

Refrigerated Air Dryer

Series *IDF/IDU E*

Air flow capacity **Increased up to the**
max. **40%**

Power consumption **Decreased up to the**
max. **40%**

Refrigerant **HFC134a**
Coefficient of destruction
for ozone is zero.

Improved corrosion resistance
with the use of stainless steel,
plate type heat exchanger
(Except IDF1E to 3E)



	Series	Air flow capacity m ³ /min (ANR)		Applicable air compressor output (Guide) In case of screw type (kW)	Refrigerant	Rated inlet condition	Port size	Pages
		50 Hz	60 Hz					
Standard inlet air temperature IDF	IDF1E	0.10	0.12	0.75	HFC134a	Saturation: 35°C 0.7MPa	Rc3/8	P.2-P.4
	IDF2E	0.20	0.235	1.5			Rc1/2	
	IDF3E	0.32	0.37	2.2			Rc3/4	
	IDF4E	0.52	0.57	3.7				
	IDF6E	0.75	0.82	5.5				
	IDF8E	1.22	1.32	7.5				
	IDF11E	1.65	1.82	11				
High inlet air temperature IDU	IDU3E	0.32	0.37	2.2	HFC134a	Saturation: 55°C 0.7MPa	Rc3/8	P.5-P.7
	IDU4E	0.52	0.57	3.7			Rc1/2	
	IDU6E	0.75	0.82	5.5			Rc3/4	

Series IDF/IDU E

Selection Method

1 Reading correction factor

Obtain the correction factor (A) to (D) suitable for your operating condition from the graph at left.

IDF selection example

Condition	Data symbol	Correction factor
Inlet air temperature	40°C	A
Ambient temperature	35°C	B
Outlet air pressure dew point	10°C	C
Inlet air pressure	0.5 MPa	D
Air flow rate	0.3 m³/min	—
Power supply frequency	50 Hz	—

Note) Values obtained from the table below.

IDU selection example

Condition	Data symbol	Correction factor
Inlet air temperature	60°C	A
Ambient temperature	35°C	B
Outlet air pressure dew point	10°C	C
Inlet air pressure	0.5 MPa	D
Air flow rate	0.4 m³/min	—
Power supply frequency	60 Hz	—

Note) Values obtained from the table below.

2 Calculating corrected air flow capacity

Obtain the corrected air flow capacity from the following formula.
 Corrected air flow capacity =
 Operating air flow capacity ÷
 (Correction factor A x B x C x D)

Corrected air flow capacity = 0.3 m³/min ÷ (0.82 x 0.96 x 1 x 0.88) = 0.43 m³/min

Corrected air flow capacity = 0.4 m³/min ÷ (0.95 x 0.93 x 1 x 0.88) = 0.51 m³/min

3 Selecting a model

Select a model which corrected air flow capacity exceeds the air flow capacity from the specification table. (For air flow capacity, refer to the data below (E).)

According to the corrected air flow capacity of 0.43 m³/min, IDF4E will be selected which air flow capacity is 0.52 m³/min at 50 Hz.

According to the corrected air flow capacity of 0.51 m³/min, IDU4E will be selected which air flow capacity is 0.57 m³/min at 60 Hz.

4 Selecting the type of threads, options and international standards or not.

Refer to page 2 and 8.

Refer to page 5 and 8.

5 Model determination

Refer to page 2.

Refer to page 5.

6 Selecting accessories sold separately.

Refer to page 10.

Data (A) Inlet air temperature

Series IDF

Inlet air temperature (°C)	Correction factor
25	1.73
30	1.3
35	1
40	0.82
45	0.68
50	0.57

Series IDU

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

Data (C) Outlet air pressure dew point

Series IDF, IDU

Outlet air pressure dew point (°C)	Correction factor
5	0.59
10	1
15	1.68

Data (D) Inlet air pressure

Series IDF, IDU

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	1.16

Data (B) Ambient temperature

Series IDF

Ambient temperature (°C)	Correction factor
25	1.14
30	1.04
32	1
35	0.96
40	0.9

Series IDU

Ambient temperature (°C)	Correction factor
25	1.2
30	1.04
32	1
35	0.93
40	0.84

Data (E) Air flow capacity

Series IDF

Model	IDF1E	IDF2E	IDF3E	IDF4E	IDF6E	IDF8E	IDF11E
Inlet air pressure 50 Hz	0.10	0.20	0.32	0.52	0.75	1.22	1.65
m³/min (ANR) 60 Hz	0.12	0.235	0.37	0.57	0.82	1.32	1.82

Series IDU

Model	IDU3E	IDU4E	IDU6E
Inlet air pressure 50 Hz	0.32	0.52	0.75
m³/min (ANR) 60 Hz	0.37	0.57	0.82

Refrigerant HFC134a

Standard inlet air temperature

Series *IDF* *E*

1E, 2E, 3E, 4E, 6E, 8E, 11E

(Inlet air temperature: 35°C, Outlet air pressure dew point: 10°C)

How to Order

IDF 8 E — 10

Size •

Size	Air compressor
1	0.75 kW
2	1.5 kW
3	2.2 kW
4	3.7 kW
6	5.5 kW
8	7.5 kW
11	11 kW

Voltage •

Symbol	Voltage	Applicable size						
		1	2	3	4	6	8	11
10	Single phase 100 VAC (50 Hz)	●	●	●	●	●	●	●
	100 to 110 VAC (60 Hz)							
20	Single phase 200 VAC (50 Hz)	—	—	●	●	●	●	●
	200 to 220 VAC (60 Hz)							

• Thread type

Symbol	Thread
Nil	Rc
F ^{Note)}	G
N	NPT

Note) Hexagonal nipple (R threads) is included as an accessory for the thread symbol "F".

Table of options and available combinations (Size/Option) •

Symbol ^{Note 1)}	Nil	A	C	H	K	L	M	R	S	T
Option specifications	None	For cool compressed air	With anti-corrosive treatment	For medium air pressure (Case for auto drain: Metal case)	For medium air pressure (Case for auto drain: Metal case with level gauge)	With heavy duty auto-drain	With motor operated auto drain	With circuit breaker	Power source terminal block connection (Voltage symbol 10 only) ^{Note 2)}	With terminal block for run & alarm signal
Size										
1	●	●	●	—	—	—	—	—	●	—
2	●	●	●	—	—	—	—	—	●	—
3	●	●	●	—	—	—	—	—	●	—
4	●	●	●	—	—	●	●	●	●	●
6	●	●	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●	●	●	●

Note 1) Enter alphabetically when multiple options are combined. However, the following combinations are not possible.

- R and S (Because S function is also included in R.)
- S and T (Because S function is also included in T.)

Note 2) Voltage symbol 20 (200 VAC) is the terminal block connection as standard. Option S cannot be chosen.

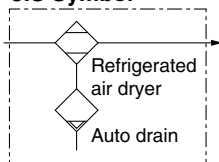
Voltage symbol 10 (100 VAC) is the power cable with plug as standard.

Note 3) Refer to page 8 for further information on options

Standard Specifications



JIS Symbol



Specifications			Model	Standard inlet air temperature					
				IDF1E	IDF2E	IDF3E	IDF4E	IDF6E	IDF8E
Rated conditions Note 2)	Air flow capacity Note 1) m³/min (ANR)	50 Hz	0.10	0.20	0.32	0.52	0.75	1.22	1.65
		60 Hz	0.12	0.235	0.37	0.57	0.82	1.32	1.82
	Inlet air pressure (MPa)		0.7						
	Inlet air temperature (°C)		35						
	Ambient temperature (°C)		32						
	Outlet air pressure dew point (°C)		10						
Operating ranges	Working fluid		Compressed air						
	Inlet air temperature (°C)		5 to 50						
	Inlet air pressure (MPa)		0.15 to 1.0						
	Ambient temperature (humidity) (°C)		2 to 40 (Relative humidity of 85% or less)						
Electrical specifications	Power supply voltage (frequency)		Single phase: 100 VAC (50 Hz), 100 to 110 VAC (60 Hz) Note 3) Single phase: 200 VAC (50 Hz), 200 to 220 VAC (60 Hz)						
	Power consumption (W)	50/60 Hz	180/202	180/202	180/202	180/202	180/202	208/236	385/440
	Operating current (A)	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
		50/60 Hz 200 V	—	—	1.2/1.3	1.2/1.3	1.2/1.3	1.5/1.5	3.4/3.0
Circuit breaker Note 4) (A)			10 (100 VAC), 5 (200 VAC)						
Condenser			Air-cooled type						
Refrigerant			HFC134a						
Auto drain			AD37	AD38			AD48		
Port size			3/8			1/2	3/4		
Weight (kg)			16	17	18	22	23	27	28
Coating color			Body panel: White 1 (Munsell 10Y8/0.5) Base: Gray 2 (Munsell 10Y5/0.5)						
Applicable air compressor output (Guide) In the case of a screw type (kW)			0.75	1.5	2.2	3.7	5.5	7.5	11

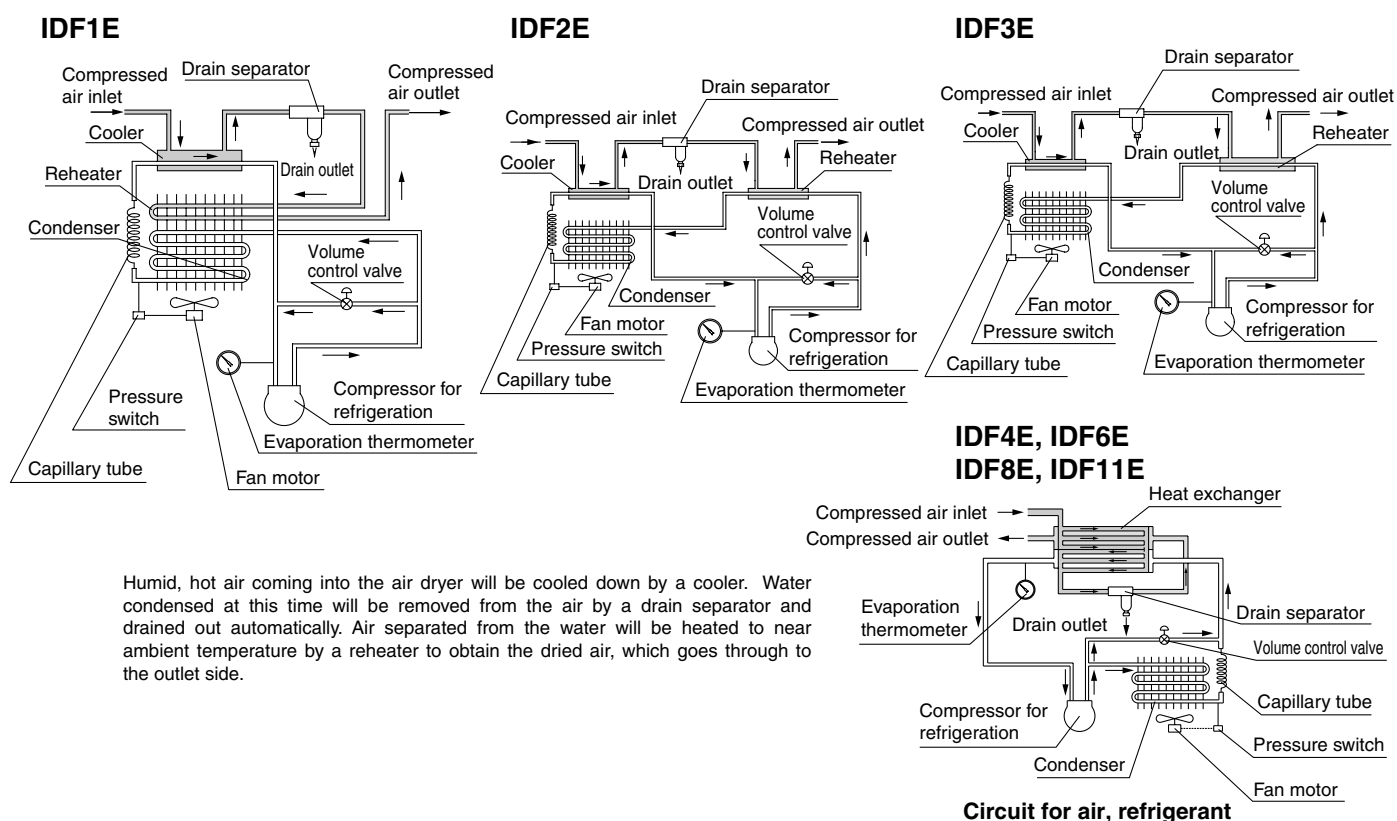
Note 1) The data for m^3/min (ANR) is under the conditions of 20°C, 1 atmospheric pressure and relative humidity of 65%..

Note 2) Select air dryer according to the selection method (P. 1) and not the rated condition.

Note 3) When selecting a power supply voltage, refer to "How to Order" on page 2.

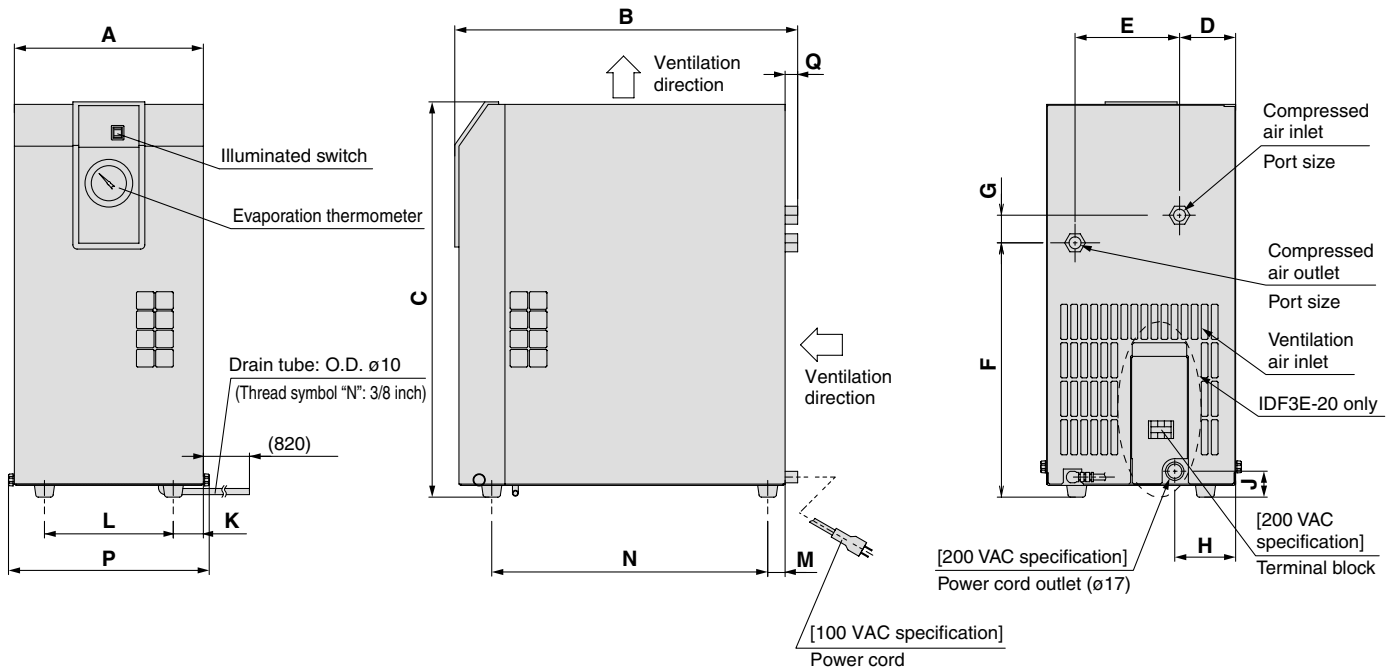
Note 4) Install a circuit breaker with a sensitivity of 30 mA or less.

Operation Principle

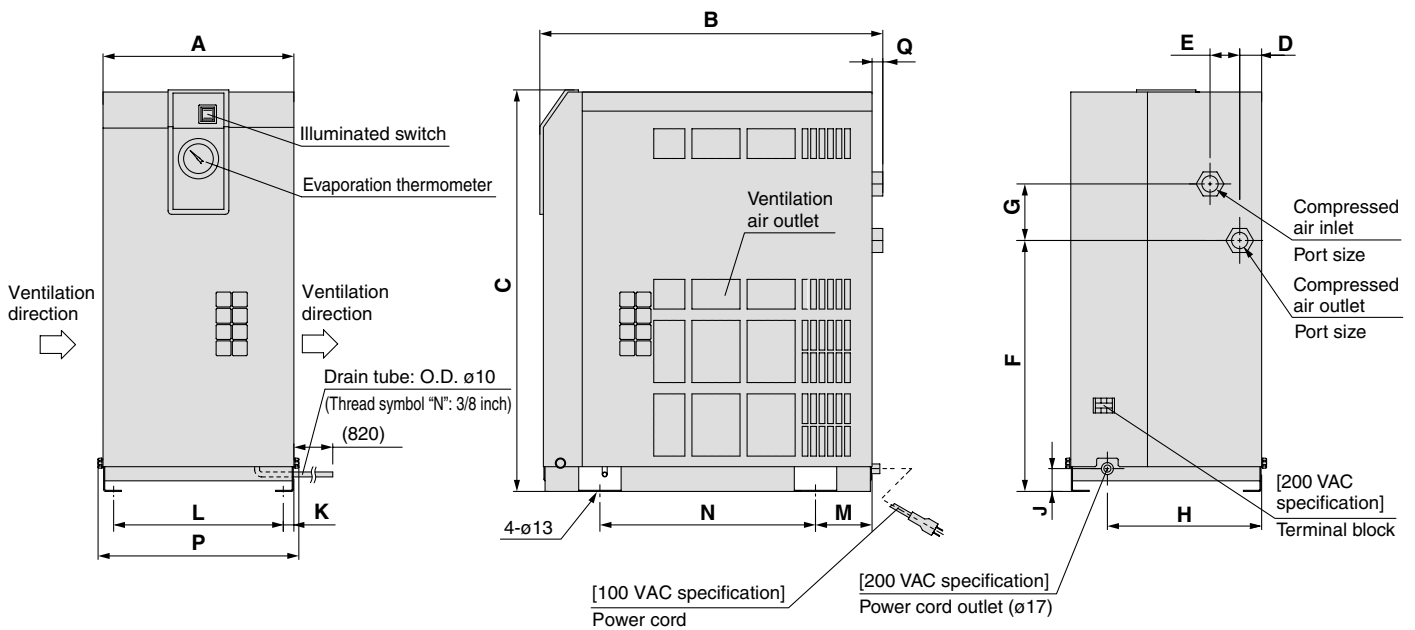


Dimensions

IDF1E to 3E



IDF4E to IDF11E



(mm)																			
Model	Port size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q			
IDF1E	3/8	226	410	413	69	101	270	32	—	—	38	150	21	330	240	15			
IDF2E				51	125	232	138	24					327						
IDF3E				473		67	304	33	73	31	36	154	21	330					
IDF4E	1/2	270	453	498	31	42	283	80	230	32	15	240	80	275	284	13			
IDF6E	3/4		455	568			355							300		15			
IDF8E																			
IDF11E																			

Refrigerant HFC134a

High inlet air temperature

Series *IDU* *E*

3E, 4E, 6E

(Inlet air temperature: 55°C, Outlet air pressure dew point: 10°C)

How to Order

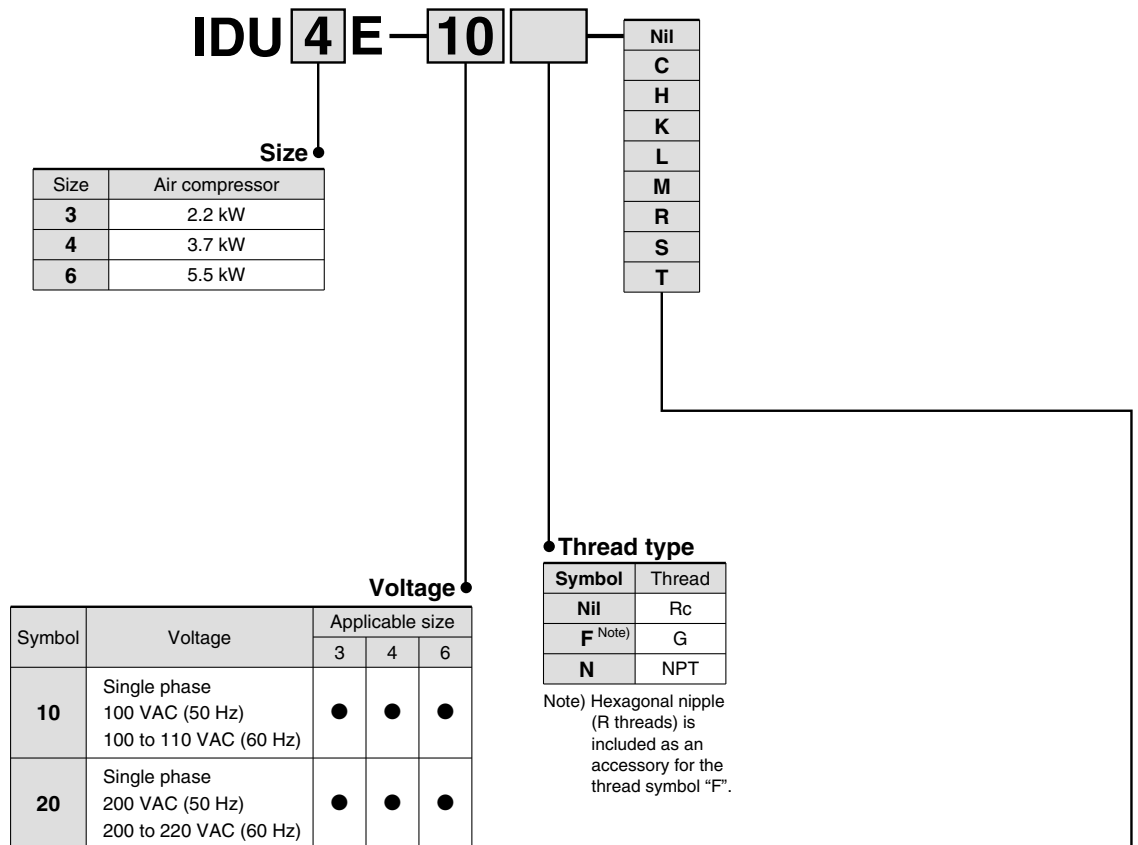


Table of options and available combinations (Size/Option) •

Symbol ^{Note 1)}	Nil	C	H	K	L	M	R	S	T
Option specifications	None	With anti-corrosive treatment	For medium air pressure (Case for auto drain: Metal case)	For medium air pressure (Case for auto drain: Metal case with level gauge)	With heavy duty auto-drain	With motor operated auto-drain	With circuit breaker	Power source terminal block connection (Voltage symbol 10 only) ^{Note 2)}	With terminal block for run & alarm signal
Size	●	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●	●

Note 1) Enter alphabetically when multiple options are combined.

However, the following combinations are not possible.

- R and S (Because S function is also included in R.)
- S and T (Because S function is also included in T.)

Note 2) Voltage symbol 20 (200 VAC) is the terminal block connection as standard. Option S cannot be chosen.

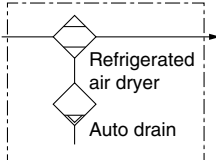
Voltage symbol 10 (100 VAC) is the power cable with plug as standard.

Note 3) Refer to page 8 for further information of options.

Standard Specifications



JIS Symbol



Specifications		Model		
		High inlet air temperature		
Rated conditions	Air flow capacity ^{Note 1)} m ³ /min (ANR)	50 Hz	60 Hz	60 Hz
		0.32	0.52	0.75
	Inlet air pressure (MPa)	0.37	0.57	0.82
	Inlet air pressure (°C)	0.7	55	
	Ambient temperature (°C)	32		
Operating ranges	Outlet air pressure dew point (°C)	10		
	Working fluid	Compressed air		
	Inlet air pressure (°C)	5 to 80		
	Inlet air temperature (MPa)	0.15 to 1.0		
Electrical specifications	Ambient temperature (humidity) (°C)	2 to 40 (Relative humidity of 85% or less)		
	Power supply voltage (frequency)	Single phase: 100 VAC (50 Hz), 100 to 110 VAC (60 Hz) ^{Note 3)} Single phase: 200 VAC (50 Hz), 200 to 220 VAC (60 Hz)		
	Power consumption (W)	50/60 Hz	180/202	208/236
	Operating current (A)	100 V	2.4/2.5	3.0/3.1
		50/60 Hz	200 V	1.2/1.3
Circuit breaker ^{Note 4)} (A)		10 (100 VAC), 5 (200 VAC)		
Auto drain		AD48		
Refrigerant		HFC134a		
Port size		3/8	1/2	3/4
Weight (kg)		23	27	28
Coating color		Panel: White 1 (Munsell 10Y8/0.5) Base: Gray 2 (Munsell 10Y5/0.5)		
Applicable air compressor output (Guide) ^{Note 3)} In the case of a screw type (kW)		2.2	3.7	5.5

Note 1) The data for l / min (ANR) is under the conditions of 20°C, 1 atmospheric pressure and relative humidity of 65%.

Note 2) Select air dryer according to the selection method (P. 1) and not the rated condition.

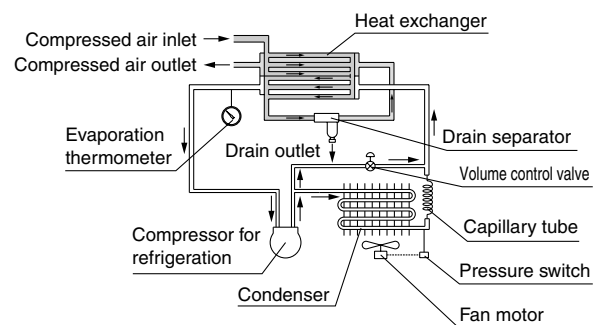
Note 3) When selecting a power supply voltage, refer to "How to Order" on page 5.

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

Operation Principle

Humid, hot air coming into the air dryer will be cooled down by a cooler. Water condensed at this time will be removed from the air by a drain separator and drained out automatically. Air separated from the water will be heated to near ambient temperature by a reheater to obtain the dried air, which goes through to the outlet side.

IDU3E, IDU4E, IDU6E

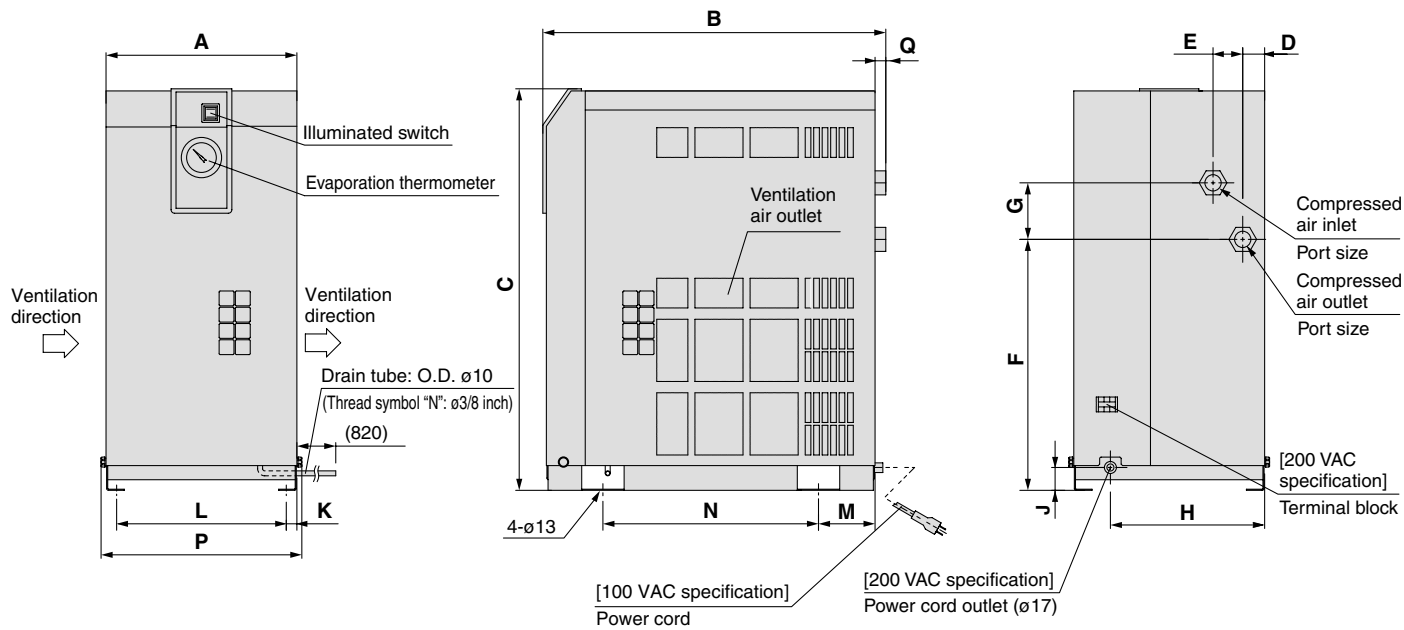


Circuit for air, refrigerant

Series IDU E

Dimensions

IDU3E to 6E



(mm)																
Model	Port size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
IDU3E	3/8	270	455	498	31	42	283	80	230	32	15	240	80	275	284	15
IDU4E	1/2		483	568			355									13
IDU6E	3/4		485													15

Series IDF/IDU E Option Specifications 1

Refer to pages 2 and 5 for
"How to Order" of options.

A

Option symbol

Cool compressed air output IDF all models

There is no heating of cooled, dehumidified air as it leaves the air dryer.
The air flow with this option is smaller than that of the standard dryer.
(The external dimensions are identical with the standard product.)

Model		IDF1E	IDF2E	IDF3E	IDF4E
Air flow capacity (m ³ /min (ANR))	50 Hz	0.085	0.12	0.18	0.26
	60 Hz	0.1	0.14	0.21	0.29

Model		IDF6E	IDF8E	IDF11E
Air flow capacity (m ³ /min (ANR))	50 Hz	0.32	0.5	0.65
	60 Hz	0.375	0.55	0.75

Conditions: Inlet air pressure: 0.7 MPa, Inlet air temperature: 85°C (Saturation)
Outlet air temperature: 10°C

C

Option symbol

Anti-corrosive treatment IDF, IDU all models

This minimizes the corrosion of the copper and copper alloy parts when the air dryer is used in an atmosphere containing hydrogen sulfide or sulfurous acid gas.

Special epoxy coating: Copper tube and copper alloy parts.

The coating is not applied on the heat exchanger or around electrical parts, where operation may be affected by the coating.

H

Option symbol

For medium air pressure IDF6E to 11E, IDU3E to 6E

The auto drain is changed from the standard one to one with a medium pressure specification.

A metal case is used for the auto drain.

(The external dimensions are identical to the standard product.)

Maximum operating pressure: 1.6 MPa

Auto drain assembly no.: IDF-S0085

(Auto drain (AD48-2-X2114), thermal insulator, and one-touch fitting are included.)

K

Option symbol

For medium air pressure IDF6E to 11E, IDU3E to 6E

The auto drain is changed from the standard one to one with a medium pressure specification.

A metal case with a level gauge which can confirm the water level is used for the auto drain.

(The external dimensions are identical to the standard product.)

Maximum operating pressure: 1.6 MPa

Auto drain assembly no.: IDF-S0086

(Auto drain (AD48-2-X2110), thermal insulator, and one-touch fitting are included.)

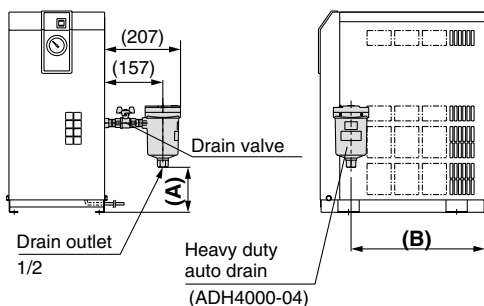
L

Option symbol

With heavy duty auto drain IDF4E to 11E, IDU3E to 6E

The float type auto drain used in the standard air dryer is replaced with a heavy duty auto drain (ADH4000-04) which enables the drainage to discharge more efficiently.

**IDF4E, 6E, 8E, 11E
IDU3E, 4E, 6E**



Note) The heavy duty auto drain and the drain valve are both enclosed in the same shipping package as the main body of the air dryer. The customer is required to mount the parts to the air dryer.

M

Option symbol

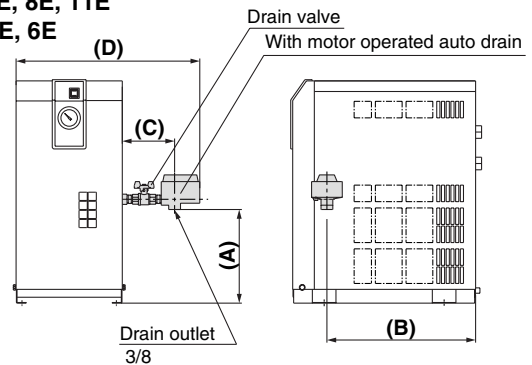
With motor operated auto drain

The float type auto drain used in the standard air dryer is replaced with a motor type auto drain (ADM200) which enables the drainage to discharge more efficiently.

Operating air pressure	Air discharge without drainage
0.3 MPa	6 ℓ (ANR) per cycle
0.5 MPa	10 ℓ (ANR) per cycle
0.7 MPa	14 ℓ (ANR) per cycle

* Operation cycle: 1 cycle per min. Operation time: 2 sec./min.

**IDF4E, 6E, 8E, 11E
IDU3E, 4E, 6E**



* The motor operated auto drain is enclosed in the same shipping package as the main body of the air dryer. The customer is required to mount the auto drain to the air dryer.

Rc thread

Model	A	B	C	D
IDF4E	154	348	133	467
IDF6E, IDU3E	166			
IDF8E, IDU11E	238	378		
IDU4E, IDU6E				

PF thread

Model	A	B	C	D
IDF4E	154	348	129	463
IDF6E, IDU3E	166			
IDF8E, IDU11E	238	378		
IDU4E, IDU6E				

NPT thread

Model	A	B	C	D
IDF4E	154	348	142	476
IDF6E, IDU3E	166			
IDF8E, IDU11E	238	378		
IDU4E, IDU6E				

Replacement parts: Auto drain assembly Note)

	Thread	Rc thread	PF thread	NPT thread
Voltage				
	Single phase 100 VAC (50 Hz) 100 to 110 VAC (60 Hz)	IDF-S0087	IDF-S0088	IDF-S0089
Single phase	200 VAC (50 Hz) 200 to 220 VAC (60 Hz)	IDF-S0090	IDF-S0091	IDF-S0092

Note) Includes wire with connector on the end.

Series IDF/IDU E

Option Specifications 2

Refer to pages 2 and 5 for "How to Order" of options.

R

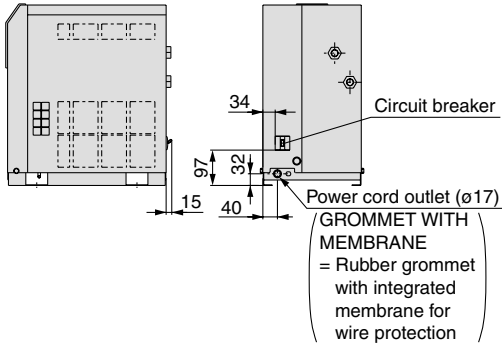
Option symbol

With circuit breaker

IDF4E to 11E,
IDU3E to 6E

A circuit breaker with cover is attached to the side of the air dryer. This saves additional electrical wiring at the time of installation.

IDF4E to 11E
IDU3E to 6E



	Model	Breaker capacity	Sensitivity current
Type 100 V	IDF4E-10, IDF6E-10	10 A	30 mA
	IDF8E-10, IDF11E-10		
	IDU3E-10, IDU4E-10 IDU6E-10		
Type 200 V	IDF4E-20, IDF6E-20	5 A	30 mA
	IDF8E-20, IDF11E-20		
	IDU3E-20, IDU4E-20 IDU6E-20		

S

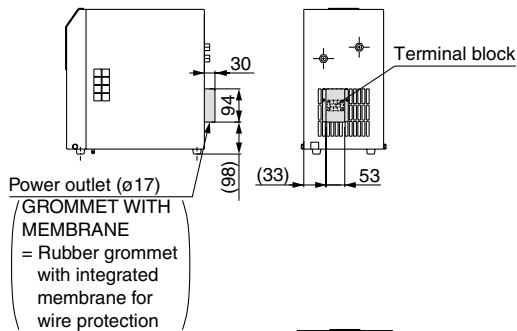
Option symbol

With power cord connection

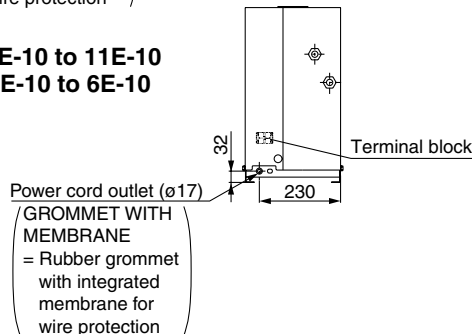
IDF1E-10 to 11E-10,
IDU3E-10 to IDU6E-10

The option allows the connection of a power cord to a terminal block.

IDF1E-10 to 3E-10



IDF4E-10 to 11E-10
IDU3E-10 to 6E-10



T

Option symbol

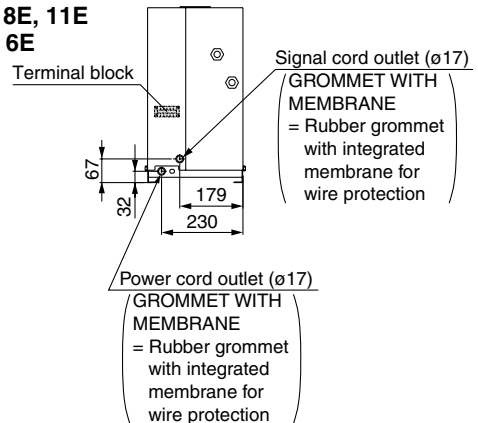
**With terminal block for power supply,
run & alarm signal and remote operation**

IDF4E to 11E,
IDU3E to 11E

Besides terminals for the power supply, terminals for the operating signal and the emergency stop signal are also available. (No-voltage contact) Also, in the case of remote control, operate it from the power supply side while the air dryer switch remains ON.

Contact specification: Max. rated voltage 220 V 3 A
Min. operating current 10 mA

IDF4E, 6E, 8E, 11E
IDU3E, 4E, 6E



Accessory (Option)

Description	Features	Specifications	Applicable dryer	Dimensions
Separately installed transformer 	Power supply and voltage for those other than the standard.	Max. ambient temperature 40°C (Relative humidity 85% or less)	IDF1E-10 to IDF8E-10 IDU3E-10, IDU4E-10	P. 11
Base integrated with a transformer 	A dedicated base for integrating the separately installed transformer and the air dryer.	—		P. 12
Dust-protecting filter set 	Prevents a decline in the performance of an air dryer, even in a dusty atmosphere.	Max. ambient temperature 40°C	IDF1E to 11E IDU3E to 6E	P. 12
Bypass piping set 	Easy bypass piping (connect this set to the air dryer), allowing substantial reduction in the installation time.	Max. operating pressure 1.0 MPa Max. operating temperature 60°C		P. 13

How to Order

Separately installed transformer

IDF — TR 500 — 2

Capacity

Symbol	Capacity	Applicable dryer
500	500 VA	IDF1E-10 to IDF8E-10 IDU3E-10, IDU4E-10

Source voltage

Symbol	Inlet voltage	Outlet voltage	Model
1	110 VAC (50 Hz), 110 to 120V (60 Hz)	100 VAC (50 Hz) 100 to 110 VAC (60 Hz)	Single turn
2	200, 220, 230, 240 VAC (50 Hz), 200 to 260V (60 Hz)		
3	380, 400, 415 VAC (50 Hz), 380 to 420V (60 Hz)		Compound
4	420, 440, 480 VAC (50 Hz), 420 to 520V (60 Hz)		

Please refer to page 11 for dimensions.

Base integrated with a transformer

IDF — TB 403

Size order

Symbol	Applicable dryer
403	IDF4E to 8E, IDU3E to 4E

Please refer to page 12 for dimensions.

Dust-protecting filter set

IDF — FL 201

Applicable dryer

Symbol	Applicable dryer
200 Note 1)	IDF1E, 2E
201 Note 1)	IDF3E
202	IDF4E
203	IDF6E, IDU3E
204	IDF8E, IDU4E
205	IDF11E, IDU6E

Note 1) In the case of option S, model no. will be differed.

Consult with us separately.

Please refer to page 12 for dimensions.

Bypass piping set (Rc thread)

IDF — BP 302

Applicable dryer

Symbol	Applicable dryer
300	IDF1E
301	IDF2E
302	IDF3E
303	IDF4E
304	IDF6E to 11E

IDU — BP 305

Applicable dryer

Symbol	Applicable dryer
305	IDU3E
306	IDU4E
307	IDU6E

Please refer to page 13 for dimensions.

Bypass piping set (NPT thread)

IDF — BP 308

Applicable dryer

Symbol	Applicable dryer
308	IDF1E
309	IDF2E
310	IDF3E
311	IDF4E
312	IDF6E to 11E

IDU — BP 313

Applicable dryer

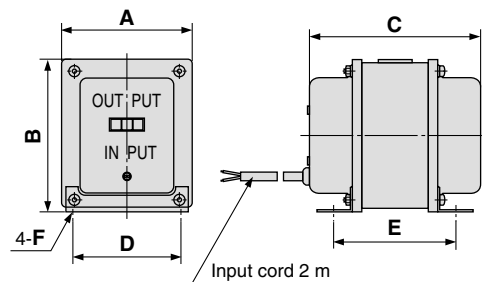
Symbol	Applicable dryer
313	IDU3E
314	IDU4E
315	IDU6E

Please refer to page 13 for dimensions.

Accessory (Option)

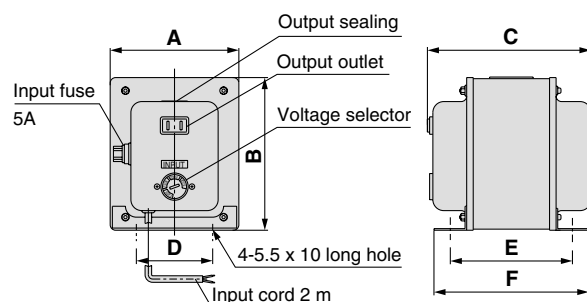
Separately Installed Transformer/Dimensions

IDF-TR500-1



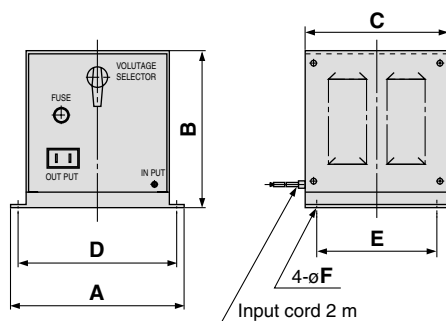
Transformer part no.	Applicable dryer	Capacity	Model	Inlet voltage	Outlet voltage	A	B	C	D	E	F	Weight (kg)
IDF-TR500-1	IDF1E-10 to 8E-10 IDU3E-10, 4E-10	500 VA	Single phase Single turn	110 VAC (50 Hz) 110 to 120 VAC (60 Hz)	100 VAC (50 Hz) 100 to 110 VAC (60 Hz)	78	94	100	64	75	4.2 x 7 (Long hole)	1.5

IDF-TR500-2



Transformer part no.	Applicable dryer	Capacity	Model	Inlet voltage	Outlet voltage	A	B	C	D	E	F	Weight (kg)
IDF-TR500-2	IDF1E-10 to 8E-10 IDU3E-10, 4E-10	500 VA	Single phase Single turn	200, 220 230, 240 VAC (50 Hz) 200 to 260 VAC (60 Hz)	100 VAC (50 Hz) 100 to 110 VAC (60 Hz)	118	140	150	70	112	142	6

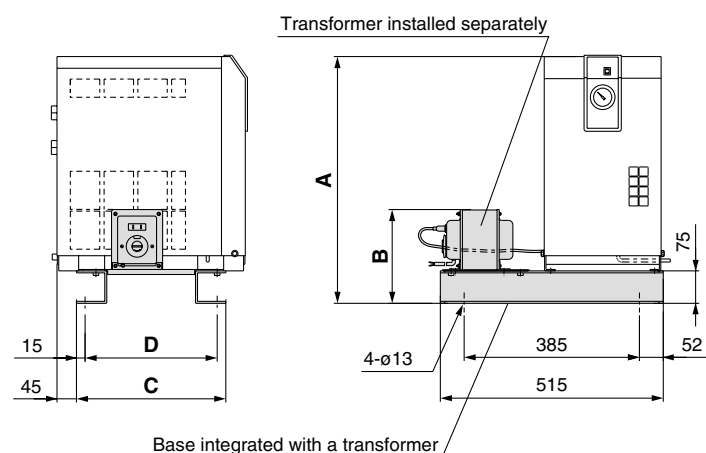
IDF-TR500-3, 4



Transformer part no.	Applicable dryer	Capacity	Model	Inlet voltage	Outlet voltage	A	B	C	D	E	F	Weight (kg)
IDF-TR500-3	IDF1E-10 to 8E-10 IDU3E-10, 4E-10	500 VA	Single phase Single turn	380, 400, 415 VAC (50 Hz) 380 to 420 VAC (60 Hz)	100 VAC (50 Hz) 110 VAC (60 Hz)	230	207	190	210	160	9	15
IDF-TR500-4				420, 440, 480 VAC (50 Hz) 420 to 520 VAC (60 Hz)								22

Base Integrated with a Transformer/Dimensions

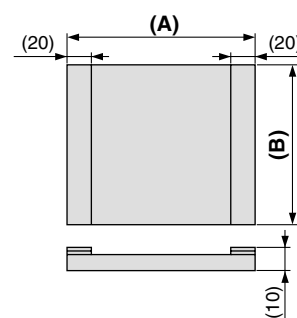
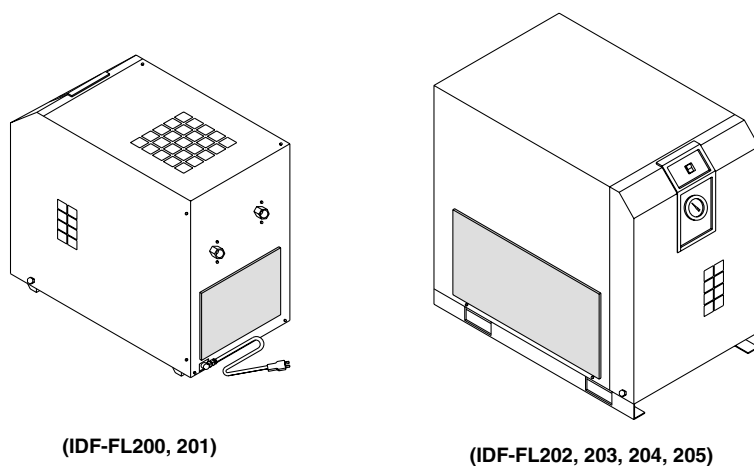
IDF4E to 8E
IDU3E, 4E



Base integrated		Applicable dryer	Applicable transformer	Dimension				Total weight
Part no.	Weight (kg)	Model	Model	A	B	C	D	(kg)
IDF-TB403	6	IDF4E-10	IDF-TR500-1	573	171	345	315	30
			IDF-TR500-2		217			40
			IDF-TR500-3		284			43
			IDF-TR500-4		284			50
		IDF6E-10 IDU3E-10	IDF-TR500-1	573	171	345	315	31
			IDF-TR500-2		217			35
			IDF-TR500-3		284			44
			IDF-TR500-4		284			51
		IDF8E-10 IDU4E-10	IDF-TR500-1	643	171	370	340	35
			IDF-TR500-2		217			39
			IDF-TR500-3		284			48
			IDF-TR500-4		284			55

Note) Weight including the air dryer and the transformer.

Dust-protecting Filter Set/Dimensions



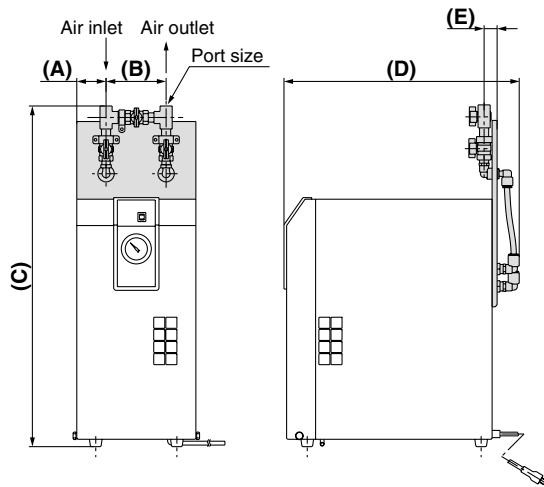
Part no.	Applicable dryer	A	B	Weight (g)
IDF-FL200	IDF1E, 2E	220	150	20
IDF-FL201	IDF3E		200	30
IDF-FL202	IDF4E	310	195	45
IDF-FL203	IDF6E, IDU3E	375		55
IDF-FL204	IDF8E, IDU4E	340	265	70
IDF-FL205	IDF11E, IDU6E	375		75

Accessory (Option)

Bypass Piping Set/Dimensions

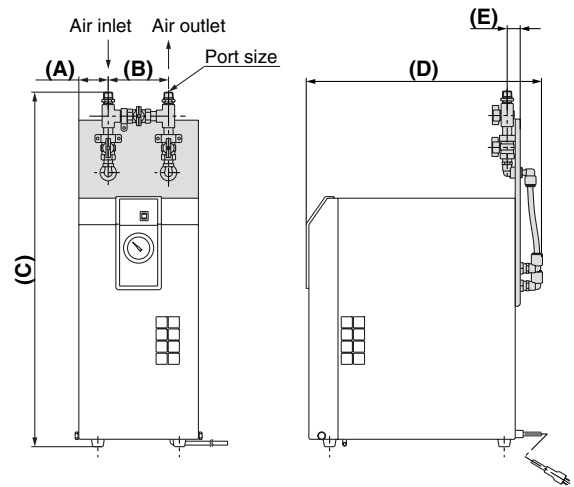
IDF1E, 2E, 3E

For Rc



Part no.	Applicable dryer	Port size Rc	A	B	C	D	E	Weight (kg)
IDF-BP300	IDF1E	3/8	56	114	549	440	5	1.5
IDF-BP301	IDF2E				628	443		1.6
IDF-BP302	IDF3E				642	445		

For NPT

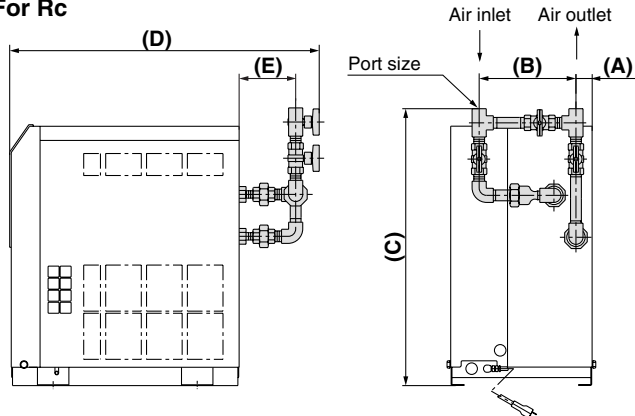


Part no.	Applicable dryer	Port size NPT	A	B	C	D	E	Weight (kg)
IDF-BP308	IDF1E	3/8	56	114	573	444	12	1.6
IDF-BP309	IDF2E				652	447		1.7
IDF-BP310	IDF3E				666	450		

IDF4E, 6E, 8E, 11E

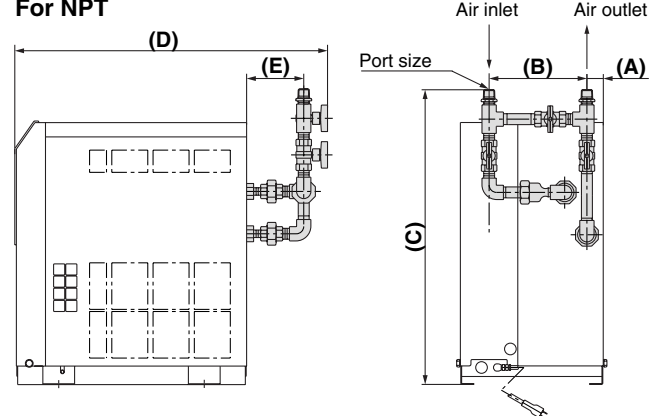
IDU3E, 4E, 6E

For Rc



Part no.	Applicable dryer	Port size Rc	A	B	C	D	E	Weight (kg)
IDF	IDF-BP303	IDF4E	31	175	531	595	110	2.3
	IDF-BP304	IDF6E		187	555	617	129	3.3
	IDF-BP304	IDF8E			627	647		
	IDF-BP304	IDF11E						
IDU	IDU-BP305	IDU3E	31	202	506	572	100	1.6
	IDU-BP306	IDU4E		175	603	625	110	2.3
	IDU-BP307	IDU6E		187	627	647	129	3.3

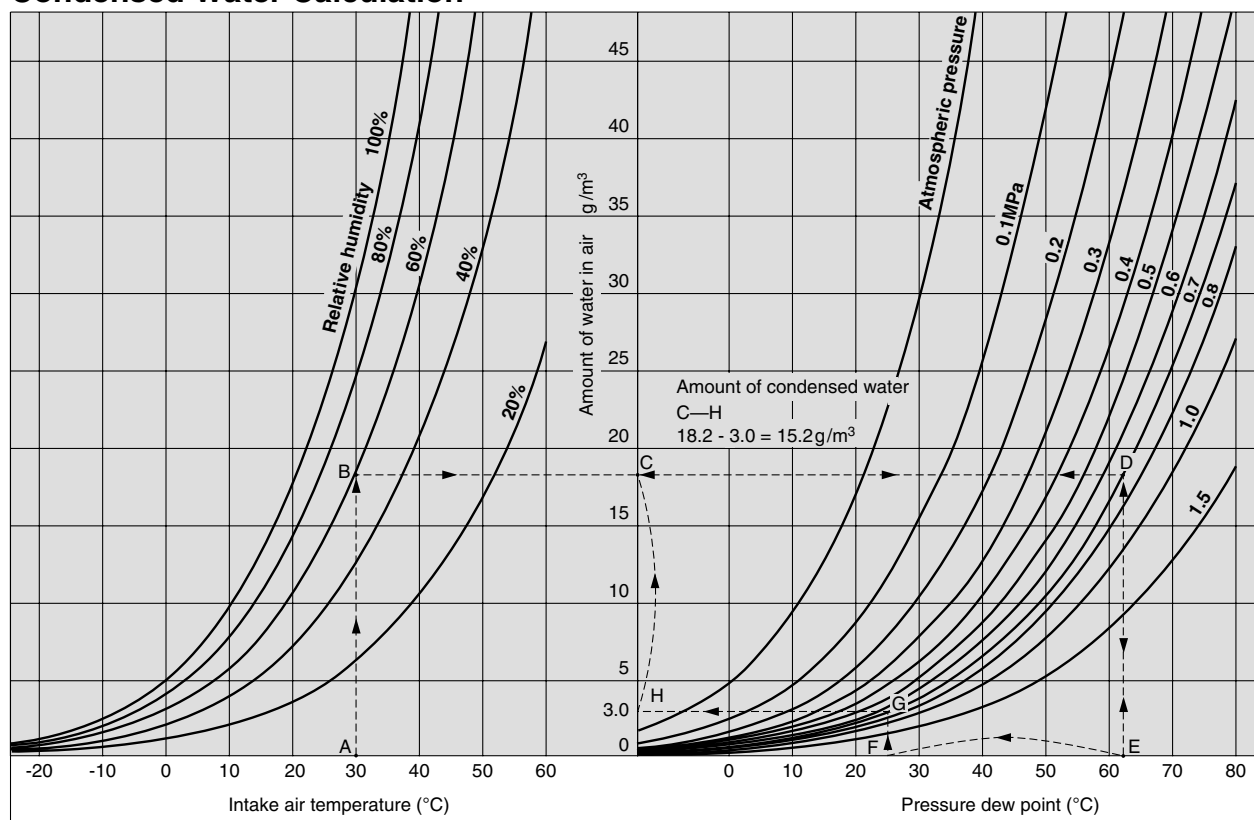
For NPT



Part no.	Applicable dryer	Port size NPT	A	B	C	D	E	Weight (kg)
IDF	IDF-BP311	IDF4E	31	175	560	595	110	2.4
	IDF-BP312	IDF6E		182	587	617	129	3.4
	IDF-BP312	IDF8E			659	647		
	IDF-BP312	IDF11E						
IDU	IDU-BP313	IDU3E	31	192	530	572	100	1.7
	IDU-BP314	IDU4E		175	632	625	110	2.4
	IDU-BP315	IDU6E		187	659	647	129	3.4

Technical Data

Condensed Water Calculation

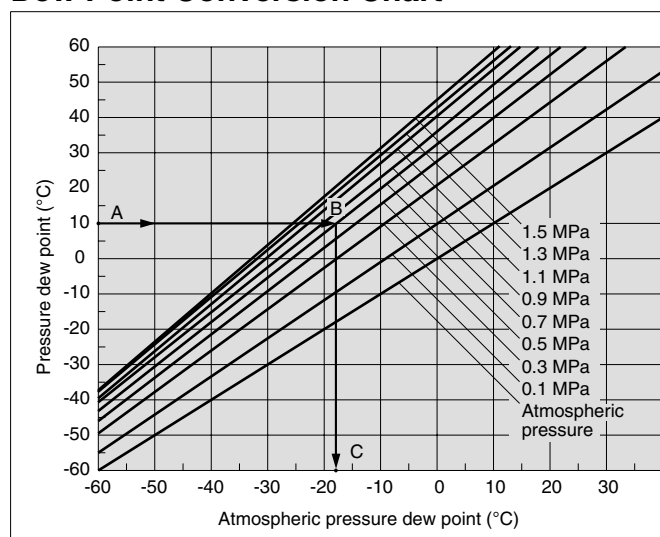


<How to calculate the amount of condensed water>

Example) To obtain the amount of condensed water when the inlet air of a compressor is pressurized to 0.7 MPa then cooled down to 25°C. Given an ambient temperature of 30°C and a relative humidity of 60%.

- Trace the arrow mark, from point A of ambient temperature 30°C to obtain the intersection B on the curved line for the relative humidity of 60%.
- Trace the arrow mark, from the intersection B to obtain the intersection D on the curved line for the 0.7 MPa pressure characteristics.
- Trace the intersection D to obtain the intersection E.
- The intersection E is the dew point under pressure 0.7 MPa with an ambient temperature of 30°C and a relative humidity of 60%. The value for E is at 62°C.
- Trace the intersection E upward, and C leftward to obtain the intersection D.
- The intersection C is the amount of water included in the compressed air (1 m³ at 0.7 MPa) with a pressure dew point of 62°C. The amount of water is 18.2 g/m³.
- Trace the arrow mark, starting with F for cooling temperature 25°C (pressure dew point 25°C) to obtain the intersection G on the pressure characteristic line for 0.7 MPa.
- From the intersection G, trace the arrow mark to obtain the intersection H on the vertical axis.
- The intersection H is the amount of water included in the compressed air 1 m³ at 0.7 MPa, pressure dew point of 25°C. The amount of water is 3.0 g/m³.
- Therefore, the amount of condensed water is as following. (per 1 m³)
The amount of water at the intersection C
– the amount of water at the intersection H
= the amount of condensed water
 $18.2 - 3.0 = 15.2 \text{ g/m}^3$

Dew Point Conversion Chart



<How to read the dew point conversion chart>

Example) To obtain the atmospheric dew point at a pressure dew point of 10°C, and a pressure of 0.7 MPa.

- Trace the arrow mark →, starting from point A at a pressure dew point of 10°C to obtain the intersection B on the pressure characteristic line for 0.7 MPa.
- Trace the arrow mark →, starting from point B to obtain the intersection C at the dew point under atmospheric pressure.
- The intersection C is the conversion value -17°C under atmospheric pressure dew point.