 6) The part number for the auto drain components without including the body part.
Body part replacement is impossible.



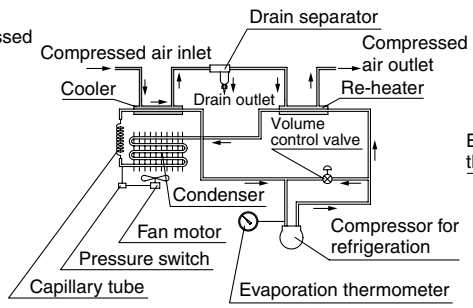
Construction Principle (Air/Refrigerant Circuit)

Humid, hot air coming into the air dryer will be cooled down by a cooler (heat exchanger). Water condensed at this time will be removed from the air by a drain separator (auto drain) and drained out automatically. Air separated from the water will be heated by a re-heater (heat exchanger) to obtain the dried air, which goes through to the outlet side.

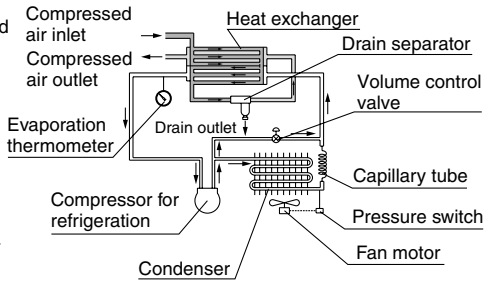
IDF1E



IDF2E, IDF3E



IDF4E, IDF6E
IDF8E, IDF11E, IDF15E



Correction Factors

Data A: Inlet Air Temperature

Series IDF

IDF1E to 37E

Inlet air temp. (°C)	Correction factor
5 to 30	1.3
35	1
40	0.82
45	0.68
50	0.57

IDF55E, 75E, 120D to 240D

Inlet air temp. (°C)	Correction factor
5 to 30	1.35
35	1.25
40	1
45	0.8
50	0.6

IDF370B

Inlet air temp. (°C)	Correction factor
5 to 30	1.25
35	1.00
40	0.83
45	0.70
50	0.60

Series IDU

IDU3E to IDU37E

Inlet air temp. (°C)	Correction factor
5 to 45	1.15
50	1.07
55	1
60	0.95
65	0.9
70	0.86
75	0.82
80	0.79

IDU55E, 75E

Inlet air temp. (°C)	Correction factor
5 to 45	1.21
50	1.10
55	1
60	0.87
65	0.76
70	0.74
75	0.72
80	0.70

Data B: Ambient Temperature

Series IDF

IDF1E to 75E

Ambient temp. (°C)	Correction factor
2 to 25	1.14
30	1.04
32	1
35	0.96
40	0.9

IDF120D to 240D

Ambient temp. (°C)	Correction factor
2 to 25	1.10
30	1.05
32	1
35	0.95
40	0.90

Series IDU

IDU3E to IDU37E

Ambient temp. (°C)	Correction factor
2 to 25	1.2
30	1.04
32	1
35	0.93
40	0.84

IDU55E, 75E

Ambient temp. (°C)	Correction factor
2 to 25	1.25
30	1.11
32	1
35	0.90
40	0.63

Data C: Outlet Air Pressure Dew Point

Series IDF

IDF1E to 75E, 120D to 240D, 370B

Outlet air pressure dew point (°C)	Correction factor
3	0.55
5	0.7
10	1
15	1.3

Series IDU

IDU3E to IDU37E

Outlet air pressure dew point (°C)	Correction factor
3	0.55
5	0.7
10	1
15	1.3

IDU55E, 75E

Outlet air pressure dew point (°C)	Correction factor
3	0.53
5	0.67
10	1
15	1.30

Data D: Inlet Air Pressure

Series IDF

IDF1E to 75E

Inlet air pressure (MPa)	Correction factor
0.2	0.62
0.3	0.72
0.4	0.81
0.5	0.88
0.6	0.95
0.7	1
0.8	1.06
0.9	1.11
1 to 1.6	1.16

IDF120D to 370B

Inlet air pressure (MPa)	Correction factor
0.2	0.68
0.3	0.77
0.4	0.84
0.5	0.90
0.6	0.95
0.7	1
0.8	1.03
0.9	1.06
1.0	1.08

Series IDU

IDU3E to 37E

Inlet air pressure (MPa)	Correction factor
0.2	0.62
0.3	0.72
0.4	0.81
0.5	0.88
0.6	0.95
0.7	1
0.8	1.06
0.9	1.11
1 to 1.6	1.16

IDU55E, 75E

Inlet air pressure (MPa)	Correction factor
0.2	0.62
0.3	0.69
0.4	0.77
0.5	0.85
0.6	0.93
0.7	1
0.8	1.08
0.9	1.16
1 to 1.6	1.23

Data E: Air Flow Capacity

Series IDF

Model		IDF1E	IDF2E	IDF3E	IDF4E	IDF6E	IDF8E	IDF11E	IDF15E	IDF22E	IDF37E	IDF55E	IDF75E
Air flow capacity m^3/min (ANR)	50 Hz	0.10	0.20	0.32	0.52	0.75	1.22	1.65	2.8	3.9	5.7	8.4	11.0
	60 Hz	0.12	0.235	0.37	0.57	0.82	1.32	1.82	3.1	4.3	6.1	9.8	12.4

Model		IDF120D	IDF150D	IDF190D	IDF240D	IDF370B
Air flow capacity m^3/min (ANR)	50 Hz	20.0	25.0	32.0	43.0	54.0
	60 Hz	23.0	30.0	38.0	50.0	65.0

Note) In the case of option A (Cool compressed air output), the air flow capacity is different. Refer to page 42 for details.

Series IDU

Model		IDU3E	IDU4E	IDU6E	IDU8E	IDU11E	IDU15E	IDU22E	IDU37E	IDU55E	IDU75E
Air flow capacity m^3/min (ANR)	50 Hz	0.32	0.52	0.75	1.1	1.5	2.6	3.9	5.7	8.4	11.0
	60 Hz	0.37	0.57	0.82	1.2	1.7	2.8	4.3	6.1	9.8	12.5